



# European Energy Network

A voluntary network of European energy agencies

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Lisbon, Portugal

**Promoting energy and water use  
reduction at national and local levels**

**Lisbon, 8<sup>th</sup> June 2022**



# **Smart Sustainable Cities in Portugal**

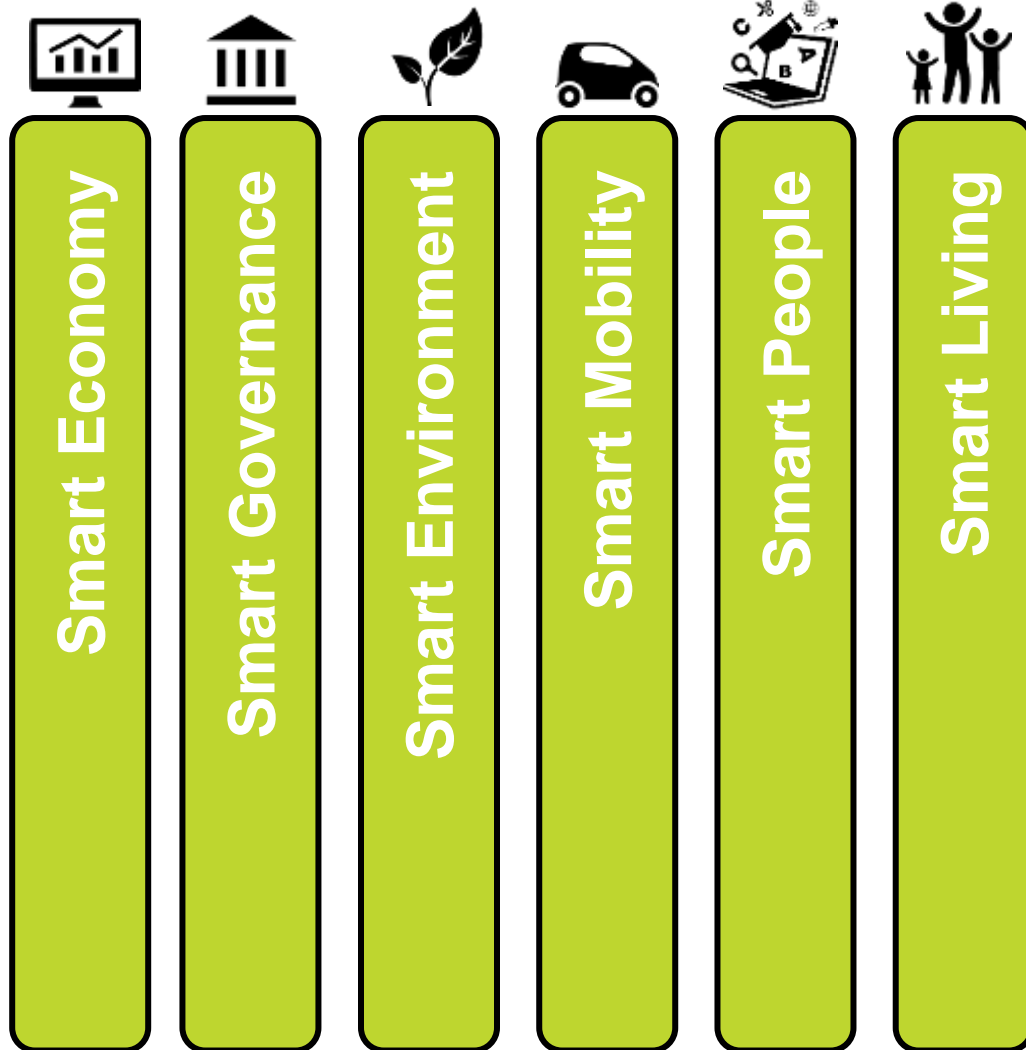
**Miguel de Castro Neto**





# Cluster 1. Digital Transformation





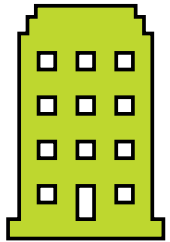
**Cluster 2.**  
**“Vertical” approach**

# Vertical Organizational Model

## IMPACTS

Source: IDC

### Smart Buildings



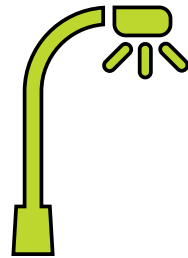
ROI in less than 6 months

### Smart Waste Collection



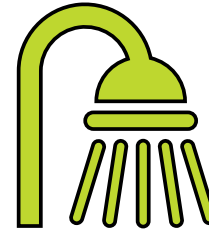
40 - 80% of cost reduction

### LED + Smart Lighting



50% reduction (ROI in 6 years)

### Smart Water Management



40% reduction of water losses

### Smart Parking

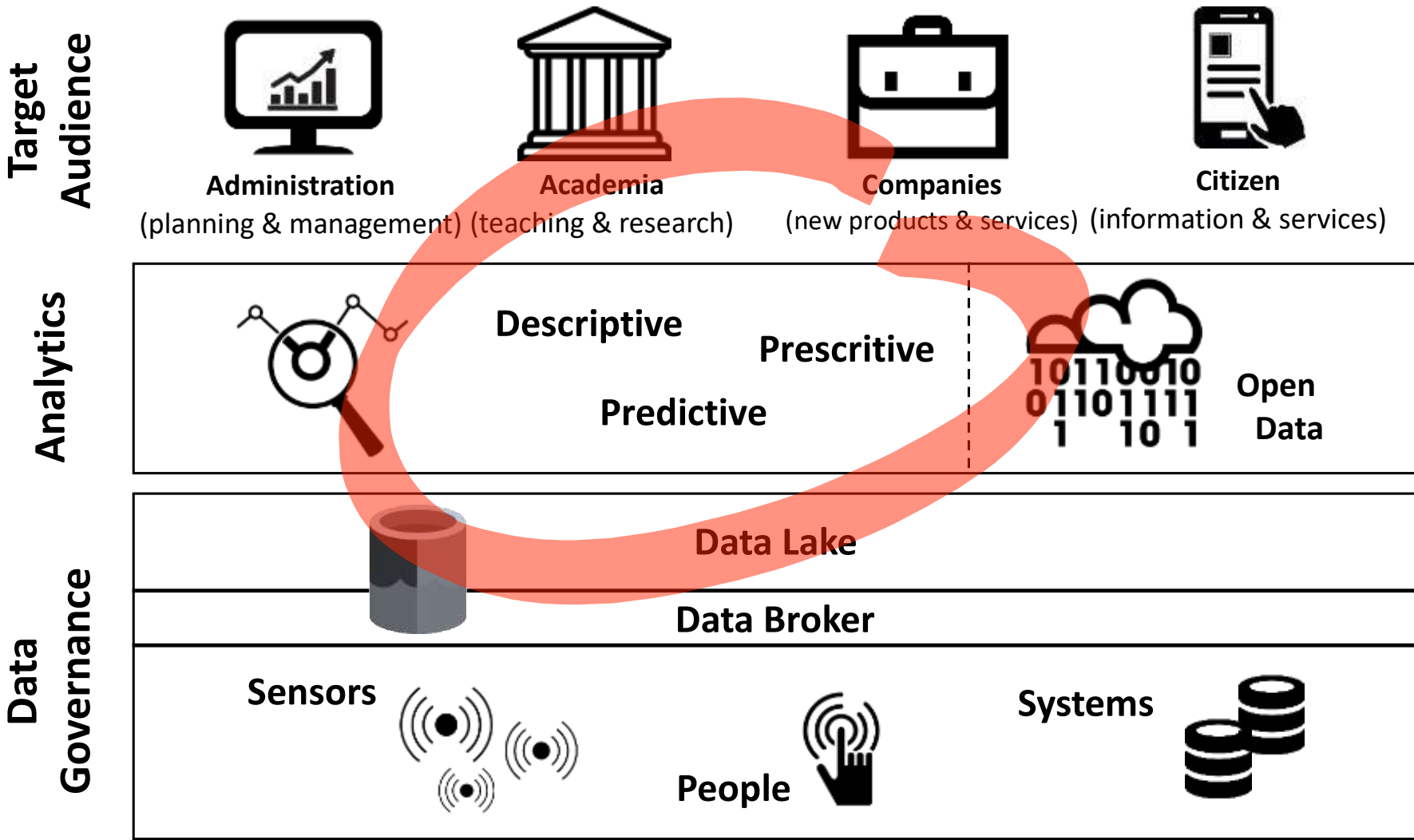


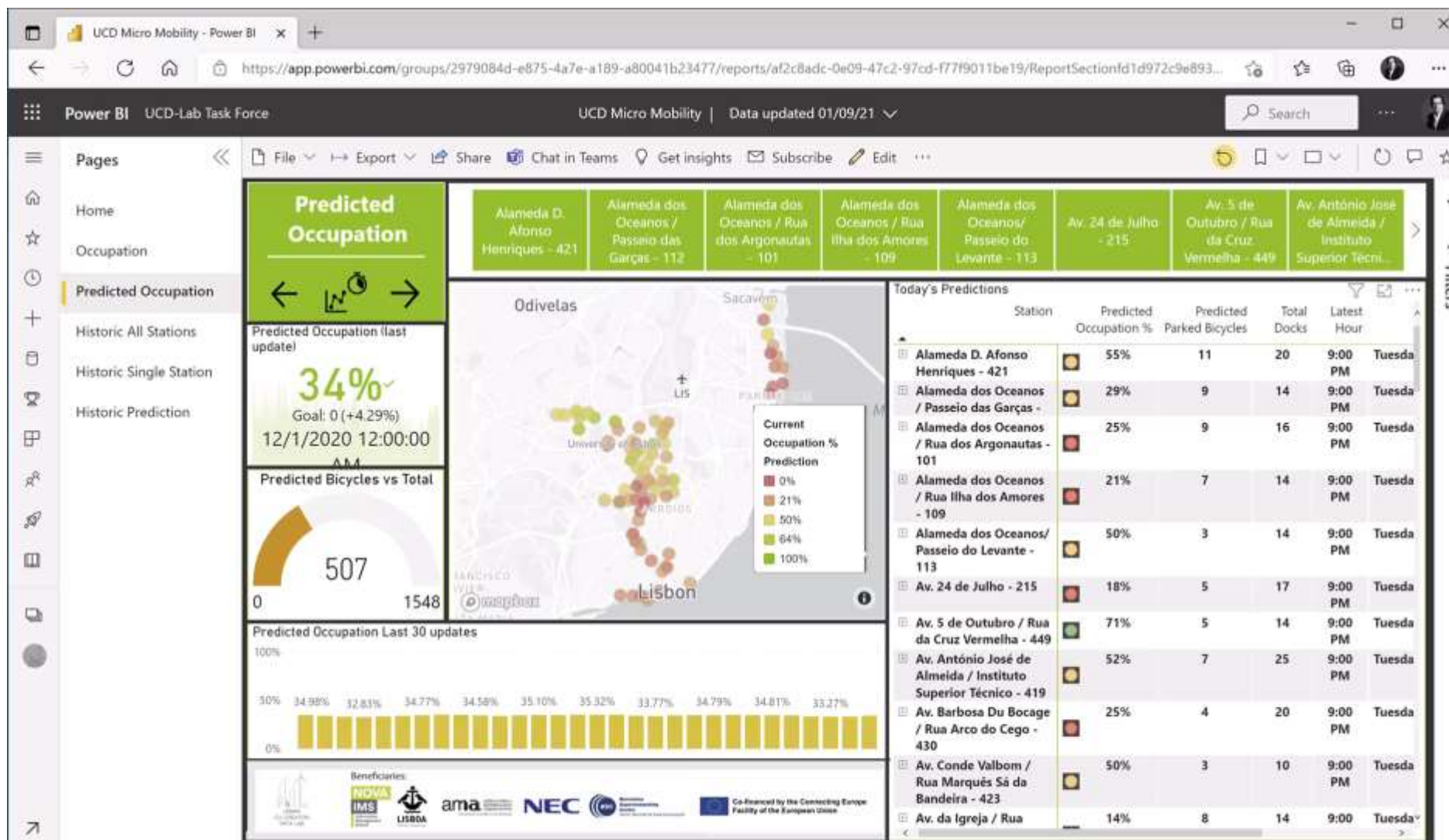
20-30% cost reduction (ROI in 2 years)



# Custer 3.

## City as a **Plataform**













# Digital Twins

<https://buildmedia.com/work/wellington-digital-twin>

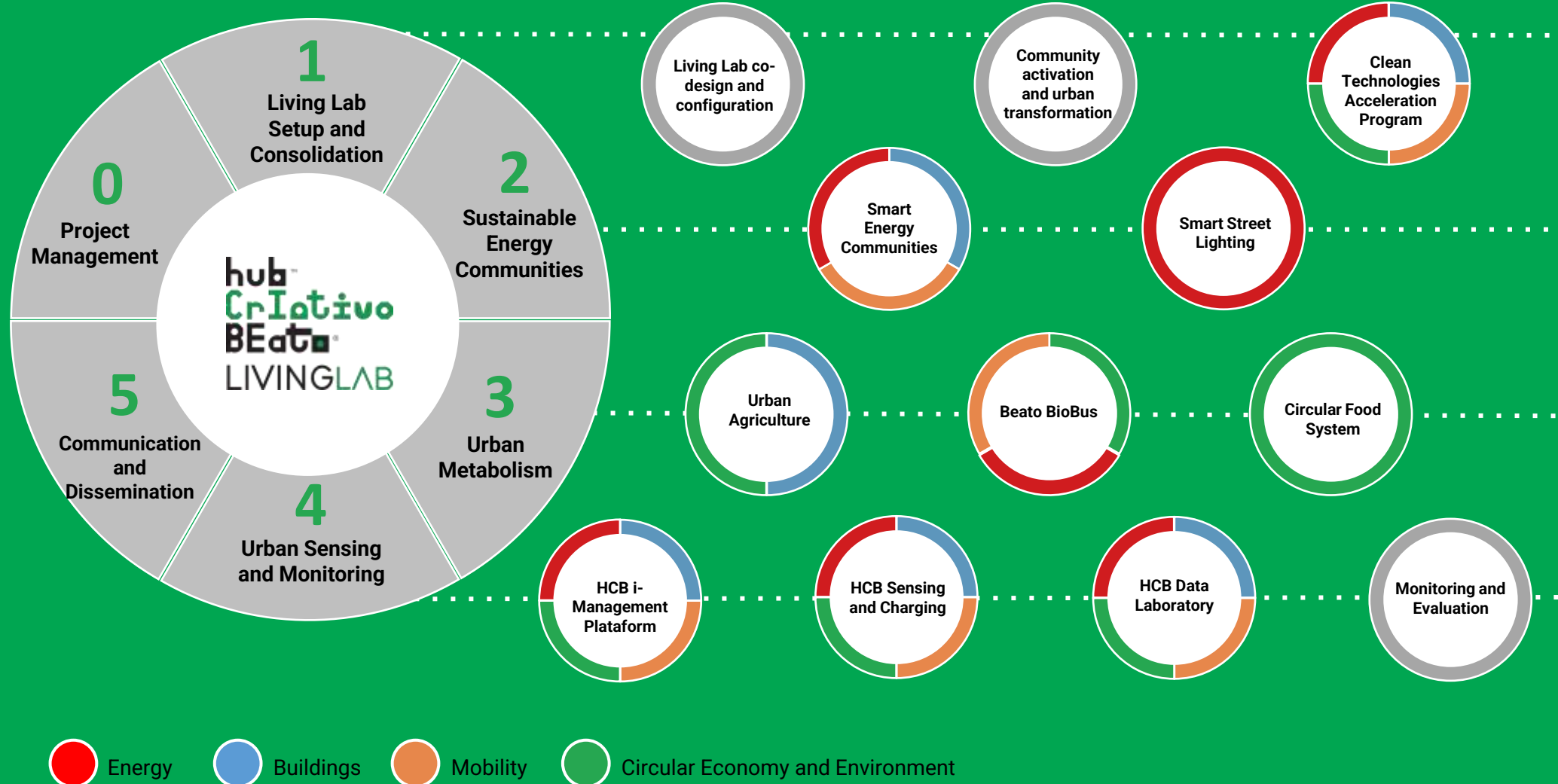


# hub<sup>TM</sup> CrIativo BEato<sup>®</sup> LIVINGLAB

Iceland   
Liechtenstein  
Norway grants



# HCB Living Lab Structure



# **Thank you for your attention**

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# Thank you!

This presentation was part of the  
European Energy Network Seminar

**Promoting energy and water use reduction  
at national and local levels**

Lisbon, June 8 2022

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