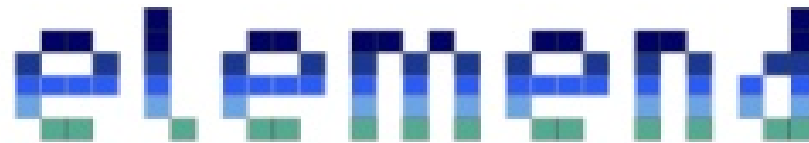




Co-funded by the
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"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"



Electrical Energy Markets and Engineering Education

ELEMEND 585681-EEP-1-2017-1-EL-EPPKA2-CBHE-JP

Project Overview

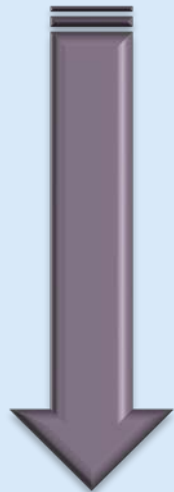
WB Cluster Meeting

Durres, Albania

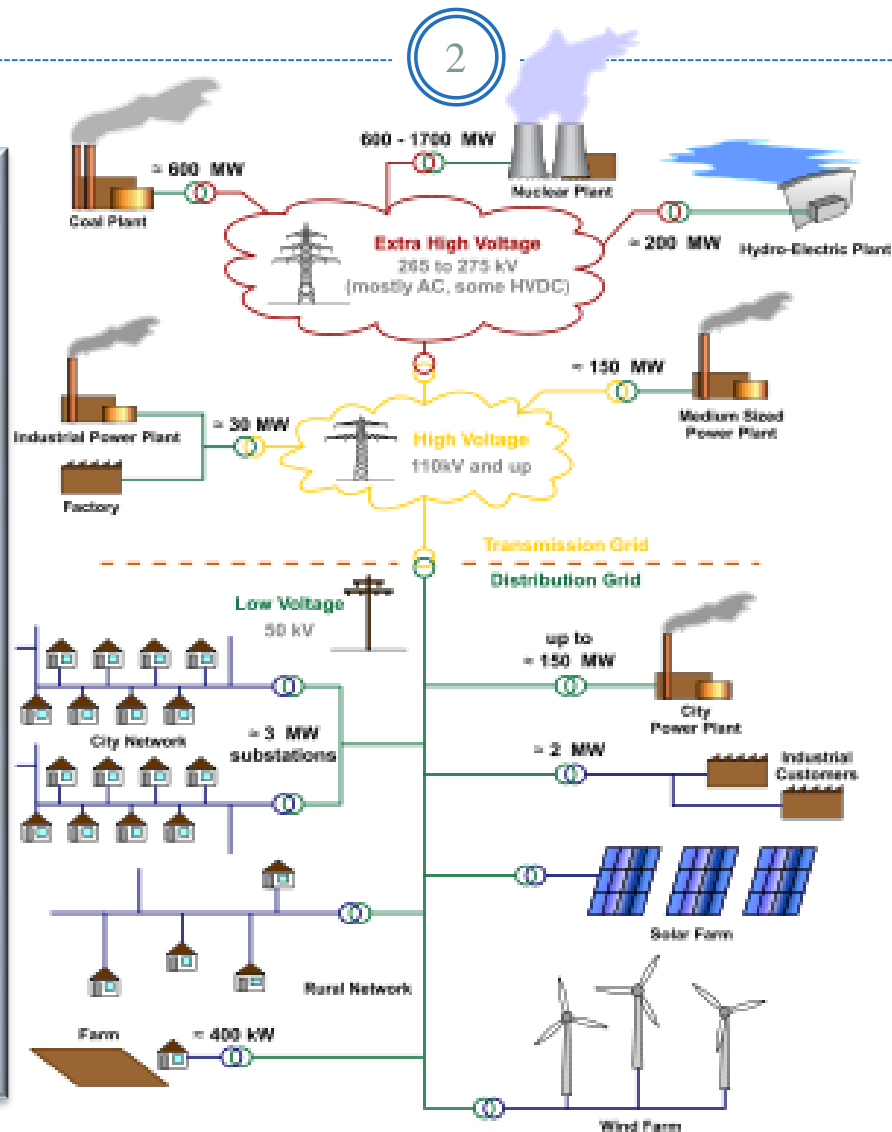
October 22nd – 23rd, 2019

Paradigm Shift

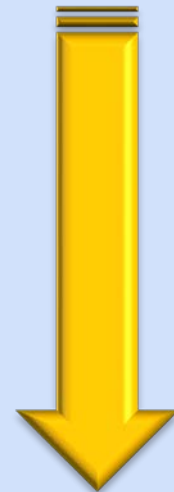
**Conventional
grid**



Smart grid



**Passive
consumer**



Active agent

BOSNIA i HERZEGOVINA: International Burch University,
University of Tuzla, University of East Sarajevo, EPBiH

KOSOVO*: University of Pristina Kosovska Mitrovica,
Technical College of Applied Sciences Urosevac,
University of Business and Technology

*According to the UN Security Council Resolution 1244.

MONTENEGRO: Mediteran, MANT

SERBIA: University of Novi
Sad, Singidunum University,
PROSMART

4 EU HEIs

9 WB HEIs

3 non academic partners

elemend

RTU

TUW

UVIGO

NKUA

ELEMEND specific objectives

4

1. To increase **capacity building** for study in smart grids offered both in English and in local languages at BSc and MSc level at 9 WBC HEIs.
2. To **develop, accredit and implement** new courses in smart grids at the **BSc (6 courses)** level
3. To **develop, accredit and implement** new **MSc** programme (**12 courses**)
4. To introduce **new ICT tools as self-learning tools** in participating WBC HEIs
5. To **increase employability** by targeting WBC labor market needs in smart grid field

ELEMEND Expected Outcomes

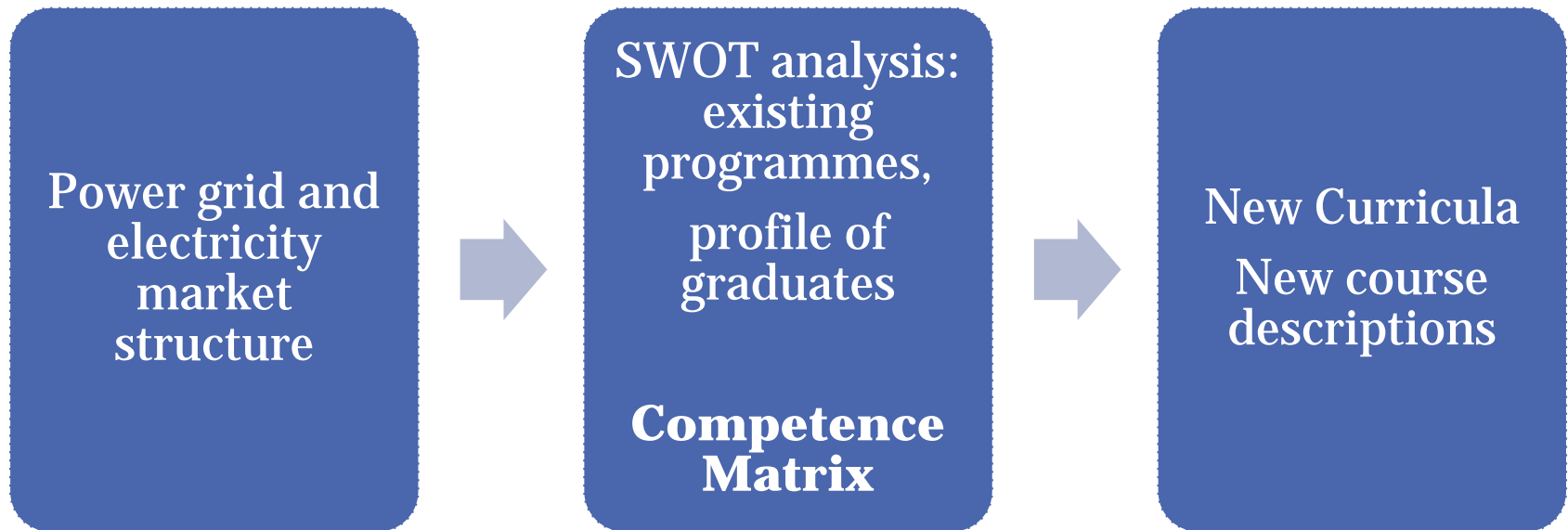
5

- New/updated MSc programmes
- Increased number of MSc students in the field of smart grids in WBC HEIs
- Updated BSc courses / programmes
- New educational material
- Internship programmes
- ELEMEND platform
- New e-learning courses
- ELEMEND network
- Increased internationalisation of partner universities
- Research collaboration

ELEMEND Work Flow

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Phase 1



ELEMEND Work Flow

7

Phase 2



ELEMEND Work Flow

8

Phase 3:

Pilot implementation



Evaluation



Exploitation

KPIs

9

Capacity building in the field of smart grids

- **Nr** of teachers and technical staff trained
- **Nr** of courses **developed/accredited/ offered** in **English and in local languages** in WBC
- **Nr** of students enrolled in new MSc programmes (**approx. 350 total**)
- **Nr** of laboratories, equipment, literature
- **Nr** of laboratory teaching material
- **Nr** of calls for enrolment

KPIs

10

Sustainability & Better economic performance / employability in the field of power engineering

- **Nr** of members of ELEMEND network;
- **MOUs** with industry (**min 5/HEI**); student placements
- **Nr** of yearly meetings with university bodies at each university (**min 2**)

KPIs

11

Internationalization of WBC universities / Increased collaboration with EU universities

- **Nr of teacher exchanges and other evidence of educational collaboration with EU universities**
- **Nr of staff trained**
- **Nr of signed agreements between the WBC and EU institutions**

KPIs

12

New MSc programmes created at WBC HEIs

- Documents of acceptance of the new programmes by the participating HEIs
- Documents of accreditation of the new curricula in national level

Increased number of MSc students in the field of power engineering

- **Nr** of students enrolled in new MSc programmes

KPIs

13

Increased use of ICT in teaching

- **Nr** of teachers and technical staff trained (**min 3** from each HEI)
- **Nr** of trainings offered in ICT methodologies
- **Nr** of users of ELEMEND platform

Quality assurance mechanisms

- **Nr** of student feedback evaluations for each course
- **Nr** of monitoring reports on internal and external quality assessments **published at website**
- **Nr** of external auditor report

KPIs

15

Dissemination

Website; Final conference; student projects, other outputs

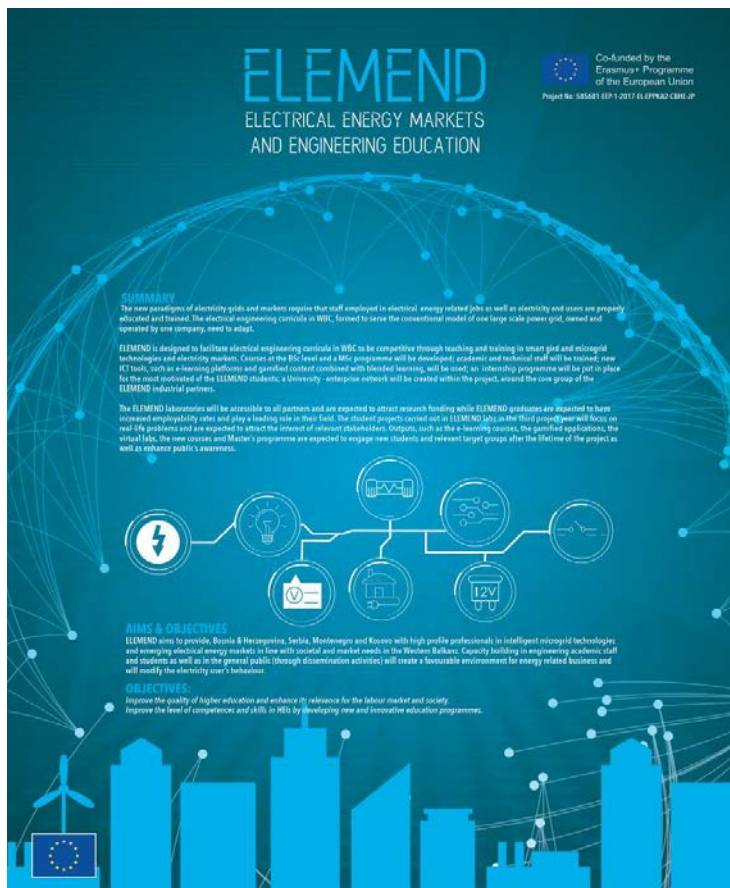
Nr of workshops (**min. 5**), open days (**min. 2**), stakeholder meetings, career days held

Nr of media publicity events

Nr of advertising brochures

<http://elemend.ba/>

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ELEMEMD
ELECTRICAL ENERGY MARKETS
AND ENGINEERING EDUCATION

Co-funded by the
Erasmus+ Programme
of the European Union
Project No: 585881-IPP-1-2017-EL-PPAD-CBHE-JP

SUMMARY
The new paradigms of electricity grids and markets require that staff employed in electrical energy related jobs as well as electricity end-users are properly educated and trained. The electrical engineering curricula in WBEC, formed to serve the conventional model of one large scale power grid, owned and operated by one company, need to adapt.

ELEMEMD is designed to facilitate electrical engineering curricula in WBEC to be competitive through teaching and training in smart grid and microgrid technologies and electricity markets. Courses at the BSc level and a MSc programme will be developed; students and national staff will be trained; new ICT tools, such as e-learning platforms and gamified content combined with blended learning, will be used; an internship programme will be put in place for the most motivated of the ELEMEMD students; a University-enterprise network will be created within the project, around the core group of the ELEMEMD industrial partners.

The ELEMEMD laboratories will be accessible to all partners and are expected to attract research funding while ELEMEMD graduates are expected to have increased employability rates and play a leading role in their field. The student projects carried out in ELEMEMD labs in the third project year will focus on real life problems and are expected to attract the interest of relevant stakeholders. Outputs, such as the e-learning courses, the gamified applications, the virtual labs, the new courses and Master's programme are expected to engage new students and relevant target groups after the timeline of the project as well as enhance public's awareness.

AIMS & OBJECTIVES
ELEMEMD aims to provide, Bosnia & Herzegovina, Serbia, Montenegro and Kosovo with high profile professionals in intelligent microgrid technologies and emerging electrical energy markets in line with societal and market needs in the Western Balkans. Capacity building in engineering academic staff and students as well as in the general public through dissemination activities will create a favourable environment for energy related business and will modify the electricity user's behaviour.

OBJECTIVES:
Improve the quality of higher education and enhance its relevance for the labour market and society.
Improve the level of competence and skills in HEIs by developing new and innovative education programmes.



TECHNOLOGICAL
EDUCATION INSTITUTE
OF STEREA ELLADA

Universidade de Vigo



TECHNISCHE
UNIVERSITÄT
WIEN
Vienna | Austria



INTERNATIONAL
BURCH
UNIVERSITY



Univerzitet u Tuzli
Bosna i Hercegovina



Singidunum
University



УНИВЕРЗИТЕТ У ПРИШТИНИ
КОСОВСКА МИТРОВИЦА

Prosmart



Kolegij UBT



Javno preduzeće
ELEKTROPRIVREDA BOSNE I HERCEGOVINE
d.d. - Sarajevo

