



The Role of Data Centres in Smart Communities

Presented by:

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Global Data Centre Trends



The world, and our world is changing fast...



- Digital disruption is all around us
- What do these companies have in common?



The world, and our world is changing fast...



Largest accommodation provider owns no property



Largest taxi service provider owns no cars



One of the largest software application vendor doesn't write the applications (99%)



One of the largest retailer owns no inventory



Largest movie provider owns no movie or cinema



One of the largest content provider doesn't write content



One of the fastest growing bank has no physical money



Demographics and attitudes are changing

- 43% of the current workforce will retire in the next 8 years
- New work force is (going to be) very different placing more demand on IT/Data centres
 - More demanding yet less loyal
 - More technical/digital/social media savvy
 - Expect anything, anytime, anywhere....



Open data centre architectures



- Two “competing” standards have entered the market
 - OCP - Open Compute Project
 - Based on 21” inch wide racks
 - Open19
 - Based on standard 19” inch wide racks
- OCP started in 2011 but has not gained the traction/adoption which was expected
- OCP is expected a faster adoption due to the usage of standard components/equipment



Security

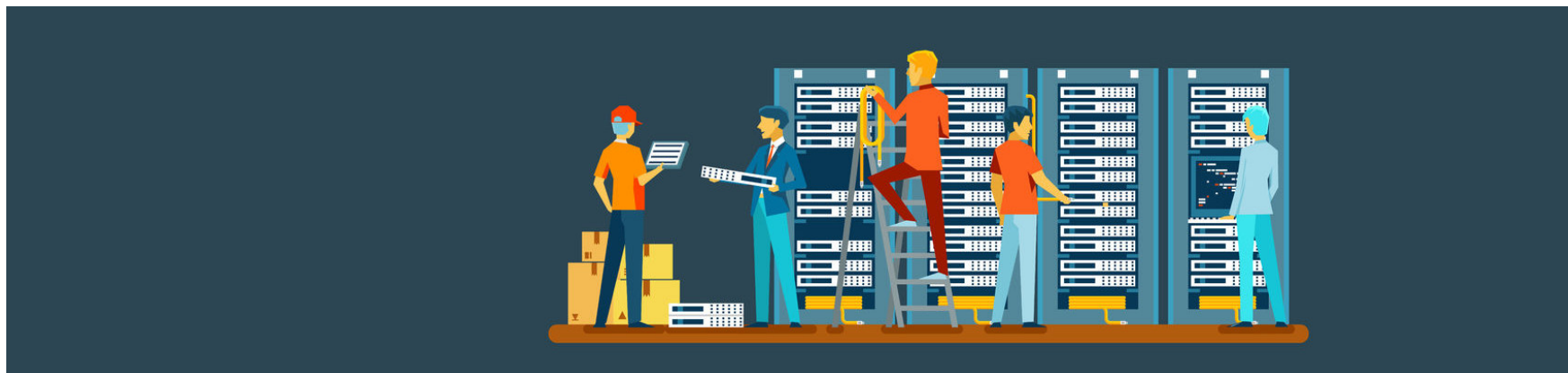


- Security stays high on the agenda
- IT Security becomes more challenging
 - IoT – Internet of Things
 - DDoS – Distributed Denial of Service
 - Ransomware
- Security of supporting infrastructure
 - BMS / Control Systems
 - Public/utility services



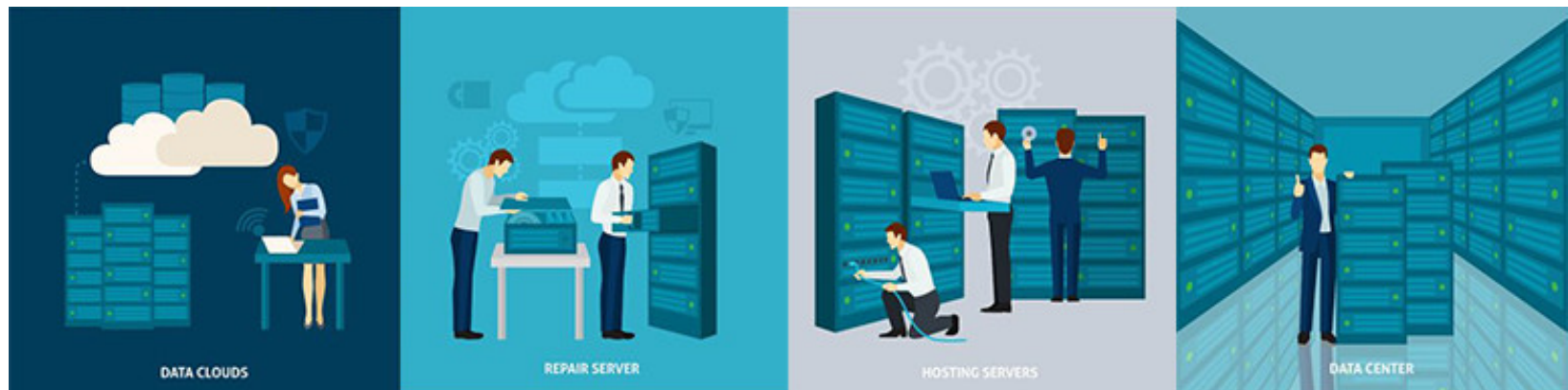
Resilience

- Traditional resilient infrastructure will change or be complemented due to new technologies and ever increasing demand for availability
 - More sharing
 - More active
 - More replication
 - More intelligent and software driven
 - More distributed



Shift in Enterprise Data Centres

- Less, or smaller, on premise data centers
- Many smaller and regional facilities consolidate into centralized 'premium' sites
- Capacity outsourcing to public cloud data centers, enterprises will increasingly turn to colocation and hosting providers
- SaaS/Cloud attracts customers with a need for driving down cost and increase speed of innovation
- IoT will lead to many regional aggregation data centres to support hyper scale data centres



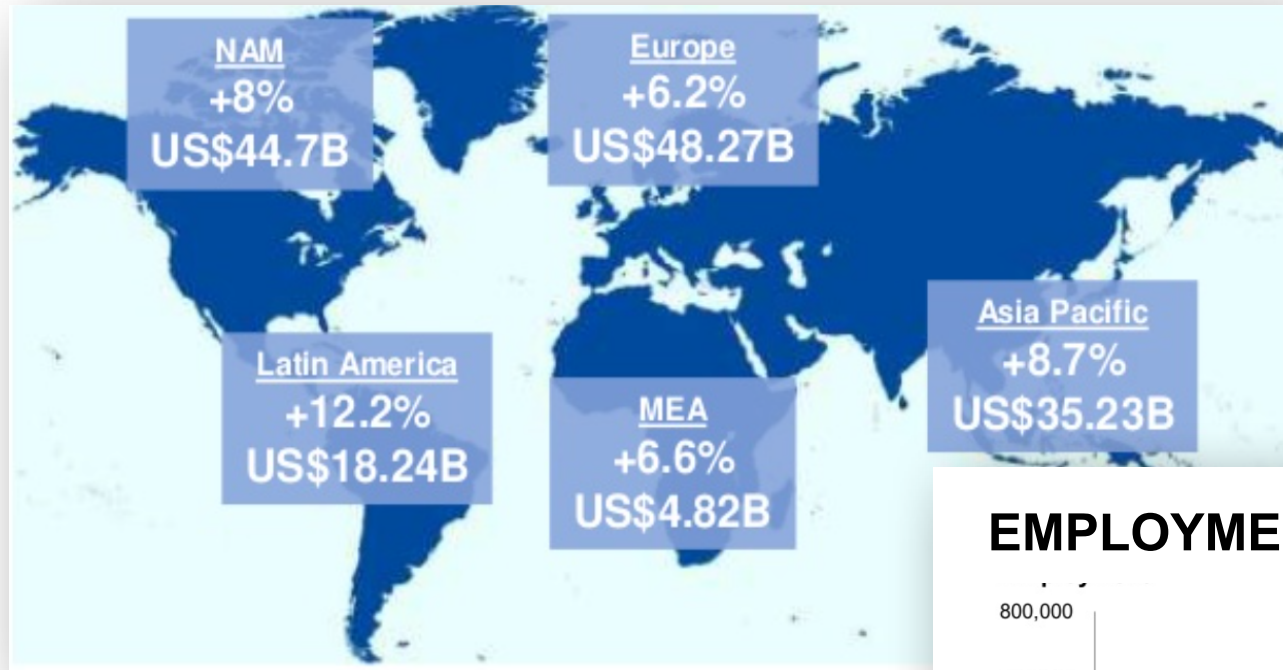
AI – Artificial Intelligence

- AI is going to be disruptive once the technology has been proven
- Google is experimenting (Deepmind project)
- University of Lancaster's Data Science Institute developed data centre AI software (REX)
- Intel® released programs for AI

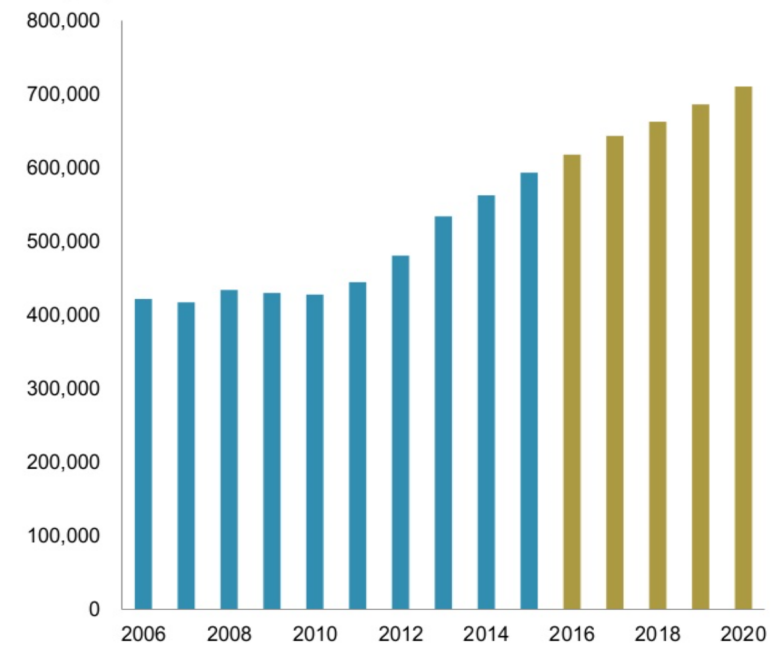




Data centre market growth



EMPLOYMENT



Source: IBISWorld, June 2015



Data Centres





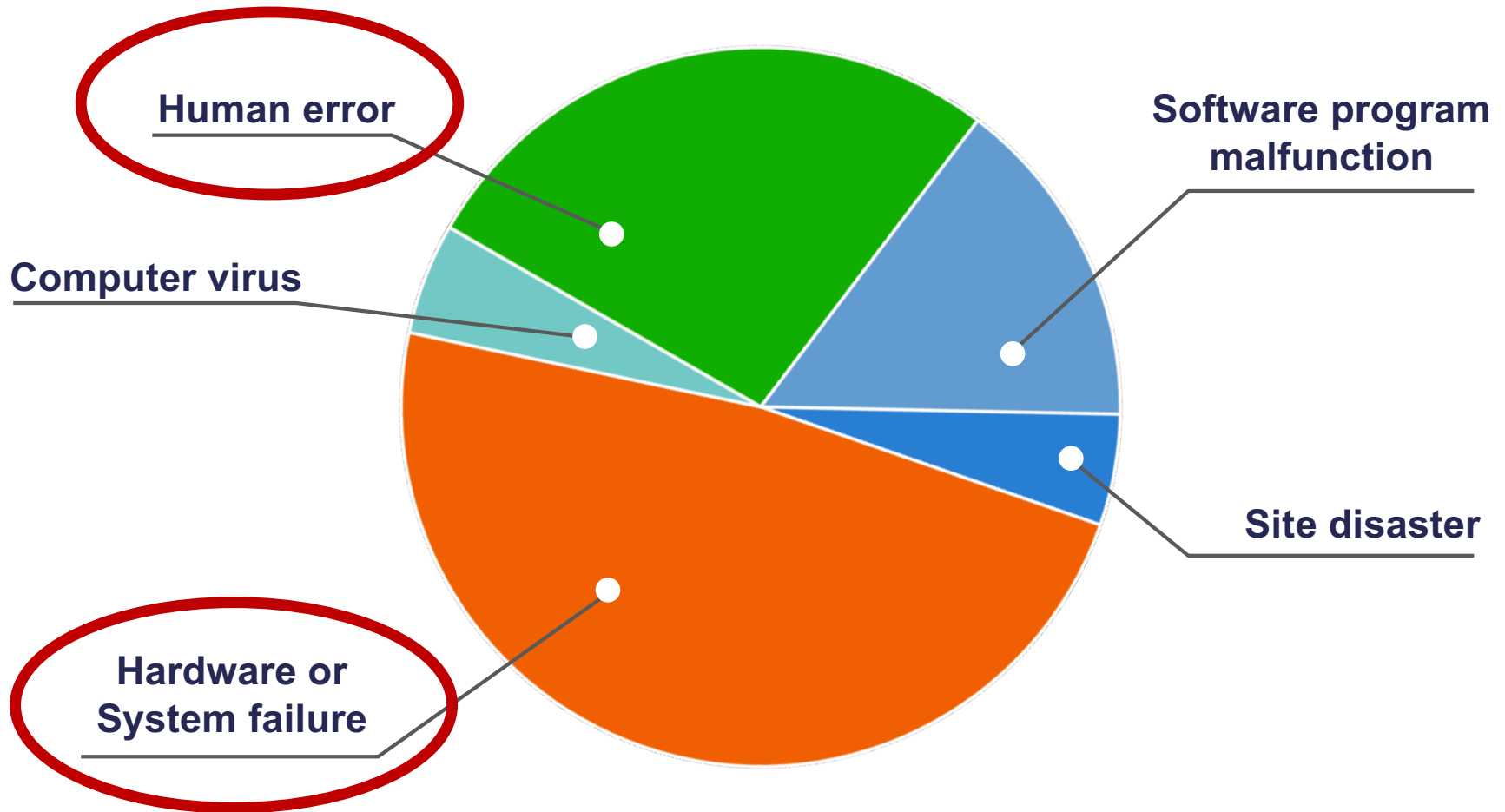
How Good is a CLOUD?

- How you can say you have a good CLOUD?
 - Communications, Regulations, Physical Infrastructure, Operations,...

 - No apparent downtime
 - NETFLIX
 - AMAZON down in March 2017 for 8 hours
 - GOOGLE
 - IBM
 -

 - Where is the CLOUD?

Causes of downtime



Causes of downtime and data loss
(Source: ZDNet by ADIC)





Airline Safety – a 5 Year Overview

- Airline accidents have dropped against an increase in number of flights

Description	2009	2014	Change %
# of flights (in Millions)	33.2 (2.5b)	38 (3.3b)	+15% (35%)
Total accidents	90	73	-19%
Fatal accidents	18	12	-33%

Source: IATA

- Pre- and inflight check lists are one of the reasons...



Operational Excellence



- RELIABLE service



Data centre Framework



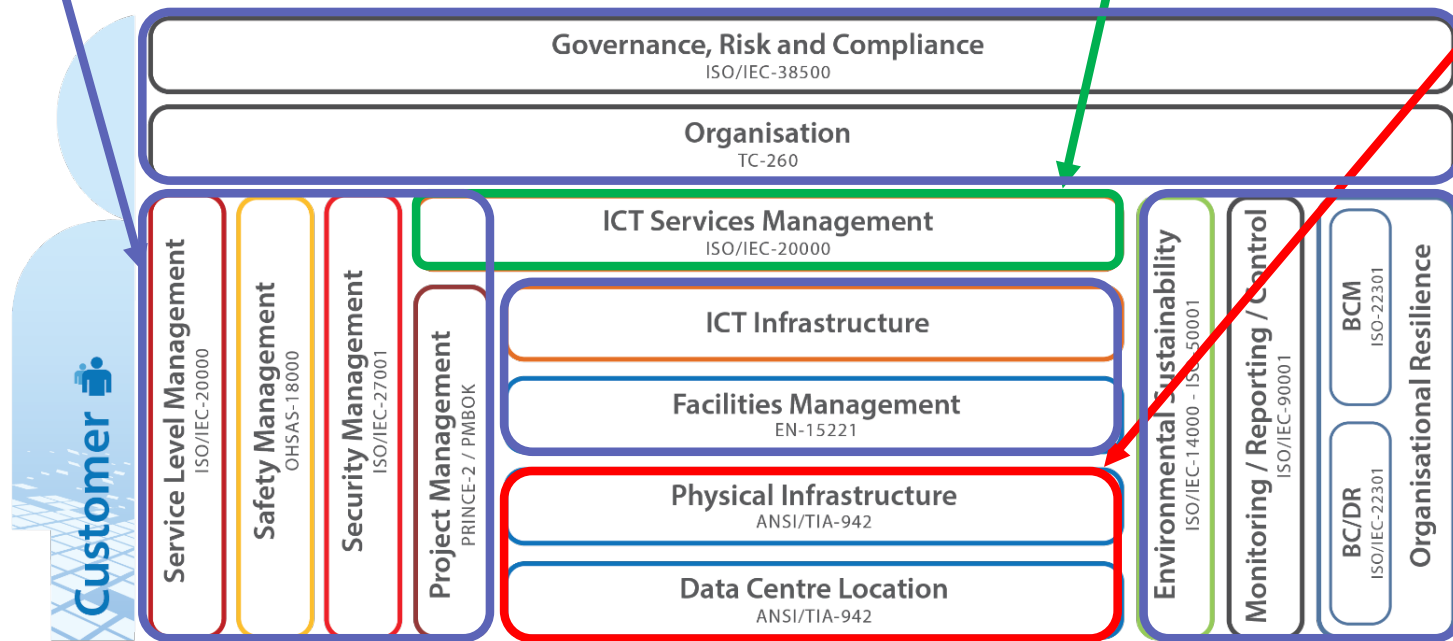
DCOS

ITIL / ISO-20000

ANSI/TIA-942



EPI Data Centre Framework[©]



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How Good is a CLOUD?



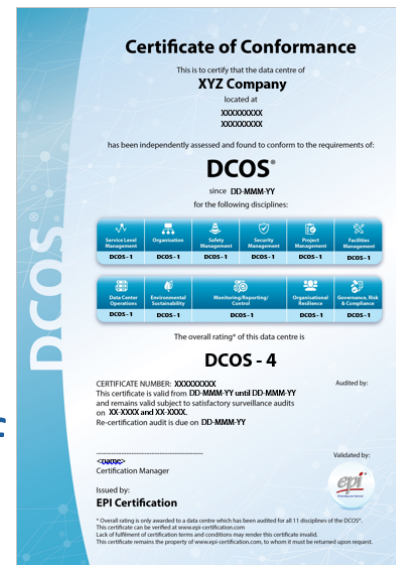
- How you can say you have a good CLOUD?

– Maybe Certified according Standards?

- Physical Data Center (Architectural, Electrical, Mechanical, Security, Telecommunications)

- Operations

- Trained and Skilled Staff

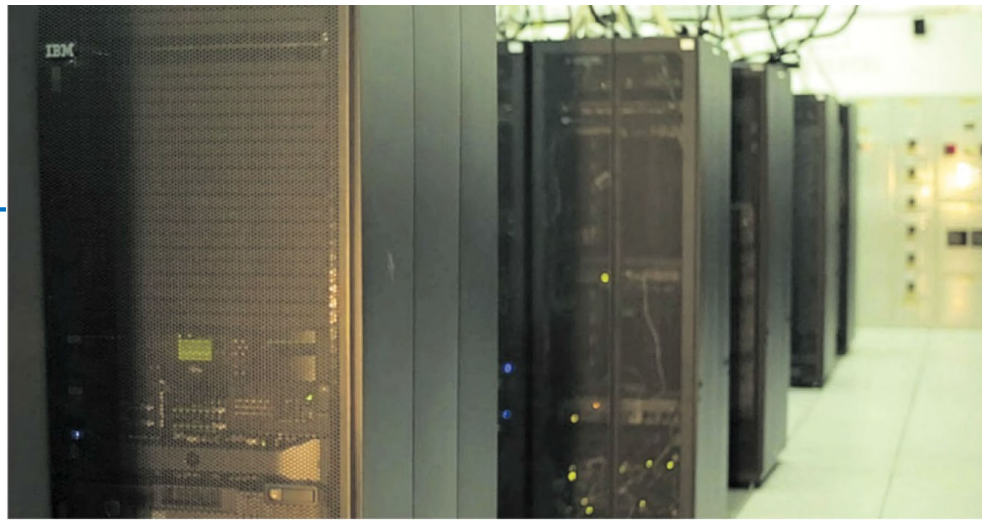




TSTT

Telecommunication Services Trinidad and Tobago





TSTT DATA Centre is the only TIA-942 certified centre in Latin America.



TSTT receives full certification as a Data Centre Service Provider



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Joseba Calvo, Managing Partner of EPI LATAM presents TSTT's TIA certificate to Rolf Young, Senior Manager Enterprise Marketing at TSTT.



How Good is TSTT CLOUD?

- How you can say you have a good CLOUD?
 - Communications
 - No apparent downtime
 - AMAZON down in March 2017 for 8 hours)
 - Where is the CLOUD?

How Good is TSTT CLOUD?



- How you can say you have a good CLOUD?

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- Physical Data Center (Architectural, Electrical, Mechanical, Security, Telecommunications)
- Operations
- Trained and Skilled Staff



ANSI/TIA-942:2014

Certificate of Conformance

This is to certify that the data center of
Telecommunications Services of Trinidad and Tobago
 located at
**#1 Pineapple Drive Mausica D'abadie,
 Trinidad & Tobago**
 has been independently assessed and found to conform to the requirements of:

**ANSI/TIA-942:2014
 Rated 3**

since 07-Sept-16
 for the following scope:

Architecture: R3	Mechanical: R3	Electrical: R3	Telecom: R3
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CERTIFICATE NUMBER: 1868201609070001
 This certificate is valid from 07-Sept-16 until 07-Sept-19 and remains valid subject to satisfactory surveillance audits on 07-Sept-2017 and 07-Sept-2018. Re-certification audit is due on 07-Sept-2019.

Edward van Leent
 Certification Manager

www.tia-942.org

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Key Takeaways



- Downtime is KEY and its COST impacts in the business
- Smart Communities need DATA, Communication,....
- Data, Communication depend on Data Centers
- Certified Data Centers are able to guarantee a **RELIABLE SERVICE** for SMART COMMUNITIES







Thank You!



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