Progressing towards the City as a Platform

IoT Week, June, 2019
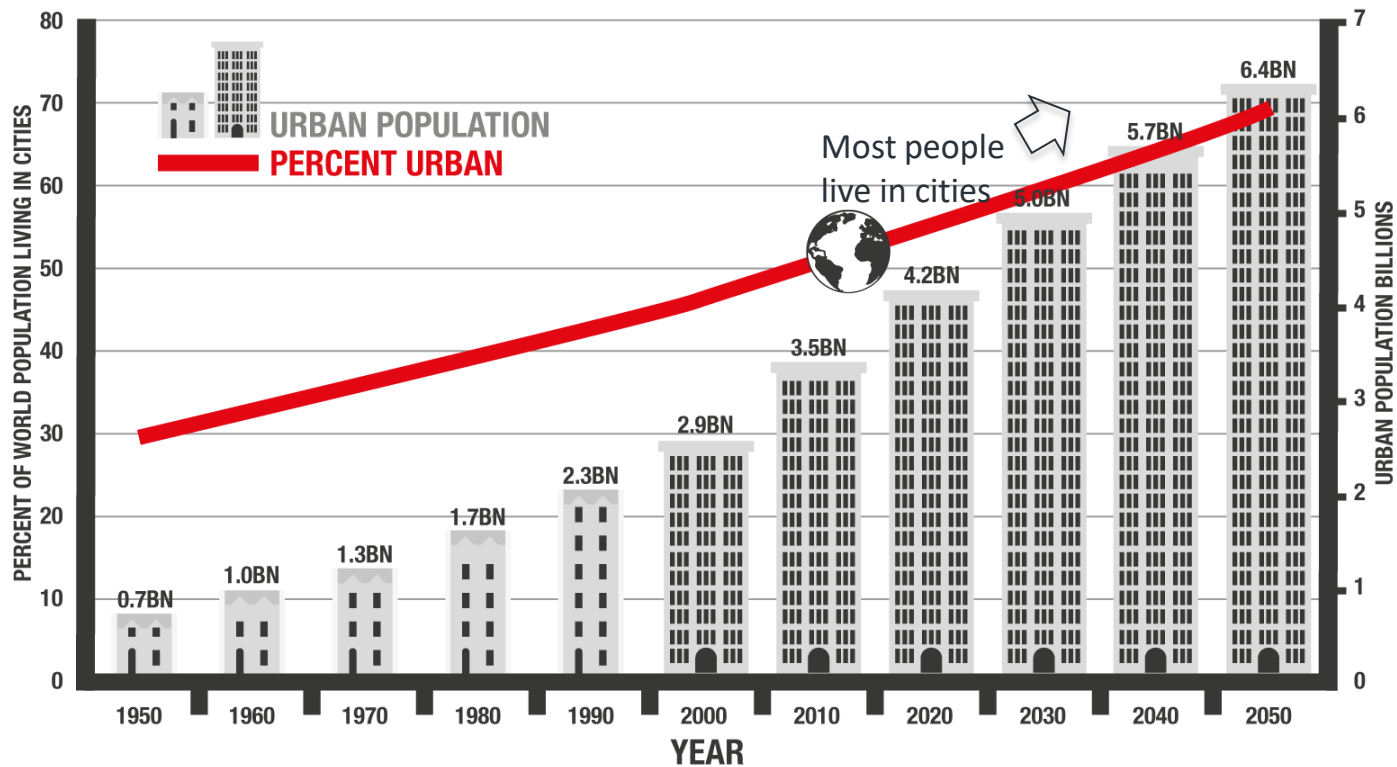
Paul Wilson

Founder Bristol Is Open, co-Founder UK5G
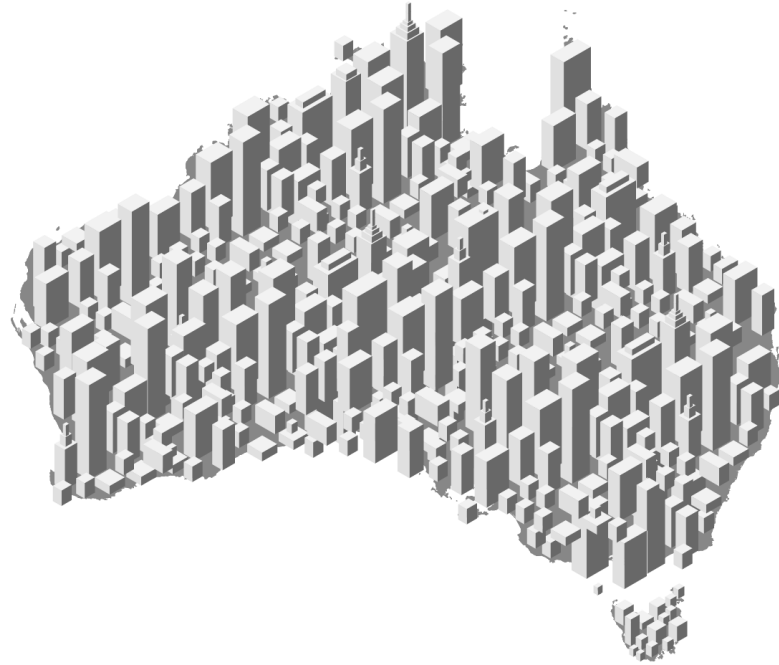
Originator City as a Platform Manifesto
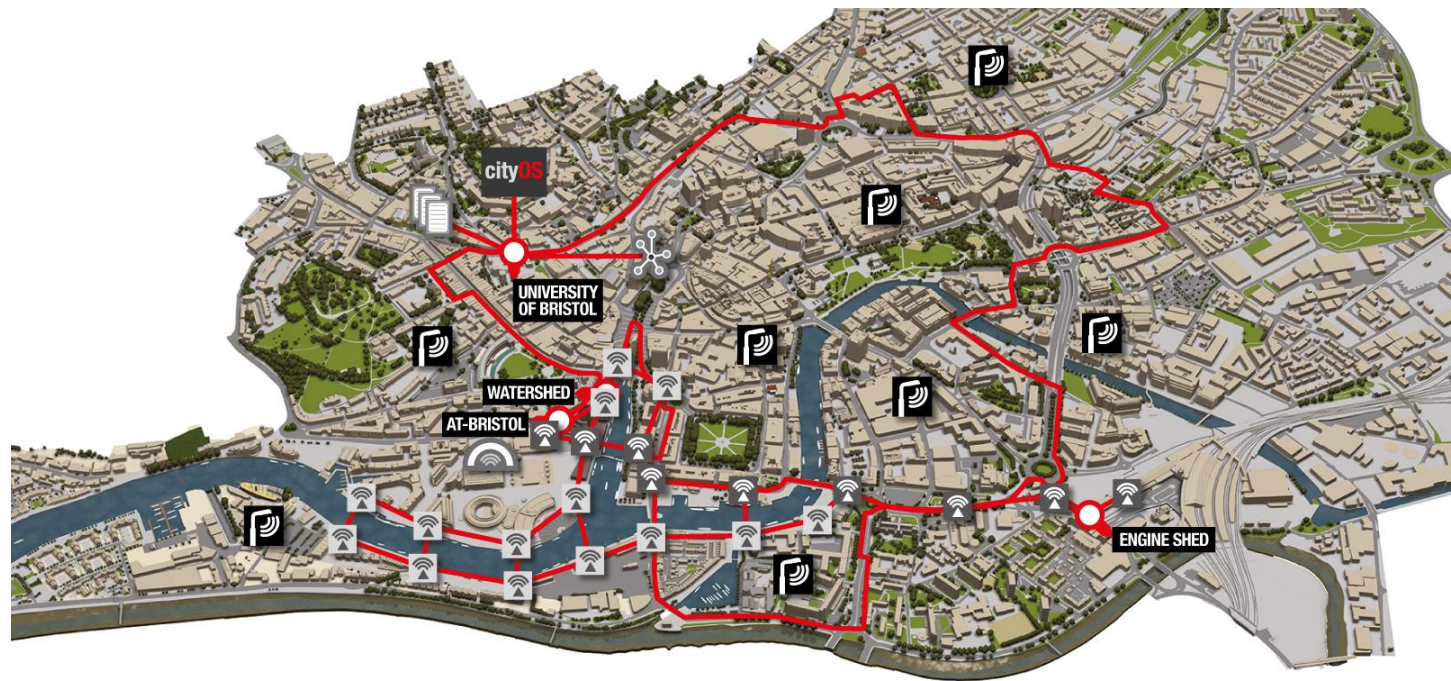
Chief Marketing Officer, TM Forum

1m more people are born-or-move-into a city a day

An area the size of Australia will be urbanised by 2050

2015 Bristol Is Open: Fibre Core, 5G & IoT 'canopy of connectivity' across the city

ACTIVE NETWORK

— Fibre network

Core network nodes with accessible rack space

Network emulator

cityOS Software

High performance computer

Data Dome

WIRELESS NETWORK

Main hubs

'Sub-hubs'

3G, 4G, LTE & 5G Technologies
60GHz & Experimental wireless

RF MESH NETWORK

1,500 lamp posts

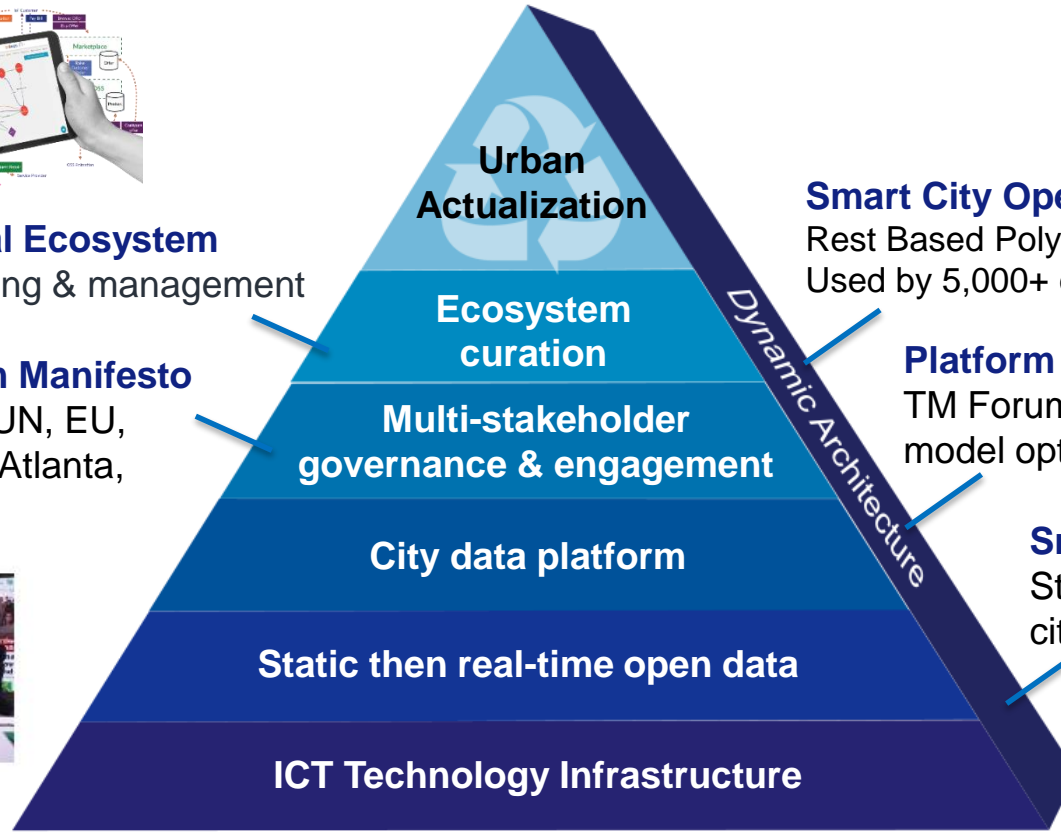# 2016 Emerging consensus on how to grow the City as a Platform

tmforum

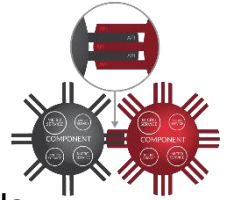**Digital Ecosystem**
Mapping & management

City as a Platform Manifesto
180+ signatories (UN, EU, Dubai, Barcelona, Atlanta, IBM, ZTE…)

Smart City Open APIs,
Rest Based Polymorphic APIs, Used by 5,000+ developers in 65+ countries

Platform Data Models FIWARE, TM Forum & others collaborate on model optimisation

Smart City Benchmark
Standards based goal setting, city peer-to-peer progress

5G connectivity
Mass digitization

Pyramid layers (top to bottom):
- **Urban Actualization**
- **Ecosystem curation**
- **Multi-stakeholder governance & engagement**
- **City data platform**
- **Static then real-time open data**
- **ICT Technology Infrastructure**

Dynamic Architecture
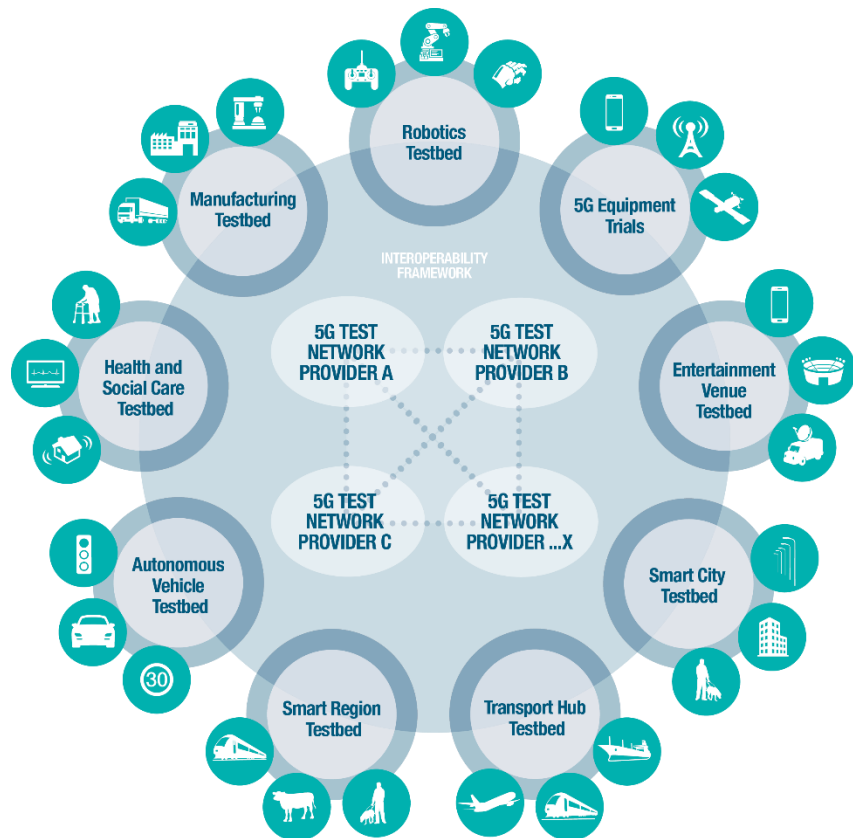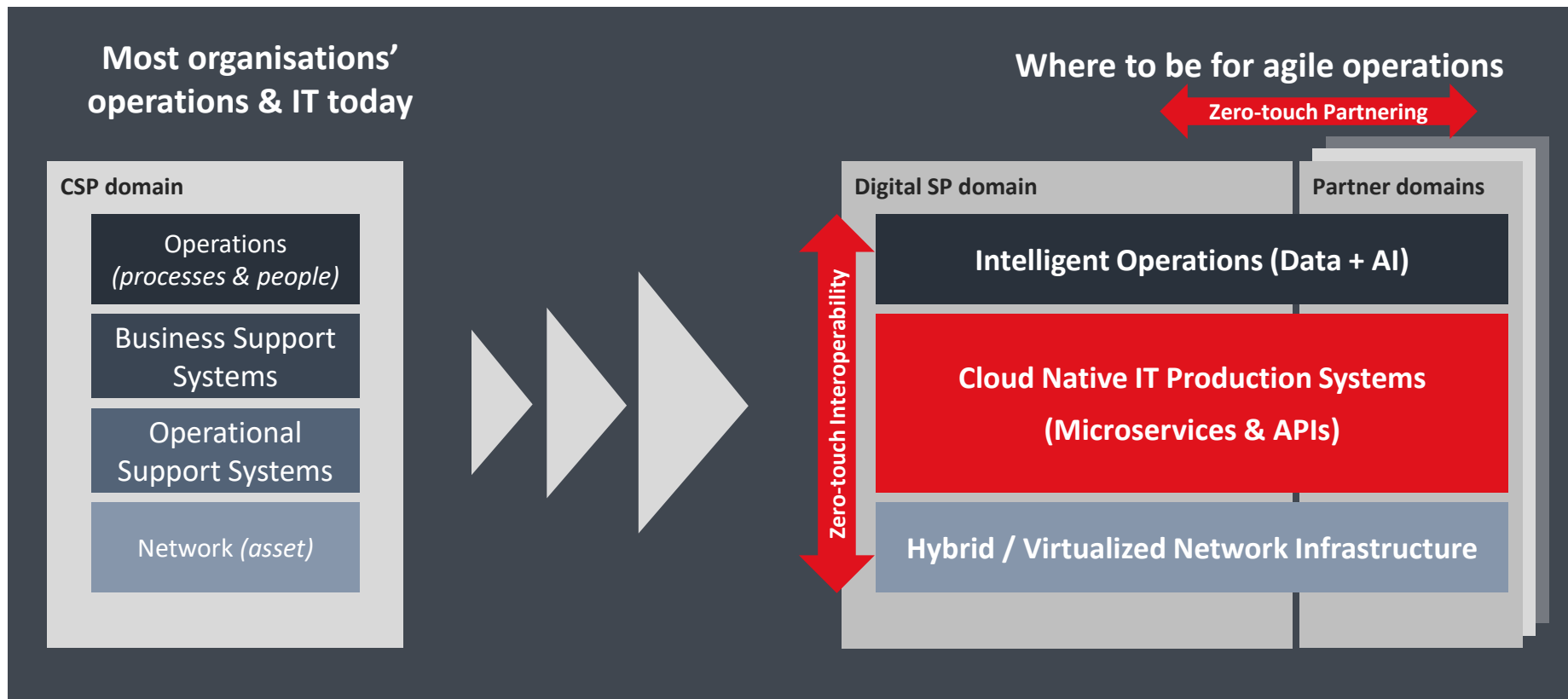
2018-19 UK 5G Tesbeds & Trials - £250m R&D programme + the Forum's Catalyst programme

TM Forum Catalyst Programme

2019 Open Digital Framwork: Agile & Intelligent Operations for a 5G World

tmforum

Telecoms and other industries are moving to the cloud to create agile intelligent operations

Most organisations' operations & IT today

CSP domain
- Operations *(processes & people)*
- Business Support Systems
- Operational Support Systems
- Network *(asset)*

Where to be for agile operations

Zero-touch Partnering

Digital SP domain

Partner domains

Zero-touch Interoperability

- **Intelligent Operations (Data + AI)**
- **Cloud Native IT Production Systems (Microservices & APIs)**
- **Hybrid / Virtualized Network Infrastructure**

Transformation driven by principles of Simplification, Automation & Intelligence

2024: Moving towards the 5G enabled Right-Time City
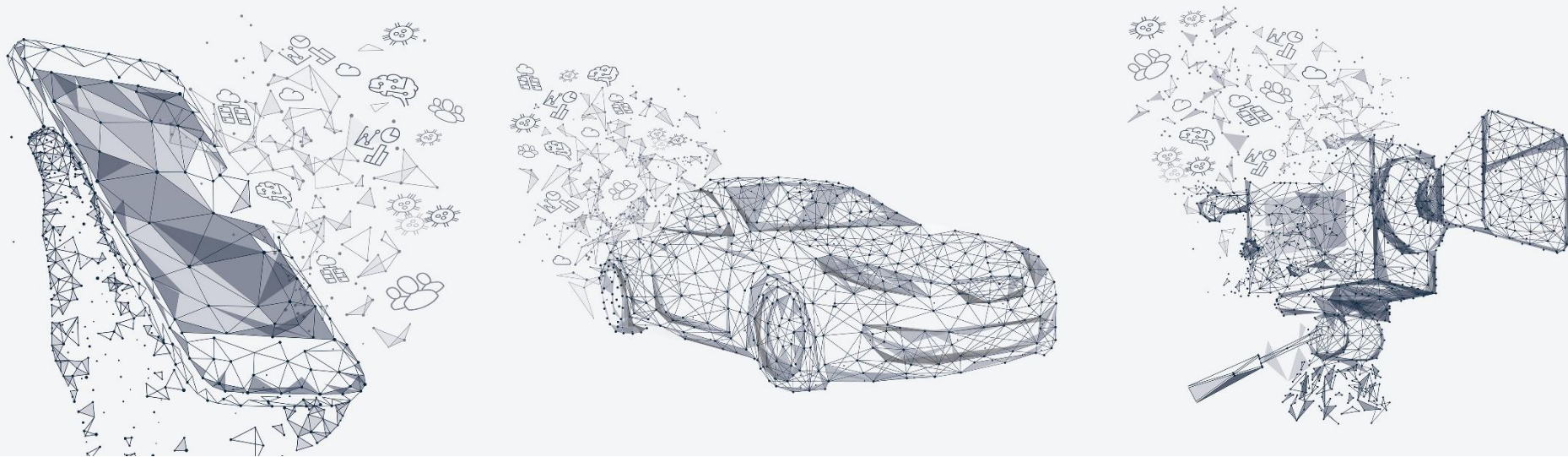
- Continuously innovating: real-time, data-driven leveraging augmented intelligence
- Demand true partnerships: trusted; agile; innovative domain experts
- Dependent on partner-based platforms and open ecosystems

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