

→ OASC Conference 2024

Become Better Connected

16th - 17th
January
2024

nhow Hotel
Wilhelminakade 137
3072 AP
Rotterdam
Netherlands



OPEN & AGILE SMART CITIES
& COMMUNITIES



Gemeente
Rotterdam



www.oascities.org

Become Better Connected

Bas Boorsma

Urban Innovators Global

Thunderbird School of Global Management

URBAN
INNOVATORS GLOBAL.

Bas Boorsma



- Co-Founder, Urban Innovators Global
- Professor of Practice, Urban Innovation & Smart City, Thunderbird School of Global Management
- Former Chief Digital Officer, City of Rotterdam ('21-'23)
- 22+ years in 'smart cities'
- 11 years at Cisco, Digitization Lead, Northern Europe (2015-17)
- Author of *A New Digital Deal. Beyond Smart Cities. How to Best Leverage Digitalization for the Benefit of our Communities*



Oltre le Smart Cities.
Come impiegare al meglio
la Digitalizzazione al
servizio delle nostre
Comunità

Edizione 2020 rivista

nova



Beyond Smart Cities.
How to Best Leverage
Digitalization for the
Benefit of our
Communities

Revised 2020 edition

nova

NOVA

Revised 2020 edition

Revised 2020 edition
Beyond Smart Cities.
How to Best Leverage
Digitalization for the
Benefit of our
Communities



YOUSSEF AL-ABBAAF & BAS BOORSMA

عهد رقمي جديد

كيف نستثمر الرقمنة لصالح مجتمعاتنا ومدينتنا


يوسف العساف
باس بـورسما



I was **born** in the **Year 29 B.G.**

Becoming Better Connected.

(?)



education Openness
broadband
Digital-Twinning
BIM IoT
acceleration transformation PPPs Web
Culture architecture normalization
Shared Language
Platform MIMs vision OASC
ethics
Redundancy Regulations Metaverse people
virtualization security Divides data
governance roadmaps
connectivity conversation
Inclusion
interoperability

**We all want the same. We all want Cities that
are livable. Equitable. Sustainable. Social.
Hey, even walkable.**











Can I order 2 United Nations Sustainable Development Goals Please? And some Open Data on Ice. OK?

Oh, and while you are at it: two portions of MIMs and BIMs on the side please

7

Considerations

in order to

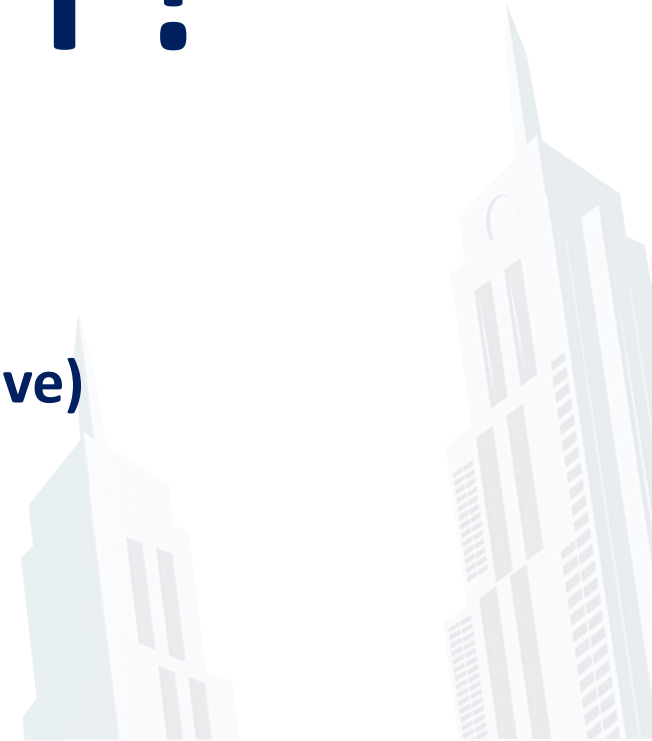
Become Better Connected

1.

PURPOSE FIRST!

Debate. Moderate. Curate. Act.

(or: how to move beyond the old smart city narrative)



2. Understand how new technologies change our society



New Technology

New Sources of Value



Doing New Things Differently

Optimizing existing ways of doing things



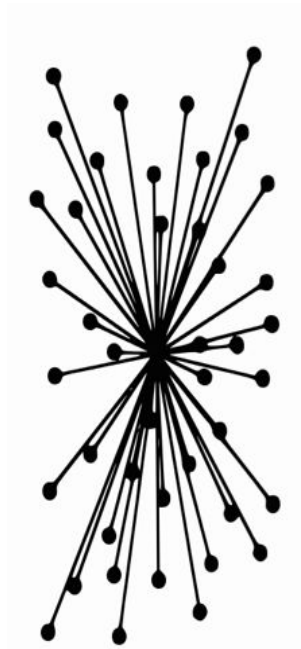
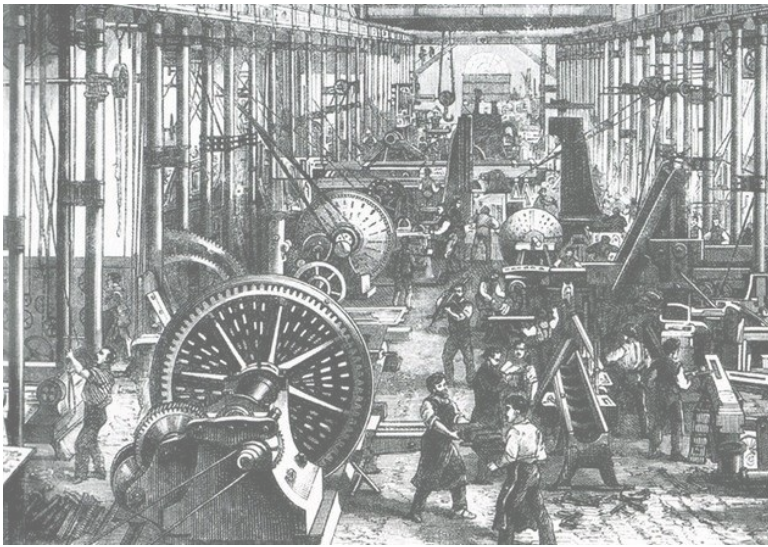
New Skills, Employees, Customers

New Business Models

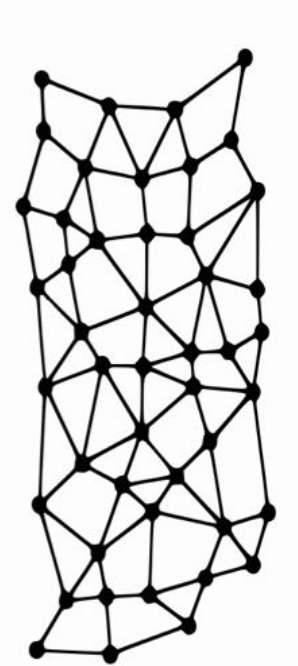
New Modes of Leadership



Digitalization & the Network Paradigm



Centralized



Distributed



**Network
Society**

The Network Paradigm: a Design Shift!



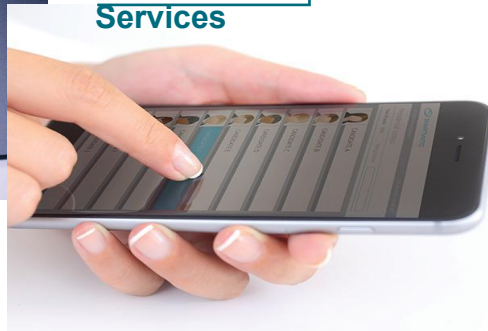
Healthcare



Work

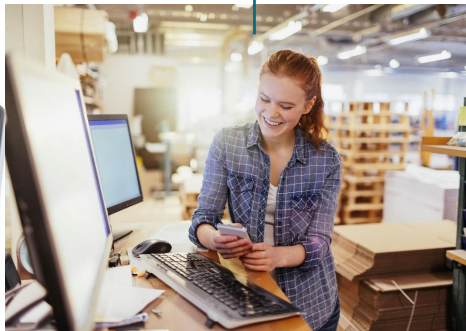


Citizen Services



Mobility

Logistics



Residential & Built Environment



Learning



Energy

Environment



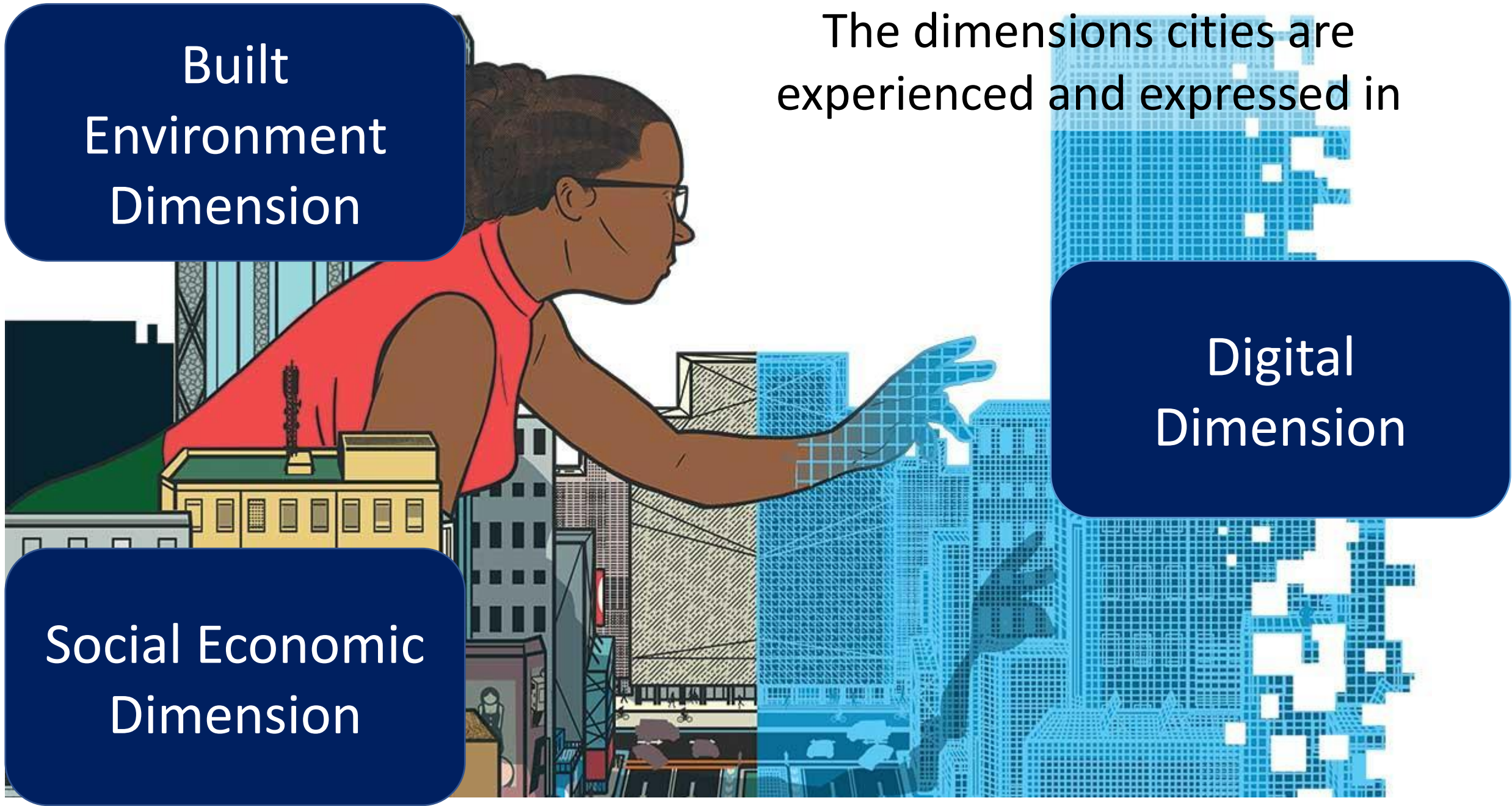


Built
Environment
Dimension

The dimensions cities are
experienced and expressed in

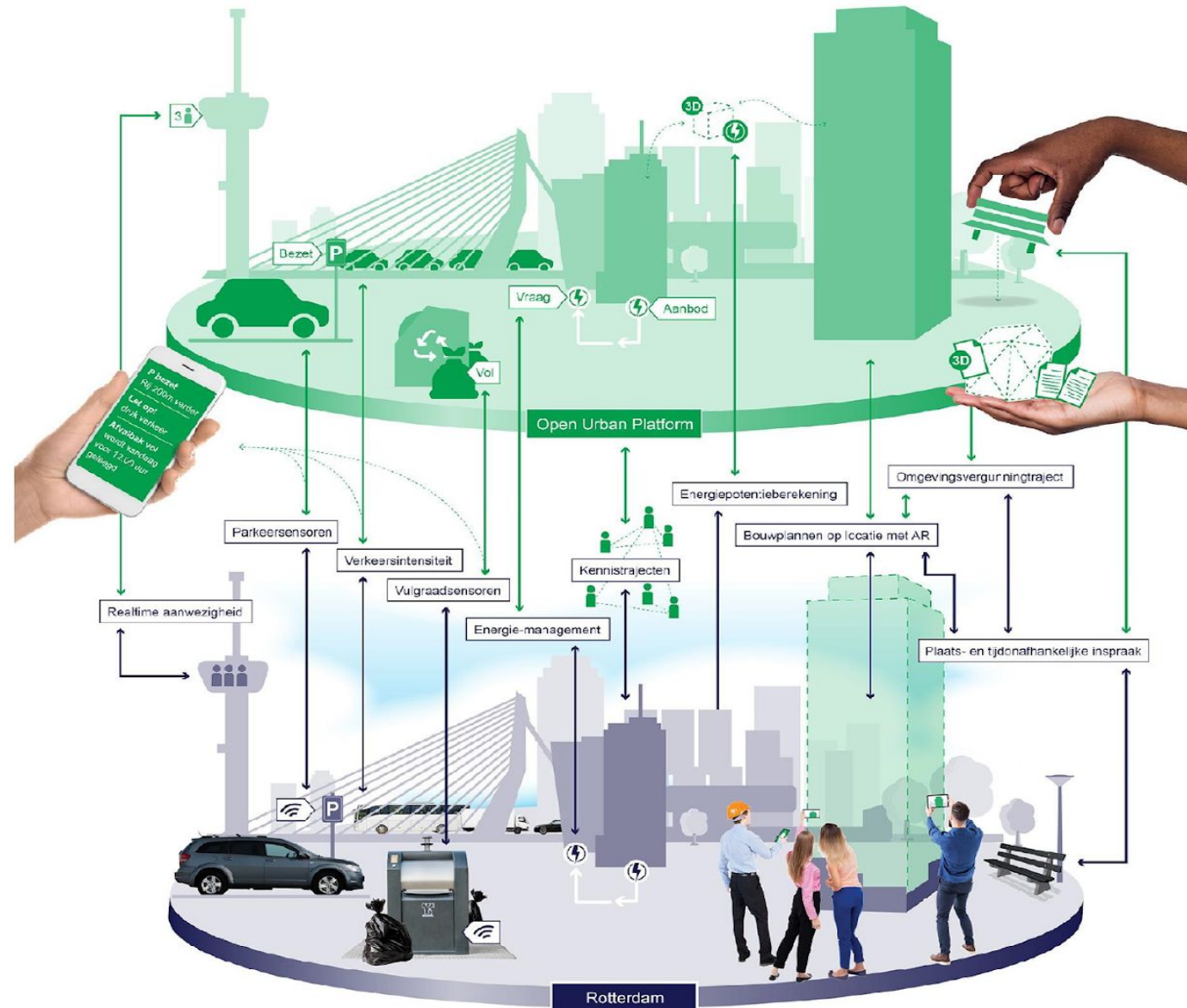
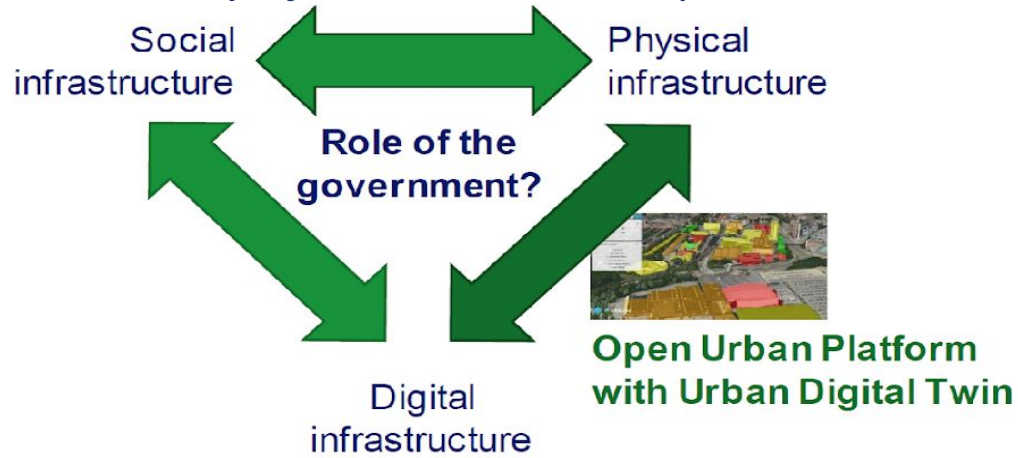
Digital
Dimension

Social Economic
Dimension



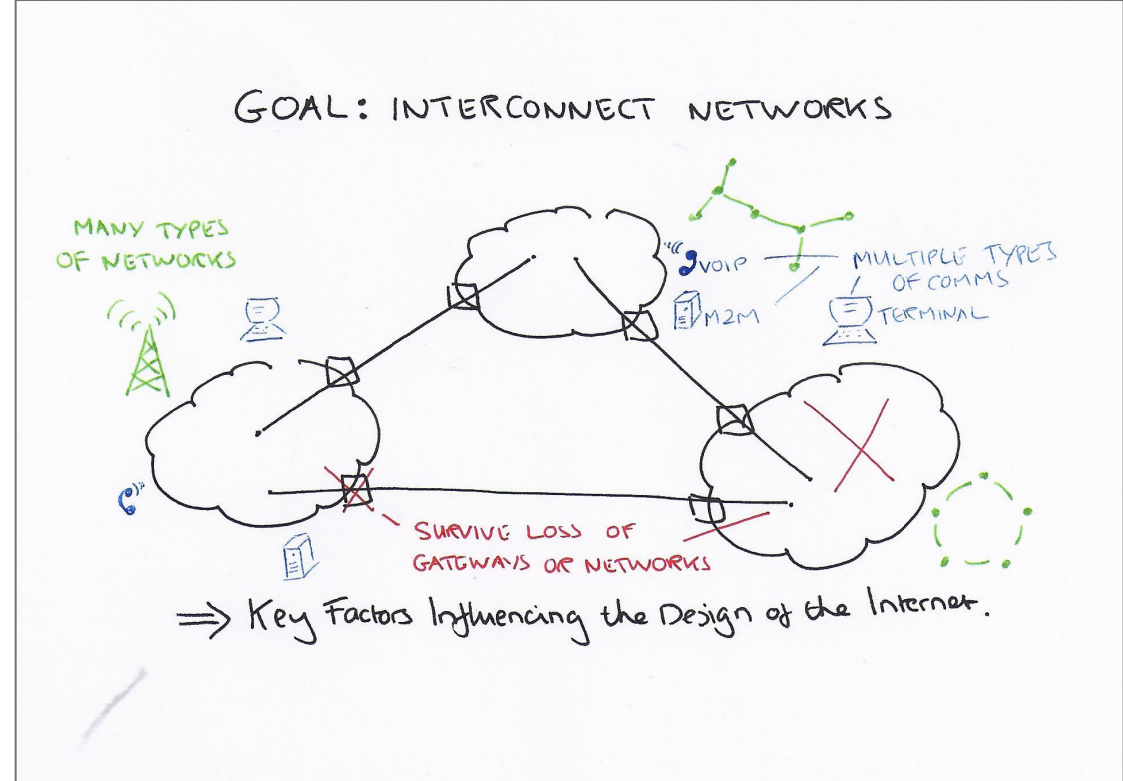
Digital Twin as a Platform for urban information, communication, services

The City of Rotterdam Example



3. Government as an Innovator

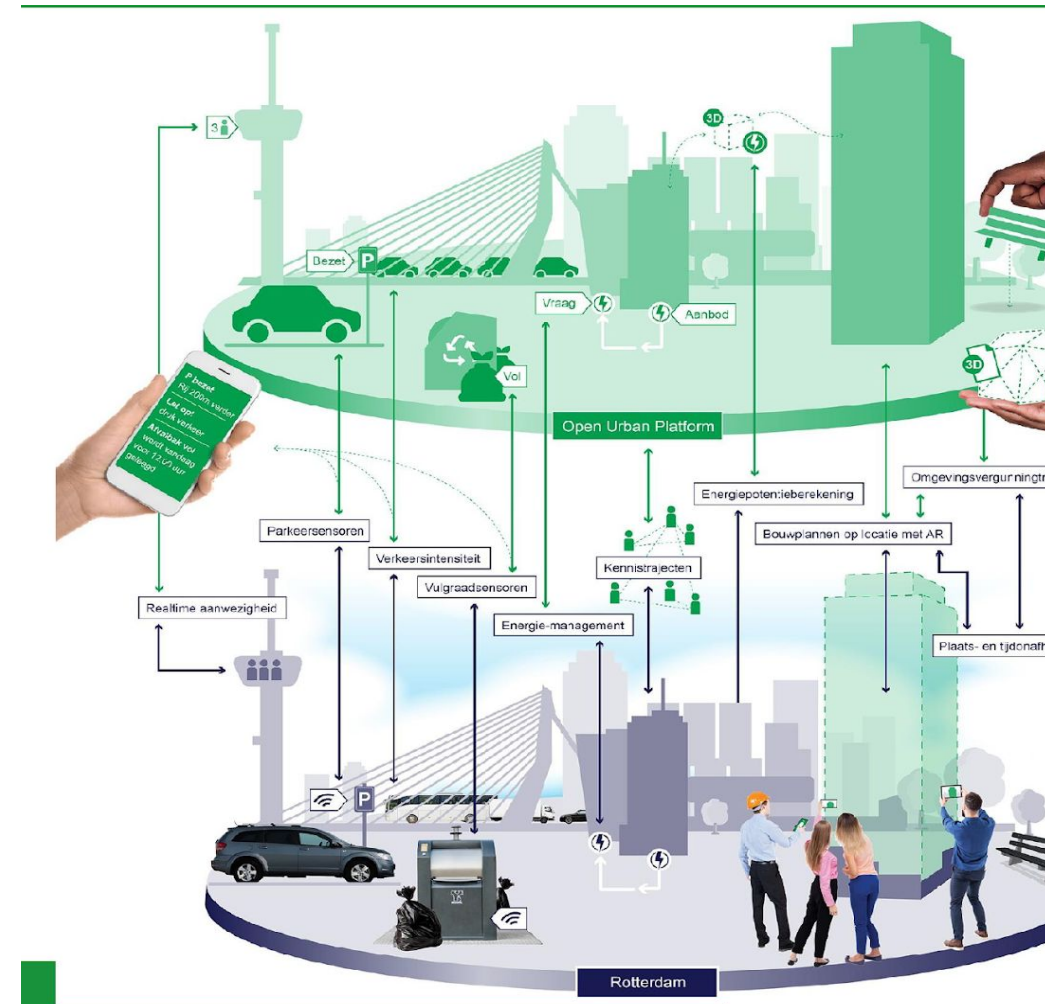
- ✓ Invest, Act, Innovate when private does not (yet)
- ✓ Long Term Goals, 'Moonshot'
- ✓ Accept failure as an acceptable result
- ✓ Invest, act if public purpose is too important to be left to private sector alone



Government as an Innovator

Rotterdam Municipality about the city's Digital Twin:

“Let us lead in the development of a Digital Twin, because if we don't we know Google will do it instead...”

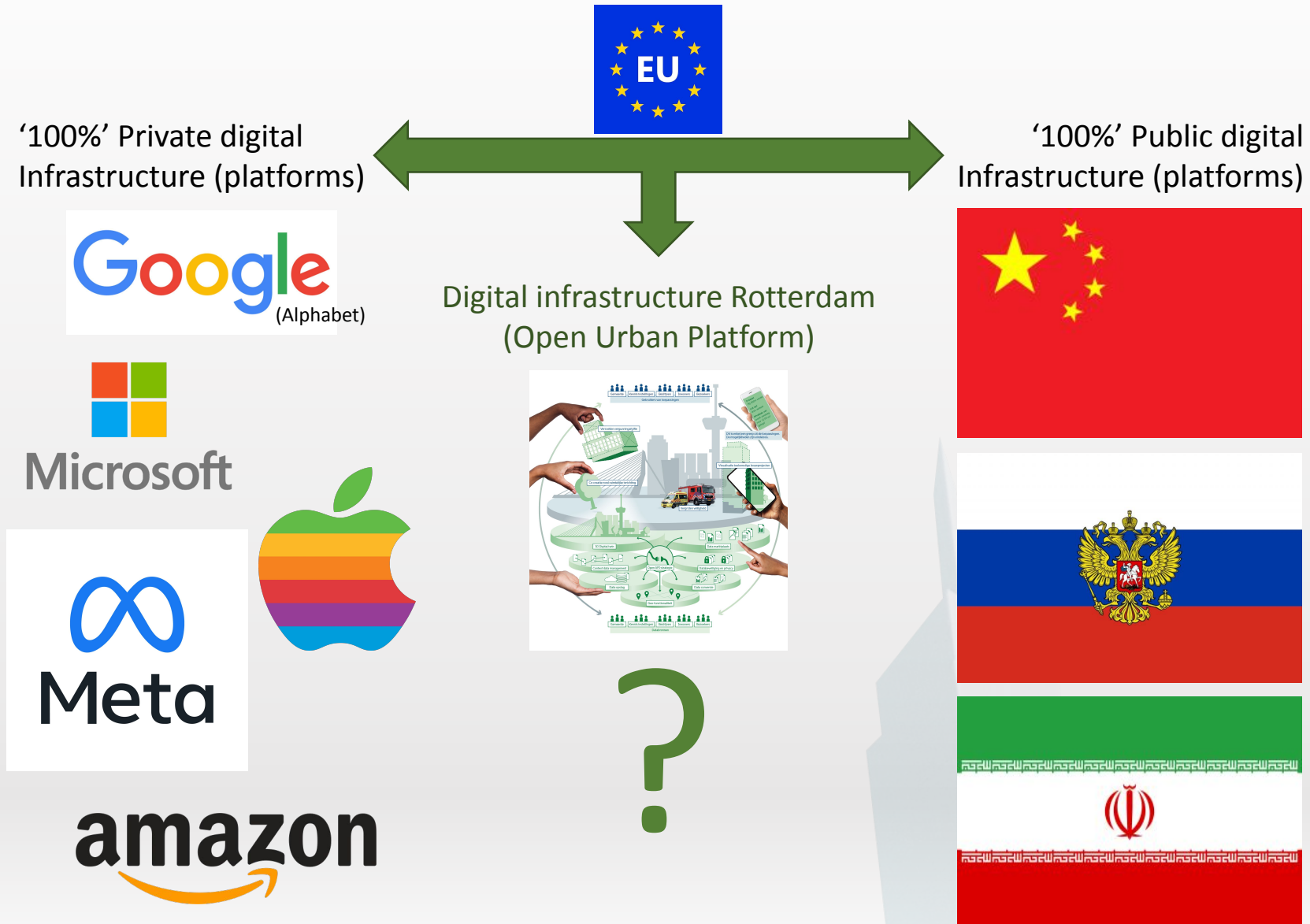


4.

Governance



Governance model public-private partnership



IF Digital Infrastructure, including Digital Twins and Open Urban Data Platforms are too important to fail, if it must be regarded as a mission-critical utility, then what should the Governance of such tech look like?

Who should own it?

Bundled versus Unbundled Business Architectures



One airport serving multiple competing airlines...

One platform (of platforms) with commercial services on top (?)



Tech Governance...

Data Utility

Algorithm Register

Sensor-in-public-spaces register

Framework for Digitalization

Rules for AI use

Etc.



5.

Data has to be on the move
(and should not get lost in translation)



The case for the *un-silo-ing, normalization and platformification* of data



MIMs ensuring Interoperability

Minimal Interoperability Mechanisms – practical tools that can be used by communities of any size to tackle the challenges of a local data ecosystem



Minimal to ensure:

no unnecessary complexity or time-to-implement



Sufficient Interoperability to allow:

“Good enough” integration of systems



Clearly defined Mechanism so that:

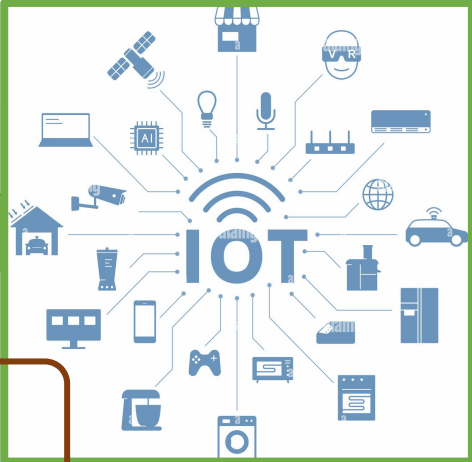
It is easy to determine if a product or service is compliant

Rotterdam Digital Reference Architecture

(high level)



Users



Applications



Open Urban Data Platform / Other Data Platforms

Cloud

Network Architecture

Fog/Edge Computing

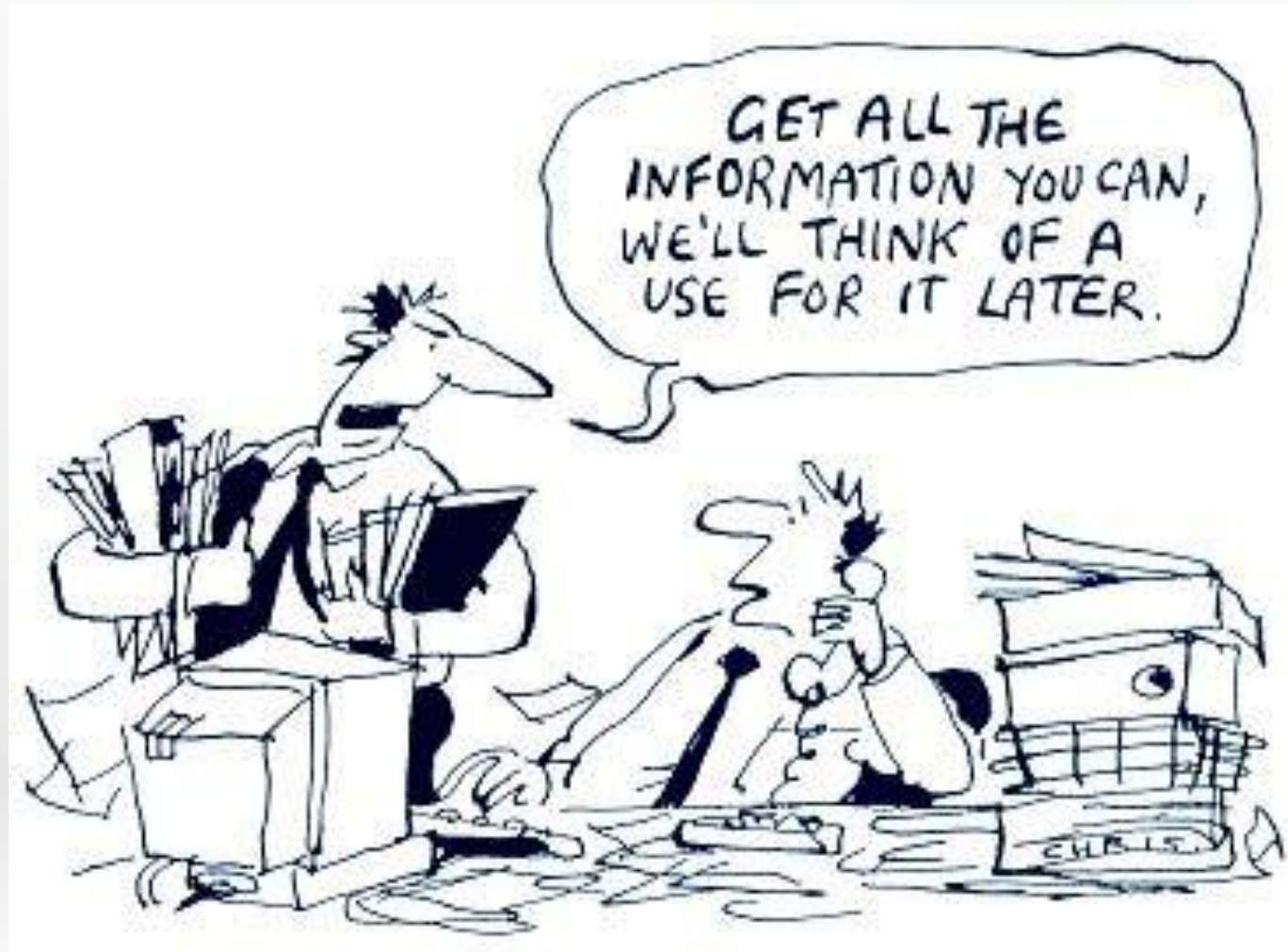
On-site
Data Storage

Mobile 3/4/5G | Longe Range Low Power Wireless: LoRa, NB-IoT, LTE-M |
Short Range: Wireless Zigbee, RFID, Bluetooth, other

Satelite

Fixed Broadband Infrastructure | Cable, Fiber | Symmetric, Assymetric

Mitigate the Open Data craze: Purpose, purpose, purpose.





CYBER CRIME

COMPUTER

INTERNET

HACKER

DATA

SECURITY

CRIMINAL

INFORMATION HACKING

SPY

THIEF

SAFETY

SECURE

LAPTOP

WEB SYSTEM

THEFT TECHNOLOGY

DANGER

DIGITAL

PHISHING

STEAL

CODE

COMMUNICATION PC

MAN

IDENTITY

PASSWORD

VIRUS

STEARLING

PROTECTION

NETWORK

SECURITY

HACKER

DATA

CRIMINAL

INFORMATION HACKING

SPY

THIEF

SAFETY

SECURE

LAPTOP

WEB SYSTEM

THEFT TECHNOLOGY

DANGER

DIGITAL

PHISHING

STEAL

COMMUNICATION PC

MAN

IDENTITY

PASSWORD

VIRUS

BUSINESS ATTACK

BINARY

PRIVACY

ONLINE

DATA

COMPUTER

CRIME

INTERNET

HACKER

SECURITY

CRIMINAL

INFORMATION HACKING

SPY

THIEF

SAFETY

SECURE

LAPTOP

WEB SYSTEM

THEFT TECHNOLOGY

DANGER

DIGITAL

PHISHING

STEAL

COMMUNICATION PC

MAN

IDENTITY

PASSWORD

VIRUS

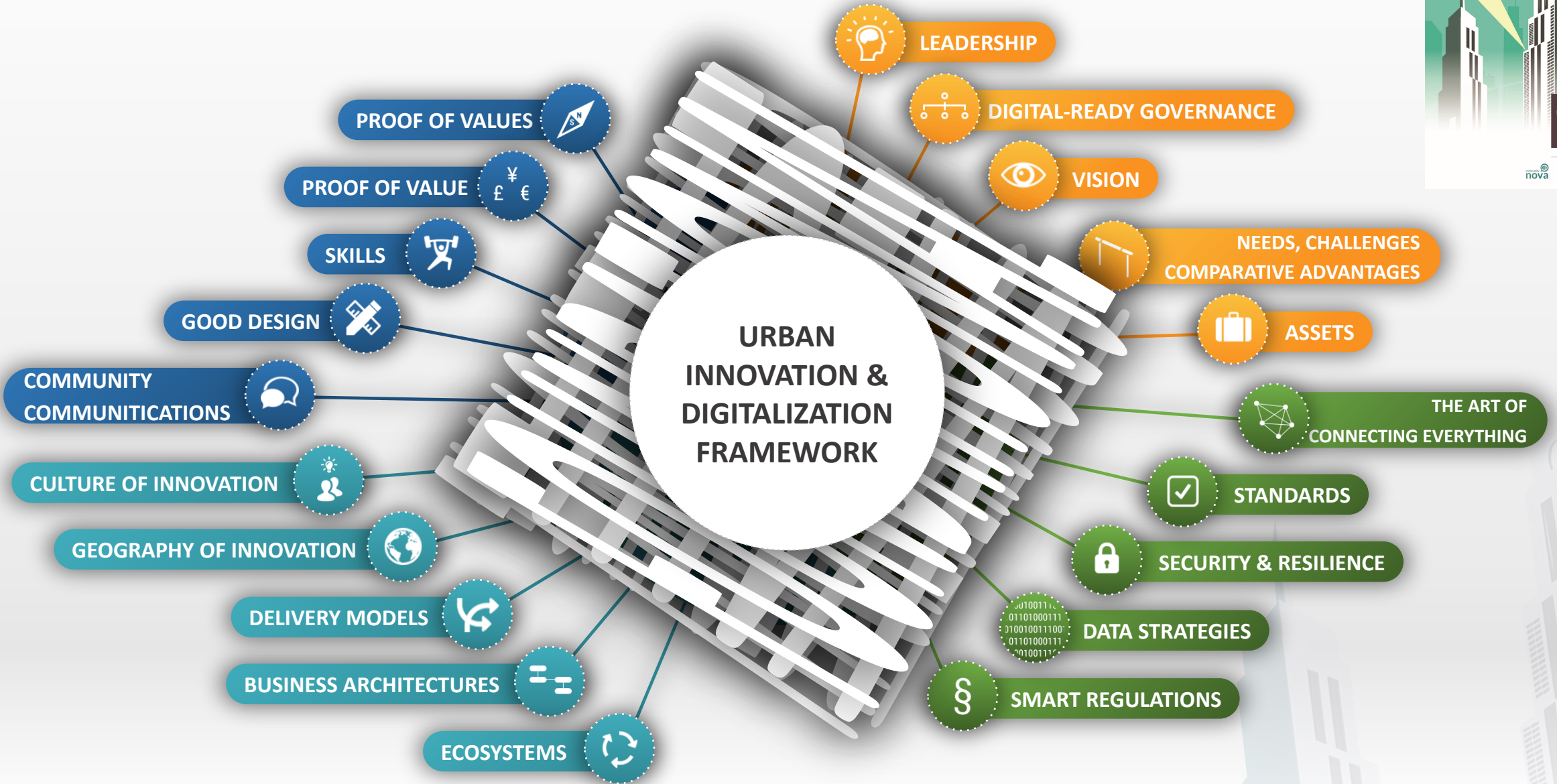
**NOT
the
Future**



WEB 3.0



6. Building a *New Digital Deal* – and strategize accordingly



Digital Transformation Assessment Tool

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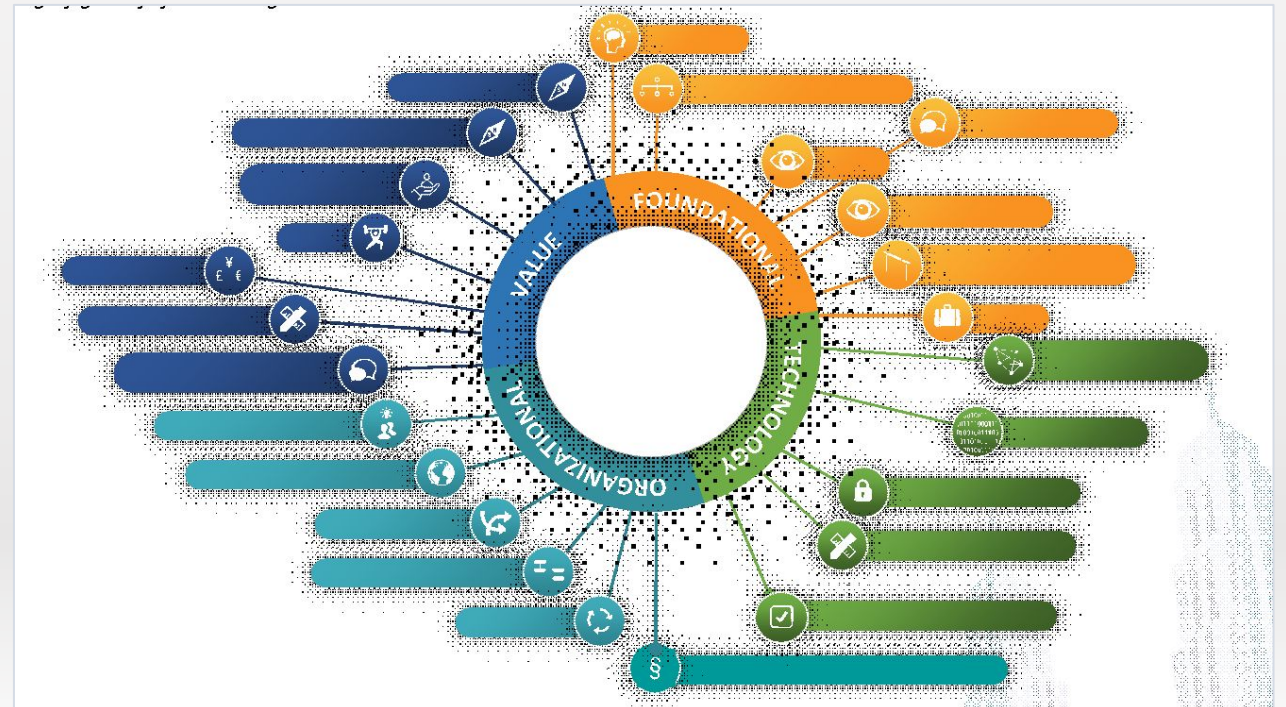


The Assessment Tool for Digital
Transformation
in Cities and Regions

Version 2.0 – December 2023

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- Assessment Tool to audit a city's Digitalization strategy and its Digital Transformation at large
- 25 Building Blocks, 200 Questions
- Hands-on support throughout the audit: a real human job!
- 'Beta' testing Dubai, Reykjavik
- Available per Q1 2024



7.

Not leaving anyone lost in translation

(The expanded case for Digital Inclusion & honesty on the topic)





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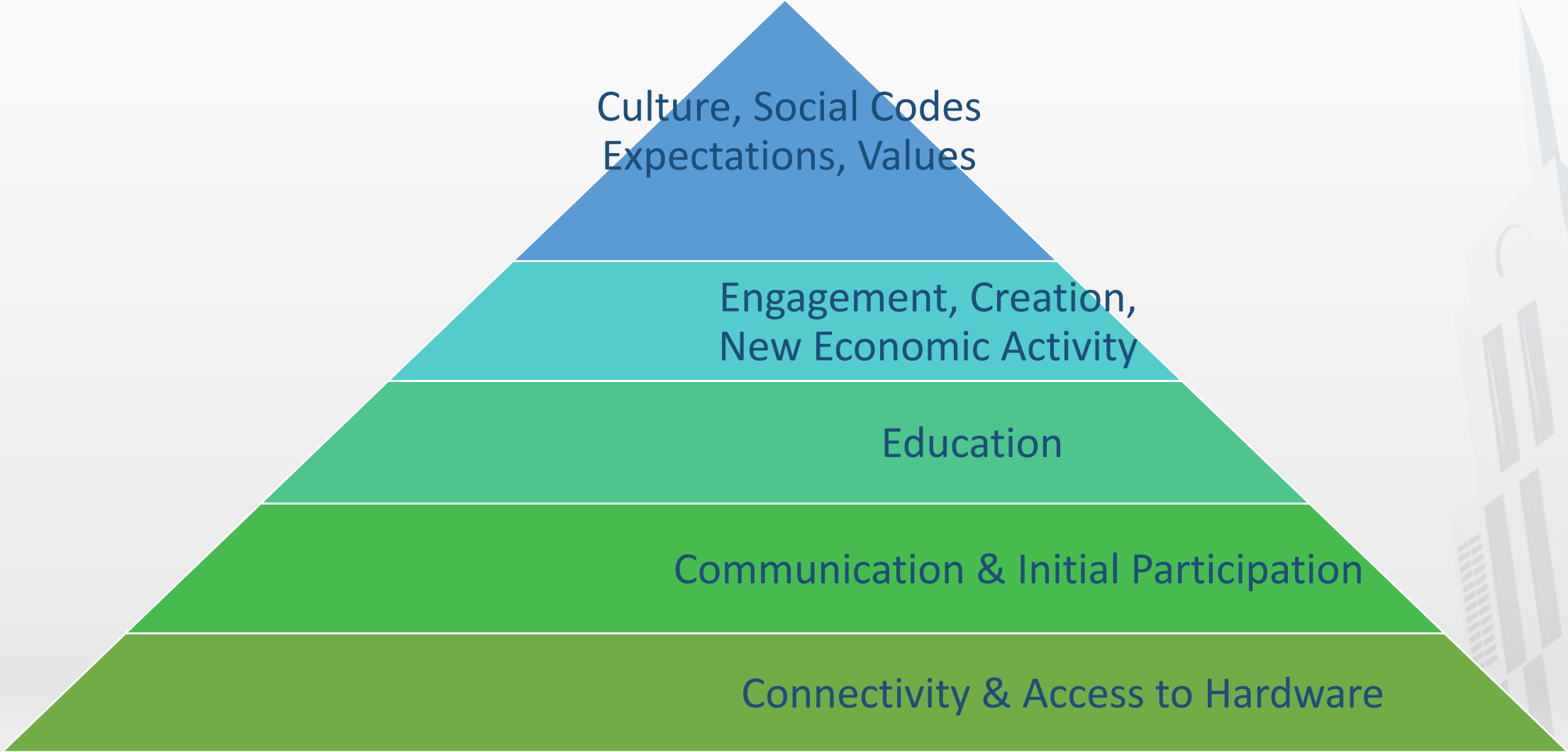
Oh, and while you are at it: two portions of MIMs and BIMs on the side please



Purpose!
Design Thinking, Citizen
Engagement.
Stay Honest.
Be prepared to run with
what you harvest
Competence generates
trust



Becoming Better Connected: Digital Inclusion



The City & the Multiverse: *Interaction, Engagement, Communication*



“If you can game, you can participate”



Let's become better connected.
We owe it to ourselves, our communities

and

We owe it to future generations



Thank You.

Bas Boorsma

Urban Innovators Global
Thunderbird School of Global Management

Bas.boorsma@urbaninnovators.global

www.urbaninnovators.global

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A stylized, light blue and grey graphic of a city skyline with several skyscrapers of varying heights and architectural details, positioned in the bottom right corner of the slide.