Ministry of Communication Technologies and Digital Economy

Tunisian smart city initiatives – Catalysts for innovation–

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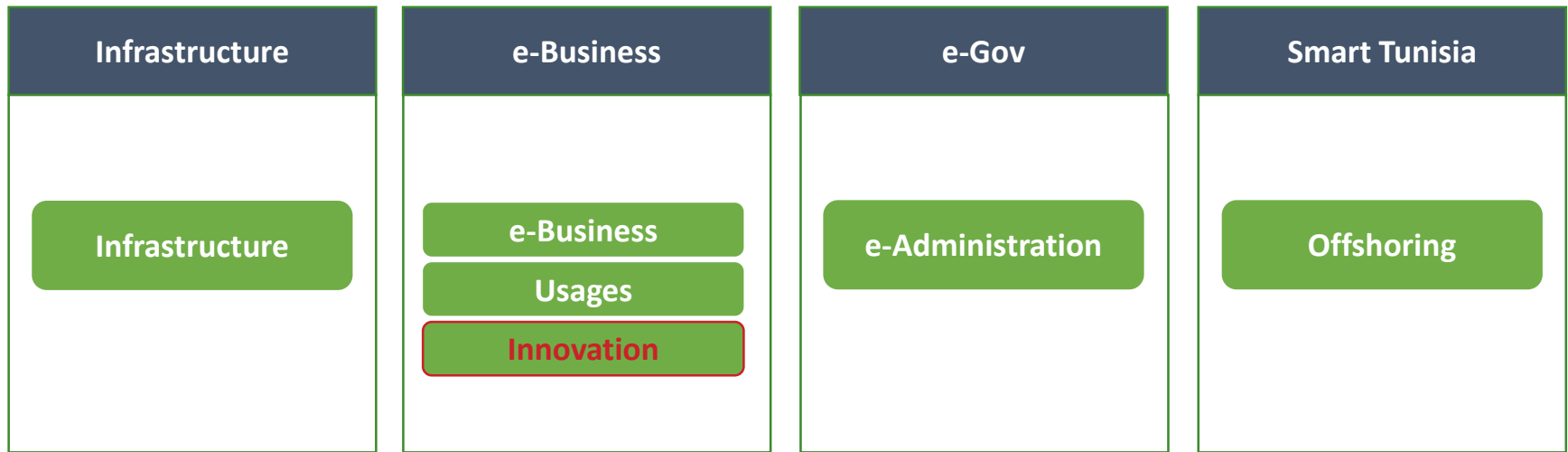
CEO of Itissalia services

November 15, 2017

Plan

› **Digital Tunisia 2020**

    › Governance Strategy

    › ICT Innovation – Tunisia positionning

    › ICT Innovation – Vision and goals

› **Tunisian Smart Cities Initiaitives**

    › Rades smart city strategic plan

    › ITU KPI Kairouan smart city

    › Feasibility study of El-Ghazala smart city

› **Collaboration opportunities**

Digital Tunisia Program – Vision and Program pillars

Use ICT as an important enabler for socio-economic development
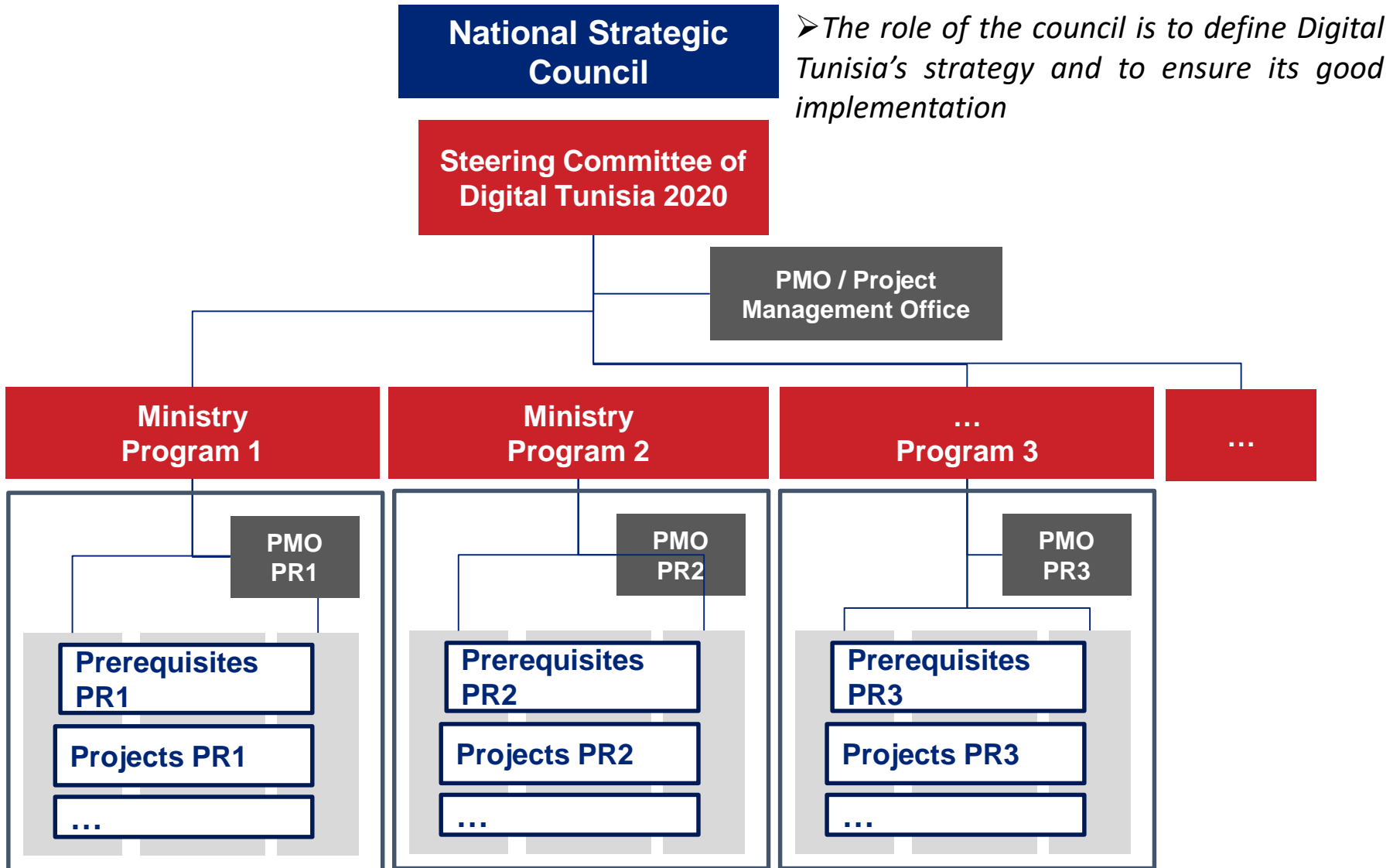**Make Tunisia an international Digital Reference**

Infrastructure	e-Business	e-Gov	Smart Tunisia
Infrastructure	e-Business / Usages / Innovation	e-Administration	Offshoring

Quantified Targets 2020

2020

50 000 jobs **+** **50 000 jobs**

% Households with access to Internet	Added Value from the Digital Program	Exports Value from the Digital Program	NRI Rankings 2018
100%	13 500 MD	5 000 MD	Monde (40) Afrique (1) Arabe (4)

Digital Tunisia Program – Governance Strategy

National Strategic Council

➢ *The role of the council is to define Digital Tunisia's strategy and to ensure its good implementation*

Steering Committee of Digital Tunisia 2020

PMO / Project Management Office

Ministry Program 1	Ministry Program 2	… Program 3	…

PMO PR1

PMO PR2

PMO PR3

Prerequisites PR1

Projects PR1

…

Prerequisites PR2

Projects PR2

…

Prerequisites PR3

Projects PR3

…

Innovation – Tunisia positionning

Tunisia is ranked 76th in the Global Innovation Index (GII) 2015
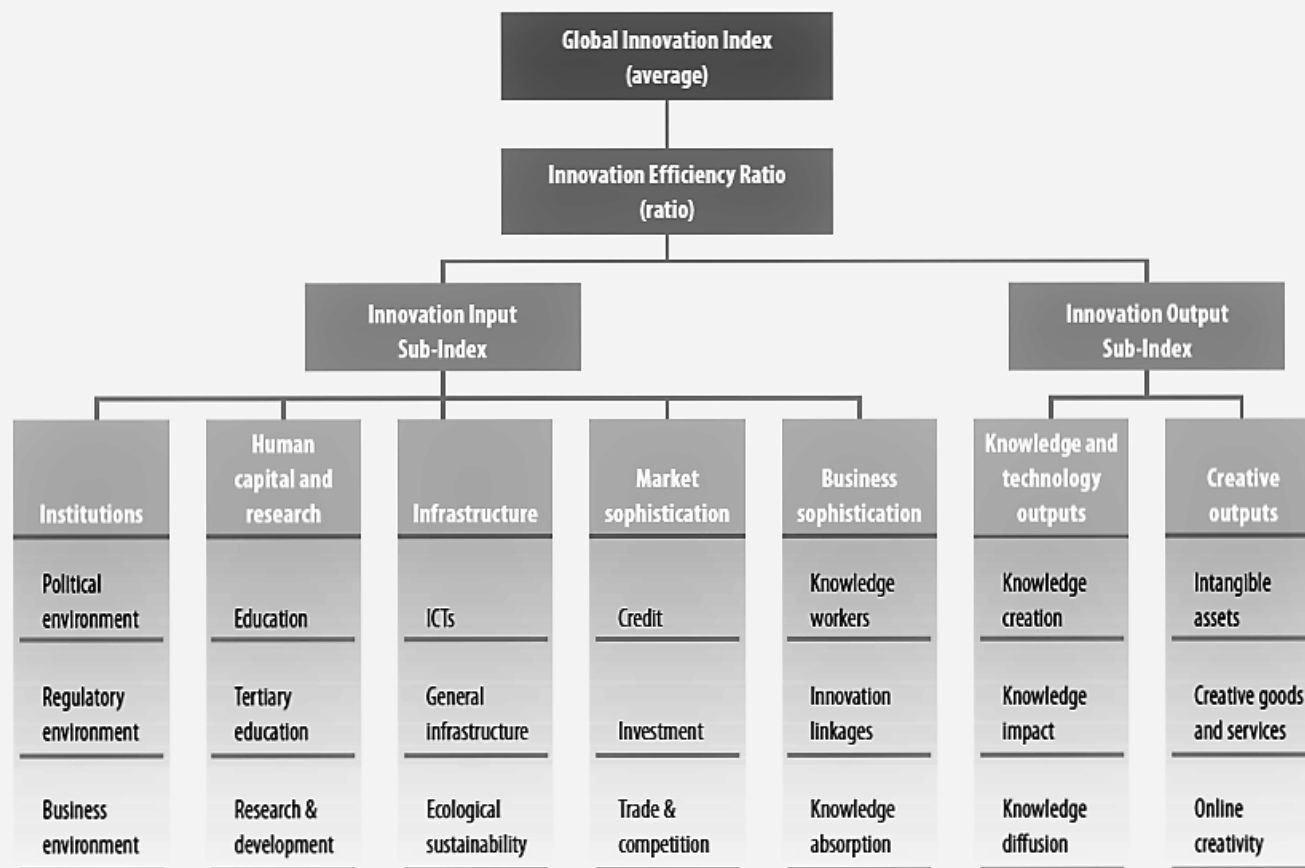
According to the 2015 edition of the GII, Tunisia ranked 76th out of 141 countries worldwide and ranked 8th amongst 14 Arab countries considered in the index.

Tunisia was outperformed by Saudi Arabia, the United Arab Emirates, Qatar, Bahrain, Oman and Jordan.

6 over 12 pillars of the GII are directly depending or influencing the knowledge and Technology Transfer capability

Innovation – Vision & Goals

Develop the entrepreneurial culture and strengthen the ICT innovation capability in Tunisia

Mobile Dev	IoT Big Data Smart cities	Creative industry	Crypto-currency FinTech	Digital Learning

#DigiStartUp Tunisia

Telecom Infrastructure & Cybersecurity

Digital Regulation

Quantified Targets (100% reforms) 2020+

∑Risk Capital investments	High Valued Job Creation	Nb Unicorn Startups Valued += 2 Billiard DT	GII Ranking
500 MDT	5 000 to 20 000	2	15th

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Smart Rades city project – Overview

As a part of its program for the year 2017, the Junior Chamber International of Rades has launched the project "Radès Smart City".

The project focuses on six main components of the smart city: Smart Governance, Smart Citizen, Smart Environment, Smart Living, Smart Mobility, Smart Economy.

A restitution seminar has been organized on 26th October 2017 with government officials, citizens, entrepreneurs, and CSO.
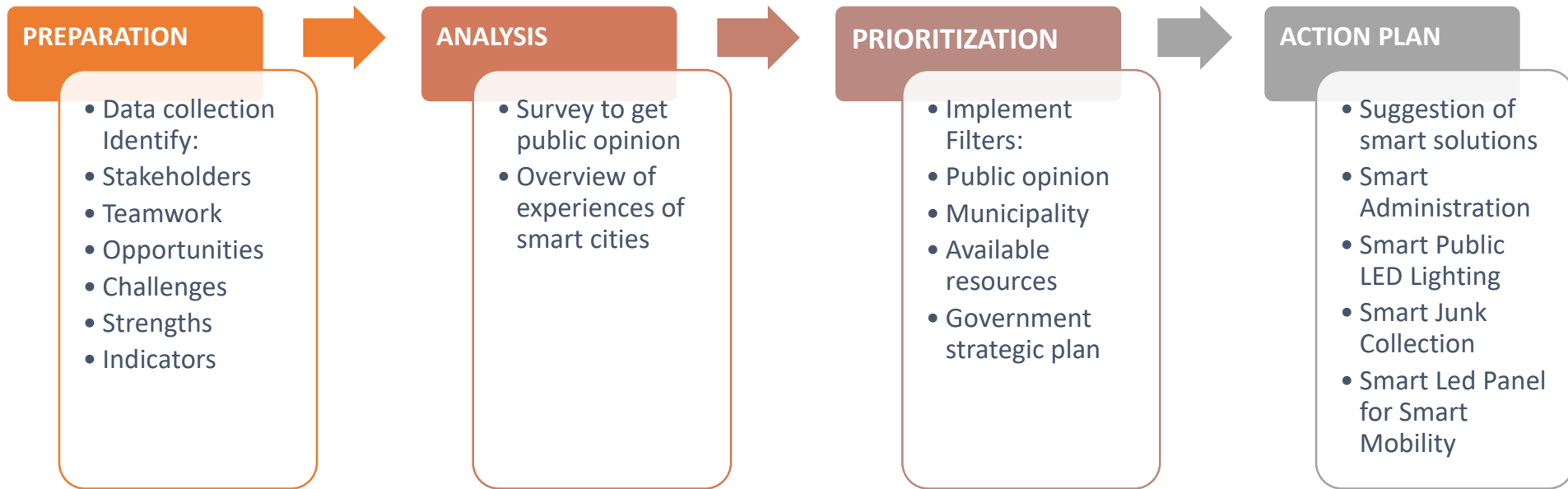

A partnership agreement was sign between JCI Rades and the local government in Rades

Smart Rades city project – Action plan

The Development of a Smart City includes two stages:

1) Development of of the Action plan

PREPARATION	ANALYSIS	PRIORITIZATION	ACTION PLAN
• Data collection Identify: • Stakeholders • Teamwork • Opportunities • Challenges • Strengths • Indicators	• Survey to get public opinion • Overview of experiences of smart cities	• Implement Filters: • Public opinion • Municipality • Available resources • Government strategic plan	• Suggestion of smart solutions • Smart Administration • Smart Public LED Lighting • Smart Junk Collection • Smart Led Panel for Smart Mobility

Smart Rades city project – Action plan

2) Execution of the Action plan

PRE-INVESTMENT

- Signing a partnership agreement between JCI Rades and the local government in Rades

MONITORING

- Design and Deployment of a supervisor system

EXECUTION

- Carrying out the projects described in the action plan

Kairouan smart city project – Context and benefits

- Initiated by the Ministry of Communication Technologies and Digital Economy (MTCEN), the city of Kairouan has been selected from 50 cities worldwide to participate in the pilot project "Key Performance Indicators for Smart Sustainable Cities", launched by ITU.

- The project is lead by the Governorate of Kairouan and MTCEN, it aims at measuring a set of Key Performance Indicators (KPI), proposed by ITU and their applicability.

- Through this participation, the city of Kairouan will contribute to the development of the Global Smart City index, which will be adopted as an ITU standard in 2018.

Kairouan smart city project – Why KPIs for smart city?
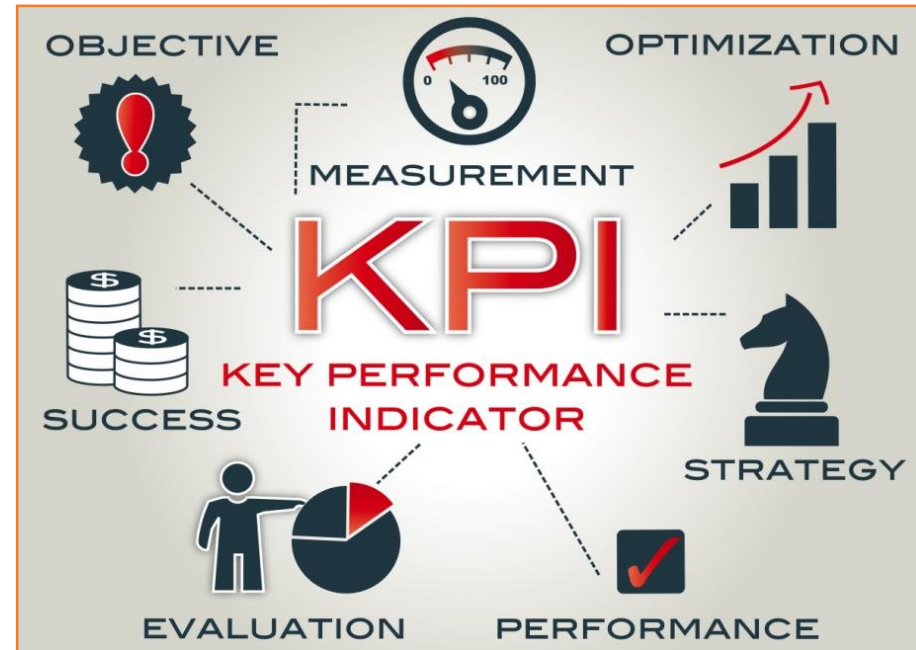
Kairouan smart city project –
Why KPIs for smart city?

Show what data to collect

Standardize data collection

Show gaps in policy

Show areas for improvement

KPIs for Smart Sustainable cities help cities to achieve the **SDGs**

Kairouan smart city project – Structure and properties of KPI for SSC

Dimension   **Subgroup**   **Sub-dimension**

Economy

- ICT
- Infrastructure
- Productivity

- Building
- Electricity Supply
- Employment
- ICT infrastructure
- Innovation
- Noise
- Productivity
- Public sector
- Roads
- Transport
- Urban planning
- Waste and sanitation
- Water supply

Environment

- Energy
- Environment
- Infrastructure

- Air quality
- Energy
- Environmental quality
- Health infrastructure
- Noise
- Public spaces, nature and biodiversity
- Waste and sanitation
- Warer and sanitation
- Water supply

Society and culture

- Education, health and culture
- Safety, housing and social inclusion

- Culture
- Education
- Food Security
- Health
- Housing
- Poverty
- Safety - disaster
- Safety - disaster relief
- Safety – emergency
- Safety – ICT
- Social inclusion

Smart Kairouan city project – Action plan

Data collection → Verification and audit → Membership in the committee booard

Kick-off meeting
19 Oct. 2017

Progress meeting
30 Oct. 2017

13 Nov. 2017

Audit and control report
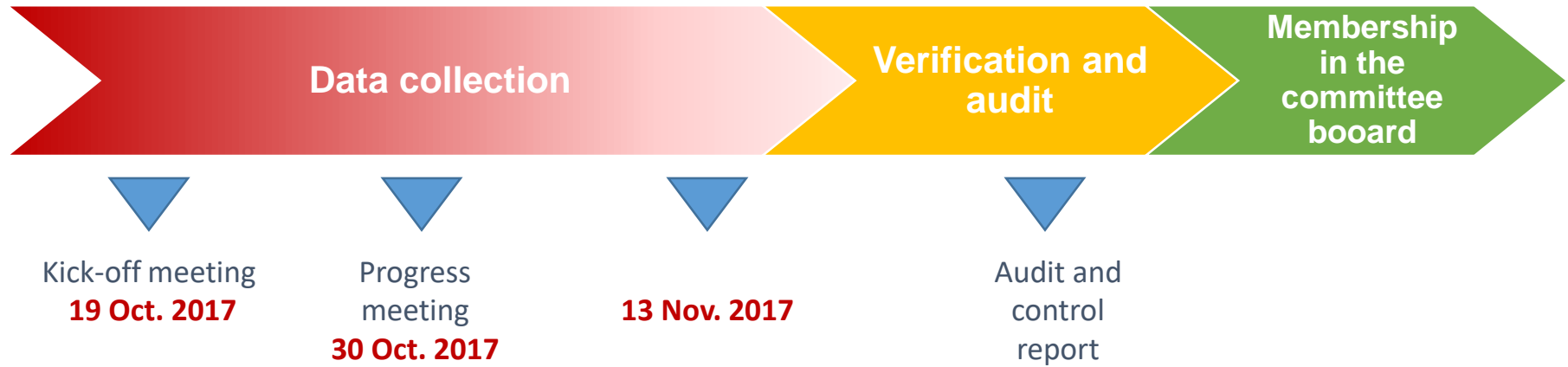
Feasibility study of El-Ghazala smart city – Methodology

CERT   NIPA

TEAM

Questionnaire	Environment Analysis	To-Be Model Design	Main Project Development	Kick-off/ Completion Report
Interview	Assessment of current status	Definition of To-Be Smart City model	Main project strategy & roadmap	To-Be Model Workshop
Physical inventory	Requirement, Issues and Priority	Direction (Organization, Legal, Technology)	Implementation options	1st, 2nd, 3rd Visit

Project Implementation Plan   Final Completion Report

To-Be Model Direction   Implementation Plan

Feasibility study of El-Ghazala smart city – Overall schedule

Environment Analysis	To-Be Model Design	Main Project Development	Final Repo

2016

6	7	8	9	10	11	12

Project Implementation Plan

To-Be Model Direction

Consulting Activities Preparation

ICT Strategy & Infra Analysis

To-Be Model Definition

Stakeholders Analysis

Implementation Strategy

Socio-economic Environment Analysis

Implementation Plan

Final Report Review

Final Report

1st Visit (Jul 28 ~ Aug 9)

2nd Visit (Sept 18 ~ Sept 30)

Benchmarking In Korea (Nov 14 ~ 17)

3rd Visit (Nov 27 ~ Dec 3)

Kick-off Meeting

To-Be Model 1st Checkpoint

To-Be Model Workshop

Invitational Workshop in Korea

Project Completion

- Aug. 3rd Kick-off Meeting
- Aug. 8th "Preliminary Innovation Model"

- Sept. 27th ~ 28rd To-Be Model Workshop

- Nov 17th Invitational Workshop

- Dec. 2nd Project Completion Reporting
- Dec. 2nd - Closing sig off

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Feasibility study of El-Ghazala smart city – To-Be Image

Service Location in El-Ghazala Smart City

Energy/Env. Zone

Testbed Zone

Healthcare Zone

CERT

Transportation Zone

Biz/Education Zone

Facility Management Zone

Service Zone

Energy/Env. Zone

Transportation Zone

Facility Management Zone

Biz/Education Zone

Healthcare Zone

Testbed Zone

WiFi Zone
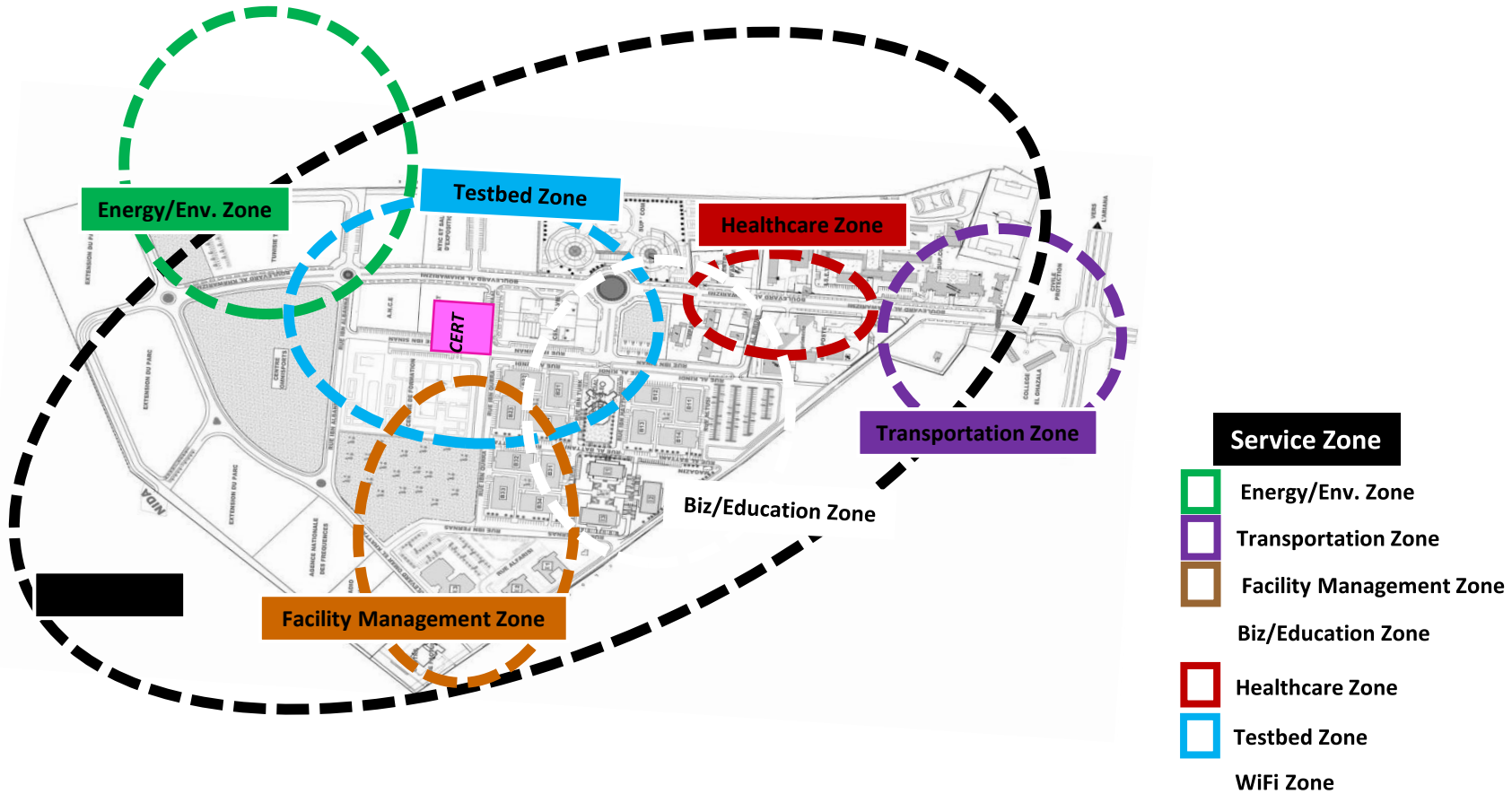
Feasibility study of El-Ghazala smart city – Total costs

City Layer		Solution	Investment	Operating Costs For first 2 years	Total ('000 Euro)
Structure of Total Cost					
City Inherent Service Layer	Energy Sector	WTE	4,000	-	4,000
		IOT based Smart Metering	180	20	200
		IOT based BEMS	90	10	100
		Smart EV Charger	45	5	50
	Transport Sector	BIS and Bus Shelter	180	20	200
		Taxi Call Service	90	10	100
		One Card for Payment and Security	135	15	150
City Common Service Layer	Biz/Edu Sector	Remote Co-Work Solution	90	10	100
		IOT based Smart Office/Home/School	90	10	100
	Healthcare	Smart Hospital	180	20	200
Information Space Layer	Testbed with Exhibition & Cultural Center	Information Space Creation	1,000	-	1,000
		Testbed and Marketing Platform	1,800	200	2,000
		Exhibition and Virtual Incubation Solutions	630	70	700
		Digital Culture Solution	540	60	600
City Infrastructure Layer	Facility Management	WiFi Network	135	15	150
		Smart Pole	135	15	150
		Smart Parking with Security System	180	20	200
Total			**9,500**	**500**	**10,000**

Feasibility study of El-Ghazala smart city – Impl. roadmap

			2017				2018	
		1Q	2Q	3Q	4Q	1Q	2Q	
Stage 1								
Energy	WTE	Biz Plan/Design	Consent	Financing	Construction		Operation	
Testbed with Exhibition & Cultural Center	Information Space Creation	Biz Plan/Design	Consent	Financing Or Budgeting	Construction		Operation	
	Testbed and Marketing Platform							
	Exhibition and Virtual Incubation Solutions							
	Digital Culture Solution							
Stage 2								
Energy	IOT based Smart Metering				Biz Plan /Design	Consent/ Budgeting	Construction	
	IOT based BEMS							
	Smart EV Charger							
Transport	BIS and Bus Shelter				Biz Plan /Design	Consent/ Budgeting	Construction	
	Taxi Call Service							
	One Card for Payment and Security							
Biz/Edu	Remote Co-Work Solution				Biz Plan /Design	Consent/ Budgeting	Construction	
	IOT based Smart Office/Home/School							
Healthcare	Smart Hospital				Biz Plan /Design	Consent/ Budgeting	Construction	
Facility Management	WiFi Network				Biz Plan /Design	Consent/ Budgeting	Construction	
	Smart Pole							
	Smart Parking with Security System							

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5 Major competetive advantages to invest in smart cities inTunisia

- Promulgation of new digital code (ongoing work) that aims to make a favorable environment for investors to invest in Tunisia (relaxed conditions for administrative procedures, incentives for investors, ...)

- The Government provided 29 IoT licences in 1st round and 9 in 2nd round to deploy their IoT networks with the aim to develop new business opportunities and create the value

- A growing and strong entrepreneurial ecosystem

- Competitive and talented human resources

- Strategic location between Europe and Africa

ICT Collaboration between Korea and Tunis

- Tunisian Public Procurement System in Tunisia (TUNEPS)

- Feasibility Study for El Ghazala smart city by NIPA

- Enterprise DB Integration Study (ongoing) by NIPA

- Several workshops on ICT (KAIST ITTP and CERT)

- Assistance and expertise in ICT filed (e-Government, …)

- Training and competencies development

Thank you for your attention!