



Smart City Successes

The Spatial Technology Factor

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Agenda

- Drive behind Smart City Initiatives
- Dubai Case Study
 - One Window View of Consolidated Infrastructure Data
- Measuring Smart City Impact
- Central role of Geography in Building Smart City Technologies

The “HAPPY” factor:



- With the success of the mGovernment initiative, focus is now shifting to monitoring and achieving a sustained level of “Happiness” with the City’s residents
- For over a decade, Rolta has played a central role in helping Dubai realize its ambitions
- Cities will all soon aim for HAPPY among its citizens.

Drivers In Dubai

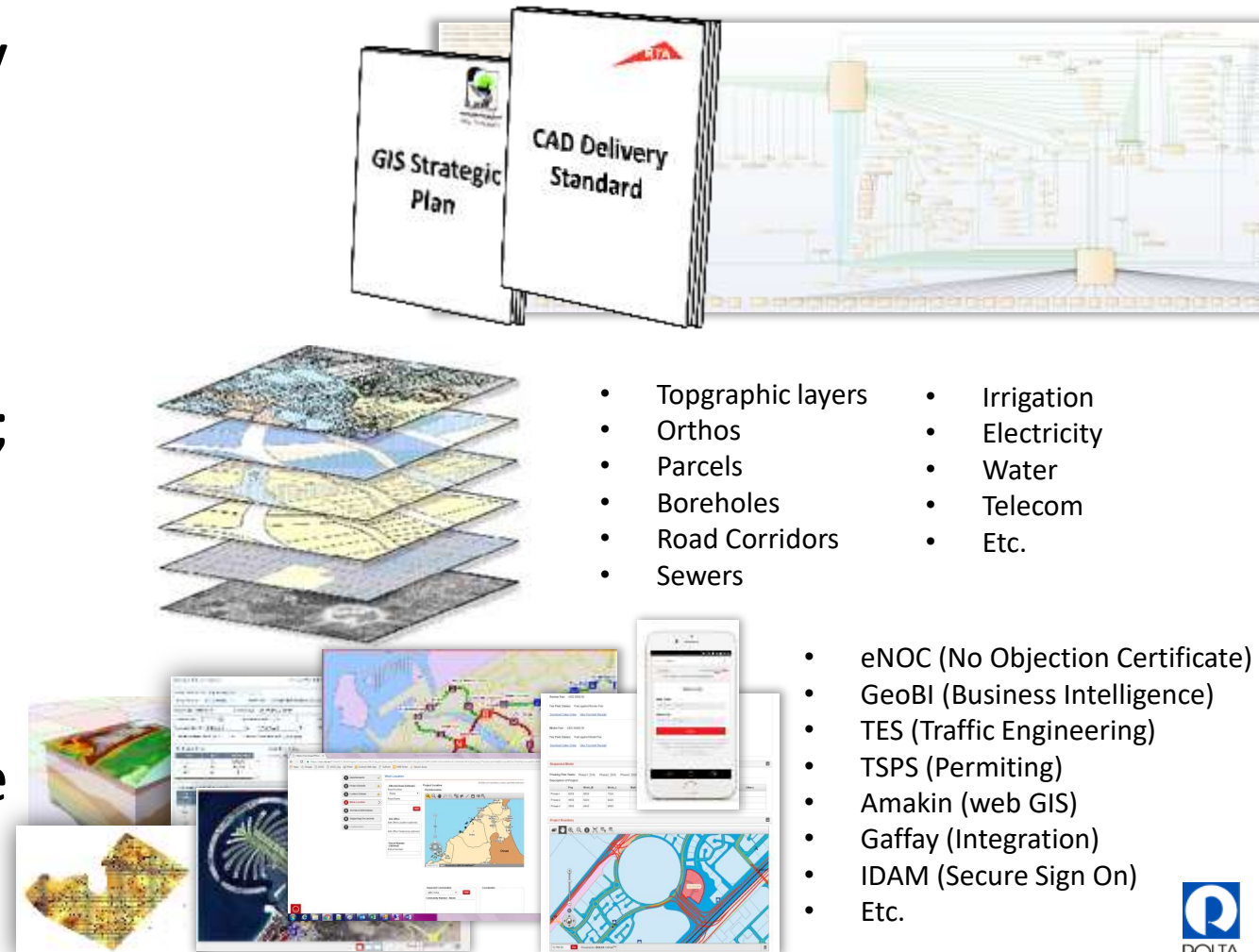
- In fact, in February 2016, they swore in their first Minister of Happiness
- Clearly, they take this very VERY seriously



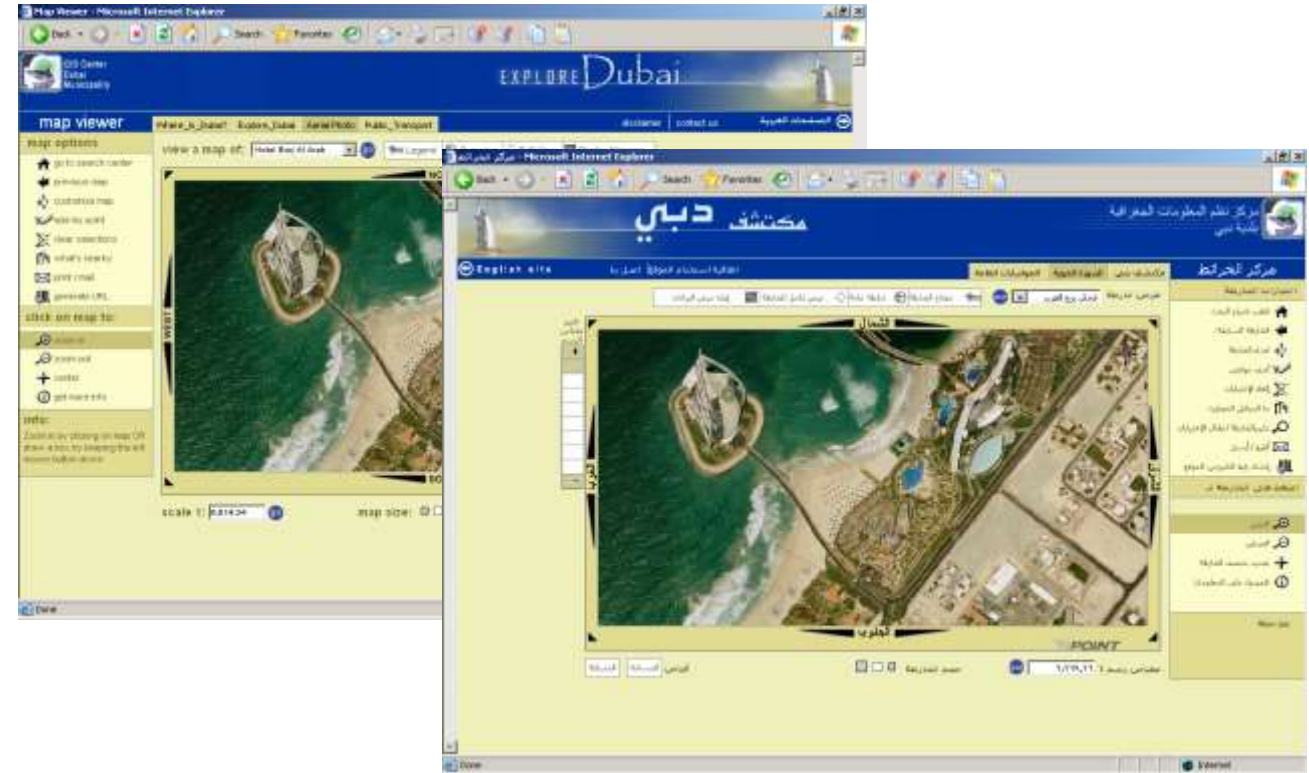
*Ohood Al Roumi,
Dubai Minister of Happiness*

Being Part of the Dubai Transformation

- Rolta is proud to have been part of helping Dubai transform into the Smart City it is today
 - Their “Foundation”, such as GIS Strategies, Data Models, and other standards
 - Their many spatial data layers; the critical ingredients that go into the solutions they build
 - And the many systems that have delivered “Happy” to the city’s citizens



Application Project: Web GIS



- Various government departments use Web-GIS to carry out their day-to-day responsibilities, for:
 - Land / Property Management
 - Environmental Issues
 - Transportation
 - Economic Development
 - Utilities / Asset Management



Project: Traffic Engineering System (TES)

- A fully integrated GIS based workflow solution for Traffic Impact Studies and Cost Sharing
 - Minimizing reliance on emails and phone calls
 - Following a standard workflow, avoiding ad-hoc processes
- Helps improve overall financial health
 - Reducing operational cost
 - Increasing cost recovery for capital projects



Note: Map takes few moments to load, please wait until it loads completely.

Trip Generation Details

Estimated Trip Generation	Vehicle/Hour
Trip Generation (All)	9994
Trip Generation (GT)	9972
Trip Generation (PH)	7709
Trip Generation (RH)	8195
Calculated Study Level	LS

[Link User Details](#)

Methodology and TIS Application Approval condition(s)

Supporting Documents

Free Consultant Uploaded Internally

Category	Sub-Category	File	Status
Appraisal Letter	Introductory TIS Application	TIS-Intro-Letter-LS	Approved
Review Fee	Others	Review-Fee-Paid	Approved
Model Fee	Others	Model-Fee-Paid	Approved
Methodology Report (PDF)	Methodology Application	MTS-Methodology-Paid	Approval Pending

[Expire](#) [Download](#)

Official Communication

Approval Remarks

Additional Information

Messages

Today November - December, 2016 Day Month

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Nov 27	28	29	30	Dec 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Project Boundary

8,750.63 [Go](#) Powered by: BDLIA Online™

Discussions

[To Consultant](#) [To Internal](#) [Start a new discussion](#)

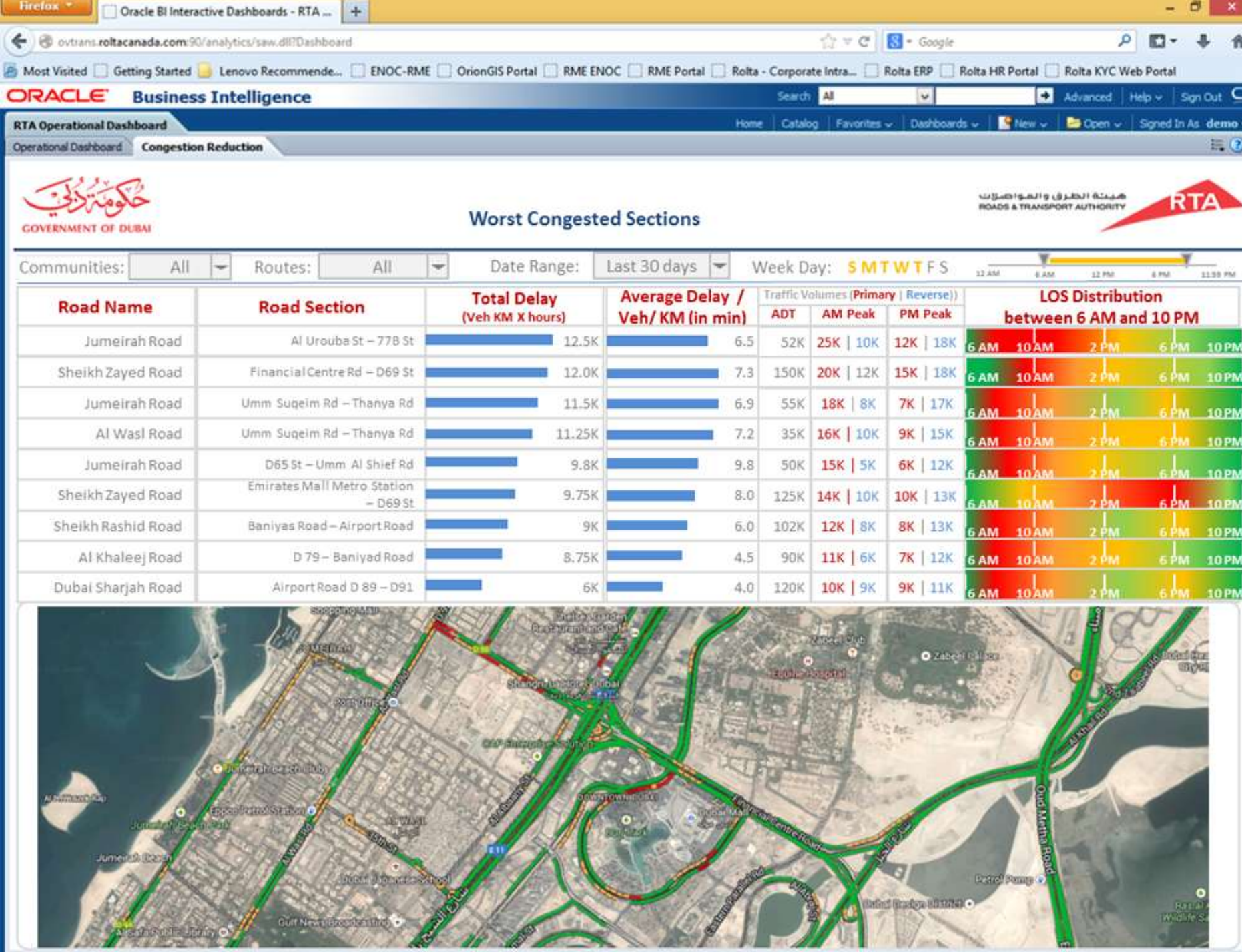
Missing Documents 15/11/2016

Entered by: Isma (Person Email: [isma@bdlia.org](#) | Person Office Phone No: 0144444)

Discussion: Please submit all the missing documents a, b and c.

Reply: 6 (15/11/2016) | Please find here attached Attachments: [57b0d0c36c3d](#)

Project: RTA GeoBI



- GeoBI screen, showing traffic at different times of day

Dubai Case Study – Al Gaffay

One Window View of Consolidated Infrastructure Data

- The aim is to improve the happiness of the citizen
 - Saves the customer from having to stand in line to secure approvals from one agency to the next to the next for the same application
 - Simpler “one window” process for filing various applications
 - We apply smarter use of technology to take such burdens off the customers’ shoulders (and reducing number of trips to the municipality), making them happy
- Dubai considers it their **duty** to find more ways to bring the agencies, and to the citizens of





Before

- Contractors would need to visit each potentially affected agency to gather their drawings for a project site, and the general area around it
- This could take many weeks, as each agency would require endless levels of proof of the contractors legitimacy, and the true existence of the project

eNOC - Apply New NOC x Faridur Rahman

localhost/RTA-enoc/ApplyNOC.html

1 Questionnaire

2 Project Details

3 Contact Details ✓

4 **Work Location** >

5 Technical Information

6 Supporting Documents

7 Confirmation

Work Location

Affected Road (Optional)

Road Number: 101/2

Road Name: Sheikh Zayed Road

Add

1- 101/2 Sheikh Zayed Road ✗

2- 101/3 32nd Street ✗

3- 201/3 34th Street ✗

Site Office

Site Office Location:

Site Office Telephone:

Project Location

(All field are mandatory unless specified otherwise)

Plot Information

Community Name: Abu Hail

Plot ID:

Search

Today

- The process is automated through a single portal
- The legitimacy of the contractor and the project are already recorded in the system, and they can instantly download pertinent structure and infrastructure details

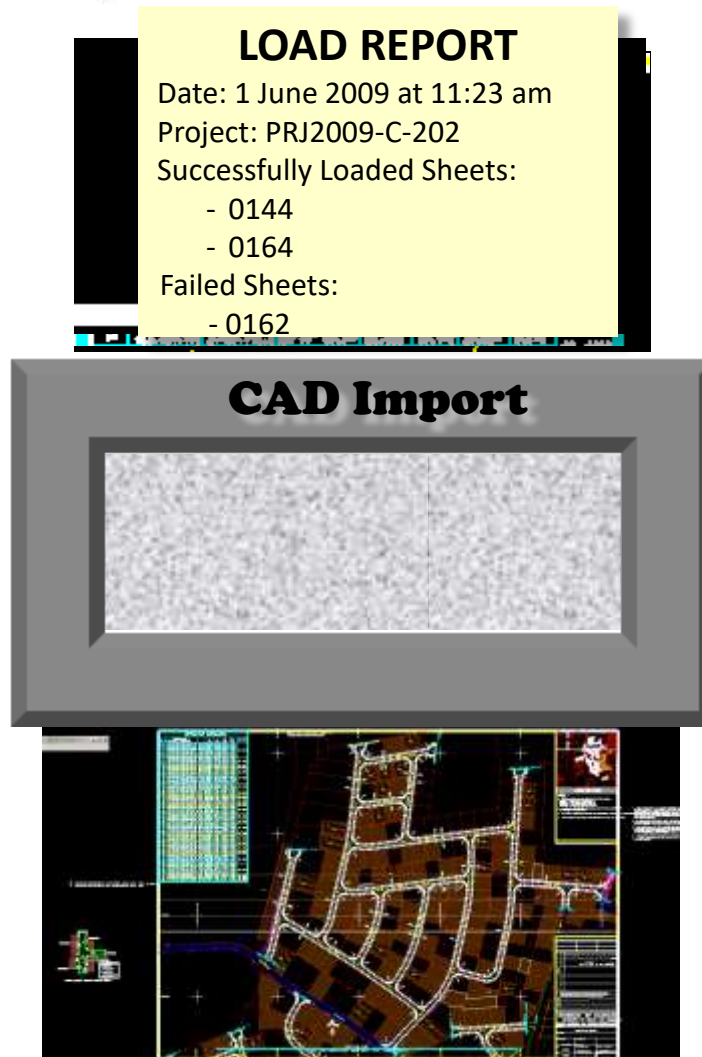


Dubai Case Study – Al Gaffay

Uploads from Contractors

- For Design and Construction NOCs, the Contractor needs to upload either Design or As-Build CAD drawings to the Municipality's site
- In the past, every contractor followed their own rules for how the CAD file was formatted, making it nearly impossible to import it into a common system
- Today, there are CAD submissions in place, and an import process to automate it

Dubai Case Study – Al Gaffay Uploads from Contractors



The import will:

- Split the data out into various parts (e.g. geographic features, table records, etc.)
- Append them to the appropriate layers and tables in the database
- Update all your project management records



One Window View of Consolidated Infrastructure Data

With this approach...

- Contractor Benefits
 - They only need to provide their content through **one portal**
 - They can also **download existing infrastructure** from one site when they begin planning a new project
- Service Authorities Benefit
 - They retain full control of their role in approving Service and Building NOCs, but are **not burdened with the logistics of managing a paper trail**
 - They have a **One Window View** of Consolidated Infrastructure Data
- Citizens and Developers Benefit
 - Projects proceed **more promptly** without significant delay since NOC applications no longer experience the usual paper trail delays

Dubai Case Study – Al Gaffay

Measuring Smart City Impact

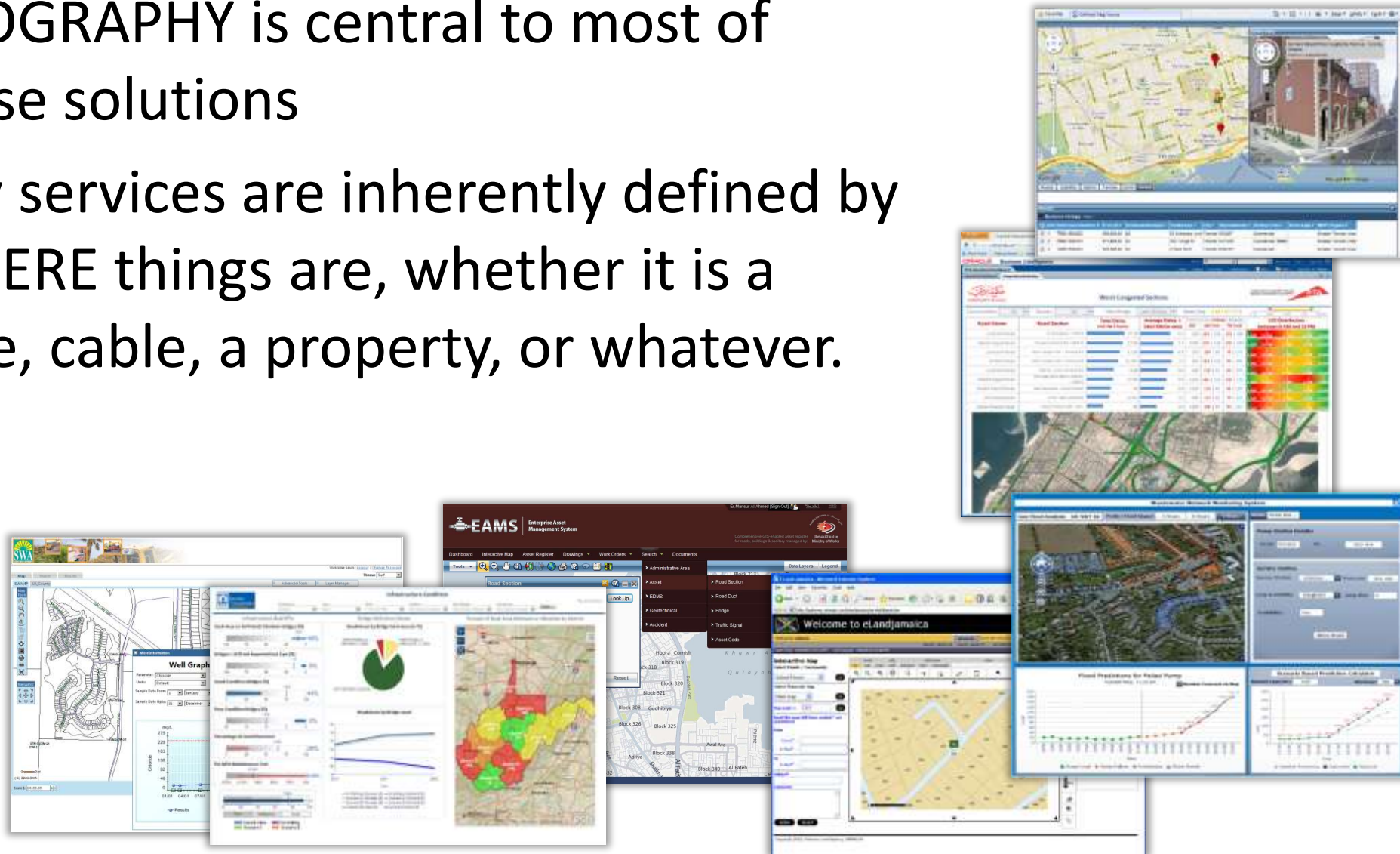
Financial Return on Investment	
	AED per year
Information NOC	1,485,000.00
Design NOC	1,080,000.00
Construction NOC	2,160,000.00
Total Savings a year	4,725,000.00
Number of Years to recover investment	5 years
Social Return on Investment	
Improved service delivery time	Contribute towards to Happy Dubai Reduce Trips Save Time
Reduce carbon footprint	Reduce cost for end users Improving Health Reduce consumables (Paper)

Financial and Social KPIs for the project in Dubai

Smart Cities

Geography is Central

- GEOGRAPHY is central to most of these solutions
- City services are inherently defined by WHERE things are, whether it is a pipe, cable, a property, or whatever.



Rolta Smart City Solutions

Bahrain MOW – eAMS
Abu Dhabi 3D Mapping
Min. of Transport, Ontario
Dubai RTA GeoBI
Dubai RTA eNOC
Gwinnett County
Ontario's MPAC
Dubai Municipality
Georgia Power
Ontario MEDT
West Palm Beach SWA
Rajasthan Groundwater
Florida DOT
Hydro One
Saudi Electric Company
Qatar's Ashghal - CAPRMS
Saudi GCS
Lucknow Police



Saudi MOI
Abu Dhabi Police
CARE – Complaint Mgmt
Thames Water
Jamaica NLA
Qatar's Ashghal - CMS
US Map21
Muscat Municipality
Town of Oakville
Mumbai Police
Alava, Spain
Mun. of Chatham-Kent
City of St Johns
New Plymouth, NZ
Town of Markham
Greater Amman Mun.
City of Pasadena, CA
City of Kingston

Partial list of the Rolta customers
Indian Intellectual Property, Make in India, Deployed Worldwide

Questions

- I would like to invite you to visit our booth



ROLTA