SpaceSUITE

SpaceSUITE approach to micro-credentials, flexible learning pathways and relevant experiences

AZULchain Lda - Portugal

Building Skills, Partnerships and a European Network for the Future Space Economy
The 16th of November 2026, 11:00-17:30
Stalowa Wola Regional Development Agency (StARR)

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

Work-Based Learning in the Downstream Space Sector

Work-based learning is the main area of application for micro-credentials, for a number of key reasons.

- Downstream space activities (Earth Observation, GNSS, SatCom) require procedural rigor, real-time data handling, and adherence to standard protocols
- Traditional lecture-based formats evaluate declarative knowledge ("knowing that"), but struggle to transmit procedural execution ("knowing how") and situational judgment ("knowing when and why")
- Establishes a structured framework to integrate learning into real work contexts, linking theory to practical operations through guided practice and workplace interaction

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

Catalogue of WBL Methodologies

Categorization of the 10 WBL modalities and alignment across European Qualifications Framework (EQF) levels

- Methodological Typology: Immersive, Operational, Simulation/Inquiry, and Transversal/Enterprise.
- Targeting the Technician Gap (EQF Levels 3–5): While higher engineering profiles (EQF 6–8) are well-represented in universities, downstream growth is acutely constrained by shortages in technicians, ground console operators, and data handling specialists.
- Structured Modalities for EQF 3–5: Prioritizing Structured On-the-Job Training (SOJT) anchored by Standard Operating Procedures (SOPs) and console simulations to build procedural reflexes without mission risk.
- Open-Ended Modalities for EQF 6–8: Deploying Project-Based Learning (PBL) where learners solve complex geospatial modeling challenges using multi-source satellite data.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

Authentic Assessment: Measuring Competence in Action

- Authentic assessment evaluates a learner's ability to execute non-routine, realistic tasks using industry-standard tools, datasets, and operational constraints rather than recalling memorized facts.
- Formative Assessment: Structured mentor observation, Direct Observation of Procedural Skills (DOPS), and iterative feedback loops.
- Summative Assessment: Comprehensive evaluation of performance outputs against transparent, standardized rubrics.
- Primary Evidence Instruments (D4.3): Job Performance Measures (JPM checklists with defined pass/fail criteria), telemetry/error logs from simulation environments, and cumulative technical project dossiers.
- Constructive Alignment: Ensures that learning outcomes, learning activities, and assessment instruments form an unbroken pedagogical chain mapped directly to industry job roles.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

Micro-credentials vs. Micro-learning

Dimension	Micro-Learning (Delivery Format)	Micro-Credential (Certified Outcome)
Core Function	Bite-sized content delivery (short videos, podcasts, procedural refreshers).	Formal certified record of verified learning outcomes and demonstrated competence.
Assessment Mechanism	Self-assessments, optional knowledge quizzes, or completion tracking.	Rigorous, quality-assured authentic assessment evaluated by subject matter experts.
Labor Market Value	Informal learning support; internal knowledge reinforcement.	Stand-alone currency recognized by employers; portable digital proof of capability.
Regulatory Standard	No standardized governance or external quality assurance.	EU Council Recommendation (2022); mapped to EQF, ECTS/ECVET, and QA standards.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

The MICOO Infrastructure: Evidence-Based Credentialing

The Paradigm Shift:

Traditional learning platforms verify "participation" (attendance) or "completion" (progress bar). MICOO enforces "demonstrated achievement", capturing observable artifacts, assessment criteria, and evaluator sign-offs.

Foundational Philosophy:

Completion says it happened. Evidence shows what it means.'

Credential trust is engineered directly through the instructional and assessment workflow.

micoo
Microcredentials made simple

https://micoo.io/

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

micoo
Microcredentials made simple

Evidence Dossiers & Technical Verification in MICOO

The Multimedia Evidence Dossier:
Rather than issuing a standalone static certificate, MICOO packages the learner's actual technical outputs into an immutable evidence dossier: project files (e.g. QGIS .qgz), source code, data logs, technical reports, and video demonstrations.

Criterion-Referenced Rubric Assessment:
Evaluators grade submissions against multi-tier rubrics directly tied to learning outcomes. Rubrics evaluate specific performance dimensions.

Blockchain-Anchored Integrity:
Credential metadata and cryptographic hashes of the evidence dossier are anchored on the Polygon blockchain via smart contracts, guaranteeing that credentials cannot be altered or retroactively modified.

Instant Third-Party Verification:
Employers and academic institutions can independently verify credential authenticity, issuing authority, rubric scores, and underlying evidence without contacting the issuing institution.

European Interoperability:
Architected for full compliance with the European Digital Credentials for Learning (EDC) standard and Europass digital infrastructure.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

micoo
Microcredentials made simple

Operational Blueprint: GIS in Digital Agriculture

Credential Title	GIS Application in Digital Agriculture: Integration of Multi-Source Data and Production of Map
Issuing Organization	Epsilon Italia s.r.l. (SpaceSUITE Consortium Partner) | Non-Formal Learning Sector
Qualification Level	EQF Level 6 | Advanced Professional / Technical Competency | 3-Year Validity
Notional Workload	8 Hours Total (Structured as: 3h direct course delivery + 3h self-study + 2h applied project work)
Target Learner Profiles	Agronomists, agricultural engineers, spatial data analysts, and smart farming technicians
Framework Mapping	ESCO: 'Apply digital mapping'; SpaceSUITE Profile: 'Digital Agriculture Expert'; SpaceSUITE BoK: 'Cartography and Visualization'



Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

Evidence Evaluation in the Digital Agriculture Scenario

Assessment Dimension	Specific Competence Evaluated	MICOO Rubric Criteria & Evidence Source
Input Data Evaluation & Preparation	Ability to assess data formats, coordinate reference systems, and input quality.	Evaluated via Technical Report and QGIS project properties. Requires correct CRS transformation and data consistency.
QGIS Integration & Processing	Methodological rigor in utilizing QGIS tools, layer structures, and domain plug-ins.	Evaluated via QGIS project file (.qgz). Requires organized layer styling, correct raster index execution, and spatial join integrity.
Cartographic Output & Reporting	Production of compliant maps matching specified digital agriculture standards.	Evaluated via final exported map and technical report. Requires correct scale bars, legends, metadata, and reasoned analytical conclusions.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

micro
Microcredentials made simple

Quality Assurance, Stackability & Long-Term Impact

Alignment with European Quality Frameworks:
SpaceSUITE micro-credentials align with the 2022 EU Council Recommendation, referencing European Quality Assurance in VET (EQAVET) and European Standards and Guidelines (ESG) for higher education.

Interoperable Digital Formats:
Full technical compatibility with European Digital Credentials for Learning (EDC), Europass, and W3C Verifiable Credentials, ensuring seamless cross-border mobility for European space professionals.

Curricular Stackability:
The 8-hour GIS micro-credential functions as an independent, labor-market-relevant asset, while designed to stack seamlessly into broader modular qualifications on the Open Space Academia (e.g., 'Precision Agriculture Specialist' or 'Earth Observation Data Analyst').

Ecosystem Integration:
Anchored in the long-term SPACE4GEO Large-Scale Partnership under the EU Pact for Skills, ensuring sustained industry co-design, ongoing currency, and transnational institutional recognition.

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union

SpaceSUITE

micoo
Microcredentials made simple

Thank you for your attention.

Carlo Stefano Cavicchioli | AZULchain LdA

cc@azulchain.io

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Co-funded by the European Union