

# Building Smart City Governance Competencies: The CAP4CITY training modules

Lucy Temple<sup>1</sup>, Gabriela Viale Pereira<sup>1</sup> and Luiza S. Azambuja<sup>2</sup>

<sup>1</sup>University for Continuing Education Krems, Dr.-Karl-Dorrek-Straße 30, 3500 Krems an der Donau, Austria

<sup>2</sup>Tallin University of Technology, Ehitajate tee 5, 12618 Tallinn, Estonia

## Abstract

This poster describes the methodology for establishing the baseline for a Smart Sustainable City (SSC) curriculum and its fundamental aspects. The proposed curriculum has the goal of building competencies in the area of SSC by developing teaching content and ICT-based learning outcomes to improve the quality of learning and teaching tools, methodologies and pedagogical approaches in Europe and Latin America in different levels of education. The curriculum encompasses 31 training modules aligned within 9 knowledge areas to build governance capacity on SSC.

## Keywords

Smart Sustainable Cities, curriculum development, governance competencies

## 1. Smart Sustainable City training modules

Smart sustainable cities (SSC) characterise the progression on the application of digital technology and innovative solutions by the cities to address the needs of their populations and pursue sustainable socio-economic development [1]. In the context of the ERASMUS+ research project “Strengthening Governance Capacity for Smart Sustainable Cities” (CAP4CITY) a library of courses has been developed, going beyond the existing state-of-the-art in smart city developments towards establishing an interdisciplinary curriculum with focus on sustainability challenges. The proposed curriculum has the goal of building competencies in the area of SSC by developing teaching content and ICT-based learning outcomes to improve the quality of learning and teaching tools, methodologies and pedagogical approaches in Europe and Latin America in different levels of education. The training program consists of a set of 31-course material, which was jointly developed by the CAP4CITY partners. The methodology for curriculum development was adapted from Okudan, G. E., Kisenwether, E., & Rzasa, S. [2], as illustrated in Figure 1.

The first step was the external benchmarking with an aim of identifying the status quo of SSC in partner countries, considering the local circumstances and taking stock of the best practices implemented, identify the current scenario of SSC-related education programs, available sources and educational material, general competencies for SSC and roles and responsibilities associated

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*EGOV-CeDEM-ePart 2022, September 06–08, 2022, Linköping University, Sweden (Hybrid)*


✉ lucy.temple@donau-uni.ac.at (L. Temple); gabriela.viale-pereira@donau-uni.ac.at (G. V. Pereira);

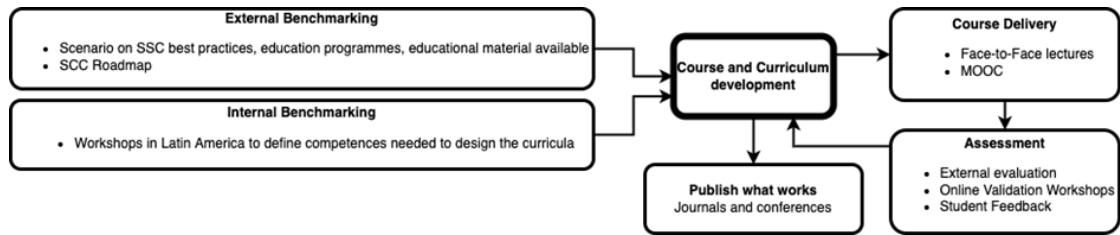
luiza.schuch@taltech.ee (L. S. Azambuja)

🆔 0000-0003-4131-7648 (L. Temple); 0000-0002-7602-3052 (G. V. Pereira); 0000-0001-7878-3875 (L. S. Azambuja)



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 CEUR Workshop Proceedings (CEUR-WS.org)



**Figure 1:** Continuous Curriculum Improvement and Assessment Plan Source: Adapted from Okudan, G.E., Kisenwether, E., & Rzasa, S. [2]

with development and management of SSC. This was followed by an internal benchmarking with eight (8) workshops in Latin America with local stakeholders and academic staff, aiming at defining the competencies needed to design the curricula of the training courses. The results acquired during both benchmarking activities were the basis to define a set of training modules on SSC. These have been through continuous assessments and were validated by an external evaluation and online workshops. As follows, we preview the resources prepared by the CAP4CITY project, carefully designed to satisfy the identified SSC competency building needs, a library of courses that may be used to design diverse curricula on SSC.

KNOWLEDGE AREA	COURSE	KNOWLEDGE AREA	COURSE
Business and Economics	Economic sustainability principles (2 ECTS)	Communication	Communication and social network interaction (3 ECTS)
	Innovation for urban transformation (3 ECTS)	Smart City Foundations	Smart City applications (4 ECTS)
Governance	E-democracy and e-participation (5 ECTS)		Smart City: Context, Policy and Government (3 ECTS)
	Evidence-based and Collaborative Governance (3 ECTS)		Smart Sustainable Cities introduction (3 ECTS)
	Smart City Governance (3 ECTS)	Socio-technical ICT	Data analytics for SSC solutions/ data-driven decision and policy making in SSC (3 ECTS)
Information Systems	User-driven service design and co-creation (5 ECTS)		Digital and Urban Infrastructure (2 ECTS)
	Data Governance and Information Management (2 ECTS)		Disruptive technologies in SSC (5 ECTS)
Legal and Ethical implications of SSC	Information Systems for decision-support (2 ECTS)		IT Development (3 ECTS)
	Cybersecurity, privacy and ethical implications (6 ECTS)		IT Governance and management (3 ECTS)
Public Administration /Management	Legal competences for SSC (6 ECTS)		Open Government (3 ECTS)
	Local level organizational structures and process (2 ECTS)		Urban Studies and Sustainability
	Public Administration/Management: Management and strategies for urban transformation (2 ECTS)	Environmental Sustainability (2 ECTS)	
	Methods and tools for City management (2 ECTS)	Social Sustainability (2 ECTS)	
	Monitoring and assessment of SSC solutions (2 ECTS)	Sustainable Architecture (2 ECTS)	
	SSC-related project management (5 ECTS)	Urban Planning (4 ECTS)	
Public Administration/Management: SSC-related project planning (3 ECTS)			
	Total ECTS		97

**Figure 2:** Knowledge areas and CAP4CITY library of courses

## Acknowledgments

This research was supported by the Erasmus+ Programme of the European Union, project reference number 598273-EPP-1- 2018-1-ATEPPKA2-CBHE-JP

## References

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