



energy

Department:
Energy
REPUBLIC OF SOUTH AFRICA

7. Digitalisation in Municipalities

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IEA #energyefficientworld

Training Overview

Digitalisation in Municipalities

Scenario: Your mayor wants to be known for innovative solutions.

Question: What are the ways you can use digitalisation to further reduce urban energy use and improve urban services?

Training Overview

- 1. Activity 1: Digital solutions in different sectors of the city**
- 2. Activity 2: Delivering digital solutions, barriers and solutions**
- 3. Group presentation**

10 mins

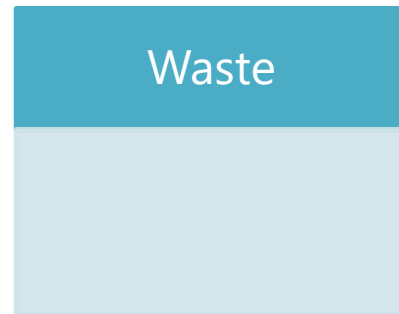
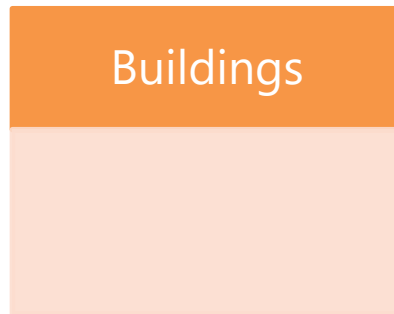
30 mins

15 mins

Activity 1: Digital solutions in different sectors of the city

Activity 1: Digital solutions in different sectors of the city


- Arrange yourself into three groups and list out digital solutions that can help lower energy use in the following sectors:



Activity 1: Digital solutions in different sectors of the city

- Some of the examples:

Transport



Smart Mobility as a service

The image shows a person's hands holding a smartphone. To the right of the phone, there are several curved lines representing signal waves or connectivity, and a stylized orange and white icon of a car or vehicle.

Water



Leakage and energy management systems

The image shows a close-up of a grey water meter with a digital display showing the number '12345'.

Lighting



Intelligent lighting systems

The image shows a street lamp with a modern, rectangular light fixture against a blue sky with white clouds.

Urban Design



Mapping and other data tools for planning

The image shows a colorful map of a city or region, with various shades of green, yellow, and red, representing different data points or zones.


Buildings



Smart building controls

The image shows a digital display screen showing a temperature of 72 degrees Fahrenheit and other building control information.

Waste



Smart bins

The image shows several colorful, modern-looking waste bins in shades of blue, green, and orange.

Activity 2: Delivering digital solutions, barriers and solutions

Activity 2: Map out what is needed for the following smart solutions

Select one solution, then break it apart and determine the barriers and solutions to each component

Transport



Smart Mobility as a service

The image shows a hand holding a smartphone with orange signal waves emanating from it, symbolizing connectivity and smart mobility services.


Water



Leakage and energy management systems

The image shows a smart water meter with a digital display, representing advanced water management technology.

Lighting



Intelligent lighting systems

The image shows a modern street lamp with a digital display, representing intelligent lighting systems.

- Elaborate the issues that you might face in infrastructure, data, and service delivery (privacy, cost, ownership, legal authority?) then what are the solutions?
- Use the internet if necessary
- 5-minute presentation per group afterwards

Sample: Breaking apart the elements of a digital solution

SERVICE



DATA



INFRA-STRUCTURE



Smart building controls



Building temperature and humidity sensors



Electricity meter



Lighting systems

Servers



Motion detectors

Group Presentation

Key Resources

MOOC: Smart Cities – Management of Smart Urban Infrastructures



Learn about the principles of management of urban infrastructures in the era of Smart Cities. The introduction of Smart urban technologies into legacy infrastructures has already resulted and will continue to result in numerous challenges and opportunities. This course will help you to make the best out of the introduction of these smart technologies in your cities' legacy infrastructures.

<https://www.coursera.org/learn/smart-cities>

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