



Procurement Educational Consortium for Innovation-sourcing using Sustainability



Funded by the
Erasmus+ Programme
of the European Union

PRECIOUS

Procurement Educational Consortium for Innovation sourcing

Using Sustainability

Intellectual Output 5

Guidance Document for MOOC navigation



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technology



**UNIVERSITY
OF TWENTE.**

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Work Package	WP5
Delivery Date (DoA)	June, 30th 2025
Actual Delivery Date	

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List of Abbreviations

Abbreviation	Meaning
IO	Intellectual Output
PSM	Purchasing and Supply Management
SME	Small and Medium Enterprises
MOOC	Massive Open Online Courses
R&D	Research and Development
RQ	Research Question
SPSM	Sustainable Purchasing Supply Management
SC	Supply Chain

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Introduction

Effective and sustainable procurement practices are becoming increasingly vital across various sectors. Modern organizations, whether public or private, are under growing pressure to integrate sustainability into their operations, not only to comply with regulatory demands but also to meet the expectations of a more environmentally conscious market. The intersection of public procurement, environmental engineering, and SME innovation is particularly crucial in driving this shift toward sustainability. As these sectors collaborate, the ability to procure, develop, and implement innovative and sustainable solutions becomes a key determinant of an organization's success and societal impact.

In the context of public procurement, sustainability is no longer a peripheral concern but a central element of strategic planning. Public procurement professionals are now tasked with identifying and acquiring solutions that not only meet functional needs but also align with broader environmental goals. This requires a deep understanding of sustainable technologies, effective supplier engagement, and the ability to navigate complex regulatory frameworks.

For environmental engineers, the challenge lies in developing solutions that are not only innovative but also scalable and compatible with the needs of public sector clients. This demands a robust set of competences in both technical innovation and cross-sector collaboration, enabling them to translate their expertise into practical, sustainable solutions that can be adopted by public entities and SMEs alike.

SMEs play a critical role in this ecosystem as well, acting as the bridge between innovation and implementation. However, for SMEs to successfully compete in the public procurement space, they must possess a comprehensive understanding of the procurement process and be able to articulate the sustainability benefits of their offerings. The ability to co-create with public procurement professionals and environmental engineers is therefore essential for SMEs to thrive in this increasingly competitive and sustainability-driven market.

The importance of equipping professionals in these sectors with the necessary skills and knowledge cannot be overstated. As organizations seek to meet the demands of sustainability and innovation, the need for well-trained professionals who can navigate these challenges is growing. Despite this, there remains a significant gap in education and training for procurement, environmental engineering, and SME professionals, particularly in the areas of sustainable procurement and cross-sector collaboration. Recent studies highlight a shortage of competences in these areas, with many professionals lacking the skills needed to effectively contribute to sustainable procurement processes. This is compounded by the increasing complexity of global supply chains and the heightened expectations for sustainability in both the public and private sectors. Consequently, the demand for professionals equipped with these critical skills is rising, creating significant opportunities for those who possess them. In response to these challenges, the PRECIUS project aims to bridge this gap by developing a comprehensive educational programme that equips public procurement professionals, environmental engineers, and SME representatives with the competences necessary to excel in sustainable procurement and innovation. This programme is designed to meet the current and future needs of these sectors, ensuring that they are prepared to lead the way in sustainable development.

1. Welcome to PRECIUS MOOC

Sustainable procurement is increasingly essential for both public and private organizations due to regulatory pressures and market expectations. Collaboration between public procurement professionals, environmental engineers, and SMEs is crucial in developing and implementing innovative, sustainable solutions. However, a significant skills gap exists in sustainable procurement and cross-sector collaboration.

To address this, the PRECIUS project created this MOOC aimed at equipping professionals in these sectors with the necessary competencies to drive sustainability and innovation effectively.

In this MOOC, you will discover our three main modules: Public Procurement, Small and Medium Enterprises and, Innovative and Environmental Engineering.

1.1 Target groups

The course is intended to:

- I. Environmental engineers as a generator of sustainable innovations.
- II. Public procurement officers of sustainable innovations that increasingly face problems in acquiring sustainable innovations from the market.
- III. Entrepreneurs and sales personnel of privately held firms, i.e. suppliers, mainly SMEs that have difficulties tendering and, particularly, how to sell sustainable solutions to public authorities.

1.2 Intended learning outcomes

By the end of the course, participants from public procurement, environmental engineering, and SMEs will be able to:

- I. Foster creative Innovation: Apply creative thinking to develop and implement novel, sustainable procurement and development solutions.
- II. Enhance Cross-Sector Collaboration: Work effectively in interdisciplinary teams, fostering open communication and co-creation among procurement professionals, engineers, and SMEs.

- III. Communicate Effectively Across Roles: Convey technical, environmental, and value-based information clearly to diverse stakeholders in procurement processes.
- IV. Think Strategically and Systemically: Demonstrate strategic thinking to align sustainability initiatives with long-term environmental and organizational goals.
- V. Navigate Sustainability Regulations and Policies: Understand and integrate relevant sustainability regulations, public procurement policies, and innovation strategies into practice.
- VI. Implement Sustainable Procurement Processes: Design and manage procurement procedures that prioritize sustainability, supplier engagement, and innovation.
- VII. Evaluate and Apply Sustainable Technologies: Assess environmental engineering solutions for their practical applicability, scalability, and sustainability in procurement contexts.
- VIII. Bridge Innovation with Practical Implementation: Support SMEs in turning innovative concepts into deliverable solutions that meet public procurement requirements.
- IX. Adapt to Emerging Trends and Complex Supply Chains: Respond effectively to changing market dynamics and sustainability challenges in global and local supply chains.

2. How this course works

This MOOC offers a flexible, “cafeteria-style” learning pathway designed for sustainability-minded professionals in procurement, environmental engineering, and entrepreneurship. This flexible design allows participants to tailor their learning journey by selecting modules that align with their specific career needs. Just as in a cafeteria where individuals choose from a variety of options, participants in this MOOC can select from distinct modules focused on procurement, development, or entrepreneurial skills.

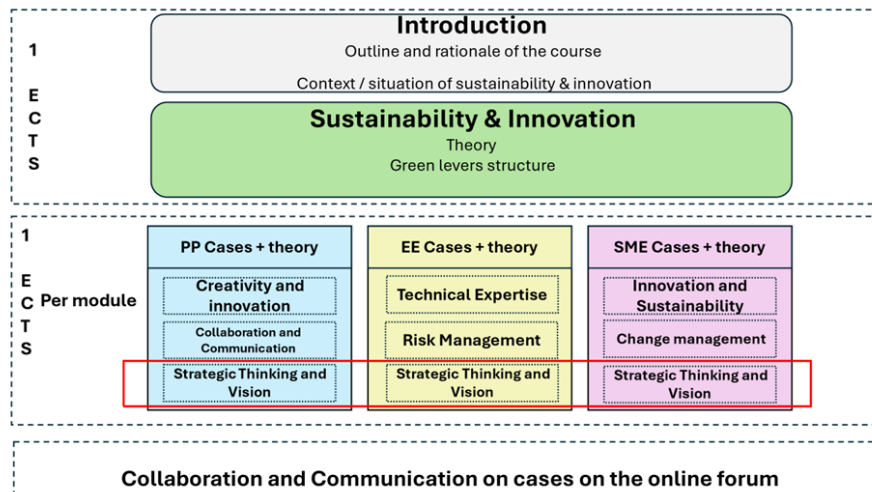


Figure 1. Course structure overview

All participants begin with a **Green Levers Module** that establishes essential sustainability principles, including ecological and social challenges, sustainable practices, and the role of innovation across sectors.

Following the core, learners choose from three **Specialized Modules** —Procurement, Environmental Engineering, or Entrepreneurship—adapting their studies to their professional needs while retaining the freedom to explore topics in other pathways. Procurement professionals deepen their expertise in sustainable purchasing and supply-chain management; environmental engineers focus on innovative technical solutions and sustainable project management; SME representatives concentrate on co-creation, market strategies, and business growth.

The integration module represents participant(s) solution to the provided case studies.

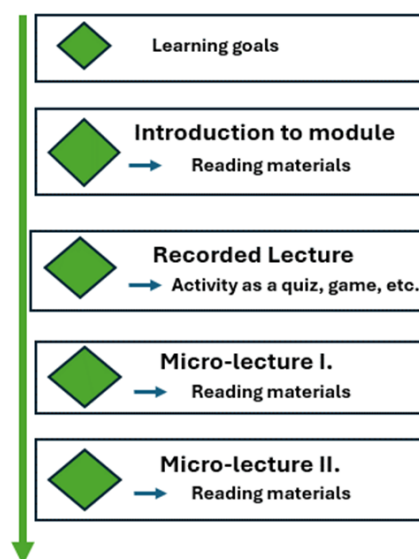


Figure 2. Micro-lectures overview

This MOOC provides you free, online, and interactive short videos, quizzes, interviews and other learning activities

2.1 How to navigate this course

To begin the course, use the link "Modules" on the menu navigation on the left.

You can then navigate into the course using the "Previous" and "Next" buttons at the bottom of the screen. You can also use left menu options like Modules, Quizzes, etc. which will lead you directly to the desired part of the course.

3. Instructions for educators on how to use and implement the course

3.1 Course Overview and Design

The course uses a cafeteria model, designed to accommodate the diverse professional backgrounds of its target audience:

- I. Public procurement professionals
- II. Environmental engineers
- III. SME representatives

Participants can customize their learning journey by selecting from modular components that best suit their role and learning needs. The course is equivalent to 4 ECTS credits and consists of both core and specialized modules.

3.2 Structure and Modules

- Core Module (shared by all participants): Introduces the foundational principles of sustainability and cross-sector collaboration, ensuring a common understanding across all professional groups.
- Specialized Modules (choose one based on background):
 - I. Procurement Module (for public procurement professionals): Focus on sustainable procurement practices, regulatory frameworks, and supply chain management.
 - II. Development Module (for environmental engineers): Covers technical innovation, sustainable project development, and engineering solutions for public needs.

III. Entrepreneurial Module (for SMEs): Emphasizes business development, co-creation with public entities, and innovative market strategies.

3.3 Integration into Existing Curricula

- Flexibility: Educators can integrate the core module as a foundational sustainability unit across programs in public administration, environmental sciences, or business.
- Customization: Specialized modules can be embedded into existing course tracks depending on the discipline:
 - I. Public Management or Policy Programs → Procurement Module
 - II. Engineering or Environmental Programs → Development Module
 - III. Business, Innovation, or Entrepreneurship Programs → Entrepreneurial Module

3.4 Teaching Recommendations

- I. Encourage interdisciplinary participation to simulate real-world collaboration.
- II. Use case studies, project-based tasks, and peer reviews to enhance engagement.
- III. Assign role-specific tasks during group activities to reflect real-sector dynamics.

3.5 Learning Outcomes Alignment

Ensure that course activities align with core learning outcomes, including:

- I. Creativity and innovation in sustainable practices
- II. Strategic and systems thinking
- III. Effective communication and cross-sector collaboration

3.6 Assessment and Certification

- I. Modular assessments can be combined to grant full ECTS accreditation.
- II. Encourage learners to complete all modules for a comprehensive view, but partial completion can still support role-specific certification.