



Klima og digitalisering

En status på, hvad vi har (brug for)

Martin Brynskov
@brynskov

5. oktober 2020

Webinar: Europæiske Missioner for Danske Kommuner

Martin Brynskov

Director & Associate Professor, Aarhus University
DITCOM – Centre for Digital Transformation of Cities & Communities

Chair, Open & Agile Smart Cities (OASC)

Coordinator, SynchroniCity, SCORE & NGIoT
Chair, Danish Standards Committee on SSCC (ISO TC268)
Partner, Smart City Cluster Denmark
Vice-Chair, UN U4SSC

oascities.org
ditcom.au.dk



DITCOM

Centre for Digital
Transformation in Cities
and Communities

Annual Report 2019

TABLE OF CONTENTS

What is DITCOM? 4
Get a short introduction to our research centre

6 Looking Back at 2019
Look back at 2019 with Centre Leader,
Martin Brynskov

Meet the Centre 8
Meet the people working in DITCOM

10 DITCOM Highlights & Numbers
Take a look at the overview of our main
achievements in 2019

14 Projects
Learn more about our main EU projects
SynchroniCity, NGIoT and SCORE

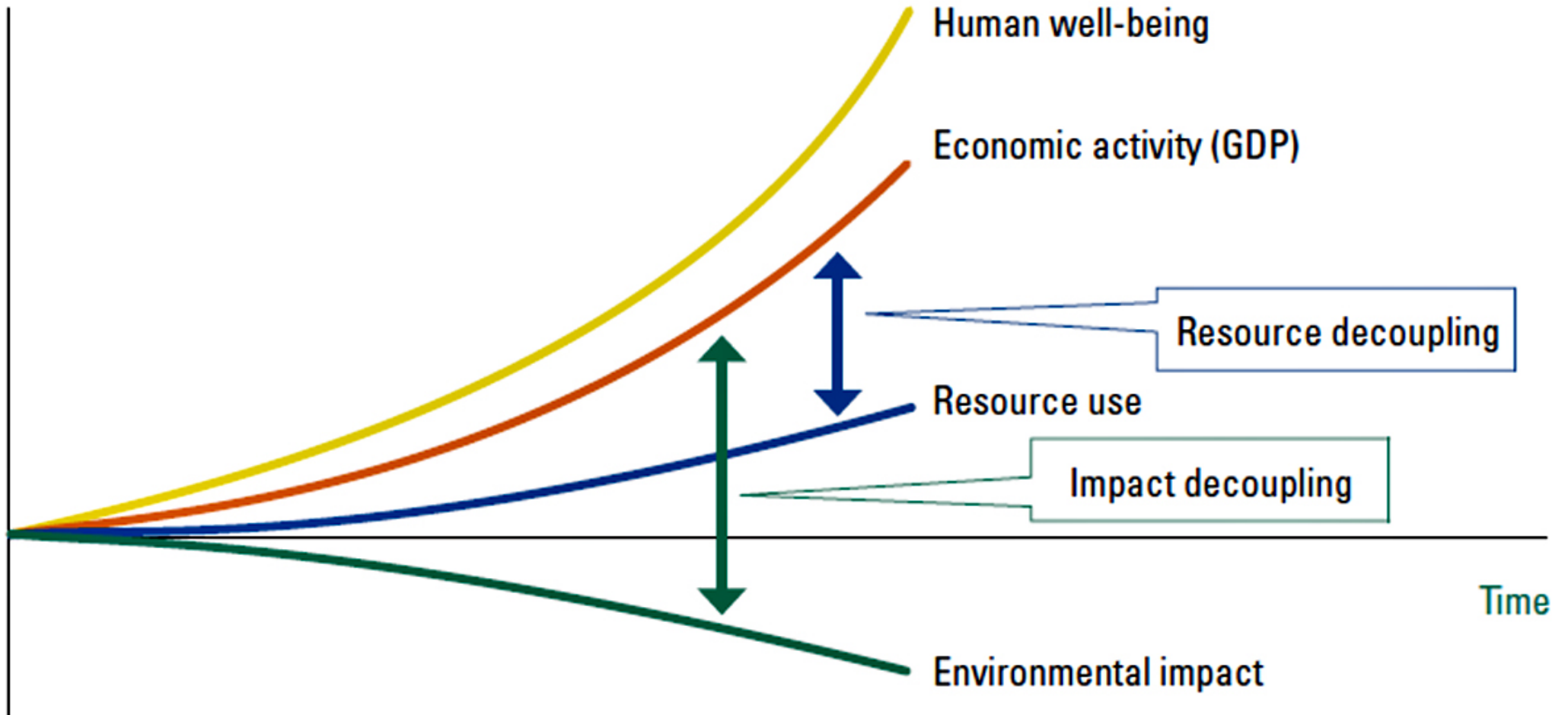
Events 22
Discover our main events organised or
co-hosted by DITCOM in the past year

30 Networks and Partnerships
Get an overview of our networks and
partnerships

A Look Into the Future 34
Learn about the projects we have in the
pipeline

36 Annex
See a full list of activities, publications and
reports

Sustainable, Open Innovation





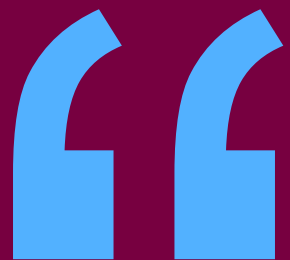
EPSC Strategic Notes

Issue 30
July 2019

Rethinking Strategic Autonomy in the Digital Age

European **Political
Strategy** Centre |

In the 21st century, **those who control digital technologies are increasingly able to influence economic, societal and political outcomes.** Policymakers around the world are waking up to the critical imprint that digital technologies have on their countries' strategic autonomy and a global race for technological leadership has ensued.



Smarte byer og lokalsamfund:
Effektiv integration af fysiske,
digitale og menneskelige systemer i
det bebyggede miljø for en
bæredygtig, velstående og
inkluderende fremtid for alle
borgere.

Source: ITU-T FG-DPM, ISO/IEC 30182
<https://www.itu.int/en/ITU-T/focusgroups/dpm>

Hvorfor byer/kommuner/regioner?

1. Grøn-digital drift – det er komplekst
2. Nærhed – en nødvendighed for sammenhæng
3. Økonomisk muskel – skal udnyttes
4. Partnerskaber – skal være glokale
5. Muligheder – skal forberedes

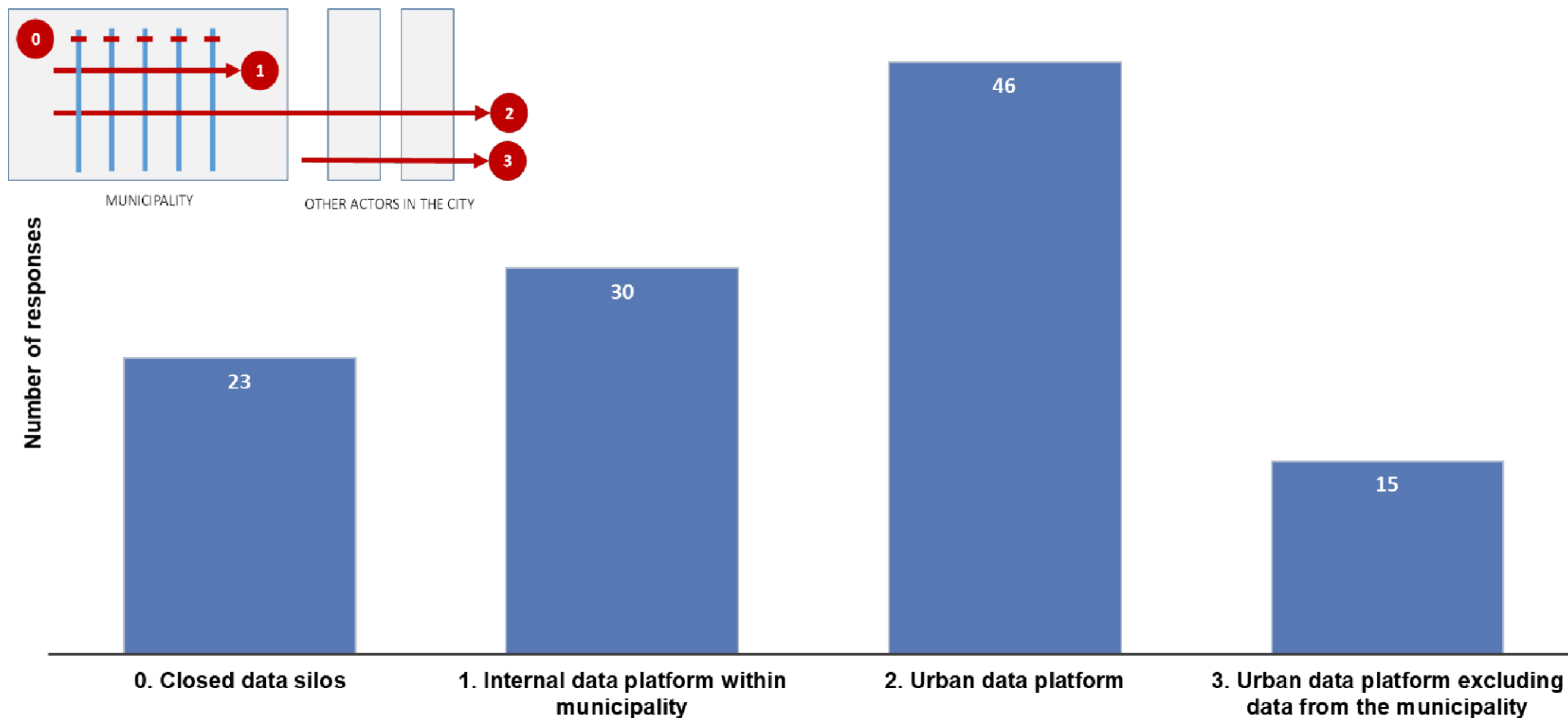
1. DATA & DIGI

**Byer og samfund
er
alle sektorer
tilsammen**

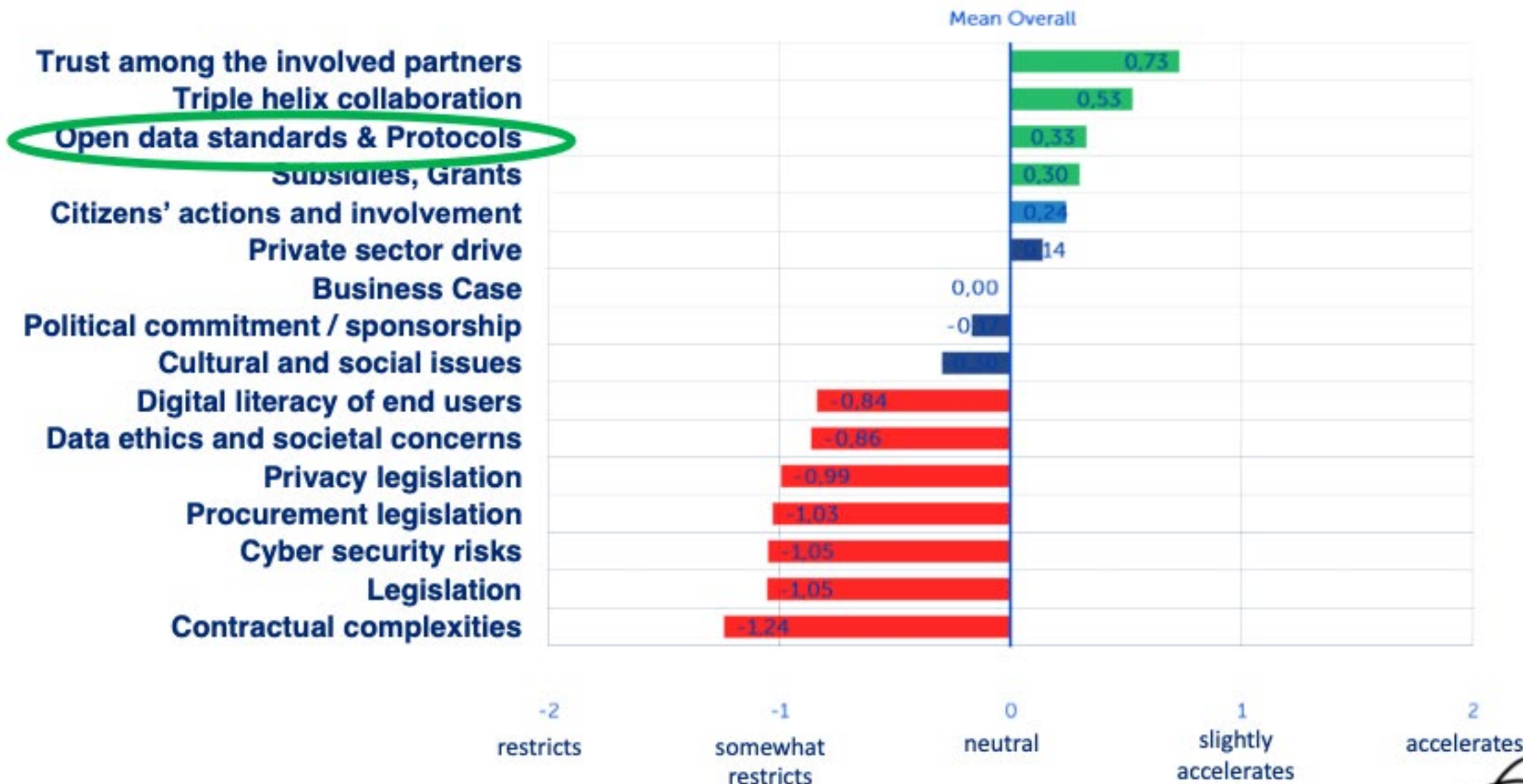
**Byer og samfund
er
alle sektorer
tilsammen
og
alle data**

Existing data landscape in European cities

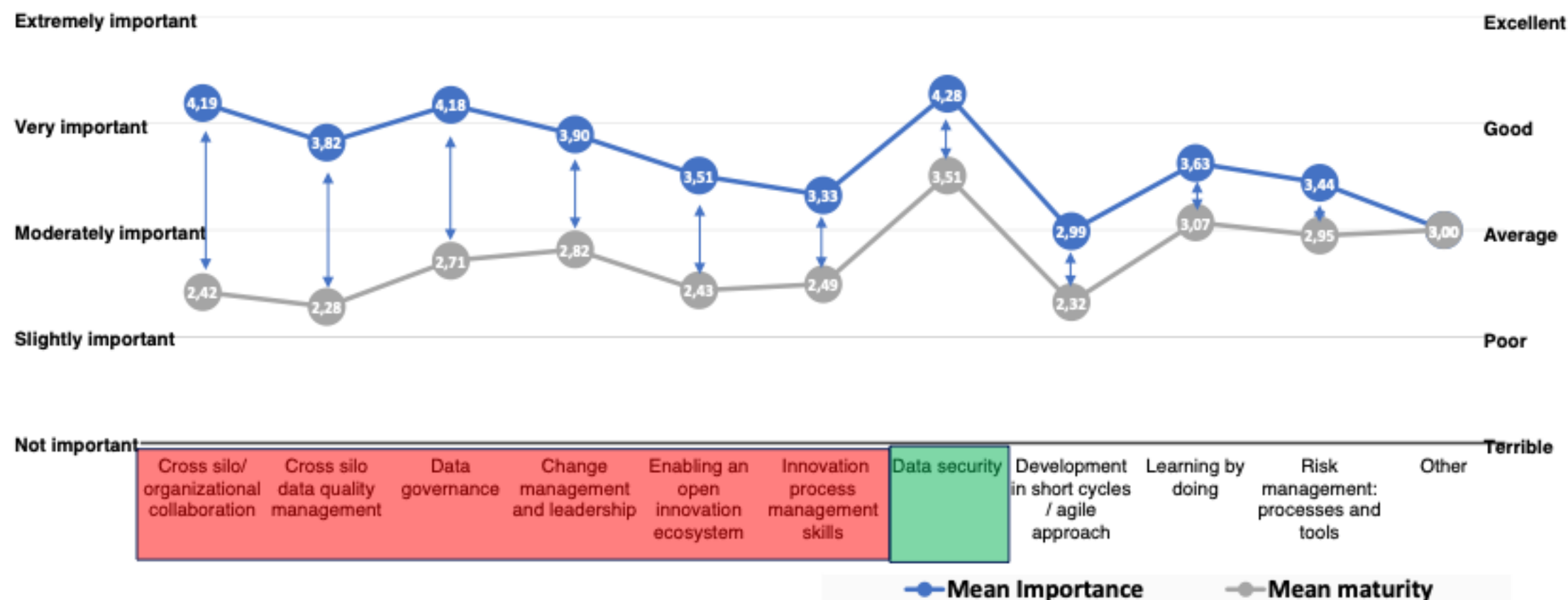
Ecosystem Design choices all responses



UDP innovation & adoption Accelerators & Barriers



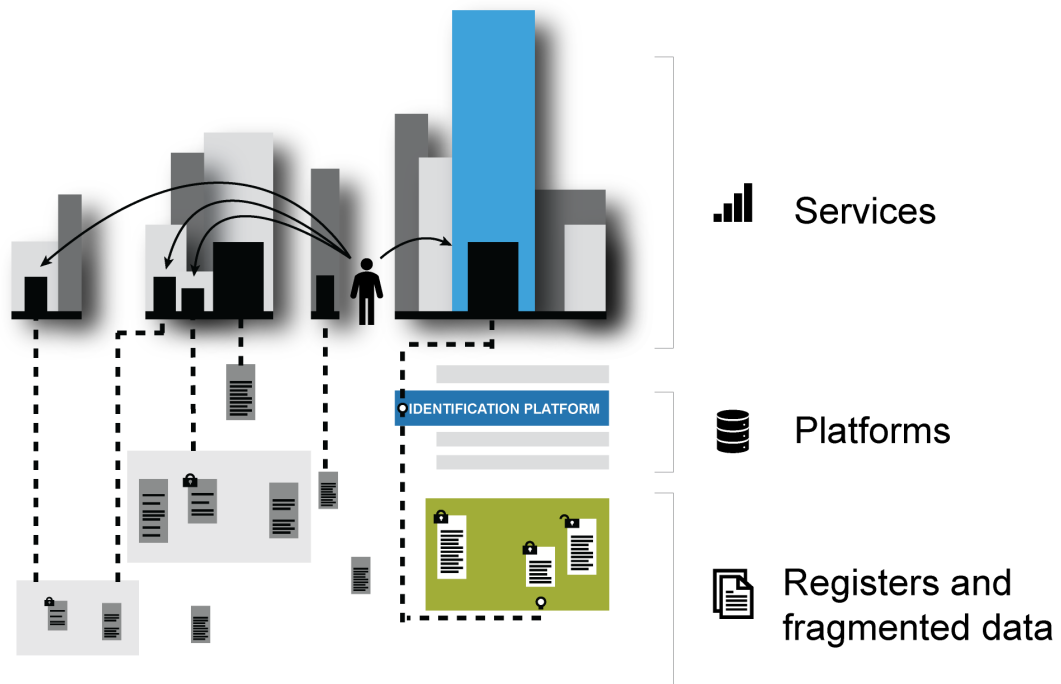
Capabilities of the city municipality



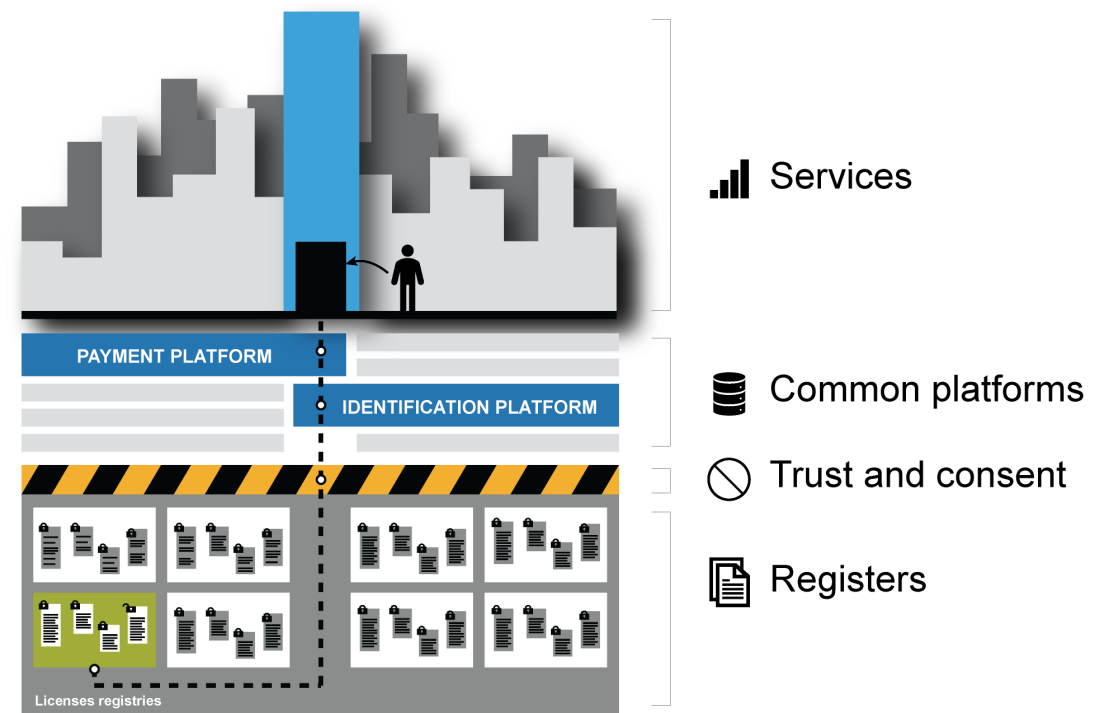
2. NÆRHED

Fundamentet for digitalt velfungerende byer og samfund

SILOED GOVERNMENT

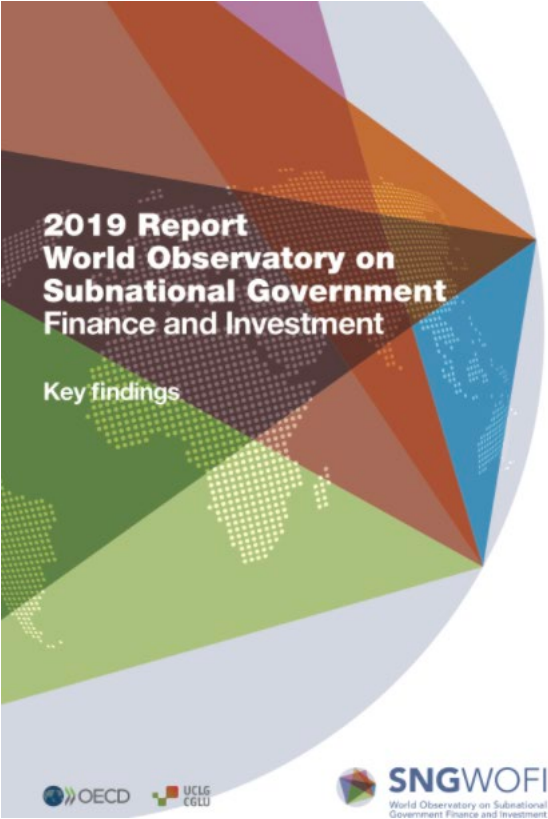


HOLISTIC GOVERNMENT AS A PLATFORM



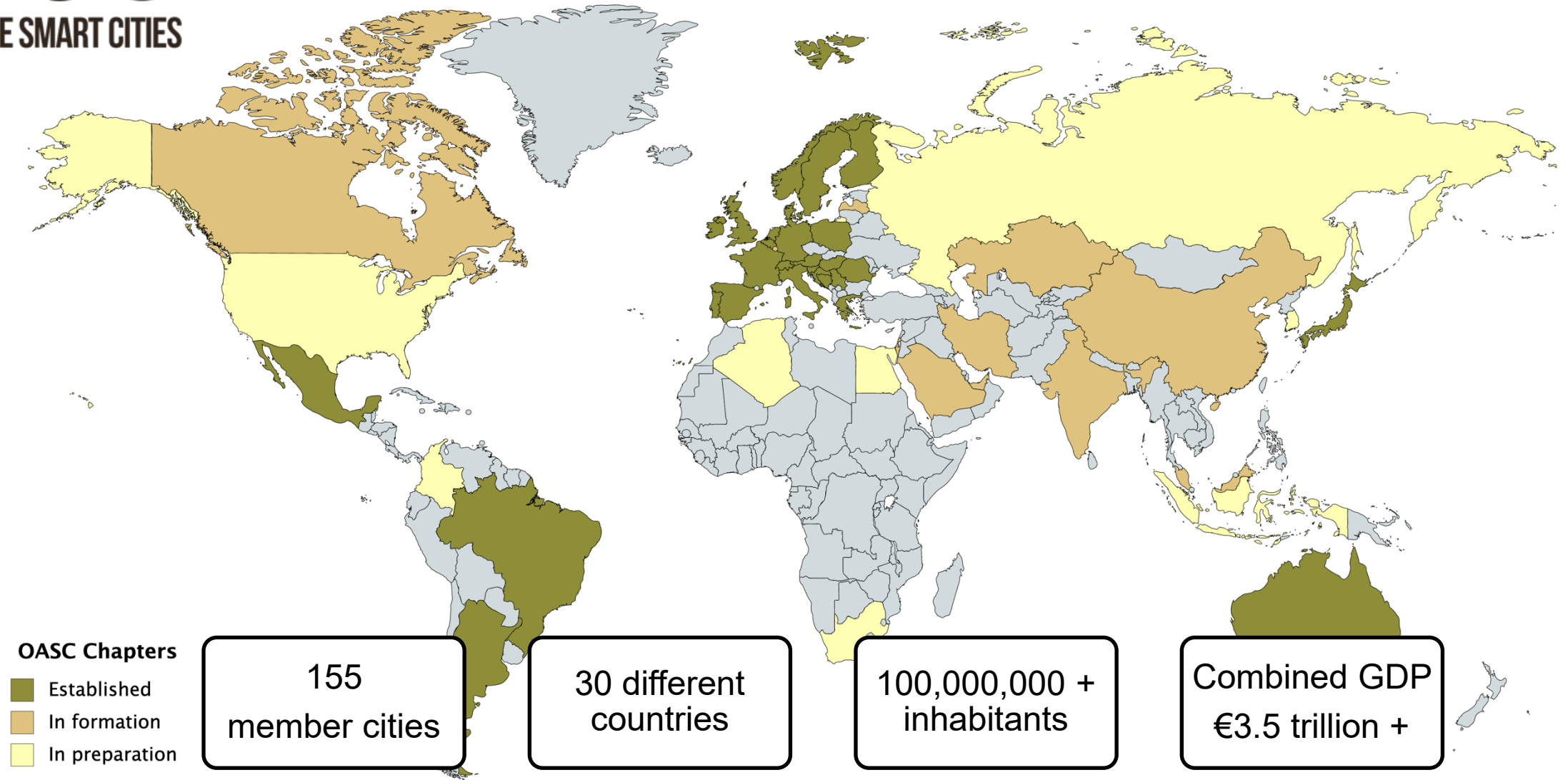
3. ØKONOMI

Subnational government expenditure as a percentage of GDP and general government expenditure (2016)



Source: 2019 Report World Observatory on Subnational Government Finance and Investment
<https://www.oecd.org/regional/regional-policy/sngs-around-the-world.htm>

4. PARTNERSKABER



Global community



LIVING-IN.EU

The European way of digital transformation in cities and communities





We signed



76 representatives of a public administration at local, regional, national or European level, have signed the [Declaration](#). See also our [interactive map at ec.europa.eu](#).

Position	Public Administration	Level	Country
Mayor	City of Antwerpen	Local	Belgium
Mayor	City of Rijeka	Local	Croatia
Mayor	Nicosia Municipality	Local	Cyprus
Mayor	Ringkøbing-Skjern Kommune	Local	Denmark
Mayor	Viborg Kommune	Local	Denmark
Mayor	Odder Kommune	Local	Denmark
Mayor	Randers Kommune	Local	Denmark
Mayor	City of Aarhus	Local	Denmark
Minister	Ministry of Finance	National	Estonia

Overview commitments



Financial



Technical



Legal



Education & Capacity Building



Monitoring & Measuring

1.1
Joint Investment Plan

1.2
Multi-level synergies

1.3
Local digital transformation with EU funds

1.4
Use common procurement practices

2.1
Common list of Standards & Technical Specifications

2.2
Key Enablers –Available for All

2.3
Common Marketplace

3
Assess and develop legal measures for a common EU framework

4.1
Develop administrative capacities

4.2
Citizen-centric design approaches

4.3
Digital education and skills for public authorities and businesses

4.4
Provide digital education and skills to the public

4.5
Culture of co-creation, participative and cross-sector approach

4.6
Facilitate and coordinate activities for scaling-up

4.7
Opportunities that can accelerate deployment DIHs

5
Framework based on existing methodologies

LI.EU Tech Commitments and Deliverables

- Tech Commitment Principles:
 - Use common standards and technical specifications
 - Make key enablers (including data, infrastructure and services) available to all
 - Establish a common market
- Deliverables:
 - Concept paper (scope, plan)
 - Technical Specifications (MIMs Plus)
 - Operational Guidance (jointly with other LI.EU commitments)

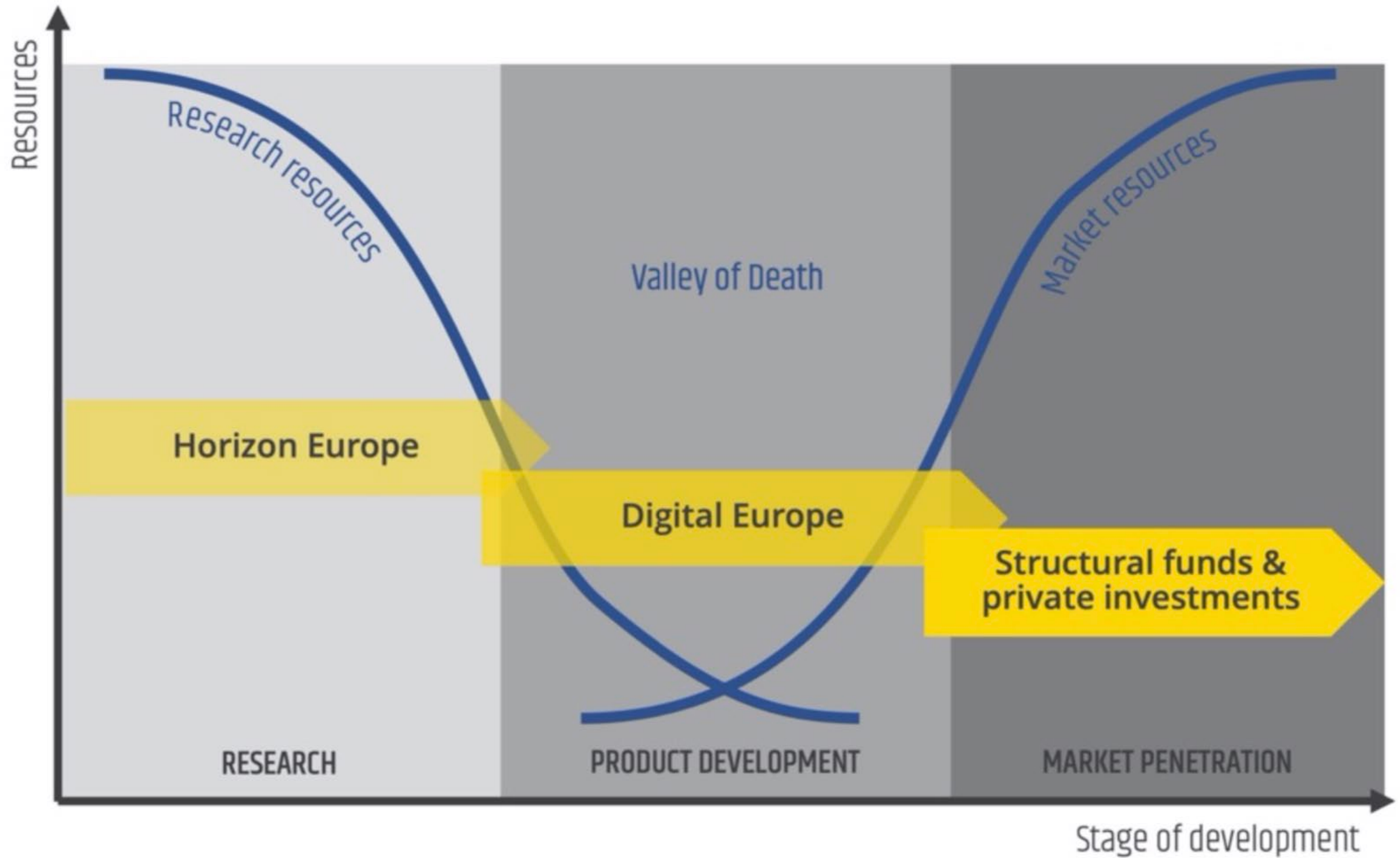


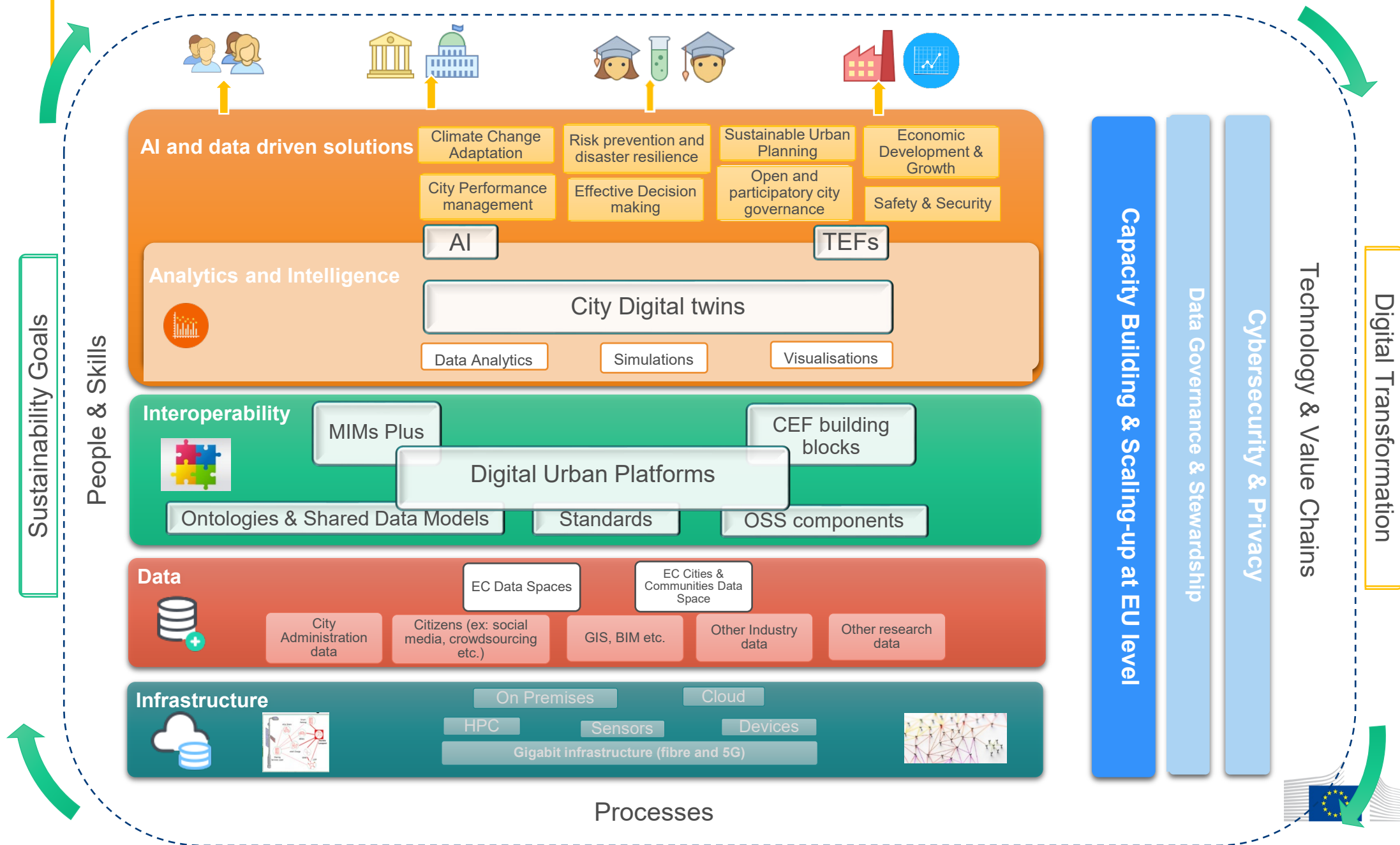
5. MULIGHEDER

Programmer

- Recovery & Resilience Facility – 750 mia. euro
→ 20% til digital – 134 mia. euro
- Horizon Europe/Digital Europe/CEF – ~100 mia. euro
- Strukturfonde, andre programmer ...

2-3 bio. euro





ORGANICITY

Key innovations

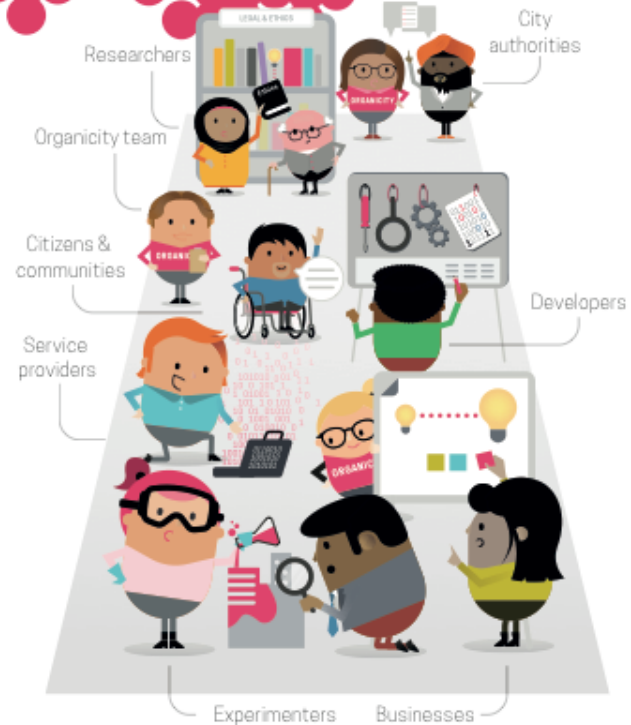
- Easy experimentation
- Co-creation tools
- Federated privacy
- IPR in co-creation

www.organicity.eu

ORGANICITY

EXPERIMENTATION AS A SERVICE

Exploring how citizens, businesses and city authorities can work together to create digital solutions to urban challenges.





SYNCHRONICITY BOOTCAMP KICKS OFF PILOT PHASE

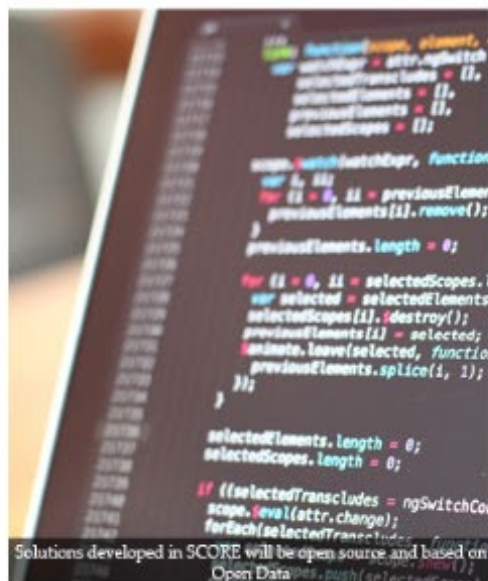
20 ... 50

CITIES & PILOTS



SCORE Smart Cities and Open data REuse

Programme	NSR
Duration	4 years
Project partners	14
Budget	€5.7M
EC-contribution	€2.8M
Coordinator	City of Amsterdam



Solutions developed in SCORE will be open source and based on Open Data



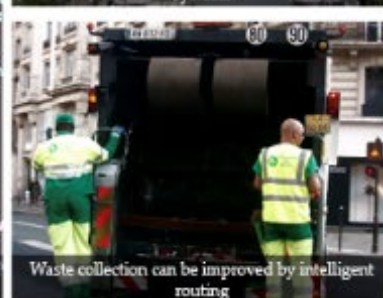
Water level sensors can inform early flood warning systems



Real-time information about free parking spaces can reduce CO2 emission by decreasing traffic by up to 30%



Public transit frequency can be adjusted based on live user data



Waste collection can be improved by intelligent routing



Streetlight sensors can be used to measure traffic flows and improve traffic management

Background	Aim	Approach	Results	Impact
------------	-----	----------	---------	--------

Cities aim to improve the delivery of public services based on innovative software solutions and data sharing.

However, Data has not and will not automatically lead to better public service delivery.

To capture that potential, value from data needs to be unlocked by making it interoperable between departments and organisations.

The shared challenge is how to generate innovative solutions that address common city needs.

SCORE aims to increase the efficiency and quality of public service delivery of cities in the sectors of Environment, Waste & Water, Parking & Traffic, and Sustainable Mobility by developing innovative open source solutions that use urban data, i.e. Contributing to Interreg NSR's objective by stimulating "the public sector to generate innovation demand and innovative solutions for improving public service delivery".

The solutions will be free to use by other cities, adhere to EU standards, and replicable.

9 cities from 7 countries in the NSR will be grouped according to their shared challenges. The cities will formulate 6 public service challenges based on their in-depth understanding of the city's operations (business case), the available data (feasibility) and knowledge of their existing programmes and initiatives (funding).

Each challenge will form a group that will develop 2 open source solutions using urban data. The solutions will be tested in Urban Living Labs. All cities will collaborate throughout the development process to ensure relevance and compatibility. In fact, solutions will be replicated transnationally at least twice within the SCORE project period.

By implementing the innovative open source solutions, SCORE will:

- Reduce by 10% service provision costs of public authorities in the sectors of urban sustainability using open data and open source solutions.
- Improve by 20% the quality of public service provision as valued/assessed by citizens.
- Reduce by 30% the software development time in cities.

SCORE will solve public service delivery challenges common to partner cities through innovation. This community will contribute to the open-source movement and deliver solutions that are free to use by other NSR cities and beyond.

The partnership will create an ecosystem with cities, research institutions and network organisations for smart public service delivery innovation. Organisations learn from each other while building solutions, eg in agile software development, transitioning towards being more data-driven.

Interreg
North Sea Region

City of Amsterdam

Hamburg

City of Oslo
ABERDEEN CITY COUNCIL

City of Bradford MDC

ghent: so much city

CITY OF AARHUS

Johanneberg Science Park

Amsterdam Data Science

DORDRECHT

eit Digital

UNIVERSITY OF BRADFORD

AARHUS UNIVERSITET

BAX & COMPANY

WILLIAM PETERSON

Hvorfor byer/kommuner/regioner?

1. Grøn-digital drift – det er komplekst
2. Nærhed – en nødvendighed for sammenhæng
3. Økonomisk muskel – skal udnyttes
4. Partnerskaber – skal være glokale
5. Muligheder – skal forberedes



We signed



76 representatives of a public administration at local, regional, national or European level, have signed the [Declaration](#). See also our [interactive map at ec.europa.eu](#).

Position	Public Administration	Level	Country
Mayor	City of Antwerpen	Local	Belgium
Mayor	City of Rijeka	Local	Croatia
Mayor	Nicosia Municipality	Local	Cyprus
Mayor	Ringkøbing-Skjern Kommune	Local	Denmark
Mayor	Viborg Kommune	Local	Denmark
Mayor	Odder Kommune	Local	Denmark
Mayor	Randers Kommune	Local	Denmark
Mayor	City of Aarhus	Local	Denmark
Minister	Ministry of Finance	National	Estonia