

Digital Around
the World

OCTOBER

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EU-USA Project Collaboration: Smart City Focus Area

Digital Around
the World

20-21
October 2020

24 Hours Connecting
Over the World

Digital Around the World is a 24 hours non-stop virtual conference that will bring together top-level speakers discussing the latest trends in digital transformation

NGI EXPLORERS

Dr. Martin Serrano

Research Unit Director - UIoT

IoT, Stream Processing and Intelligent Systems

National University of Ireland Galway, Ireland.

Insight SFI Research Centre for Data Analytics



NUI Galway
OÉ Gaillimh

IoT Forum

EXCEED YOUR LIMITS

BECOME THE BEST

The program to launch European Researchers and Innovators into Technology Expeditions to the USA

3 / 6 month

Expedition to the US

100%

Sponsorship Plan

Mentorship

Program

Our Explorers will gain the skills and build the networks to transform Europe into the powerhouse of the Next Generation Internet.

Innovation:
An holistic approach for improving the generation and the measuring method of Key Performance Indicators (KPIs)



Scale-Up KPI
EXPLORERS
Project



Scale-Up KPI Explorer:

"Smart City Maturity Assessment Method based on Holistic KPI's" for the Next Generation of Smart Cities. Fostering EU-USA collaboration.

An EU-USA Collaboration Project



European
Commission



In collaboration with:

NIST National Institute of
Standards and Technology
U.S. Department of Commerce

Engineering Laboratory
Smart Grid and Cyber-Physical Systems
Program Office

A Smart City
must feature its own
Characteristics

- Smart City Strategy
- Development Plan
- City Action Plan
- Digital Strategy



Current Situation: All cities try to replicate others

In collaboration with:

NIST National Institute of
Standards and Technology
U.S. Department of Commerce

GLOBAL CITY
TEAMS CHALLENGE



EXPLORERS



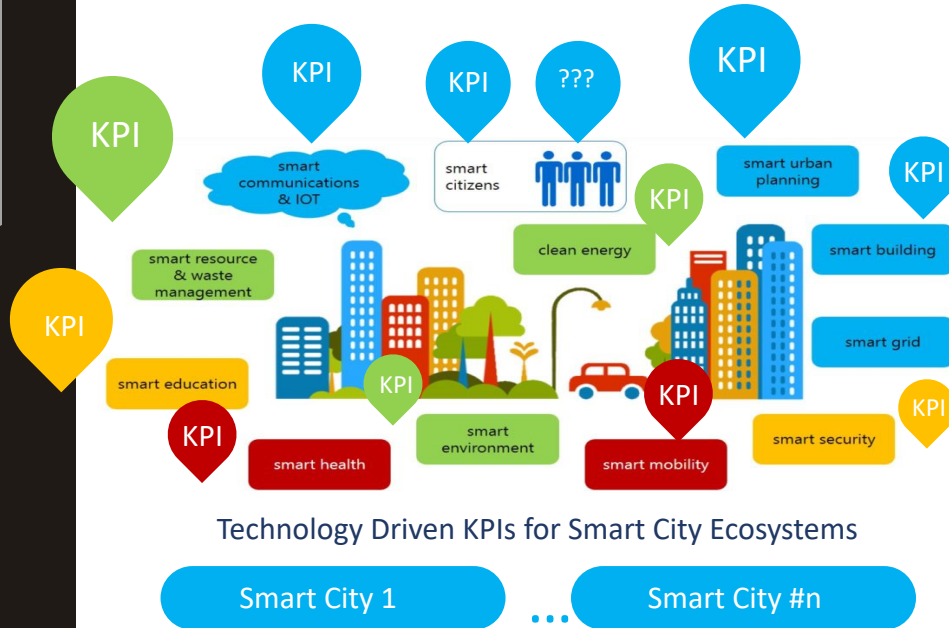
#SmartCity
#SmartCityAnalysis
#HolisticKPIs Specification

Framework:

Smart City
Key Performance
Indicators (KPIs):

- Impact in communities
- Current KPIs Analysis
- Services Expansion
- Technology Improvements

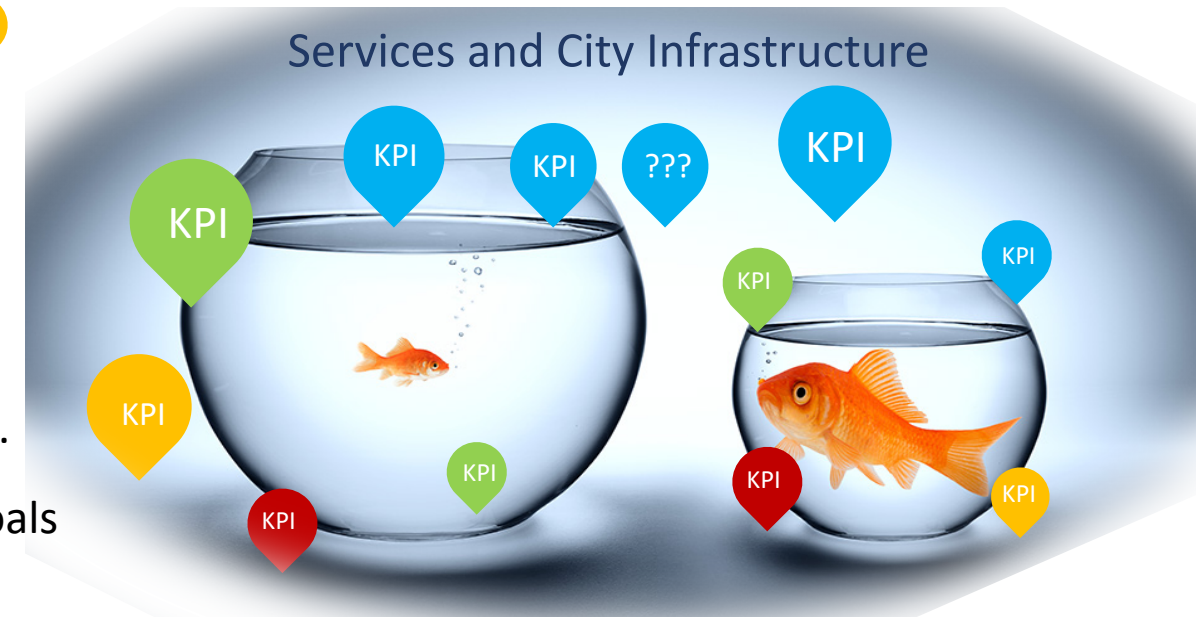
NGI Scale-Up KPI EXPLORERS Project Services and City Infrastructure



- One size does not fit all... →
- Different cities have different needs.
- Cities have different Strategies/Goals

Smart City Assessment Method Today Look like this:

- Current Smart City landscape need to cope with disparity.
- Technology and challenges.
- Currently there is no ways to have an interoperable assessment method.



Smart Cities Today by result of KPIs Method

Resources:

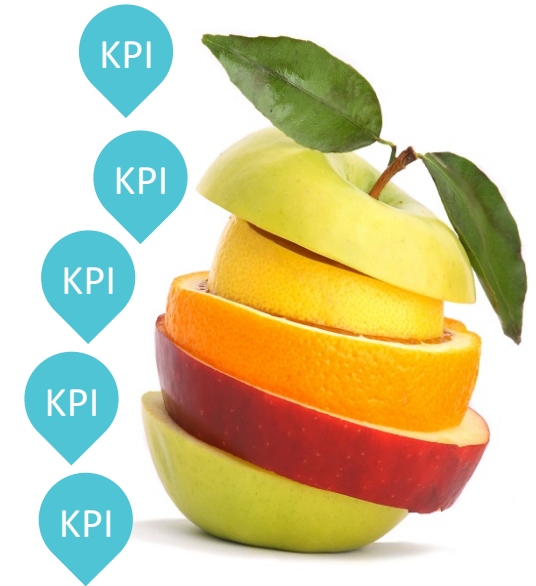
Smart City
Key Performance
Indicators (KPIs):

- Plans and Data Sets
- Formal Methods
- Statistical Analysis
- Deployed Devices

Smart Cities KPIs Explorer Current Approach:

Holistic KPIs for Smart City

In collaboration with:



KPIs for ease Maturity Assessment

Next Generation Smart

#DefineHolistic-KPI

- Combination of verticals
- Applicable to any Domain
- Based on Current Approach
- Improve the current process

#ObjectiveAssessment

- Formalisation of a Holistic method
- Agnostic to size, location, characteristics
- Enable the introduction of indirect KPI
- Applicable to any city

#MaturityLevel

- Advantages on using it
- Combining but not mixing
- Features of the methodology
- Potential usability model

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Results:

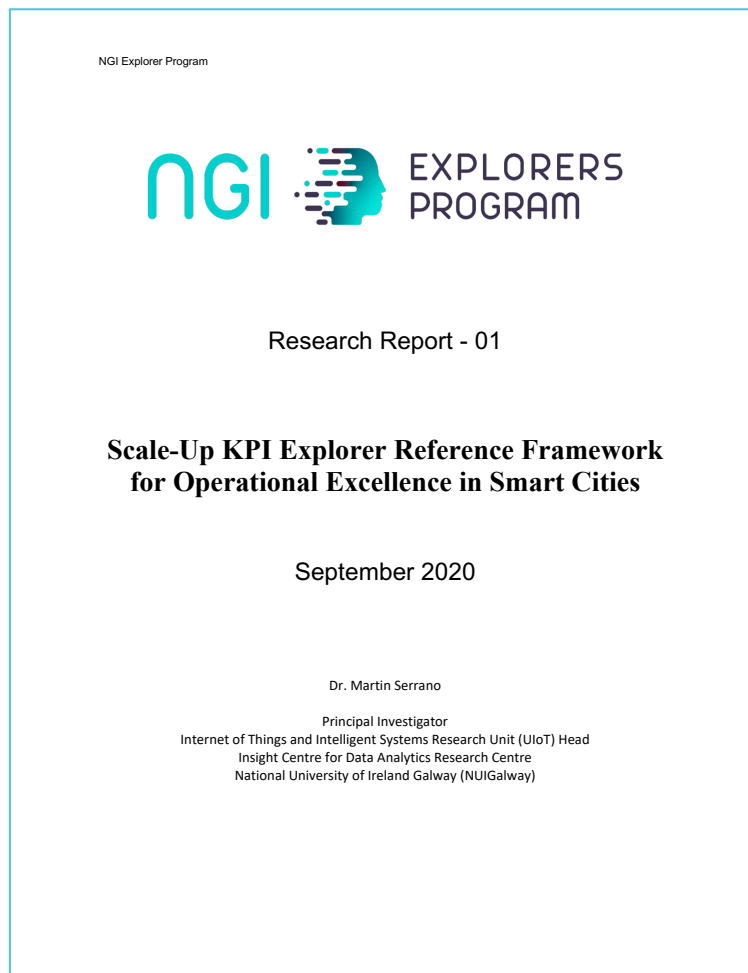
Smart City
Key Performance
Indicators (KPIs):

- Specification
- Documentation
(Open Access)
- Online tools (Plan)
- Technology
(Online Tool)



Scale-Up KPI
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We are working on...



Deliverable 1

Scale-Up KPI Explorer Reference Framework for Operational Excellence in Smart Cities

This document provides the descriptions and the report of the Scale-Up KPI Explorer Framework, It introduces the H-KPI concept, framework specifications and functionalities for its operation and vision towards adaptations for different Smart Cities



Deliverable 2

Scale-Up KPI Explorer for Objective Maturity Assessment

This document contains the progress of the project at its current stage and reports on the multi-side smart city (Framework) for measurements and the assessments about the functionality of the provided information framework that uses the Scale-Up KPI Explorer Framework for Measuring Smart City maturity level

Application:

Smart City
Key Performance
Indicators (KPIs):

- Policy (CML)
- Services (ERL)
- Infrastructure (CRL)
- Technology (TRL)



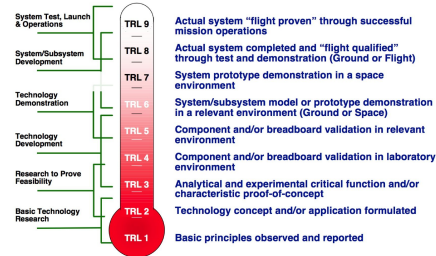
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Potential Applications – Use Cases...

TRL (Reference Example)



NASA/DOD Technology Readiness Level



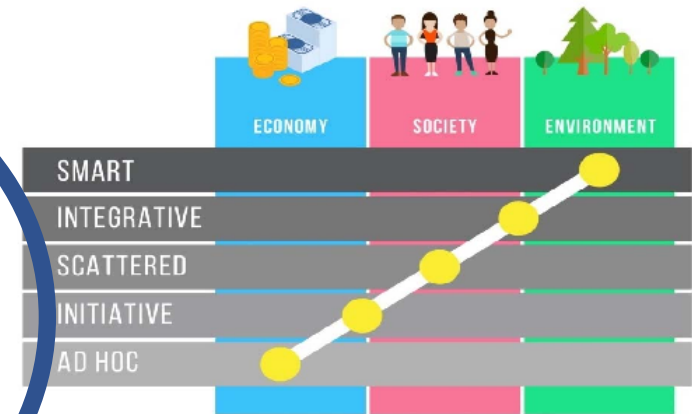
TRL
Technology
Readiness
Level

ERL
Experience
Readiness
Level

CRL
City
Readiness
Level

CML
City
Maturity
Level

by means of Holistic
KPI measuring



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Thank
You

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