

Smart City Opportunities for Investments in Greece and Lessons Learnt from the Green Cities Framework

Ho-Shik Lim, Senior Banker, Information & Communication Technologies
Dr. Tara Shirvani, Principal Specialist, Smart and Green City Initiatives

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European Bank
for Reconstruction and Development

EBRD – IFI with unique mandate

The European Bank for Reconstruction and Development fosters transition to market economies in countries from Central and Eastern Europe to Central Asia and the Southern and Eastern Mediterranean region:

History	AAA-rated International Financial Institution founded in 1991 to meet the challenge of rebuilding the post-communist economies of Central and Eastern Europe
Mission	Foster the transition towards market-oriented economies and to promote private initiatives in countries committed to the principles of democracy
Core values	Investments must meet strict environmental, social, governance and integrity standards, supporting sustainable development and transparency
Shareholders	Owned by 67 countries and two inter-governmental institutions, the European Union and the European Investment Bank.
Client sectors	All key economic sectors including financial institutions, infrastructure, energy and the general corporate sector
Instruments	Long-term market based debt and growth equity financing and technical assistance
Staff	From all member countries, working in sector, product, regional, support and control functions
Locations	Headquarters in London, with over 50 resident offices in its 38 countries of operations in Central and Eastern Europe, Central Asia and the Southern and Eastern Mediterranean region

What makes EBRD special?

- **Mandate:** transition toward well-functioning, sustainable market economy – identified 6 transition qualities
- **Policy Connectivity:** engagement multiplier
- **Focus on Private Sector:** key conduit of delivery across the full capital structure
- **Mobilisation:** financial multiplier
- **Market Pricing:** working with markets without market distortion
- **Sector Knowledge & Locally Embedded:** Strong sector teams with network of local offices
- **Preferred Creditor Status:** privileges and immunities provide risk mitigation



Smart City Overview and EBRD Alignment

A Smart City is a city geared towards addressing the needs of city stakeholders and delivering desired results and value

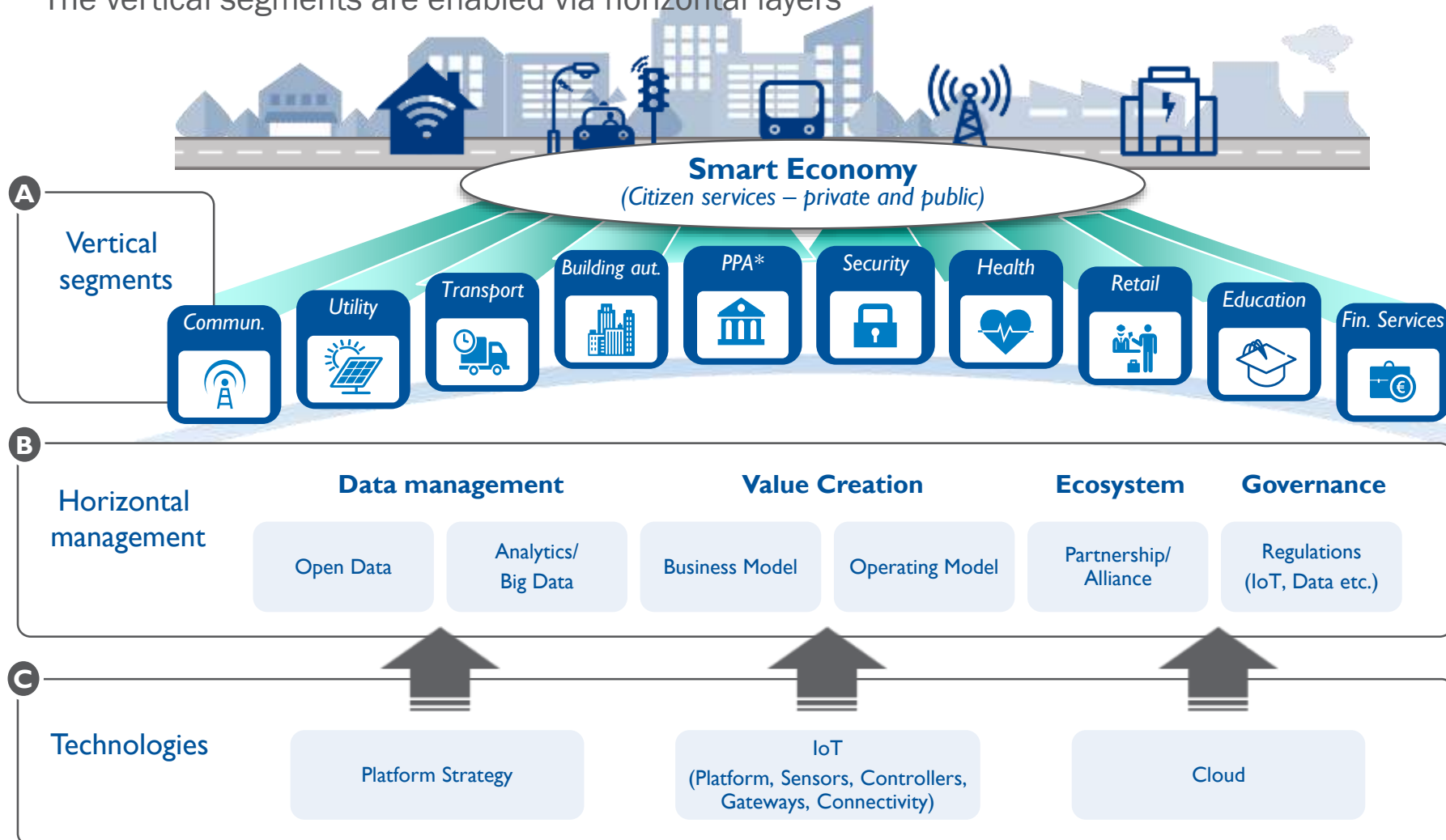


EBRD with the support of Arthur D Little is currently assessing Smart City Opportunities in Greece through a Technical Cooperation Project

Source: Arthur D. Little

Smart City overview

The vertical segments are enabled via horizontal layers



Note: Public planning and administration

Smart City as Problem Solver

We see Smart City solutions today capable of tackling key issues of Greek cities in short term...

Key addressable pain points for Smart City applications in Greece

Mobility



Rising congestion
puts pressure on cities & populations

Pollution



The larger the city,
the larger the pollution

Urban Health



Urban people live longer becoming more vulnerable to chronic diseases

Security



Cyber attacks and identity theft are becoming **more widespread**

Connectivity

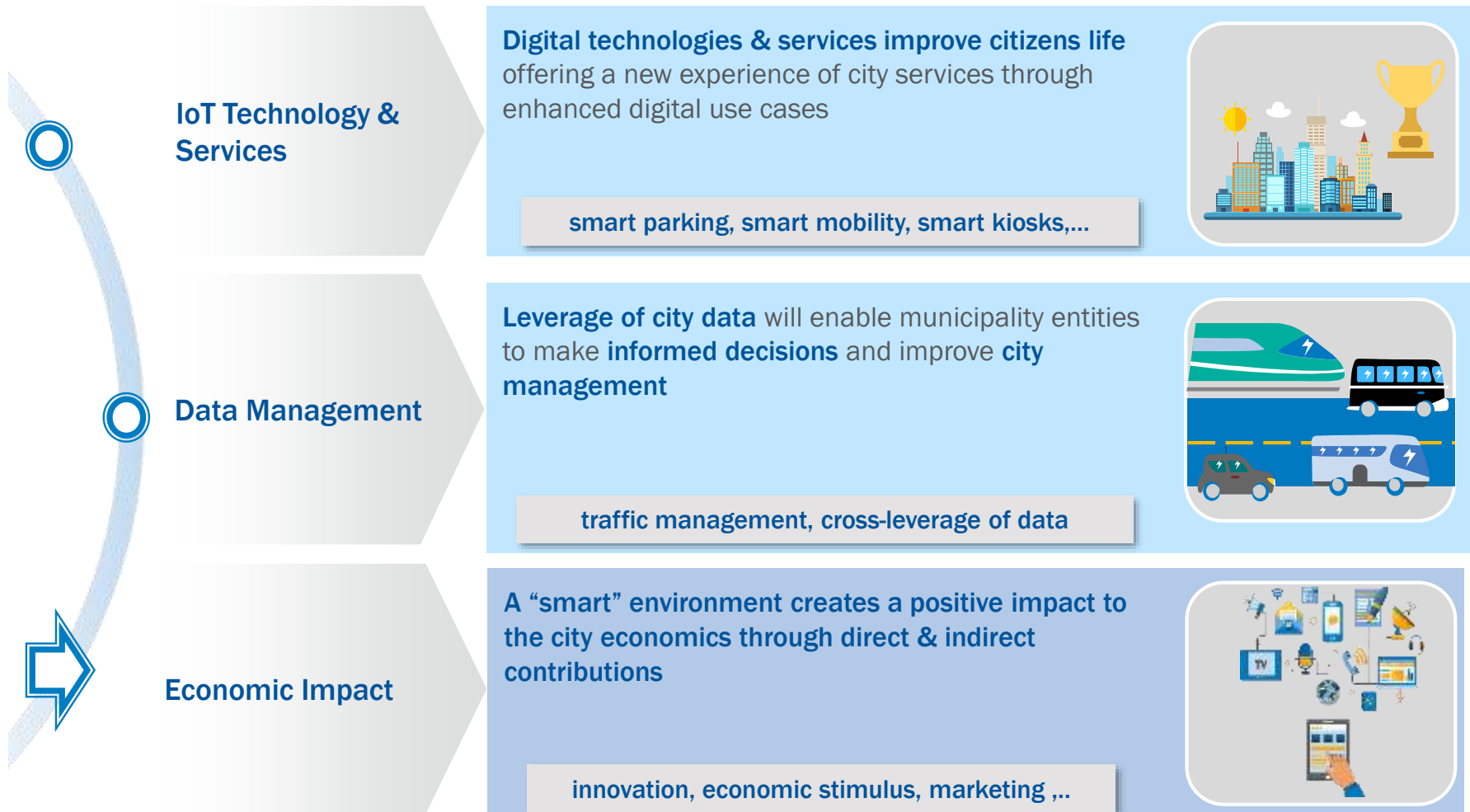


Bringing fast-enough speeds to cities is ever more challenging

Smart city works as a problem solver for cities' and citizens' pain points

Smart City as Problem Solver

...by leveraging IoT technologies/services and data management significant economic impact can be achieved



Smart City Use Cases

Five of the most promising use cases are being assessed

Building automation



Technologies to monitor and **automate management of buildings**, e.g. smart thermostats, shutters, locks etc.

Smart street lighting



More efficient **LED** lamp posts with **attached smart elements**, enabling big data analytics & use case integration

Smart parking



In-ground sensors & platform enabling citizens to **find parking spots faster and pay easier**

Smart waste



Smart trash bins compressing waste & **notifying authorities when full**

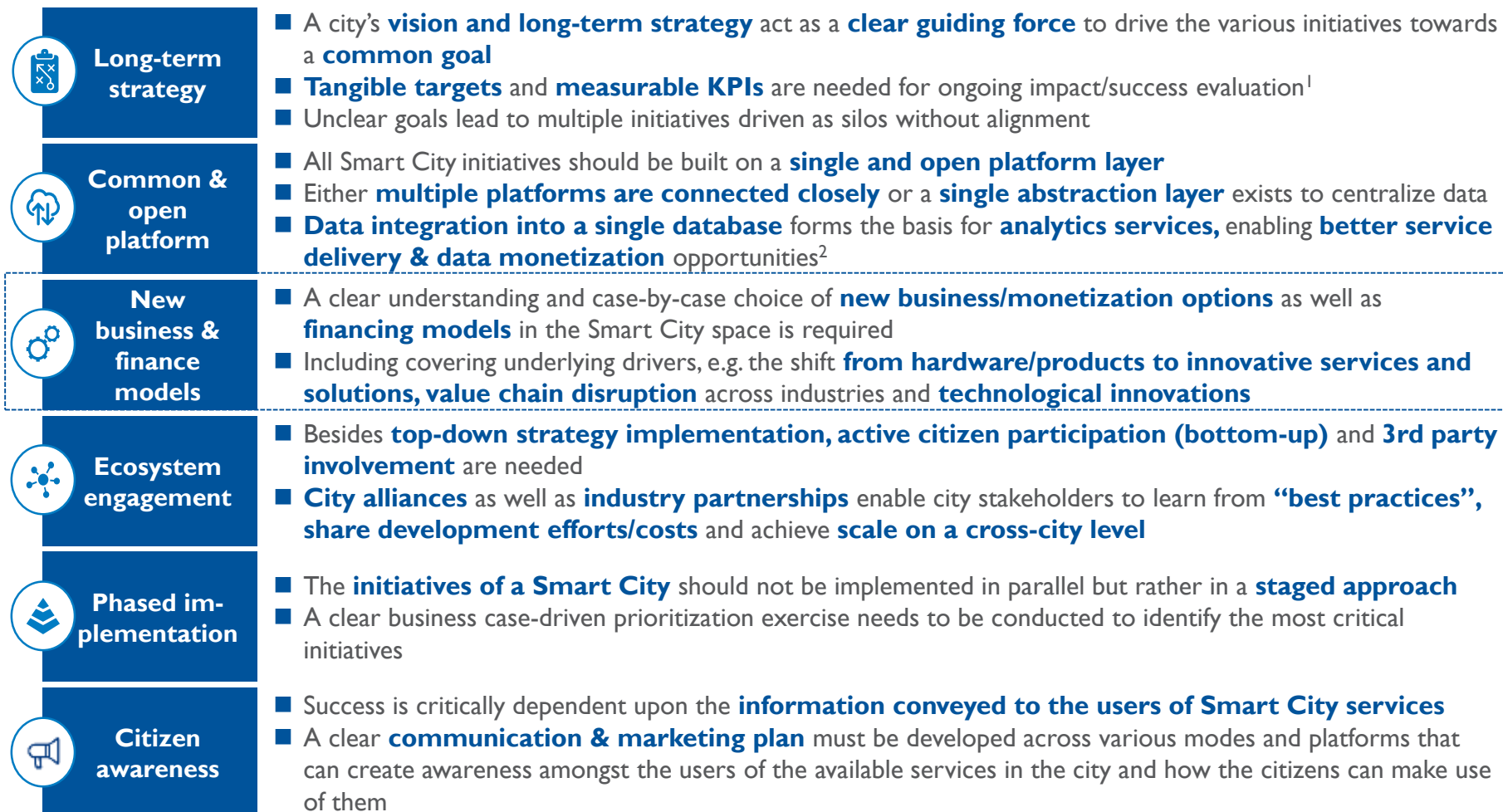
Personal health management



Personal smart devices allowing **digital doctor's visits at home**

What makes a Smart City Concept successful from the city perspective?

The best practice of implementation shows six key success factors

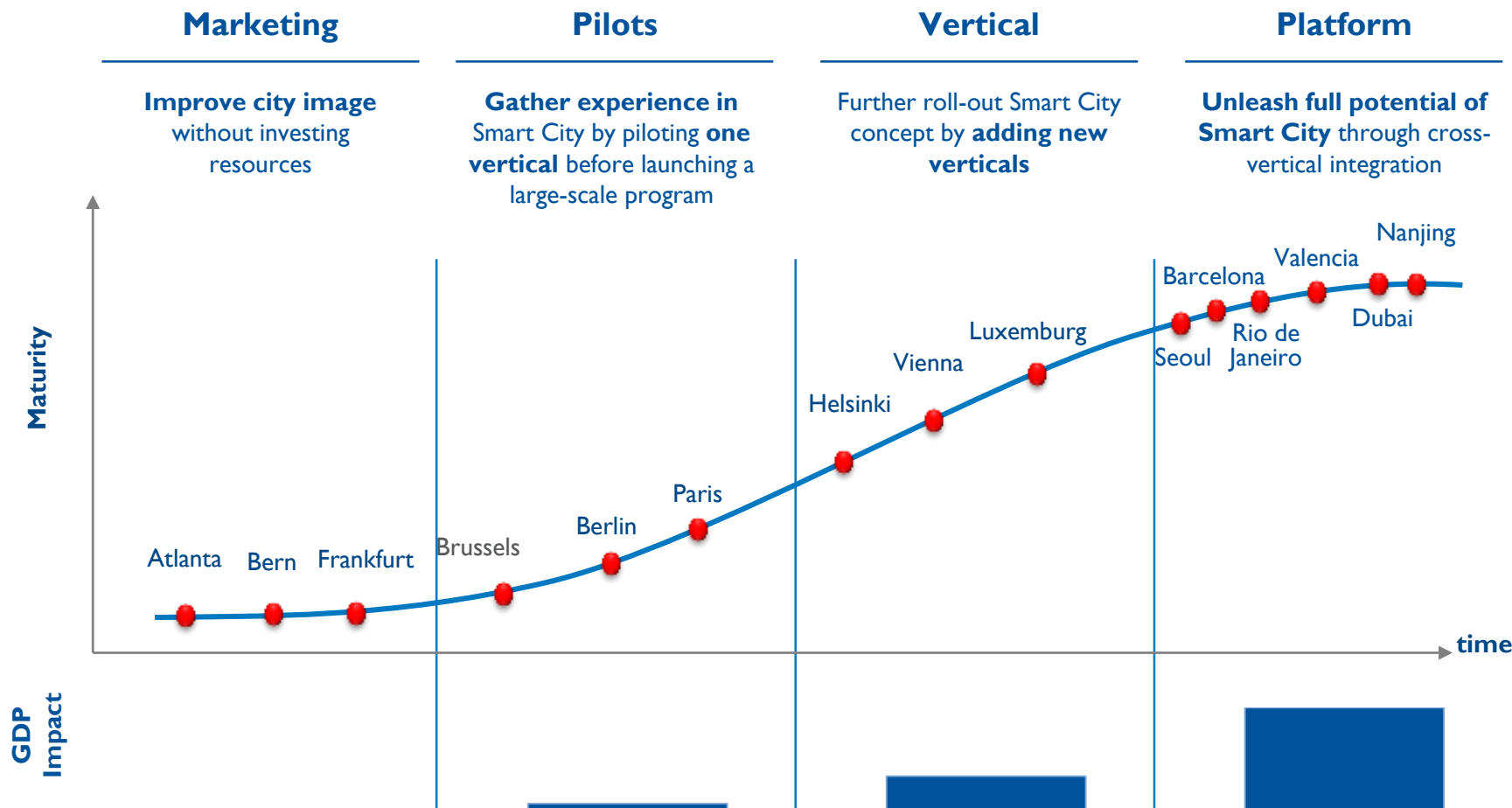


Source: Arthur D. Little, expert interviews, Smart City (case) examples

Note: 1) E.g. efficiency increase, GDP increase, cost reduction, social ROI, etc.; 2) After suitable sanitization and declaration of consent regarding citizen data usage

Several cities aim to become the “Smartest City of the World”, requiring a cross-vertical collaboration to unleash full potential

Illustrative Positioning Platform





€1 billion framework to support cities to identify, benchmark, prioritise and invest in Green City measures to improve urban environmental performance through:



Delivery of strategy and policy support

Green City Action Plans (GCAP)
Policy dialogue



Facilitating and stimulating Green City infrastructure investments

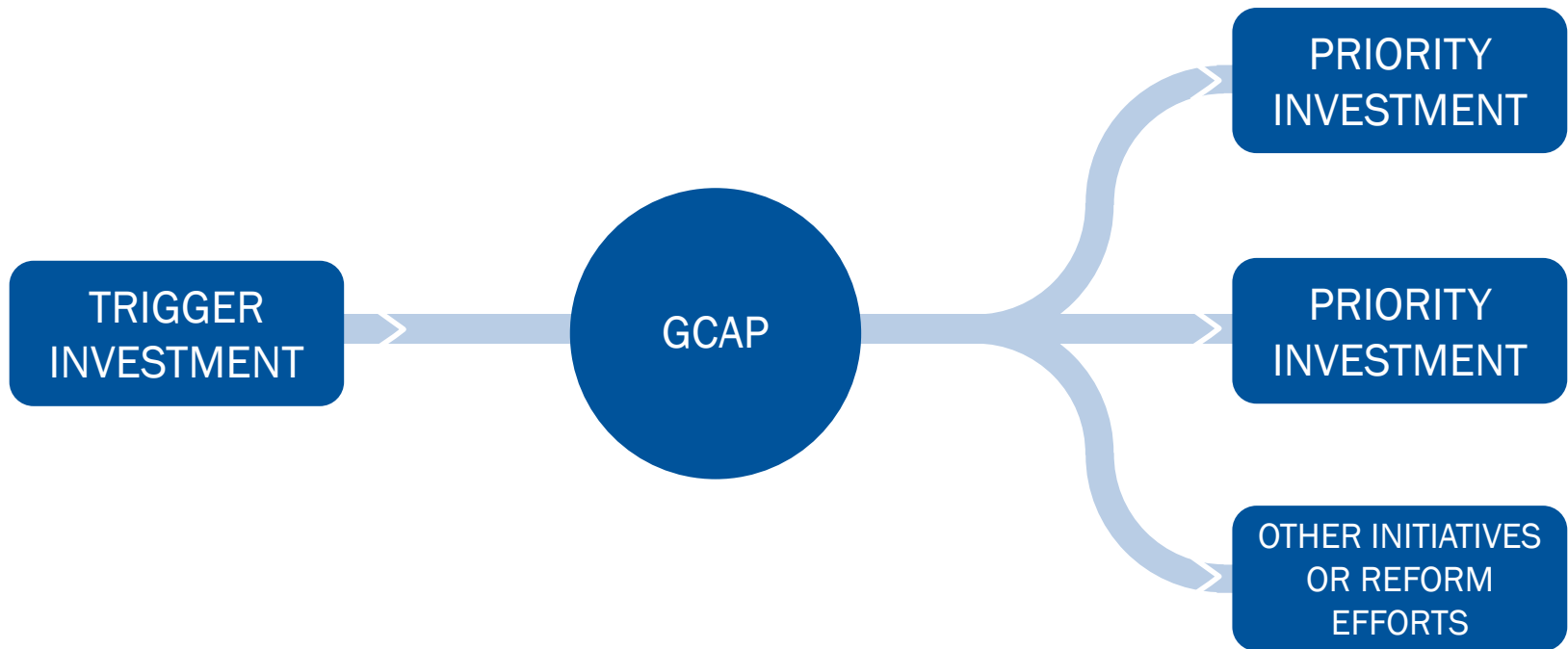
Urban transport	Water & Wastewater
District heating	Building energy efficiency
Solid Waste	Street Lighting & Roads



Building capacity of city administrators and key stakeholders

In order to become a part of EBRD Green Cities, cities must meet the following criteria:

- (1)** Located in EBRD's Countries of Operation
- (2)** Population \geq 100,000
- (3)** Conduct a Green City Action Plan
- (4)** Initiate 'Trigger' Infrastructure Project
in one of the following sectors
 - Solid Waste
 - Water & Wastewater
 - Urban Transport
 - District Heating
 - Public Building Energy Efficiency
 - Renewable Energy
 - Climate Change Resilience



Example

Tbilisi Buses

Tbilisi GCAP

Tbilisi Solid Waste

Green Cities

3 GCAPs adopted



- Yerevan, Armenia
- Tbilisi, Georgia
- Tirana, Albania

11 GCAPs underway



- Minsk, Belarus
- Sofia, Bulgaria
- Banja Luka, BiH
- Batumi, Georgia
- Zenica, BiH
- Belgrade, Serbia
- Chisinau, Moldova
- Gyumri, Armenia
- Sarajevo, BiH
- Ulaanbaatar, Mongolia
- Amman, Jordan

6+ GCAPs in preparation



Since Nov 2016, EBRD Green Cities has:

Launched **14 Green City Action Plans**

Invested **€300 million** in sustainable infrastructure

Enabled well over **€1 billion** in EBRD & donor finance

Reduced **368k tonnes CO₂**  equivalent to permanently removing **80,000 cars** from roads

Contacts



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For all further enquiries, please contact:

Ho-Shik Lim
Senior Banker, Information & Communication Technologies
LimH@ebrd.com

Tara Shirvani
Principal Specialist, Smart and Green City Initiatives
Shirvant@erbd.com

Lin O'Grady
Deputy Head, Municipal and Environmental Infrastructure
OGradyL@ebrd.com

