Microsoft

IoT in Action

#IoTinActionMS

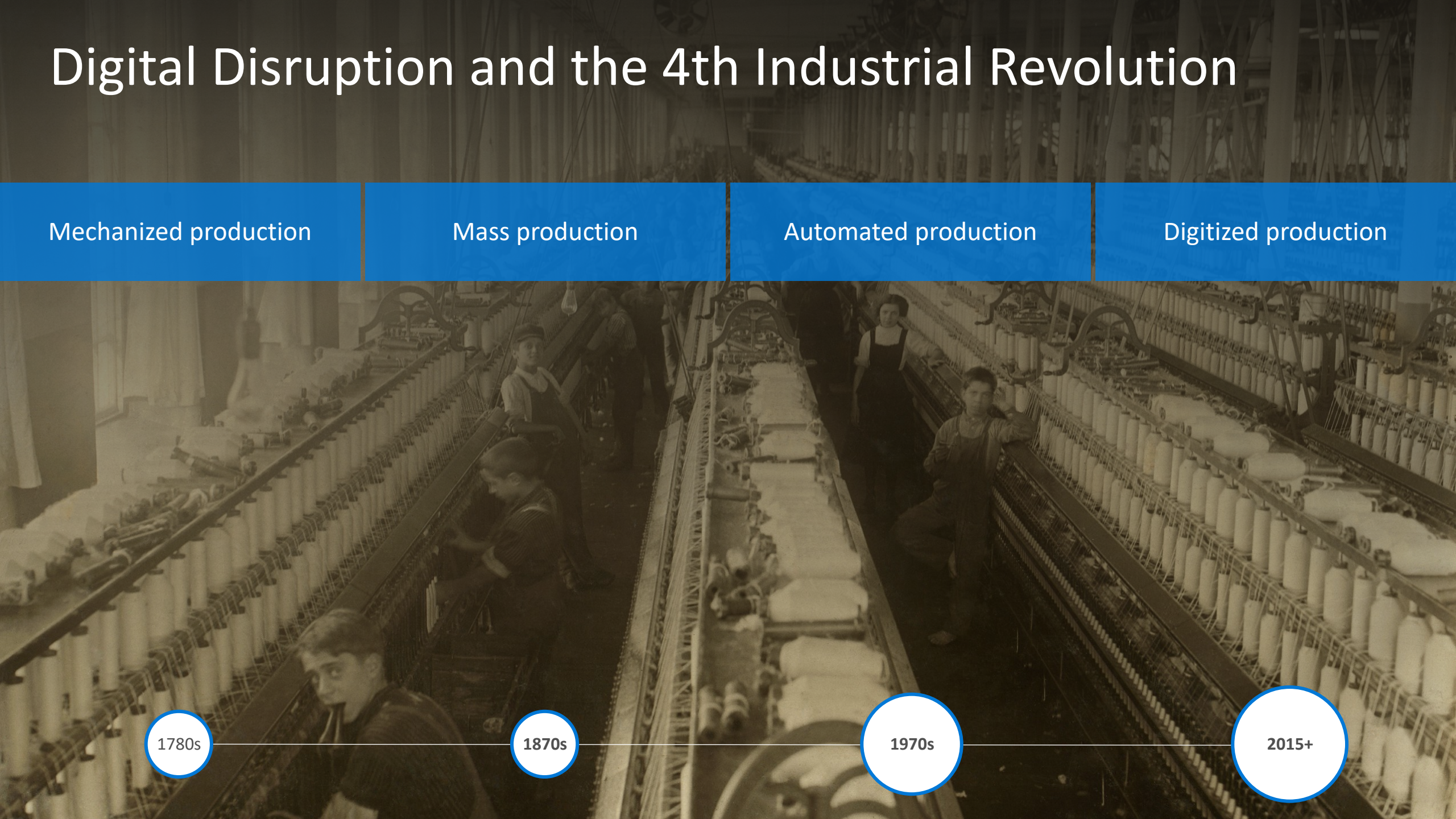
Microsoft

Smart City Transformation in Action

Andrew Smith
General Manager, IoT Strategic Accounts & Programs
Microsoft

IoT in Action

Digital Disruption and the 4th Industrial Revolution



Mechanized production	Mass production	Automated production	Digitized production

1780s — 1870s — 1970s — 2015+

ERA of CITIES

1.7 billion

Millennials today, choosing the best City for living

6.5 billion

by 2050 (**70%** of Total)

80%

of the world's **ENERGY** is consumed in cities

75%

of the world's Carbon **Emissions**

More **MOBILES** than Citizens

60%

of citizens have access to smart devices

80%

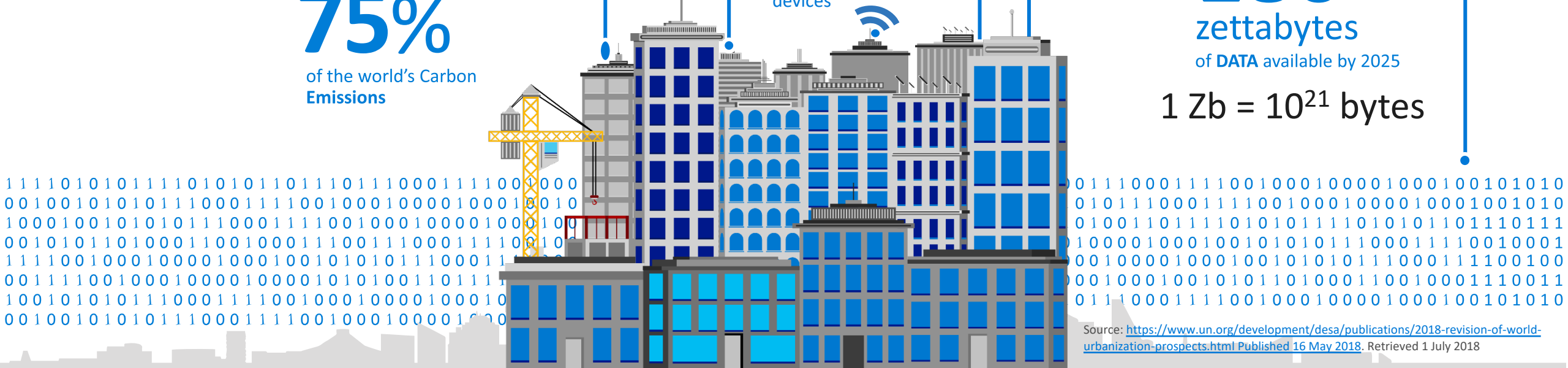
of **GDP** is created in cities

180

zettabytes

of **DATA** available by 2025

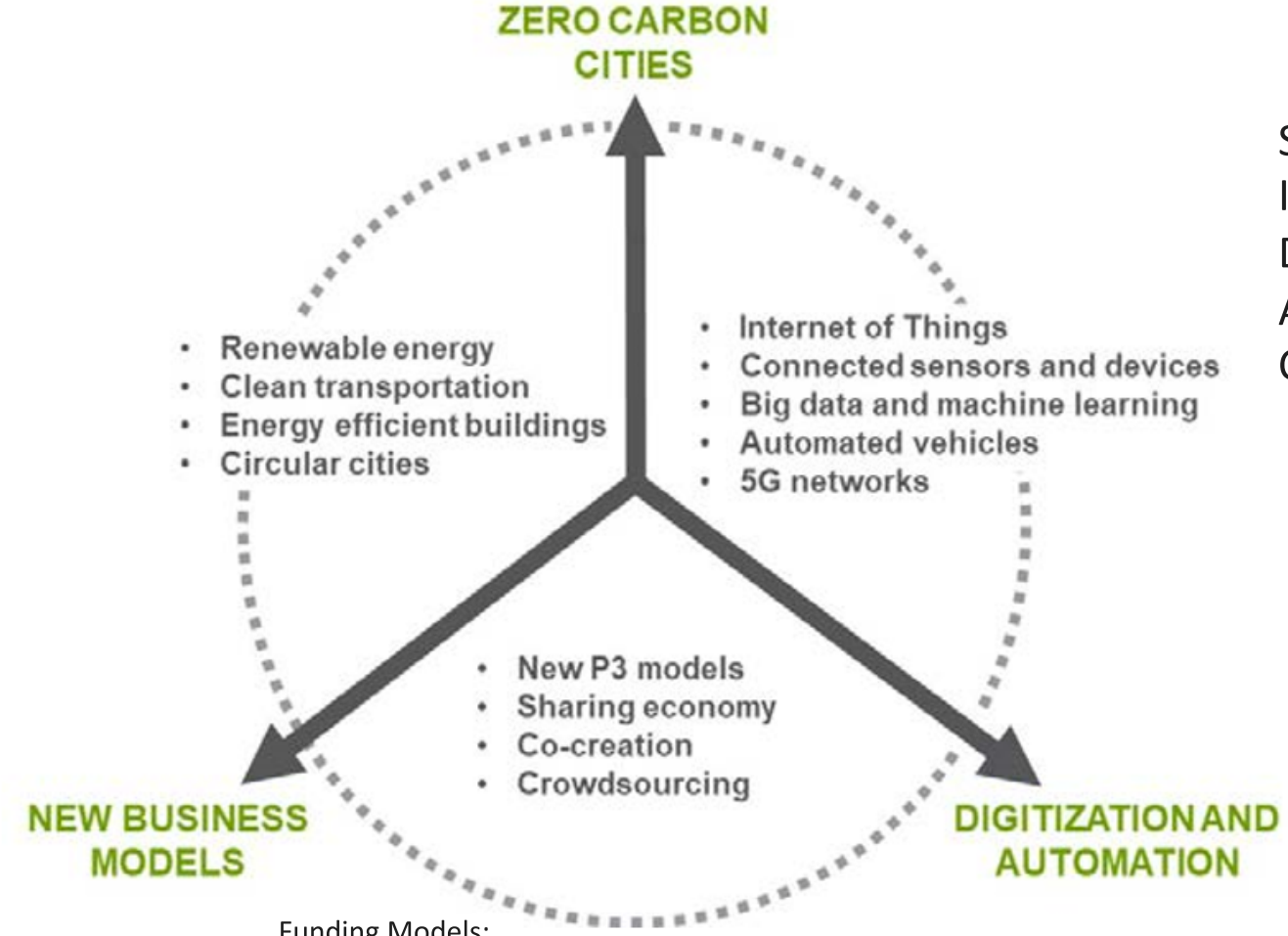
1 Zb = 10^{21} bytes



Source: https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html Published 16 May 2018. Retrieved 1 July 2018

Cities want change

3 vectors of change for Cities and Regions



Carbon Neutral
CO2 Emissions Reduction
Fossil Energies Reduction
Circular Economy

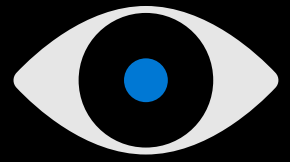
Sensor->Data as Service
IoT Platforms
DataLakes
AI (Understand Citizens)
Connected everything 5G

Funding Models:

- Public-private partnerships (PPPs)
- Energy savings performance contracts (ESPCs)
- Investment recovery thru Ads and Mkt,
- Social impact bonds (SIBs)
- EU Grants (Structural, H2020)

(Source: Navigant Research)

4 Steps of Digital Transformation in Smart Cities



1. City insights

Sensor proliferation

Data collection, transfer, storage and processing

New insights—understanding city operations more deeply

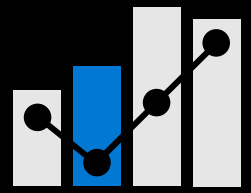
2. Operational efficiencies

Process engineering and city operations improvements

Predict the future based on past data patterns

Cost reduction and carbon reduction

Predictive operations



3. New business models

Service vs product orientation

Public-private partnerships

Energy-saving performance contracts

4. Features and rev streams

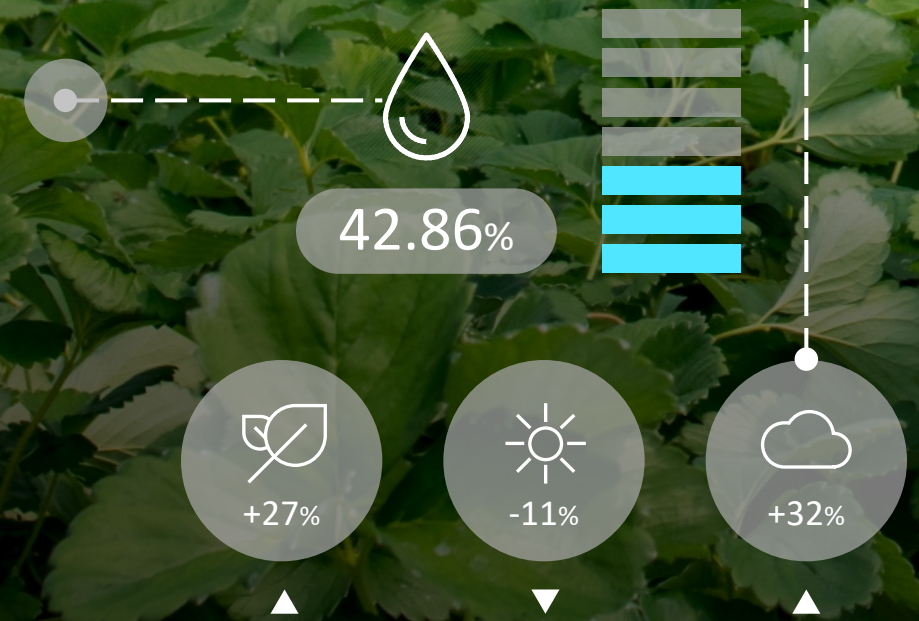
Enablement of ancillary businesses and new businesses to support Smart Cities.

Transformed organizations


Vision & strategy
Culture & capabilities
Business model & GTM
Technology

Value generation

The purpose of every digital transformation



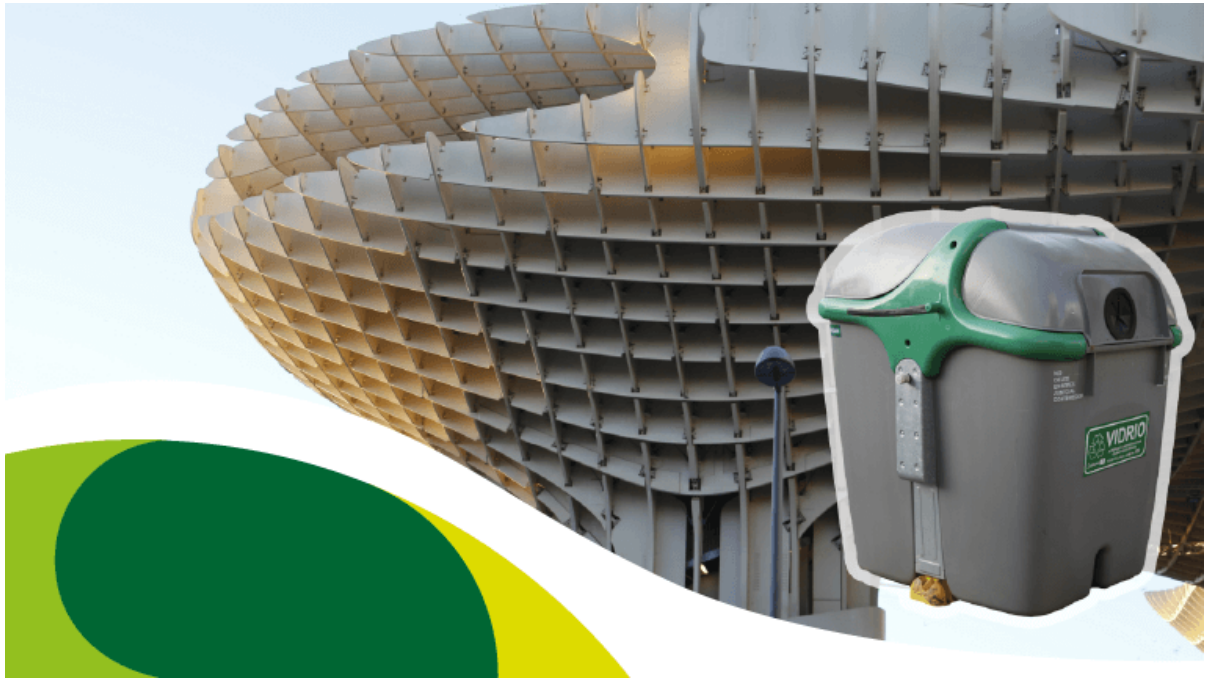
City of Seville (Spain)

Smart Waste Management

Quamtra, an Azure-based IoT system developed by WellnessTelecom, includes a hardware device for measuring waste container fill level and collect additional data, and a software platform for data management and visualization. These devices turn containers into smart items that generate real-time data about their status. That way, the collection manager receives useful information about the whole containers system, allowing them to make permanent adjustments on the collection routes, based on waste volume in containers. Alerts are generated during vandalism instances, floods or fire alerts, and the seasonality and dynamism of a city like Seville.

"With the information we received from the sensors and collection platform on containers' fill level, we were able to reduce the number of pick up rounds from 3 every 12 days, down to 1 every 7 days. This meant going from 100 rounds per year to 34, (66% Savings) and optimized routes, going from 3 static routes to 1 dynamic one, 400 less hours requiring a vehicle on streets per year, which also means traffic improvement and reducing noise and odours caused by collection trucks."

José Andrés Ferrete
Head of Urban Furniture - LIPASAM
Seville, Spain



Learn more

Watch video

WellnessTelecom

LIPASAM

NO8DO Ayuntamiento de Sevilla

CITY OF BREDA

Cloud solution reduces costs for the city while citizens can make informed decisions on the amount of water they use.

"Waterakkers is a project that brings everything together.… Citizens can see how much rain is falling, where the water is going, and how this system works … so it brings a consciousness like how do I keep my environment clean."

Bernie van den Berg
Alderman
City of Breda
The Netherlands

Microsoft Azure

Gemeente Breda

ireckon!

Telensa Microsoft smart CAMBRIDGE Qualcomm SAMSUNG kainos

Urban Data Project

Collect

Change the economics of data collection – with low cost multi-purpose AI sensors

Protect

Provide a trust toolset for cities – with privacy and transparency for cities and their citizens

Apply

Enable controlled data sharing and marketplace monetisation

Microsoft

“Art of the Possible”

John Koot
Director Alliances
John.Koot@OrangeNXT.com
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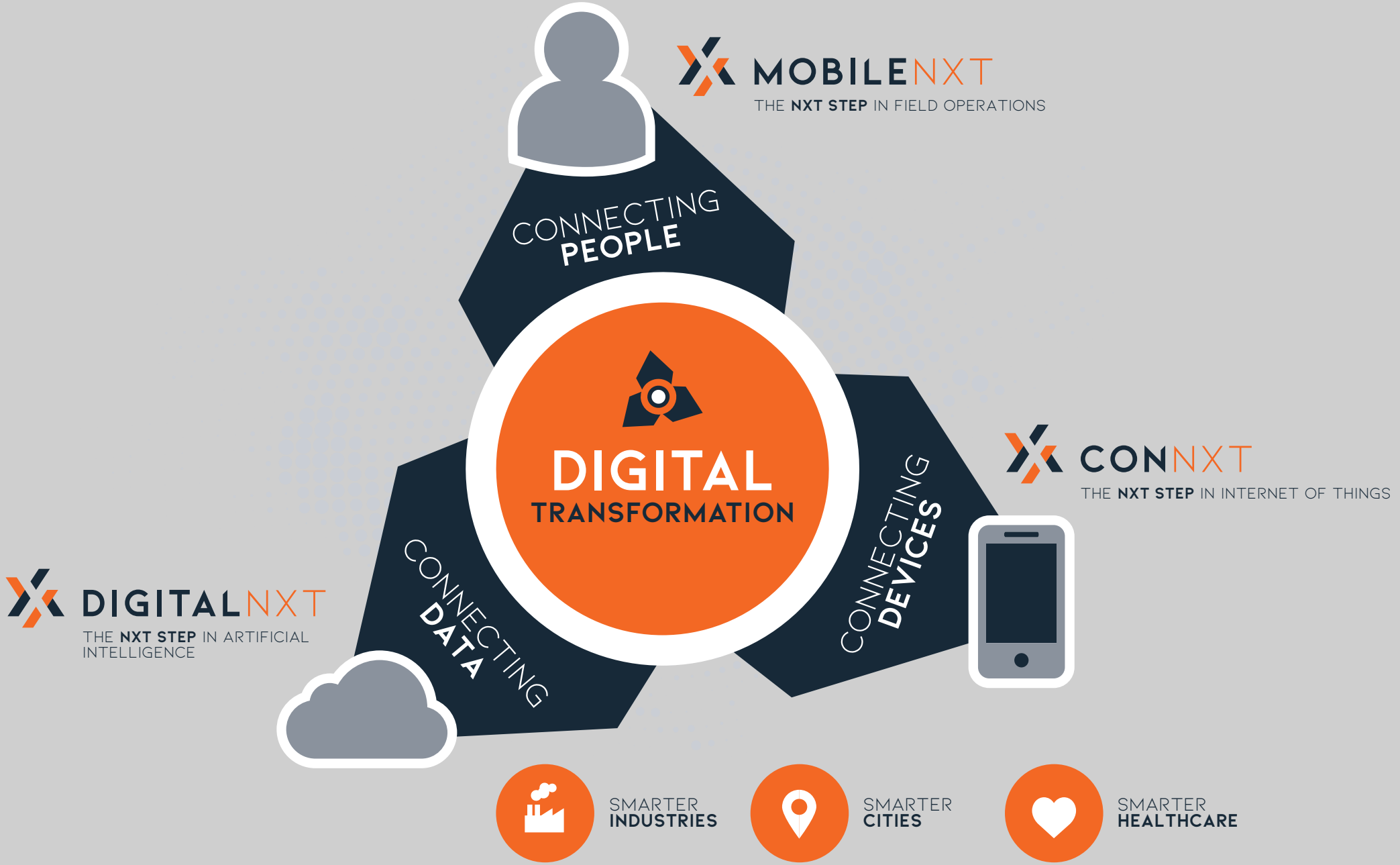
IoT in Action

ORANGENXT

ORANGENXT

- Part of the ICT Group
- Country Partner of the Year
- IoT Elite Partner
- AI Inner Circle Partner

*Focus on connecting **People**, **Devices** & **Data**. By delivering repeatable solutions (IP) that enable scalable future growth!*


MOBILENXT
THE NXT STEP IN FIELD OPERATIONS
CONNECTING PEOPLE
DIGITAL TRANSFORMATION
CONNECTING DEVICES
CONNECTING DATA
CONNXT
THE NXT STEP IN INTERNET OF THINGS
DIGITALNXT
THE NXT STEP IN ARTIFICIAL INTELLIGENCE
SMARTER INDUSTRIES
SMARTER CITIES
SMARTER HEALTHCARE


SMARTER WORKER
SMARTER ENVIRONMENT
INTELLIGENT AUTOMATION
/Administration
/Human Resources
/Legal
/Accounting
/Finance
/Marketing
/Publicity


MOBILENXT
CONNXT
DIGITALNXT
/Administration
/Human Resources
/Legal
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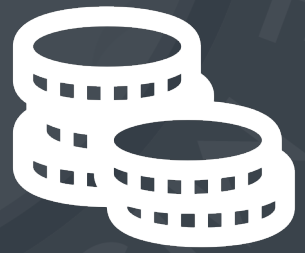
/Publicity

MAKING THE WORLD A LITTLE SMARTER EVERY DAY

THIS MEANS WE NEED TO CHALLENGE OUR CUSTOMERS TO:

Transform their business model how they do business today



Help them to create sustainable and profitable growth

Modernize your Business and build Value

THE FOUR C'S

WE DEVELOPED A MODEL THAT **DIGITALLY TRANSFORMS**
ANY COMPANY IN **FOUR STEPS**

1 CONNECT

DATA GATHERING
& CONNECTION
TO CLOUD

2 COLLECT

TRANSFORMING
DATA INTO
INFORMATION

3 CONTROL

WITH THE COLLECTED
INFORMATION YOU
CAN TRULY INNOVATE
YOUR BUSINESS

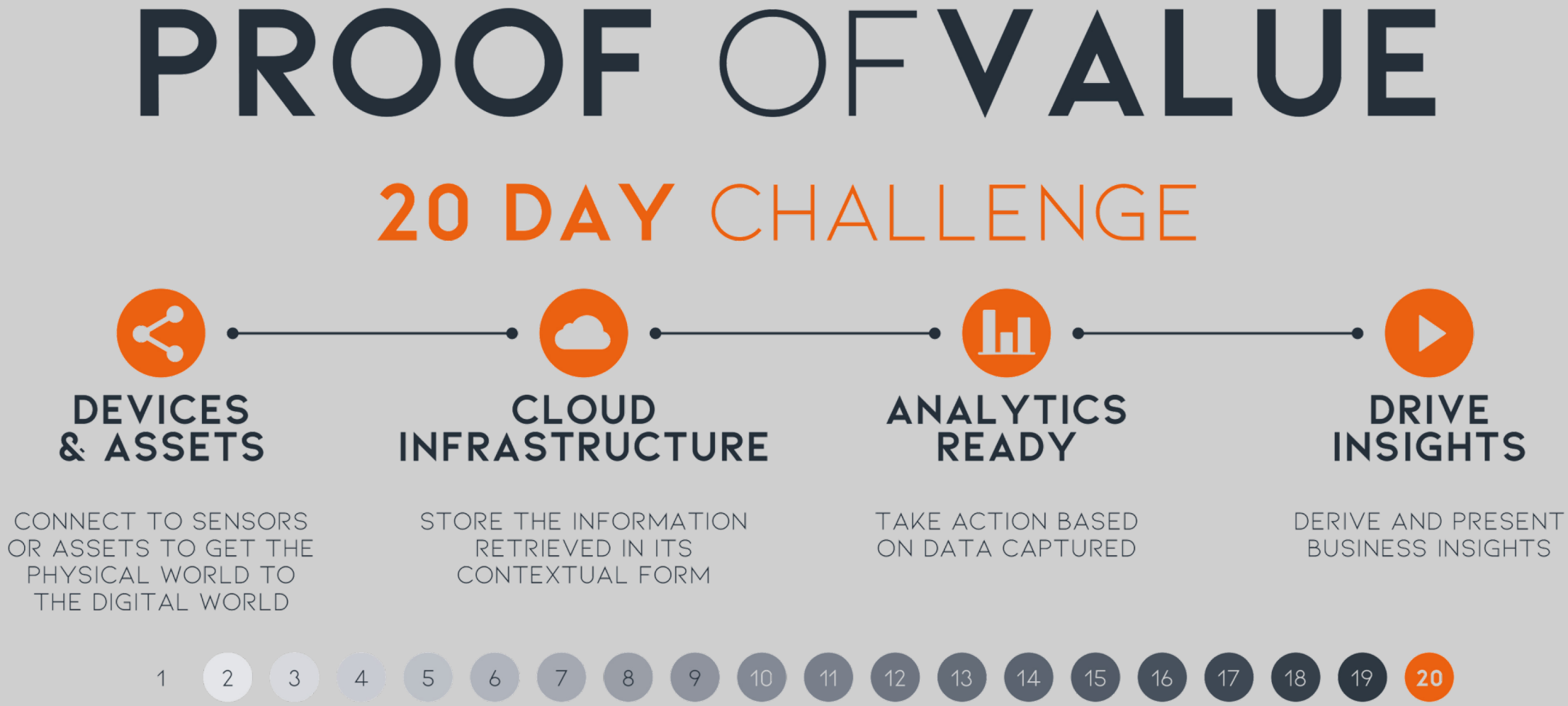
4 CHANGE

NOW IT'S TIME FOR
CONTINUOUS
CHANGE

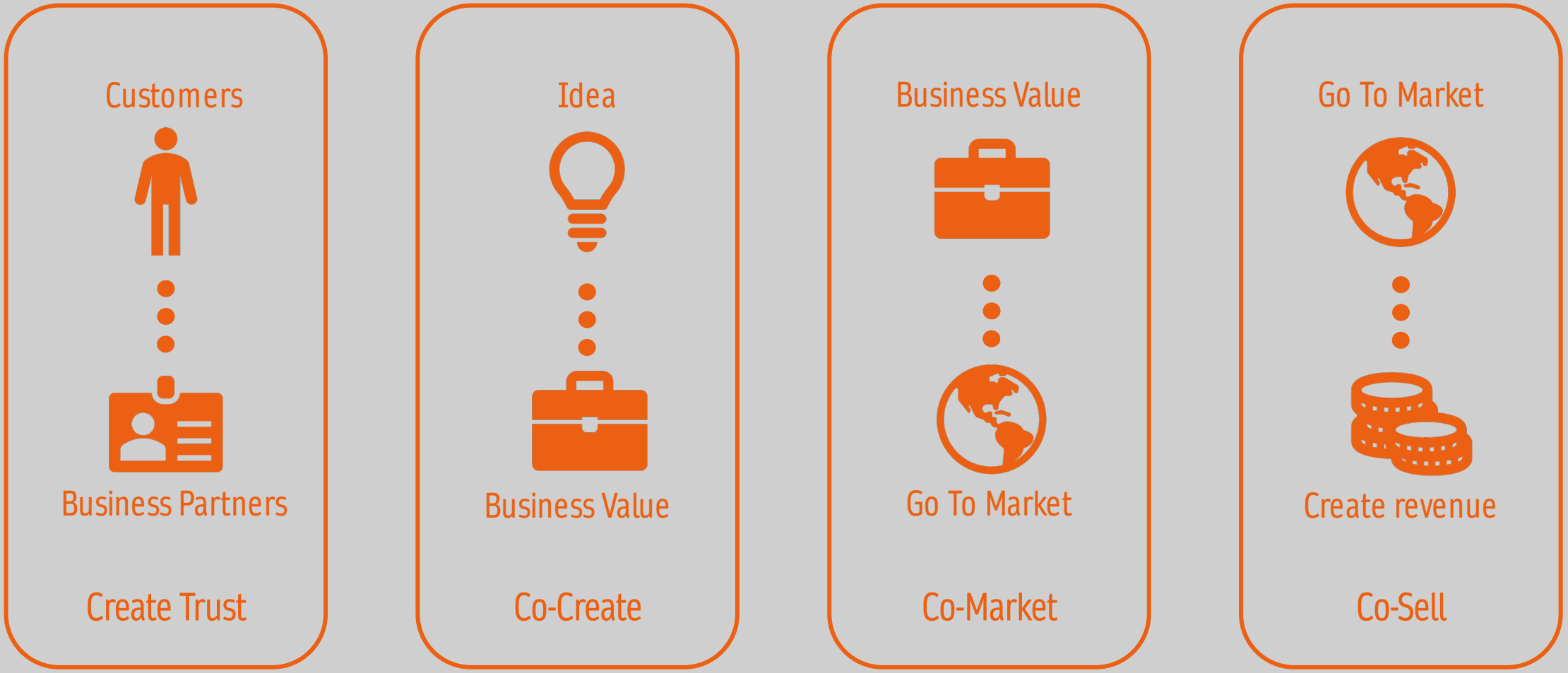
The **CHALLENGE** is to move from technology to an AS A SERVICE mindset...

This means a new set of principles applies to **WIN**!

Principle 1: Proof Business Value FAST



Principle 2: Customers become **Partners**



DUTCH COMPANY USES SMART TECHNOLOGY TO MAKE ROADS SAFER

CUSTOMER - "OR DO I NEED TO SAY PARTNER!"

Microsoft

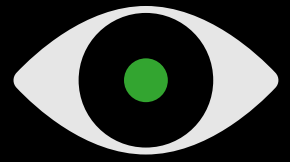
“Now, that’s an {Asset}”

Kitting Lee
Director Business & Innovation
Kitting.Lee@bam.com
+31611035905

IoT in Action

bam

4 Steps of Digital Transformation in Smart Cities



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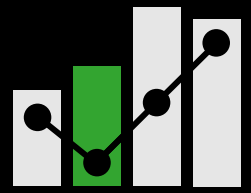

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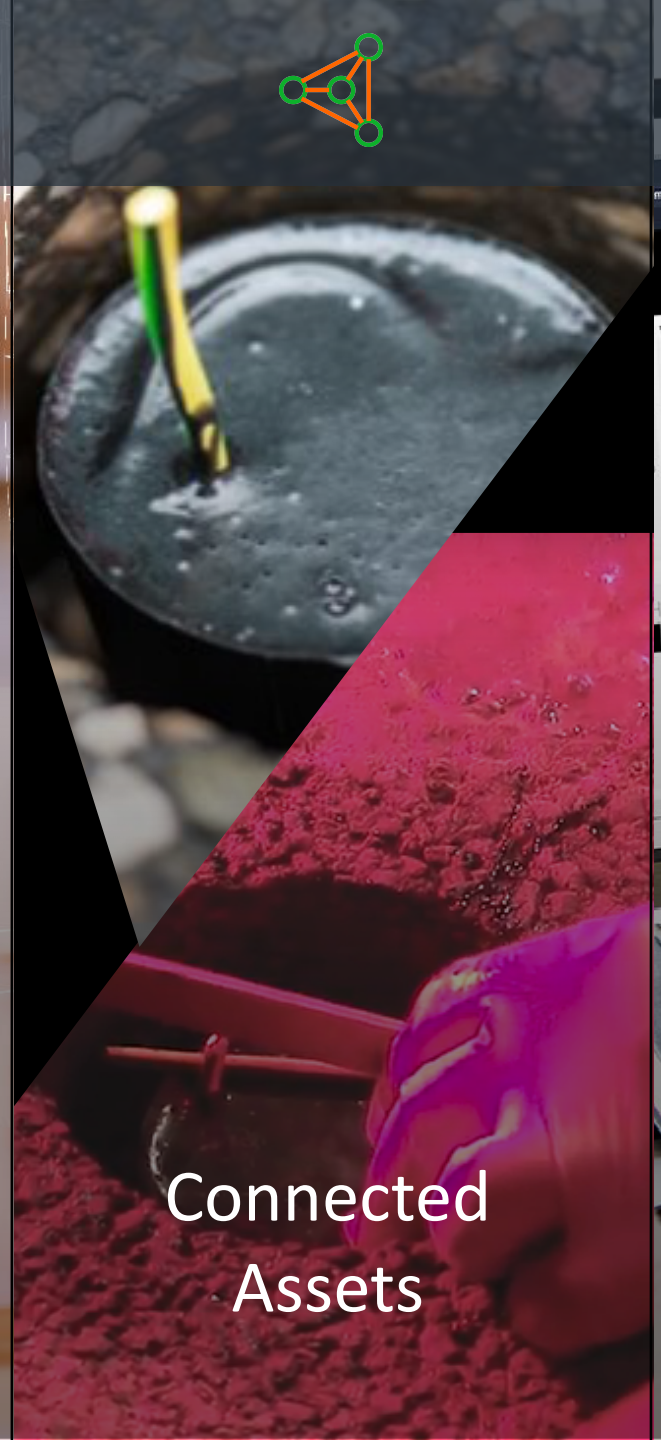
Transformed organizations

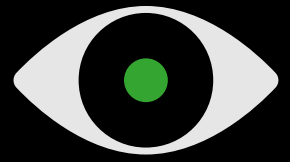

Digital Asset Scan


Connected Assets


10
Average Response Time (min)
14
Out of Service days
69
MTBF
Temperature (C°) and Repairs Over Time
Count of Repairs by Location
Intelligent Asset Monitoring


Smart Maintenance

4 Steps of Digital Transformation in Smart Cities



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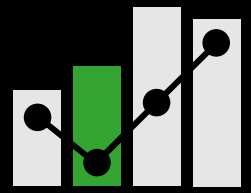

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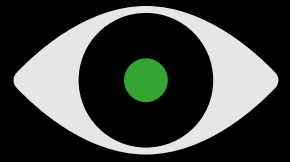
Dynamic Life Cycle Maintenance Plan

4 Steps of Digital Transformation in Smart Cities



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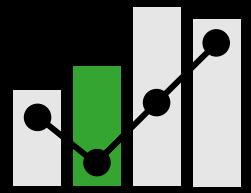

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Transformed organizations

- **Time / cost savings: up to 80%/50%**
- **Steady Quality**
- **Continuity and scalability**
- **Increased safety and availability of the infrastructure**

Microsoft

THANK YOU

bam

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