



**UNIVERSIDAD
AUTÓNOMA
METROPOLITANA
Unidad Cuajimalpa**

DIVISIÓN DE CIENCIAS DE LA COMUNICACIÓN Y DISEÑO

Departamento de Teoría y Procesos de Diseño

PROYECTO DE INVESTIGACIÓN

LeNS: Una propuesta para la promoción del Diseño de Sistemas Servicio – Producto Sustentables

PRESENTA: Mtra. Brenda García Parra

CUERPO ACADÉMICO: Procesos Educativos y Lenguajes para el Diseño

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1.2 RESUMEN DEL PROYECTO

La solicitud de registro del presente proyecto, el cual se enmarca dentro del proyecto de investigación *LeNS-in (The International Learning Network of Networks on Sustainability)*, tiene como objetivo establecer un antecedente para comunicar acerca de las necesidades a las que responde, sus objetivos, y los resultados que se han obtenido desde la iniciación del convenio firmado entre las Universidades participantes en 2015¹. Asimismo, se pretende ofrecer un seguimiento puntual sobre las actuales y las próximas actividades de investigación y de docencia a realizar, con el fin de definir el inicio de un planteamiento a largo plazo que busca consolidar el continuo análisis y sistematización de la difusión, divulgación y enseñanza de los conceptos rectores alrededor de la Sustentabilidad a nivel interdisciplinario en la Licenciatura de Diseño de UAM Cuajimalpa.

LeNSin surge de la convocatoria realizada por la **Unión Europea** y el programa **ERASMUS +** bajo el programa de *Cooperación para la innovación e intercambio de buenas prácticas educativas para la Construcción de Capacidades en el ámbito de la Educación Superior*². La participación de la UAM (Unidades Cuajimalpa y Azcapotzalco) en el proyecto se deriva de la invitación realizada por el Instituto Politécnico de Milán, sumándose así a la red *LeNS*³ de 36 universidades e institutos de Diseño en Europa, Asia, África, Centro América y Sudamérica, involucradas como socios del proyecto.

De manera particular, la participación y aportación realizada desde el Departamento de Diseño de la Unidad Cuajimalpa de la UAM corresponde a la realización de una investigación dirigida hacia la difusión, divulgación y enseñanza del conocimiento, a partir del interés particular por reforzar y fomentar la práctica del Diseño Sustentable desde el planteamiento del Diseño de Sistemas Servicio – Producto Sustentables iniciando con una identificación clara de sus fundamentos teórico-prácticos y su implementación en docencia mediante el desarrollo de material didáctico, el cual tendrá como incidencia inicial en la Licenciatura de Diseño, pero con miras a traspasar un límite disciplinario.

La investigación en curso se centra en la actual falta de sistematización para incorporar métodos y herramientas durante los estudios de Diseño, con el fin de consolidar una postura encaminada hacia la sustentabilidad (ambiental, económica y social). En este sentido, lo que se pretende ofrecer como una fundamentación metodológica y práctica para la enseñanza del Diseño para la Sustentabilidad, se

¹ Anexo al presente documento

² Programa ERASMUS + ec.europa.eu/programmes/erasmus-plus/discover/guide

³ El proyecto *LeNSin* se desarrolla dentro de la *Red LeNS*, conformada por más de 36 Universidades de diferentes países. Cabe destacar que no todas las Universidades pertenecientes a la Red *LeNS* participan en el proyecto *LeNSin*

plantea como resultado del proceso colaborativo entre las Universidades participantes que consolidan la red LeNS, a través del cual se han integrado procesos de investigación aplicada para la definición de los principios teóricos que consolidan los cimientos del Diseño Sustentable, para la detección de las necesidades contextuales de aprendizaje y de formación docente, y los alcances particulares de la propuesta de diseño de Sistemas Servicio –Producto como vía del Diseño para lograr un mayor acercamiento a la sustentabilidad.

1.3 PARTICIPANTES DEL PROYECTO

Mtra. Brenda García Parra (Participante interno. UAM-C)

Maestra en Diseño Industrial por la Universidad Nacional Autónoma de México (UNAM) y Licenciada en Diseño Industrial por la Universidad Iberoamericana (UIA). Realizó estudios de maestría en la Universidad Fachhochschule Aachen, Alemania, y posteriormente una especialidad técnica en Tecnologías de Diseño Industrial en el Instituto Tecnológico de Kyoto (KIT), Japón. Es autora del libro *Ecodiseño, Nueva herramienta para la sustentabilidad*, editorial Designio, 2008; además ha colaborado con la publicación de diversos capítulos de libro. Su trabajo de docencia e investigación se ha centrado en los fundamentos teóricos y prácticos del Ecodiseño y el Diseño Sustentable. Es profesora investigadora del Departamento de Teoría y Procesos del Diseño en UAM Cuajimalpa, y participa en el Cuerpo Académico: Procesos Educativos y Lenguajes para el Diseño

Mtra. Sandra Molina Mata (Participante externo. UAM-A)

Maestra en Diseño Industrial por la Universidad Nacional Autónoma de México, UNAM y Licenciada en Diseño Industrial por Universidad Autónoma Metropolitana Azcapotzalco (UAM A). Es Profesora investigadora Titular en la UAM Azcapotzalco desde 2009, Jefa de Área “Habitat y Diseño” y directora del Laboratorio de Análisis de Ciclo de Vida. Su investigación involucra el análisis de modelos de Diseño Sustentable, Diseño para la Innovación Social y Economía social, los cuales han sido publicados y presentados en foros Nacionales e Internacionales.

Mtro. Alejandro Ramírez Lozano (Participante externo. UAM-A)

Profesor Asociado en la Universidad Autónoma Metropolitana Azcapotzalco (UAM A) desde 1983. Es maestro en Diseño Industrial por la Scuola Politecnica di Design, Italia, y realizó estudios de Posgrado en Historiografía mexicana. Su trabajo de investigación contempla los ámbitos de la producción de mobiliario en México, envases y embalajes y modelado de sistemas de diseño metropolitanos .

Mtro. Rodrigo Lepez Vela (Participante externo. UVM)

Maestría en Packaging y Branding por la Escuela Superior de Disseny (ELISAVA), Barcelona. Diseñador Industrial por el ITESM Querétaro. Experiencia profesional en Desarrollo y Diseño de Producto, publicidad, transporte y de marca. Es miembro del Sistema Nacional de creadores de arte de FONCA/CONACULTA y actualmente es Director Nacional de Arquitectura, Arte y Diseño en la Universidad del Valle de México.

Carlo Vezzoli (Participante externo. Politecnico de Milán)

Coordinador de la red LeNS. Jefe del grupo de investigación Diseño e Innovación de Sistemas para la Sustentabilidad en el Departamento de Diseño del Politecnico de Milán, Italia. Es profesor de Diseño para la sustentabilidad ambiental y Diseño de Sistemas para la Sustentabilidad en la Escuela de Diseño de la misma institución. Ha coordinado diferentes proyectos de investigación internacionales y ha formado parte de investigaciones financiadas por la Unión Europea (SusHouse, MEPSS, Score!, Tango, LeNS, LeNSes, Sustainability Maker). Su más reciente publicación fue publicada en 2014 por la Organización de las Naciones Unidas, denominada Service System Design for Sustainability.

Colaboradores externos adicionales

Adicionalmente, se cuenta con una constante colaboración con profesores e investigadores pertenecientes a las 12 Universidades que también participan en el proyecto *LeNSin*, entre ellas se encuentra la Universidad de Brunel, Inglaterra; Instituto DELFT, Holanda; Universidad Aalto, Finlandia; Instituto de Srishti, India; Universidad Federal de Paraná, Brasil; Universidad de Capetown, Sudáfrica, entre otras. A partir de un plan general del proyecto, la actividades generales se realizan entre pares de Universidades con el fin de coordinar esfuerzos y monitorear el seguimiento de cada actividad. Adicionalmente, cada país y Universidad desarrolla y genera los productos, eventos y actividades solicitadas a nivel regional.

ROLES DE PARTICIPACIÓN EN EL PROYECTO DE INVESTIGACIÓN

Actividades	MTRA. BRENDA GARCÍA	MTRA. SANDRA MOLINA	MTRO. A. RAMÍREZ	MTRO. RODRIGO LEPEZ	DR. CARLO VEZZOLI
	Participante Interno UAM - C	Participante externo UAM - A	Participante externo UAM-A	Participante externo UVM	Coordinador Proyecto Paraguas
Gestión general Proyecto LeNSin					
Coordinación Actividades de todas las etapas del Proyecto LeNSin					
Procedimientos de evaluación interna					
Monitoreo de actividades en progreso					
Análisis Teórico y Estado del arte del Diseño de Sistemas Servicio - Producto Sustentables (SPSS) en México					
Planeación y coordinación de Seminario Docente Sobre SPSS en México					
Análisis de las necesidades docentes y curriculares en torno al SPSS México					
Análisis de las necesidades docentes y curriculares en torno al SPSS – UAM Cuajimalpa					
Planeación de actividades a desarrollarse en Laboratorio LeNS – UAM C					
Instalación de Laboratorio LeNS – UAM C					
Observación Cursos Piloto sobre SPSS en Universidades participantes					
Planeación e impartición de Cursos Piloto sobre SPSS en UAM C y UAM A					
Planeación y evaluación de Cursos Piloto sobre SPSS en UVM					
Coordinación de actividades de evaluación por asesores externos al proyecto					
Coordinación de Publicación colaborativa sobre proyecto LeNSin					
Coordinación e implementación de plataforma regional (México)					
Desarrollo y selección de material didáctico para docentes sobre SPSS					
Coordinación, gestión y difusión de material didáctico docente sobre SPSS en UAM Cuajimalpa					
Retroalimentación de resultados de todas las Universidades participantes					
Evaluación Final Proyecto LeNSin					

2. JUSTIFICACIÓN

Las diferentes iniciativas internacionales establecidas y promovidas por programas de las Naciones Unidas como la UNESCO y PNUMA, que resaltan la necesidad de generar e incorporar estrategias para la Educación para el Desarrollo Sustentable en todos los niveles educativos, así como la postura instituida en el Modelo Educativo de la UAM Cuajimalpa que aboga por estructurar sus valores y principios alrededor de ejes como la sustentabilidad, esbozan un llamado para la reflexión y toma de acción para proponer medios, estrategias y vías de implementación que permitan la adopción de una visión en la que se refleje una clara postura y preparación profesional encaminada hacia la Sustentabilidad durante la formación de los estudiantes de esta casa de estudios.

La importancia de la presente investigación responde a la necesidad de promover la formación de estudiantes de la carrera de Diseño cuya preparación y conocimientos permitan la generación de soluciones que evidencien una legítima postura encaminada hacia la sustentabilidad. La investigación se fundamenta también en un enfoque horizontal, en el que el proceso de formación de estudiantes contempla todos aquellos factores involucrados (personal académico, análisis de contenidos curriculares, material didáctico, entre otros), con el fin de lograr una comunicación y un proceso de enseñanza-aprendizaje colectivo y encaminado hacia un mismo objetivo.

La base teórica de la presente propuesta se alinea con el *Diseño de Sistemas Servicio – Producto Sustentables*, el cual parte del análisis profundo de un problema y su contexto con el fin de proponer sistemas que contemplen la interrelación de actores, servicios y productos de manera tal que las premisas sociales, económicas y ambientales se encuentren fundamentadas en la generación de modelos sustentables de producción y de consumo, ofreciendo la oportunidad de replantear escenarios y modelos socio-económicos establecidos.

El beneficio del proyecto se manifiesta en la posibilidad de preparar a una nueva generación de diseñadores (tanto de alumnos, como de profesores) capaces de identificar los fundamentos teóricos y metodológicos, y proponer soluciones de Diseño Sustentable a partir de una sólida formación y actualización, y fomentar asimismo la participación y comunicación con otras instituciones educativas, empresas y organizaciones que ya se encuentran en este camino.

La propuesta resulta conveniente y congruente particularmente con el propósito y alcances de la carrera de Diseño de la UAM Cuajimalpa, pues al no contar con un enfoque centrado en la planeación y diseño de productos (diseño industrial), o en el desarrollo de estrategias de comunicación gráfica (diseño gráfico) u otras disciplinas afines, sino que incorpora y fomenta la adopción de una visión sistémica para brindar una solución de Diseño (sin apellidos), el planteamiento del Diseño de Sistemas Servicio-Producto Sustentables se alinea con el principal objetivo de la carrera, en el sentido que permite el desarrollo de una solución acorde con una o varias necesidades detectadas, derivando en el planteamiento de un sistema que conjunte productos y/o servicios. Adicionalmente, el proyecto de respuesta a una postura y visión de sustentabilidad puntualmente establecida como parte de uno de los ejes rectores de la Unidad Cuajimalpa de la UAM, como parte del actuar ético profesional planteado por la institución.

El beneficio del proyecto se refleja en la posibilidad de ofrecer un apoyo y una guía en las actividades académicas y docentes de la Unidad Cuajimalpa para la enseñanza, aprendizaje y quehacer actualizado del Diseño para la Sustentabilidad, y dar a conocer a nivel internacional este compromiso mediante la participación activa en la red internacional LeNS (*The International Learning Network of Networks on Sustainability*) mediante la participación en el proyecto internacional LeNSin convocado y financiado por la **Unión Europea** y el programa **ERASMUS +** bajo el programa de *Cooperación para la innovación e intercambio de buenas prácticas educativas para la Construcción de Capacidades en el ámbito de la Educación Superior*⁴.

El desarrollo del proyecto dentro del marco y apoyo mencionados brinda la oportunidad de contar con una serie de actividades soportadas y derivadas de acciones colaborativas procedentes de más de 12 instituciones de educación superior a nivel internacional, situando a la UAM como un nodo clave para la comunicación y contextualización local de los fundamentos de la teoría, práctica y enseñanza del Diseño par la Sustentabilidad, integrando, enriqueciendo y adaptando un acervo de conocimientos que de otra forma resultarían desarticulados y sin posibilidad e ofrecer una comunicación y retroalimentación de tan largo alcance.

⁴ Programa ERASMUS + ec.europa.eu/programmes/erasmus-plus/discover/guide

3. Antecedentes históricos, teóricos y conceptuales

El concepto de sustentabilidad ha encontrado un sin fin de posturas a partir de las diferentes interpretaciones derivadas, principalmente, de la definición promulgada en el Reporte Brundtland de 1987. Sin embargo, a manera general, el concepto es ya un referente importante como posible vía de solución ante los actuales y crecientes problemas mundiales que enfrentamos, y que de no reducirlos, se observa un futuro amenazante, en donde la Tierra llega a los límites de habitabilidad sin posibilidad de seguir sosteniendo las actividades intensivas de producción y de consumo del hombre.

Una parte de la promulgación de los diversos e importantes acuerdos internacionales para la búsqueda de un desarrollo sustentable a nivel local y global, ha contemplado también el desarrollo y difusión de recomendaciones y lineamientos para implementar una práctica educativa con miras hacia la sustentabilidad. En el *Programa de Educación Ambiental* desarrollado por la UNESCO y el PNUMA⁵, por ejemplo, se recomendaron tres tipos básicos de educación, dirigiéndose el primero al público en general, el segundo a grupos ocupacionales específicos cuya actividad ejerce una influencia en el entorno (arquitectos, ingenieros, entre otros), y el tercer tipo dirigido a la formación de investigadores y especialistas en temas relacionados con el medio ambiente.

Por otro lado, el manual *Criterios pedagógicos y científicos para definir el contenido ambiental de la educación universitaria*⁶, deja ver en su marco conceptual el rango de temáticas y la amplitud de aspectos que se contemplan para la planeación curricular a nivel superior, el cual abarca desde problemáticas ambientales mundiales, hasta aspectos sociales como el crecimiento demográfico y problemas regionales, reforzamiento de criterios éticos y morales, comportamiento humano, entre otros.

Además de las recomendaciones anteriores y las diferentes iniciativas que han surgido durante las últimas décadas para el fomento de la educación como estrategia básica para la consecución de un desarrollo sustentable, se distingue la promulgación del *Decenio de las Naciones Unidas para la*

⁵ Organización de las Naciones Unidas para la Educación y Programa de las Naciones Unidas para el Medio Ambiente, respectivamente.

⁶ Tanguiane, S. y Perevedentsev, V. *Programa Internacional de Educación ambiental UNESCO – PNUMA*. Serie de Educación Ambiental. Departamento de Ciencias, Educación Técnica y Medioambiental. Número 19. Unesco, 1997

Educación con miras al Desarrollo Sostenible (2005- 2014) en la que se destaca la labor de la UNESCO para continuar resaltando la relevancia de la *Educación para el Desarrollo Sustentable* (ESD, por sus siglas en inglés), y de esta forma enfatizar la importancia de la educación como medio indispensable para crear conciencia, reforzar el compromiso humano y formar valores éticos para la mejora de un entorno a nivel global. De esta forma, diversas instituciones educativas han adquirido el compromiso para adoptar algunas de estas recomendaciones con el fin de promover una visión y postura de sustentabilidad durante la formación universitaria.

En el caso particular de la Unidad Cuajimalpa de la Universidad Autónoma Metropolitana, la consideración de la sustentabilidad alcanza un importante nivel de compromiso, el cual es posible identificar al interior de las diferentes publicaciones desarrolladas por la institución, como lo es en la publicación *El Modelo Educativo de la UAM Cuajimalpa, 10 años de vida*, donde se indica que el componente filosófico del modelo educativo de la Universidad, conformado por valores y principios, se edifica alrededor de la sustentabilidad, la equidad y la justicia social, la autonomía y la creatividad, la ética y la responsabilidad social.

La sustentabilidad y el desarrollo sustentable son dos de los valores esenciales de la Unidad Cuajimalpa. La sustentabilidad es uno de los valores del presente y del futuro para una sociedad; implica la existencia de condiciones económicas, ecológicas, sociales y políticas que permiten su funcionamiento de manera armónica en el tiempo y el espacio. (UAM, 2015) De esta forma, se ha establecido que la Sustentabilidad se considera en la UAM Cuajimalpa como uno de los ejes rectores de su proyecto educativo, adquiriendo así el compromiso de ofrecer una eficiente gestión de los recursos naturales, de favorecer el desplazamiento del eje de las economías actuales hacia el desarrollo sustentable de manera interdisciplinaria, y la equidad de condiciones sociales (UAM, 2015).

Si bien, existen diversas actividades (no curriculares) al interior de la UAM Cuajimalpa mediante las cuales se fomentan diversos valores y la reflexión hacia un paradigma de Sustentabilidad, se detecta un número reducido de cursos, temáticas, material didáctico y otros contenidos a nivel curricular relacionados con el Desarrollo Sustentable, por lo que se observa una importante ausencia de conceptos, referencias y principios de sustentabilidad que permitirían una verdadera articulación de

los valores necesarios para implementar acciones, decisiones y propuestas por parte de los estudiantes en sus actividades profesionales futuras.

De manera particular, el plan de estudios de la Licenciatura en Diseño de la UAM Cuajimalpa, cuenta únicamente con el curso denominado Seminario sobre Sustentabilidad⁷ en el primer trimestre de la carrera, donde se analizan y discuten temas generales acerca de la sustentabilidad. Sin embargo, al ser el único curso donde se contemplan dichas temáticas de manera formal, el alumno no cuenta con mayores oportunidades para volver a explorar o discutir sobre temas de sustentabilidad a lo largo de sus estudios de licenciatura.

En este sentido, diversos autores han señalado que la transversalidad curricular representa una estrategia indispensable para promover valores que corresponden a una visión a largo plazo, debido a su capacidad para fomentar la integración de contenidos que de manera continua, articulada, interrelacionada y evidente reflejen objetivos comunes y constantes para alcanzar una formación disciplinaria con una posición clara a favor de un desarrollo sustentable. Es decir, al abordar de manera aislada una temática de gran trascendencia, como es la sustentabilidad, en cursos independientes donde no se aprecia ninguna continuidad ni relación con otros cursos o con la propia disciplina, y sin la oferta de actividades que permitan abordar e implementar de manera práctica los conocimientos, su alcance queda interrumpido, aumentando la posibilidad de que el alumno no incorpore esta visión en su vida profesional, al terminar sus estudios.

En el caso particular de la disciplina del Diseño, se observa también que los esfuerzos por desarrollar contenidos y propuestas relacionados con la sustentabilidad durante la carrera profesional, además de escasos; generalmente parten de un concepto centrado en el espectro ambiental, al margen de la implementación de alguna estrategia de Ecodiseño para reducir un impacto ambiental, o vinculado al "maquillaje ambiental"⁸, obviando la necesaria reflexión y análisis sobre las circunstancias y efectos relacionados con los pilares sociales y económicos de un sistema productivo. Lo anterior se relaciona también con la oportunidad vigente para esclarecer entre el personal académico los alcances, conceptos, metodologías y objetivos de la Sustentabilidad, y su relación con las prácticas y actividades propias de la disciplina del Diseño.

⁷ Curso perteneciente al tronco general de la formación inicial, común para todas las licenciaturas de la UAM Cuajimalpa

⁸ Denominado así por Joan Rieradevall para referirse aquella práctica que pretende destacar alguna característica que promete reducir el impacto ambiental de algún producto o servicios, sin ser necesariamente comprobable.

4. Preguntas y supuestos de investigación

Los principios y objetivos de la Sustentabilidad se dirigen más allá de la adopción de medidas para la protección ambiental, y abarca un enfoque amplificado para incluir en sus metas la equidad y la cohesión social, mediante el fortalecimiento económico de entidades locales dirigido hacia una democratización del acceso a recursos, bienes y servicios. Es con este enfoque que diversas entidades oficiales anuncian la necesidad de incorporar este importante concepto como una visión clave en las prácticas educativas de manera transversal, y particularmente en la Unidad Cuajimalpa de la UAM se ha establecido como un eje rector que forme parte de los principios éticos, valores y de la formación educativa de su comunidad.

Si bien existen esfuerzos anteriores para integrar criterios, valores y conocimiento alrededor de la Sustentabilidad en diferentes ámbitos y actividades de la Unidad Cuajimalpa, de manera particular se debe de contar con una respuesta puntual que considere su inserción como enfoque clave durante la formación de los diseñadores de la institución.

Con base en lo anterior, se plantea la siguiente pregunta:

¿Cómo incentivar y formar una nueva generación de diseñadores (docentes y alumnos), capaces de incorporar una visión fortalecida de sustentabilidad de tal manera que su práctica profesional sea identificada por la incorporación de este importante enfoque?

De acuerdo con las características propias de la carrera de Diseño de la UAM Cuajimalpa, se fundamentan dos supuestos:

1. El *Diseño de Sistemas Servicio – Producto Sustentables (SSPS)* permitirá la adopción de un modelo que se alinea con una visión ya existente en la Unidad para contemplar las soluciones de diseño como un sistema, o una combinación posible de productos y servicios de acuerdo con las necesidades detectadas. En un contexto socio-económico polarizado como en el caso de México, “una innovación proveniente del Diseño de Sistemas Servicio – Producto Sustentables podría actuar como una oportunidad para facilitar el proceso de un desarrollo socio-económico sustentable, al traspasar la fase caracterizada por el consumo y propiedad individual de productos producidos en masa, hacia la búsqueda de la satisfacción de necesidades mediante el diseño de sistemas que reducen la intensidad de consumo de recursos” (UNEP 2002)

2. Con el fin de formar diseñadores con el conocimiento y las herramientas relacionadas con el Diseño de Sistemas Servicio – Producto Sustentables (SSPS), se deben actualizar, diseñar e implementar cursos de alta calidad, y considerar a la “enseñanza” como una prioridad. De esta forma, se observa la necesidad de que la formación de una nueva generación de docentes bajo este enfoque se realice a partir de una construcción e intercambio colaborativo (local e internacional) de nuevos recursos de aprendizaje.

5. Objetivos

Objetivo General

Ofrecer acceso a la educación superior sobre el Diseño para la Sustentabilidad (DfS), enfocada en los Sistemas Servicio - Producto Sustentables, a través de la creación de una red basada en la construcción del conocimiento colaborativo y en la difusión entre Instituciones de Educación Superior de Diseño.

Objetivos específicos

1. Potencializar la incorporación de un enfoque de sustentabilidad en la Licenciatura de Diseño en la UAM Cuajimalpa en respuesta y de acuerdo con el eje rector de sustentabilidad de la Universidad, de manera tal que se encuentre acorde a los objetivos y alcances ya existentes del actual plan de estudios.
2. Desarrollar, de manera colaborativa junto con otras Instituciones participantes en el proyecto LeNSin y pertenecientes a la red LeNS, seminarios, cursos y recursos de aprendizaje, herramientas y guías didácticas bajo el enfoque del Diseño de Sistemas Servicio – Producto Sustentables a ser utilizadas e implementadas por los docentes de la Licenciatura de Diseño en UAM Cuajimalpa
3. Instalar un Laboratorio LeNS⁹ regional que permita el desarrollo del material didáctico a ser instalado en la plataforma descentralizada d.OLEP (Open Learning E-Platform)¹⁰ para la

⁹ Los laboratorios regionales LeNS son espacios donde estudiantes, profesores e investigadores pueden tener acceso a una serie de herramientas y recursos de aprendizaje sobre el Diseño para la Sustentabilidad, actuando como un centro que se

producción distribuida y libre sobre Diseño para la Sustentabilidad bajo el enfoque de Diseño de SSPS, y en el que se permita también una colaboración interdisciplinaria entre los diferentes departamentos y divisiones de la Unidad.

6. Metodología

Si bien el proyecto de investigación “paraguas” LeNSin cuenta con una metodología propia que abarca la preparación de las condiciones generales y el establecimiento de tareas particulares para cada una de las Instituciones de Educación Superior participantes, la metodología particular a llevar a cabo en la Unidad Cuajimalpa de la Universidad Autónoma Metropolitana, contempla un enfoque de investigación interdisciplinario, con el fin de incorporar continuamente fundamentos y argumentos provenientes de disciplinas y áreas de conocimiento como: Diseño de servicios y productos, sustentabilidad, las ciencias sociales y la economía, entre otras.

La investigación contempla tanto la investigación documental como de campo, debido a que se pretende una aproximación a las teorías y fundamentos teóricos alrededor del Diseño para la Sustentabilidad, bajo el enfoque del Diseño de Sistemas Producto - Servicio Sustentables, así como a los factores y actores involucrados en el proceso de enseñanza y aprendizaje durante los estudios en Diseño.

La investigación documental teórica y en campo, será analizada a partir de la consideración del contexto local, con el fin de identificar aquellas condiciones que permitan la formulación, planeación y desarrollo de estrategias, herramientas y material docente en la carrera de Diseño de la UAM Cuajimalpa, con miras a ser aprovechada y apropiada también por otras disciplinas en la institución.

conecta con los demás laboratorios e Instituciones de Educación Superior de la red LeNS, con el fin de adoptar un acercamiento intercultural para favorecer la generación de conocimiento colaborativo.

¹⁰ La plataforma es concebida como un repositorio descentralizado de recursos de aprendizaje (textos, videos, audio, presentaciones, entre otros), de herramientas y guías para apoyar los cursos de diseño y difusión y compartir recursos de aprendizaje

El desarrollo del proyecto desde la incidencia particular en la Unidad Cuajimalpa contempla las siguientes fases:

1. Generación del Estado del Arte del Diseño para la Sustentabilidad en México, y en la Unidad Cuajimalpa de la UAM
2. Aproximación teórico- práctica a nivel docente para la difusión del Diseño de Sistemas Servicio – Producto Sustentables (SSPS) mediante el desarrollo de un Seminario Docente
3. Asistencia, observación y evaluación de un cursos piloto en otra Institución de Educación Superior de Diseño perteneciente a la red LeNS como referente de aproximación de enseñanza y aprendizaje acerca del SSPS
4. Planeación, desarrollo e impartición de un curso piloto en la carrera de Diseño en la UAM Cuajimalpa que contemple la implementación de contenidos teóricos y metodológicos del Diseño para la Sustentabilidad bajo el enfoque del Diseño de SSPS
5. Análisis, evaluación y síntesis del material utilizado y los resultados generados durante el curso piloto
6. Instalación del Laboratorio regional LeNS en UAM Cuajimalpa para la elaboración y difusión de material didáctico sobre Diseño para la Sustentabilidad
7. Elaboración y adaptación del material didáctico sobre Diseño de SSPS, así como el desarrollo de un plan de difusión e implementación acorde a las necesidades de aprendizaje y enseñanza en la carrera de Diseño de UAM Cuajimalpa
8. Hallazgos, resultados y conclusiones

7. Bibliografía

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8. Metas (expresadas en productos de investigación)

- Planeación e implementación de **Seminarios para profesores**
- Diseño e implementación de un **Curso Piloto**
- Sistematización, organización, desarrollo y difusión de **material didáctico** en Plataforma Educativa O.DLEP para la enseñanza y aprendizaje del Diseño para la Sustentabilidad bajo el enfoque del Diseño de Sistemas Servicio – Producto Sustentables en la Unidad Cuajimalpa de la UAM
- Planeación, instalación e implementación de un **laboratorio regional LeNS** en la UAM Cuajimalpa para el desarrollo y difusión de material didáctico sobre Diseño para la Sustentabilidad en red global inter-institucional
- Consolidación de la participación de la UAM Cuajimalpa en la **red internacional LeNS** de Instituciones de Educación Superior de Diseño
- Publicaciones científicas indexadas y de divulgación
- Coordinación de eventos internacionales (seminario docente en UAM Cuajimalpa y conferencia LeNS sobre resultados finales)
- Coordinación de publicación del proyecto LeNS
- Participación en congresos nacionales e internacionales para la divulgación del proyecto

9. Cronograma de actividades (trimestral y anual)

Se considerará, tanto el periodo que abarca las actividades ya desarrolladas y por realizar del Proyecto paraguas LeNSin, como el plazo necesario para continuar con las actividades concernientes al desarrollo y evaluación de productos particulares a implementar en la UAM Cuajimalpa

	III 2015	I 2016	II 2016	III 2016	I 2017	II 2017	III 2017	I 2018	II 2018	III 2018
Convenio institucional con proyecto LeNSin y red internacional LeNS	■									
Estado del Arte DfS y SPSS México y Diseño de SSPS		■								
Planeación e implementación de Seminario para profesores				■						
Asistencia, observación y evaluación de cursos piloto en otra Institución de Educación Superior de Diseño perteneciente a la red LeNS					■			■		
Planeación, desarrollo e impartición de un curso piloto en la carrera de Diseño en la UAM Cuajimalpa					■	■	■	■		
Análisis, evaluación y síntesis del material utilizado y los resultados generados durante el curso piloto							■	■		
Instalación del Laboratorio regional LeNS en UAM Cuajimalpa					■	■				
Integración de alumnos de servicio social								■	■	
Coordinación de 2ndo Curso Piloto en Instituto regional socio de México (UVM)							■	■		
Elaboración y adaptación del material didáctico sobre Diseño de SSPS, así como el desarrollo de un plan de difusión e implementación acorde a las necesidades de aprendizaje y enseñanza en la carrera de Diseño de UAM Cuajimalpa								■	■	
Coordinación de publicación final del proyecto LeNS							■	■	■	■
Evaluación de uso y difusión de material didáctico									■	■
Coordinación y asistencia conferencia LeNS (cierre de proyecto)									■	■
Análisis de evaluaciones										■
Asistencia a congresos nacionales para divulgación del proyecto										■
Conclusiones										■

10. Requerimientos y justificación de los recursos solicitados

10.1 Recursos Humanos

El proyecto de investigación paraguas LeNSin, tuvo su inicio operativo a inicios del año 2016, contando con la participación directa de la Mtra. Brenda García Parra, perteneciente al cuerpo académico *Procesos Educativos y Lenguajes para el Diseño* del Departamento de Teoría y Procesos de Diseño como representante de la UAM Unidad Cuajimalpa, adoptando el carácter de “socio” regional de México en la red internacional LeNS de manera vinculante con la UAM Unidad Azcapotzalco.¹¹ En dicha Unidad se cuenta con la participación de la Mtra. Sandra Molina Mata y el Mtro. Alejandro Ramírez, quienes desarrollan actividades en paralelo establecidas en el proyecto LeNSin y de acuerdo con sus necesidades particulares a nivel curricular.

De manera externa, se cuenta con la participación del Mtro. Rodrigo Lepez Vela (UVM), quien funge como socio de la red regional México y desarrolla actividades de soporte en actividades y elaboración de productos académicos y de investigación específicos contemplados por el proyecto LeNS.

Asimismo se solicitará la participación de alumnos de Servicio Social, quienes apoyarán especialmente en la recopilación de resultados, así como en tareas de edición y clasificación de material didáctico desarrollado.

10.2 Infraestructura, equipamiento y recursos materiales (expresados en rubros de gasto)

A continuación se muestra la relación entre las actividades y los recursos necesarios para su desarrollo y ejecución, indicando la fuente de procedencia (Unión Europea, y DCCD Unidad Cuajimalpa en el caso de solicitarse apoyo complementario).

¹¹ Si bien las Unidades Cuajimalpa y Azcapotzalco realizan actividades particulares y en paralelo en el proyecto LeNS in, el convenio de la Red LeNS reconoce la participación de la UAM como Institución individual

ACTIVIDAD GENERAL	ACTIVIDAD ESPECÍFICA	FINANCIAMIENTO DESDE PROYECTO PARAGUAS (ERASMUS + UE)	SOLICITADO DCCD – UAM CUAJIMALPA			
			RUBRO	UNIDAD	COSTO UNITARIO	TOTAL
Planeación e implementación de Seminario para profesores						
Asistencia, observación y evaluación de cursos piloto en otra Institución de Educación Superior de Diseño perteneciente a la red LeNS	1er Curso Piloto. Instituto Srishti, India. Febrero 2017					
	2do Curso Piloto. Instituto Tecnológico Guwahati, India. Febrero 2018		Viáticos	1	\$10,000	\$10,000
Planeación, desarrollo e impartición de curso piloto en la carrera de Diseño. UAM Cuajimalpa						
Instalación del Laboratorio regional LeNS en UAM Cuajimalpa	Equipo de cómputo (2 computadoras, 4 tabletas, 2 Laptops)					
	Libros electrónicos					
	Impresión de material para comunicación dentro del laboratorio		Impresiones (cartucho impresora)	1	\$1,000	\$1,000
Coordinación de 2do Curso Piloto en Institución socia regional (UVM)						
Elaboración de material didáctico de Diseño de SSPS para la carrera de Diseño UAM C	Adaptación del material didáctico original de acuerdo con las necesidades particulares de docencia detectadas		Equipo de cómputo Software para edición de videos (Video Scribe)	1	\$1,127 (licencia anual)	\$1,127
	Investigación documental complementaria		Libros			\$2,000
Integración de recursos didácticos en plataforma digital de Red LeNS regional	Soporte en servidor institucional de la Unidad Cuajimalpa		Otros Dominio y hospedaje	1	\$200	\$200
Coordinación de publicación final del proyecto LeNS						
Coordinación y asistencia conferencia LeNS (cierre de proyecto)						
Asistencia a congresos nacionales e internacionales para la divulgación del proyecto			Inscripción a congresos			\$10,000
			Viáticos			
Presupuesto Total del Proyecto (complemento DCCD)						24,327

11 Vinculación con los planes y programas de estudio de la división y la Unidad

El planteamiento y la fundamentación teórica del proyecto se relaciona de manera directa con dos de las tres líneas emblemáticas que caracterizan los ejes rectores de la UAM Cuajimalpa: **Sustentabilidad y Cambio Tecnológico**.

Mediante el análisis profundo de los aspectos y factores que se encuentran relacionados con las respuestas generadas desde la Universidad para fortalecer valores que den respuesta a los retos de **Sustentabilidad**, es posible identificar una necesaria inclusión de contenido a nivel curricular que ofrezca una formación sólida conformada por cursos de alta calidad, material didáctico, herramientas y valores fortalecidos, tanto en alumnos como en los docentes que imparten dichos cursos.

Inicialmente, el proyecto tendrá incidencia directa en diferentes UEAs y actividades fundamentalmente vinculadas con la carrera de Diseño de la Unidad. Sin embargo, de acuerdo con el planteamiento teórico en el que se sustenta, se observa una posible vinculación con disciplinas pertenecientes a otros departamentos y divisiones. De manera inicial, el material didáctico derivado del proyecto de investigación resultará también pertinente para ser utilizado por docentes y alumnos de la UEA de formación inicial Seminario de Sustentabilidad por contemplar conceptos clave en torno al Desarrollo Sustentable, Ciclo de Vida, pilares Sociales, Económicos y Ambientales de la Sustentabilidad, entre otros.

En este sentido, temáticas contempladas en las diferentes herramientas relacionadas con el Diseño de Sistemas Servicio – Producto, como Análisis de Ciclo de Vida, resulta vinculante con las disciplinas pertenecientes a la División de Ciencias Naturales e Ingeniería, y el fundamento de las Economías Distribuidas que analizan los patrones particulares de los modelos de producción y consumo de manera distribuida y descentralizada que propician un mayor acercamiento sistémico en las propuestas de Diseño de productos y servicios sustentables, podría resultar de interés particular en las disciplinas de la División de Ciencias Sociales y Humanidades.

Asimismo, se pretende analizar la convergencia directa con el programa de maestría MADIC (Maestría en Diseño, Información y Comunicación), al involucrar temas de diseño y comunicación desde una visión sistémica.

El medio para lograr la planeación, retroalimentación, actualización y evaluación de los posibles medios para difundir un conocimiento y generar aprendizaje relacionado con el Diseño Sustentable se propone mediante una plataforma digital que ofrezca, mediante una apertura hacia el **cambio tecnológico**, un repositorio descentralizado de recursos de aprendizaje (textos, videos, audio, presentaciones, entre otros), de herramientas y guías para apoyar los cursos, y permitir la difusión e intercambio recursos de aprendizaje entre Universidades localizadas en diferentes países con el fin de fomentar una colaboración activa y constante.

11. Vinculación Institucional

Posibles colaboraciones con otras instituciones de investigación y/o docencia nacionales o internacionales

La gestación y propósito inicial del proyecto paraguas LeNSin se origina en la importancia de la cooperación y vinculación inter-institucional a nivel Internacional, partiendo desde un inicio con la intervención y colaboración de más de 15 Instituciones de Educación Superior que imparten la licenciatura en Diseño y que forman parte de la red LeNS.

El vínculo ya existente entre las universidades participantes se ha consolidado más allá de los convenios institucionales, puesto que las dinámicas de colaboración para el intercambio de material didáctico, casos de estudio, visitas, contacto entre alumnos y proyectos afines perfilan una comunicación que trascenderá los límites del proyecto paraguas LeNS.



Application Form

Selection: 2015

KA2 – Cooperation for innovation and the exchange of good practices –

Capacity Building in the field of Higher Education

Call for Proposal EAC/A04/2014

**the international Learning Network of networks on
Sustainability / LeNSin**

DETAILED DESCRIPTION OF THE PROJECT

(To be attached to the eForm)

Version 1 – 1.10.2014

PART D - Quality of the project team and the cooperation arrangements

D.1. Organisations and activities

This part must be completed separately by each organisation participating in the project (applicant and partners).

Partner number		P1
Organisation name & acronym	Politecnico di Milano, POLIMI	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>The Politecnico di Milano is one of the most outstanding technical universities in Europe. Established 1863, it is the largest school of architecture, design and engineering in Italy, with two main campuses located in Milan, the heart of fashion and design industries, and five more premises around the Lombardy region, in Northern Italy. The university has around 1200 permanent professors and 40000 students. Within the University, different structures work in Design and Innovation: the Design School (member of Cumulus, BEDA, Icoagrada and ICSID) focused on education; the Design Department focused on research; the Design Consortium focused on applied research, publishing activities and promotional design ventures.</p> <p>Polimi, through the group of research Design and Innovation for Sustainability (DIS), has expertise within Design for Sustainability (DFS) and sustainable Product-Service System (PSS) in research and didactic (in both UG and PG level), experience on educational national and international network. Through the METID centre (Method and Innovative Technologies for Didactic) it has competencies on the most advanced methodologies, tools and strategies for education.</p> <p>The Design department was involved in a large number of collaborative Europe funded projects, such as: LeNSes – the Learning Network for Sustainable Energy Systems, EU funded (ACP-EDULINK II); LeNS – the Learning Network on Sustainability, EU Asia Link programme; MEPSS – Methodology for Product Service System development, FP6; Tango – Toward A New intergenerational Openness, Culture Programme (European Union – Education and Culture DG); HICS – Highly customerised solutions. Solution-oriented design, production and delivery systems, FP4 Competitive and Sustainable Growth Programme; SCORE! – Sustainable Consumption and Production: Opportunities and Challenges, FP6.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		
<p>Polimi is the project coordinator, leader of WP2 Development (leader of Task 2.9, 2.10 and 2.11) and WP5 Management (leader of Task 5.1 and 5.3) because its past experience on similar projects. Polimi is also involved as participant in all other WPs and in particular will be leading Task 1.3 because the kick-off meeting will be in Milan and Task 4.5 because the Decentralised Conference in Europe will be in Milan. Polimi as project coordinator has the role of establishing procedures for the internal evaluation of all activities in order to (I) provide updated information on activities to be carried out, achievements and critical aspects, (II) evaluate the intermediate and final results of the projects, (III) ensure project results are delivered to contract and achieve the stated objectives, (IV) generate learning amongst involved partners. In other words, Polimi will constantly monitor the project activities progress, in order to check the correspondence with the Action Plan.</p>		
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project		
<i>Please add lines as necessary.</i>		
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>	
Carlo Vezzoli	He is the head of the Design and System Innovation for Sustainability (DIS) research group at the Design department of the Politecnico di Milano He is professor of 'Design for environmental sustainability' and 'System design for sustainability' of the School of Design of the same institution. He coordinated	

	several international research projects and took part in EU funded researches (SusHouse, MEPSS, SCORE!, Tango, LeNS, LeNSes, Sustainability Maker). His most recent book is Vezzoli C., Kohtala C., Srinivasan A., (2014) Product-Service System Design for Sustainability, patronised by the United Nation (DESD). London: Greenleaf, ISBN 978-1-906093-67-9, pp. 1-504, to be published soon both the Chinese and Thai editions.
Fiammetta Costa	Ph.D in Industrial Design and researcher at the Design Department of Politecnico di Milano. Principal areas of her research interests are: environmental design and user research methods especially applied in the field of health care design. She has covered coordination roles in researches financed by the Italian Ministry of university and technological research (MIUR) and Lombardy Region and is currently involved in an European Research titled LIFE 2.0_Geographical positioning services to support independent living and social interaction of elderly people.
Elisa Bacchetti	Graduated at Politecnico with a thesis project focused on the development of a sustainable PSS to promote intergenerational dialogue in Milan suburbs, within the TANGO/AH-Design EU project (Education and Culture DG). Since graduated she is member of the Design and system Innovation for Sustainability (DIS) research group as fellow researcher in the area of "Dissemination of System Design for Environmental Sustainability and Social Inclusion", working as a member in two EU funded projects, respectively LeNSes (www.lenses.polimi.it) and Sustainability Maker (www.sustainabilitymaker.org , www.innonative.com).
Emanuela Delfino	Graduated at Politecnico with a thesis project focus on the implementation of a sustainable Product Service System in low-income context (Cape Town suburbs) in collaboration with DIS and the Cape Peninsula University of Technology and several local NGOs. Since she graduated has become member of the Design and System Innovation for Sustainability (DIS) research unit, has tutored for the courses 'Design for Environmental Sustainability' and 'System Design for Sustainability' and she has been working as member of the Polimi Team in the LeNSes project (EU funded). - Delfino E., Vezzoli C. and Ambole L. 2014. System Design for Sustainable Energy for all. A new challenging role for design to foster sustainable development. http://dx.doi.org/10.7577/formakademisk.791 (pubblicato entro Relating Systems Thinking and Design I. Practical Advances in Systemic Design. Birger Sevaldson and Alex J. Ryan Editorial).

Partner number		P2
Organisation name & acronym	Aalto-korkeakoulusäätiö, AALTO ARTS	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		

Aalto University provides world-class education in art, technology and business. The combination of the fields brings a whole new dimension to our activities: in addition to the traditional degree options, our students and researchers have the possibility to build a unique study and work experience that corresponds to their personal preferences and career aspirations. At the School of Arts, Design and Architecture, theory meets practice; we focus on combining practical assignments and projects with newest ideas and knowledge. Our students create human-centred environments for living, wellbeing, learning and working. We have a MA programme for sustainable design, Creative Sustainability, which has been collaborating with the European partners of the proposed project already for a longer time both in projects and mobility. Overall, sustainability is integrated to our studies and research as well as everyday practices.

The key members of the staff for the project will come from the NODUS research group. The research of NODUS members focuses on sustainable design solutions, strategies and frameworks. Their members were involved in the LeNS project, and we collaborate closely on research and publications with other European members of the LeNSin project in question. Our members are also deeply involved in teaching in and developing the multidisciplinary Creative Sustainability Master’s programme.

Aalto University School of Arts, Design and Architecture has extensive experience of participating in European projects (Creative Europe, Culture, Erasmus+, Erasmus LLP, Tempus) both as project coordinator and project partner. We have experienced financial and legal staff supporting project management, as well as internal network of experts sharing their experiences. We are actively participating in various international organisations and networks such as Cumulus, which will collaborate with disseminating the project results.

Please describe also the role of your organisation in the project (limit 1000 characters).

Aalto is leader of WP4 Dissemination and exploitation (in particular leader of Task 4.1) because have experience in designing and implementing dissemination activities, and involved as participant in all other WPs in particular will be leading Task 2.1.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Cindy Kohtala	<p>Cindy Kohtala (MA) has been a sessional instructor and Master’s tutor in the Design Department for more than 15 years, specializing in Sustainable Design and sustainable Product-Service System design teaching. She has been involved in various aspects of the Creative Sustainability Master’s programme, including teaching, student intake, student tutoring and course coordinating.</p> <p>Kohtala worked in the LeNS project on which this current application and network of partners is based. This involved developing teaching materials, teaching in cross-cultural contexts and compiling and editing a textbook on sustainable Product-Service System design. She is also an editorial team member for a Special Volume of the Journal of Cleaner Production on sustainable Product-Service System design, all team members representing the European partners in this current project in question (LeNSin). Her current doctoral research examines Fab Labs and distributed communities in digital fabrication, which covers precisely the topic areas of this application (e.g. open hardware, distributed design and distributed economies). Through this research she has gained a deep understanding of</p>

	the environmental issues in distributed material peer production and what barriers and opportunities exist for more sustainable practices in maker communities.
Mikko Jalas	<p>Mikko Jalas holds a PhD from Aalto University School of Business and is a Senior Lecturer at Aalto University School of Arts, Design and Architecture, in the Department of Design (starting 1.4.2015). His research work focuses on sustainable consumption, energy efficiency and renewable energy. In particular, he studies time use, everyday rhythms, practices and behavioural changes related to sustainability. He has served as the manager of the Creative Sustainability - Master's programme at Aalto University School of Business and been responsible for curriculum development in that program. He has experience in supervision in bachelor, masters and PhD degrees as well as in professional training. He has written teaching material for the area of corporate responsibility and edited a textbook in the area.</p> <p>In addition he been professionally involved with eco-design, forest certification, and wind power, and is currently a board member at Lumituuli Oy, a small citizen owned windpower company. For details on research and teaching activities, see personal CV at https://people.aalto.fi/pdf/108097.pdf</p>

Partner number		P3
Organisation name & acronym	BRUNEL UNIVERSITY LONDON, UBRUN	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>Brunel University London is a dynamic institution with over 15,000 students and nearly 900 staff. With a turnover of more than £160 million, the University is a Higher Education and research establishment with considerable intellectual, financial and social resources as a major contribution to the economy and community of the West London region. It also plays a significant role in the higher education scene with numerous national and international links and partnerships with both academia and industry. Brunel comprises of 3 colleges and 3 Research Institutes conducting research from social sciences and health and social care to design, mechanical and material engineering and information systems, computing and mathematics.</p> <p>Design at Brunel is a multidisciplinary and increasingly interdisciplinary activity, driven by human need, and its research approach seeks to integrate the human and the technological - combining human centred design investigation with the technological or systems dimension enabled by design thinking and processes. The distinctiveness of the subject area of Design ('Brunel Design') lies in its integrated engineering approach to design. Brunel Design has a well established record of research excellence, with multidisciplinary, product related design research that is grounded on strong engineering design traditions.</p> <p>Brunel Design has built a strong expertise in Design for Sustainability with a focus on opportunities and problems to design products, services and product-service systems integrating socio-ethical, environmental and economic sustainability principles. Aim of the Sustainable Design research group is to embed sustainability design thinking in society, and in particular to develop, test and diffuse design approaches, methods and tools to support designers, companies and institutions to design solutions with superior quality with respect to sustainability values.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		

Ubrun is leader of WP1 Preparation (in particular leader of Task 1.1) because has wide experience in DfS teaching and research, and involved as participant in all other WPs, in particular will be leading Task 2.2 (Design of the didactic pilot courses) and Task 4.2 (General publicity of the project)

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project
Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Fabrizio Ceschin	<p>Fabrizio Ceschin is a Lecturer in Design for Sustainability. He joined Brunel in September 2012, and was formerly at Politecnico di Milano (Italy). Fabrizio has expertise in Design for Sustainability, and in particular in the elaboration of strategies, methods, and tools to enable companies/public institutions/NGOs/communities to tackle sustainability challenges at different levels: product level (Life Cycle Assessment, Ecodesign, Emotionally Durable Design), Product-Service System level (new service propositions, sustainable business models and value chains etc.), and social innovation level (design for grass-root innovations). Within this framework he has been an investigator in several international and national research projects, funded by the European Commission, EPSRC, Italian national institutions, small and medium enterprises, and multinational enterprises.</p> <p>Recent publications related to the domain of the project:</p> <p>Ceschin, F. (2015, in press) The role of socio-technical experiments in introducing sustainable Product-Service System innovations. In: Agarwal, R., Selen, W., Roos, G., and Green, R. (eds) The Handbook of Service Innovation. London: Springer.</p> <p>Vezzoli, C., Ceschin, F., Diehl, J.C., Kohtala, C. (2015, in press) New design challenges to widely implement sustainable Product-Service Systems. Journal of Cleaner Production.</p> <p>Vezzoli, Ceschin, F., Diehl, J.C. (2015, in press) Sustainable Product-Service System Design applied to Distributed Renewable Energy: Fostering the goal of sustainable energy for all. Journal of Cleaner Production.</p> <p>Ceschin, F. (2014) Sustainable Product-Service Systems: Between Strategic Design and Transition Studies. Cham, Heidelberg, New York, Dordrecht, London: Springer.</p> <p>Ceschin, F. (2014) How the design of socio-technical experiments can enable radical changes for sustainability. International Journal of Design 8(3) : 1-21.</p> <p>Ceschin, F. (2013) Critical factors for implementing and diffusing sustainable Product-Service Systems: Insights from innovation studies and companies' experiences. Journal of Cleaner Production 45:74-88.</p> <p>Vezzoli, C., Ceschin, F. (2011) The Learning Network on Sustainability: an e-mechanism for the development and diffusion of teaching materials and tools on Design for Sustainability in an open-source and copy left ethos. International Journal of Management in Education 5(1):22-43.</p>
David Harrison	<p>Professor David Harrison founded the Cleaner Electronics research group in 1994. The group has carried out many research projects in environmentally sensitive design, focused on reducing the environmental impact of electronic products. They have collaborated with over thirty companies as partners on these projects. Projects include the first ecological footprinting of mobile</p>

	<p>phones and computers, and the development of design tools and methods to support eco innovation. An EU Framework 5 project on the active disassembly of products for recycling developed a range of active fasteners. Other projects addressed the use of additive printing processes to manufacture circuits on biodegradable substrates. David Harrison's current research interests include making users more efficient through design for sustainable behaviour. He was recently involved in a project to redesign a powerdrill for a circular economy, working with a major retailer. He teaches courses in the LCA of consumer products to design students.</p> <p>Recent publications related to the domain of the project: Lockton D, Harrison D, Stanton N (2010) The Design with Intent method, Applied Ergonomics, Vol.41 No.3, pp. 382-392, May 2010 Lockton D, Harrison D, Stanton N, (2014) Redesign for sustainable behaviour: Concept generation using a design pattern toolkit. The Design Journal, Vol 17, No.1 Harrison D, Qiu F, Fyson J, et al. (2013) Coaxial single fibre supercapcitor for energy storage, Physical Chemistry Chemical Physics, (PCCP) 2013, Royal Society of Chemistry, published online 30th May 2013 Dowson M, Poole A, Harrison D, Susman G, (2012) Domestic UK retrofit challenge: Barriers, incentives and current performance leading into the Green Deal 2012/8/15 Energy Policy, Elsevier Dowson M, Harrison D, Craig S, Gill Z (2011) 'Improving the thermal performance of single-glazed windows using translucent granular aerogel', International Journal of Sustainable Engineering, First published on: 01 March 2011 (iFirst) To link to this Article: DOI: 10.1080/19397038.2011.558931 Lockton D, Harrison D, Stanton N, (2011) Models of the User: Designers Perspectives on Influencing Sustainable Behaviour, Journal of Design Research Plant AVC, Harrison D, Griffiths BJ, Lam B (2010) Design standards for product end-of-life processing International Journal of Sustainable Engineering DOI: 10.1080/19397031003686918</p>
Marco Cavallaro	<p>Marco Cavallaro has a PhD in Manufacturing and Production Systems. He is senior lecturer (associate professor) in Design for Manufacturing. He is President at ISPO Italia - National Member of International Society for Prosthetics and Orthotics, EC expert on Additive Manufacturing and Member of ASTM-F42 as well as ISO/TC261 - Committees on Additive Manufacturing technologies. His education and professional experiences are mostly focused on Personalized Production Paradigm, particularly on the development of advanced production systems and generative design tools exploited by human-centered goods, mainly manufactured using novel Composite/Polymeric Materials, ad hoc 3D Scanning Devices and Additive technologies. The manufacturing and engineering knowledge are integrated by medical education on orthopedics, sports and clinical biomechanics. He is currently the ADDFactor project Coordinator (EU-FP7).</p> <p>Recent publications related to the domain of the project: A. Armillotta, M. Cavallaro, S. Minnella (2013). A tool for computer-aided orientation selection in additive manufacturing processes. Proceedings of the 6th International Conference on Advanced Research in Virtual and Rapid Prototyping. October 2013, Leiria, Portugal. M. Cavallaro, G. Moroni, M. Zäh, S. Lutzmann, M. Kahnert (2010). A Methodological Approach to Radical Technological Changes and Improvements in Electron Beam Technology. Proceedings of the ASME 10th</p>

	<p>Biennial Conference on Engineering Systems Design and Analysis. July 2010, Istanbul, Turkey.</p> <p>M. Cavallaro, A. Armillotta (2012). Additive Manufacturing as a potential and functional alternative in Foot Orthotics production. In: DDMC 2012 - Fraunhofer Direct Digital Manufacturing Conference. March 2012, Berlin, Germany. (Peer reviewed paper).</p> <p>A. Armillotta, M. Cavallaro, Minnella (2013). Evaluation of FDM options for fashion shoe heels manufacturing. Proceedings of the 6th International Conference on Advanced Research in Virtual and Rapid Prototyping. October 2013, Leiria, Portugal.</p> <p>A. Armillotta, M. Cavallaro, S. Minnella (2014). Direct Digital Manufacturing of Shoe Heels Through Fused Deposition Modeling. In: DDMC 2014 - Fraunhofer Direct Digital Manufacturing Conference. March 2014, Berlin, Germany.</p>
Ilan de Vere	<p>Dr Ilan de Vere is Head of Design at Brunel University London. His research addresses sustainable and socially responsible design, open design, design pedagogy and curricula. He is conscious of not only limiting the impact of our professional activities on environment and society, but also developing the capacity for designers and engineers to contribute positively to global communities through socially responsible design. He is an award-winning industrial designer with extensive industry experience in new product development (including biomedical, electronic and consumer products and industrial equipment), design for the public domain, commercial furniture design and educational museum design for children. His teaching focuses on the development of curricula that responds to new patterns of professional design practice, with emphasis on creativity and innovation, user-centred design, ethical and sustainable practice, technical expertise and design entrepreneurship. He has a PhD and a Diploma of Sustainability from Swinburne University of Technology, plus a Bachelor of Industrial Design and a BAppSc in Environmental Design from the University of Canberra.</p> <p>Recent publications related to the domain of the project:</p> <p>de Vere, I., Phillips, R. (2015) Using Social Engagement to Inspire Design Learning. Great Expectations: Design Teaching, Research & Enterprise. The 17th International Conference on Engineering and Product Design Education (E&PDE2015), Loughborough University Design School (under review)</p> <p>de Vere, I., Melles, G. (2014) Integrating 'designerly' ways with engineering science: a catalyst for change within product design and development. in Information Resources Management Association (Eds) Industrial Engineering: Concepts, Methodologies, Tools, and Applications. IGI Global ISBN 9781466619456</p> <p>de Vere, I. (2014) A New Consumerism: The Influence of Social Technologies on Product Design. Design Education & Human Technology Relations. The 16th International Conference on Engineering and Product Design Education (E&PDE2014), University of Twente, Netherlands</p> <p>de Vere, I. (2013) Industrial Design 2.0: A Renaissance. Design Education - Growing our Future. The 15th International Conference on Engineering and Product Design Education (E&PDE2013), Dublin Institute of Technology, Ireland</p> <p>de Vere, I., Melles, G., Kapoor, A. (2012) SketchFest: Emphasising sketching skills in engineering learning. Design education for future wellbeing. The 14th International Conference on Engineering and Product Design Education (E&PDE2012).Artesis University College Antwerp, Belgium</p> <p>Melles, G. de Vere, I., Misic, V. (2011) Socially responsible design: thinking beyond the triple bottom line to socially responsive and sustainable product</p>

	design. CoDesign, Vol. 7, no. 3-4, pp. 143-154
Eujin Pei	<p>Dr Eujin Pei is a Lecturer in Product Design at Brunel University with a research focus on Additive Manufacturing and Inclusive Design. He was a Research Fellow at leading institutions including Loughborough University, Brunel University and the University of Southampton; and was a Visiting Scientist to Vaal University of Technology and Central University of Technology, Free State. He commercialised his PhD to produce 26,000 iDCards for worldwide circulation and Apps for Apple and Android devices. His design portfolio includes projects for Motorola, Inc., LM Ericsson, Sennheiser GmbH & Co. KG, and Rentokil Initial where products are being sold today. He is a Member of the Institution of Engineering Designers, Fellow of the Royal Society for the Arts, Manufactures and Commerce and Associate Editor for the Journal of Assembly Automation. He is Convenor for the ISO (International Standards Organisation) Technical Committee ISO/TC261/WG4 for Data and Design Guidelines for Additive Manufacture, and contributes to the British Standards Institution (BSI) for BS8888 standards on Technical Definition, and the AMT/8 Group for Additive Manufacturing.</p> <p>Recent publications related to the domain of the project:</p> <p>E. Pei (2014) "4D Printing – Dawn of an Emerging Technology Cycle", Assembly Automation, 34(4)</p> <p>E. Pei (2013) "Design Futures: The use of Additive Manufacture in Product Design Education" Rapid Prototyping Conference, Driving 21st Century Innovation. Amsterdam, 9-10 April 2013</p> <p>B. Liu, R.I.Campbell and E. Pei (2013) "Real-time Integration of Prototypes in the Product Development Process", Journal of Assembly Automation 33(1)</p> <p>S. Maidin, R.I. Campbell and E. Pei (2012) "Development of a Design Feature Database to support Design for Additive Manufacturing" Journal of Assembly Automation 32(3)</p> <p>E. Pei, R.I. Campbell and M. A. Evans (2011) "A Taxonomic Classification of Visual Design Representations Used by Industrial Designers and Engineering Designers" The Design Journal 14(1)</p> <p>Deon J de Beer, R. I. Campbell and E. Pei (2011) "Additive Manufacturing in South Africa: Building on the Foundations" Rapid Prototyping Journal 17(2)</p> <p>E. Pei, R.I. Campbell and M.A. Evans (2010) "Development of a tool for building shared representations among industrial designers and engineering designers" CoDesign 6(3)</p>

Partner number		P4
Organisation name & acronym	TECHNISCHE UNIVERSITEIT DELFT, TU Delft	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		

Delft University of Technology was established over 165 years ago. Th high quality its research and teaching is worldwide renowned. It views its current role in society as supplying technological solutions that take us significantly further along the road towards sustainability and a flourishing economy. Delft University of Technology offers 14 BSc. and more than 30 MSc. Programmes. All MSc. Courses are taught in English. The current student population is around 19.000 students of which 3.000 are international students.

The faculty of Industrial Design Engineering (IDE) is still amongst the largest design programmes in the world. Over 5.000 Industrial Design Engineers have graduated from the faculty since it was founded in 1969. The emphasis is on the design of durable products and services, taking into account the interests of users, industry, society and the environment.

The research of the Design for Sustainability (DfS) group is part of the Technology transformation research programme. The research under this theme is inspired by the globally accepted need for sustainable development. It aims at generating the knowledge necessary for the design of products and product-service systems (PSS) with superior life cycle performance, as well as making a concentrated effort to actual design and development. Since its establishment the Design for Sustainability Research group has been continuously working on the development of DfS tools and methods for education and practitioners as well as has been responsible for developing DfS standards for the United Nations Environment Program (UNEP). Currently the DfS programme offers a wide range of BSc, MSc. Andp PhD courses in the field of Design for Sustainability including the topic Sustainable Product Service Systems.

Please describe also the role of your organisation in the project (limit 1000 characters).

TU Delft is leader of WP3 Quality Plan (in particular leader of Task 3.1) because has past experience in quality control in EU projects, and involved as participant in all other WPs, in particular will be leading Task 4.6 (Students design award and catalogue) and Task 2.4 (Design and implementation of LeNS regional labs)

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Prof. Dr. Ir. Han Brezet	Since 1992 he is tenure professor in sustainable product design at the IDE faculty, where he has established the DfS program. In cooperation with UNEP Paris and companies like Philips, the program was among the first in the world in the area of life cycle oriented Applied Ecodesign: the development of useful products with de-carbonization, de-toxification and de-materialization as co-drivers. Among the outputs are ca. 30 doctoral dissertations and a few hundred MSc theses.
Dr. Ir. J.C. Diehl	Within the DfS program he is managing the international projects on sustainable product innovation especially in emerging markets. The main focus of his research is the know-how transfer and implementation of sustainable product innovation into an international context. In addition his research has a special interest in cultural differences in product design and developing products for the so called 'Base of the Pyramid (BoP)'. Next to his position at the TU Delft he is consultant for UNIDO and UNEP and invited lecturer at several international universities. He is co-author of the UNEP Design for Sustainability (D4S) manual for Developing Economies (D4S EE).
Dr. Ir. Bas Flipsen	As senior lecturer he is responsible for the Design for Sustainability courses with the IDE curriculum. He is heading the minor on sustainable product

	design
Jairo da Costa Junior MSc.	Bachelor's degree in Industrial Design (2006) and with a Specialisation in Graphic Design and Corporate Strategy (2008), since 2007, he has done research on Design for Sustainability. He has worked at the Design & Sustainability Research Centre (2010-2012) in Brazil, and obtained his Master's degree in Design (2012) on the topic Eco-efficient Services in Product-Service Systems. He is currently working on his PhD research in Design for Sustainability at Delft University of Technology, where he is investigating Product-Service Systems for the Base of the Pyramid (BoP) in Emerging Markets.
Wouter Kersten MSc.	Wouter is working on developing the projects and activities on the theme of 'Systemic Context Variation'. This is a next step paradigm that will help innovators and designers world wide to address innovation in an increasingly complex and connected society. It provides relevant direction for innovators and designers of all shapes and sizes. With the first steps of introducing this paradigm now achieved next steps consist of getting concrete projects going that revolve around or make use of this new theme.

Partner number		P5
Organisation name & acronym	Universidade Federal do Paraná, UFPR	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>The Paraná Federal University (UFPR) is the oldest and fourth largest university in Brazil. The Design & Sustainability Research Center (NDS) is a research group linked to the Design Postgraduate Program of UFPR. The Design of Product-Service Systems is the main research topic at NDS/UFPR. One of the first major case studies was carried out with between 2006 and 2008 and explored the concept of PSS on the packaging systems of components used to protect the chassis during the painting process. The second major case study was carried out at Globusiness (local company), from 2008 to 2010, focusing on a PSS for office space provision. The third case study was carried out between 2010 and 2011 in partnership with Tigre (piping manufacturer) and consisted of a "Product Oriented PSS" for rainwater harvesting, aiming low-income households. From 2012 to the present our research group has been developing a PSS for light provision on low income households, having Accord (wood lamps manufacturer) as the main partner.</p> <p>Throughout this period the continuous dialog with the LeNS partners has been a key factor to enable the advancement of our competences on the issue of PSS Design. LeNS South America is currently coordinated by Prof. Dr. Aguinaldo dos Santos and various initiatives have been organized under its heading, such as the International Symposium on Sustainable Design (2007 (Curitiba), 2009 (São Paulo), 2011 (Recife) and 2013 (Porto Alegre)), which consists on the main event for dissemination of sustainable design in South America.</p> <p>Integrated to the PSS research projects is the theme of Distributed Economy, with projects focusing on locally-based and network-structured initiatives. One of such projects, for instance, deals with the use of Crowd-Design to achieve sustainable solutions for low income communities, involving local companies in the process. This project (Sustainable Maker) is funded by the European Community, led by E-concept (German design company) and is resulting on the Innonatives Platform (www.innonatives.com). Our research facilities (3D printer, 3D scanners, CNC, etc) enable us to explore new models of dialogue between users and manufacturers as well as new and more sustainable business models.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		

UFPR is WP assistant leader of WP2 Development because is the non-EU partner with the biggest experience in DfS research & teaching, and involved as participant in all other WPs. In particular within the WP2 will be leader of Task 2.3 (Development of first version of learning resources), 2.6 (Preparation for the curricular course evaluation meeting), and 2.8 (Revision and finalisation of the courses and learning resources).

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Aguinaldo Dos Santos	<p>Job location: Professor at the Design Department and Design Post-graduate Program, Federal University of Paraná (UFPR), in the city of Curitiba, Brazil. Since 2003 he is the coordinator of the Design & Sustainability Research Center at UFPR.</p> <p>Titles: Car Mechanic Technician – (SENAI/PR, 1984-1986), Civil Engineer (UFPR, 1988 – 1992); MSc on Civil Engineering (UFRGS, 1993 - 1995); PhD on Operations Management - University of Salford, England (1996 – 1999); Post-doctorated on Sustainable Design – Politecnico di Milano (2008/ feb-2009).</p> <p>Main research interests: Sustainable design on low income households</p> <p>Editorial, referee and ad-hoc activities: Editorial, referee and ad-hoc activities on journals such as Ambiente Construído (São Paulo), Construction Management & Economics, Design em Foco, Estudos em Design, Product (IGDP), Journal of Disaster Resilience on the Built Environment and Journal of Construction on Developing Countries. At CNPq (Brazilian Funding Agency) he has coordinated the high committee on Design. He is on the Advisory Board of the Sustainable Maker Project (2013-2016), sponsored by the European Community.</p> <p>Previous and ongoing projects: His recent projects include: A product-service system for light provision on low income houses (funded by SENAI (20014-2015); Leapfrogging the low-income consumer on energy and water consumption (funded by FINEP/CNPq) (2008-2013); product-service system for rainwater harvesting on low-income houses (funded by CNPq/Tigre – 2009-2011); Kits do-it-yourself for low income housing (funded by FINEP/CNPq - 2005–2008): Methodology for designing sustainable products for the electronics sector (funded by CNPq - 2004–2007); Methodology for designing sustainable products on cardboard (funded by Embrart/CNPq - 2004–2007); Methodology for designing sustainable products made of marble/granit (funded by TECPAR - 2002–2004); 1.0 House Project (funded by CITPAR – 2002-2003).</p> <p>Awards/scholarships: Research productivity scholarship (CNPq) since 2003; Academic Merit – UFPR – 2009; CAPES-Emerald Award (research project) - 2009; highly Commended Award (paper), Literati Club - Emerald (England) (2002); Visiting Scholar Placement, Glasgow Caledonian University - 2001; Research Fellowship,</p>

	<p>Salford University – 1999.</p> <p>Organization of scientific events: He has been the Chair of the 7th Brazilian Congress on Design Research & Development (2006); 1st International Symposium on Sustainable Design (Curitiba - 2007); 2nd International Symposium on Sustainable Design (São Paulo – 2009) and the 1st Symposium Paranaense de Design Sustentável.</p> <p>International collaboration: He has been the external evaluator for the European Community on the Learning Network on Sustainability, a project coordinated by Politecnico di Milano along with 6 other universities of Asia and Europe. He has champion the the cooperation agreements between UFPR and Politecnico di Milano (Italy), Köln International School of Design (Germany) and Cape Peninsula University of Technology (South Africa).</p> <p>Recent Publications: SANTOS, Aguinaldo dos . Leapfrog of light provision on low income households in Brazil through the use of LED technology on a Product-Oriented PSS. In: Sustainable Innovation Conference 2013, 2013, Epson. Proceedings of Sustainable Innovation 2013. Epson: The Centre for Sustainable Design, 2013. v. 1. p. 1-18. GOMES, NIVALDO SIMÕES ; DOS SANTOS, AGUINALDO . Defining criteria selection for environmental dimension tools of sustainable design. Strategic Design Research Journal, v. 6, p. 72, 2013. SCHAFER; Martina Jaeger-Erben, Melanie ; SANTOS, Aguinaldo . Leapfrogging to Sustainable Consumption? An Explorative Survey of Consumption Habits and Orientations in Southern Brazil. Journal of Consumer Policy, p. 1-22, 2011. COSTA JUNIOR, J. ; PEREIRA, J. V. I. ; ZACAR, C. R. H. ; ENRICONI, A. M. ; GOMES, N. S. ; SANTOS, Aguinaldo dos . Sistema Produto+Serviço para o cozinhar sustentável: Estudo de Caso Projeto Monno. Projética, v. 1, p. 155-171, 2010. SANTOS, Aguinaldo dos ; Krämer, A. ; Vezzoli . Design Brings Innovation to the Base of the Pyramid. Design Management Review, v. 20, p. 83-89, 2009. BARRETO, S. ; SANTOS, Aguinaldo dos ; Ceschin, F. ; Vezzoli . A taxonomy of strategies for achieving sustainability on the clothing sector. In: Design, Development & Research Conference, 2011, Cidade do Cabo. DDR2011. Cape Town, South Africa: CPUT - Cape Peninsula University of Technology, 2011.</p>
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Partner number		P6
Organisation name & acronym	Universidade Federal de Pernambuco, UFPE	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		

Considered one of the top ten Brazilian universities, the Federal University of Pernambuco has been committed to promote the self sustained development of the Northeast Brazilian region during the last 68 years. UFPE is engaged with the promotion of citizenship and generation of knowledge, focusing on three core activities: education, research and community integration through diverse extension programs. UFPE has three campi in the state of Pernambuco: Recife, Vitoria de Santo Antão and Caruaru. Its main campus has more than 40 buildings, including faculties, libraries, hospital, convention centre, sports centre, student dorms, university restaurant, museums and galleries, radio and TV studio. UFPE has been engaged as a public university with academic excellence offering 102 academic programs at the undergraduate level, 70 master courses, and 49 doctorate courses. UFPE has 33.616 students and 2.500 professors. The Innovation, Design & Sustainability Research Lab belongs to the Design Postgraduate Program at UFPE. Active since 2007, the group carries out research activities related to the development of tools and methods on Design for Sustainability in partnership with public and private institutions and organizations at the national and international level.

Please describe also the role of your organisation in the project (limit 1000 characters).

UFPE is involved as participant in all other WPs, in particular involved in task 1.3 (Organisation of the project set-up meeting), 2.1 (Design and implementation of seminars, 2.4 (Design and implementation of LeNS regional labs), 4.2 (General publicity of the project), 4.5 (Decentralised Conference organisation) and 5.1 (General coordination)

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Leonardo Gomez Castillo	<p>Job location: Professor at the Design Department of the Federal University of Pernambuco (UFPE), in the city of Recife, Brazil. Since 2012 he is the Head of the Design Post-graduate Program. Also he is the coordinator of the Innovation, Design & Sustainability Research Lab at UFPE.</p> <p>Titles: Industrial Designer from the National University of Colombia (1994). M.Sc. in Architecture from Kyoto University (2001), and a Ph.D. in Human an Environmental Studies, also from Kyoto University (2004). From Jul/2011 to May/2012 he was a visiting scholar at the Faculty of Industrial Design Engineering, at the Technical University of Delft, TU Delft.</p> <p>Main research interests: Design for Sustainability, Design Driven Innovation, and Emergency Sheltering.</p> <p>Editorial, referee and ad-hoc activities: Editorial, referee and ad-hoc activities on journals such as Journal of Cleaner Production, Estudos em Design and InfoDesign. He is also advisor to the Design Committee at CNPq and CAPES (Brazilian Funding Agencies).</p> <p>Previous and ongoing projects:</p>

His recent projects include: development of Product + Service Systems (PSS) based on a Design Driven Innovation approach (funded by CNPq (2014-2016); Methodological considerations for Product Service System Design for the Base of the Pyramid (funded by CNPq) (2011-2014); Design Driven Innovation for the Creative Industries: In search of a model of meaning innovation (funded by CNPq/2013-2014); Emergency Sheltering based on Biomimetic Principles (funded by FACEPE- 2010–2013). A Study of Structures based on Biomimicry principles (funded by CNPq - 2010–2012); Development of tools and methodologies for sustainable product design (funded by CNPq - 2007–2012).

Awards/scholarships:

Research productivity scholarship (CNPq) since 2010; Visiting Scholar Placement, Kyoto University – 2001-2004; Research Fellowship at Kyoto Institute of Technology– 1998.

Organization of scientific events:

He has been the Chair of the 3rd International Symposium on Sustainable Design (Recife - 2011).

Recent Publications:

CASTILLO, L. ; TIMOTEO, A. WANDERLEY, V. ; MACHADO, T. ; LIMA, M.E. ; GOMES, C.R. ; GOMES, A. S. . Design of a Self-standing Multimedia Enriched Projector to enhance teaching experience in classroom in Brazilian public schools. Revista Brasileira de Informática na Educação, v. 21, p. 23-36, 2013.

LYRA Gabriela ; CASTILLO, L. . Measuring the environmental impact of the production processes in a medium-sized industry of apparel. Gestão.Org, v. 10, p. 195-210, 2012.

CASTILLO, L. ; LEÃO, Lucidio . Guidelines creation for the Assessment of Environmental Performance in the Graphic Industry. In: 11o P&D Design 2014: Congresso Brasileiro de Pesquisa e Desenvolvimento em Design, 2014, Gramado. Anais do 11o P&D Design 2014: Congresso Brasileiro de Pesquisa e Desenvolvimento em Design, 2014.

CASTILLO, L. ; GÓMEZ, Carla R. P. . Reverse Manufacturing as a Promoting Mechanism of Sustainable Consumption: A Case Study in Natura and Boticario Cosmetic Industries. In: 11o P&D Design 2014: Congresso Brasileiro de Pesquisa e Desenvolvimento em Design, 2014, Gramado. Anais do 11o P&D Design 2014: Congresso Brasileiro de Pesquisa e Desenvolvimento em Design, 2014.

GÓMEZ, Carla R. P.; NOBRIGA, S. E. C. ; OLIVEIRA, V.M. ; CASTILLO, L. . Inovação Social x Tecnologia Social: Duas faces da mesma moeda?. In: XXVIII Simpósio de Gestão da Inovação Tecnológica, 2014, Belo Horizonte. Anais do XXVIII Simpósio de Gestão da Inovação Tecnológica. Belo Horizonte: Editora da Anpad, 2014.

CASTILLO, L. . Product Service Systems Development based on Design Driven Innovation Strategies. In: Congreso de investigación en Diseño, 2014, Bogotá. Memórias del primer congreso de investigación en diseño. Bogotá: Editora de la Universidad Nacional de Colombia, 2014.

Partner number		P7
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Organisation name & acronym	Srishti School of Art, Design and Technology, Srishti
D.1.1 - Aims and activities of the organisation	
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>	
<p>Srishti School of Art, Design and Technology was founded in 1996 by the Ujwal Trust with the objective of providing art and design education in an interactive and open learning environment, fostering a community of learners among all our faculty, students, design professionals and staff. Srishti is one of the leading design schools in South Asia, offering a unique interdisciplinary platform for teaching and learning; a model institution for innovation, sustainability and commitment to social, economic and environmental issues of tomorrow, and cutting-edge design.</p> <p>Srishti's mission is facilitated by its organizational structure – a “community of learners” comprising industry-experienced faculty and energetic students who continually explore and experiment with art and design pedagogies, aesthetics, values and innovative practices. Since its inception, Srishti has undertaken interdisciplinary research in sustainability focusing primarily on the interaction between design, environment and sustainability. Srishti hosts a number of centers and labs, like DesignEARTH, Grass Roots Innovation Design Studio (GRIDS), Sustainable Urbanism International (SUI) –Srishti Collaborative, Natural Fibres Lab, Law+Environment+Design Laboratory (LED), that have a research focus on environment, community, heritage and sustainability. The research labs facilitate projects within a wide range of environmental and community focus using design thinking to innovate solutions, products and ways of raising awareness.</p> <p>Srishti has also been involved in many projects that have a strong focus on sustainability. Details of the labs and projects are attached in the accompanying document – (Srishti Sustainability Projects Document)</p>	
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>	
<p>Srishti is assistant leader of WP1 Preparation because has past experience in DfS educational projects, and involved as participant in all other WPs. In particular within the WP1 will be leader of Task 1.2 (Definition of exchange agenda and modalities) and within the WP4 leader of task 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs).</p>	
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project	
<i>Please add lines as necessary.</i>	
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Mary Jacob	Mary Jacob is currently the Dean of Professional Diploma Program in Srishti. She has worked on various projects with students, which includes Sustainable Design and Inclusive Design, these two being her core areas of interest. An architect by training, she has a wide range of experience in architectural and interior projects. Mary played an active role in coordinating the three-year EU funded project LeNS (Learning Network on Sustainability), which was a partnership of seven colleges in Asia and Europe.
Deepta Sateesh	Deepta is Director of the Law+ Environment+ Design Laboratory, a partnership between the Srishti School of Art, Design and Technology and Natural Justice, and is engaged in collaborative research and practice that challenges current social, economic, cultural and ecological frameworks, through an interdisciplinary and creative approach. Till recently she also headed Strategy at Srishti, working on

	<p>institutional growth and building long-term partnerships. Her areas of interest include critical issues of development and progress and, the importance of socio-ecological relationships to build adaptive capacity towards resilience. Previously, Deepta has practiced as an urban planner with expertise in sustainable development and environmental leadership in environmental planning, land-use and transit-oriented development, tourism planning projects, as well as strategic planning for ecologically sensitive regions. She has a Master of City Planning from the University of Pennsylvania, USA, and a Bachelor of Architecture from Manipal Institute of Technology, India. Deepta, via the lab, offers interdisciplinary projects to design students at Srishti, mentoring them through design exploration, interpretation and demonstration, to develop an ability to embrace complexity. In the past, she has also taught at the University of Pennsylvania, USA, and RV College of Engineering, Bangalore, India. She is passionate about learning-by-doing and is a dancer, an equestrian, a traveler, constantly seeking adventure and change.</p>
Shweta Srivastav	<p>Shweta is an Architect and Researcher and holds a PhD from Cardiff University, UK where she looked at Carbon Footprints as a Policy Tool in Indian Cities: Method, Process and Applications. Her experience and interest ranges from tools that can help guide implementation of sustainability policies from building energy design tools to policy tools for the larger urban areas as well as broader questions of Sustainability as a concept and Design for Sustainability. Some publications - Article published in Green Construction + Design – Water conservation, August 2014 Paper presented at the PLEA 2011 conference, Louvain-la-Neuve, July 2011 - The cost implications of refurbishment and demolish and built pathways for a dwelling energy upgrade, Shweta Srivastav, Simon Lannon, Huw Jenkins, and Phil Jones, Welsh School of Architecture, Cardiff University, Cardiff, U.K. Paper presented at the Building Simulation 2009 conference, Glasgow, July 2009 - A Review and comparison of data visualisation techniques used in building design and in building simulation, Shweta Srivastav, Simon Lannon, Donald K. Alexander, and Phil Jones, Welsh School of Architecture, Cardiff University, Cardiff, U.K. Journal Article published in International Journal of Low Carbon Technologies, August 2009 - Use of traditional passive strategies to reduce the energy use and carbon emissions in modern dwellings, S. Srivastav and P.J. Jones, Welsh School of Architecture, Cardiff University</p>
Jacob Mathew	<p>Jacob is CEO of Industree Foundation and Industree Skills Transform Pvt Ltd, in the Cultural Creative Manufacturing Industry, and is cofounder of Idiom Design, Dovetail Furniture and Spring Health. Spring Health is an affordable safe drinking water company in rural India. Jacob works at the intersection of Design, Business, sustainability, Capital and Impact. With impact enterprises as design Principal at the Impact Edge incubator at Srishti School of Art Design & Technology. Jacob is a sustainability practitioner, in low energy commercial interiors for retail, in low carbon foot print residential construction and works in business design for impact enterprises. Jacob is working on several sustainable business initiatives including, sun powered irrigation and torrefaction based agriculture waste conversion to coal. Jacob has</p>

	spoken at conferences organized by the Design Management Institute, Confederation of Indian Industry, Association of Designers of India, Indian Institute of Interior Designers, India Green Building Council and World Economic Forum.
Ravi Mani	<p>Ravi has an environmental studies, engineering and MBA background. As a LEED Accredited Professional (LEED-AP) he is a sustainable development consultant with emphasis on environmentally responsible architecture and renewable energy solutions. In spatial design, he likes to explore space, time and energy in a rhythmic order using Indian aesthetics that is conducive to well-being and comfort. He has over twenty years of management consulting and industry experience in North America, Europe and Asia in diverse industries – green building consulting services and supply chain management. He was speaker at sustainability conferences including Green Office Haworth Sustainability Forums, Better Buildings Better Companies Green Building Conference, Shanghai and Green Building forum, Dubai. Lean and green hands-on skills include earth construction, Life Cycle Analysis, Hoshin Kanri strategy planning, Quality Function Deployment (QFD), benchmarking, six-sigma, Materials Requirement Planning (MRP), and Just-In-Time (JIT) systems. Multi-lingual, intermediate level French.</p> <p>M.Sc. Architecture – Advanced Environmental and Energy Studies from CENTRE FOR ALTERNATIVE TECHNOLOGY, Graduate School of the Environment (GSE) Wales, UK</p> <p>M.B.A – Finance and International Business, NEW YORK UNIVERSITY, STERN SCHOOL OF BUSINESS, New York, NY</p> <p>M.S – Industrial and Systems Engineering, GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA</p> <p>B.Tech – Mechanical Engineering, INDIAN INSTITUTE OF TECHNOLOGY, Madras, India</p>

Partner number		P8
Organisation name & acronym	Indian Institute of Technology Guwahati, IIT Guwahati	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		

Indian Institute of Technology Guwahati (IIT Guwahati) has eleven departments and three inter-disciplinary academic centres covering all the major engineering, science and humanities disciplines, offering BTech, BDes, MA, MDes, MTech, MSc and PhD programmes. It has been able to build up world class infrastructure for carrying out advanced research and has been equipped with state-of-the-art scientific and engineering instruments. It conducts researches within its academic programmes under all the departments and the academic centres. Its faculty members also conduct research projects sponsored by various government agencies and companies.

IIT Guwahati established full-fledged Centre for the Environment, in May 2004. the Centre has provided dedicated rooms and space for establishing the Institutional Biotech Hub funded by DBT, GOI under special programme for the North-Eastern States and the same is functioning from the Centre. The Department of Design(DoD) offers an M.Des. degree, a B.Des. degree (the only undergraduate level degree of its kind in an Indian Institute of Technology) and a PhD degree in Design. The design program presently offers a course on Design for Sustainability following the Product Service Systems Approach in Design.

Recently Related Activities:

IIT Guwahati being one of the foremost technical institutions in the North-east India plays a key role in fostering the concept of sustainable green solutions. Examples of green technology implementation at various locations in the North east India is presently conveyed through media and other communication resources. Their success stories are important from the context of long term sustainability. It is this issue that the Green Office which started on Oct 30, 2013, attempts to address with a focus on North-east specific Green R&D. The central goal of the Green Office, IITG is to target and implement sustainable green solutions in the diverse fields of energy efficiency and waste management.

Please describe also the role of your organisation in the project (limit 1000 characters).

IIT Guwahati is involved as participant in all other WPs, in particular involved in task 1.3 (Organisation of the project set-up meeting), 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs), 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation) and 5.1 (General coordination)

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Ravi Mokashi Punekar	Is Professor and Former Head of Department of Design. He has a Ph.D in Design and a MDes 9Product Design from IDC, IIT Bombay. With 25 years of teaching experience in Design, he areas of research are in Product Innovation, Design for Indian Craft and Well being, Product Innovation and Design for Sustainability. Has two PhD research scholars who have completed their Thesis and 5 other research scholars who are pursuing their doctoral Program in Design.
Sharmishta Banerjee	M.Sc (Product Design Engineering) TU Delfts. Presently. Pursuing her Doctoral Research in Design for Sustainability at IIT Guwahati. Is currently Assistant Professor in Product Design at IIT Guwahati. He has professional experience in the areas of product design of agricultural equipment, Design of Health care products. Her area of research are in the area of Design Innovation for Developing Economies.
Avinash Shende	Avinash Shende is Assistant Professor at Department of Design. He has 7 years of experience in Product Innovation, Design and Development . He is

	completing his Doctoral Research in Creativity and Product Innovation. He has extensively worked in development of cane and bamboo products, Lighting design and furniture Design.
A.K Das	Professor and Former Head of Department of Design, IIT Guwahati. Is currently Director IIIT, Imphal (On Deputation). Has worked extensively on Product Design and Development of Human Powered Transport Systems. He has Two Doctoral Candidates who have completed their PhD under his supervision and 6 other candidates who are currently pursuing their research. A Product Designer who has professional expertise in Appropriate Technology Design and Development including Human powered Cycle Rickshaw Design, Design of Loom for IndianWeaving community of the North East and Design of Product in Plastic Composites and # D printing Technologies.
Sougata Karmakar	M.Sc. PhD (Ergonomics), is currently Assistant Professor, Department of Design, IIT Guwahati. He has 4 years of experience in Ergonomic research in leading R&D organization of Government of India and is currently engaged in research in the areas of Human factors and anthropometry studies related to Small scale Industries, Tea workers amongst Tea Gardens of North East region of India.
Sachin Kakoty	Professor Department of Mechanical Engineering, IIT Guwahati. Is currently Dean (Infrastructure Development IIT Guwahati) and Co-ordinator, Rural Technology Development Action Group (RuTAG) Has worked extensively on Product Development of Tribology, Duct Acoustics, Mechanical System Design, Rural Technology with a focus on Applications for Rural Needs. He has Five Doctoral Candidates who have completed their PhD under his supervision.
Pinakeshwar Mahanta	Professor and Former Head of Department of Mechanical Engineering, IIT Guwahati. He is presently the Dean (Faculty Affairs) at IIT Guwahati. He has worked extensively on Engineering Design and research on Thermal Radiation with Participating Media, Fluidization, Energy Conservation and Renewable Energy. Has 7 Doctoral Candidates who have completed their PhD under his supervision .

Partner number		P9
Organisation name & acronym	Tsinghua University, TSINGHUA	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		

Tsinghua University is the most highly regarded university in China. Among over 120,000 students who have graduated from Tsinghua since its founding are many outstanding scholars, eminent entrepreneurs and great statesmen. The Academy of Arts & Design was established in 1956 to meet the country's demand for art design professionals. It has cultivated a large number of art and design professionals, turning out 8,442 graduates with bachelor's degrees, 1,085 with master's degrees and 143 with PhD degrees. And it has trained more than 10,000 people who did not receive academic degrees.

The Academy's philosophy of teaching and educational set-up has been predominant in the development of China's modern art and design education. In the national key discipline review which occurs once every five years, the Academy's Art and Design Discipline was twice designated as the only national level key discipline in its field. In the national first-level discipline appraisal conducted once every five years, the Academy's Art Study program took first place. The Academy appeared twice in the top 60 best design colleges in the world by Business Weekly.

Recently Related Activities:

- 1\Sustainable Living Lab,2014: It advocates a green, healthy, low-carbon life philosophy, and focuses to apply this philosophy to real life scenarios.
- 2\Beijing Green Map, Fund by IDEO,2013: The online map connects the CSA farms, organic farmers markets, organic restaurants, eco farm homes, second-hand groceries, rental bicycles points and many green architectural landscapes.
- 3\Design for Urban Agriculture: The project focused on the concepts propagation and products design for green planting at home.
- 4\ FOOD LOOP, 2013: The exhibition for food safety provides an alternative for urban consumers, a green and sustainable eating pattern.
- 5\ NEW COMMUNITY CENTER, 2012: It is an online platform and offline place which provides linkage to the community residents with the CSA farm and other stakeholders.

Please describe also the role of your organisation in the project (limit 1000 characters).

Tsinghua is assistant leader of WP5 Manangement, in particular will be leading Task 5.2 (Internal monitoring) and task 2.5 (Implementation of the first 5 curricular pilot courses), and involved as participant in all other WPs.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Liu Xin	Research, Teach and Practice on Design for Sustainability; Product Service System Design, and Design fundamental. Recent publications: Liu Xin, Design Border, Zhuangshi Journal, 2014 ; Zhang Jun, Liu Xin, Carlo Vezzolic, Fabrizio Ceschinc, LeNS China: A Chinese Learning Network on Sustainability for the Development and Diffusion of Teaching Materials and Tools on Design for Sustainability, Ecological Economy 2014 Vol.10, No.2 ; Liu Xin, Design for Sustainability and Innovation Food Network, Transforming Design Disciplines : Paper Compilation on the 30th Anniversary of Industrial Design Department of the Academy of Arts & Design, Tsinghua University, China Architecture & Building Press, 2014 ;

	<p>Liu Xin, He Ding, Wang Wei, Sustainable Lifestyle Lab, Works Collection on the Tao of Sustainability---An International Conference and Exhibition on Sustainable Design, China Architecture & Building Press, 2014 ;</p> <p>Liu Guanzhong, Liu Xin, MATTEROLOGY: A Chinese method for sustainable design thinking, Product-Service System Design for Sustainability, Greenleaf publishing, January, 2014.</p>
Lv Mingyue	<p>Post-doctor in Industrial Design Department of the Academy of Arts & Design, Tsinghua University; Researcher in Sustainable Design Research Institute; Director in LeNS-China Office; Operational Manager in Desis Network, Tsinghua Desis Lab;</p> <p>Recently related publications on sustainable design:</p> <p>Lv Mingyue, Practicing, Teaching and Sharing under the Vision of Design for Sustainability, Zhuangshi Journal, 2015 (in press)</p> <p>Lv Mingyue, A Report on Design Development in 2014 in China, Annals of Chinese Art in 2014, China Culture & Arts Press, February, 2015</p>
Zhou Haoming	<p>Main research direction: Sustainable Architecture and Environmental Art Design. Dr. Zhou has published or participated in publishing more than 10 academic books (including translated books) and hundreds of academic articles; He has hosted and participated in a number of art projects funded by National Social Science Foundation, the projects funded by the National Natural Science Foundation of China and provincial foundations, and university research projects. Dr. Zhou has received many teaching and academic achievement awards from the nation and the provinces. His design works were selected into the "Tenth National Arts Exhibition". Since 2009 to 2013, his design works were selected into the International EcoDesign Special Exhibition, in Helsinki, Finland for consecutive 5 years. His interior design work, "CHINESE INKWASH - TRASH HOTEL" was selected to be exhibited in the Finnish "World Design Capital Helsinki 2012" exhibition and "HABITARE (the furniture and home furnishings Design Fair)" in 2012.</p>
Cai Jun	<p>Professor, Director of the Design Management Research Lab in Tsinghua University. Head of the Department of Industrial Design (2006-2009). Member of External Review Team, IIT, Institute of Design (2011), Member of Editorial Board, Design Issues (2011-2013) and International Advisory at International Advisory Committee at Seoul World Design Capital (2010). External reviewer for Aalto University and Design school of Hong Kong Polytechnic University (2012-2013). He also got award as 2013 Top Ten Best Design Educators in China. His research area recently is about 1) Design strategy and innovation based on user lifestyle development. 2) Knowledge transformation and structure change for design innovation and design management. Through exploration of design driven business innovation and user centered design thinking by academic and practical experience, he took responsibility and involved the research project with Motorola, Nokia, LG, Boeing, Lenovo etc. for over 40 projects and also awarded design prizes from Norway, Hong Kong and Mainland. He has published over 30 papers and publications on design research, design management and strategy etc. He was the main organizer for D2B2---2009, 2011 and 2013 Tsinghua International Design Management Symposium.</p>

Partner number		P10
Organisation name & acronym	HUNAN UNIVERSITY, HNU	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the</i>		

organisation, etc.) relating to the area covered by the project (limit 2000 characters).

Hunan University (HNU) is the national "211 Project", "985 project" key university. School of Design of Hunan University (HNU Design) is one of the earliest design and artistic disciplines in China which was established in 1982. It is the director unit of the National College of Industrial Design Teaching Steering Committee. In 2006 HNU Design joined the international design art college alliance, and established close cooperation relations with the design schools abroad, as well as multinational companies.

In 2006, HNU Design was nominated as one of the world's top 60 design schools by the "Business Week". In 2007, industrial design subjects were firstly named characteristics of professional subjects in the state-level. In 2008, Art and Design Experiment Teaching Centre was named a National Experimental Teaching Demonstration Centre. In 2009, it became the state-level Art and design Personnel training base. In 2011, it established the China-Italy Design and Innovation Centre (Hunan).

HNU Design is staffed by a group of famous teachers who have rich experience in teaching practice and art design. Its students have got more than 300 awards in the national and international design competitions. The graduates had solid foundation knowledge and comprehensive knowledge and welcomed by the employer, and more than 30% graduates go to other famous universities around the world to continue their study.

Recently Related Activities:

Since 2001, HNU Design developed such research on design for sustainability collaborated with Milan Politecnico di Milano and HongKong Polytechnic University on the topic "Immaterial and Sustainable Solutions in China". Along last 10 years, HNU Design published several books and design projects which refer from eco-product design to product service system design. HNU Design initiated such research works with a series of design workshop named "New Channel" for social innovation collaborated with NOKIA, MARKOR from 2009 to 2014.

Please describe also the role of your organisation in the project (limit 1000 characters).

Hunan is involved as participant in all other WPs, in particular involved in task 1.3 (Organisation of the project set-up meeting), 2.1 (Design and implementation of seminars), 2.4 (Design and implementation of LeNS regional labs), 4.2 (General publicity of the project), 4.5 (Decentralised Conference organisation) and 5.1 (General coordination).

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project
Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Zhang Jun	PhD in Design, Assistant Professor in School of Design Research, Teach and Practice in the field of Design for Sustainability, Service Design and Product Service System Design. Publication: - Zhang Jun, Liu Xin, et.al., LeNS China: A Chinese learning network on sustainability for the development and diffusion of teaching materials and tools on design for sustainability, Ecological Economy, 2014.02, 130-143 - Zhang Jun, Zhang Lihong, Sustaining Bike-Sharing Systems in China: Case Studies, 19th International Conference on Sustainable Innovation 2014, Cities & Regions as Catalysts for Smart & Sustainable Innovation, 2014.11.3 - Zhang Jun, Zhang Lihong, Comparative Case Study on the Public-Bike System Design and Business Model in Chinese City, Ecological Economy (in Chinese), 2014.02, 115-122 - Zhang Lihong, Zhang Jun, Duan Zhengyu, David Bryde, Sustainable bike-

	sharing systems: characteristics and commonalities across cases in urban China, Journal of Cleaner Production, Accessed online:2014-04-13, http://dx.doi.org/10.1016/j.jclepro.2014.04.006 - Design for Sustainable Change (in Chinese), Anne Chick(author), Zhang Jun (Translator), 2012.10.
He Renke	Professor and Dean of School of Design
Ji Tie	PhD in Design, Vice Dean and Professor in School of Design, HNU. Expert in the field of Design for Social Innovation.
Eun ji Cho (Korean)	PhD in Design in POLIMI of Italy, Assistant Professor in School of Design, HNU. Research and teach in the field of Design for Social Innovation and Service Design.
Wang Baosheng	PhD in Design from Chiba university in Japan, Assistant Professor in School of Design, HNU. Research and teach in the field of Design for Social Innovation and Green Design.
Zhang Duoduo	PhD in Design, Post-Doc from Tsinghua university, Assistant Professor in School of Design, HNU. Research and teach in the field of Design for Social Innovation and Cultural Design.
Ahn Sunghee (Korean)	PhD in Design in Brunel University of UK, Assistant Professor in School of Design, HNU. Research and teach in the field of Design for Social Innovation and Public Design.

Partner number		P11
Organisation name & acronym	Cape Peninsula University of Technology, CPUT	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>The Cape Peninsula University of Technology is the only university of technology in the Western Cape. It is the largest university in the region, housing 6 faculties across several campuses, including the largest Design faculty in South Africa. The institution offers higher education to more than 30 000 students.</p> <p>The CPUT is dedicated to catalysing social transformation by developing focus areas that address some of the major social and community challenges facing the city, province, country and continent. It recognises that design and its associated processes across all disciplines is a powerful catalyst for change that can enable more sustainable ways of living. Central to this is design thinking and practice. Individuals who take this approach to design consider the deeper social, cultural, economic, environmental and technological aspects of any product, system or service development.</p> <p>The institution has been building a reputation for research and innovation excellence, especially in social and environmental sustainability. In its Research, Technology and Innovation (RTI) blueprint of 2012, CPUT identifies Design for Sustainability (Dfs) as one of its seven research focus areas.</p> <p>Recently Related Activities: community water supply and sanitation; environmental toxicity and remediation; biocatalysis; low-cost housing; adaptronics; power systems; energy efficiency and solar water heating; instrumentation; material flow; clothing and textiles; healthcare in underserved communities; e-government; green design and biomimicry; design for sustainability.</p> <p>The South African Renewable Energy Technology Centre (SARETEC) is the first national renewable energy technology centre in South Africa and is currently being established at the Cape Peninsula University of</p>		

Technology (CPUT) - Bellville campus, Cape Town, South Africa. (The Western Cape Government, CPUT and GreenCape are founding partners of SARETEC. http://www.saretec.co.za/news.htm)	
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>	
CPUT is assistant leader of WP4 Dissemination and exploitation because have experience in designing and implementing dissemination activities (e.g. CPUT was involved in the Cape Town World Design Capital 2014), and involved as participant in all other WPs, in particular will be leader of Task 2.7 (Implementation of the second 5 curricular pilot courses).	
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project <i>Please add lines as necessary.</i>	
Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Prof Mugendi M'Rithaa,	<p>Specialisations: Design for Sustainability, Industrial Design, Universal Design Chairperson ICSID. Conference proceedings: M'Rithaa M <i>World Design Capital 2014: advancing sustainable design thinking in majority world</i> Joint International Conference on Engineering Education and Research 2013 Munyai K & M'Rithaa MK. <i>Promoting sustainability through embedding tacit knowledge in modern design in Cape Town.</i> Cumulus, Helsinki, Finland, 24-26 May 2012 Gungaya S & M'Rithaa MK <i>Considered spontaneity: The new role of the product designer</i> 2nd Design, Development and Research (DDR) Conference, Bellville, 3-5 September 2012 Munyai K & M'Rithaa MK <i>Indigenous knowledge in design: Humanising the story behind the aesthetic façade.</i> 2nd Design, Development and Research (DDR) Conference, Bellville, 3-5 September 2012</p>
Rael Futerman	<p>Specialisations: Industrial Design, Sustainability, Biomimicry, Participatory Design Proceedings of Design, Development and Research (DDR): Annual Research Conference of the Faculty of Informatics and Design, Cape Peninsula University of Technology, Cape Town, 26-27 September 2011 Futerman R, Grant-Broom A, Lubbe E & Snaddon B <i>Growing the city: Developing collaborative design process through a biomimicry-inspired curriculum</i></p>
Mr Johan van Niekerk	<p>Specialisations: Industrial Design, Sustainability, Biomimicry Van Niekerk J & Raman P</p>

	<p><i>The place for ethics within design</i> 2nd Design, Development and Research (DDR) Conference, Bellville, 3-5 September 2012</p>
Mr Fareed Ismail	<p>Lecturer Department of Mechanical Engineering Specialisation: Mr Ismail invented a Small Scale Modular Solar Powered Aquaponics System which has been patented. The system will allow such sub social as well as affluent environmentally friendly communities to promote entrepreneurship, create awareness of green energy, and supply sustainable livelihoods throughout. It consists of an aquaculture unit to breed and grow fish as well as a hydroponics water filtration unit that facilitates the growth of vegetables and fruits. The invention also relies on renewable energy such as solar thermal, wind and photovoltaic energy as a power source together with a programmable control system.</p>
Mr Sven Pietrangeli	<p>Mechanical/Industrial Engineering - Operations Manager - South African Renewable Energy Technology Centre (SARETEC) Specialisations: Mr Pietrangeli is part of the team at SARETEC which aims to facilitate and coordinate skills development activities in the South African wind energy sector.</p>
Mr Ilyas Omar	<p>Specialisations: Engineering - Renewable energy research: Renewable energy activities are currently focused on small hydropower and diesel engine performance testing when running on biodiesel and biofuel blends. Mr Omar specialises in allied work in the field of Environmental Engineering and Engineering Education, specifically in the areas of environmental literacy and environmental engineering curriculum and course delivery. Mr Omar has jointly presented at the International Industrial and Commercial Use of Energy Conference in August 2012. There is local collaboration with some industries and government departments. In this regard, the microturbines project was undertaken in partnership with the City of Cape Town, and the biodiesel study received support from Cape Advanced Engineering and EcoAfrica Environmental Consultants.</p>
Prof Ernst Uken	<p>Specialisations: Renewable energy, sustainability</p> <p>Books: Introduction to energy efficiency The Sustainable Energy Resource Handbook: <i>Energy Efficiency</i>, Alive2green, SA vol. 3 Cape Town: <i>The Department of Energy, Eskom and the Renewable Energy & Energy Efficiency Partnership</i>, 2012, pp 17-21, ISBN 978 0 620 45068 3</p> <p>Introduction to renewable energy The Sustainable Energy Resource Handbook: Renewable Energy, Alive2green, SA vol. 4 Cape Town: The Department of Energy, Eskom and the Renewable Energy & Energy Efficiency Partnership, 2012, pp 19-22, ISBN 978 0 630 450068 3</p> <p>Articles:</p>

	<p>Energy efficiency or effectiveness? The Power and Electricity World, Africa, Sandton, 26-29 March 2012 Policy pitfalls of solar water heating International Conference on Solar Heating and Cooling for Buildings and Industry, San Francisco, CA, 9-11 July 2012</p>
Mr Bruce Snaddon	<p>Specialisations: Communication design; Design education; Design for Sustainability, Biomimicry</p> <p>Snaddon B & Grant-Broom A <i>Growing the city: Developing a collaborative design process through a biomimicry-inspired curriculum</i> CPUT Research Day: A Celebration of Research Excellence Cape Town, 2 December 2011</p>
Andrea Grant Broom	<p>She is a qualified Graphic Designer has a 12-year background in branding strategy and new product development in the Communication Design industry. Holding an MPhil in Teaching from University of Cape Town, she has an additional 20 years experience as a communication design educator at the Faculty of Informatics and Design at the Cape Peninsula University of Technology. Her skills set includes facilitation of design thinking workshops, content development, innovative curriculum practices, communication design, branding, experience design, communication strategies and operational coordination. She is currently an independent Design consultant.</p>

Partner number		P12
Organisation name & acronym	Stellenbosch University, SUN	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>Stellenbosch University's vision is a sustainable 21st-century institution having made a conscious decision to utilise its expertise for the benefit of society at large. It has an academic community of 28 000 students (including more than 3 000 foreign students) and 939 academic staff on five campuses.</p> <p>Stellenbosch University (SU) is among South Africa's leading tertiary institutions based on research output, student pass rates and rated scientists, and is recognised internationally as an academic institution of excellence.</p> <p>This science-for-society approach is reflected in SU's HOPE Project, a campus-wide initiative through which the University uses its core business – teaching and learning, research, and community interaction – in search of sustainable solutions to some of South Africa and Africa's greatest challenges. In this way, SU promotes five selected development themes derived from the international development agenda, aimed at improving people's lives by eradicating poverty, promoting human dignity and health, promoting democracy and human rights, promoting safety and security, and promoting a sustainable environment and a competitive industry.</p> <p>SU has ten faculties: AgriSciences, Economic and Management Sciences, Medicine and Health Sciences, Engineering, Military Sciences, Arts and Social Sciences, Science, Education, Law and Theology.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		

<p>SUN is involved as participant in all other WPs, in particular involved in Task 1.3 (Organisation of the project set-up meeting), 2.1 (Design and implementation of seminars), 2.4 (Design and implementation of LeNS regional labs), 4.2 (General publicity of the project), 4.5 (Decentralised Conference organisation) and 5.1 (General coordination).</p>	
<p>D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project <i>Please add lines as necessary.</i></p>	
<p>Name of staff member</p>	<p><i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i></p>
<p>Costandius Elmarie</p>	<p>She is currently teach Visual Communication Design at Stellenbosch University, South Africa. She studied Information Design at Pretoria University and continued my studies at the Gerrit Rietveld Academy, Amsterdam. My interests are in multicultural education. She is currently busy with a PhD in Curriculum studies focusing on aspects such as ethnic stereotyping, power relations and gender in the context of post-colonial and post-apartheid South Africa.</p>

<p>Partner number</p>		<p>P13</p>
<p>Organisation name & acronym</p>	<p>Universidad Autonoma Metropolitana, UAM</p>	
<p>D.1.1 - Aims and activities of the organisation <i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i></p>		
<p>Universidad Autónoma Metropolitana (UAM) is a public university with 41 years experience, founded on the idea of innovation and social commitment. Due to the quality of its programs, UAM is considered among the top Higher Education Institutions in Mexico. It is organized around a General Vice-chancellorship with five independent campi. Each campi has three Academic Divisions, in total there are six Academic Divisions: Basic Sciences and Engineering, Biological Sciences and Health, Communications Sciences and Design, Natural Sciences and Engineering, Social Sciences and Humanities, Sciences and Arts for Design.</p> <p>Its flexibility has helped it to maintain a leadership in higher education in Latin America. An important characteristic of UAM's academic model is the commitment on social problem's resolution. UAM's model cores are: teaching, research and social commitment. UAM has over 55,967 students and more than 3,050 lecturers – researchers. It is recognized for its contributions to society throughout more than 180 research areas within 58 academic departments. UAM participates with both national and international Higher Education institutions and Research Centers in different areas, through activities that offer opportunities to enrich academic and professional training, such as: Social Service Projects. UAM has academic cooperation with 259 Higher Education Institutions in Mexico and in other countries in different regions.</p> <p>UAM is a leading institution that participates and coordinates a diverse range of projects that tackles major international, national, metropolitan and local issues and complies with the needs of society's most vulnerable sectors. The examples include the Sierra Nevada Project aimed at restructuring traditional production practices into sustainable resource operations that project beyond the in mediate into the long-term. Also the Metropolitan Studies Project that addresses problems faced by large cities around the globe.</p>		
<p><i>Please describe also the role of your organisation in the project (limit 1000 characters).</i></p>		

UAM is assistant leader of WP3 Quality Plan in particular leader of Task 3.2 (facilitating external evaluators in the Analysis of the project intermediate and final results) and leader of Task 4.3 (Book on DfS focused on S.PSS+DE) and involved as participant in all other WPs.

D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project

Please add lines as necessary.

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Sandra L. Molina Mata	<p>Master Degree in Industrial Design at National Autonomous University of Mexico (UNAM) with specialization in Sustainable Design. Associated Professor at UAM Azcapotzalco since 2009, Head of “Habitat and Design” Research team. Head of Life Cycle Assessment Laboratory. Research work includes design models for sustainable design, design for social innovation and social economy, which have been published and presented at National and International forums.</p> <p>Chapter in Book MOLINA, Sandra. Alternative Visions in development and nature (Visiones alternativas sobre el desarrollo y la naturaleza) in: ACOSTA, MOLINA y MALDONADO. Discursos sobre el diseño, la relación con el entorno natural y la sustentabilidad. Mexico. UAM Azcapotzalco. 2014. P.p 13-19. ISBN 978-607-28-0256-8.</p> <p>Member of the Technical Committee (ISO TC207) at the Mexican Institute of Normativity and Certification (INMC). Edition and revision of environmental standards.</p>
Alejandro Ramírez Lozano	<p>Associated Professor since 1983. Master Degree in Industrial Design at Scuola Politecnica di Design (1980-82) Posgraduated studies in Mexican Historiography. Research work:</p> <ul style="list-style-type: none"> • Industrial Design and the wood furniture production in Mexico – 1998 • Development of packaging for the horticultural sector – 2003 • DISEÑO MX: Modeling of metropolitan design system. – 2011 • domestic appliances in the kitchen - urban environment of Mexico City from 1930-1960.
Brenda García Parra	<p>Master Degree in Industrial Design at National Autonomous University of Mexico (UNAM) with specialization in Ecodesign. Associated Professor at UAM Cuajimalpa since 2010, with research projects and thought courses regarding Sustainable Development and Sustainable Design, Life Cycle Assessment, Conservation of species (interdisciplinary projects), Sustainable Consumption and Production patterns, and Ecodesign, which have been published and presented at National and International forums.</p> <p>Chapter in Book GARCIA, Brenda. Perspectives of Sustainability at the United Nations. The cultural perspective as key factor (Enfoques de Sustentabilidad en la ONU. La perspectiva cultural como elemento clave) in: ACOSTA, MOLINA y MALDONADO. Discursos sobre el diseño, la relación con el entorno natural y la sustentabilidad. Mexico. UAM Azcapotzalco. 2014. P.p 21-27. ISBN 978-607-28-0256-8.</p>

	<p>Chapter in Book GARCIA, Brenda. The Designer’s formal education towards sustainability: an undoubted need (La formación del diseñador hacia la sustentabilidad: una necesidad indudable) in:Industrial Design: Education, purposes and actions. Mexico. UNAM. 2013. Pp. 121-128. ISBN 978-607-02-40-29-4</p> <p>Book GARCIA, Brenda (2008). Ecodesign. New Tool for Sustainability. Mexico. Designio. ISBN 968-5852-11-1</p> <p>Member of the Technical Committee (ISO TC207) at the Mexican Institute of Normativity and Certification (INMC). Edition and revision of environmental standards.</p>
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Partner number		P14
Organisation name & acronym	The Universidad del Valle de México (UVM)	
D.1.1 - Aims and activities of the organisation		
<i>Please provide a short presentation of your organisation (key activities, affiliations, size of the organisation, etc.) relating to the area covered by the project (limit 2000 characters).</i>		
<p>The Universidad del Valle de México or UVM (acronym in Spanish) is a private university founded in Mexico City in 1960. UVM enrolls students at several campuses throughout Mexico and offers undergraduate and graduate degrees in the fields of Medicine, Engineering, Business, and Law, among others. The institution has the highest accreditation level from the Mexican Department of Education (excelencia académica en nivel superior) and FIMPES (Lisa y Llana) accrediting board. UVM currently ranks in the top 16% of mexican universities, and top 8% of private mexican universities, according to the 2014 QS Latin America University rankings, accounting the 180 public and private universities which are members of ANUIES.</p> <p>UVM started classes at 1960. After 1976 the university started its expansion with the opening of different campuses located strategically in Mexico City.UVM has 37 campuses throughout the country, including nine locations in Mexico City, and twenty six throughout central and southern Mexico.The total area of all of the campuses adds up to 226,043 m2 of buildings and other construction on a surface area of 853,459 m2 of land. Today, UVM has over 74,000 students, over 6,000 teachers and more than 3,700 administration officers.</p> <p>UVM offers degree programs in a wide array of fields and professional disciplines at the undergraduate and graduate levels. Undergraduate programs typically require between four and five years to complete, while graduate programs typically span two years. UVM has the firm commitment to educate youth seeking a balance in scientific, technological and cultural approaches towards the social needs not only of the country but of today’s globalized world, as well as the search for truth and the common well-being, all founded on the institutional philosophy and education model.</p>		
<i>Please describe also the role of your organisation in the project (limit 1000 characters).</i>		
<p>UVM is involved as participant in all other WPs, in particular involved in task 1.3 (Organisation of the project set-up meeting), 2.1 (Design and implementation of seminars, 2.4 (Design and implementation of LeNS regional labs), 4.2 (General publicity of the project), 4.5 (Decentralised Conference organisation) and 5.1 (General coordination).</p>		
D.1.2 - Operational capacity: Skills and expertise of key staff involved in the project		
<i>Please add lines as necessary.</i>		

Name of staff member	<i>Summary of relevant skills and experience, including where relevant a list of recent publications related to the domain of the project.</i>
Rodrigo L�pez Vela	professor and head of Nacional de Dise�o at the Universidad del Valle de M�xico Campus Lomas Verdes.
Jos� Eduardo Camacho G.	Professor and head of Industrial design program at the Programa de Dise�o Universidad del Valle de M�xico Campus Lomas Verdes.

List of Associated Partners

(Where applicable)

*These organisations may provide the consortium with facilities or assistance that enhances the quality of work, but they cannot be responsible for core activities of the project (e.g. management, coordination, monitoring, leader of a work group etc.). **No financial contribution from the project grant will be allocated to these organisations.***

Ref.nr	Name of organisation	Type of institution	City	Country	Role in the project
P15	UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	Higher Education Institution	MEXICO DISTRITO FEDERAL	Mexico	Associated Partner
P16	Fluminense Federal University	Higher Education Institution	Niterói, Rio de Janeiro	Brazil	Associated Partner
P17	Federal University of Alagoas	Higher Education Institution	Maceió, Alagoas	Brazil	Associated Partner
P18	Federal University of Uberlândia	Higher Education Institution	Uberlândia	Brazil	Associated Partner
P19	Federal University of Santa Catarina	Higher Education Institution	Florianópolis, Santa Catarina	Brazil	Associated Partner
P20	Hunnershala Foundation for Building Technology and Innovation	Higher Education Institution	Mirjapur Part, Gujarat	India	Associated Partner
P21	Goa College of Architecture	Higher Education Institution	Panaji, Goa	India	Associated Partner
P22	Care school of architecture	Higher Education Institution	Trichy	India	Associated Partner
P23	Indian Institute of Technology Gandhinagar	Higher Education Institution	Ahmedabad	India	Associated Partner
P24	Indian Institute of Information Technology Design and Manufacturing	Higher Education Institution	Jabalpur	India	Associated Partner
P25	Jiangnan University	Higher Education Institution	Wuxi	China	Associated Partner
P26	Tongji University	Higher Education Institution	Shanghai	China	Associated Partner
P27	Guangzhou academy of fine arts	Higher Education Institution	Guangzhou	China	Associated Partner
P28	Wuhan University of	Higher	Wuhan	China	Associated Partner

	Technology	Education Institution			
P29	The University of Science and Technology	Higher Education Institution	Beijing	China	Associated Partner
P30	The Hong Kong Polytechnic University	Higher Education Institution	Hong Kong	China	Associated Partner
P31	Beijing Information Science and Technology University	Higher Education Institution	Beijing	China	Associated Partner
P32	Farm & Garden National Trust	Other Association	Cape Town	South Africa	Associated Partner
P33	Instituto Tecnológico de Estudios Superiores de Monterrey	Higher Education Institution	Monterrey	Mexico	Associated Partner
P34	Londrina State University	Higher Education Institution	Londrina, Paraná	Brazil	Associated Partner
P35	Vastu-Shilpa HEI	Higher Education Institution	Thodupuzha, Kerala	India	Associated Partner
P36	Cape Craft & Design Institute	School institute educational centre – vocational training	Cape Town	South Africa	Associated Partner

Please insert rows as necessary

D.2. Cooperation arrangements, management and communication

This part must only be completed once by the applicant.

D.2.1 - Project management

Please define the organisation of the implementation of the project and the division of tasks between the partners. Please explain the allocation of resources for each activity. Explain also how the tasks are distributed amongst the partners and how project "ownership" is ensured (limit 3000 characters).

Each Work Package (WP) will be led by a different couple of HEIs: 1 Programme Country HEI and 1 Partner Country HEI. This will ensure an adequate level of experience (EU HEIs have wide experience in EU project) as well as the project ownership by each nonEU HEI. In addition the leadership of each task is allocated to an individual HEI. In particular:

WP1 will be led by UBRUN (WP leader) & SRISHTI (Assistant Leader) and developed in collaboration with all LeNSin partners. UBRUN has wide experience in DfS teaching and research, and SRISHTI has past experience in DfS educational projects. Task leadership allocation: 1.1 (UBRUN); 1.2 (SRISHTI); 1.3 (POLIMI, because the kick-off meeting will be in Milan).

WP2 will be led by POLIMI (WP leader) & UFPR (Assistant Leader) and developed in collaboration with all LeNSin partners. POLIMI is leading the WP because is the project coordinator and because its past experience on similar projects, while UFPR is the nonEU partner with the biggest experience in DfS research & teaching.

Task leadership allocation: 2.1 (AALTO ARTS); 2.2 (UBRUN); 2.3, 2.6 & 2.8 (UFPR); 2.4 (TU DELFT); 2.5 (TSINGHUA); 2.7 (CPUT); 2.9, 2.10 & 2.11 (POLIMI). All nonEU partners will take responsibility in the implementation of the LeNS_labs in their institutions. Furthermore tasks from 2.1 to 2.7 will involve external actors as design teachers, researchers and practitioners from associated HEIs, as well as relevant

local institutions and organisations such as companies, consultancies, industrial associations, governments, NGOs. Also, the development of the d.OLEP will require subcontracting.

WP3 will be led by TU Delft (WP leader) & UAM (Assistant Leader) and developed in collaboration with all LeNSin partners, involving 6 external evaluators task 3.1. TU DELFT has past experience in quality control in EU projects. Task leadership allocation: 3.1 & 3.3 (TU DELFT); 3.2 (UAM).

WP4 will be led by AALTO (WP leader) & CPUT (Assistant Leader) and developed in collaboration with all partners. AALTO and CPUT have experience in designing and implementing dissemination activities (e.g. CPUT was involved in the Cape Town world design capital 2014). Task leadership allocation: 4.1 (AALTO ARTS) 4.4 (SRISHTI); 4.2 (UBRUN); 4.3 (UAM); 4.5 (POLIMI); 4.6 (TU DELFT). Furthermore tasks 4.1, 4.2, 4.3 & 4.5 will involve subcontractors.

WP5 will be led by POLIMI (WP leader) & TSINGHUA (Assistant Leader) and developed in collaboration with all LeNSin partners. Task leadership allocation: 5.1 & 5.3 (POLIMI); 5.2 (TSINGHUA). Subcontracting is required for external auditing.

The project ownership is ensured by:

- Having all EU HEIs and all the 5 main nonEU HEIs co-leading at least 1WPs.
- Allocating task leadership to individual HEIs.
- Having all nonEU HEIs responsible for implementing the LeNS labs in their own institutions; designing & implementing seminars and courses as well as the local conferences.
- Allowing a participatory approach in decision making (see D2.2).

D.2.2 - Cooperation and communication arrangements of the consortium

Please explain the overall project and partnership management making specific reference to the management plan and how decisions will be taken. Please describe how permanent and effective communication and reporting will be ensured as well as the measures put in place for conflict resolution (limit 2000 characters).

The project results rely on the presence of the Project Cycle Management unit (PCM). It is the structure assuring the management of the project and it is based on the principle of shared responsibility between partners. It is composed of the Project Manager (PM, from POLIMI) and a representative from each partner (total of 14 representatives). The PCM unit will deal with the action progress as well with open issues coming from the different WPs (and related activities) not resolved at that level. The decision making process will follow a participatory approach. If it is not possible to negotiate a common position and a voting is needed, the vote of each member will count as one (in case of even number the PM will count double).

Each WP leader will be responsible for the activities belonging to his/her WP, which can involve various compositions of actors (e.g. all the partners, only the WP leaders, partners and associates, external actors, etc.) (activities are listed in the Logical Framework, activities & actors in the Action plan). At activity level, the decision making process will follow a participatory approach and, in case it is not possible to negotiate a common position: for technical issues related to the activity, the majority of expressed opinions (of the partners involved in that activity) will be considered (in case of even number, the WP leader vote will count double); for general issues related to the interconnection of the activity with the Action the WP leader will consult the PCM unit.

Communication and reporting will be ensured by the project coordinator with the contribution from all partners. The project coordinator will compile regular quarterly progress reports. A permanent internal monitoring on project progress will measure achievements against goals established in the proposal. To this purpose the project coordinator with WP5 assistant leader will use the Objectively Verifiable Indicators (OVIs) given in the Logical Framework.

PART E - Project characteristics and relevance

E.1. Why does the consortium wish to undertake this project?

Please outline the motivation behind your project, clearly identifying the specific needs or problem/s which it intends to solve. Explain how the project proposal fits within the development strategies of the Partner Countries involved and how it addresses the priorities defined at national / regional level. Also explain why this/these problem/s were selected instead of others. In particular, explain how the area of intervention has been explored to guarantee that the project is offering something new compared to the existing situation. Where applicable, explain any synergy with other EU initiatives should be highlighted (limit 5000 characters).

The consortium wants to undertake this project to consolidate, empower and improve current fragmented experiences (6 HEIs regional networks called LeNS, the Learning Network on Sustainability, www.lens.polimi.it: LeNS_Europe, LeNS_South Africa, LeNS_Brazil, LeNS_Mexico, LeNS_India and LeNS_China) and bring them to a solid, coherent and cross-cutting higher education programme. In particular the project addresses the following needs (and related partner countries' common priorities):

1] The overall ambition of the project is to produce a new generation of industrial designers, equipped with a proper set of knowledge-base and know-how, and capable to play a role in the transition towards sustainability.

This is linked to the "Environmental protection" priority, recognised a key priority by all the Partner Countries involved in the project (e.g. see Brazil's "Sustainable Production and Consumption Plan (SBCP)", India's "Faster, More Inclusive and Sustainable Growth" plan, Mexico's "National development plan").

In particular all these countries recognise the need to improve social equity and cohesion by empowering locally-based enterprises and initiatives, for an environmentally sustainable re-globalisation process characterised by a democratisation of access to resources, goods and services. In relation to this, two promising models coupling environmental and social with economic sustainability are the Sustainable Product-Service System (S.PSS) and the Distributed Economies (DE) ones:

-S.PSSs shift the business focus from selling products to offering a combination of products and services jointly capable of achieving a final user satisfaction. S.PSSs are known offer models potentially decoupling resources consumption from its traditional connection with profit. In middle and low-income contexts "a S.PSS innovation may act as a business opportunity to facilitate the process of a socio-economic development by jumping over the stage characterised by individual consumption/ownership of mass produced goods - towards a 'satisfaction-based' and 'low resource-intensity' advanced service-economy" (UNEP 2002).

-DE are "selective share of production distributed to regions where activities are organized in the form of small scale, flexible units that are synergistically connected with each other". (Johansson et al, 2005). DE may vary from distributed energy generation, distributed production of information, distributed production of software, distributed production of (hardware) products and distributed design. DE represent promising opportunities to couple economic (reduced cost of transportation, increased reliability), environmental (efficiency gains, reduced emissions) and socioethical (democratization of access to goods and services, increased participation and empowerment of local economies and communities) benefits.

2] In order to equip designers with knowledge and know-how on S.PSS&DE design, new, up to date and high quality courses need to be designed and implemented ("Improving quality of education and teaching" priority). There is therefore the need for a new generation of design educators capable of delivering relevant and high quality courses (in fact, in the partner countries, existing courses on DfS focus mainly on product design). For this reason, it is important to enable them in collaborating locally and internationally in the building&sharing of new learning resources.

3] There is also the need of closing the gap between universities and the productive sector, and facilitate

the employment of design graduates with skills on S.PSS&DE design (“Developing the HE sector within the society at large” priority). Representatives from the productive sector need to take part in the curriculum design to make courses relevant to their specific needs, as well as in the implementation of courses to offer opportunities for joint projects.

3] Finally it also important to speed up the diffusion of learning resources (on DfS focused on S.PSS&DE) and favour its access to disadvantaged people and regions (“Access to and democratization of higher education” priority). Thus mechanisms to allow a free access to resources (i.e. open and copyleft) need to be implemented. To this purpose, the use of ICT (i.e. web platform) becomes crucial.

During the exploration of the area of intervention, HEIs as well as local companies, NGOs, public and private organisations were approached by nonEU partners to discuss the first versions of the proposal and gain insights on how to improve and make it more relevant to their needs and priorities. This has ensured the development of a proposal that aims to target the 4 main needs highlighted above, and characterised by several innovative elements (see E4).

Please describe briefly how your project proposal was prepared (e.g., capitalising on previous experiences, based on achieved outcomes in former projects, following previous cooperation amongst the consortium members, etc.) (limit 1000 characters).

This project is not a prolongation of a previous action. However the consortium builds on existing expertise developed by each partner individually or in collaboration in past projects. In particular it builds on: LeNSes the Learning Network on Sustainable energy systems (European-African network, funded by EU, ACP EduLink II programme); and LeNS, the Learning Network on Sustainability (Asian-European educational network, 2007-2010, funded by EU, Asia Link programme); the informal Learning Networks on Sustainability for curricula development in design , set up worldwide (Europe, Africa, South America, Central America, Oceania, North America, China) from 2009. Some partners (Polimi, TU Delft, Aalto, Brunel, CPUT, Tsinghua and Srishti) have already collaborated together in EU funded projects. Informal educational activities and teaching exchanges took place between the other non EU partners and EU partners (in particular Polimi).

If your proposal is based on the results of one or more previous projects / networks, please provide precise references to this / these project(s) / network(s) in the table below.

Reference number	DCI-AFS/2013/320-298		
Project dates <i>(year started and completed)</i>	2007-2010	Programme or initiative	Asialink
Title of the project	LeNS, the Learning Network on Sustainability		
Coordinating organisation	Politecnico di Milano		
Website	http:// www.lens.polimi.it		
Password / login if necessary for website	-		
<i>Please summarise the project outcomes and describe (a) how the new proposal seeks to build on them and, (b) how ownership / copyright issues are to be dealt with (limit 1000 characters).</i>			
The LeNSes project was developed within the LeNS HEIs network. It is funded by the EduLink II programme (2013-2016), involving 7 design schools in Europe and Africa, as a multi-polar network for curricula and lifelong learning capacity development on Design for Sustainability focused on Sustainable Product-Service Systems (S.PSS) and Distributed Renewable Energy (DRE), as a promising contribute to the key paradigm shift in the energy sector, as essential leverage for the transition towards a sustainable			

society.

In fact, a new system design approach is under development and tested as a promising contributor to the needed and key paradigm shift in the energy sector, as essential leverage for the transition towards a sustainable society. These LeNSes are consolidating and empowering the relation with African HEIs on the topics of S.PSS and DRE. The outcomes of these projects are of great interest to build up the new international network as well as the knowledge that has been built.

Reference number	ASIE/2007/128905		
Project dates <i>(year started and completed)</i>	2013-2016	Programme or initiative	EduLink II
Title of the project	LeNSes, the Learning Network on Sustainable energy systems		
Coordinating organisation	Politecnico di Milano		
Website	http:// www.lenses.polimi.it		
Password / login if necessary for website	-		
<i>Please summarise the project outcomes and describe (a) how the new proposal seeks to build on them and, (b) how ownership / copyright issues are to be dealt with (limit 1000 characters).</i>			
<p>The LeNS project was funded by the Asia-Link Programme (2007 - 2010), involving 7 design schools in Europe and Asia, to develop an Asian-European multi-polar network for curricula development on Design for Sustainability (DfS) focused on Product-Service System (PSS) Innovation.</p> <p>The LeNS project generated and diffused new knowledge on DfS promoting a new ethos: to shift towards an open and copy left learning-by-sharing attitude. Within this perspective a successful campaign has been launched (outside the action and budget of the LeNS project) to generate no-budget affiliated LeNS networks: 2009 LeNS South Africa/Africa and LeNS Brasil, 2010 LeNS Mexico and LeNS Oceania, 2011 LeNS German speaking languages, 2012 LeNS China and 2014 LeNS India. Those LeNS regional networks from the eligible countries have been the base to define the LeNSin partnership, in order to build a coherent and solid international, intercultural and multipolar network of HEIs.</p>			

Please copy and paste tables as necessary.

E.2. Rationale for the setting-up of the consortium

Please explain why the selected partners are best suited to participate in this European project. Describe innovative and or complementary skills, expertise and competences within the consortium directly relating to the planned project activities. If associated partners are involved, please explain their role in the project and the added value to the consortium (limit 3000 characters).

The 4 EU partners are leading HEIs in Europe on DfS, with a focus on S.PSS, and complementary knowledge on DE. They have been already working together in various EU funded research on this topic and are willing to collaborate even more as testified by a Memorandum On Understanding named "LeNS Europe" signed in 2012. One of the partners per each of the non EU countries involved has launched a LeNS country network testifying competencies and commitments in DfS; the second partner of each non EU country is member of the same LeNS country network; all Associates partners are experienced and committed as well in DfS being HEIs member of the respective LeNS country network.

For what concerns EU partners the following could be added.

Polimi has expertise within DfS, S.PSS and DE in research and didactic (also in UG and PG level) through the group of research Design and system Innovation for Sustainability (DIS), and on the most advanced methodologies for education through the METID centre (Method and Innovative Technologies for Didactic). Further Polimi experience in international and EU funded research projects assures the competences needed for the Coordination, Development and Management of the project. Brunel Design

Department has competences on DfS and S.PSS and DE in low-income and emerging contexts in research and didactic (in both UG and PG level) through the collaborative research network Energy and Environmental Sustainability and through the centre for research into Entrepreneurship, International Business and Innovation in Emerging Markets.

TU Delft has experience in DfS education, expertise in developing methods and tools for DfS, competences regarding regional and local sustainability, experience on co-operation projects in low-income and emerging contexts, expertise with international educational. It has extensive experience in international research as well as EU funded research procedures, capacities required for the Quality Plan. DfS is deeply integrated in Aalto's studies and research and Aalto's members are involved in developing the multidisciplinary Creative Sustainability Master's program collaborating with European HEIs involved in LeNS. Moreover Aalto has extensive experience in European projects (Creative Europe, Culture, Erasmus+, Erasmus LLP, Tempus) both as project coordinator and project partner and is involved in various international networks as Cumulus, which will collaborate in Disseminating LeNSin results. All the partner countries' HEIs will take advantage of local companies, consultancies, NGOs and public institutions involved as project associates in the design and implementation of curricular courses that will assure the development of higher education of quality, efficient and relevant to the needs of the labour market and consistent with the partner countries' socio-economic development priorities.

E.3. European added value

Please describe the benefits of and need for European cooperation. Please describe also why the results cannot be achieved through national, regional or local funding (limit 1000 characters).

The project will provide to both Programme and Partners countries the opportunity to collaborate with HEIs worldwide, favouring mobility of teachers and researchers in an international learning-by-sharing process based on cross-cultural fertilisation.

The focus of the project, DfS applied to S.PSS & DE, is in line with the partner countries' Environmental protection priorities (see E1). In this regard LeNSin offers a unique opportunity to address these sustainability issues from different perspectives (HEIs in the project are in fact from low-, medium- and high-income contexts) allowing a fruitful exchange of knowledge, best practices and teaching approaches. Also, the project will set up the d.OLEP and an international network of labs on DfS, to empower and augment the knowledge contamination & sharing between HEIs worldwide (during and after the end of the project).

This multi-regional and multi-cultural approach on the topic cannot be achieved without EU cooperation funding.

E.4. Innovative character

Indicate what the project is offering that is new and what are the main innovating elements (limit 2000 characters).

In terms of contents:

-The project topic of DfS focused on Sustainable Product-Service Systems applied to Distributed Economies. These models are promising opportunities to address the Environmental protection (priority) since they can couple economic with environmental sustainability and social equity and cohesion (as discussed in E1). The project will produce new and innovative learning resources and tools as well as courses on these topics (currently there are not similar courses);

-The project will develop a variety of learning resources and courses because each non EU HEI will identify a specific type of DE to focus on;

-Two types of courses will be implemented: theory-based (focused on delivering the knowledge base and know-how) and project-driven (focused on applying the know-how in design projects in collaboration with companies).

In terms of knowledge building & dissemination:

-The project will adopt a knowledge building & dissemination strategy based on a learning-by-sharing logic (open source & copy-left ethos) enabled by a decentralised web platform (d.OLEP), allowing every

design educator, student and professional to access/modify/reuse learning resources.

In terms of teaching methods:

- The d.OLEP will be used to support distant, open and flexible learning (modular learning resources);
- Representatives from the productive sector will be involved: in the curriculum design (ensuring courses are developed considering specific needs and priorities); and in the implementation of courses, by providing design briefs to students as well as coaching them.

In terms of dissemination:

- An innovative “decentralised Conference” (taking place simultaneously in the 6 partners’ country) will be used to foster results dissemination, taking advantage of physical and virtual communication modalities.

In terms of exploitation of results:

- The d.OLEP and the LeNS_labs will remain after the end of the project, ensuring the exploitation of project results even after the end of the grant.

PART F - Quality of the project design and implementation

F.1. Aims and objectives

Please define the concrete aims and objectives of the project and describe the ways in which the situation set out under the previous section (Part E) will be changed (limit 3000 characters).

The project aims at the internationalization, intercultural cross-fertilization and accessibility of higher education on Design for Sustainability (DfS), focused on Sustainable Product-Service Systems and Distributed Economies (both considered promising models to couple environmental protection with social equity/cohesion and economic prosperity). The objective is to foster a multipolar learning-by-sharing network for collaborative knowledge building & diffusion across design HEIs with an open/copyleft ethos (allowing in this way a free access to learning resources even in lower income contexts).

The specific objective is to build a coherent and solid international Learning Network empowering and improving synergies between several HEIs regional networks established worldwide since 2009 as a spin-off of 2 EU funded projects, LeNS (asia link programme, 2007-2010) and LeNSes (edulink programme 2013-2016): LeNS_Brasil/Latin America; LeNS_Mexico/Central America; LeNS_South Africa/Africa; LeNS_India and LeNS_China, together with LeNS_Europe. To achieve this both a decentralised Open Learning E-Platform (d.OLEP) and a set of regional LeNS_labs in each involved country will be developed:

- The decentralised Open Learning E-Platform (d.OLEP) is a webplatform that enables a distributed production & fruition of knowledge in an open©left ethos on design for sustainability, i.e. the d.OLEP is conceived as a decentralised repository of learning resources (slide shows, video, audio, texts, etc.), tools and guidelines to support courses design & diffusion and learning resources sharing.
- The LeNS regional labs are spaces where students, teachers, researchers as well as local interested stakeholders can get access to a set of tools,resources and facilities for DfS. LeNS_Labs aim at: supporting the development of learning resources and implementation of the pilot didactic courses hosting one of the decentralised OLEP (Platform) with its contents OLEP (E-Package); acting as a hub connecting in a multipolar scheme any LeNS_lab of the network, as well as local and global HEIs, by adopting an intercultural approach to favour knowledge cross-fertilisation.

Overall, the network aims to:

- Jointly promote an up-to-date disciplinary ground on DfS focused on Sustainable Product-Service Systems and various type of Distributed Economies;
- Jointly develop seminars and courses, with learning resources, tools and guidelines for course development;
- Strengthen co-operation and networking among HEIs and stakeholders, both locally and internationally;
- Support a curriculum development that is relevant to the needs of the labour market, by involving representatives from the productive sector in the design & implementation of seminars and courses.
- Disseminate results to support educators' development of curricular courses;
- Ensure the endurance of the action after the project end (the d.OLEP will remain ill remain as a permanent exchange platform after the project end).

F.2. Project activities and Methodology

Please define the activities proposed and the working methodology (project activities/developments including educational and training content and pedagogical approach) to be used for achieving the objectives, including major milestones, measurable indicators, etc. (limit 6000 characters).

Preparation (WP1) will take place at the Partner Country HEIs. The preliminary project set-up meeting will exchange relevant information regarding the current state-of-the-art in the field of DfS world-wide, thought with a focus on Partner contexts and HEIs, and will produce an agreement for the exchange agenda and modalities (for both travelling and hosting teachers in WP2). A User centered design and learner centered pedagogy approach will help to empower building curricula in agreement with real needs of the involved countries and the tools they actually have available.

In Development (WP2) design and implementation of the seminars and didactic curricular pilot courses and supporting learning resources will be developed. Innovative learning resources (such as video recorded lectures, slideshows, texts, software tools) will allow to share knowledge and experiences between teachers, researchers, students and the international community active in the DfS field. 5 Seminars will be implemented, one in each Partners Country and will bring together (in addition to local partners and 2 European partners) local design HEIs and representative from local companies/consultancies/associations; deepen the topics of interests defined in WP1 and gather insights to be used to design the pilot courses. 10 pilot courses will be implemented (in 5 Partner Countries HEIs) through exchange modalities defined in WP1. The first round of 5 curricular pilot courses will focus on theories, methods and tools of DfS (each of them addressing the specific topics of interest identified in WP1 and deepened in the seminars). The second round of remaining 5 courses will be project-based, with five design briefs given by local companies/organisations. In parallel LeNS labs in the Partner Countries HEIs will be settled up supporting teaching and internationalization; and also strengthening the link between universities and the local productive sector. This activity will include the detailed identification of the needed space, equipment and resources (e.g. software, books, etc.). Within the same WP the D-OLEP for the decentralised production and fruition of learning resources and tools, will be developed, tested and refined. It will be used for long-distance collaboration during seminars and curricular courses. To assess WP1/WP2 results and exchange experiences gained by all partners, an intermediate meeting will take place in Latin America during WP2. Blended methodologies have been selected to create a virtual learning environment that facilitates a simultaneous independent and collaborative learning experience; face-to-face classroom methods (pilot courses) combined with computer mediated activities (OLEP, LeNS_lab) support the contamination of academic and practical skills among all the socio-economic actors involved. In Quality Plan (WP3) evaluation of project activities and results will be undertaken by independent evaluators based on the internal monitoring reports (WP5), on the observers' reports (WP2 and WP5), on the project deliverables, and by attending the final conference. Dissemination of results (WP4) will be strengthened via 5 international seminars at the Partner Country HEIs, an international students design award (that in this way will involve even world-wide teaching staff), the setup of 10 Sustainability Labs for internationalization and companies relation in the Partner Country HEIs, and an international distributed conference in Milan including 5 simultaneous national conferences (one in each Partner Country) targeted to specific audience with a focus on DfS, such as: design & engineering teachers, researchers and practitioners. Moreover relevant institutions and organisations such as governments, public institutions industrial associations, NGOs etc. will be invited. During the conferences the D-OLEP contents (learning resources, a book, guidelines for designing and implementing didactic modules, its working modalities as well as the open and copy left learning-by-sharing ethos project vision will be presented. The dissemination and diffusion of technological tools support an effective introduction of new media culture and fosters an ethical use of technologies, coherent with every involved Country's priorities. Project Management (WP5) will adopt a Project Cycle Management (PCM unit) made up of a lead academic from each partner institutions (see section D2.2). Main activities will be related to manage partner roles, coordinate the delivery of project outcomes, and manage the internal communication among partners as well as with the European Commission. The project management activities also comprise a permanent internal monitoring regarding project progress and achievements against goals established in the proposal through the Objectively Verifiable Indicators (OVIs) given in the Logical Framework. The methodology adopted is intended to ensure the delivery of projects outputs and to provide performance measurements, whilst allowing partner institutions to contribute to the carrying out of the project WPs. Project progress will be tightly monitored on output and measurable performance criteria against defined milestones to be detailed in the first stages of the project. WP coordinators will be supported by administrative staff in: arranging travel and accommodation, financial management and project reporting. The Project Manager will draw intermediate progress reports at 3 months intervals. The quarterly reports will be sent to all PCM unit members and to the EC officer. The annual reports will be sent to all Partnership Board members at last 2 weeks in advance of each Partnership Board meeting. It is envisaged that distance communication will take place through email correspondence, while

common documents will be retrieved on a common workspace. The Project Manager will assume responsibility for the reports returns to the EC, and for drawing down and allocating funds among partners.

F.3. Budget and cost effectiveness

Please describe the strategy adopted to ensure that the proposed results and objectives will be achieved in the most economical way and on time. Explain the principals of budget allocation amongst partners. Indicate the arrangements adopted for financial management and what co-financing modalities are planned (limit 3000 characters).

Strategies to ensure that results & objectives will be achieved in the most economical way and on time:

- Internal monitoring/evaluation and external evaluation will ensure project activities & results are delivered on time (see F4).
- Regarding subcontracting activities and the purchase of equipment, quotes will be asked to several suppliers, ensuring in this way the selection of the most cost-effective offers.
- The booking of flights and accommodation for exchange activities will be done in advance (the definition of the exchange agenda will be in month 5), allowing a reduction of costs.
- Conferences will take place in HEIs' venues, with no cost on the project.
- Partner countries' HEIs have consulted their local production sector and verified that companies and organisations are interested in take part in the design & implementation of seminars and courses.
- The d.OLEP will be designed in order to not require maintenance after the end of the action, allowing the exploitation of project results at no cost.

Budget allocation amongst partners:

The project involves 10 partner countries' HEIs and 4 programme countries' HEIs.

For each partner country involved in the project there are 2 HEIs as partners: 1 HEI will act as main partner (it will coordinate the implementation of the seminars, didactic course and the conference in its own institution); and the other HEI will act as supporting partner (providing support in all the key activities). As a consequence most of the staff cost is allocated to the 4 programme countries' HEIs and the 5 partner countries' HEIs acting as main partners (around 92% of the overall staff costs). The amount of staff days allocated to these 9 HEIs is equally distributed (with Polimi having an additional amount of staff days due to its role as project coordinator).

Equipment costs are equally distributed to the 10 partner countries' HEIs.

Subcontracting costs are managed by the project coordinator, with exception of the coordinated image design (allocated to WP4 leader), and communication materials printing costs (allocated equally to all partners).

Overall, around 54% of project costs are allocated to partner countries' HEIs.

Financial management:

Administrative staff at Polimi will be in charge of coordinating the financial management activities. In particular it will inform the administrative staff of the other project partners about the project financial requirements and deadlines, and coordinate them in the preparation of the yearly financial reports (which will be approved by an external auditor).

Co-financing:

It is planned that each partner will provide a human resource contribution in terms 'staff days' to be allocated to the project (in particular academic staff). This will increase the overall amount of staff days to be worked on the project by each partner by around 20% (compared to the staff days covered by the requested grant). Overall, the co-financing contribution is of 601 staff days corresponding to 75,586€.

F.4. Quality control and Monitoring

Please explain what mechanisms have been put in place for ensuring the quality of the project and how the evaluation will be carried out. Please define the specific quality measures established, as well as the

benchmarks and indicators foreseen to verify the outcome of the action. Make sure that the information in this section is consistent with the project Logical Framework Matrix (limit 3000 characters).

Internal evaluation. Project Coordinator will establish procedures for the internal evaluation in order to: (i) provide updated information on project activities, achievements and critical aspects; (ii) evaluate intermediate and final results of the projects; (iii) ensure project results are delivered and stated objectives are achieved on time; (iv) generate learning amongst partners.

Evaluation criteria: The evaluation will be based on quantitative and qualitative criteria. It will mainly use the Objectively Verifiable Indicators (OVIs) given in the Logical Framework. Examples of quantitative indicators used in the Logical Framework are: number of participants, number of website visits, number of conference attendances, etc. Examples of qualitative indicators are: coherence with the purpose, scientific correctness, usability, etc. For each indicator it will be defined the source and mean of verification.

Timing and roles in the evaluation process: The quantitative evaluation will be carried out by project coordinator and reported in the "Quarterly report" to constantly monitor the project activities progress, check the correspondence with the Action Plan, and report any delay. The qualitative evaluation, will be carried out by all partners yearly. The intermediate results of the internal evaluation will be collected by the project coordinator, reported in the intermediate and final reports, and communicated to all partners. The overall impact assessment will be carried out after a certain timelapse (6 months), so the medium-term results of the project will be assessed properly.

External evaluation. A panel of external evaluators: 1 principal and 5 co-evaluators, will be appointed. Their expertise will cover the following areas: (i) design and engineering for sustainability, (ii) Sustainable Product-Service System innovation, (iii) Distributed Economy, (iv) sustainable innovation in low-income and emerging contexts. Evaluators, chosen from different geographic areas, will be independent from the project and will have experience in evaluating EU and other public and private funded projects. In particular 4 of them will be academics, with experience in education in HEIs. Evaluating the project will request the setting up an evaluation framework at Month 6 (in collaboration with the WP3 leader and the other partners) to monitor the project quantitatively and qualitatively. To facilitate the evaluation process, the principal evaluator will attend the project final conference. External evaluators will produce 5 reports during the project (to be delivered to project partners), and a final project evaluation (to be delivered to EC). WP leaders will prepare a response report to react on evaluators' criticisms, insights and suggestions. The evaluation service will also involve target groups and final beneficiaries in the evaluation, to ensure expectations are achieved. Furthermore, the project will be yearly subject to an internal and external audit.

G.1. Expected impact of the project

Please explain who will use these project outputs / products / results and how the consortium will reach them. Describe how the target groups (including participating institutions, stakeholders) will be reached and involved during the life of the project and how the project will benefit the target group at local, regional, national and or European level. Please structure your description according to the different levels of impact and stakeholders (limit 3000 characters).

Targets groups are:

- (1) teaching/lecturing and administrative staff (around 200 in the Partner Countries HEIs and around 7500 in other HEIs) working in engineering or design departments;
- (2) UG and PG design students attending from the Partner Countries institutions (around 10000) and from other HEIs (around 250000) who will have access to the dissemination activities.

Intermediate beneficiaries are: practitioners, companies, NGOs and public and private organisations working in environmental protection at local, national and international levels.

Final beneficiaries are final users and local communities.

Teaching staff from partner countries HEIs will benefit in terms of:

- a) capacity building in designing and delivering didactic curricular courses;
- b) capacity building in designing and delivering seminars;
- c) capacity building in developing assessment procedures to evaluate courses;
- d) increasing contacts with local actors (companies, consultancies, public and private organizations);
- e) attending the final conferences

In addition the d.OLEP will enable teaching staff to collaboratively produce and exchange new knowledge even after the end of the project.

Undergraduate and Postgraduate design students will take advantage of curricular courses on DfS, integrating theories, methods and tools focused on S.PSS&DE. They will gain from multipolar and intercultural cross-fertilising learning process and benefit from the involvement of companies, consultancies and organisations in the courses set up. They will also take advantage from the d.OLEP and the possibility of accessing (for free) learning resources online (allowing even disadvantaged students to get free access to high quality contents).

Companies/Practitioners (professionals, SMEs and multinational enterprises, design consultancies) will benefit from qualified design graduates. They will be able to:

- a) participate in the seminars;
- b) access the d.OLEP contents;
- c) use the d.OLEP to share experience with other practitioners and HEIs;
- d) attend the final conferences;
- e) attend after the project termination other modules that will be implemented by Partner Countries and other HEIs (supported by the project outcomes);
- f) collaborate with HEIs in education activities and joint projects development.

Public and private organisations such as local institutions, industrial design associations, business and industrial councils, and NGOs, international organisations such as UNEP and UNESCO will be involved and will benefit from dissemination activities.

Final users and local communities will benefit from local design consultancies and companies capable of (co)designing and (co)developing locally-based (human and natural resource), renewable, resilient, economically viable and cleaner Product-Service Systems. Representatives from local communities will be involved in the seminars and the courses.

Please describe how the target groups (including participating institutions, stakeholders) will be reached after the project is finished (limit 3000 characters).

The d.OLEP will be the main tool to maximise the possibilities for replication and extension of the main project outcomes in other African, Latin American, Asian and European HEIs, in fact worldwide. The d.OLEP is in fact intended as a free-access, open source, and modular-content web-platform for storing and sharing knowledge and know-how among educators, researchers, students and practitioners. This possibility will create opportunities to readily disseminate knowledge and facilitate the design and implementation of seminars, didactic courses, but even LeNS_labs on DfS in other HEIs (in this respect it is important to underline that the available learning resources and tools can be properly adapted, remixed and reused in order to respond to specific local needs and priorities). Moreover the same web-platform is downloadable as open source and copyleft artefact: any educational institution, teacher, network, can generate a new decentralized web-platform, reconfiguring it by re-defining partners (the scientific board), the focus, the geographical representation etc. In this way there are opportunities to facilitate the proliferation of locally-based interconnected networks of design communities.

The web platform will support networking cooperation and knowledge exchange among Partner Countries and European HEIs and local actors (companies/NGOs/institutions in the energy sector); moreover it will remain as a permanent exchange platform after the project ends, allowing continuous enlargement of the learning resources and articulation of the network.

Local companies, consultancies, NGOs, public institutions will be directly involved in the design and implementation of curricular courses, assuring that all the relevant and specific needs will be addressed to support higher education of quality, that is efficient and relevant to the needs of the labour market, skills needs and consistent with the partner countries' socio-economic and sustainable development priorities.

After the project termination new courses/modules will be integrated in the curricula of each partner. Moreover the OLEP will be available for any other HEIs free of charge and in open and copy left ethos, giving an extremely effective and practical support for course development. This, on the other side, will allow continuous enlargement of the initial network, further long-distance didactic interactions and enrichment of the initial contents.

Overview of short and long term impact indicators

Please add rows as necessary according to indicators

Short term impact	Target groups/potential beneficiaries	Quantitative indicators	Qualitative indicators
Creation of a multi-polar network among HEIs in Partners Countries and Programme Countries (in addition to the HEIs involved in the project)	Teaching/lecturing and administrative staff (200 in the Partner Countries and around 7500 in other HEIs) working in design departments	-Number (min. 40) of HEIs in Partner Countries and Programme Countries joining the network in the 2 years after the project termination; -Number of students (100) and staff exchanges (30) on issue related to DfS among Partner Countries and European HEIs in the 2 years after	- Quality of the HEIs joining the network and their relevance and importance in the design field; - Quality of academic staff and students involved in the exchanges; - Quality of the theses developed and their relevance to the productive sector.

		<p>the project termination;</p> <ul style="list-style-type: none"> -Number (min. 50) of joint theses on issue related to DfS among Partner Countries and European HEIs in the 2 years after the project termination. 	
<p>Diffusion of a learning-by-sharing mechanism for the knowledge creation & dissemination (on DfS focused on S.PSS & DE) among HEIs worldwide</p>	<p>Teaching/lecturing and administrative staff (200 in the Partner Countries and around 7500 in other HEIs) working in design departments</p>	<ul style="list-style-type: none"> - Number of website (d.OLEP) visits by design teachers/researchers; - Number downloads (min. 10.000) of learning resources from the d.OLEP by design teachers/researchers (located in a different region than the author of the learning resource); - Number of learning (min. 200) resources modified or adapted by design teachers/researchers (located in a different region than the authors of the learning resource); - Number of modified or adapted learning resources (min 100) re-uploaded on the d.OLEP. - Number of papers presented in international conferences (on issues related to DfS, S.PSS and DE) jointly developed by teachers/researchers from different HEIs. 	<p>- Students' feedback on the quality of learning resources</p>
<p>Implementation of courses/modules on DfS focused on S.PSS & DE (in addition to the ones implemented during the project)</p>	<p>Design UG and PG students in Partner Countries and Programme Countries</p>	<ul style="list-style-type: none"> - Number (min. 50) of new courses/modules offered on DfS focused on S.PSS & DE, at both PG and UG levels, by HEIs in Partner Countries and Programme Countries (in 	<p>- Students' feedback on the quality of courses/modules and learning resources</p>

		addition to the HEIs involved in the project) in the 2 years after the project termination; - Number (min. 100) of new learning resources produced in the 2 years after the project termination;	
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Long term impact	Target groups/potential beneficiaries	Quantitative indicators	Qualitative indicators
Building up of a new generation of designers/practitioners capable of designing sustainable Product-Service Systems applied to the Distributed Economy model	Companies (SMEs and multinational companies), design consultancies, organisations and professionals	- Number of graduate students hired in companies and design consultancies dealing with design, sustainability and PSS	- Quality of the project implemented by companies and design consultancies
Environmental Protection through the implementation of Product-Service System solutions based on the Distributed Economy model	Final users and communities	- Number of new S.PSS solutions (based on the DE model) implemented in Partner Countries and Programme Countries; - CO ₂ reduction given by the new S.PSS solutions compared to previous solutions.	Survey on quality of life

G.2. Dissemination and exploitation strategy

Please explain how the dissemination will be organised and how exploitation activities will ensure optimal use of the results within the project's lifetime and after. Explain the roles, responsibilities and target groups (limit 3000 characters).

The dissemination is organized on different levels. First is the creation of the international Network of HEIs regional networks, based on the project web platform, seminars & courses and LeNS_labs, enabling and activating learning-by-sharing processes, aimed at effective knowledge osmosis and cross-fertilization in the field of DfS. The decentralized Open Learning E-Platform (d.OLEP) as web platform will allow interested teachers from worldwide HEIs to freely download open source and copyleft learning resources (slides, video lectures, etc.) and tools, produced and improved during the project (but also alongside it and after the project end), that could be modified, remixed and reused. The d.OLEP aims not only at disseminating the project results, but also at facilitating their adoption, adaptation and further development. The d.OLEP will contain tangible results of the project: 1] guidelines for the design & implementation of didactic courses and LeNS_labs; 2] a book on DfS focused on S.PSS&DE; 3] a catalogue of best students' projects on DfS focused on S.PSS&DE; 4] a repository of case studies as best practices of DfS focused on S.PSS&DE; 4] a member section with useful information to get in touch with practitioner experts in DfS. Seminars (and even courses) will act as regional dissemination tools. Each seminar will bring together (in addition to local partners and 2 European partners) local design HEIs and

representatives from local companies/consultancies/associations, providing the opportunity to spread the word about the project. LeNS_labs will act as regional and international dissemination hubs (being provided with long distance communication equipment).

The dissemination will act on a second level by raising awareness of the open and learning-by-sharing ethos and its supporting tool (the d.OLEP) among non-European HEIs, via targeted publicity. A coordinated image, developed in the beginning of the action, will guarantee consistency in communication outputs.

As further dissemination activities, the following set of actions are aimed to a direct involvement of worldwide HEIs: 1] the organization of a distributed Conference, made up of an international Conference in Milan and 5 simultaneous national conferences, one in each main non-European partner (and the publishing of conference proceedings); 2] the organization of a students' design award and publishing a catalogue of awarded projects.

Aalto as WP4 leader in collaboration with CPUT as WP assistant leader will coordinate the dissemination and publicity activities involving all partners to accomplish all the expected results previously mentioned. Targets of the dissemination cover: design HEIs curricula development responsables as well as single teachers/researchers, design companies/departments/practitioners, public bodies and NGOs (all of them active in the field of sustainability). A contact list related to the dissemination target groups will be developed at the beginning of the project.

G.3. Sustainability

Explain how the impact of this project will be sustained beyond its lifetime. Please list the outcomes that you consider sustainable and describe the strategy to ensure their long lasting use beyond the project's life - financially, institutionally and policy level. Also explain how the results will be mainstreamed and multiplied in the sector of activity and in the participating institutions. Describe the strategy foreseen to attract co-funding and other forms of support for the project (limit 2000 characters).

The d.OLEP will be designed as a tool to be used (without maintenance) even after the grant end, continuously empowering the international Network developed in the project; potentially attracting fundings from public and private entities. The LeNS_labs, will be designed to be permanent after the project end, empowering local use of d.OLEP, strengthening the link between HEIs and the local productive sector and enabling a long-distance collaboration among regional LeNS_labs. Institutional sustainability: project partners have appropriate Faculty procedures and intend to incorporate new curricula on DfS in regular programmes at UG and PG level. This will be facilitated by the local ownership of action outcomes, developed on the basis of local needs and priorities. Didactic modules will be further sustained via relationships with industries and organisations for courses settled up and targeted during dissemination activities. Policy level sustainability: the book and the web platform from the project, together with the other dissemination activities (in particular the final decentralised Conference) will be targeted even to Governments, public institutions and associations, providing them with sustainable strategies, approaches and concepts. In the medium-long term, this will potentially result in the adoption of governmental strategies and policy measures for embedding DfS into planning initiatives within HEIs and industry, in order to respond to local-sustainability challenges. Environmental protection sustainability: the action will contribute to curricula capacity development in the area of environmental protection. The ambition is to equip students and practitioners with conceptual and operative tools to design sustainable Product-Service Systems. For this reason in the medium-long term the action could contribute in creating and disseminating innovative solutions on DfS. The d.OLEP will also allow long-distance collaborations and relationships, reducing travels and related environmental impacts.

LOGICAL FRAMEWORK MATRIX – LFM

<p>Wider Objective: <i>What is the overall broader objective, to which the project will contribute?</i></p> <ul style="list-style-type: none"> • Internationalization, intercultural cross-fertilization and accessibility of higher education on Design for Sustainability, focused on Sustainable Product-Service Systems and Distributed Economies, to contribute to environmental protection together with social equity/cohesion and economic prosperity. The objective is to foster a multipolar learning-by-sharing knowledge diffusion across the HEIs with an open/copyleft ethos, accessible even in lower income contexts. 	<p>Indicators of progress: <i>What are the key indicators related to the wider objective?</i></p> <ul style="list-style-type: none"> • Number of Partner HEIs that integrated in their study programmes courses on DfS. • Number of graduate students hired in companies and consultancies dealing with environmental protection and design. • Number of Partner HEIs with international status on DfS, measured by the number of teachers/researchers presenting papers in international conferences (on issues related to DfS) 	<p>How indicators will be measured: <i>What are the sources of information on these indicators?</i></p> <ul style="list-style-type: none"> • Partner HEIs curricula programmes. • Economic and sectoral studies. • Proceedings of international conferences (on issues related to DfS). 	
<p>Specific Project Objective/s: <i>What are the specific objectives, which the project shall achieve?</i></p> <ul style="list-style-type: none"> • To build a effective and solid international network of HEIs supported by a decentralized Open Learning E-Platform (d.OLEP) and a set of regional LeNS_labs, enabling a distributed production&transfer of knowledge in an open/copyleft ethos. The network aims to: (i) jointly promote an up-to-date disciplinary ground on DfS focused on S.PSS&DE; (ii) jointly develop seminars and courses, with learning resources, tools and guidelines for course 	<p>Indicators of progress: <i>What are the quantitative and qualitative indicators showing whether and to what extent the project's specific objectives are achieved?</i></p> <ul style="list-style-type: none"> • Number (>5) of seminars offered on DfS focused on S.PSS applied to DE; • Number (>10) of new courses/modules offered on DfS at PG and/or UG levels during the project in Partner HEIs; • Number of other HEIs in partner countries (>20) which implement the courses/modules in the 2 years after the project termination; • Number (>100) of new learning resources and/or tools produced in 	<p>How indicators will be measured: <i>What are the sources of information that exist and can be collected? What are the methods required to get this information?</i></p> <ul style="list-style-type: none"> • WP2 deliverables and external evaluator reports. • Partner HEIs curricular programmes. • Partner HEIs curricular programmes. • LeNSin network website. • LeNSin network website. • LeNSin network website. • Partner and European HEIs exchange records (international offices). • Partner and European HEIs exchange records (international offices). • WP2 deliverables and external 	<p>Assumptions & risks: <i>What are the factors and conditions not under the direct control of the project, which are necessary to achieve these objectives? What risks have to be considered?</i></p> <ul style="list-style-type: none"> • Sufficient synergy to enable the development of effective pilot courses/modules within each partner curricula. • Expansion of regional ICT infrastructure (Internet connection conditions continue to improve, Digital Divide is reduced). • Human: risks on unavailability of persons (mobility, illness, work overload) will be countered by

<p>development; (iii) strengthen co-operation and networking among HEIs and local stakeholders; (iv) disseminate results to support wider educators' development of curricular courses (even for lower income contexts); and (v) ensure the endurance of the action after the project end.</p>	<p>the 2 years after the project termination;</p> <ul style="list-style-type: none"> • Number (>40) of HEIs in partner countries joining the network in the 2 years after the project termination; • Number (>50) of companies/consultancies/organization/institutions joining the network in the 2 years after the project termination. • Number of students (100) and staff exchanges (30) on issue related to DfS among Partner and European HEIs in the 2 years after the project termination; • Number (>50) of joint theses on issues related to DfS among Partner and European HEIs in the 2 years after the project termination; • Number (>25) of companies/organizations participating in the seminars; • Number (>20) of companies/organizations participating in the courses' design & implementation; • Number (>100) of theses on issues related to DfS developed in collaboration with companies/organizations. 	<ul style="list-style-type: none"> • evaluator reports. • WP2 deliverables and external evaluator reports. • Partner and European HEIs record 	<p>involving reputable, fixed staff members of the HEIs and avoiding reliance on one single individual.</p> <ul style="list-style-type: none"> • Operational: operational risks include availability and continuity in the execution of courses with local actors. • Procedural: risks from failures of accountability, internal systems and controls, organization, are to be minimized by strict and continuous management of the project. • Project: risks of cost over-runs, jobs taking too long, of insufficient product or service quality are also to be countered by well organized project management. • Financial: financial risks on macro-economic level always exist, but are difficult to deal with on a project level. The economic situation in the countries participating in the project, however, has been relatively stable in the past period. • Natural: threats from weather, natural disaster, accident, disease. • Political: risks involving political circumstances: the participating countries in the action are relatively stable political systems, so political risks are considered low.
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Outputs (tangible) and Outcomes (intangible):	Indicators of progress:	How indicators will be measured:	Assumptions & risks:
<p>• Please provide the list of concrete DELIVERABLES - outputs/outcomes (grouped in Workpackages), leading to the specific objective/s.:</p> <p>WP1. PREPARATION</p> <p>1.1. State of the art, priorities and needs on DfS focused on S.PSS+DE education</p> <p>1.2. Report on the exchange agenda and modalities</p> <p>WP2. DEVELOPMENT</p> <p>2.1. Implementation of seminars</p> <p>2.2. Report on the implementation of seminars</p> <p>2.3. Definition of the first version of the didactic curricular pilot courses (structure and organization) and gathering (or developing ex-novo) of the supporting teaching materials and tools</p> <p>2.4. Implementation of the first round (of 5) pilot courses</p> <p>2.5. Report about the implementation of the first round of curricular pilot courses</p> <p>2.6. Implementation of the second round (of 5) pilot courses</p> <p>2.7. Report about the implementation of the first round of curricular pilot courses</p>	<p><i>What are the indicators to measure whether and to what extent the project achieves the envisaged results and effects?</i></p> <ul style="list-style-type: none"> • • Number (>50) of HEIs reached by the analysis • Number of persons (>50) attending each seminar and the heterogeneity of their professions (participants from HEIs, NGOs, etc.) • Development, by month 11, of the syllabuses for the 10 pilot didactic modules • Positive evaluation on the syllabuses by external evaluators • First 5 pilot courses' attendance; students' evaluation (>75% positive) of course content and organization • Second 5 pilot courses attendance; students evaluation (>75% positive) of courses content and organisation 	<p><i>What are the sources of information on these indicators?</i></p> <ul style="list-style-type: none"> • • WP1 deliverables and external evaluator reports. • WP2 deliverables and external evaluator reports. • Internal monitoring, WP2 deliverables and external evaluators' reports. • Indicators of course evaluation adopted by the partner HEIs in which the course is held. • Observer audit (see task 2.5 for details on the observer role). • External evaluators' audit. • Indicators of course evaluation adopted by the partner HEIs in which the course is hold; • Observer audit (see task 2.7 for 	<p><i>What external factors and conditions must be realised to obtain the expected outcomes and results on schedule?</i></p> <ul style="list-style-type: none"> • • WP1. PREPARATION • Assumption: HEIs, companies, NGOs and institutions engaged in the analysis of the current state-of-the-art (task 1.1) will be committed in providing the requested information to the partners • Risks: not having enough commitment from local actors is minimal: several HEIs are in fact associates in the project (showing the willingness of contributing and collaborating in the project) WP2. DEVELOPMENT • Assumption: local stakeholders (companies/ consultancies/ institutions/ organizations) will be willing to participate in the seminars • Natural risks: threats from weather, natural disaster, accident, disease • Political risks involving political circumstances: the participating countries in the action are relatively stable political systems, so political risks are considered low The risk of not having enough commitment from local actors is minimal since each partner countries'

<p>2.8. Revision and finalization of the didactic pilot courses (structure and organization) and support learning resources (final version)</p>	<ul style="list-style-type: none"> • Development, by month 36, of the syllabuses for the 10 pilot didactic courses, and upload of the final version of learning resources on the d.OLEP • Positive evaluation on the syllabuses, the learning resources and tools by external evaluators 	<p>details on the observer role);</p> <ul style="list-style-type: none"> • External evaluator audit. • Internal monitoring, <p>• WP2 deliverables and external evaluators' reports.</p>	<p>HEI has already established contacts with local organizations</p> <ul style="list-style-type: none"> •
<p>2.9. Implementation of regional LeNS_labs</p>	<p>Labs are implemented by month 11. Positive evaluation by students and staff Positive evaluation by external evaluators</p>	<ul style="list-style-type: none"> • Internal monitoring, WP2 deliverables and external evaluators' reports. 	
<p>2.10. Beta d.OLEP</p>	<ul style="list-style-type: none"> • Beta d.OLEP ready by month 10. Positive evaluation from external evaluators 	<ul style="list-style-type: none"> • Internal monitoring, WP2 deliverables and external evaluators' reports. 	
<p>2.11. Final d.OLEP</p>	<ul style="list-style-type: none"> • Number of website counted visits (>1000) • Job function and role of the registered visitors at the website • Number of users of the website (min. 2000 1 year after) • Number (>10000) of students' downloads of learning resources (2 year after) • Number (>300) of teachers' 	<ul style="list-style-type: none"> • Report on dissemination activities; OLEP Website download and upload counter. 	<ul style="list-style-type: none"> • The main project precondition is that the infrastructure and the bandwidth required to support the OLEP are in place. The assumption, during and after the implementation phase, is that internet communication systems will improve in the partner countries, reducing the digital divide and allowing a wider number of users to access project results

<p>WP3. QUALITY PLAN 3.1. 1st project evaluation report 3.2. 2nd project evaluation report 3.3. 3rd project evaluation report 3.4. 4th project evaluation report 3.5. Final project evaluation report</p> <p>WP4. DISSEMINATION & EXPLOITATION 4.1. Dissemination and exploitation strategy report 4.2. Book on DfS focused on S.PSS&DE</p> <p>4.3. Guidelines for the implementation of didactic courses and the setting up of LeNS_ labs</p> <p>4.4. Catalogue of best student projects</p> <p>4.5. Decentralized conference and conference proceedings</p>	<p>downloads of learning resources (2 year after) • Number (>100) of new learning resources produced in the 2 years after</p> <p>• Indicator to be identified by external evaluators</p> <p>• Book published by an international publisher and available on the d.Open Learning E-Package (d.OLEP) • Number (>1000) of downloads 1 year after the end of the project</p> <p>• Guidelines published and available on the Open Learning E-Package (OLEP) • Number (>100) of downloads 1 year after the end of the project</p> <p>• Number (>50) of student project in the catalogue</p> <p>• Number of persons (> 450) attending</p>	<p>• External evaluation reports.</p> <p>• Report on dissemination activities; decentralized Open Learning E-Package (d.OLEP); website download counter.</p> <p>• Report on dissemination activities; decentralized Open Learning E-Package (d.OLEP); website download counter.</p> <p>• Report on dissemination activities.</p> <p>• Report on dissemination activities; Conference proceedings; website download counter.</p>	<p>• Assumption: the panel of evaluators selected to perform the task is overall highly competent on design, sustainability, PSS innovations, DE and higher education.</p> <p>• Readiness of the publisher in editing and publishing the book • Internet connection conditions are acceptable in Latin American, Asian and African HEIs</p> <p>•</p> <p>• Attendance of academics from other HEIs and professionals to the conference • Possibility to travel to the locations where the conference take place • Readiness of the publisher in editing and publishing the proceedings • Natural and political risks A general precondition required is that all partners agree to perform the declared tasks</p> <p>•</p>
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<p>WP5. MANAGEMENT</p> <p>5.1. First project report</p> <p>5.1. Second project report</p> <p>5.1. Third project report</p> <p>5.1. Final project report</p>	<p>the conferences and their relevance in relation to target groups</p> <ul style="list-style-type: none"> • Proceedings published, available on the d.OLEP and the conference website • Number of downloads (>1000) 1 year after <ul style="list-style-type: none"> • • • • 	<ul style="list-style-type: none"> • 	
<p>Activities:</p> <p><i>What are the key activities to be carried out (grouped in Workpackages) and in what sequence in order to produce the expected results?</i></p> <ul style="list-style-type: none"> • WP1. PREPARATION • 1.1. Analysis of the current state of art, priorities and needs in relation to Design for Sustainability focused on S.PSS applied to a specific type/s of DE • 1.2. Definition of the exchange agenda and modalities (gathering and overlapping of information, and final definition of the agenda). • 1.3. Organization of the project set-up meeting • 	<p>Inputs:</p> <p><i>What inputs are required to implement these activities, e.g. staff time, equipment, mobilities, publications etc.?</i></p> <ul style="list-style-type: none"> • • 140 staff days • • • • 5 staff days • • 90 staff days • Travel and accommodation for set- 		<p>Assumptions, risks and pre-conditions:</p> <p><i>What pre-conditions are required before the project starts? What conditions outside the project's direct control have to be present for the implementation of the planned activities?</i></p> <ul style="list-style-type: none"> • • WP1. PREPARATION <p>Conditions outside the Beneficiary's direct control: possibility for HEIs representatives to travel to the locations where set-up meeting will take place.</p>

<ul style="list-style-type: none"> • WP2. DEVELOPMENT • 2.1. Design and implementation of seminars (content from WP1 and design of 5 (2-day) seminars • 2.2. Design of the didactic pilot courses (content from WP1 and outcome of seminars) • 2.3. Development of first version of learning resources • 2.4. Design and implementation of LeNS_labs • 2.5. Exchange cycles I: implementation of the 5 curricular pilot courses • • 2.6. Preparation for the curricular course evaluation meeting • • 2.7. Exchange cycles II: implementation of the 5 curricular pilot courses • • 2.8. Revision and finalization of the courses and learning resources • • 2.9 Coordination of the exchange activities • • 2.10. Development of the d.OLEP (structure) • 2.11. Management of d.OLEP contents • • WP3. QUALITY PLAN 	<ul style="list-style-type: none"> up meeting (3 days) • • 250 staff days • Travel and accommodation for the staff exchange in the 5 seminars • 70 staff days • • 300 staff days • • 100 staff days • Equipment to set up labs • 420 staff days • Travel and accommodation for staff exchange for the 5 didactic courses (14 days each) • 80 staff days • Travel and accommodation for set-up meeting (3 days) • 420 staff days • Travel and accommodation for staff exchange for the 5 didactic courses (14 days each) • 150 staff days • • 14 staff days • • 60 staff days • Subcontracting web developer • 30 staff days 		<ul style="list-style-type: none"> • WP2.DEVELOPMENT • Conditions outside the Beneficiary's direct control: <ul style="list-style-type: none"> • - possibility for partners to travel to the locations where seminar and pilot courses take place; • - attendance of diverse academics, professionals, companies, consultancies, organizations to the seminars; • - participation of companies, consultancies, organizations in the second round of pilot courses; • - Internet connection conditions in partner countries' HEIs.
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<ul style="list-style-type: none"> • 3.1. Appointment of external evaluation panel and definition of evaluation procedure. • 3.2. Analysis of the project intermediate and final results. • 3.3. Analysis of evaluation reports and development of response reports. • WP4. DISSEMINATION & EXPLOITATION • 4.1 Coordinated image design. • 4.2 General publicity of the project (newsletter, etc.) • 4.3 Book on DfS focused on S.PSS+DE (editorial board; review and editing of contributions; publishing) • 4.4. Development of guidelines for the design & implementation of didactic courses and DfS labs • 4.5. Distributed Conference organization (scientific committee; conference website development; conference communication; Call for Papers and management) 	<ul style="list-style-type: none"> • 20 staff days • 20 staff days • Subcontracting 6 external evaluators • 120 staff days • • • • 15 staff days • Subcontracting professional communication/graphic designer • 52 staff days; • Subcontracting printing of communication materials. • • 200 staff days • Subcontracting editing, publishing and printing services for the book. • • 50 staff days • 200 staff days. • Travel and accommodation for partners' academic staff to attend the conference. • Travel and per diems for keynote speakers, award winner to attend the conference. • Subcontracting design and printing 		<p>WP3. QUALITY PLAN</p> <ul style="list-style-type: none"> • Conditions outside the Beneficiary's direct control: Internet connection conditions in partner countries' HEIs. <p>WP4. DISSEMINATION & EXPLOITATION</p> <ul style="list-style-type: none"> • Conditions outside the Beneficiary's direct control: • - readiness of the publisher in editing and publishing the book: • - contribution of academics from other HEIs and professionals to the conference. • • • • • • • • • • • • • • • •
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<ul style="list-style-type: none"> • 4.6. Organization of the Student Design Award on DfS and catalogue of best projects <p>WP5. MANAGEMENT</p> <ul style="list-style-type: none"> • 5.1. General coordination. • 5.2. Internal monitoring. 5.3. Website: establishment and maintenance • 	<p>of conferences' communication materials.</p> <ul style="list-style-type: none"> • Subcontracting catering for the conferences. • Subcontracting editing, publishing and printing services for the conference proceedings. <ul style="list-style-type: none"> • 100 staff days. • <ul style="list-style-type: none"> • 240 staff days. • 720 administrative staff days. • Equipment: laptops enabled for long distance collaboration plus webcam and microphone for partner countries' HEIs. • Subcontracting auditing services. • • • • 		<ul style="list-style-type: none"> • • • • • • • • <p>WP5. MANAGEMENT</p> <ul style="list-style-type: none"> • General preconditions required before the action starts: • Internet connection conditions are acceptable in partner countries' HEIs; • Agreements and availability of all partners to attend the declared tasks, with a minimum risk given all partners' participation to the proposal preparation and high commitment. • • • • • • •
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WORKPLAN

Please use the model provided. Applicants are expected to complete a one-page work plan for each project year.

For each year of your project proposal, please complete a work plan indicating the deadlines for each outcome and the period and location in which your activities will take place. Please create additional work plan tables if further space is needed.

The same reference and sub-reference numbers as used in the logical framework matrix must be assigned to each outcome and related activities.

Activity carried out in the Programme Country: = (E.g. activity in France for two weeks in the first month of the project 2= under M1)

Activity carried out in the Partner Country (ies): X (E.g., activity in Tunisia for three weeks in the second month of the project: 3X under M2)

WORKPLAN for project year 1

Activities		Total duration (number of weeks)	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Ref.nr/ Sub-ref nr	Title		Ott 15	Nov 15	Dic 15	Gen 16	feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Ago 16	Sep 16
1	PREPARATION	20	////	////	////	////	////							
1.1	Analysis of the current state of art, priorities and needs in relation to Design for Sustainability focused on S.PSS applied to a specific type/s of Distributed Economies (M1-M3)		4X	4X	4X									
1.2	Definition of exchange agenda and modalities (gathering and overlapping of information, and final definition of the agenda) (M4-M5)					4X	4X							
1.3	Organisation of the project set-up meeting (M3)				1=									
2	DEVELOPMENT	28						////	////	////	////	////	////	////
2.1	Design and implementation of seminars (gathering content from WP1 and design of 5 (2-day) seminars) (M6-M10)							4X	4X	4X	4X	4X		
2.2	Design of the didactic pilot courses (gathering content from WP1 and the outcome of the seminars) (M11-M13)												4X	4X
2.3	Development of first version of learning resources (M11-M18)												4X	4X
2.4	Design and implementation of LeNS regional labs (M6-M11)							4X	4X	4X	4X	4X	4X	
2.5	Exchange cycles: implementation of the first 5 curricular pilot courses (M10-18)											4X	4X	4X
2.9	Coordination of the exchange activities (M10-18) (M26-M30)											4X	4X	4X
2.10	Development of the OLEP (structure) (M11-M36)												4=	4=

Activities		Total duration (number of weeks)	M1 Ott 15	M2 Nov 15	M3 Dic 15	M4 Gen 16	M5 feb 16	M6 Mar 16	M7 Apr 16	M8 May 16	M9 Jun 16	M10 Jul 16	M11 Ago 16	M12 Sep 16
Ref.nr/ Sub-ref nr	Title													
2.11	Management of OLEP contents (M11-M36)												4=	4=
3	QUALITY PLAN	28						////	////	////	////	////	////	////
3.1	Appointment of external evaluation panel and definition of evaluation procedure (M6)							4=						
3.2	Analysis of the project intermediate and final results (M12, M18,M24,M30,M35)													4=
3.3	Analysis of evaluation reports and development of response reports (M12, M18,M24,M30,M35)													4X
4	DISSEMINATION & EXPLOITATION	48	////	////	////	////	////	////	////	////	////	////	////	////
4.1	Coordinated image design (M1-M3)		4=	4=	4=									
4.2	General publicity of the project (newsletter, press releases, blogs, etc.) (M3-M36)				4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.3	General publicity of the project (design of project flyers) (M2-M3)			4=	4=									
4.4	General publicity of the project (newsletter, press releases, blogs, etc.) (M3-M36)				4=	4=								
5	MANAGEMENT	48	////	////	////	////	////	////	////	////	////	////	////	////
5.1	General coordination (M1-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
5.2	Internal monitoring (M4-M36)					4=	4=	4=	4=	4=	4=	4=	4=	4=
5.3	Web-site: establishment and maintenance of public area (M3-M36)				4=	4=	4=	4=	4=	4=	4=	4=	4=	4=

WORKPLAN for project year 2

Activities		Total duration (number of weeks)	M13 Ott 16	M14 Nov 16	M15 Dic 16	M16 Gen 17	M17 feb 17	M18 Mar 17	M19 Apr 17	M20 May 17	M21 Jun 17	M22 Jul 17	M23 Ago 17	M24 Sep 17
Ref.nr/ Sub-ref nr	Title													
2	DEVELOPMENT	48	////	////	////	////	////	////	////	////	////	////	////	////
2.2	Design of the didactic pilot courses (gathering content from WP1 and the outcome of the seminars) (M11-M13)		4X											
2.3	Development of first version of learning resources (M11-M18)		4X	4X	4X	4X	4X	4X						
2.5	Exchange cycles: implementation of the first 5 curricular pilot courses (M10-18)		4X	4X	4X	4X	4X	4X						
2.6	Preparation for the curricular course evaluation meeting (M20-M22)									4X	4X			
2.9	Coordination of the exchange activities (M10-18) (M26-M30)		4X	4X	4X	4X	4X	4X						
2.10	Development of the OLEP (structure) (M11-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
2.11	Management of OLEP contents (M11-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
3	QUALITY PLAN	48	////	////	////	////	////	////	////	////	////	////	////	////
3.2	Analysis of the project intermediate and final results (M12, M18,M24,M30,M35)							4=						4=
3.3	Analysis of evaluation reports and development of response reports (M12, M18,M24,M30,M35)							4X						4X
4	DISSEMINATION & EXPLOITATION	48	////	////	////	////	////	////	////	////	////	////	////	////
4.2	General publicity of the project (newsletter, press releases, blogs, etc.) (M3-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.5	Distributed Conference organisation (Establishing of a scientific committee; conference website development; conference communication; Call for Papers launch and management) (M24-M36)													4=
4.6	Organisation of the Students design award on DfS focused on S.PSS+DE, and realisation of a catalogue of best students projects (M19-M27)								4=	4=	4=	4=	4=	4=
Activities		Total	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24

Ref.nr/ Sub-ref nr	Title	duration (number of weeks)	Ott 16	Nov 16	Dic 16	Gen 17	feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Ago 17	Sep 17
5	MANAGEMENT	48	////	////	////	////	////	////	////	////	////	////	////	////
5.1	General coordination (M1-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
5.2	Internal monitoring (M4-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
5.3	Web-site: establishment and maintenance of public area (M3-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=

WORKPLAN for project year 3

Activities		Total duration (number of weeks)	M25 Ott 17	M26 Nov 17	M27 Dic 17	M28 Gen 18	M29 feb 18	M30 Mar 18	M31 Apr 18	M32 May 18	M33 Jun 18	M34 Jul 18	M35 Ago 18	M36 Sep 18
Ref.nr/ Sub-ref nr	Title													
2	DEVELOPMENT	48	////	////	////	////	////	////	////	////	////	////	////	////
2.7	Exchange cycles: implementation of the <u>second round</u> of 5 curricular pilot courses (M26-M30)			4X	4X	4X	4X	4X						
2.8	Revision and finalisation of the courses and learning resources (M31-M36)								4X	4X	4X	4X	4X	4X
2.9	Coordination of the exchange activities (M10-18) (M26-M30)			4X	4X	4X	4X	4X						
2.10	Development of the OLEP (structure) (M11-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
2.11	Management of OLEP contents (M11-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
3	QUALITY PLAN	48	////	////	////	////	////	////	////	////	////	////	////	////
3.2	Analysis of the project intermediate and final results (M12, M18,M24,M30,M35)							4=					4=	
3.3	Analysis of evaluation reports and development of response reports (M12, M18,M24,M30,M35)							4X					4X	
4	DISSEMINATION & EXPLOITATION	48	////	////	////	////	////	////	////	////	////	////	////	////
4.2	General publicity of the project (newsletter, press releases, blogs, etc.) (M3-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.3	Book on DfS+DE (Establishing of an editorial board; review and editing of contributions; publishing) (M25-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.4	Guidelines for the design & implementation of didactic courses and DfS labs (M25-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.5	Distributed Conference organisation (Establishing of a scientific committee; conference website development; conference communication; Call for Papers launch and management) (M24-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
4.6	Organisation of the Students design award on DfS focused on S.PSS+DE, and realisation of a catalogue of best students projects (M19-M27)		4=	4=	4=									
5	MANAGEMENT	48	////	////	////	////	////	////	////	////	////	////	////	////
5.1	General coordination (M1-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=

5.2	Internal monitoring (M4-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=
5.3	Web-site: establishment and maintenance of public area (M3-M36)		4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=	4=

PART H - Work packages

Please enter the different project activities you intend to carry out in your project. Make sure that the information in this section is consistent with the project Logical Framework Matrix.

H.1. Description of work packages, outcomes and activities

Work package type and ref.nr	PREPARATION	1
Title	Project set up	
Related assumptions and risks	<p>Assumptions: The main assumption is that the HEIs, companies, NGOs and institutions engaged in the analysis of the current state-of-the-art (task 1.1) will be committed in providing to the partners the requested information.</p> <p>Risks: The risk of not having enough commitment from local actors is minimal: several HEIs are in fact associates in the project and already part one of the LeNS affiliated regional networks (showing the willingness of contributing and collaborating in the project).</p>	
Description	<p>The aim of this WP is to identify the DfS topics focused on Sustainable Product-Service Systems (S.PSS) and specific types of Distributed Economies (DE) each HEI will be working on. S.PSSs are known offer model potentially decoupling resources consumption from its traditional connection with profit; moreover, if properly conceived, S.PSSs can offer to low-income people the possibility to have access to services that traditional product sales models would not allow. If properly designed, even DE are promising opportunity to couple economic, environmental and socio-ethical benefits. Different types of DE are emerging Distributed Energy Generation (e.g. mini-grid renewable energy generation), Distributed Production of Information (e.g. wikipedia), Distributed Production of Softwares (e.g. Linux), Distributed Production of Products (e.g. 3-D Printing), Distributed Design (e.g. open innovation/design and crowd-sourcing). Various possible combinations of S.PSS&DE is the promising and articulated field were Design for Sustainability will be focused on (in short "DfS on S.PSS&DE"). The S.PSS and the DE models, or their combination, can be considered promising to tackle economic, environmental and socio-ethical issues. In other terms, the project is focused on the following research hypothesis: "A S.PSS approach may act as a offer model able to facilitate the diffusion of various forms of DE in low and middle-income (all) contexts, as a key leverage for a sustainable development of locally-based and network-structured enterprises and initiatives, for a sustainable re-globalisation process characterised by a democratisation of access to resources, goods and services.". ["Vezzoli et al. 2014 PSS design for Sustainability", London: Greenleaf]</p> <p>The selection of the topics of interest will be based on the analysis of the local state-of-the art, needs and priorities (including companies' priorities). This will be followed by the identification of didactic curricular priorities and needs, and the definition of the bases upon which the seminars and the pilot courses will be designed and the related learning resources will be collected/developed in terms of disciplinary content and structure. Representatives from the local productive sector will be involved to drive the identification of the local priorities.</p>	
Tasks	<p>1.1 Analysis of the current state of art, priorities and needs in relation to Design for Sustainability focused on S.PSS applied to specific type/s of Distributed Economies:</p> <p>Each HEIs partner will gather information regarding their own knowledge,</p>	

	<p>didactic practices and tools in the area of Design for Sustainability focused on Sustainable Product-Service System and specific type/s of Distributed Economies (DfS on S.PSS&DE), as well as information regarding the local priorities and needs (including companies' priorities). The objective is the consolidation of a common disciplinary ground, and the definition of: [a] a set of specific topics of interest upon which the seminars will be developed; [b] specific didactic priorities and needs upon which the didactic curricular pilot courses will be structured and organised; [c] specific companies' priorities and needs upon which the second round of pilot courses will be organised. Partners will produce short reports to be presented and debated in the Project set-up meeting foreseen in this work package.</p> <p>1.2 Definition of exchange agenda and modalities: On the basis of the specific topics of interests, partner institutions will be clustered into groups, seeking to identify the best opportunities for matching. In parallel, current curriculum and structural compatibility will be evaluated among partner institutions aiming at the definition of the exchange schedules and modalities to implement the seminars and the two rounds of curricular pilot courses (WP2). Each non-European institution will gather relevant information regarding (existing or potential) design & engineering-related courses in its own institution (in terms of schedule, number of hours, contents, teaching methodologies and techniques) and prepare a short report and proposal for the exchange agenda and modalities (defining its own agenda for both travelling and hosting a guest teachers and observers). The WP leader will receive and overlap the diverse short reports and proposals from non-European partners and an agenda from European partners; the WP leader will then report the partners during the Project set-up meeting.</p> <p>1.3 Organisation of the project set-up meeting: To take place in month 3 as a 2 days meeting with representatives from each partner. All partners will bring all documents and data prepared (as specified above in 1.1 and 1.2). The meeting deliberations will conclude about: (1) the identification of specific topics of interest for each partner and the clustering of partners around these topics; (2) the identification of the specific priorities and needs that non-European HEIs have in relation to DfS on S.PSS&DE and hence identification of the boundaries and the contents of the shared knowledge-base and know-how on this issue; (3) the consolidation of a common background on education approaches, methods and tools with a focus on DfS on S.PSS&DE; (3) the identification of the specific priorities and needs that non-European HEIs have in relation to education when the concern is on DfS focused on S.PSS&DE; (4) the identification of the specific priorities and needs that local companies, consultancies and organisations have in relation to DfS and S.PSS&DE types; (5) the definition of the exchange agenda (duration and schedule) and modalities for the implementation of the seminars and the two rounds of didactic curricular pilot courses. The project set-up meeting will be organised by UBRUN with SRISHTI support.</p>		
Estimated Start Date (dd-mm-yyyy)	Month 1: 01/10/2015	Estimated End Date (dd-mm-yyyy)	Month 5: 28/02/2016
Lead Organisation	WP leader: UBRUN; Assistant WP leader: SRISHTI; Task 1.1 leader UBRUN; Task 1.2 leader SRISHTI; Task 1.3 leader POLIMI;		
Participating Organisation	POLIMI, AALTO ARTS, UBRUN, TU DELFT, UFPR, UFPE, SRISHTI, IIT GUWAHATI, TSINGHUA, HNU, CPUT, SUN, UAM, UVM.		

Deliverables/results/outcomes

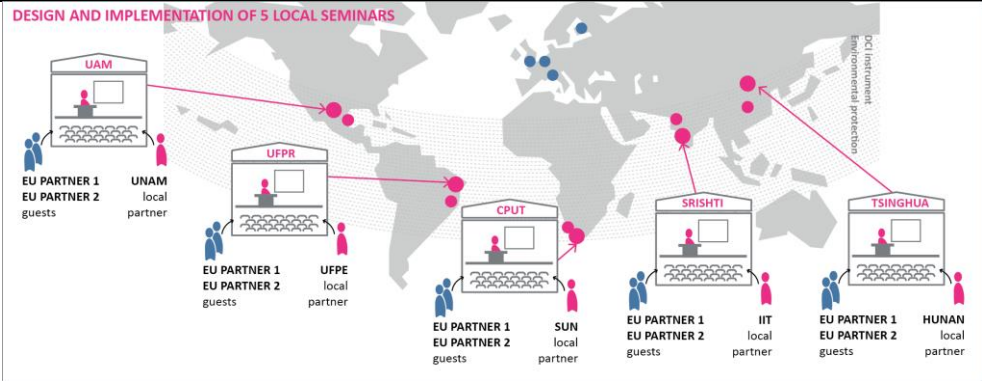
Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	1.1.	
	Title	State of the art, priorities and needs on DfS focused on S.PSS&DE education	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report on the current state of the art in DfS focused on S.PSS applied to various types of DE in each partner institution. The report includes an analysis of local priorities and needs and an analysis of the current knowledge-base and know-how on DfS focused on S.PSS&DE (including existing design approaches, methods and tools). The deliverable will be based on the short reports prepared by each partner and the subsequent debate and conclusions of the Project set-up meeting. The deliverable will constitute the basis for the organization and development of the seminars and the two rounds of curricular pilot courses (WP2).	
	Due date	28/02/16	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	1.2.	
	Title	Report on the exchange agenda and modalities	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	This report, on the basis of the specific topics of interests, priorities and needs (Deliverable 1.1), identifies relevant clusters of universities and defines a first tentative exchange agenda and modalities for seminars and the two round of curricular pilot courses.	
	Due date	28/02/2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff		

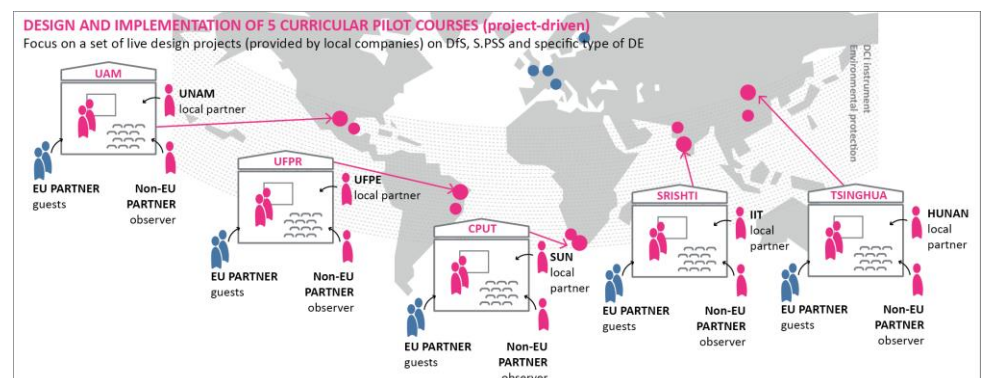
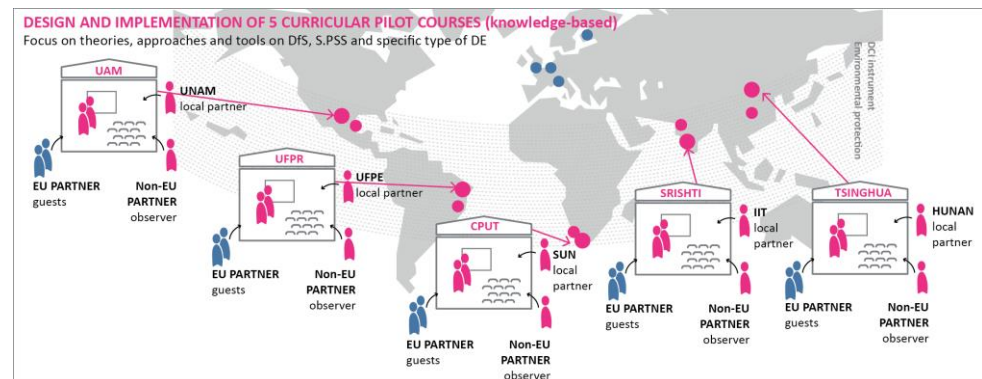
	<input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International

Please copy and paste tables as necessary.

Work package type and ref.nr	DEVELOPMENT	2
Title	Design and implementation of seminars and curricular pilot courses, and development of related supporting learning resources and distributed Open Learning E-Platform (d.OLEP) and design and implementation of LeNS regional labs (LeNS_labs)	
Related assumptions and risks	<p>Assumptions: 1] The main project precondition is that the infrastructure and the bandwidth required to support the d.OLEP are in place. The assumption, during and after the implementation phase, is that internet communication systems will improve in the partner countries, reducing the digital divide and allowing a wider number of users to access project results. 2] The second assumption is that partners will have the possibility to travel to the locations where the seminars and pilot curricular courses take place. 3] The third assumption is that local stakeholders (companies/ consultancies/ institutions/ organisations) will be willing to participate in the seminars and in the pilot curricular courses.</p> <p>Risks: In relation to the possibility of the partners to travel to the locations where seminars and curricular pilot courses take place, there are some Natural and Political risks. <i>Natural:</i> threats from weather, natural disaster, accident, disease. <i>Political:</i> risks involving political circumstances: the participating countries in the action are relatively stable political systems, so political risks are considered low.</p>	
Description	<p>This WP is structured around four main activities:</p> <p>1] <i>Design and implementation of seminars.</i> To design, organise and implement 5 seminars (one for each main non-European partner). This seminars will bring together (in addition to local partners and 2 European partners) local design HEIs and representative from local companies/consultancies/associations. Seminars are primarily aimed at collecting the widest and most advanced knowledge on DfS focused on S.PSS&DE. In particular they will deepen the topics of interests defined in WP1 and gather insights to be used to design the pilot courses. Seminars will take place within the end of month 12 and, in any case, before the implementation of the first round of pilot courses. All speeches will be video recorded and video, slideshows and other learning resources will be made freely available on the d.OLEP.</p>	



2] *Development and implementation of curricular pilot courses and related learning resources and design tools.* In both the cases this activities will include: (1) the design of the pilot course prototypes, i.e. definition of a comprehensive teaching syllabus regarding contents, teaching methodologies, tools, techniques and evaluation procedures, according to the exchange agenda defined in WP1; (2) the selection and development of disciplinary and thematic didactic support material: learning resources, books and booklets, slideshows, software tools, etc. The whole of this materials and subsidies will support the launch and implementation of 10 curricular pilot courses (2 for each non-European institution) to be carried out within a total period of 24 months (two academic years) through exchange modalities defined in WP1. The first round of 5 curricular pilot courses will focus on theories, methods and tools of DfS focused on S.PSS&DE (each of them addressing the specific topics (DE type) of interest identified in WP1 and deepened in the seminars). The second round of remaining 5 courses will be project-based, with live design briefs given by local companies/organisations.



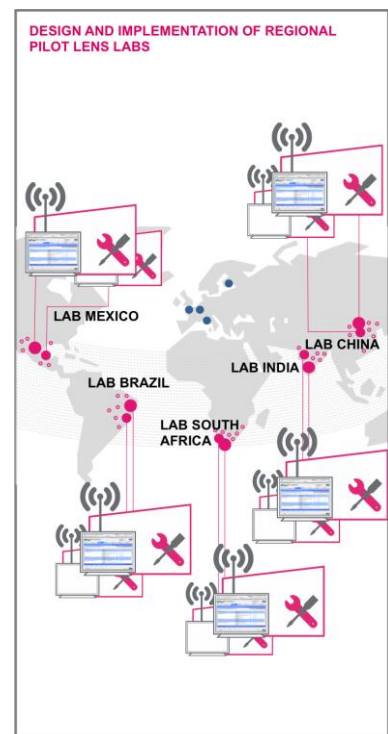
3] *Design and Implementation of the 5 LeNS regional pilot labs in the non-European partner institutions.* LeNS regional labs are aimed and will be used to:

a) support undergraduate and postgraduate teaching (teacher will use the lab's resources and tool to enrich the teaching of DfS-related courses; b) support students' projects (students will get access to the resources and tools offered by the lab when developing design projects with a sustainability focus); c) support PhD students and researchers activities (allowing them to get access to the latest resources and tools on DfS) d) host the d.OLEP with regionally developed resources and tools; e) strengthen the link between universities and the local productive sector (the lab and its resources can be used by the university to collaborate with companies and other organisations research projects and consultancies); f) finally it is important to highlight that the labs also enable a long distance and multipolar collaboration among different LeNS regional labs (theme with local&global HEIs and companies/NGOs/institutions), enriching all the previously listed activities from a) to e).

This activity will include the detailed identification of the needed space, equipment and resources (e.g. software, books, etc. as well as videoconferencing facilities) needed for each LeNS regional lab, followed by the implementation of the labs.

4] Development of the decentralised Open Learning E-Platform.

To develop an decentralised Open Learning E-Platform (d.OLEP) for the distributed production, distribution and fruition of knowledge and know-how on DfS focused on S.PSS&DE, with a modular and adaptable package for curricular courses composed by: learning resources (video, slide shows, texts, audio, etc.), teaching tools, design tools, guidelines for courses design & implementations, and courses and modules programs examples. It can be described as a modular e-package of teaching materials and tools that researchers/educators (as well as students, designers, entrepreneurs and interested persons/ institutions) worldwide will be able to download (free of charge), modify, remix and reuse, i.e. in a copyleft ethos. The d.OLEP will allow the exchange in an openethos and with a learning-by-sharing approach of teaching subsidies, between all HEIs, favouring in this way a multipolar dissemination, as well as the intercultural cross-fertilisation and consolidation of project results, i.e. knowledge-base and know-how on DfS focused on S.PSS applied to various type of DE. The design and development of the distributed web platform will be based on the already developed and tested LeNS and LeNSes platforms (Asialink and Edulink EU funded projects).



Tasks

2.1 Design and implementation of seminars:
 Taking into consideration the results of WP1 (in particular the identification of specific topic of interest and the clustering of partners around those topics), this activity foresees the design, organisation and implementation of 5 seminars. Each main non-European partner will take the lead in organising a 2-day seminar. This will be done in collaboration with the other local partner and supported by two European partners. Seminars will target regional HEIs within DfS disciplines (i.e. design teachers, researchers and practitioners); moreover relevant institutions and organisations active in the local context (such as companies, consultancies,

industrial associations, governments, public institutions, NGOs etc.) will be invited. Each seminar will deepen DfS focused on S.PSS applied to specific DE type/s identified as strategic by the local partners (WP1 results). The outcome of each seminar is expected to provide insights, suggestions and indications to drive the design of the curricular pilot courses. In particular it is expected to design courses which are very relevant for the local productive contexts because they meet their priorities and needs (strengthening in this way the link between university and industry by enhancing employability).

- **Seminar 1. Host partner:** UFPR; **Local partner:** UFPE; **Guest partners:** 2 EU partners

- **Seminar 2. Host partner:** SRISHTI; **Local partner:** IIT; **Guest partners:** 2 EU partners

- **Seminar 3. Host partner:** TSINGHUA; **Local partner:** HUNAN; **Guest partners:** 2 EU partners

- **Seminar 4. Host partner:** CPUT; **Local partner:** SUN; **Guest partners:** 2 EU partners

- **Seminar 5. Host partner:** UAM; **Local partner:** UVM ; **Guest partners:** 2 EU partners

2.2 Design of the didactic pilot courses:

Taking in considerations the result of WP1 and the outcome of the seminars, this activity foresees the development of the syllabuses of the didactic curricular pilot courses (in terms of structure, duration, frequency, number of hours, teaching methods, tools, techniques, student's project delivery formats and evaluation procedures). The contents of each pilot course will be on DfS focused on S.PSS applied to a specific type/s of DE (topic identified by each partner countries' HEI in WP1 and deepened in the seminars). Two rounds of courses are foreseen: (a) the first round of 5 curricular pilot courses will focus on theories, methods and tools of DfS focused on S.PSS&DE; (b) the second round of remaining 5 courses will be project-based, with live design briefs given by local companies/NGO/organisations.

The design of the modules will be done in collaboration between all HEIs partners and with project associates acting as advisors (to ensure that course will reflect labour market needs and priorities). Associated companies/organisations are interested in participating in the task in order to design courses that are relevant to their specific needs. Associated HEIs are interested in participating to gain new knowledge to be applied in their programmes.

2.3 Development of first version of learning resources:

Taking in consideration the structure of the pilot modules designed in the previous activity, the necessary learning resources are gathered or developed ex-novo (according to expressed needs and priorities). The focus is in particular on the development of new teaching materials, specifically thought for HEI's local context. Also in this activity there will be the task of defining and distributing the pertinent bibliography among partners and the identification of didactic tools. Significant existing tools developed or used by the single partners will be specially considered. This activity will be done in collaboration between all HEIs partners.

2.4 Design and implementation of LeNS regional labs

In parallel with activity 2.3, 5 LeNS_labs will be designed and implemented in each non-European partner institution. These labs are meant as spaces where students, researchers and teachers can have access to equipment,resources and tools to support: DfS teaching activities and projects, the hosting of the d.OLEP

servers and the audio video conferencing between different LeNS_labs. These equipment, resources and tools will be tailored to the specific local needs and priorities but, in general, will include computer desktops, DfS books, DfS journals, software (e.g. LCA software), DfS tools (physical and online tools), as well as space to run teamwork activities (e.g. brainstorming sessions, user focus groups, etc.) and to enable videoconferencing. This task includes the detailed identification of the needed space, equipment and resources (e.g. software, books, etc.) needed for each LeNS_lab, being focused on S.PSS and a specific type of DE: This will be followed by the labs implementation. European partners will support non-European partner in the identification of requirements, as well as the start-up of the labs.

2.5 Exchange cycles I: implementation of the first 5 curricular pilot courses:

The first round of curricular pilot courses will take place in the 5 main non-European partner institutions, along month 10 to month 18. Each of the Pilot courses will be on DfS focused on S.PSS applied to specific type/s of DE, coherently with the topic of the seminars previously organised by the same HEIs. This will be in terms of theories, approaches and tools. Each pilot course will be organised by a main non-European partner, in collaboration with the other local non-European partner and a European HEI partner. Within each pilot course it is foreseen one cycle of exchange; the EU partner will undertake a two-week mission to the non-European HEI partner. Another non-European HEI partner will act as Observer, monitoring in-site the exchange process and the pilot course implementation.

In particular, the pilot courses are composed as follows and the allocation of the guest partner and the observer will take place after identifying (WP1) the specific interests of each HEI:

- **Pilot course 1. Host partner:** UFPR ; **Local partner:** UFPE ; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 2. Host partner:** SRISHTI; **Local partner:** IIT ; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 3. Host partner:** TSINGHUA; **Local partner:** HUNAN; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 4. Host partner:** CPUT; **Local partner:** SUN; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 5. Host partner:** UAM; **Local partner:** UVM; **Guest:** EU partner; **Observer:** non-EU partner

The local host responsible HEI's staff (and the other local HEI's staff members) will, together with the guest staff, implement the pilot course, for local students. The role of the Observer is to monitor and annotate the development of the activities along the period of implementation of the pilot course. The Observer will be in-site during the visit of the guest teacher. The aim of the Observer is that of assessing the process of implementation of the pilot course and reporting its results to the work package leader (POLIMI). The Observer can also intervene and contribute along the teaching process (moreover the observer will benefit by being exposed to a two week course in terms of knowledge, didactic approaches, modalities and tools shared among non-European and EU teachers). At the end of each half cycle of exchange, the Observer will prepare an evaluation report. Each regional LeNS_lab will be used and will provide useful tools and resources supporting the development and implementation of each pilot course.

2.6 Preparation for the curricular course evaluation meeting:

For the intermediate meeting (to be organised by UFPR), the assessment reports

delivered by the 5 Observers will be overlapped and synthesized. Partners will discuss upon the results of the pilot courses implementation. The conclusions will be integrated back on the teaching courses and materials helping the refinement for their final version, aiming at describing guidelines for further consolidation of curricula and network potentialities. Furthermore, assessment reports delivered by the Observers will constitute a key input for the Final project report (WP5) aiming, as a medium and long-term result of the project, at the establishment of guidelines for further diffusion and consolidation of such courses in design HEIs curricula.

2.7 Exchange cycles II: implementation of the second 5 curricular pilot courses:

The implementation and assessment of the first round of pilot courses will be also used to inform the second round of 5 pilot courses (to be implemented between months 19-30 in the 5 main non-European partner in the following academic year). Compared to the first round of courses (which provide to students the knowledge base and the know-how), these courses are meant to be project-driven: courses will be structured around a set of live design projects provided by local companies/organisations. These courses are expected to strengthen the link between university and industry, enhancing students' employability. Local associates (companies, consultancies, organisations) will therefore be involved in defining the design briefs (that will be related to a live project on DfS focused on S.PSS&DE), as well as in providing feedbacks and revisions throughout the entire students' projects development. As for the first round of pilot courses, each pilot course will be organised by a main non-European partner, in collaboration with the other local non-European partner and a European HEI partner.

In particular (allocation of guest partners and the observers will take place after identifying (WP1) the specific interests of each HEI and the first exchange cycles):

- **Pilot course 6. Host partner:** UFPR; **Local partner:** UFPE; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 7. Host partner:** SRISHTI; **Local partner:** IIT; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 8. Host partner:** TSINGHUA; **Local partner:** HUNAN; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 9. Host partner:** CPUT; **Local partner:** SUN; **Guest:** EU partner; **Observer:** non-EU partner
- **Pilot course 10. Host partner:** UAM; **Local partner:** UVM; **Guest:** EU partner; **Observer:** non-EU partner

2.8 Revision and finalisation of the courses and learning resources:

During and after the implementation of the pilot courses its structure as well as the learning resources, tools and modalities, will be tested. This will allow the revision and improvement of courses and supporting teaching materials. A final version will be developed for the end of month 33, in order to be used by HEIs (both partners and other HEIs) in the following academic years. This activity of revision and finalisation will be based not only by the experience made by the involved teachers but even through both the external evaluation report (WP3) and the evaluation to be carried out by the partners who will act as Observers (and produce and deliver assessment reports for each pilot course).

In this activity there will be moreover the development of guidelines for curricular consolidation of the courses within the partners, as well as guidelines for similar courses diffusion to other HEIs; this is expected to support the exploitation of the project results. These guidelines will be built based on the results of the implementation of the didactic curricular pilot courses. Hence, it is

crucial that the original didactic curricular courses are further revised, modified and complemented according to the outcomes and conclusions of their implementation.

The intermediate and final results of this activity (all learning resources and design tools used to support the educational activity, such as video and slideshows, texts, etc.) will be uploaded and made available in the regional Open Learning E-Platform, so forth even on the d.OLEP (see task 2.11).

2.9 Coordination of the exchange activities:

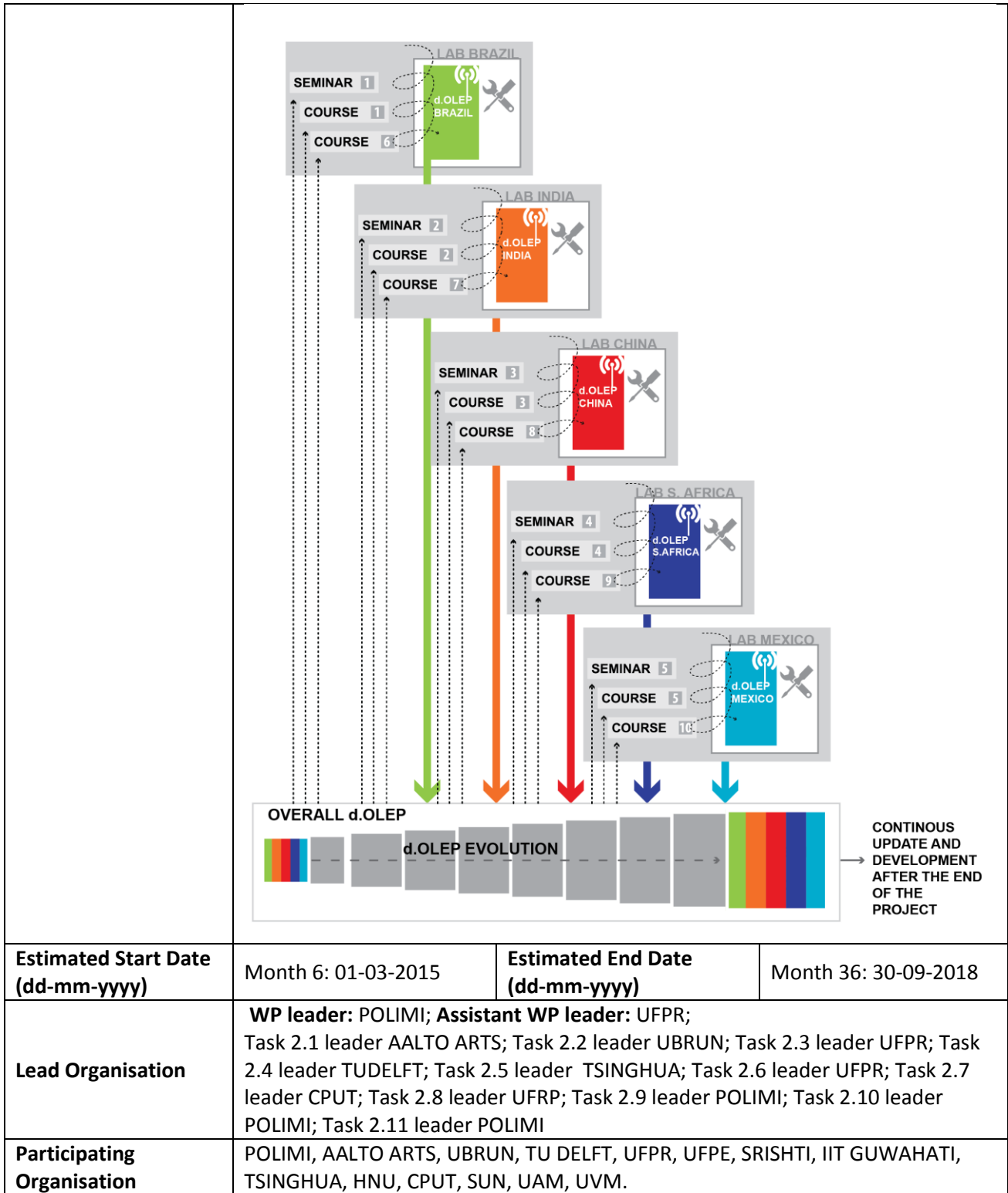
The activities developed during the pilot curricular courses will be complemented by regular long-distance collaboration between both host and guest partners, and local associates, followed by the observer. The activity of coordination will ensure that every single exchange cycle is conducted according to the established agenda and parameters as well as the subsequent long-distance collaboration between the participants.

2.10 Development of the d.OLEP (structure):

Redesign and upgrade of the OLEP web platform already successfully developed and tested within the LeNS, Learning Network on Sustainability project (EuropeAid, Asia-Link Programme, 2007-2010) and updated under the LeNSes, Learning Network on Sustainable energy system project (Edulink II programme, 2013-2016). The WP leader will engage and coordinate a subcontractor in the development of a new and improved version of the platform (taking in consideration both the possible improvements emerged during the LeNS and LeNSes projects and the specific needs emerged during the LeNSin project). A beta version will be developed (it will be ready for month 9) and further refined during the pilot courses implementation (month 10-33) taking in consideration the evaluation and feedback coming from partners during the use of the d.OLEP itself (in particular, contribution on how to improve the d.OLEP will come from observer reports, from external evaluators reports, and from a test with external users). A final version of the d.OLEP will be delivered by month 36. POLIMI will lead this task and all the project partners will be involved in identifying the specific requirement of the d.OLEP and in testing the beta version and the subsequent versions.

2.11 Management of d.OLEP contents:

The first contents of the d.OLEP will be the teaching subsidies and supporting materials developed during task 2.1 and task 2.3. During the implementation of the pilot courses d.OLEP contents will evolve: the logic of this process is that of refining and expanding the initial d.OLEP contents along its implementation in the first 5 pilot courses and in the following 5 courses, feeding back the original pack. Each partner will be engaged in using, integrating and remixing the didactic materials produced by the other partners for the pilot courses previously carried out. The same will happen for the contents related to lifelong learning modules. A “final” 2018 version of OLEP contents will be made available at the end of the project. However, it is a final version only in relation to the LeNS international funded project: in fact, since it is an open package, it is foreseen its continuous updating and development even after the end of the project (see the figure below). POLIMI will manage the upload of the d.OLEP content, organising it in appropriate clusters.



Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.1.	
	Title	Implementation of 5 seminars on DfS on S.PSS&DE	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Implementation of 5 seminars (one for each main non-European partner) to deepen the topics of interests	

		defined in WP1 and gather insights to be used to design the pilot courses.
	Due date	Month 10: 30-07-2016
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other	
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International	

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.2.	
	Title	Report on the implementation of seminars	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report about the implementation of the 5 seminars, describing and analysing the activities undertaken and the results achieved.	
	Due date	Month 11: 31-08-2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>Representative from local companies/consultancies/associations.</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input checked="" type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.3.	
	Title	Definition of the first version of the didactic curricular pilot courses (structure and organization) and gathering (or developing ex-novo) of the supporting teaching materials and tools	
	Type	<input checked="" type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product

	Description	Development of the syllabuses (5) of the didactic curricular pilot courses on DfS focused on S.PSS&DE (in terms of structure, duration, frequency, number of hours, teaching methods, tools, techniques, student's project delivery formats and evaluation procedures), and definition of the first version of learning resources (to be gathered or developed ex-novo according to expressed needs and priorities).
	Due date	Month 18: 31/03/2017
	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International	

	Work Package and Outcome ref.nr	2.4.	
	Title	Implementation of the first round (of 5) pilot courses	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
Expected Deliverable/Results/Outcomes	Description	Implementation of 5 curricular pilot courses (1 in each non-European partner institutions) on DfS each focused on S.PSS applied to a specific type of DE , in terms of theories, approaches and tools. Each pilot course will be organised by a main non-European partner, in collaboration with the other local non-European partner and a European HEI partner. Within each pilot course it is foreseen one cycle of exchange; the EU partner will undertake a two-week mission to the non-European HEI partner. Another non-European HEI partner will act as Observer, monitoring in-site the exchange process and the pilot course implementation.	
	Due date	Month 18: 31/03/2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>Representative from local companies/consultancies/associations.</i>		

Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.5.	
	Title	Report about the implementation of the first round of curricular pilot courses	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report describing and analysing the activities undertaken and the results achieved in the first round of curricular pilot courses.	
	Due date	Month 19: 30/04/2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.6.	
	Title	Implementation of the second round (of 5) pilot courses	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Implementation of 5 project-led curricular pilot courses (1 in each non-European partner institutions) on DfS focused on S.PSS applied to specific DE types. Compared to the first round of courses these courses are meant to be project-driven: courses will be structured around a set of live design projects provided by local companies/organisations. As for the first round of pilot courses, each pilot course will be organised by a main non-European partner, in collaboration with the other local non-European partner and a European HEI partner.	
	Due date	Month 30: 31/03/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees		

	<input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other
	<i>Representative from local companies/consultancies/associations.</i>
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.7.	
	Title	Report about the implementation of the second round of curricular pilot courses	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report describing and analysing the activities undertaken and the results achieved in the second round of curricular pilot courses.	
	Due date	Month 31: 30/04/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input checked="" type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	2.8.	
	Title	Revision and finalisation of the didactic pilot courses (structure and organisation) and support learning resources (final version)	
	Type	<input checked="" type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Development of the syllabuses of the didactic curricular pilot courses on DfS on S.PSS&DE (in terms of structure, duration, frequency, number of hours, teaching methods, tools, techniques, student's project delivery formats and evaluation procedures), and definition of the first version of learning resources (to be gathered or developed ex-novo according to expressed needs and priorities).	
	Due date	Month 36: 30/09/2018	

	Languages	English
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other	
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional <input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.9.	
	Title	Implementation of LeNS_labs	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Implementation of LeNS_labs in each non-European partner institution. These labs are meant as spaces where students, researchers and teachers can have access to equipment and resources to support DfS teaching activities and projects. These equipment and resources will be tailored to the specific local needs and priorities but, in general, will include computer desktops, DfS books, DfS journals, software (e.g. LCA software), DfS tools (physical and online tools), as well as space to run teamwork activities (e.g. brainstorming sessions, user focus groups, etc.), and to settle videoconferences.	
	Due date	Month 11: 31/08/2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.10.	
	Title	Beta d.OLEP	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material	<input type="checkbox"/> Event <input type="checkbox"/> Report

		<input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Service/Product
	Description	Beta version of the distributed Open Learning E-Platform, for the decentralised production and fruition on knowledge.	
	Due date	Month 10: 31/07/2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	2.11.	
	Title	Final d.OLEP	
	Type	<input checked="" type="checkbox"/> Teaching material <input checked="" type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Final version of the distributed Open Learning E-Platform, containing all the teaching subsidies and supporting materials (developed in tasks 2.8), as well as the book on DfS on S.PSS&DE (task 4.3), the guidelines for the design & implementation of didactic courses and LeNS_labs (task 4.4).	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other		
	<i>Companies/practitioners/consultancies/associations/organisations interested in DfS focused on S.PSS&DE.</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Please copy and paste tables as necessary.

Work package type and ref.nr	QUALITY PLAN	3
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Title	Project evaluation		
Related assumptions and risks	Assumptions: The main assumption is that the panel of evaluators selected to perform the task is highly competent on design, sustainability, distributed economy and higher education.		
Description	<p>The aim of this WP is to constantly monitor and evaluate the project. This is based on an external independent evaluation of the whole project. External evaluation will provide an independent evaluation to the European Commission, appraising the project in terms of the steps taken to ensure: the compatibility of the didactic courses development and their implementation within partner institutions (WP2); and an effective dissemination of project results (WP4). Finally, it will provide an independent assessment of the project deliverables and effectiveness, and it will appraise the project's potential medium and long-term results.</p> <p>External evaluators will base their evaluation on the internal monitoring reports (see task 5.2), the observers' reports (see tasks 2.5 and 2.7), the project deliverables, and by attending the final conference.</p>		
Tasks	<p>3.1 Appointment of external evaluation panel and definition of evaluation procedure: A panel composed of 6 external evaluators will be appointed: 1 principal evaluator and 5 co-evaluators. The expertise of the panel will overall cover the following areas: (1) design and engineering for sustainability, (2) Sustainable Product-Service System innovation; (3) Distributed Economies; (3) sustainable innovation in low-income and emerging contexts. Moreover, at least 4 of them will be academics, with experience in education in HEIs. External evaluators will be also chosen from different geographic areas. The external evaluation panel (in collaboration with the WP leader and the other partners) will then define the evaluation procedure.</p> <p>3.2 Analysis of the project intermediate and final results: External evaluators will analyse reports and deliverables of work packages (WP1, WP2, and WP4,) and produce 5 evaluation reports: - month 12: evaluation of the pilot curricular courses design and teaching materials development, and the dissemination & exploitation plan; - month 18: evaluation of the seminars implementation; - month 24: evaluation of the first round of pilot courses implementation; - month 30: evaluation of the second round of pilot courses implementation; - month 36: final evaluation on the whole project. To facilitate the process of evaluation, the main external evaluator will attend the conference to be held in the third year, to interview target groups and final beneficiaries.</p> <p>3.3 Analysis of evaluation reports and development of response reports: External evaluators will submit the report to the WP leaders. Moreover WP leader will communicate the external evaluation results to the other partners: intermediate evaluations are in fact specifically targeted to provide feedback and suggestions on how to improve and refine the project activities in order to reach the planned results and medium and long-term outcomes. Evaluation reports will be analysed and discussed among partners. Response reports will be prepared by WP leaders to react on evaluators' criticisms, insights and suggestions.</p>		
Estimated Start Date (dd-mm-yyyy)	Month 6: 01-03-2015	Estimated End Date (dd-mm-yyyy)	Month 36: 30-09-2018

Lead Organisation	WP leader: TUDELFT; WP assistant leader: UAM: ; Task 3.1 leader TU DELFT; Task 3.2 leader UAM; Task 3.3 leader TU DELFT
Participating Organisation	POLIMI, AALTO ARTS, UBRUN, TU DELFT, UFPR, UFPE, SRISHTI, IIT GUWAHATI, TSINGHUA, HNU, CPUT, SUN, UAM, UVM.

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.1.	
	Title	1 st project evaluation report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Evaluation report of the pilot curricular courses design and teaching materials development, and the dissemination & exploitation plan. This will combine the external evaluators report and the response report by project partners.	
	Due date	Month 13: 31/10/2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.2.	
	Title	2 nd project evaluation report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Evaluation report of the seminars implementation. This will combine the external evaluators report and the response report by project partners.	
	Due date	Month 19: 30/04/2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		

	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.3.	
	Title	3 rd project evaluation report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Evaluation report of the first round of pilot courses implementation. This will combine the external evaluators report and the response report by project partners.	
	Due date	Month 25: 31/10/2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	3.4.	
	Title	4 th project evaluation report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Evaluation report of the second round of pilot courses implementation. This will combine the external evaluators report and the response report by project partners.	
	Due date	Month 31: 30/04/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		

Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input type="checkbox"/> International

Expected Deliverable/Results/ Outcomes	Work Package and Outcome ref.nr	3.5.	
	Title	Final project evaluation report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Final evaluation report of the whole project. This will combine the external evaluators report and the response report by project partners.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty	<input type="checkbox"/> Local	<input type="checkbox"/> National
	<input checked="" type="checkbox"/> Institution	<input type="checkbox"/> Regional	<input type="checkbox"/> International

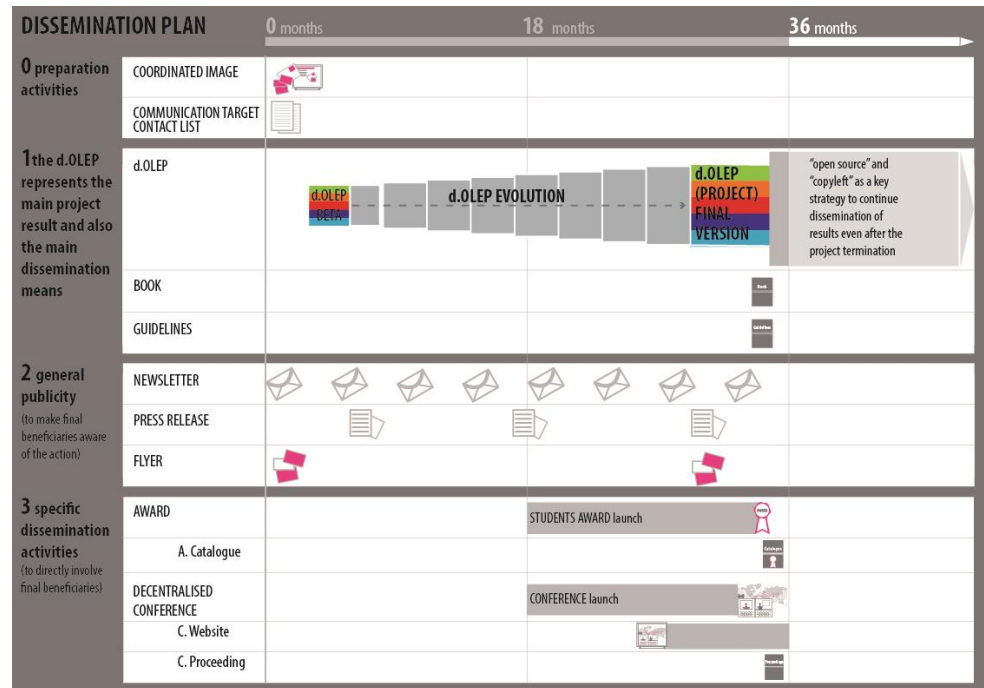
Please copy and paste tables as necessary.

Work package type and ref.nr	DISSEMINATION & EXPLOITATION	4
Title	Dissemination and exploitation of project results	
Related assumptions and risks	<p>Assumptions: 1] The main project precondition is that the infrastructure and the bandwidth required to support the d.OLEP are in place. The assumption, during and after the implementation phase, is that internet communication systems will improve in the partner countries, reducing the digital divide and allowing a wider number of users to access project results. 2] The second assumption is that it will be possible to travel to the locations where the conferences take place. 3] The third assumption is that the conference will attract attendance of representatives from HEIs, companies, consultancies, institutions and organisations.</p> <p>Risks: In relation to the possibility of the partners to travel to the locations where seminars and curricular pilot courses take place, there are some Natural and Political risks. <i>Natural:</i> threats from weather, natural disaster, accident, disease. <i>Political:</i> risks involving political circumstances: the participating countries in the action are relatively stable political systems, so political risks are considered low.</p>	
Description	The aim of this WP is to disseminate the project results in order to make the relevant target groups aware of the project outcomes (in particular the d.OLEP and the pilot courses' structure and contents). Targets of the dissemination materials and events cover: design HEIs curricula development responsible as well as single teachers/researchers, design	

companies/departments/practitioners, public bodies and NGOs (all of them active in the field of sustainability).

As described in part G, the d.OLEP will act as the main dissemination tool. Other dissemination tools include the seminars, a distributed international conference, a student design competition, a book on DfS focused on S.PSS+DE, and guidelines for the design and implementation of curricular courses and the setting up of LeNS_labs.

The project outputs (and the modality to deliver them) are conceived in order to maximise the potential of exploiting them (i.e. modular, adaptable, customisable output in an open source and copyleft ethos).



Tasks

Distributed Open Learning E-Platform (see WP2, tasks 2.10 and 2.11):
 The d.OLEP will be the main dissemination tools. All project results will be available in an open source and copyleft ethos and will be shaped in order to enable modularity and personalisation.

Seminars (see WP2, task 2.1):
 Seminars will also act as a regional dissemination tool. Each seminars will bring together (in addition to local partners and 2 European partners) local design HEIs and representative from local companies/consultancies/associations. It will provide the opportunity to spread the word about the project.

In addition the d.OLEP and the seminars, the following activities will enhance the dissemination & exploitation potential:

4.1 Coordinated image design:
 The WP leaders will lead the design of the project coordinated image: design of logo, website graphic, documents layout, newsletter layout, etc. (subcontractor).

4.2 General publicity of the project:
 All partners will develop a *contact list* of target groups and project beneficiaries to whom the dissemination activities will be targeted. A *quarterly newsletter* (prepared by WP leader in collaboration with partners) will be sent to contact list. WP leader will engage and coordinate a subcontractor in the design of 4 project flyers (a general flyer, a flyer related to the seminars, a flyer related to

the project conference, and a flyer related to the student award).

4.3 Book on DfS focused on S.PSS&DE:

The publication is intended as a tool for educators and researchers to support the design & implement didactic courses in HEIs. It will provide theoretical contents as well as best practices and practical approaches (strategies/methods/tools) on DfS focused on S.PSS&DE. It will reflect the specific priorities of the partners' countries involved in the project and thus will offer a wide range of design perspectives and approaches. An editorial board (made up with representatives from all the project partners) will be constituted for this purpose. The publication will be freely downloadable from the project website in a copy left ethos (Creative Common license), so forth allowing free of charge translation and adaptation by other world-wide interested teachers/researchers

4.4 Guidelines for the design & implementation of didactic courses and LeNS_labs:

An articulated set of guidelines for the design and implementation of didactic curricular courses and the setting up of LeNS_labs will be produced (all the partners will be involved in this activity), on the basis of the outcomes of WP2. The document will be freely downloadable from the project website.

4.5 Decentralised conference organisation:

A **decentralised conference**, made up of an **international conference** in Europe (Milan) and **5 simultaneous national conferences** - one in each non-European partner's country - will be organised and implemented at the end of the project:

- The **international conference** will be a three-day conference, to be held in Milan, will target specific audience within design disciplines with a focus on DfS S.PSS and DE, such as: design teachers, researchers and practitioners. Moreover relevant institutions and organisations active in the sustainability related issues (such as governments, public institutions, industrial associations, NGOs etc.) will be invited. An organising committee will be set up to manage conference organisation activities (it will be led by POLIMI and formed by a representative from each partner institution). A scientific committee will be established to review and select papers. With a foreseen attendance of 150-200 delegates, the conference is intended to directly inform the development of DfS focused on S.PSS&DE within design HEIs. It is expected the attendance of key-members of the partner institutions (i.e. rector/pro-rector, dean, department director, chairperson, etc.) and representatives from other international HEIs. It is also foreseen the attendance of representatives from the industrial and productive sectors, and representatives from design and engineering bodies including ICSID (International Council of Societies of Industrial Design), Cumulus (European Association of Universities and Colleges of Art, Design and Media), as well as organisations related or committed to sustainability such as UNEP and representative from UNESCO committed with Education for Sustainable Development of UN.

- The **5 national conferences** will take place simultaneously with the conference in Europe (Milan) in each non-European partners' country. UFPR, SRISHTI, TSINGHUA, UAM and CPUT) will be responsible for the organisation and implementation of each conference). These conferences will promote even a series of design challenges where students, practitioners and companies address design briefs focused on local priorities. These national conferences are also aimed at increasing the access to the contents of the main conference (by broadcasting the plenary speeches of the conference). For each conference it is expected the attendance of representatives of design teachers, researchers and

	<p>practitioners at a regional level (e.g. from South American countries for the conference to be implemented in Brazil). Moreover relevant regional institutions and organisations active in the sustainability related issues (such as governments, public institutions, industrial associations, NGOs etc.) will be invited.</p> <p>A single conference website will be developed, activity managed by WP leader in collaboration with the partners responsible for the implementation of each conference. Conference proceedings will be edited and printed as a complementary dissemination tool.</p> <p>4.6 Students design award on DfS focused on S.PSS&DE and catalogue of best students projects:</p> <p>The design award (open to worldwide HEIs design students) will be organised to award best students' projects as a means of stimulating design development among students, stimulating external interest, and publicising the action in worldwide HEIs. The award will be open to students attending the pilot courses as well as students from other HEIs. The involvement of other HEIs in the award is important because represents another communication channel to make worldwide HEIs aware of the action. A special jury will be constituted with representatives from partner institutions and from industries and external institutions. The winner will be awarded in a ceremony during the final conference in Milan. It is foreseen the publication of the best projects deriving from the students design exercise (elaborated within the didactic pilot modules, WP2). The publication will be freely downloadable from the project website.</p>		
Estimated Start Date (dd-mm-yyyy)	Month 1: 01/10/2015	Month 1: 01/10/2015	Month 1: 01/10/2015
Lead Organisation	<p>WP leader: AALTO ARTS; Assistant WP leader: CPUT; Task 4.1 leader AALTO ARTS; Task 4.2 leader UBRUN; Task 4.3 leader UAM; Task 4.4 leader SRISHTI; Task 4.5 leader POLIMI; Task 4.6 leader TU DELFT;</p>		
Participating Organisation	POLIMI, AALTO ARTS, UBRUN, TU DELFT, UFPR, UFPE, SRISHTI, IIT GUWAHATI, TSINGHUA, HNU, CPUT, SUN, UAM, UVM.		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.1.	
	Title	Dissemination and exploitation strategy report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report on the dissemination & exploitation strategy, the results achieved and the expected exploitation results after the end of the project.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		

	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.2.	
	Title	Book on Dfs focused on S.PSS&DE	
	Type	<input checked="" type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Book in the theoretical contents as well as best practices and practical approaches (strategies/methods/tools) on Dfs focused on S.PSS&DE. It will reflect the specific priorities of the partners' countries involved in the project and thus will offer a wide range of design perspectives and approaches. The publication will be freely downloadable from the project website (Creative Common license). The publication is intended as a tool for educators and researchers to design & implement courses in HEIs, as well as for practitioners/designers/companies/institutions interested in Dfs focused on S.PSS&DE.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other <i>Companies/practitioners/consultancies/associations/organisations interested in Dfs+DE.</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.3.	
	Title	Guidelines for the implementation of didactic courses and the setting up of LeNS_labs.	
	Type	<input checked="" type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	A set of guidelines for the design and implementation of didactic curricular courses and the setting up of LeNS_labs will be produced. Guidelines will be freely downloadable from the d.OLEP platform.	
	Due date	Month 36: 30/09/2018	
	Languages	English	

Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input checked="" type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.4.	
	Title	Catalogue of best students projects	
	Type	<input type="checkbox"/> Teaching material <input checked="" type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Publication of the best projects deriving from the students design award. The publication will be freely downloadable from the OLEP platform.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Institution	<input type="checkbox"/> Local <input type="checkbox"/> Regional	<input type="checkbox"/> National <input checked="" type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	4.5.	
	Title	Distributed conference and conference proceedings	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input checked="" type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
	Description	Implementation of a distributed conference, made up of an international conference in Milan and 5 simultaneous national conferences. Conference proceedings will be freely available in the OLEP platform.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input checked="" type="checkbox"/> Students		

	<input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input checked="" type="checkbox"/> Other
	<i>Companies/practitioners/consultancies/associations/organisations interested in DfS focused on S.PSS&DE.</i>
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input type="checkbox"/> Institution <input type="checkbox"/> Regional <input checked="" type="checkbox"/> International

Please copy and paste tables as necessary.

Work package type and ref.nr	MANAGEMENT	5
Title	Project management	
Related assumptions and risks	<p>Assumptions: a general precondition required before the action starts is that all partners agree to perform the declared tasks (with a minimum risk given all partners participation to the proposal preparation and their high commitment). Risks: There are some general risks, not only related to this WP but the entire project. <i>Human:</i> risks on unavailability of persons (mobility, illness, work overload) will be countered by involving reputable, fixed staff members of the HEIs and avoiding reliance on one single individual. <i>Procedural:</i> risks from failures of accountability, internal systems and controls, organization, are to be minimised by strict and continuous management of the project. <i>Project:</i> risks of cost over-runs, jobs taking too long, of insufficient product or service quality are also to be countered by well organised project management. <i>Financial:</i> financial risks on macro-economic level always exist, but are difficult to deal with on a project level. The economic situation in the countries participating in the project however, has been relatively stable in the past period. <i>Natural:</i> threats from weather, natural disaster, accident, disease. <i>Political:</i> risks involving political circumstances: the participating countries in the action can be considered among the most stable political systems, so political risks are considered low.</p>	
Description	<p>The aim of this WP is to manage partner roles, coordinate the delivery of project outcomes, and manage the internal communication among partners as well as communication with the European Commission.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center; margin: 0;">MANAGEMENT STRUCTURE</p> </div>	

Tasks	<p>5.1 General coordination: A general Coordinator at POLIMI will establish working procedures and reporting structures, manage project roles, partner expectations and sets of activities, clearly identified within the proposal, against milestones. General Coordinator will also provide time management, manage work package activities and deliverables against agreed milestones, coordinate activities and disseminate internal reports among partners. Management is integrated into all work packages within the project, with each partner assuming lead roles in coordinating work packages. The Coordinator, with the contribution from all partners, will also compile regular progress reports and maintain all records of expenditure attributable to the project in line with EU financial guidelines. Under WP5, the Coordinator will also summarise project findings and submit the final report to the funding body.</p> <p>5.2 Internal monitoring: The project management activities also comprise a permanent internal monitoring regarding project progress and achievements against goals established in the proposal. To do this the project Coordinator and the WP assistant leaders will use as tool the Objectively Verifiable Indicators (OVIs) given in the Logical Framework, updating both due to changes that might occur along the project implementation.</p> <p>5.3 Web-site: establishment and maintenance of public area Establishment of project website aiming at the overall dissemination of the project and maintain the content regarding its public access area. The website will have a multi-purpose nature with different modalities of access, and will be integrated with the distributed Open Learning E-Platform (WP4). The content of the public area of the website will be managed and uploaded (publishing in-progress activities of the project) by the project Coordinator.</p>			
	Estimated Start Date (dd-mm-yyyy)	Month 1: 01/10/2015	Month 1: 01/10/2015	Month 1: 01/10/2015
	Lead Organisation	WP leader: POLIMI; WP assistant leader: TSINGHUA; Task 5.1 leader POLIMI; Task 5.2 leader TSINGHUA; Task 5.3 leader POLIMI;		
	Participating Organisation	POLIMI, AALTO ARTS, UBRUN, TU DELFT, UFPR, UFPE, SRISHTI, IIT GUWAHATI, TSINGHUA, HNU, CPUT, SUN, UAM, UVM.		

Deliverables/results/outcomes

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	5.1.	
	Title	First project report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report on the activities undertaken and the results achieved in the first year of the project.	
	Due date	Month 13: 31/10/2016	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff		

	<input type="checkbox"/> Librarians <input type="checkbox"/> Other <i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	5.2.	
	Title	Second project report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report on the activities undertaken and the results achieved in the second year of the project.	
	Due date	Month 25: 31/10/2017	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Expected Deliverable/Results/Outcomes	Work Package and Outcome ref.nr	5.3.	
	Title	Final project report	
	Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material	<input type="checkbox"/> Event <input checked="" type="checkbox"/> Report <input type="checkbox"/> Service/Product
	Description	Report on the activities undertaken and the results achieved considering the overall project.	
	Due date	Month 36: 30/09/2018	
	Languages	English	
Target groups	<input checked="" type="checkbox"/> Teaching staff <input type="checkbox"/> Students <input type="checkbox"/> Trainees <input type="checkbox"/> Administrative staff <input type="checkbox"/> Technical staff <input type="checkbox"/> Librarians <input type="checkbox"/> Other		
	<i>If you selected 'Other', please identify these target groups. (Max. 250 characters)</i>		
Dissemination level	<input type="checkbox"/> Department / Faculty <input type="checkbox"/> Local <input type="checkbox"/> National <input checked="" type="checkbox"/> Institution <input type="checkbox"/> Regional <input type="checkbox"/> International		

Please copy and paste tables as necessary.

H.2. Explanation of work package expenditures

Please explain what costs will be associated to each work package and covered by lump sums, flat rates, unit costs, and real costs. Provide information on the travels necessary to complete the workpackage. Detailed information on each travel must be indicated in the Budget Excel table. If purchase of equipment is required, explain how the respective equipment addresses the needs identified in the project. Remember that the specification of each item, including the partner country university/ies at which equipment will be installed, must be detailed in the Budget Excel table. If any subcontracting is considered necessary for the implementation of the project, please explain why the task cannot be performed by the consortium members themselves (limit 3000 characters).

The allocation of costs is as follows: 39% on human resources (salaries); 13% on travel costs; 14% on costs of stay; 25% on equipment; 9% on subcontracting.

Looking at each WP:

WP1 (61,835€): 29,945€ on staff costs (analysis of the current state of the art and the organisation of the kick-off meeting); 22,530€ and 9,360€ on travel & stay costs (for the 3-day kick-off meeting);

WP2 (659,121€): 186,066€ on staff costs (mainly for the design and implementation of the 5 seminars and 10 pilot didactic courses, the development of related learning resources, and development of the d.OLEP); 85,495€ and 106,560€ on travel & stay (for the implementation of the 5 seminars and the 10 courses; and for the 3-day interim meeting); 255,000€ for equipment (LeNS regional labs and laptops); 26,000€ on subcontracting costs (mainly for the development of the d.OLEP);

WP3 (30,885€): 19,385€ on staff costs (identification and appointment of external evaluators and the analysis of their reports); 11,500€ on subcontracting costs (external evaluation activities);

WP4 (133,295€): 55,020€ on staff costs (mainly for the realisation of the book and the organisation of the conferences and the student design award); 17,805€ and 16,320€ on travel & stay (attendance of final conferences); 44,150€ on subcontracting costs (design of the coordinated image, the editing and publishing of the book, the conference catering, communication materials & website);

WP5 (93,054€): 88,164€ on staff costs (general coordination, internal monitoring and administrative coordination); 4,890€ on subcontracting costs (external auditor);

Travel & accommodation costs are necessary for: the implementation of the 5 seminars (each 5-day long, involving 2 EU HEIs and 1 nonEU HEI in addition to the host HEI) and the 10 didactic courses (each 14-day long, involving 1 EU HEI and 2 nonEU HEI in addition to the host HEI); the kick-off and interim meetings; and the attending of the final conferences.

Equipment costs are mainly for the implementation of the LeNS regional labs in each partner country HEI. These labs are meant as spaces where students, researchers and teachers can have access to PCs, books, software and tools on DfS. They are necessary for the development of learning resources and in particular the implementation of the didactic courses.

Subcontracting costs are mainly for the development of the d.OLEP (which requires web development expertise not owned by the consortium), the external evaluators (which obviously should come from outside the consortium), the design of the coordinated image (that requires professional communication designers), the conferences organisation (that needs professional catering services and professionally printed communication materials), the conference website (that requires professional web development expertise), the publishing of the book and the conference proceedings (which requires a professional publisher) and the audit activity (that requires a professional auditor).

*If your project involves a **Special Mobility Strand**, please explain what support will be required under each budget heading in order to cover organisational costs (such as special needs, exceptional, non-online linguistic support, etc.) (limit 2000 characters).*

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H.3 Consortium partners involved and resources required to complete the work package

Indicative input of consortium staff - The total number of days per staff category should correspond with the information provided in the budget tables.

Work Package Ref.nr	Partner nr	Partner acronym	Country	Number of staff days ¹					Role and tasks in the work package
				Category 1	Category 2	Category 3	Category 4	Total	
PREPARATION	1	POLIMI	Italy		25.0			25.0	Leader of task 1.3 (Organisation of the project set-up meeting); involved in tasks 1.1 (Analysis of the current state of art), and 1.2 (Definition of exchange agenda and modalities) and
	2	AALTO ARTS	Finland		20.0			20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	3	UBRUN	United Kingdom		35.0			35.0	WP leader; leader of task 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	4	TU Delft	Netherlands		20.0			20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	5	UFPR	Brazil		20.0			20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	6	UFPE	Brazil		5.0			5.0	Involved in task 1.3 (Organisation of the project set-up meeting); providing support to task 1.1(Analysis of the current state of art)
	7	SRISHTI	India		30.0			30.0	WP assistant leader; Leader of task 1.2 (Definition of exchange agenda and modalities); involved in tasks 1.1 (Analysis of the current state of art), and 1.3 (Organisation of the project set-up meeting)
	8	IIT	India		5.0			5.0	Involved in task 1.3 (Organisation of the project set-up meeting);

¹ Please see Programme Guide, Part B for your action, Table A – Project Implementation (amounts in Euro per day) Programme Countries and Table B - Project Implementation (amounts in Euro per day) Partner Countries.

		GUWAHA TI						providing support to task 1.1(Analysis of the current state of art)
	9	TSINGHU A	China		20.0		20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	10	HNU	China		5.0		5.0	Involved in task 1.3 (Organisation of the project set-up meeting); providing support to task 1.1(Analysis of the current state of art)
	11	CPUT	South Africa		20.0		20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	12	SUN	South Africa		5.0		5.0	Involved in task 1.3 (Organisation of the project set-up meeting); providing support to task 1.1(Analysis of the current state of art)
	13	UAM	Mexico		20.0		20.0	Involved in tasks 1.1 (Analysis of the current state of art), 1.2 (Definition of exchange agenda and modalities) and 1.3 (Organisation of the project set-up meeting)
	14	UVM	Mexico		5.0		5.0	Involved in task 1.3 (Organisation of the project set-up meeting); providing support to task 1.1(Analysis of the current state of art)
SUBTOTAL					235		235	
DEVELOPMENT	1	POLIMI	Italy		162.0		162.0	WP leader; leader of tasks 2.9 (Coordination of the exchange activities), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents). Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources)
	2	AALTO ARTS	Finland		150.0		150.0	Leader of task 2.1 (Design and implementation of seminars); involved in tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the

	3	UBRUN	United Kingdom	150.0	150.0	d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
						Leader of task 2.2(Design of the didactic pilot courses); involved in tasks 2.1 (Design and implementation of seminars), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	4	TU Delft	Netherlands	132.0	132.0	Leader of task 2.4 (Design and implementation of LeNS regional labs). Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
						WP assistant leader; Leader of task 2.3 (Development of first version of learning resources), 2.6 (Preparation for the curricular course evaluation meeting), and 2.8 (Revision and finalisation of the courses and learning resources). Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses), 2.9 (Coordination of the exchange activities), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	5	UFPR	Brazil	198.0	198.0	Involved in tasks 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs). Providing support to tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses).
	6	UFPE	Brazil	46.0	32.0	

	7	SRISHTI	India		112.0			112.0	Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	8	IIT GUWAHATI	India		46.0			46.0	Involved in tasks 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs). Providing support to tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses).
	9	TSINGHUA	China		112.0			112.0	Leader of task 2.5 (Implementation of the first 5 curricular pilot courses). Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	10	HNU	China		46.0			46.0	Involved in tasks 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs). Providing support to tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses).
	11	CPUT	South Africa		112.0			112.0	Leader of task 2.7 (Implementation of the second 5 curricular pilot courses). Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the

									curricular course evaluation meeting), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	12	SUN	South Africa		46.0			46.0	Involved in tasks 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs). Providing support to tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses).
	13	UAM	Mexico		112.0			112.0	Involved in tasks 2.1 (Design and implementation of seminars), 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.4 (Design and implementation of LeNS regional labs), 2.5 (Implementation of the first 5 curricular pilot courses), 2.6 (Preparation for the curricular course evaluation meeting), 2.7 (Implementation of the second 5 curricular pilot courses), 2.8 (Revision and finalisation of the courses and learning resources), 2.10 (Development of the d.OLEP (structure)), and 2.11 (Management of d.OLEP contents)
	14	UVM	Mexico		46.0			46.0	Involved in tasks 2.1 (Design and implementation of seminars) and 2.4 (Design and implementation of LeNS regional labs). Providing support to tasks 2.2 (Design of the didactic pilot courses), 2.3 (Development of first version of learning resources), 2.5 (Implementation of the first 5 curricular pilot courses), 2.7 (Implementation of the second 5 curricular pilot courses).
SUBTOTAL					1470			1470	
QUALITY PLAN	1	POLIMI	Italy		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	2	AALTO ARTS	Finland		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	3	UBUN	United Kingdom		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	4	TU Delft	Netherlands		15.0			15.0	WP leader; leader of tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of

									evaluation reports and development of response reports).
	5	UFPR	Brazil		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	6	UFPE	Brazil		5.0			5.0	Providing support to task 3.3 (Analysis of evaluation reports and development of response reports)
	7	SRISHTI	India		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	8	IIT GUWAHATI	India		5.0			5.0	Providing support to task 3.3 (Analysis of evaluation reports and development of response reports)
	9	TSINGHUA	China		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	10	HNU	China		5.0			5.0	Providing support to task 3.3 (Analysis of evaluation reports and development of response reports)
	11	CPUT	South Africa		15.0			15.0	Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports)
	12	SUN	South Africa		5.0			5.0	Providing support to task 3.3 (Analysis of evaluation reports and development of response reports)
	13	UAM	Mexico		15.0			15.0	WP assistant leader; leader of task 3.2, facilitating external evaluators in the Analysis of the project intermediate and final results. Involved in tasks 3.1 (Appointment of external evaluation panel and definition of evaluation procedure) and 3.3 (Analysis of evaluation reports and development of response reports).
	14	UVM	Mexico		5.0			5.0	Providing support to task 3.3 (Analysis of evaluation reports and development of response reports)
SUBTOTAL					160			160	
DISSEMINATION & EXPLOITATION	1	POLIMI	Italy		40.0			40.0	Leader of task 4.5 (Decentralised Conference organisation). Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs,) and 4.6 (Students design award and catalogue)

	2	AALTO ARTS	Finland		55.0			55.0	WP leader; leader of task 4.1 (Coordinated image design). Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	3	UBRUN	United Kingdom		40.0			40.0	Leader om task 4.2 (General publicity of the project). Involved in tasks 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	4	TU Delft	Netherlands		40.0			40.0	Leader of task 4.6 (Students design award and catalogue). Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation)
	5	UFPR	Brazil		40.0			40.0	Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	6	UFPE	Brazil		10.0			10.0	Involved in tasks 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation)
	7	SRISHTI	India		40.0			40.0	Leader of task 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs). Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	8	IIT GUWAHATI	India		10.0			10.0	Involved in tasks 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation)
	9	TSINGHUA	China		40.0			40.0	Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)

	10	HNU	China		10.0		10.0	Involved in tasks 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation)
	11	CPUT	South Africa		60.0		60.0	WP assistant leader; Involved in tasks 4.2 (General publicity of the project), 4.3 (Book on DfS focused on S.PSS+DE), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	12	SUN	South Africa		10.0		10.0	Involved in tasks 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation)
	13	UAM	Mexico		40.0		40.0	Leader of task 4.3 (Book on DfS focused on S.PSS+DE). Involved in tasks 4.2 (General publicity of the project), 4.4 (Guidelines for the design & implementation of didactic courses and DfS LeNS_labs), 4.5 (Decentralised Conference organisation) and 4.6 (Students design award and catalogue)
	14	UVM	Mexico		10.0		10.0	Involved in tasks 4.2 (General publicity of the project) and 4.5 (Decentralised Conference organisation)
SUBTOTAL					445		445	
MANAGEMENT	1	POLIMI	Italy		60.0	108.0	168	WP leader; Leader of tasks 5.1 (General coordination) and 5.3 (Web-site: establishment and maintenance of public area), Involved in tasks 5.2 (Internal monitoring).
	2	AALTO ARTS	Finland		20.0	54.0	74	Involved in task 5.1 (General coordination)
	3	UBRUN	United Kingdom		20.0	54.0	74	Involved in task 5.1 (General coordination)
	4	TU Delft	Netherlands		20.0	54.0	74	Involved in task 5.1 (General coordination)
	5	UFPR	Brazil		20.0	54.0	74	Involved in task 5.1 (General coordination)
	6	UFPE	Brazil		10.0	36.0	46	ù
	7	SRISHTI	India		20.0	54.0	74	Involved in task 5.1 (General coordination)
	8	IIT GUWAHATI	India		10.0	36.0	46	Involved in task 5.1 (General coordination)
	9	TSINGHUA	China		30.0	54.0	84	WP assistant leader; Leader of task 5.2 (Internal monitoring). Involved in task 5.1 (General coordination) and 5.3 (Web-site: establishment and maintenance of public area)

	10	HNU	China		10.0		36.0	46	Involved in task 5.1 (General coordination)
	11	CPUT	South Africa		20.0		54.0	74	Involved in task 5.1 (General coordination)
	12	SUN	South Africa		10.0		36.0	46	Involved in task 5.1 (General coordination)
	13	UAM	Mexico		20.0		54.0	74	Involved in task 5.1 (General coordination)
	14	UVM	Mexico		10.0		36.0	46	Involved in task 5.1 (General coordination)
SUBTOTAL					280		720	1000	
TOTAL					2590		720	3310	

Please insert rows as necessary

Subcontracting of tasks to external bodies should be very occasional. The specific competences and particular expertise needed to reach the project objectives should be found in the consortium and should determine its composition. Subcontracting is intended for specific, time-bound, project-related tasks which cannot be performed by the Consortium members themselves.

Tasks that will be subcontracted:

Work Package Ref.nr	Partner responsible for sub-contracting (Acronym)	Country	Number of days (where appropriate)	Brief description of task
2	POLIMI	Italy		Development of the Open Learning E-Platform (task 2.10)
3	POLIMI	Italy		External evaluation costs: main external evaluator (task 3.2)
3	POLIMI	Italy		External evaluation costs: o-external evaluators (task 3.2)
4	AALTO ARTS	Finland		Visibility actions: coordinated image design (task 4.1)
4	AALTO ARTS	Finland		Visibility actions: flyers design (task 4.2)
4	POLIMI	Italy		Visibility actions: flyers printing (task 4.2)
4	AALTO ARTS	Finland		Visibility actions: flyers printing (task 4.2)
4	UBRUN	United Kingdom		Visibility actions: flyers printing (task 4.2)
4	TU DELFT	Netherlands		Visibility actions: flyers printing (task 4.2)
4	UFPR	Brazil		Visibility actions: flyers printing (task 4.2)
4	UFPE	Brazil		Visibility actions: flyers printing (task 4.2)
4	SRISTHI	India		Visibility actions: flyers printing (task 4.2)
4	IIT GUWAHATI	India		Visibility actions: flyers printing (task 4.2)
4	TSINGHUA	China		Visibility actions: flyers printing (task 4.2)
4	HNU	China		Visibility actions: flyers printing (task 4.2)

4	CPUT	South Africa		Visibility actions: flyers printing (task 4.2)
4	SUN	South Africa		Visibility actions: flyers printing (task 4.2)
4	UAM	Mexico		Visibility actions: flyers printing (task 4.2)
4	UVM	Mexico		Visibility actions: flyers printing (task 4.2)
4	POLIMI	Italy		Book: layout and cover design (task 4.3)
4	POLIMI	Italy		Book: editing – 300 pages (task 4.3)
4	POLIMI	Italy		Book: paging – 300 pages (task 4.3)
4	POLIMI	Italy		Book: cost of printing 28 copies (task 4.3)
4	POLIMI	Italy		Conference Milan: catering (6000€) + conference communication material print (300€) + package for attendees (USB key + badge + conference programme; 10€ x 200 attendees)
4	CPUT	South Africa		Conference Cape Town: catering (1000€) + conference communication material print (100€) + package for attendees (USB key + badge + conference programme; 10€ x 50 attendees)
4	TSINGHUA	China		Conference Beijing: catering (1000€) + conference communication material print (100€) + package for attendees (USB key + badge + conference programme; 10€ x 50 attendees)
4	SRISHTI	India		Conference Bangalore: catering (1000€) + conference communication material print (100€) + package for attendees (USB key + badge + conference programme; 10€ x 50 attendees)
4	UAM	Mexico		Conference Curitiba: catering (1000€) + conference communication material print (100€) + package for attendees (USB key + badge + conference programme; 10€ x 50 attendees)
4	POLIMI	Italy		Conference proceedings: layout and cover design
4	POLIMI	Italy		Conference proceedings: editing (€ 2 per page x 500 pages)
4	POLIMI	Italy		Conference proceedings: paging (€ 5 per page x 500 pages)
4	POLIMI	Italy		Conference website: website developer
4	POLIMI	Italy		Expenditure verification: auditor (1500€ x 3 verifications)
4	POLIMI	Italy		Financial services: cost of bank transfer (10€ x 13 partners x 3)

Please insert rows as necessary.

PART I – Special Mobility Strand

Applies *ONLY* to cooperation projects with partner countries from REGIONS 1, 2 and 3

Projects may organise mobility activities of students, researchers and staff so far as they support/complement the other activities of the **Capacity Building** project and bring added value in the realisation of the project's objectives. Mobility activities do not constitute the main activities for Capacity Building.

I.1. Relevance of mobility activities

Please describe what kind of mobility activities are foreseen in the Special Mobility Strand, what are their objectives and expected results. Explain how the mobility activities of students, researchers and staff support/complement the other activities of the Capacity Building and bring added value in the realisation of the project's objectives (limit 3000 characters).

-

I.2. Identification and selection of the participants

Please describe the procedures set up for identification and selection of participants for the mobility activity (limit 1000 characters).

-

I.3. Preparation and support

Please describe the structure for preparation of the participants for the mobility activity, including specific training or course, linguistic preparation etc. Please explain the support provided in terms of accommodation, insurances, etc. Please explain the quality measures set up in the sending and receiving organisations for monitoring the mobility activity and measures to be taken if the results foreseen are not met (limit 2000 characters).

-

I.4. Involvement of people with fewer opportunities

Does your project involve people with fewer opportunities? YES NO

IF YES, how many participants coming from which countries and organisations would fall under this category? Specify the type of situation of fewer opportunities these participants are facing (limit 2000 characters).

-

Please explain the nature of the support required and how it will be addressed, so that these persons can fully engage in the foreseen activities (limit 1000 characters).

-

I.5. Recognition and validation of learning outcomes

Please explain how the project intends to recognise and validate the teaching and/or learning outcomes of the participants (limit 1000 characters).

-

PART J - OTHER EU GRANTS

Please list the **projects** for which the organisations involved in this application have received financial support from EU programmes.

Programme or initiative	Reference number	Beneficiary Organisation	Title of the Project
ACP-EDULINK II	DCI-AFS/ 2013/320-298	<ul style="list-style-type: none"> - Politecnico Di Milano, Italy (Coordinator) - Delft University Of Technology, Delft, the Netherlands - Brunel University, London, United Kingdom - University Of Nairobi, Kenya - University Of Botswana, Gaborone, Botswana - Makerere University, Kampala, Uganda - Cape Peninsula University Of Technology, Cape Town, South Africa 	LeNSes, the Learning Network on Sustainable energy systems. African-European multi-polar and open network for curricula and lifelong learning capacity development focused on System Design for sustainable Energy for All.
LIFE	LIFE11 ENV/DE/000342	<ul style="list-style-type: none"> - Econcept, Agency for Sustainable Design, Cologne, Germany (Coordinator) - Politecnico Di Milano, Italy - Ecosense, media & communication, Cologne, Germany - WEBclusive, Amsterdam, the Netherlands - Forum Soziale Technikgestaltung, Moessingen-Talheim, Germany 	SuM, Sustainability Maker.
ASIALINK	ASIE/2007/128905	<ul style="list-style-type: none"> - Politecnico Di Milano, Italy (Coordinator) - Delft University Of Technology, Delft, 	LeNS, the Learning Network on Sustainability. Asian-European multi-polar network for curricula development on Design for

		<p>the Netherlands</p> <ul style="list-style-type: none"> - Aalto University, School of Art and Design, Helsinki, Finland - King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand - Indian Institute of Technology Delhi, India - Srishti School of Art, Design and Technology, Bangalore, India - Tsinghua University, Academy of Arts & Design, Beijing, China 	<p>Sustainability focused on Product-Service System.</p> <p>ASIALINK</p>
Erasmus Mundus programme Action 3	-	<ul style="list-style-type: none"> - Politecnico Di Milano, Italy (Coordinator) - École Centrale of Lille, France - École Centrale of Nantes, France - École Centrale Paris, France - Budapest University of Technology and Economics, Hungary - Instituto Superior Técnico (IST), Portugal - Technical University of Madrid, Spain - Lund University, Sweden - Austral University, Argentina - Technological Institute of Buenos Aires, Argentina - Politechnical School of Federal University of Rio de Janeiro, Brazil 	<p>Adde Salem.</p> <p>A double degree in Europe, South America</p> <p>Leadership and Employability</p>

		<ul style="list-style-type: none"> - São Paulo University, Brazil - Federico Santa Maria Technical University, Chile - Pontifical Catholic University of Chile, Chile - Javeriana University, Colombia - University of Norte Foundation, Colombia 	
EU-US Atlantis Programme	USAPOM 156621	<ul style="list-style-type: none"> - Politecnico Di Milano, Italy (Coordinator) - Technische Universität Wien, Austria - Ambrosetti, Italy - Associazione Laureati del Politecnico Di Milano, Italy - Istituto Italiano per il Commercio Estero, Italy - Soren Srl, Italy - Lunds Universitet, Sweden - University of Maryland - Lexmark International - Cummins - University of Kentucky 	Evaluate-E Examining value added in transatlantic exchanges in engineering
EU-US Atlantis Programme	USATD 180582	<ul style="list-style-type: none"> - Politecnico Di Milano, Italy (Coordinator) - Drexel University, Philadelphia, US - Universidad Politecnica de Madrid, Spain - University of Connecticut, US 	EAGLES, Engineers As Global Leaders for Energy Sustainability EU-US Atlantis Programme
Erasmus European Intensive	2011-1-IT2-ERA10-27083	<ul style="list-style-type: none"> - Politecnico di Milano, Italy 	Green Products Through Multicoloured

Programme		(Coordinator) - University College of West-Flanders - Escola Superior de Artes e Design - University of Wales Institute Cardiff - Université de Technologie de Compiègne - Haagse Hogeschool Polytech'Savoie École d'ingénieurs	Approach
Tempus - JPHES	144950-TEMPUS-1-2008-1-ITTEMPUS-JPHES	- Fondazione Politecnico di Milano (Coordinator), Italy - Politecnico di Milano, Italy - Koszalin University of Technology, Polonia - Go Group, Glasgow Opportunities, UK - Lomonosov Moscow State University, Russia - "Gravitonus" (Gravitonus-soft LLC, Russia - "Whisker" Co. Russia - Al-Farabi Kazakh National University, Kazakhstan	Entrepreneurial University as a model for proper managerial interrelation among education, science and innovation development
LLP - KA3 Multilateral networks	519212-LLP-2011-IT-KA3-KA3NW	- Politecnico di Milano, Italy (Coordinator)	eLene2learn, exploring and promoting the contribution of ICT and digital media to the development of learning to learn competencies in lifelong learning transitions
Creative Europe	-	EPCC Cité du design - Ecole supérieure d'Art et de design	Human Cities_Challenging the city scale
Creative Europe	2014-3335	Porzellanikon - Staatliches Museum	Ceramics and its dimensions

		für Porzellan Hohenberg a. d. Eger/Selb	
CULTURE	2011 - 2299 / OOI - OOI	Aalto University	CULTURE - DESIGN TANGO
TEMPUS	544083-TEMPUS- 1-2013-1-PT- TEMPUS-JPCR (604024/A80201)	Universidade Aberta	ENMDA
BI LATERAL ICI ECP	2009-4981-DEPKT	Aalto University	DEPKT
LLP ERASMUS	518336-LLP-1- 2011-1-BE- ERASMUS-FEXI	Hogeschool Gent	SOUND IN AUDIOVISION
ERASMUS MUNDUS ACTION 2	372287-1-2012-1- IT-ERA MUNDUS- EMA21	Politecnico di Torino	EUROEAST
FP7 SSH.2013.8.1	-	Brunel University, Partner	IMPACT-EV
FP7 SSH 2013.8.3-2	-	Brunel University, Partner	SI-DRIVE
FP7 SSH 2013.2.1-3	-	Brunel University, Partner	MNEmerge
FP7-ICT-2013.6.3 ICT for water resources	-	Brunel University, Partner	EWATUS
SWITCH-Asia I Programme	DCI- ASIE/2009/202550	TU Delft	SPIN-VCL (Sustainable Product Innovation in Vietnam, Cambodia and Laos)
SWITCH-Asia I Programme	DCI- ASIE/2011/263- 120	TU Delft	GetGreen Vietnam
FP7	233710	DLR	ATAAC
FP7	607584	U of Goettingen	CleanSky
FP7	606719	Max-Planck-Institut für meteorologie	PANDA
Erasmus Mundus Partnership Action 2	2012-2737/001- 001-EMA2	Mondragon Unibersitatea (as the coordinator institution)	"LAMENITEC" Latin American Engineering and Information Technologies Network

Please insert rows as necessary.

Please list **other grant applications** submitted by your organisation, or by any partner organisation in this project proposal. For each grant application, please mention the EU Programme concerned and the amount requested.

Programme concerned	Beneficiary Organisation	Amount requested
210223957 IntGen4SynthSys, ERC ADVANCED GRANT	Brunel University, Applicant	3,444,194
210137276 MELANGE, H2020-SFS-	Brunel University,	1,351,421

2014-2. sustainable food security	Applicant	
210149454 ALTER AGEING, H2020-PHC-2014-two stage	Brunel University, Applicant	934,955
210148689 SWEET, H2020-WATER-2014-2015	Brunel University, Applicant	1,286,314
210148245 NexGenTools, H2020-PHC-2014-two stage	Brunel University, Applicant	795,625
210147312 MIFDA, H2020-ICT-2014	Brunel University, Applicant	790,859
210144026 OHMY, H2020-ICT-2014-1	Brunel University, Applicant	223,890
210143171 PoMoNa, H2020-SC5-2014-one-stage	Brunel University, Applicant	3,027,236
210140881 MobiDicx, H2020-MG-2014-2015	Brunel University, Applicant	2,494,149

Please insert rows as necessary.

CHECK LIST

Please make sure that you fully completed each part of this application form, as follows:

- PART D - Quality of the project team and the cooperation arrangements
- PART E - Project characteristics and relevance
- PART F - Quality of the project design and implementation
- PART G - Impact, dissemination and exploitation, sustainability
 - Logical Framework Matrix
 - Workplan
- PART H - Work packages
- PART I – Special Mobility Strand (where applicable)
- PART J - Other EU Grants