

Realizing Smart Cities

*Renovations in the public space as accelerator
for a smart and sustainable city*

May 24, 2016



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Smart Cities
distinguish themselves
from ‘normal’ cities by
their ability to
recognize and apply the
power of Innovation
and ICT to realize long
term sustainable
competitiveness

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Characteristics of Smart Cities

- **Networked**
 - Leverage networked technology and information to manage and deliver utility and public services to residents
- **Location Aware**
 - Leverage GIS technology and information to track and manage assets and events in real-time
- **Integrated**
 - Coordinate utility and public service delivery across functional siloes through service integration

So, what is everybody talking about?



Smart shopping



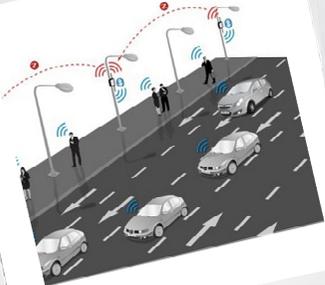
Drone solutions



Smart safety systems



Smart lighting



Smart parking



Smart Buildings



Smart transport solutions



Smart home



Remote care & connected health



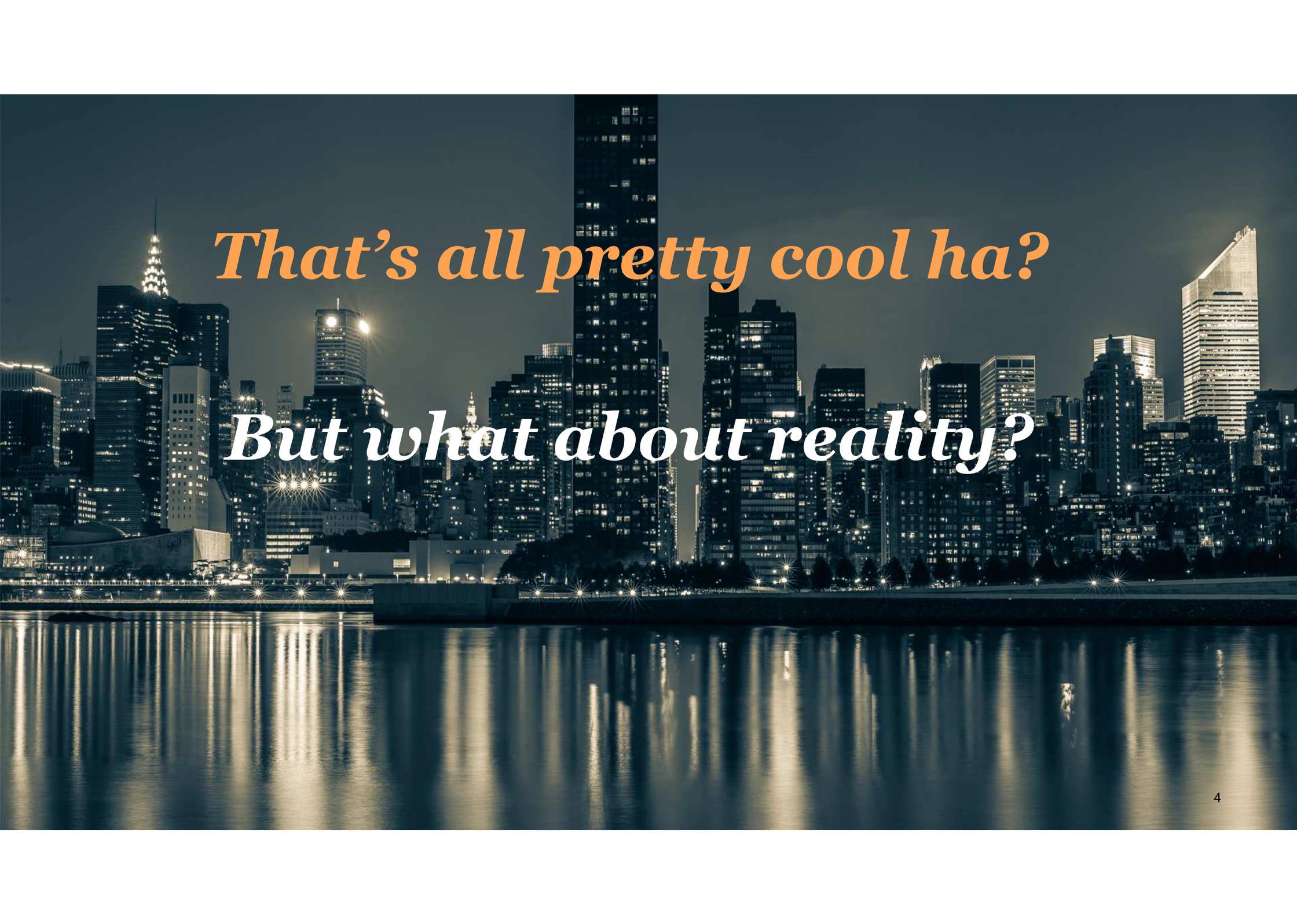
Smart energy grids



Autonomous vehicles



Big data visualisation

A nighttime photograph of a city skyline, likely New York City, with numerous skyscrapers illuminated and their lights reflected in a body of water in the foreground. The sky is dark, and the overall scene is lit by the city lights.

That's all pretty cool ha?

But what about reality?

There is no shortage in Smart City visions and fancy services, but the crude reality: Majority of pilots never scales up. 3 key problems hinder real Smart City realization



Single party solutions don't add value

- Single services/products instead of solutions
- Market players stick to single interests and individual business models
- Demand-supply relations with municipalities
 - Proof of Concepts to proof technology



Existing public space forms an obstacle

- Rolling out infrastructure in existing environment is very difficult (European historical city centers)
 - Many permits: Long processes
 - Many stakeholders & interests

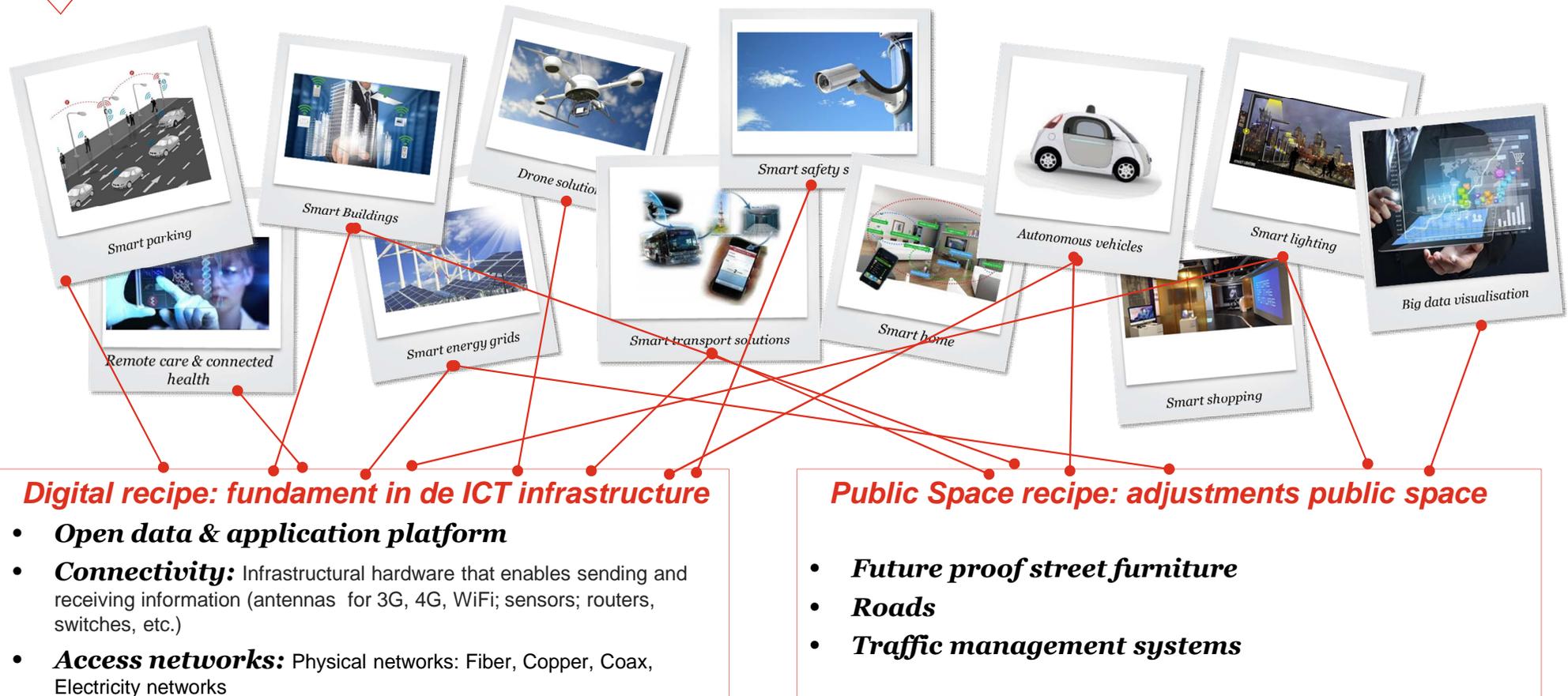


Financial challenges for both municipality and investors

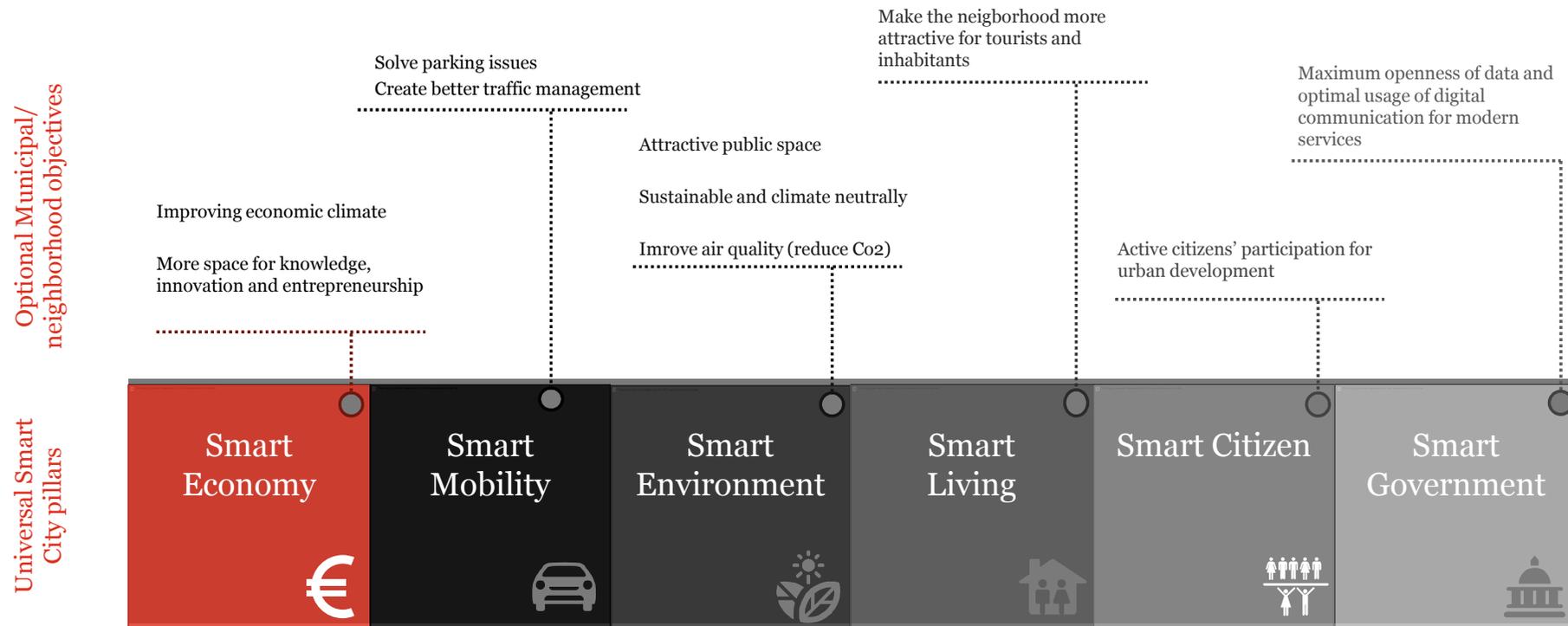
- Small innovation budgets available within municipalities: private co-investment needed
- No prospect to scale or duplicate solutions, needed for ROI
 - Lack of closing business cases

- New, innovative ways of working and new business models are necessary
- Replicability and scalability are preconditional for creating the necessary investments and revenues
- Synthesis of urban developments in the physical space and Smart City projects is essentially

All apparently 'individual' smart city services share the need for the same fundament in ICT infrastructure ('digital recipe') and public space ('public space recipe')



Smart City services do not stand on their own. Integrated solutions should form an integral part of objectives of the city and neighborhood to create real added value



A nighttime photograph of a city skyline, likely New York City, with numerous skyscrapers illuminated. The lights from the buildings and streetlights are reflected in a body of water in the foreground. The text "But how do we do get this really done?!" is overlaid in the center in a white, italicized serif font.

But how do we do get this really done?!

Successful Smart City driven urban development is built upon 4 pillars

Co creation platform for Innovation & technology

- PLACE TO MEET FOR ALL INTERESTED PARTIES TO BRING TOGETHER DEMAND & SUPPLY
- ORCHESTRATION & MANAGEMENT TO OVERCOME INDIVIDUAL INTERESTS OF ALL PARTICIPATING PARTIES

Integrated approach per area

- INTEGRATED APPROACH BETWEEN SMART CITY PROGRAM AND URBAN DEVELOPMENT
- BREAK THROUGH 1 BY 1 PROJECTS IN ISOLATION
- COORDINATE ALIGNMENT IN DESIGN, PLANNING, ROLL OUT, AND CRITICAL DECISION-MAKING MOMENTS
- SECURE SMART CITY FUNCTIONAL REQUIREMENTS

Successful Smart City driven urban development

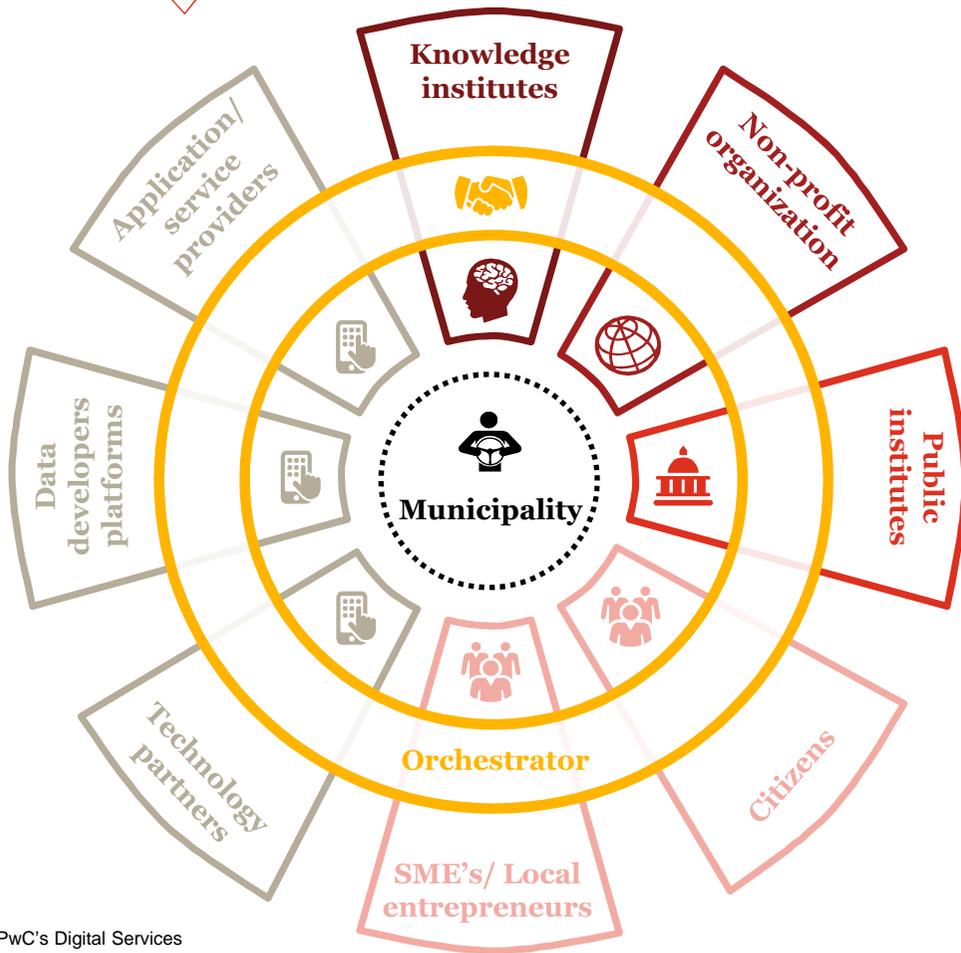
New integrated business models

- ORCHESTRATION IN REALIZING INTEGRATED BUSINESS CASES AND FUTURE PROOF AND SCALABLE MODELS
- NEW FINANCING CONSTRUCTIONS
- DESIGNED FOR REPLICATION & SCALE

Standardized WoW

- COMPETENCE DRIVEN STRATEGY
- COLLECTIVELY LEARNING & DEVELOPING
- REPLICABILITY AND SCALABILITY
- RESULTS IN ACCELERATION & BETTER BUSINESS CASES

Co creation platform for Innovation & technology



Roles		Responsibilities
	Municipality	Overall lead with responsibility for Smart City program;
	Orchestrator	Program management; realize alignment
	Knowledge institutes	Knowledge partner; provide insights and knowledge on Smart City
	Non-profit organizations	Providing public services for society
	Public institutes	End user for Smart city applications; provide insights in needs and problems
	Demand parties/ end users	Citizens, visitors and local businesses provide insights in needs
	Delivery Partners	Co-create and build solutions together

Combining Smart City infrastructure roll out with urban environmental development programs overcomes essential problems and creates important synergies



Integrate urban plans

- Connecting Smart City infrastructure roll out with existing area development plans reduces the hurdles that come up with separate attempts to roll out new infrastructure in existing urban environment
- The Smart City elements that have impact on the public space under- and above ground will be incorporated in the are designs, by which his will become an integrated and coherent plan



Scale up

- Create a structural approach for rolling out the fundament for Smart City infrastructure across the city by means of smart cohesion with urban development programs.



Create synergies

- 2 important synergies are realized:
1. Parallel implementation of the Smart City infrastructural elements with the execution of the area development activities in the public space
 2. Adoption of ‘Smart’ specifications in the relevant elements of the execution plan of the urban development program (lamp poles, pavement, street furniture, etc.).
- This will generate a strong impulse for the social and economic climate of the city.

From individual business models of products and services towards shared business models for integrated solutions

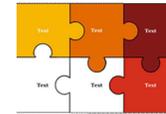
Individual business models per party



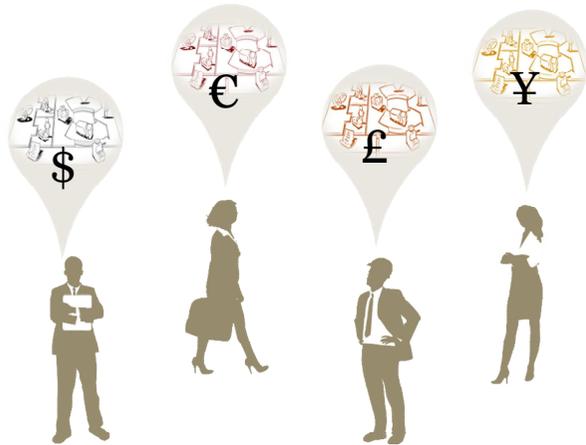
Creation of integrated business models for solutions in co-creation within the eco system



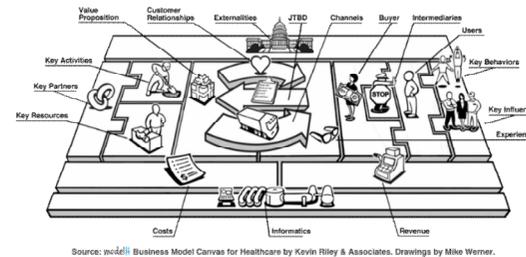
Integrated business model for Smart City solutions



Scalable for the purpose of future proofness



Co-creation



- Combined, integrated (multi sided) business model
- Co-creation between partners
- Mutual investments and benefits
- PPS models
- Designed for replication

Replicate & scale



Create the synergy! Renovations in the public space as accelerator for a smart and sustainable city



Thank you!



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