

## Summary D6.1 – Detailed development plan for the field tests

The digitalization process of the Energy Sector creates not only several crucial challenges, but also great opportunities towards energy efficiency and sustainability. Personnel with the adequate skills will be required to take advantage of these opportunities. EDDIE's purpose is to develop an industry-driven Blueprint Strategy that will identify and try to cover the skills demand in the European Energy Sector digitalization.

The project aims to create new profiles of engineers, researchers, and technicians, trained in -and familiar with- the new technologies, tools and methods to support and improve the digitalization of the Energy Sector. Additionally, the educational and research sectors should fit in the new era and be in the spotlight of synergies with industry, policy makers and other relevant actors.

The roll-out of EDDIE's Blueprint Strategy for the Digitalization of Energy (BSDE) will take place in a main pilot site in Aachen (Germany) and three smaller-scale pilot sites in Cologne (Germany), Athens (Greece) and Milan (Italy). D6.1 "Detailed development plan for the field tests" focuses on the description of these activities, including EQF-level targets, parts of the Strategy that will be tested, and possible results delivered to the EC. The activities are listed in the overview tables per pilot site and presented briefly in the following table.

Name of activity	Pilot site	Target group	EQF Level	Timeline
Archimedischer Sandkasten	Aachen	Students (10-14 yrs old)	1, 2	June '22
Gymnasium lectures	Aachen	High school students	2, 3	Oct '22
Partnership on IdeasForum and Smart People City	Aachen	VET, industry, municipality, citizens	3 to 8	June '22
Short course for RWTH Academy	Aachen	Bachelor	6	Summer '23
Leonardo lectures	Aachen	Bachelor and Master	6, 7	Oct '22
International university exchange (Jupiter4Power project)	Aachen	Master	7	Oct '22
Information event on digitalization in energy sector	Aachen	Municipalities, industry, trainers, learners, citizens)	3-8	Oct 22
EWI Academy	Cologne	Companies interested in trainings for own employees	4	Running
Certificate Programme Smart Energy – Mastering the Energy Landscape of the Future	Cologne	Professionals with min. 3 years postgraduate work experience	6	SS23
Future Energy Certificate	Cologne	University students	5	WS22/23
Course on Local energy markets, energy communities and blockchain applications	Athens	Master's students	7	May '22
Course on AI applications on energy systems: Dynamic security and forecasting	Athens	Master's students	7	May '22
MOOC (cooperation with ERIGrid 2.0 project)	Athens	Bachelor and master students, professionals	6, 7	Summer '23
Summer school (cooperation with ERIGrid 2.0 project)	Athens	TBD		Summer '23
Design, production and implementation of a MOOC	Milano	Professionals	7	August '22

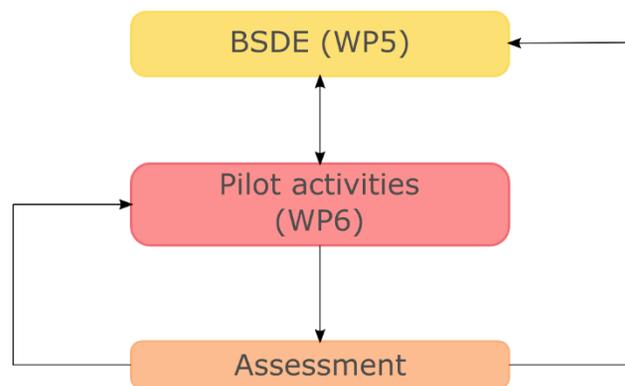
The main pilot site in Aachen proposes diverse actions that will include learners from several EQF levels. As the leader of the pilot is RWTH Aachen University, some of the actions focus on the educational system, starting from lectures to secondary education (German Gymnasiums) and ending to actions for university students, Ph.D. and researchers. These activities will include lectures and workshops about modern power systems & digitalization as well as the dissemination of EDDIE project’s material and Blueprint in an educational platform, targeting MSc students of “Power System dynamics” programs.

Aiming to raise synergies, and to appeal to a larger audience, the central pilot in Aachen also plans workshops and experimental demonstrations in cooperation with the local community, targeting to raise young generation’s awareness about renewable energy and Digitalization. In the same direction, stands the partnership with Stadt Herne (City of Herne) to propose lectures and workshops, based on Smart-City initiatives, in order to achieve dissemination of the EDDIE scope to a wider audience. The aforementioned initiatives will be complemented by an interdisciplinary set of seminars addressed to German professionals, focusing on energy applications.

In coordination with the Aachen pilot site and in the context of the BSDE directions, smaller-scale pilot sites will be developed in Cologne, Athens, and Milan. The Cologne pilot site will be mainly industry-driven. It will include a program of the EWI Academy that will offer the companies the opportunity to train their employees on new trends in the Energy Sector. It will also include a certificate program for mastering the energy landscape of the future, addressing mid-senior employees, and a course to connect companies, training entities and students/employees, administrated by EWI Academy, aiming to reduce skills gaps in the Energy Sector. The Athens pilot site focuses on lectures and courses for university students in the field of new tools and mechanisms that will play a crucial role in the digitalization of the energy system. To raise synergies, NTUA also plans to participate in a summer school and a MOOC (Massive Open Online Course), organized by the H2020 project ERIGrid 2.0, aiming to stress the necessity of updating education programs, in the context of the transformation of the Energy Sector. In Milan, Italy, Politecnico di Milano will develop a MOOC on digital energy management for real estate, aiming to match green skills with the real estate sector.

The design, analysis, implementation and assessment timeline are presented for each activity in Gantt charts.

The implementation of the activities will be followed by an assessment procedure to measure their impact. The assessment goal is to achieve a continuous update of the Strategy, seeking its sustainability after the end of the project. Pilot activities can be considered as the first stage of the BSDE assessment in an actual environment, including dedicated questionnaires to both students and learners participating in the pilot activities and to participating stakeholders from the industry sector, as well as interviews with specific focus groups of students, teachers, administration officers, and industry professionals. The assessment mechanism is presented in the following figure.



The surveys will collect both qualitative and quantitative data, related to the assessment of the tools and methods of the BSDE, as well as the pilot sites. These data will be analyzed, leading to the evaluation of the BSDE impact on the skill gaps mitigation in the various fields. This assessment procedure will be also supported by a set of qualitative and quantitative KPIs, for the actual impact assessment of the activities. The preliminary set of KPIs, described in this deliverable, will be revised and complemented during the piloting and assessment phases.

Overall, several of the components of the Strategy are going to be tested through the pilots, assessing the possible impact they may have on the transition to the digital era of the energy system. Skill gaps that have been identified will be used as a starting point to develop training contents. The proposed templates for training programmes and the best-practice analyses will be utilized in the development process, while using the common language of “syllabus elements” that is being identified in WP5. The programmes designed in the pilots will be distributed and disseminated through the “training-programmes marketplace” and the “dissemination portal” proposed in the BSDE.

Parts of BSDE tested	Aachen	Cologne	Athens	Milan
Levers to reduce skills gaps	✓		✓	✓
Levers to raise awareness and to reduce skills gaps	✓			✓
Design of recommendation and overall action set	✓		✓	
General templates	✓		✓	✓
Best practices	✓		✓	✓
Training programmes marketplace	✓	✓	✓	✓
Research and dissemination portal			✓	
Dissemination portal	✓	✓	✓	✓

The Blueprint Strategy focuses on the aforementioned issues, planning to establish a solid and sustainable framework to facilitate the continuous update of training programs offered in Europe, considering the current industry demand at any time.