

# PROCEDIN

*Building Procurement Capability for Embedding and Driving Innovation*

## D4.2

# Learning Resources and Associated Guidance

June 2024

**CAPACITY BUILDING FOR PROCUREMENT OF INNOVATION**

**COURSE SYLLABUS, RESOURCES AND GUIDANCE FOR EDUCATORS:**

***STRATEGIC PUBLIC PROCUREMENT***



Funded by  
the European Union

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<b>Work Package</b>	WP4
<b>Delivery Date (DoA)</b>	M22
<b>Actual Delivery Date</b>	

Document Revision History			
Date	Version	Author/Contributor/Reviewer	Summary of Main Changes
	0.1	Esmee Peters (UT) Klaas Stek (UT) Louise Knight (UT)	First draft to consortium

Dissemination Level and Nature of the Deliverable		
<b>PU</b>	Public	<b>X</b>
<b>SEN</b>	Sensitive, limited under the conditions of the Grant Agreement	
<b>Nature</b>	<b>R</b> = Report, <b>E</b> = Ethics or, <b>O</b> = Other	<b>R</b>

PROCEDIN Consortium			
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**PROCEDIN**

Procurement Capability - Embedding and Driving Innovation

Grant Agreement: 101070830

Funding Scheme: Coordination and Support Action (CSA)

Theme: HORIZON-EIE-2021-CONNECT-01

Start Date of Project: 01 October 2022

Duration: 24 months

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List of Abbreviations and Acronyms	
<b>PROCEDIN</b>	<b>PR</b> ocurement <b>C</b> apability – <b>E</b> MBEDDING and <b>DR</b> IVING <b>IN</b> novation
<b>POI</b>	Procurement of innovation
<b>SMEs</b>	Small Medium Enterprises
<b>GDP</b>	Gross Domestic Product
<b>ECTS</b>	European Credit Transfer and Accumulation System
<b>CLLO</b>	Course-level learning objectives
<b>AI</b>	Artificial Intelligence
<b>LO</b>	Learning Objective

## About the PROCEDIN project

The widespread adoption of procurement of innovation (POI) practices – which bring together business and public sectors – relies on legal reforms, European, national and regional policies, growing expertise, guidance, tools and case studies, and networks of early adopters. POI adoption's rate, scale, and scope must increase to drive profound, systemic change.

To accelerate POI, in the context of European cities' innovation for sustainability and resilience agendas, the PROCEDIN project leverages existing resources and the consortium members' pan-European professional networks to initiate new provisions, and to enhance and mobilise POI motivation, knowledge, and skill.

**PR**ocurement **C**apability – **E**MBEDDING and **DR**IVING **IN**novation (PROCEDIN) is a Horizon Europe project funded by the European Commission. Its purpose is POI capacity building among and between buyers (especially in public procurement) and firms (especially SMEs) and engaging other key stakeholders in building the POI ecosystem (especially educators). Together with other Horizon Europe projects, BUILD and Health InnoFacilitator, PROCEDIN has launched the Innovation Procurement Task Force, a collaborative initiative aimed at supporting procurement in innovative areas such as the circular economy, green mobility, and healthcare.

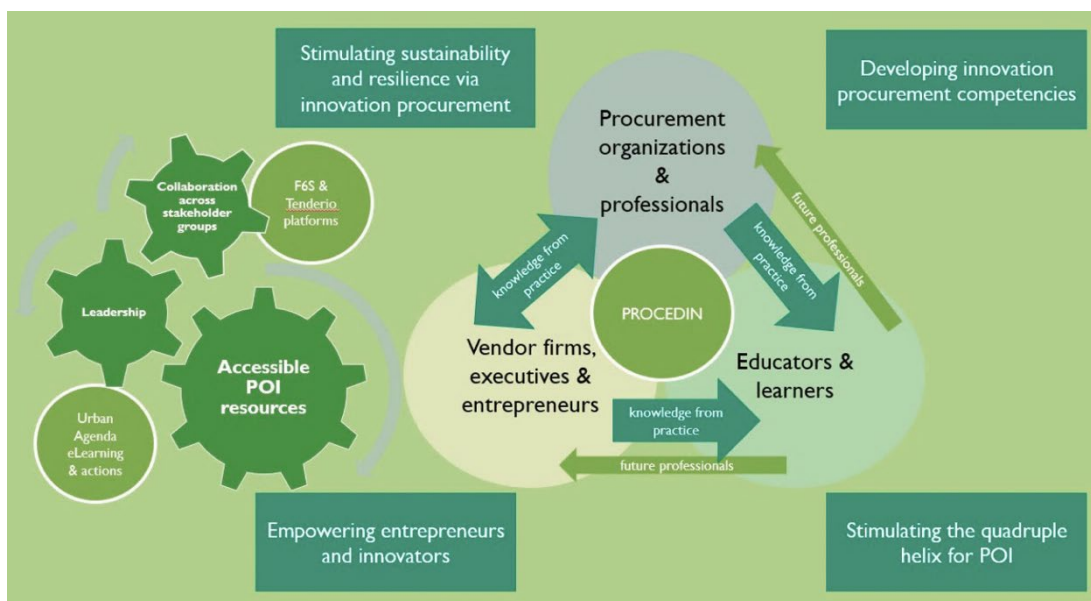


Figure 1. Visual representation of the PROCEDIN project

# 1 Introduction

A key pillar of building capacity for procurement of innovation (POI) is competence development: helping personnel involved in the POI process to develop the necessary innovation orientation and expertise. Competence development initiatives are most often training programs for existing personnel. These are necessary but not sufficient. Effective recruitment is also vital, and a key source of new recruits to the public procurement profession is graduates. In many European countries, recruits join via a civil service scheme (and are therefore not initially intending to specialise in procurement) or they have legal background (and may tend to focus on regulations and compliance). Business graduates who have studied innovation, strategy and entrepreneurship will be attuned to the demands of the POI process.

The new generation of MSc and BSc graduates is increasingly concerned with meaningful work. Many students are passionate about making a tangible difference in society through their future employment. Purchasing and supply chain management is a particularly appealing field of work, with many opportunities. Yet, students often don't see public procurement as a potential career pathway to fulfil these aspirations.

One possible way to get students to see public procurement as a potential career path is by offering *strategic public procurement* topics in supply chain management courses or an entire strategic public procurement course. This report offers customised learning resources for educational use to promote an understanding of the role, impact and processes of strategic public procurement. It is designed to provide an experienced lecturer an 'off-the-shelf' course design. While we propose a whole public procurement course, within this document, there is also plenty of guidance that could be used by a lecturer unfamiliar with public procurement to develop a couple of lectures to include in a general course on procurement.

The course refers to *strategic* public procurement rather than public procurement of innovation as *strategic* encompasses both direct and indirect innovative public procurement. 'Direct' refers to procurements undertaken using one or other of the public procurement instruments specifically designed to facilitate innovation (e.g. innovation partnership). Indirect refers to contracts issued under standard procurement procedures but with specifications and award criteria which incentivise innovation, as often used in pursuit of environmental and social policy objectives. The learning resources are carefully selected by teachers from the University of Twente<sup>1</sup>, who have experience providing strategic procurement courses to undergraduate students, graduate students, and practitioners.

A variety of learning resources are packaged in a one-course syllabus. This syllabus is carefully constructed to provide information on how various resources can promote the understanding of strategic public procurement and how educators can combine these resources into an entire strategic public procurement course. The course's intended aim is to promote awareness of the role, impact and processes of strategic procurement.

- The course aims to capture the following components of strategic public procurement: *Strategic procurement concepts, Strategic procurement processes, Strategic procurement barriers and enablers, Future trends for strategic procurement, and Strategic procurement impact cases.*

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<sup>1</sup> The University of Twente offers both undergraduate modules, as well as a full graduate specialisation program on procurement, with specific courses on public procurement. With over 30 researchers in procurement, their emphasis lies on combining theory and practice, with a focus on soft skills as well as technical knowledge.

- The following learning resources are used in constructing the strategic public procurement course: *training videos, procurement books, case studies, academic articles, wicked-problem case studies, seminar papers, and guest lectures.*
- Both the full course and the individual learning resources will provide information on the following: *target learners, learning objectives, questions for guiding discussion, and suggestions for assessment.*

First, the structure of the whole course on strategic public procurement is explained in **Chapter 2**. This includes the target learners, the course's aim and learning objectives, suggestions for a course outline, course components, grade composition, and other aspects to consider (Academic integrity, the retake policy, and the policy on artificial intelligence). **Chapter 3** links the five-course components (concepts, processes, barriers and enablers, future trends and impact cases) to possible learning resources (such as training videos, books, or guest lecturers). It should be noted that different learning resources could be used for different course components and vice versa. The target learners, learning objectives, guiding discussion questions, and assessment suggestions are identified for all learning resources. **Chapter 4** provides a conclusion.

## 2 Constructing the overall course (syllabus)

### 2.1 Identify target learners

It is essential to identify the target learners for the course. Depending on the target learners (*undergraduate students, graduate students, or practitioners*) and their background, the degree of possible collaboration among learners, the pre-required knowledge, and consequently, the whole course design will be different.

For this course, business graduate students are the target learners, but each learning resource identifies how they can be scaled toward the other possible target learners – either on different scholarly levels or from different backgrounds. An adaptive course structure for practitioners is also offered. Table 1 provides the descriptives of this course:

Table 1. Descriptives Strategic Public Procurement course

Course:	Strategic Public Procurement
Level of studies	Graduate
ECTS / Number of hours	5 ECTS / 140 hours
Prerequisites	None
Language of instruction	English
Online / On-campus course	On-campus course
Grading	Exam, paper and presentation

### 2.2 The aim of the course

In Europe, on average, public procurement spending is 12% of Gross Domestic Product (GDP), with 29% of total government expenditure is through suppliers. This means that public bodies across the EU do 2 trillion euros worth of business with companies every year. Due to its economic significance, public procurement is a crucial mechanism for governments to foster innovation in pursuit of

economic, environmental and social policy objectives. The purchaser faces exciting challenges concerning ethical and socially responsible buying in combination with the current societal-demographic, environmental, and technological changes.

This course will cover strategic procurement in the public sector, focusing on the three pillars of strategic procurement: innovative, green and socially responsible procurement.<sup>2</sup> Examples include the procurement of complex projects, goods, and services the government provides (ministries, municipalities, international agencies, and state-owned enterprises). The course brings a strategic perspective to tackle public matters in settings where the organisation's core purpose is to serve communities and wider society rather than deliver profit to shareholders. The diverse nature of the stakeholders, such as public bodies, non-profit organisations, suppliers, and society, is a particular challenge for the public sector. Effective public procurement is critical to addressing many of today's societal challenges.

The course aims to introduce students and practitioners to the main concepts of strategic public procurement. Students will develop their analysis and communication skills and be better positioned for procurement leadership roles in the future, whereas practitioners will be able to implement it in daily practice. This course consists of five components: (1) procurement concepts, (2) procurement processes, (3) barriers and enablers, (4) future trends and (5) impact cases.

### ***(1) Procurement concepts***

To apply the basic principles of strategic public procurement, students and (starting) practitioners learn the difference between public and private procurement, the concept of tendering, and the different levels of public procurement.

### ***(2) Procurement processes***

This component includes different stages of the procurement process, organisational structures, and types of collaboration.

### ***(3) Barriers and enablers***

Students and practitioners must apply critical thinking and creative problem-solving skills to understand the complex challenges of strategic public procurement in an ever-changing environment.

### ***(4) Future trends***

Through writing their seminar papers, students will investigate the broader objectives of strategic public procurement, e.g., sustainability, innovation, shaping the supplier market, shaping policy, and public procurement's influence on SMEs. Students should (in groups or individually) describe a recent development in this field and give an outlook for the future. Practitioners will be asked to write an advice report, integrating the future trends in their organisational strategy or policy.

### ***(5) Impact cases***

Students and practitioners can describe the relevance and impact of public procurement in practice through guest lectures or case studies.

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<sup>2</sup> [https://single-market-economy.ec.europa.eu/single-market/public-procurement/strategic-procurement\\_en](https://single-market-economy.ec.europa.eu/single-market/public-procurement/strategic-procurement_en)



## 2.3 Learning objectives

Table 2 maps the course-level learning objectives (CLLO), including the assessment and teaching methods. These CLLO are the same for practitioners and students.

Table 2. Course-level learning objectives

Course level learning outcomes (objectives)	Assessment methods	Teaching methods
CLLO1. Describe key concepts and processes in designing and developing strategic public procurement	Coursework, presentation, final exam	Lecture, self-study, case studies, guest lectures, videos,
CLLO2. Discuss and analyse issues and challenges within the area of strategic public procurement	Coursework, paper, presentation, final exam	Lecture, self-study, case studies, guest lectures
CLLO3. Apply public procurement insights in practice (case)	Coursework, presentation	Lecture, self-study, case studies
CLLO4. Apply critical thinking and creative problem-solving skills in a changing environment	Coursework, presentation, final exam	Lecture, self-study, case studies
CLLO5. Discuss and analyse future trends in strategic public procurement.	Coursework, paper, final exam	Lecture, self-study, guest lectures, case studies
CLLO6. Explain the relevance and impact of fostering sustainability and innovation in public procurement	Coursework, paper, final exam	Lecture, self-study, guest lectures, case studies

## 2.4 Possible course outline and course components

Table 3 provides a possible outline of a strategic public procurement course for **students**. This course consists of five components, mentioned in the ‘aim of the course’: (1) procurement concepts, (2) procurement processes, (3) barriers and enablers, (4) future trends and (5) impact cases. The assignments mentioned in the course outline are explained in the next section.

The course for **practitioners** is presented in Table 4. The course outline slightly differs from the course outline for students in two aspects. First, if practitioners have experience with public procurement, components one (procurement concepts) and two (procurement processes) can be combined. Second, rather than writing a research-based seminar paper (in detail explained in section 3.4) like students, practitioners could write an advice report on how their organisation can integrate future strategic public procurement objectives (also in detail explained in section 3.4). Moreover, the final exam could be left out of the practitioner course.

Table 3. Possible course outline for students

Topics	Required hours	Required preparation
<b>1) Introduction to the strategic public procurement course and public procurement concepts</b> <i>Basic definitions, public versus private procurement, tendering, public procurement levels</i>	10	<i>A list of training video's, book chapters, and the TED database (see 3.1)</i>
<b>2) Procurement processes</b> <i>Procurement process, organisational structures, and types of collaboration.</i>	10	<i>A list of book chapters and articles (see 3.2)</i>
<b>3) Barriers and enablers for strategic procurement</b> <i>Public contracting authorities introducing a wicked procurement challenge they currently encounter.</i>	4	<i>Information on the case you will be solving (see 3.3)</i>
<b>4) Future trends in strategic public procurement</b> <i>Sustainability, innovation, shaping the supplier market, shaping policy, and public procurement's influence on SMEs</i>	10	<i>A list of academic articles on different objectives of strategic procurement (see 3.4)</i>
<b>5) Impact case: guest lecture 1</b> <i>Guest lecture by ...</i>	2	<i>Alternative: example case studies (see 3.5)</i>
<b>6) Impact case: guest lecture 2</b> <i>Guest lecture by ...</i>	2	<i>Alternative: example case studies (see 3.5)</i>
<b>7) Case-study presentations</b> <i>Each of the student groups will present their solution to their wicked challenge</i>	2	
Case-study presentations preparation	38	<i>Connecting all previous materials</i>
Seminar paper	38	<i>A list of academic articles on strategic procurement (see 3.4)</i>
Final Exam	24	<i>Connecting All previous materials</i>
<b>Total hours</b>	140	

Table 4. Possible course outline for practitioners

Topics	Required hours	Required preparation
<b>1) Introduction to the strategic public procurement course and public procurement concepts and processes</b> <i>Basic definitions, public versus private procurement, tendering, public procurement levels, Procurement process, the organisational structures, and the types of collaboration. *Depending on the level of practitioners, this could either be one or two sections.</i>	20	<i>A list of training video's, book chapters, and the TED database (see 3.1) A list of book chapters and articles (see 3.2)</i>
<b>2) Barriers and enablers for strategic procurement</b> <i>Public contracting authorities introducing a wicked procurement challenge they currently encounter.</i>	4	<i>Information on the case that needs solving (see 3.3)</i>

<b>3) Future trends in strategic public procurement</b> <i>Sustainability, innovation, shaping the supplier market, shaping policy, and public procurement's influence on SMEs</i>	10	<i>A list of academic articles on different objectives of strategic procurement (see 3.4)</i>
<b>4) Impact case: guest lecture 1</b> <i>Guest lecture by ...</i>	2	<i>Alternative: example case studies (see 3.5)</i>
<b>5) Impact case: guest lecture 2</b> <i>Guest lecture by ...</i>	2	<i>Alternative: example case studies (see 3.5)</i>
<b>6) Optional: Case-study presentations / advice report presentations</b> <i>Practitioners will present their solution to their wicked challenge or to their advice report</i>	2	
Case-study presentations preparation/ report	38	<i>Connecting all previous materials</i>
Advice report / Presentation	38	<i>A list of academic articles on strategic procurement (see 3.4)</i>
Optional: Final Exam	24	<i>Connecting all previous materials</i>
<b>Total hours</b>	140	

## 2.5 Possible assessments and grade weightings

For students, the possible course outline consists of three types of assignments: a case-study presentation, a paper assignment and a final exam. For practitioners, the assignments could be a case study presentation and an advice report. The details of the presentation assignment and the report will be discussed in sections 3.3 and 3.4.

- **Case-study presentation:** Students will solve real public procurement cases provided by purchasers from regional and local public procurement organisations. Complex problems must be solved with the knowledge, skills, and creativity developed through the course. The opportunity for students lies in educators connecting the students with local and/or regional public contracting authorities and vice versa. The students will present their findings to the other students and the corresponding public contracting authority in a separate presentation session. Practitioners can do a similar case study, specifically focusing on learning from each other.
- **Seminar paper (students):** Students investigate the broader objectives of strategic public procurement, e.g., sustainability, innovation, shaping the supplier market, shaping policy, and public procurement's influence on SMEs through writing seminar papers. These literature-based research papers should address one of the leading objectives in strategic public procurement. The students will receive two to three academic articles as suggestions to commence. Based on these and related articles, students can (in groups or individually) describe the recent development in this field and give an outlook for the future.
- **Advice report (practitioners):** Practitioners research their own organisational policy or strategy to investigate how they currently contribute to broader public procurement objectives. This can be done for either all objectives or focusing on one. After identifying the level of integration in their organisation, practitioners are asked to write an advice report on how these strategic objectives can be enhanced within their organisational policy or strategy – using the prescribed literature to commence.

- **Final exam:** the discussion questions guiding the different course components (sections 3.1 – 3.5) could be used as final exam questions. This would ensure that the exam questions capture all the learnings of the course. These questions are summarised in Table 13.

Based on the course outlines above, the grade weightings for student assessments could be as described in Table 5. For practitioners, it is also an option to focus on pass or fail.

Table 5. Possible grade components and composition

Type of assignment	%
<i>Group Components 33.33%</i>	
Presentation grade	33.33%
<i>Individual Components 66.67%</i>	
Seminar paper	33.33%
Final Exam	33.34%
<b>Total:</b>	100%

## 2.6 Other aspects to consider

Other aspects should be mentioned in the course syllabus when constructing a complete course, including a section on academic integrity, the retake policy, and an artificial intelligence policy. Examples for each of these sections are given below.

### 2.6.1 Academic honesty and integrity

*For example*, the University Code of Ethics, which includes cheating and plagiarism, is fully applicable and will be strictly enforced in the course. Academic dishonesty and cheating can and will lead to a report to the Committee of Ethics. Concerning remote learning, we remind students that they are expected to adhere to and maintain the same academic honesty and integrity that they would in a classroom setting.

### 2.6.2 Retake policy

*For example*, if the course's final (cumulative) mark, including the final exam score, is insufficient, students can exercise their right to retake. The retake exam will cover all lectures and case-discussion topics discussed in class during the course. It will be held during the last week of the exam session and will replace the final exam grade (33.34% of the total grade). Acquired scores from all assignments will be summed up, and the final (cumulative) grade will be given. The lecturer reserves the right to choose the form of the exam.

### 2.6.3 Artificial Intelligence policy

*For example*, if artificial intelligence (AI) tools are allowed to complete an assignment, several different levels are possible, i.e., only for certain purposes, only specific tools, or completely free. Students are required to mention the use of AI. Therefore, when any form of AI is used, these tools should be included in the appendix (list all tools used during the work). The following sentence should be used at the start of the appendix:

*“During the preparation of this work, the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the work.”*

If there is nothing to disclose, a statement must still be included that no AI was used:

*“During the preparation of this work, the author(s) used no artificial intelligence tools.”*

Generally, all software (because it has the potential to include AI) that has been used needs to be disclosed, for example, but not limited to, tools for writing, searching, citing and analysing data. Please be aware that the following programs could contain tools based on AI, generally included to improve language: e.g. (but not limited to) text processors (such as Word), spelling and grammar checks and potentially reference managers. Students using AI without the explicit consent of the instructor and acknowledgement of the tool in an appendix should, therefore, be considered to have committed academic misconduct.<sup>3</sup>

### 3 Examples of possible course components and corresponding learning resources

This model course on strategic public procurement has five components. Each of these could be studied using various combinations of learning resources, as illustrated below. It should be noted that different learning resources could be used for different course components and vice versa. Similarly, different learning resources could be combined for each course component.

Table 6 provides an overview of which learning resources are linked to which course components in this developed course outline. For all course components and the linked learning resources, their projected target learners, learning objectives, questions for guiding discussion and suggestions for assessment are included.

Table 6. Possible combination of learning resources for a strategic public procurement course

Overview of course components	Overview of possible learning resources	Information provided per course component with linked learning resources
1. <i>Strategic procurement concepts</i>	<ul style="list-style-type: none"> <li>• Training videos</li> <li>• Book chapters</li> <li>• Optional: TED database</li> </ul>	<ul style="list-style-type: none"> <li>• Target learners</li> <li>• Learning objectives</li> <li>• Questions for guiding discussion</li> <li>• Suggestions for assessment</li> </ul>
2. <i>Strategic procurement processes</i>	<ul style="list-style-type: none"> <li>• Book chapters</li> <li>• Academic articles</li> </ul>	
3. <i>Strategic procurement barriers and enablers</i>	<ul style="list-style-type: none"> <li>• (Wicked-problem) case-studies</li> </ul>	
4. <i>Future trends for strategic procurement</i>	<ul style="list-style-type: none"> <li>• Academic articles (for seminar paper or advice notes)</li> </ul>	
5. <i>Strategic procurement impact cases</i>	<ul style="list-style-type: none"> <li>• Guest lectures</li> <li>• Example case-studies</li> </ul>	

<sup>3</sup> Based on the AI policy of the University of Twente: <https://www.utwente.nl/en/learning-teaching/Expertise/ai-in-education/use-of-ai-in-education-at-the-university-of-twente.pdf>

### 3.1 Understanding strategic public procurement concepts through training videos, book chapters and the TED database

Publicly available videos could be an alternative option to introducing public procurement. One option would include the PROCEDIN webinar on [Demystifying Public Procurement](#) in the course materials. The webinar, given by a public procurement professional, introduces strategic public procurement, in this case for a business audience. The webinar could be helpful for graduates, undergraduates, and practitioners to learn about strategic procurement less conventionally.

Other options would be to include shorter videos such as:

- Introduction of Public Procurement and Strategic Initiatives by the Urban Agenda Partnership: <https://www.youtube.com/watch?v=IGfeFLO4Pts>
- Introduction of Public Procurement by the UK government: <https://www.youtube.com/watch?v=uMhdXd8PCEQ>

These videos could be complemented with introductory reading materials on the difference between public and private procurement and the different procurement levels. One book chapter that could be recommended is chapter 1 of the recently published (2023) [open-access](#) book 'Public Procurement: Theory, Practices and Tools' by Grandia and Volker.

- Grandia, J., Kuitert, L., Schotanus, F., & Volker, L. (2023). Introducing Public Procurement. In *Public Procurement: Theory, Practices and Tools* (pp. 1-18). Cham: Springer International Publishing.

Table 7. Component 1 (procurement concepts): Target learners, learning objectives, discussion questions, and assessment methods

<b>Target learners</b>	<i>Book and introduction videos:</i> graduates, undergraduates and practitioners with limited knowledge of public procurement <i>Webinar:</i> all
<b>Learning objectives</b>	<b>L01.</b> Describe key concepts of public procurement <b>L02.</b> Describe the strategic element of public procurement <b>L03.</b> Discuss and analyse the different levels of procurement <b>L04.</b> Describe the difference between public and private procurement
<b>Questions to guide discussion</b>	1. What is public procurement? 2. What is the impact of public procurement? 3. What are the key differences between public and private sector procurement? 4. What are the different development stages of public procurement?
<b>Suggestions for assessment</b>	Questions similar to the questions guiding the discussion could be part of the final exam.

**Possible additional assignment:****Introduction to the TED database**

The European database for tenders (<https://ted.europa.eu/en/>) consists of all tenders executed by public contracting authorities in EU countries which exceed value thresholds set out in EU regulations. To get students and early career practitioners familiar with public procurement, an extra assignment on the TED database could be introduced. How to navigate the TED website can be understood through the TED explainer videos (<https://ted.europa.eu/en/help/video-tutorials>). Either the students/ practitioners themselves or the educator could download the descriptives of a subset of tenders. Doing an Excel analysis, the following five questions could be considered:

**1. What is the division of contracting authorities registered for tenders in Europe?**

*Possible answer:*

<i>Contracting Authority</i>	<i>Counts</i>	<i>Percentage (%)</i>
<i>Body governed by public law</i>	1942750	31.34
<i>Other</i>	1667992	26.91
<i>Regional or local authority</i>	1241647	20.03
<i>Ministry or any other national or federal authority</i>	651986	10.52
<i>Utilities sectors</i>	378549	6.11
<i>Regional or local Agency / Office</i>	173762	2.80
<i>National or federal Agency / Office</i>	122382	1.97

**2. What is the division between supplies, services and work?**

*Possible answer:*

<i>Type of Contract</i>	<i>Counts</i>	<i>Percentage (%)</i>
<i>Supplies</i>	3799542	61.30
<i>Services</i>	1965658	31.71
<i>Works</i>	432863	6.98

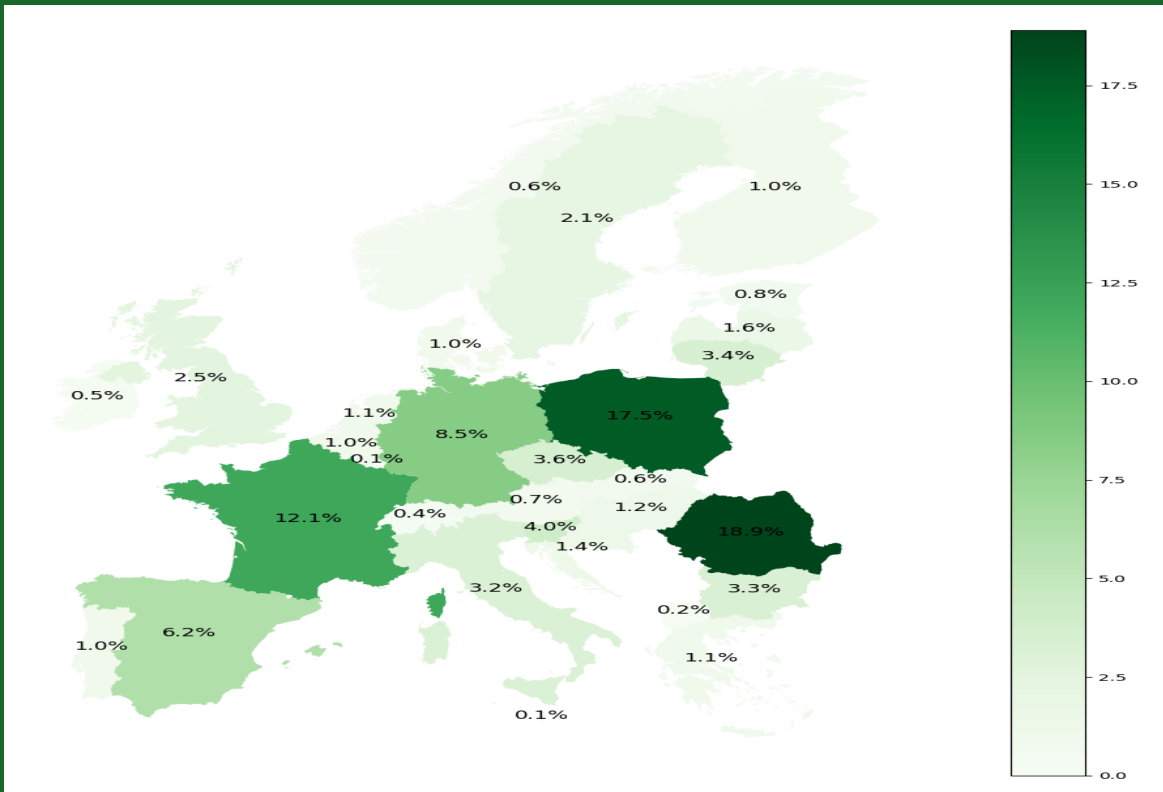
**3. Which three sectors have the highest government expenditure with regards to public procurement?**

*Possible answer:*

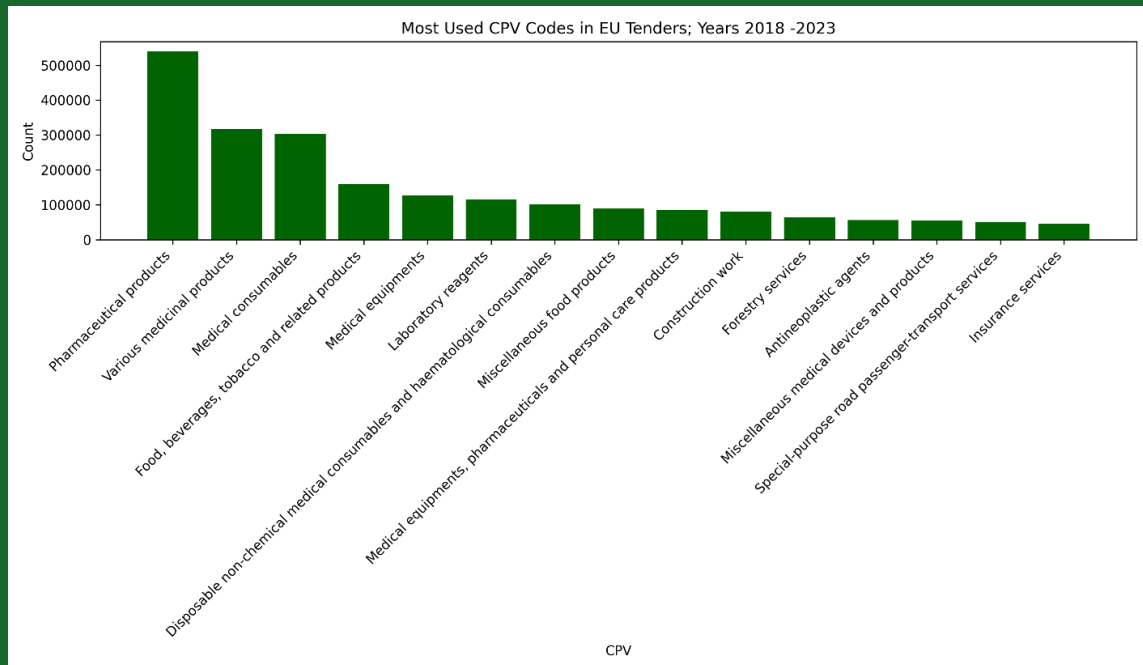
<i>Government Expenditure (COFOG)</i>	<i>Counts</i>	<i>Percentage (%)</i>
<i>Health</i>	2506664	40.44
<i>General public services</i>	1374610	22.18
<i>Education</i>	396355	6.39

**Possible additional assignment continued:**

**4. Which countries have the most tenders awarded? / Which countries have the smallest share of tender contracts awarded?**



**5. Which supplies are mostly tendered in Europe? / (underlying question: what are CPV codes?)**



\*These analyses are based on all registered tenders from all contracting authorities between 2018 and 2023, extracted from the TED database, by the University of Twente. To shorten the database, the assignment can also be done for all registered tenders from contracting authorities from one specific country (e.g. the Netherlands), in a shorter timeframe (e.g. only 2023).



## 3.2 Understanding procurement processes through book chapters and articles

Book chapters that could be recommended for understanding the procurement processes, procurement structures and types of public procurement collaborations are chapters 1 and 4 of the recently published (2023) [open-access](#) book ‘Public Procurement: Theory, Practices and Tools’ by Grandia and Volker.

- Grandia, J., Kuitert, L., Schotanus, F., & Volker, L. (2023). Introducing Public Procurement. In *Public Procurement: Theory, Practices and Tools* (pp. 1-18). Cham: Springer International Publishing.
- Schotanus, F. (2023). Organizing Public Procurement. In *Public Procurement: Theory, Practices and Tools* (pp. 57-72). Cham: Springer International Publishing.

An optional chapter could be the [open-access](#) introductory chapter from the book ‘Public Procurement for Innovation’ by Edquist, Vonortas, Zabala-Iturriagolitia and Edler.

- Edquist, C., Vonortas, N. S., & Zabala-Iturriagoitia, J. M. (2015). Introduction In *Public Procurement for Innovation* (pp. 299-306). Edward Elgar Publishing.

The following academic articles could complement these:

- Rozemeijer, F. A., van Weele, A. J., & Weggeman, M. (2003). Creating corporate advantage through purchasing: Toward a contingency model. *Journal of Supply Chain Management*, 39(4), 4–13.
- Schotanus, F., & Telgen, J. (2007). Developing a typology or organizational forms of cooperative purchasing. *Journal of Purchasing and Supply Management*, 13(1), 53–68.
- Bäckstrand, J., Suurmond, R., van Raaij, E., & Chen, C. (2019). Purchasing process models: Inspiration for teaching purchasing and supply management. *Journal of Purchasing and Supply Management*, 25(5), 100577.
- Malacina I., Karttunen E., Jääskeläinen A., Lintukangas K., Heikkilä J., Kähkönen A.-K. (2022). Capturing the value creation in public procurement: A practice-based view. *Journal of Purchasing and Supply Management*, 28 (2): 100745.
- Madsen M. S. (2023). Intergovernmental cooperation and joint purchasing agreements: Do governments free-ride? *Public Administration Review*: 1 -19

Table 8. Component 2 (procurement processes): target learners, learning objectives, discussion questions, and assessment methods

<b>Target learners</b>	Graduates, undergraduates, practitioners with limited knowledge of public procurement
<b>Learning objectives</b>	<p><b>LO1.</b> Describe the public procurement process</p> <p><b>LO2.</b> Explain the different organisational structures for procurement</p> <p><b>LO3.</b> Describe the advantages, disadvantages and obstacles of collaborative procurement</p>
<b>Questions for guiding discussion</b>	<p>1. Explain the process of public procurement</p> <p>2. What are the different purchasing structures?</p> <p style="padding-left: 40px;">a. How does federal purchasing differ from centralised purchasing?</p>

	<ol style="list-style-type: none"> <li>3. What are the advantages of joint procurement?</li> <li>4. What are the obstacles to collaborative procurement?</li> <li>5. What are the different types of collaborative procurement?</li> </ol>
<i>Suggestions for assessment</i>	Questions similar to the questions guiding the discussion could be part of the final exam.

### 3.3 Understanding barriers and enablers through real-life case studies

Part of the course could concern solving real public procurement cases provided by purchasers in public procurement organisations, in which complex problems must be solved with the knowledge, skills, and creativity developed through the course. The opportunity for students lies in educators connecting the students with local and/or regional public contracting authorities and vice versa. The students could either write their findings in a report or present their findings to the other students and the corresponding public contracting authority in a separate presentation session. For practitioners, this exercise is equally important. However, the focus should lay less on networking and more on learning from other practitioners on how they would tackle complex procurement challenges. For them, collaboration is key.

Below are some examples of real case studies investigated by University of Twente students.

#### Case example 1

**More than one million people in the Netherlands live below the poverty line. Among them are 250,000 children.**

*Public Contracting Authority Y* has been a Public Benefit Organization (ANBI) since its foundation. It aims purchase, temporarily stock, and supply products such as food and personal care products for institutional organisations such as foodbanks.

*Public Contracting Authority Y* intends to launch a European tender for all types of long shelf life products. This tender aims to fill the product shortages experienced by food banks. The market for the supply of dry groceries and personal care products is characterised by a few large wholesalers who are used to bidding on public contracts through tender management systems. Yet, *Public Contracting Authority Y* also wishes to provide opportunities to the smaller and local market parties (SMEs) and food producers.

**Challenge:** How do you reach local market partners and producers and ensure they have opportunities to offer the purchasing needs of all types of shelf-stable food for the Food Bank for a longer period?

Draw up a procurement strategy for this tender and include at least the following:

- How do you reach the local market partners and producers?
- How do you ensure that they want to register?
- How do you ensure they are willing and able to use tender management systems?
- Which tendering procedure is appropriate and why?
- What eligibility requirements would you set for this and why?
- What award criteria can the local market partners and producers use to compete with the wholesalers, and how would you describe them?

### **Case example 2**

#### **Tackling barriers for innovation procurement**

Innovation is prominently present in *Public Contracting Authority X's* vision for 2035, as we aim for 'Technologically advanced' and 'Information-driven' products, which heavily rely on innovation. Traditional tenders leave little room for new solutions, so tenders are generally seen as a limiting factor for realising innovation. Through an SBIR<sup>4</sup> programme, we want to offer more opportunities to develop ideas into usable solutions and thus increase innovative power. It is our ambition to establish some SBIR projects across our contracting authority.

The projects will differ in duration, approach, and size, but all will adopt an innovation-oriented procurement approach. This approach is a translation of—and based on—the American SBIR approach. The wicked problem is that the EU implementation of innovation-oriented procurement only includes the pre-contractual phase, but what if we would like to scale up? After an innovation seems successful, could we scale it up without doing a complex tender? (following an innovation phase with a complex tender adds significant delays and risks and often deters companies from joining an initiative in the first place)

- In light of the NATO Treaty, the EU Treaties, and national procurement and competition law, how can we address factors that constrain realising innovation?

### **Case example 3**

#### **Waste management of the Purchasing department of the university**

Reducing and preventing waste, and better waste separation, are crucial objectives in the university's efforts to manage waste. The university has formulated the following organizational objectives for 2030 and 2050:

*The university has a target of a maximum of 10.5 kg of industrial waste per person per year. The disposable waste must be reduced to 2 kg per person annually by 2030. For 2050, the targets are even lower.*

The university aims to find a company to provide solutions and assist the university in waste management, working in partnership towards the optimal waste collection and processing and the achievement of the organisational objectives.

Draw up a strategy for this tender and include at least the following:

- Tendering procedure, including motivation
- Market analysis
- Eligibility requirements
- Award criteria
- Work out how sustainability and social return can be included in this tender.

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<sup>4</sup> For more information on what an SBIR is: <https://business.gov.nl/subsidy/small-business-innovation-research/>

Table 9. Component 3 (barriers & enablers): target learners, learning objectives, discussion questions, and assessment methods

<b>Target learners</b>	Graduates, undergraduates, practitioners
<b>Learning objectives</b>	<p><b>LO1.</b> Discuss and analyse issues and challenges within the area of strategic public procurement</p> <p><b>LO2.</b> Apply public procurement insights in practice</p> <p><b>LO3.</b> The student can contribute to and work in a project group, has good communication and presentation skills, and can handle cultural differences within the working group</p> <p><b>LO4.</b> The student / practitioner can solve problems of higher complexity in a creative way</p>
<b>Questions for guiding discussion</b>	<p>Questions for discussion are dependent on the case. Afterwards, one could reflect on the commonality between the challenges:</p> <ol style="list-style-type: none"> <li>1. What are the current challenges in strategic public procurement?</li> <li>2. What do the strategic public procurement challenges have in common?</li> </ol>
<b>Suggestions for assessment</b>	Present findings in a presentation (preferred) or present findings in a report.

### 3.4 Understanding the future of strategic procurement through seminar papers

For the following course component, the assignment differs between students and practitioners.

**Students** can investigate the broader objectives of strategic public procurement, e.g., sustainability, innovation, shaping the supplier market, shaping policy, and public procurement's influence on SMEs through writing seminar papers. These literature-based research papers should address one of the leading objectives in strategic public procurement. The students will receive two to three academic articles as suggestions to commence. Based on these and related articles, students can (in groups or individually) describe the recent development in this field and give an outlook for the future. The guidelines of such a seminar paper are described below, after introducing the topics. The topics with the corresponding literature, presented in table 10 could be proposed to students.

**For practitioners**, the educator could propose to read either one or all selected reading materials. Asking the practitioners to research integration opportunities of one or all broader strategic procurement objectives (sustainability, innovation, policy, SME integration) to their own organisational policy.

Table 10. Topics and proposed literature for seminar papers

<b>Sustainability</b>	<p>Grandia, J. J., &amp; Kruyen, P. P. (2020). Assessing the implementation of sustainable public procurement using quantitative text-analysis tools: A large-scale analysis of Belgian public procurement notices. <i>Journal of Purchasing and Supply Management</i>, 26(4), 100627.</p> <p>Dimand, A. M. (2022). Determinants of local government innovation: the case of green public procurement in the United States. <i>International Journal of Public Sector Management</i>, 35(5), 584-602.</p>
<b>Innovation</b>	<p>Selviaridis, K., Hughes, A., &amp; Spring, M. (2023). Facilitating public procurement of innovation in the UK defence and health sectors: Innovation intermediaries as institutional entrepreneurs. <i>Research Policy</i>, 52(2), 104673.</p> <p>Bleda M., Chicot J. (2020). The role of public procurement in the formation of markets for innovation. <i>Journal of Business Research</i>, 107 (C): 186-196</p>
<b>Market shaping</b>	<p>Caldwell, N., Walker, H., Harland, C., Knight, L., Zheng, J., &amp; Wakeley, T. (2005). Promoting competitive markets: The role of public procurement. <i>Journal of Purchasing and Supply Management</i>, 11(5-6), 242-251.</p> <p>Hamilton, S. G. (2022). Public procurement—price-taker or market-shaper? <i>Critical perspectives on international business</i>, 18(4), 574-615.</p>
<b>Public procurement as a tool for policy</b>	<p>Grandia, J., &amp; Meehan, J. (2017). Public procurement as a policy tool: using procurement to reach desired outcomes in society. <i>International Journal of Public Sector Management</i>, 30(4), 302-309.</p> <p>Harland, C., Telgen, J., Callender, G., Grimm, R., &amp; Patrucco, A. (2019). Implementing government policy in supply chains: an international coproduction study of public procurement. <i>Journal of Supply Chain Management</i>, 55(2), 6-25.</p> <p>Harland, C. M., Eßig, M., Lynch, J., &amp; Patrucco, A. (2021). Policy-led public procurement: does strategic procurement deliver? <i>Journal of Public Procurement</i>, 21(3), 221-228.</p>
<b>Public procurement's influence on SMEs</b>	<p>Selviaridis, K., &amp; Spring, M. (2022). Fostering SME supplier-enabled innovation in the supply chain: The role of innovation policy. <i>Journal of Supply Chain Management</i>, 58(1), 92-123</p> <p>Dimand, A. M., Patrucco, A. S., Rodriguez-Plesa, E., &amp; Hirisciau, A. M. (2023). Social equity in federal contracting during emergencies: A portfolio management perspective. <i>Public Administration Review</i>, 83(5), 1319-1338.</p>

**(Example) guidelines for writing the seminar paper for students:**

Your paper will have a length of 3,000 – 4,000 words. At least two scientific papers are suggested as a starting point in your search for scientific literature for each topic. The overall question you are trying

to answer is: *What are the recent developments, and what could the future of strategic public procurement look like?*

For an outlook on the future, you may use 'grey literature', such as government policy papers, consultancy reports, et cetera. However, the paper must be based on at least 15 scientific sources (peer-reviewed articles or book chapters). The most recent literature must be used. In most cases, a decade is a very long period. It is a rule of thumb; try concentrating on less than ten years old literature. Exceptions are papers containing grand theories or well-cited ones that have proved to be foundational to the field.

Good practice in writing and presenting is the SCQA method (situation-complication-question-answer). In a nutshell, the process for your literature is as follows. In your introduction, you describe the "situation" before the "complication" occurred. Your introduction ends with one or more research "questions". In the body of your paper, you eventually provide the reader with an answer to the question. Please find detailed guidance on how to apply this method on the web.

Use Word Heading 1 for the title of your paper. State the names of all co-authors under the title. Start your paper with a summary that contains a maximum of 100 words. Use Heading 2 for the paragraph titles. Do not use more than these three levels. The titles of the paragraphs must be self-explanatory. Reading the table of contents must give guidance as an abstract of your paper. Please use "APA 6<sup>th</sup>" as the reference style. You can download references easily via Google Scholar or the publishers' websites.

### Guidelines for practitioners

Practitioners can research their own organisational policy or strategy to investigate how they currently contribute to broader public procurement objectives. This can be done for either all objectives or focusing on one. After identifying the level of integration, practitioners can be asked to write an advice report on how these strategic objectives can be enhanced within their organisational policy or strategy – using the prescribed literature to commence. The assignment can either be a presentation or an advice report.

Table 11. Component 4 (future trends): target learners, learning objectives, discussion questions, and assessment methods

<b>Target learners</b>	Graduates, undergraduates, practitioners
<b>Learning objectives</b>	<p><b>LO1.</b> The student / practitioner can explain the future trends in strategic public procurement</p> <p><b>LO2.</b> The student / practitioner can combine public procurement insights in practice with insights from academia</p> <p><b>LO3.</b> The student uses good academic (writing) skills and distinguishes between primary and side issues</p>
<b>Questions for guiding discussion</b>	<ol style="list-style-type: none"> <li>1. What are the future trends in strategic public procurement?</li> <li>2. What is the impact of public procurement on the public and private sectors?</li> </ol>
<b>Suggestions for assessment</b>	<p><b>Student:</b> A seminar paper</p> <p><b>Practitioner:</b> An advice report / a presentation</p>

### 3.5 Understanding impact cases through guest lecturers

One way of connecting the previous components (concepts, processes, barriers, enablers, and the future perspective) would be to provide impact cases at the end of the course. One opportunity would be to have guest lecturers. Both students and practitioners would have the chance to hear from real-life impactful practice examples. The complexity of the guest lecture could depend on the level of the students / practitioners.

Opportunities to find local guest lecturers would be through the [PROCEDIN community](#) or the [PROCEDIN stakeholder map](#).

**Possible example topics of guest lecturers could include:**

- Innovation and socially responsible procurement in the Ministry of X / in the municipality of Y
- Public procurement in the construction sector
- Strategic public procurement in the Ministry of X / in the municipality of Y
- Public Procurement in times of crisis

Suppose guest lecturers are not an option or have proven too difficult. Another option could be to use existing case studies. Such case studies can be found on the [PROCEDIN resource bank](#).

**Possible examples of impact case studies that can be found on the PROCEDIN resource bank:**

- [ZERO EMISSION VEHICLES](#)
- [CO<sub>2</sub>-NEGATIVE ROAD](#)
- [REDUCING URBAN FLOOD RISK](#)
- [CARE FOR HOMELESS PEOPLE](#)
- [REFURBISHED FURNITURE](#)
- [REDUCING FOOD WASTE](#)

Table 12. Component 5 (impact cases): target learners, learning objectives, discussion questions, and assessment methods

<b>Target learners</b>	Graduates, undergraduates, practitioners
<b>Learning objectives</b>	<p><b>LO1.</b> Describe how the key concepts of public procurement connect to the key processes</p> <p><b>LO2.</b> Explain the relevance and impact of strategic public procurement</p> <p><b>LO3.</b> Discuss and analyse opportunities within the area of strategic public procurement</p>
<b>Questions for guiding discussion</b>	<ol style="list-style-type: none"> <li>1. What are the current opportunities within the area of strategic public procurement?</li> <li>2. What is the impact of public procurement on the public and private sector?</li> <li>3. What are current strategic public procurement practices?</li> </ol>
<b>Suggestions for assessment</b>	Questions similar to the questions guiding the discussion could be part of the final exam.

## 4 Conclusion

One possible way to get students to see public procurement as a potential career path is by offering *strategic public procurement* topics in supply chain management courses or an entire strategic public procurement course. This report aimed to offer customisable learning resources (combined in one course) for educational use to promote an understanding of the role, impact and processes of strategic public procurement. Students will develop their analysis and communication skills and be better positioned for procurement leadership roles in the future, whereas (early career) practitioners will be able to implement their learnings in daily practice.

Table 13 provides an overview of all learning objectives and discussion questions that both students and practitioners should be able to achieve after following the course on strategic public procurement.

Table 13. Target learners, learning objectives, discussion questions, and assessment methods for the full strategic public procurement course

<b>Target learners</b>	Graduates, undergraduates, practitioners
<b>Learning objectives</b>	<p><b>L1.1.</b> Describe key concepts of public procurement</p> <p><b>L1.2.</b> Describe the strategic element of Public Procurement</p> <p><b>L1.3.</b> Discuss and analyse the different levels of procurement</p> <p><b>L1.4.</b> Describe the difference between public and private procurement</p> <p><b>L2.1.</b> Describe the public procurement process</p> <p><b>L2.2.</b> Explain the different organizational structures for procurement</p> <p><b>L2.3.</b> Describe the advantages, disadvantages and obstacles of collaborative procurement</p> <p><b>L3.1.</b> Discuss and analyse issues and challenges within the area of strategic public procurement</p> <p><b>L3.2.</b> Apply public procurement insights in practice</p> <p><b>L3.3.</b> The student can contribute and properly work in a project group, has good communication and presentation skills, and can handle cultural differences within the working group</p> <p><b>L3.4.</b> The student / practitioner can solve problems of higher complexity in a creative and inventive way</p> <p><b>L4.1.</b> The student / practitioner can explain the future trends in strategic public procurement</p> <p><b>L4.2.</b> The student / practitioner can combine public procurement insights in practice with insights from academia</p> <p><b>L4.3.</b> The student uses good academic (writing) skills and distinguishes between primary and side issues</p> <p><b>L5.1.</b> Describe how the key concepts of public procurement connect to the key processes</p>



	<p><b>L5.2.</b> Explain the relevance and impact of strategic public procurement</p> <p><b>L5.3.</b> Discuss and analyse opportunities within the area of strategic public procurement</p>
<i>Questions for guiding discussion</i>	<ol style="list-style-type: none"> <li>1. What is public procurement?</li> <li>2. What is the difference between public and private procurement?</li> <li>3. What are the different development stages of public procurement?</li> <li>4. What does the public procurement process look like?</li> <li>5. What are the different purchasing structures?</li> <li>6. What are the advantages of joint procurement?</li> <li>7. What are the obstacles to collaborative procurement?</li> <li>8. What are the different types of collaborative procurement?</li> <li>9. What are the current challenges in strategic public procurement?</li> <li>10. What do the strategic public procurement challenges have in common?</li> <li>11. What are the current opportunities within the area of strategic public procurement?</li> <li>12. What are current strategic public procurement practices?</li> <li>13. What are the future trends in strategic public procurement?</li> <li>14. What is the impact of public procurement on the public and private sectors?</li> </ol>
<i>Suggestions for assessment for students</i>	<ul style="list-style-type: none"> <li>• Final exam</li> <li>• Case-study presentation</li> <li>• Seminar paper</li> </ul>
<i>Suggestions for assessment for practitioners</i>	<ul style="list-style-type: none"> <li>• Case-study presentation (pass or fail)</li> <li>• Advice notes (pass or fail)</li> </ul>