

# Digital skills and competences for smart cities staff: Smart Cities Body of Knowledge

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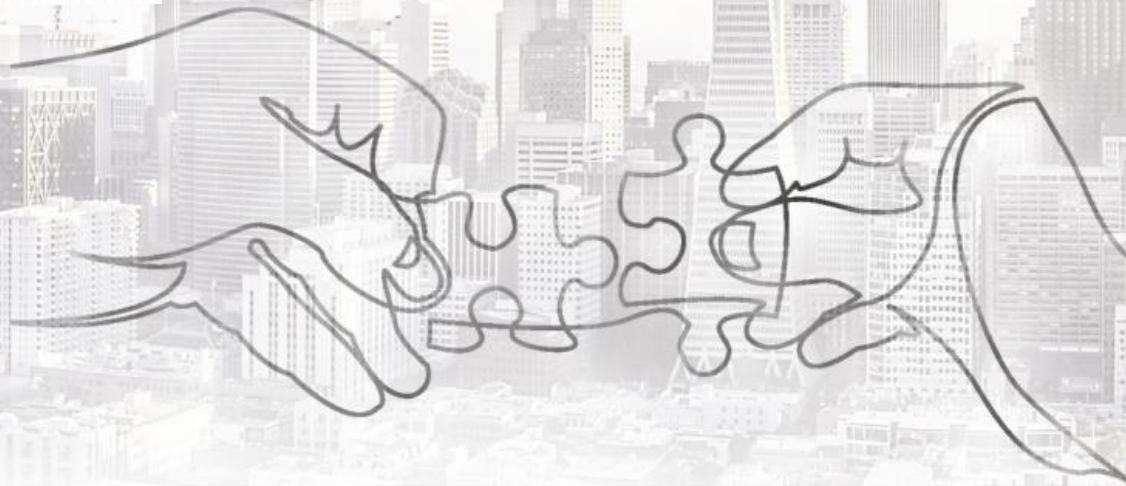
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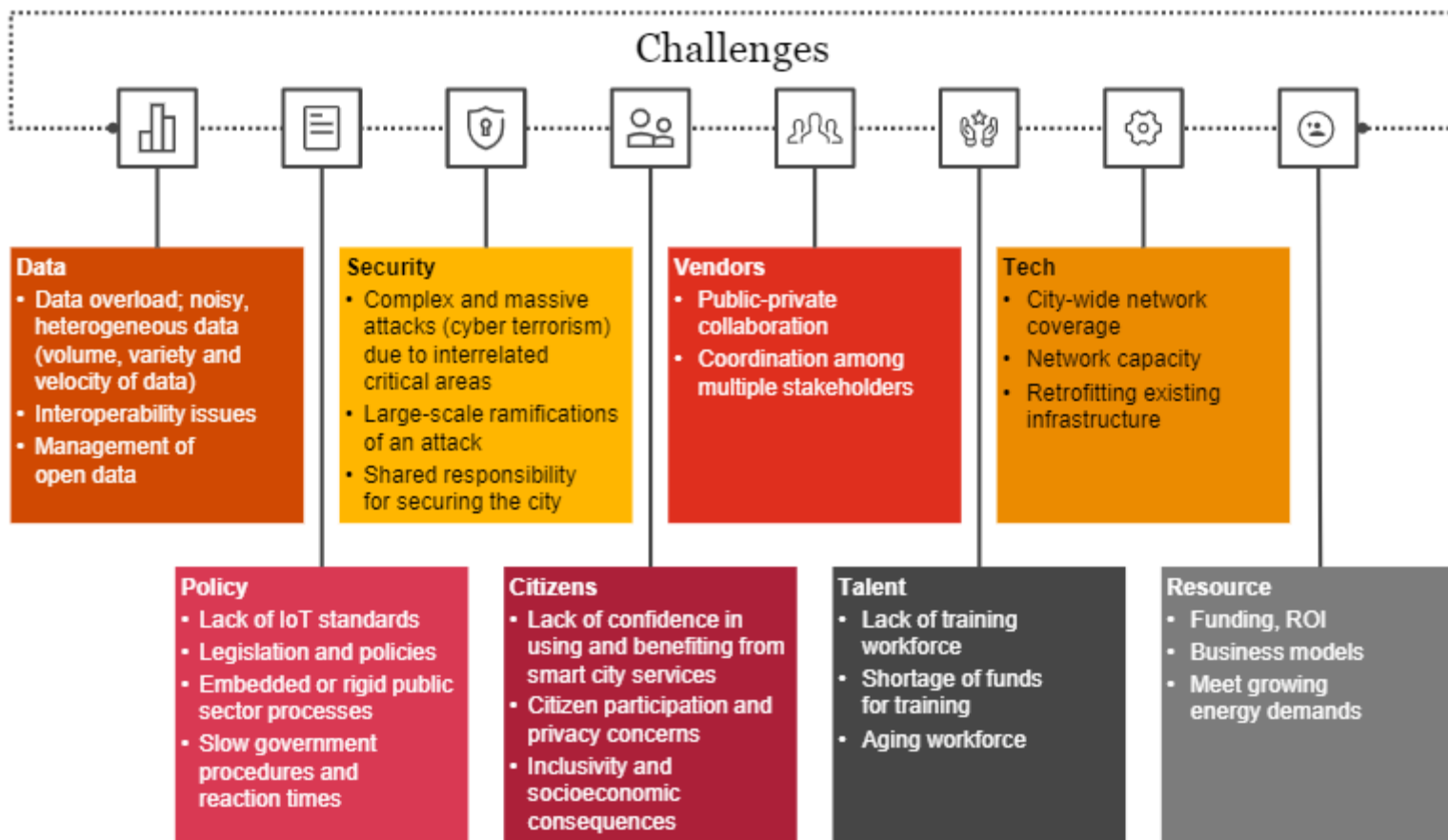


## Key information

- Official name of the project: **DevOps competences for Smart Cities**
- Acronym: **DevOps**
- Funding Programme: Erasmus+ (European Commission)
- Project website: **smartdevops.eu**
- Community of practice: **@SmartDevOpsEU (facebook)**



## Smart cities development challenges



Source: PwC analysis, Technavio, Cisco, ITU, IEEE, Smart Cities Dive, GreenBiz



“winning the war of talent”

## Data are revealing

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90 percent of organizations say that workforce issues are a challenging area to manage in their agency's digital transformation.

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Only 34 percent say their organization has sufficient skills to execute its digital strategy.

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Only 33 percent say their organization provides the right resources or opportunities to obtain the digital skills they need.

## Aims and objectives

- The aim of the SmartDevOps project is professional development through appropriate training of the personnel that works or wants to work in Municipalities, which are gradually transformed into Smart Cities. This will be achieved by upskilling them with new IT skills and knowledge that is required for smart city management; such as the DevOps methodology.



### STEP 1

...

Identify emerging roles of smart cities DevOps professionals

### STEP 2

...

Design and develop training methodologies and contents

### STEP 3

...

Pilot the MOOC

### STEP 4

...

Pilot the Specialisation courses

### STEP 5

...

Evaluation of MOOC and Spec. courses

### STEP 6

...

Dissemination and Exploitation



# DEVOPS SmartDevOps Project focuses

DEVOPS COMPETENCES FOR SMART CITIES

- In simpler terms SmartDevOps project is focusing on:
  - Promoting new technologies for smart cities development
  - Promoting new software development methodologies e.g. DevOps
  - Reskilling smart cities employees
  - Training new smart cities employees
  - Developing a Smart City culture
  - Developing a network of key stakeholders



# SmartDevOps project envisaged key profiles

- One of the main project's objectives was to define **new job profiles**, for those who plan to work as smart city professionals. These new job profiles came out to be:

Smart City Planner

Smart City IT  
manager

Smart City IT staff



- A Smart City Planner can be defined as a high-level official that can bridge the needs that arise from:
  - Cities traditional development and operational needs
  - Smart and sustainable cities frameworks, best practices, standards, and technologies
  - Strategic priorities of the city's political leadership.

- A Smart City IT manager can be defined as an ICT Consultant with responsibilities that include:
  - Setting objectives and strategies for the IT department of the municipalities
  - Deciding on and implementing suitable technology to organize all internal operations and help optimize their strategic benefits
  - Designing and customizing the IT systems, frameworks, and platforms to improve citizen experience
  - Plan the implementation of new systems and guide IT professionals and other staff within the organization
  - Etc.

- A Smart City IT officer is an IT technical expert that should be able to:
  - Analyze cities' organizational data
  - Determine information system requirements and defining project objectives
  - Use software development process, development environments, tools, and techniques



Transversal competences

General IT Knowledge  
competences

DevOps related  
competences

Smart city related  
competences



# DevOps approach is a key project innovation

- DevOps is a set of practices for modern software development that combines
  - software development (Dev) and
  - information-technology operations (Ops)
  - which aims to shorten the systems development life cycle and provide continuous delivery with high software quality.
- DevOps is a cross-functional mode of working and uses a toolchain for delivering software



# Smart DevOps MOOC

World's first MOOC for Smart City:  
Planners  
IT Managers  
IT Officers





*After 13 weeks of intense study, brainstorming, and tricky quizzes with 15 modules, cannot be more proud to get certified in the first Massive Online Course on "DevOps Competencies for Smart Cities". With so much technology disruption going around Smart Cities in many parts of the world and implementing technologies like Artificial Intelligence, Digital Twin, Data Analytics, Blockchain and Internet of Things, we can see how Smart Cities are going to a new level of excellence and changing the whole facet of urbanization for billions of people especially in Big Cities.*

*I am also very grateful to those awesome lecturers who gave us quality material to study and interesting business case studies which develop our business acumen for proposing a constructive and innovative project for Smart Cities.*

*One of my intentions for 2020 was to deepen my knowledge of smart cities. This is why I enjoyed attending the "DevOps Competencies for Smart Cities MOOC", which was organized by experts of the DEVOPS Project Consortium Partners...*



- SmartDevOps project in addition to the MOOC, developed and delivered three specialized courses.
  - One specialized course for each new job profession
- The specialization course duration was 24 weeks
- It included
  - Delivery of one module per week
  - Face to Face learning
  - Work-Based learning

For the full list of modules please visit the project web site

<https://smartdevops.eu/dev/oers/>



# Smart City Body of Knowledge

The book can be downloaded from  
<http://smartdevops.eu/scbok>



- In a “**software enabled society**” we must invest on people and win the **war of talent**.
- Actions
  - **Action 1:** Continuously monitor smart cities labor market needs
  - **Action 2:** Continuously evaluate and standardize body of knowledge for smart cities professionals
  - **Action 3:** Continuously evaluate and standardize and promote smart cities occupational profiles
  - **Action 4:** Develop a certification schema for smart cities occupational profiles
  - **Action 5:** Promote smart cities body of knowledge and occupational profiles.





# Thank you for your attention!

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## Thank you

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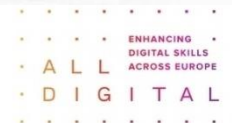
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