Towards A New Digital Deal

How to prepare for effective digitalization strategies for our communities

Bas Boorsma
Introductions

▪ 16 plus years in ‘smart cities’
▪ CEO of TASC, the academy for smarter communities
▪ Rainmaking Innovations
▪ Adjunct ASU
▪ 11 years at Cisco, Digitization Lead, Northern Europe (2015-17)
▪ Author of *A New Digital Deal*
▪ Born in the Year 29 BG
Digitalization provides us with the tools and organizational models to do things better - and differently
Paradigm Shift Hallmarks of Digitalization

- Principle of Networkedness, Distributedness
- New power relationships
- Complexity
- A New Order of Digital Reputations
- (Exponential) Speed of Change
- Cost of Copy = 0: Zero Marginal Cost Economy
- Simulation
- Personalization as the ‘new consumerism’
- ‘Platformification’ of the Economy
Some of the Smart City Stumbling Blocks

1. The Game of the Name (& Taxonomy in general)
2. Technology Extravaganzas & Solutionism
3. Lack of Clear Objectives, No Plan to Replicate or Scale
4. Status Quo. From Silos, Procurement Models, to Installed Base
5. Lack of Technology Understanding
6. Design Challenges
7. Digital Divides ‘2.0’
8. Myths and Not-so-true-isms that have a Tendency to Linger
Wireless is pretty much the answer to every connectivity need. It’s cheaper than deploying cables and fiber. Moreover, 5G will handle everything.

“Data is the New Oil”

“Data should open up. Free it. The world will become a better place.”
Community Digitalization

Value

Foundational

Technology

Organizational

Leadership

Proof of Value

Skills

Needs, Challenges

Comparative Advantages

Digital-Ready Governance

Ecosystems

Vision

Value

Assets

The Art of Connecting Everything

Smart Regulations

Data Strategies

Security & Resilience

Standards

N

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CAaaS

Business Architectures

Ecosystems

Delivery Models

Good Design

Community Communications

Culture of Innovation

Geography of Innovation

Leadership

Vision

From “A New Digital Deal” – (c) 2017 – 2018 Bas Boorsma
The Art of Connecting Everything

Smart City Reference Architecture
Converged Street Automation Use Cases

MOBILE APPL Packaging Management
PARTNER APPLICATIONS AND URBAN SERVICES

City Management Software Layer(s)

Cyber Security
Edge + Fog Analytics

Digital Network Architecture

Internet Wireless Wireless/WAN (3G/4G/ Wimax) LoRa / B-to-Tect

Wired WiFi WiFi-P 3G/4G

LoRa NB IoT Sigfox Fixed Wimax WiFi Vehicles

Water Parking Street Lighting Waste Environment Safety and Security Traffic People Street Furniture
How to define IoT & Data Platforms
Contemporary Myths, and Points of View to Review

- “Our platform makes all other platforms obsolete. You’ll just need one – ours.”
- “Even without purpose defined, City Open Data initiatives are a good thing.”
Traditional data analytics vs city open data initiatives

1. Define Goal, Purpose (ie reduced traffic congestion)
2. Build Data Management Model (algorithms, flows, decision variables, constraints)
3. Decide what data you actually need to fit the purpose

*The more criteria, the more concise, the more effective the model*

...versus what we often do in Smart City initiatives... (pun intended)

1) Converging as much data together as we can (open data initiatives, city data warehouses etc)
2) Hope data will carry value to others
3) Thin on purpose (but expect that this will emerge out of thin air)
4) Hope a market of data will mature
5) Organize hackatons, a little gamble, hoping someone else will define purpose (and call it innovation)
Vertically bundling or **un**bundling today’s and tomorrow’s digital assets

![Diagram](image)

**Service Layer (retail, billing, content etc)**

**Active Network Service Layer**

**Passive Layer: Physical Infrastructure**

**Layer ‘Zero’ - ducts, subway tubes, sewage conduits**

**Right of Way**

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**Traditional vertically integrated business architectures of telcos and utilities**

**Vertically unbundled**

**CO-ops - vertically integrated business architecture**

**Vertically unbundled business architectures**

The bundled and unbundled layers in energy and broadband business architectures
From initial drawings to Proof of Value
Digitalization-ready Regulatory Approaches

“Regulations 1.1”: amending existing rules to accommodate new insights, technologies, methods, business models tied to digitalization. Example: Air Quality Measurements

“Regulations 2.0” – creating entirely new regulatory frameworks for situations, services, products, trends that are entirely new (as old rules may not apply, or not prove effective). Example: Airbnb, Uber vs old taxi business
Skills

The trends that determine

- More Technology, more complex technology
- Digitalization is rendering millions of jobs obsolete within a small number of years
- Many new jobs that will be created are job types that simply did not / do not exist
- Single skill job is on its way out
- A new media ecology has emerged and continues to evolve
- Shift in Power Relationships
- Principle of distributedness is effecting the way we work, produce, learn, decide
- Digitalization, A.I. forces us to enhance ethical design
The Academy for Smarter Communities (TASC)
Helping cities enhance skills and competencies of relevance
Ethics – the core challenges

- Technology: Presumed Innocent
- Taken on “Interface Value”: Do we still know what’s under the hood?
- Dealing with exponential change
- The abstract nature of accountability in the digital age
- From Calculation to Simulation
- Digital Divides 2.0
- Who guards the guardians?
Ethics – Three Important Questions

▪ How can we integrate ethical considerations, checks & balances into our work?

▪ How to articulate Human Rights in the age of digitalization? (From a debate solely focused on security and privacy to the larger angle)

▪ What do new, more dynamic, better deals on data look like?
Scientific/Academic World needed more than ever to achieve A New & Better Digital Deal

1. IoT & Data Platform – Comparative Research
2. Blockchain applications for Cities
3. Relationship long term between broadband investments and smart city leadership in later years
5. Effectiveness of City Open Data models
6. Data “Utilities” to serve the City?
7. Vertically Bundled vs Unbundled Business Architectures (fixed infra, 5G, data management)
8. Ethical checks & balances
Let's Build A New Digital Deal Together!

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