



Open Data City Officer

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Project No.: 2022-1-CY01-
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Higher Education

Deliverable D5.1 Development of OpenDCO online learning platform



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Document Metadata

Document Title: Deliverable D5.1. Development of OpenDCO online learning platform

Keywords: MOOC; open data; smart cities; e-learning

Abstract: The purpose of this document is to describe the e-learning platform that was developed to support the learning process throughout the pilot training in the OpenDCO project.



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Document Change History

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0.1	Theodor Panagiotakopoulos	28/08/2024	Create	Create the document's structure
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1. Final	Theodor Panagiotakopoulos	27/09/2024	Edit	Production of final, reviewed version



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Online leaning platform

The e-learning platform of the OpenDCO project comprises the tool to manage and mediate the delivery of the OpenDCO pilot online course. This course was decided to be offered as a Massive Open Online Course (MOOC) as a MOOC can be made available to an unlimited number of trainees, ensuring that all who are really interested in acquiring the OpenDCO competences and, thus, receive the OpenDCO certification, can do so without restrictions.

From a technical perspective, there are numerous platforms to create a MOOC for educational purposes. The vast majority (e.g. Coursera, Udacity, MiriadaX, Alison, etc.) are offered for a fee and free options such as CourseSites (up to five courses per teacher) and Udemy are limited. Open edX stands out as a non-profit open-source platform used by leading universities to create and deliver MOOCs and is the only platform that allows self-hosting without any fees. Moodle, one of the most popular open-source Learning Management Systems (LMSs), has evolved to be able to support MOOCs and has already been used for MOOC delivery.

Both Moodle and Open edX are mature solutions with large and active communities, and they can both support the development and delivery of MOOCs. They provide similar functionalities to develop a MOOC, although Moodle remains more familiar to educators around the world who have been using it for years and have extensively exploited its educational tools and plug-ins. Moreover, Moodle tends to be more straightforward in terms of server configuration, user management, and localization. Moodle was eventually selected to build the OpenDCO e-learning platform due to the above and the fact that HOU, the partner responsible to develop it, has extensive experience on Moodle-based online courses as it has been using it for over one decade in all of its distance learning curricula. Another advantage of using Moodle centres around the fact that HOU runs and supports the continuous operation its own Moodle server which hosts a big collection of MOOCs. The OpenDCO MOOC will thus be maintained after the end of the project guarantying the sustainability of the project results.

The OpenDCO e-learning platform's home page is available at <https://elearning.daissy.eu/course/index.php?categoryid=9>, where brief descriptions of the project and the OpenDCO MOOC are provided as shown in Figure 1. The four (4) different courses offered by the project, one for each of the four supported languages (EN, GR, PT and DE) are available there. Important information, such as the starting date, the teachers/tutors and the number of enrolled learners is shown for each course (see Figure 2). Additionally, the project's e-learning platform home page includes information on the MOOCs' target groups and the project partners.



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Open Data City Officer Course Details



Course description

This course addresses the needs of future open data city officers in the compilation, management, maintenance, and utilization for value generation from open data. In particular, the learned skills will empower the learners to support municipalities, local/regional governments and policy makers in their planning, initiating, promoting, and supporting of all open data smart cities initiatives. Furthermore, the competences learnt in this course are beneficial for any type of ICT supplier in understanding and providing necessary IT infrastructure. Also, many different types of organisations ranging from

Learning goals

The main learning objectives of this course are to teach smart city staff and other relevant stakeholders of smart cities on how to:

- identify smart city needs for open data,
- assess the ability of data resources and infrastructure to meet smart city's and stakeholder needs,
- organize, plan, and develop data sets and collections,
- ensure the data quality and
- offer access to the data using data access methods,
- use open data to generate insights,
- visualize data insights for various purposes,

Figure 1. OpenDCO e-learning platform home page.



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The figure displays three screenshots of OpenDCO MOOCs, each featuring the Open Data City Officer logo and a list of teachers and enrolled students. Each screenshot includes a red button labeled "Enter this course".

- OpenDCO (DE)**
OpenDCO (DE)
Course start date: 15 Apr 2024
Teachers: Christian Anschütz, Katharina Ebner, Leon Benedikt Geffken, Vanessa Hering, Meike Junker, Theodor Panagiotakopoulos, Stefan Smolnik
Enrolled students: 266
- OpenDCO (PT)**
OpenDCO (PT)
Course start date: 4 Apr 2024
Content curator: Victor Barros, Isabel Ramos
Enrolled students: 111
- Υπεύθυνος/η Ανοικτών Δεδομένων Έξυπνης Πόλης**
OpenDCO (EL)
Course start date: 15 Mar 2024
Teachers: Vyrion Damasiotis, TUT DEMO, Panos Filisilis, Vasilis Kyriatidis, Fotis Lazarinis, Theodor Panagiotakopoulos, Paraskevi Tsoutsas
Enrolled students: 245

Figure 2. Available OpenDCO MOOCs based on delivery language

When a user enters one of the four courses, the login page is shown where the user is prompted to enter their login credentials as shown in Figure 3.

The screenshot shows the login page of the OpenDCO e-learning platform. It features a dark blue header with the "Dassy" logo and a search bar. Below the header, there is a "Log in to the site" button. The main content area is white and contains a "Log in" section with fields for "Username" and "Password". A red "Log in" button is at the bottom of the login section. A link for "Forgotten your username or password?" is also present.

Figure 3. OpenDCO e-learning platform login page



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When valid login credentials are provided users are navigated in the selected course's home page shown in Figure 4.

Dashboard > My courses > OpenDCO > OpenDCO

Your progress 0%

Table of contents

Expand all


- Introduction
 - Announcements
 - Discussions Forum
 - OpenDCO first page
 - 0 Foundation Open Data Essentials
 - Practical Assignment 1
 - Practical Assignment 2
 - Practical Assignment 3
 - Final Evaluation Questionnaire
- 1. Stakeholder Management
- 2. Services and Service Structures
- 3. Smart City Business Models
- 4. SC Service Co-Design and the generation of new revenue
- 5. Open Data legal framework, privacy and ethics
- 6. Open Data Vision, Strategy, Planning and Communication
- 7. Smart City

Introduction

Collapse all

Welcome to the course of the [OpenDCO project](#).

This course addresses the needs of future open data city officers in the compilation, management, maintenance, and utilization for value generation from open data. In particular, the learned skills will empower the learners to support municipalities, local/regional governments and policy makers in their planning, initiating, promoting, and supporting of all open data smart cities initiatives. Furthermore, the competences learnt in this course are beneficial for any type of ICT supplier in understanding and providing necessary IT infrastructure. Also, many different types of organisations ranging from businesses, healthcare, education, etc. can learn how to realize benefits from open data.



Scheduled meetings

Every Wednesday at 18:00 using the following link: <https://us02web.zoom.us/j/85297179026>

Figure 4. EN OpenDCO MOOC's home page

A course's home page includes various sections and menus facilitating navigation to the MOOC's content and access to its functionalities. The menu on the right (see Figure 5a) provides quick access to information concerning online meetings, announcements, course information, practical assignments, evaluation survey tool and module contents. Modules' contents can be accessed through a dropdown menu shown when the arrow next to each module's title is clicked as shown in Figure 5b.

<ul style="list-style-type: none"> 1. Stakeholder Management <ul style="list-style-type: none"> Unit 1.1 Smart Cities and Open Data: Who, what and why Unit 1.2 Using Open Data for Smart Cities: methods and practices Unit 1.3 Stakeholders engagement: contribution, use and reuse of Smart City services Evaluation of Module 1 Module 1 Assessment Quiz 2. Services and Service Structures 3. Smart City Business Models 4. SC Service Co-Design and the generation of new revenue 	<h3>Table of contents</h3> <p>Expand all</p> <ul style="list-style-type: none"> Introduction <ul style="list-style-type: none"> Announcements Discussions Forum OpenDCO first page 0 Foundation Open Data Essentials Practical Assignment 1 Practical Assignment 2 Practical Assignment 3 Final Evaluation Questionnaire 1. Stakeholder Management 2. Services and Service Structures 3. Smart City Business Models
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Figure 5. EN OpenDCO MOOC's home page

Moreover, scheduled meetings information is also provided through the course's home page, as well as announcements and discussion forums, practical assignments submission components and the final evaluation questionnaire, as shown in Figure 6.

Scheduled meetings

Every Wednesday at 18:00 using the following link: <https://us02web.zoom.us/j/85297179026>

Course Contents


- Announcements
- Discussions Forum
- OpenDCO first page
- 0 Foundation Open Data Essentials PDF document
- Practical Assignment 1
- Practical Assignment 2
- Practical Assignment 3
- Final Evaluation Questionnaire

1. Stakeholder Management

Figure 6. Forums, practical assignments and training sessions information

Each course's page includes all available learning modules which are shown to the learners in the order provided by the OpenDCO MOOC schedule (Figure 7 shows the first available training module). The right menu includes a completion bar indicating the number of modules with completed assessment tests and the course's calendar, which provides information on deadlines (e.g. for assessment tests), online synchronous training sessions and other events.

1. Stakeholder Management



Description

Smart cities and Open Data involve the active participation of several stakeholder categories. This course module focuses on the identification of the stakeholders, the provision of awareness on the topic and identify and provide methods and practices for the actual use of open data in relation with smart city framework. In addition, the module will define strategies on the engagement of stakeholders for the provision of data for the implementation and establishment of services as part of a smart city. This module provides an understanding of the stakeholders' profile, the basic and necessary knowledge for smart cities and open data and applying the principles and attributions needed for a functional smart city.

Learning Objectives

Obj1. Identify relevant stakeholders

Obj2. Provide awareness for smart cities and open data

Obj3. Identify methods and practices for stakeholders' utilisation of open data

Obj4. Define strategies to engage stakeholders in contributing to data provision for the use and reuse of services with respect to smart city.

Available from **26 March 2024**

Training Material & Assessment Quiz

Explore below the training material of Module 1 and test your knowledge!

- Unit 1.1 Smart Cities and Open Data: Who, what and why
- Unit 1.2 Using Open Data for Smart Cities: methods and practices
- Unit 1.3 Stakeholders engagement: contribution, use and reuse of Smart City services
- Evaluation of Module 1 [Submit feedback](#)
- Module 1 Assessment Quiz [Receive a grade](#)

→ Once you have gone through the Module content, test your knowledge with the quiz.

Figure 7. OpenDCO MOOC modules contents

When an item is clicked, the user is navigated to the respective content page. For example, Figure 8 shows the page of unit 1.1. Smart Cities and Open Data: Who, what and why which comprises the first unit out of three of module 1. Stakeholder Management. General information such as description, expected learning outcomes, keywords and estimated workload is provided. Then, the training material is accessible through an online viewer, while learners are also able to download it in pdf format.

Dashboard > My courses > OpenDCO > OpenDCO > 1. Stakeholder Management > Unit 1.1 Smart Cities and Open Data: Who, what and why

Unit 1.1 Smart Cities and Open Data: Who, what and why

Your progress 0%

Unit Description

The purpose of the first unit is to cover the fundamentals of Smart Cities and Open Data and introduce trainees to these concepts. Moreover, the trainees will become familiar with the main stakeholders involved, and why their involvement is important.

Unit Learning outcomes (LOut)

LOut1: To define factors identifying relevance of stakeholders

LOut2: To identify the stakeholders that impact Open Data and Smart Cities

LOut3: To explore the benefits and challenges of Open Data and Smart Cities

Estimated study time: 60 minutes

Keywords: Smart Cities, Open Data, Stakeholders

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- 1. Stakeholder Management
 - Unit 1.1 Smart Cities and Open Data: Who, what and why
 - Unit 1.2 Using Open Data for Smart Cities: methods and practices
 - Unit 1.3 Stakeholders engagement: contribution, use and reuse of Smart City services
 - Evaluation of Module 1
 - Module 1 Assessment Quiz
- 2. Services and Service Structures
- 3. Smart City Business Models
- 4. SC Service Co-Design and the generation of new revenue
- 5. Open Data legal framework, privacy and ethics
- 6. Open Data Vision, Strategy, Planning and Communication
- 7. Smart City Infrastructure as a Supplier of Open Data
- 8. Programming

PowerPoint P... 1 / 28 22%

7

Smart Cities (platforms)

8

Smart Cities (additional definitions)

9

Smart City characteristics

Stakeholder management

Smart Cities and Open Data: Who, what and why

Sylvia Koukounidou
Angelika Kokkinaki
University of Nicosia

Aim and objectives

Aim
The purpose of the first unit is to cover the fundamentals of Smart Cities and Open Data and introduce trainees to these concepts. Moreover, the trainees will become familiar with the main stakeholders involved, and why their involvement is important.

Objectives
✓ Identify relevant stakeholders
✓ Provide awareness for smart cities and open data

Description

Smart cities and Open Data involve the active participation of several stakeholder categories.

This course module focuses on the identification of the stakeholders, the provision of information on the role and digital and physical methods and practices for the actual use of open data in relation with smart city framework. In addition, the module will define strategies on the engagement of stakeholders for the provision of data for the implementation and establishment of services as part of a smart city.

This module provides an understanding of the stakeholders' profile, the basic and necessary knowledge for smart cities and open data and exploring the principles and

Figure 8. General information and training content of the OpenDCO MOOC's modules' units