EVENT REPORT FORM

TYPE OF EVENT:	**Study visit, SC, PMC and QAC meetings**
VENUE:	**Escuela Técnica Superior de Ingenieros de Telecomunicación (ETSIT)** **Address: Avenida Complutense nº 30, "Ciudad Universitaria", 28040 Madrid**
ORGANIZER:	**UPM**
REPORTING DATE:	**12.05.2025.**
REPORT AUTHOR(S)	**Slobodan Bojanić, Bojan Prlinčević**
INSTITUTION:	**UMP, AASKM**

Project acronym:	**NEST4WB**
Project full title:	**NEW ENERGY COMPETENCE SYSTEM AND TECHNOLOGY FOR WB ENERGY STABILITY SYSTEM CURRICULUM REFORM**
Project No:	**101129321 (Call: ERASMUS-EDU-2023-CBHE)**
Coordinator institution:	**ACADEMY OF APPLIED STUDIES KOSOVO AND METOHIJA**
Coordinator:	**Phd Bojan Prlincevic, prof.a.s.**
Beneficiaries:	**SVEUCILISTE U RIJECI-TEHNICKI FAKULTET (UNIRI RITEH), Hrvatska** **ETHNIKO KAI KAPODISTRIAKO PANEPISTIMIO ATHINON (NKUA), Greece** **VSB - TECHNICAL UNIVERSITY OF OSTRAVA (VSB - TUO), Czech** **UNIVERSIDAD POLITECNICA DE MADRID (UPM), Spain,** **AKADEMIJA TEHNICKO-VASPITACKIH STRUKOVNIH STUDIJA (AATPS), Serbia,** **AKADEMIJA TEHNICKO-UMETNICKIH STRUKOVNIH STUDIJA (ATUSS), Serbia,** **UNIVERSITY OF MITROVICA (UPKM), Kosovo *,** **UNIVERZITET U ISTOCNOM SARAJEVU (UES), Bosnia and Herzegovina,** **University of Mostar (SUM), Bosnia and Herzegovina,** **UNIVERZITET SINERGIJA BIJELJINA (USB), Bosnia and Herzegovina,** **LUARASI UNIVERSITY (LRS), Albania,** **UNIVERSITETI METROPOLITAN TIRANA (UMT), Albania,** **FAKULTET PRIMIJENJENE NAUKE PODGORICA (FPRN), Montenegro.**

Study Visit – UPM

The fourth study visit was held from May 06-08, 2025, at the UPM – Universidad Politecnica de Madrid, Escuela Técnica Superior de Ingenieros de Telecomunicación (ETSIT), Madrid, Spain. In addition to the hosts, UPM, and the coordinator, AASKM, representatives from partner institutions attended the study visit: VSB-TUO, AATPS, UPKM, FPRN, UMT, UES, SUM, USB, UNIRI RITEH, and LRS. A total of 33 representatives from the institutions participated in the study visit. The gender structure of the participants was such that 13 female participants and 20 male participants attended the meeting.

FIRST DAY (06.05.2025)

Participants registration to the daily attendance form (09:30-10:00)

Opening Remarks and Introductions

Meeting initiated with general greetings and an introduction to the project scope by the host Prof. Slobodan Bojaić (UPM). The attendees were greeted by Vice Dean Prof. Jesus Fraile, who introduced the project participants to the UPM – Universidad Politecnica de Madrid.

The introductory presentation was delivered by the project coordinator, Dr. Bojan Prlinčević (AASKM), who provided a brief overview and outlined the expectations for the study visit.

The coordinator presented the agenda and work plan for the three-day study visit:

- On the first day, the program opens with a welcome session and an introduction to the host institution, followed by themed seminars and guided visits to the Antenna-Testing Laboratory (LEHA-UPM) and the Institute for Solar Energy (IES-UPM).

In the afternoon, joint meetings of the Steering Committee (SC) and the Project Management Committee (PMC) will be held.

The agenda will cover:

1. Presentation of the **Project Progress Report**;
2. Definition of activities, milestones and responsible partners for the next reporting period;
3. Review of work accomplished to date in preparation for the **Interim Report**;
4. Development and creation of **learning materials**.

- Day two is devoted to training sessions led by UPM professors for consortium members, covering the following topics.
  - ✓ Victor Villagrá, ETSIT-UPM: Cybersecurity;
  - ✓ Josué Ortiz Pagán, ETSIT-UPM: Sustainable Smart Health – Energy Efficiency in the Digital Healthcare Wearable Ecosystem:

- ✓ Mercedes Grijalvo, ETSII-UPM: Integrating AI into a Gamified Business Learning Model:
- ✓ Joaquín Ordieres, ETSII-UPM: Trust and Transparency in B2B and B2C Applications through Distributed Ledger Technology (DLT).

- Day three is reserved for:
  - ✓ **Defining new methodological models** for digitally supported teaching and drafting a framework for an interactive e-learning platform.
  - ✓ **Preparing accreditation and implementation activities** for the new study programs.
  - ✓ **Round-table discussions** on:
    1. Collaboration with industry and strategic partnerships;
    2. Internship models;
    3. Development of teaching materials.

The study visit at UPM will conclude with a wrap-up session and final remarks.

After the introductory presentations, the presentation of the host institutions continued with an institutional overview by Vice Dean prof. Jesus Fraile, ETSIT: Founded in 1971, UPM is Spain's largest technological university, bringing together 21 technical schools and faculties distributed across four campuses in Madrid. The university enrolls more than 35 000 students, about 30 000 undergraduates and 8 000 graduate students—and is supported by over 3 000 faculty members. Research is organised in 200-plus recognised research groups, 20 research centres or institutes, and 55 specialised laboratories, which together secure one of the highest volumes of competitive R&D funding among Spanish institutions. UPM consistently ranks as the country's top technical university and hosts more than 80 industry–university chairs, underscoring its strong links with the industrial sector.

Following the agenda, the group toured two key laboratories at **ETSIT-UPM**: **Antenna-Testing Laboratory (LEHA-UPM) -** An accredited echoic-chamber facility that has carried out antenna measurements for industry, research and education since 1980. The lab can characterize antennas from sub-GHz bands up to millimeter-wave frequencies (≈110 GHz) using both far-field and near-field systems and regularly supports aerospace and 5G/6G prototyping projects. upm.es; **Institute for Solar Energy (IES-UPM) -** Founded in 1979, IES-UPM is the world's oldest active photovoltaic research centre. Its facilities span device-fabrication cleanrooms, module-testing lines and outdoor PV system testbeds, enabling work on high-efficiency tandem cells, concentrator photovoltaics and grid-integration studies in partnership with leading solar manufacturers. mastersolar.ies.upm.esEnergy Global. During the visits, participants showed marked interest in the demonstrations, prompting a constructive discussion on potential research collaborations and technology transfer opportunities.

The fourth – SC, PMC & QAC Meetings and Dissemination Activities

Dissemination Work Package

- Prof. Danijela Zubac (AASKM – leader of the WP7) presented the dissemination results and emphasized that, going forward, every partner must include the mandatory Erasmus+ disclaimer

in any publication arising from the project. Only publications bearing this disclaimer will be counted as official NEST4WB dissemination outputs.

- Project Management Committee (PMC) session - The coordinator presented a review of the key performance indicators (KPIs) achieved to date, together with an overview of overall progress in preparation for the Interim Report, a contractual deliverable. The KPIs show that the project is ahead of schedule and that all targets have already been fully met.

  Three top priorities for the next period were confirmed:

  - ✓ Completion of laboratory installations;
  - ✓ Development of a detailed plan for producing learning materials;
  - ✓ Preparation and submission of deliverables D2.2, D3.2, and D3.3.

  The PMC expressed its satisfaction with the consortium's performance.

- Quality Assurance Committee (QAC) session - The QAC focused on enhancing the quality of project activities and evaluating output (reports, events, promotional materials). A unified template for learning materials was drafted.
- Steering Committee (SC) session - The SC carried out a strategic review of project activities and resource allocation.

Key outcomes

Responsibilities and deadlines were assigned for the next reporting period, with particular emphasis on laboratory installation, learning material development, and timely submission of the specified deliverables

In the afternoon session, **Prof. Rene Prenc** presented his proposal for the structure of the project's learning materials, which was unanimously adopted by the consortium. Next, **Prof. Miroslav Vozňák** reported on the QAC's decision regarding minimum content requirements and formatting standards for all learning outputs. He introduced official templates—one in Word and one in PowerPoint—to be used, depending on the chosen delivery format. The second working day went completely according to schedule.

The first working day concluded with a discussion and summary of the day's outcomes.

SECOND DAY (07.05.2025)

After participants registration (9:30-10:00) to the daily attendance form, the second day of the study visit began according to the planned agenda.

The second day's agenda was filled with a series of professional lectures that began with:

1. **Víctor Villagrá, ETSIT-UPM – *Cybersecurity***
   - ✓ Highlighted the transition from classic *information security* to a holistic cybersecurity approach that encompasses services, platforms and IoT devices.
   - ✓ Presented UPM research on dynamic risk-management platforms, machine-learning correlation of multistep attacks, automatic intrusion response and IoT botnet detection.

- ✓ Detailed the 60-ECTS **UPM Master in Cybersecurity**, which spans the full cycle—*threats* → *governance* → *technologies* → *operations*—and includes hands-on SOC practice, digital forensics and reverse-engineering modules.

2. **Josué Ortiz Pagán, ETSIT-UPM – *Sustainable Smart Health: Energy Efficiency in the Digital Healthcare Wearable Ecosystem***
   - ✓ Introduced a pervasive-monitoring framework that integrates wearables, edge/fog nodes and cloud analytics for neurology, cardiology and oncology use-cases.
   - ✓ Showcased AI-driven case studies (e.g., balance prediction, migraine forecasting, sleep-quality tracking, stroke triage, blood-donation optimisation).
   - ✓ Demonstrated energy-saving techniques—on-node workload balancing, compressed sensing and low-power model design—achieving up to **80 % data-transmission reduction** and significant EU-level cost savings.
   - ✓ Concluded with micro-credential proposals on open-hardware PCB design and AI optimisation for wearables.
3. **Mercedes Grijalvo, ETSII-UPM – *Integrating AI into a Gamified Business Learning Model***
   - ✓ Since 2014, ETSII-UPM has employed business-simulation games (GMC, Gestionet) to build strategic and financial skills; the session added **generative-AI chatbots** as virtual consultants.
   - ✓ Two-phase design: an initial decision round without AI, followed by rounds using AI for market analysis, KPI interpretation and scenario building.
   - ✓ Early results show higher student engagement, deeper analysis and more confident decisions, aligning with digital-skills micro-credential pathways.
   - ✓ Applied the **MDE gamification framework** (Mechanics–Dynamics–Emotions) to map AI features to learning outcomes.
4. **Joaquín Ordieres, ETSII-UPM – *Trust & Transparency in B2B and B2C Applications through Distributed-Ledger Technology (DLT)***
   - ✓ Explored trust gaps in multi-provider supply chains and proposed DLT as a "single source of truth" for transaction data.
   - ✓ Compared B2B and B2C workflows, highlighting challenges such as service exposure, data theft and DDoS attacks, and advocating permissionless, immutable ledgers instead of exposing internal APIs.
   - ✓ Presented use cases: digital identities for smart-city IoT, certification and micropayments, and a Human-Cyber-Physical "Healthy Operator 4.0" architecture.
   - ✓ Concluded with an open discussion on aligning learning materials with the 2025 competency framework for DLT-enabled ecosystems.

After each training session, a topic-focused discussion was held.

THIRD DAY (08.05.2025)

The third working day opened with a presentation by Prof. René Prenc entitled "Developing New Methodological Models for Technology-Enhanced Teaching and Designing a Framework for an Interactive E-Learning Platform."

After Prof. Prenc's detailed research findings and analysis, participants engaged in a discussion on next-step implementation. It was agreed that each partner institution will innovate or adopt technology-based teaching methods and establish an e-learning platform. The group also considered deploying a shared platform on the project website.

After the coffee break, **Prof. Marija Boranijasević** of **AATPS**—leader of Work Package 4—presented the WP4 results along with recommendations for the preparatory activities needed to obtain accreditation and launch the new study programs.

The study visit continued with a **round-table session** devoted to three themes:

1. Collaboration with industry and strategic partnerships;
2. Internship models;
3. Development of teaching materials.

Topic 1 – Industry collaboration - The consortium reviewed the status of partnerships with industry representatives. Progress was acknowledged and it was confirmed that all agreements would be carried out in line with previously established plans.

Topic 2 – Internship models - The internship framework proposed by colleagues from **NKUA** was examined and received positively.

Topic 3 – Teaching-material development - This item was discussed in depth. The agenda and Gantt chart prepared by the WP3 leaders from NKUA, together with methodological proposals from Profs. Miroslav, Joaquín and René, formed the basis for deliberation. After extensive discussion, both the Gantt chart and the agenda were adopted.

- Working groups and group leaders were appointed.
- Courses were clustered according to the competency framework previously approved.
- Each Western-Balkan institution was assigned to lead one working group, while **NKUA** and **AATPS**—represented by Prof. Christos and Prof. Bojan—were tasked with coordinating communication and consolidating the produced materials.

The visit continued with an open Q&A session, giving attendees the opportunity to explore further collaboration opportunities.

The study visit concluded with a wrap-up discussion and summary led by Dr Bojan Prlinčević, the project coordinator.

Conclusions and Next Steps

1. Continuation of Equipment Procurement for laboratories in partner institutions.
2. Implementation of New Courses focusing on smart grids and digitalization.
3. Development of Professional Internship Programs with stronger industry collaboration.

4. Project Dissemination through scientific conferences and promotional activities.
5. Upcoming dissemination event:
   - March XX-XX, 2026 – Jahorina, INFOTEH Conference, (UES)

- Appendixes:
  1. Agenda,
  2. Attendance lists,
  3. Report of procurement status and laboratory formation
  4. Progress report – SC, PMC & QAB meetings
  5. Report of the Development and creation of learning materials - Round table
  6. Proposed structure of the learning material – prof. Miroslav Voznak
  7. Presentations – *Cybersecurity* – prof. Victor Villagra, ETSIT UPM.
  8. Presentations - *Sustainable Smart Health: Energy Efficiency in the Digital Healthcare Wearable Ecosystem*, prof Ortiz Josue Pagan, ETSIT UPM.
  9. Presentations - *AI into a Gamified Business Learning Model*, prof Mercedes Grijalvo, ETSII UPM.
  10. Presentations - *Trust & Transparency in B2B and B2C applications through DLT*, prof. Joaquin Ordieres, ETSII UPM.
  11. Presentation of the *Preparation activities for accreditation and implementation of the study programs*, prof. Marija Boranijasevic – AATPS.
  12. Round Table - *Collaboration with industry and strategic partnership, - Internship models, - Preparing teaching materials*, prof. Bojan Prlinčević, NEST4WB coordinator
  13. Evaluation report

REPORT DONE BY:

[Name and Surname]

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