

# Rise of Digital Nation Vietnam 4.0

**Key development points in  
building for a Secure, Innovative,  
Resilient Homeland in harmony  
with Industry 4.0 technology**

BUILDING SMART CITIES SUSTAINABLY IN THE FOURTH INDUSTRIAL REVOLUTION ( 20 M)

**DELLEMC**



# Martin Yates

**Chief Technology Officer  
Singapore**

首席技术主管

**City Architecture and  
Homeland Security Director**



**C4ISR Weapons  
and Communications**



**Distributed  
Computing**



**Industry 4.0  
Architecture**



**Cryptocurrency and  
block chain**

## @Home: Development Committee's, Government and Community Services



**Singapore  
Computer Society**

Founder of the SIG/ Cloud  
Chapter, Chairman and  
President 2010- 2016,  
Immediate Past President.  
Singapore Exco

**SGTech Exco;**  
Cloud and Big Data

Collaboration

**Workforce SG  
SkillFuture SG**

**WDA Workforce  
Development Agency  
NICF/ SkillsFuture SG**

Advisory  
Cloud  
Technology  
ICT Job Roadmaps 2018



Skills



**IMDA National IT  
Standards Committee  
Advisory**

MTCS SS584:2013  
  
TR30: IT Operations,  
COIR, Cloud standards



Security



People's Association

**People's Association  
Singapore**

\* Grassroots Leader for  
East Coast LHNC

\* Bedok Community  
Resident Engagement NC  
and RC

Community



Public Safety

**CERT Emergency and  
Crisis Operations Team**

SGSecure program

PA CERT National Activity



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# Build a Digital City ICT leveraging the family alignment of secure US international companies



Award-winning customized solutions offering innovative devices and services designed for the way people work

**DELL**  
Technologies

**DELLEMC**

The foundation to transform your data center with industry-leading servers, storage and converged infrastructure

**Pivotal**

Leading the intersection of Big Data, PaaS and agile development leveraging data on one cloud-independent platform

**Dell Boomi**

The leading EDI – API – MDM  
Cloud enabled software suite

**RSA**

The premier provider of security, risk and compliance solutions solving your most complex challenges

**SecureWorks**

Elite and trusted intelligence that strengthens security and reduces risk in a dynamic landscape

**virtustream**

The leading enterprise-class cloud software and solution provider

**vmware**

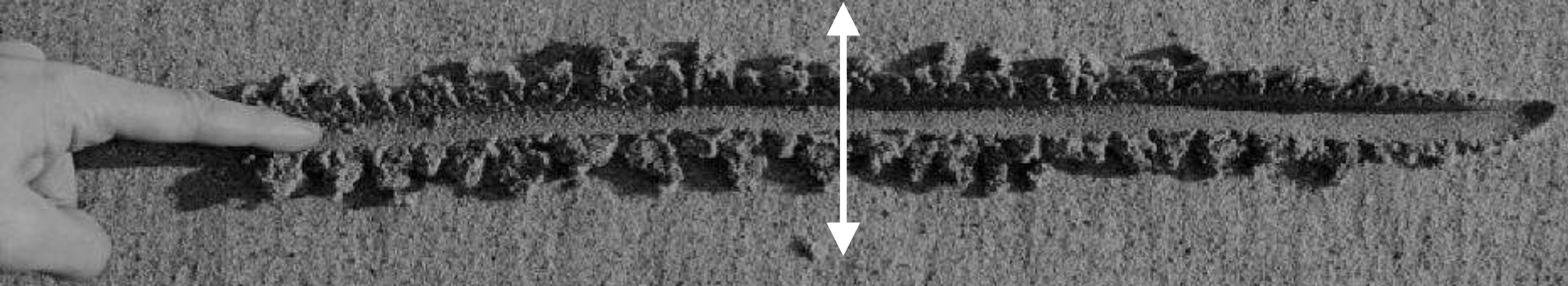
The most trusted virtualization for desktop, data center and applications. Mobile device security. VDI.

**DELLEMC**



The world is globalized

Anticipate change and evolve quickly  
with Industry 4.0 technology



React only to change, risk to the nation

# We know we must keep changing within Industry 4.0

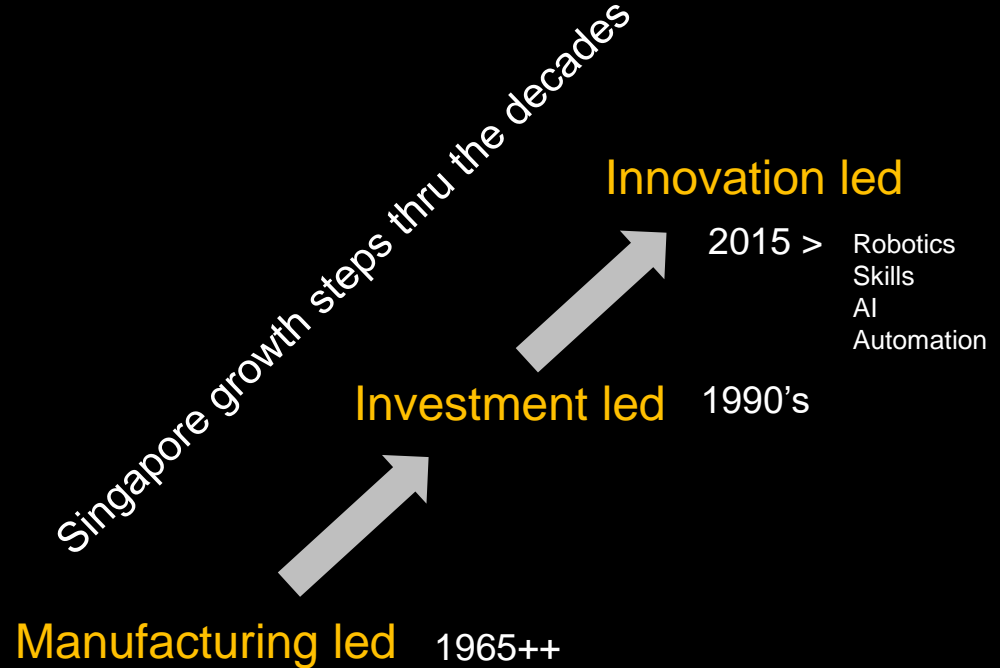
## Keeping our masterplans long term and agile to change



### Singapore The Smart Nation



“ Our vision is for Singapore to be a Smart Nation. A nation where people live meaningful and fulfilled lives, enabled seamlessly by technology, offering exciting opportunities for all.” PM Lee Hsien Loong



# Singapore sets digital transformation goals for 2023



## STAKEHOLDER SATISFACTION



Citizen Satisfaction with Digital Services (via survey)

75-80% to rate very satisfied



Business Satisfaction with Digital Services (via survey)

75-80% to rate very satisfied

## DIGITAL CAPABILITIES



Number of public officers trained in data analytics and data science

20,000



Number of public officers with basic digital literacy

All Public Officers

## END-TO-END DIGITAL OPTIONS



Services that offer e-payment options (inbound and outbound)

100%



Services that are pre-filled with Government-verified data

100%



Services that offer digital options for wet ink signatures

100%\*

## TRANSFORMATIVE DIGITAL PROJECTS



Number of transformative digital projects

30-50

## AI, DATA AND DATA ANALYTICS



Percentage of Ministry families that use AI for service delivery or policy making

All Ministry families to have at least one AI project



Number of high-impact data analytics projects

10 cross-agency projects per year, and 2 projects per Ministry family per year



Core data fields in machine readable format, and transmittable by APIs

90-100%



Time required to fuse data for cross-agency projects

Less than 10 days to share data for cross-agency projects

## END-TO-END DIGITAL TRANSACTIONS



Percentage of transactions completed digitally from end-to-end

90-95%\*



Percentage of payments (inbound and outbound) completed via e-payments

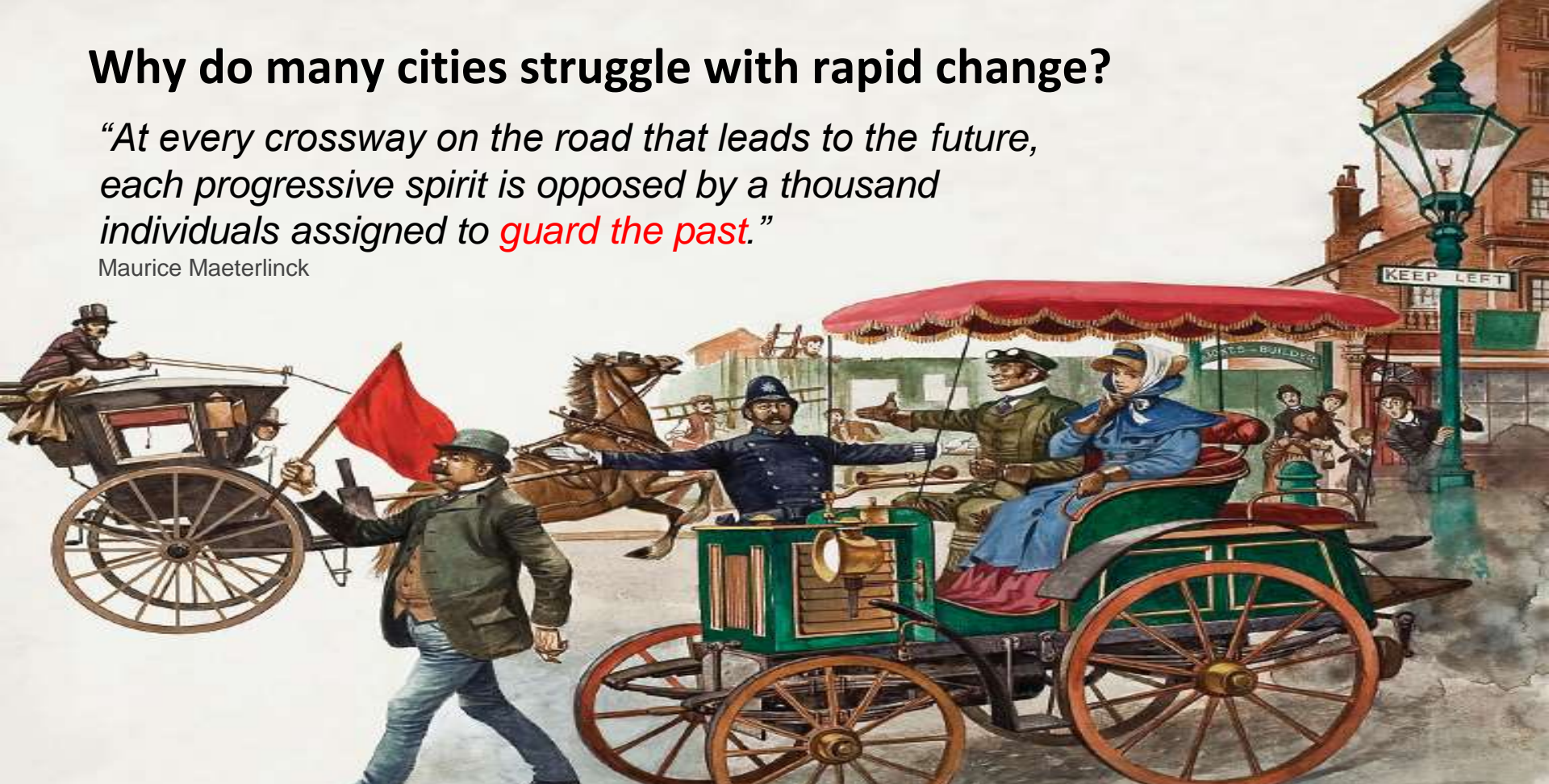
100%\*



# Why do many cities struggle with rapid change?

*“At every crossway on the road that leads to the future, each progressive spirit is opposed by a thousand individuals assigned to **guard the past.**”*

Maurice Maeterlinck



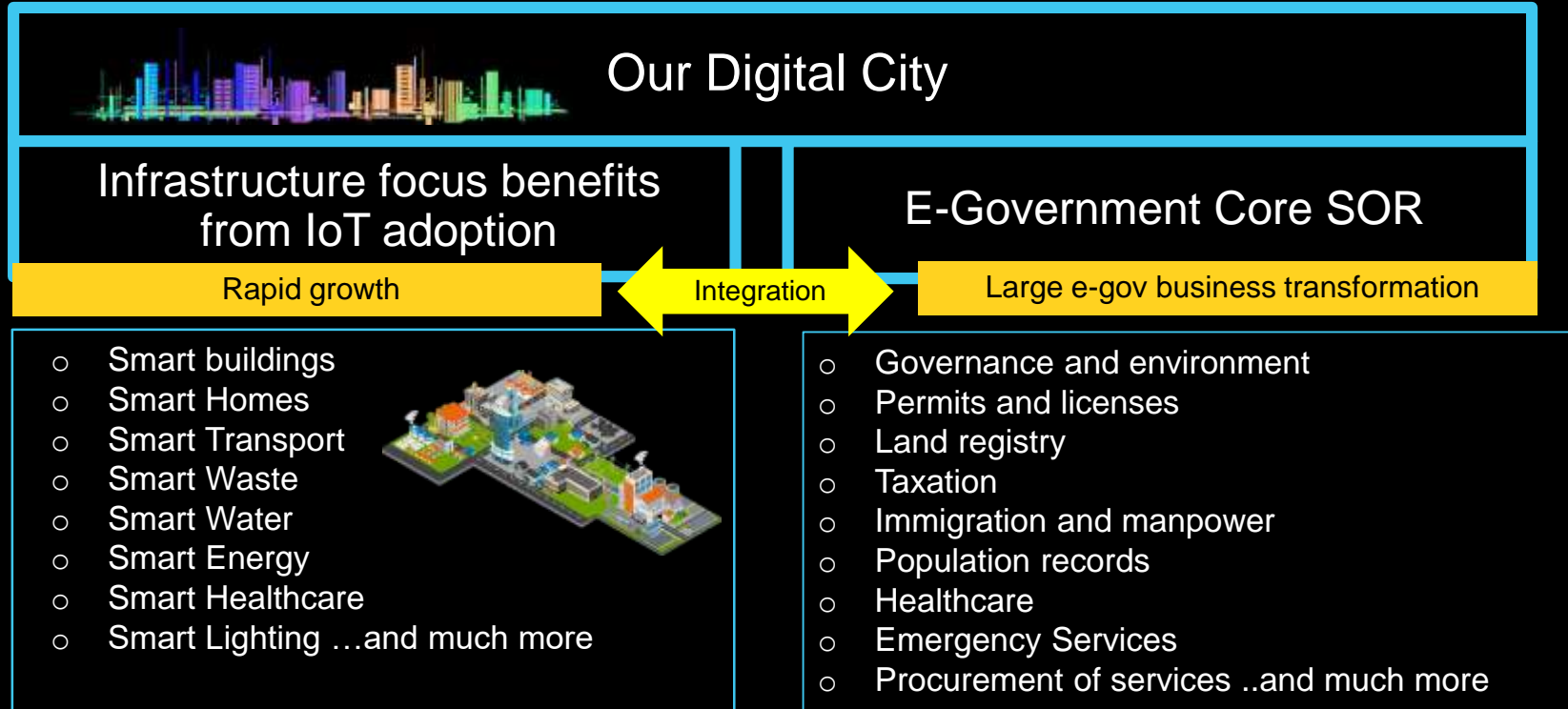
Collaborate on common vision, create incentives for detractors

Planning for advanced machinery in cities



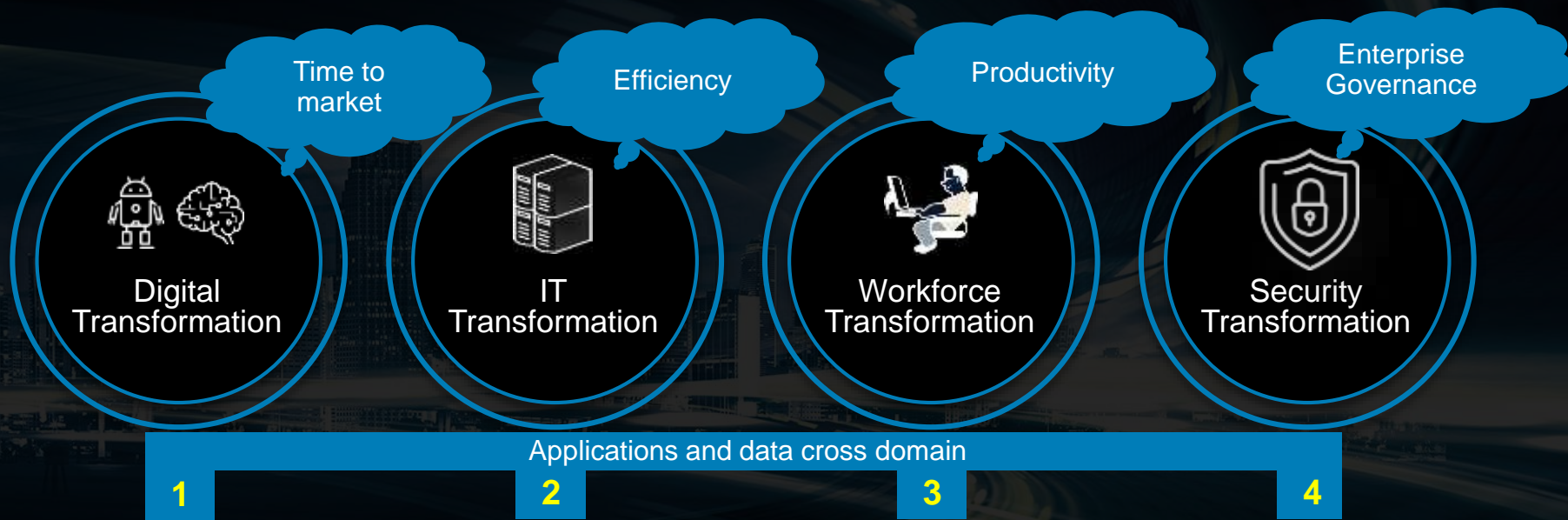


# Smarter digital edge and e-gov ICT modernization in harmony



# Best practice Government policy enables four distinctive critical areas of the “smart nation”. Develop as one !

To transform at speed, build a strategic and executable plan to address four tracks





# There can be no smart city without ICT change

## Traditional IT

Propriety  
software focus

Closed  
standards



## Modern IT “Open Source” focus

- Micro Services
- Containers
- Cloud
- Agile Software
- Bigger data
- Analytics at speed
- HCI SDDC
- Supervised aggregated IOT



## Block Chain

- Distributed Applications

# IOT connected heavy industry to personal wearable integration infrastructure, software and data management big picture



Some of our Dell EMC APJ projects  
Scope covers many industries

## Key software stack integration examples



SAP IOT only certified Dell EMC IOT





# Building blocks for your ICT architecture

Building a Digital City PaaS  
SDDC

IOT Device Management

Modern Agile Application  
Management

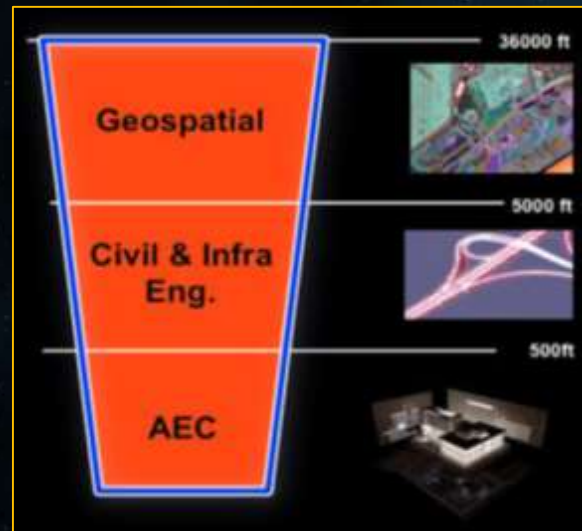
Modern big data

IOT Data Management

API / EDI Management

Open source Technology

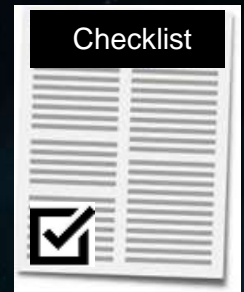
Block chain



Geospatial ICT

# Your Digital Checklist for Success

- ☐ Understand what people need
- ☐ Address the whole experience, from start to finish
- ☐ Make it simple and intuitive
- ☐ Build the service using agile and iterative practices
- ☐ Structure budgets and contracts to support delivery
- ☐ Assign one leader and hold that person accountable
- ☐ Bring in experienced teams
- ☐ Choose a modern technology stack
- ☐ Deploy in a flexible hosting environment
- ☐ Automate testing and deployments
- ☐ Manage security and privacy through reusable processes
- ☐ Use data to drive decisions
- ☐ Default to open





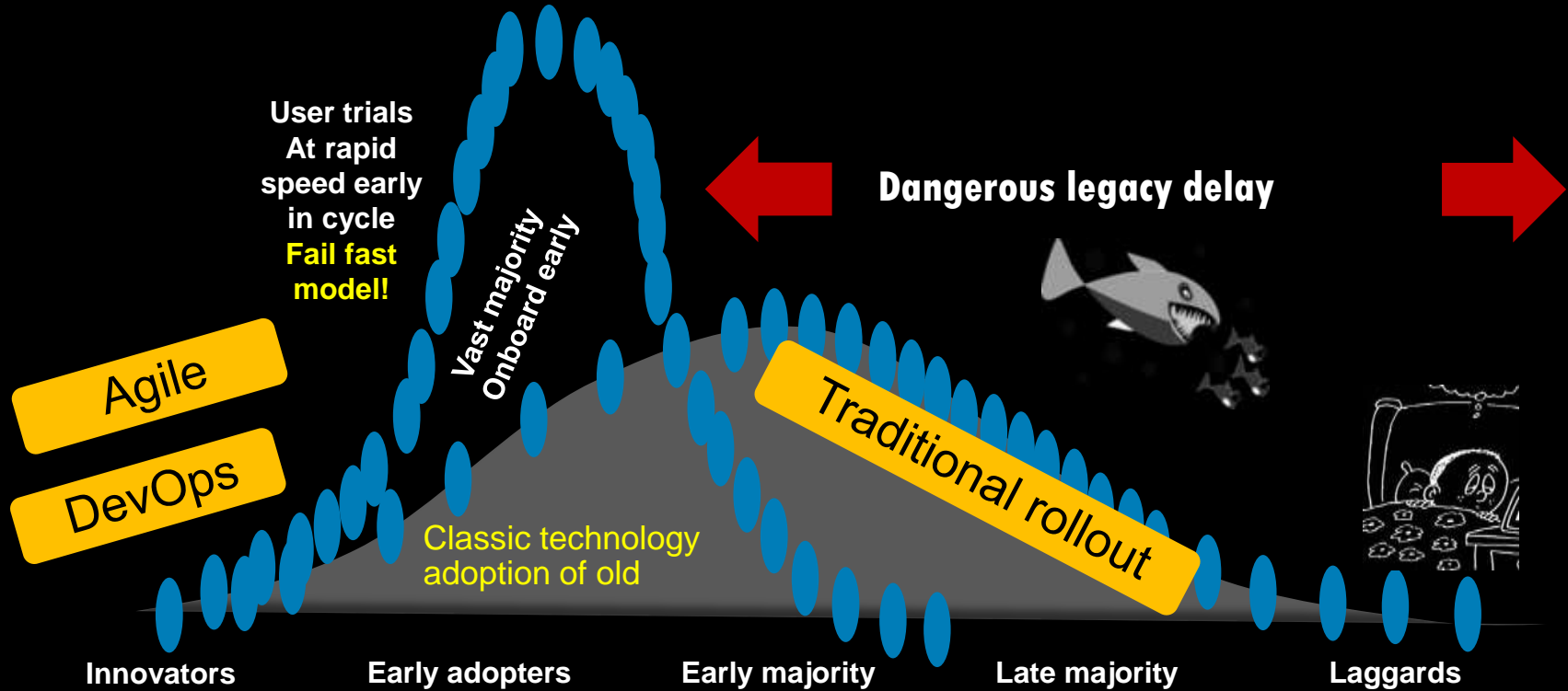
# ISO 37120 defines methodologies for a set of indicators to steer and measure the performance

- Economy
- Education
- Energy
- Environment
- Recreation
- Safety
- Shelter
- Solid waste
- Telecommunications and innovation
- Finance
- Fire and emergency response
- Governance
- Health
- Transportation
- Urban planning
- Wastewater
- Water and sanitation



# AGILITY must be nation priority to exploit Industry 4.0 era

Ability to generate GDP ahead of the rest using agile technology



Talk to Pivotal to learn more

# Government Policy mindful of 4.0 employment disruption

Maturity of big data, AI, robotics, machinery, extreme automation

Industry 4.0  
deployment

2015

2020

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{
  "id": 877228,
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    "country_code": "NI",
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  "status": "funderaid",
  "use": "to buy pigs."
}
```

Industry 4.0  
domain skills

Mid skill range

Don't stand still!!!

Lower skill  
range

Demand drives income \$ up

Income \$ erosion – machines will take time to fully impact but is already increase

Heavy tech emergence light on income/ jobs



Factory, delivery, basic services



# Delivering knowledge transfer to Vietnam as a strategic partner



DELL EMC

Pivotal

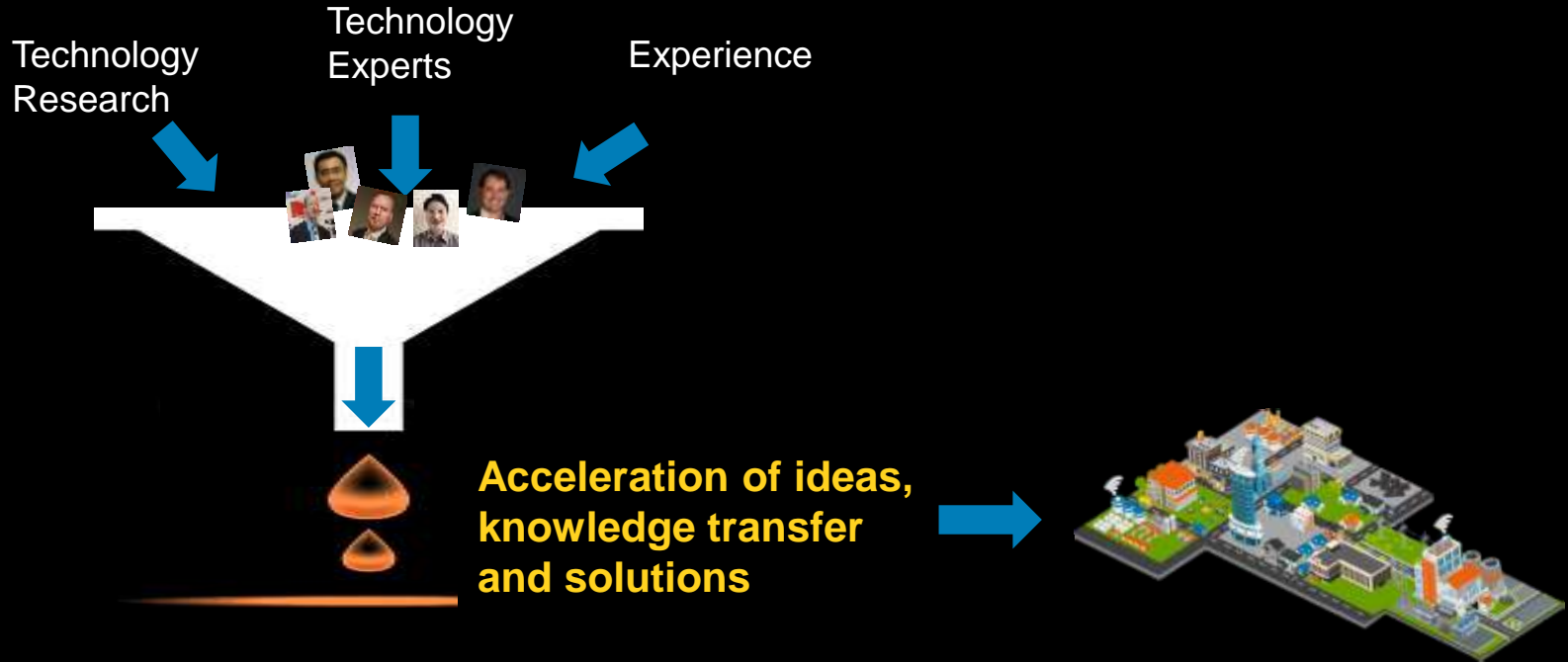
RSA

SecureWorks

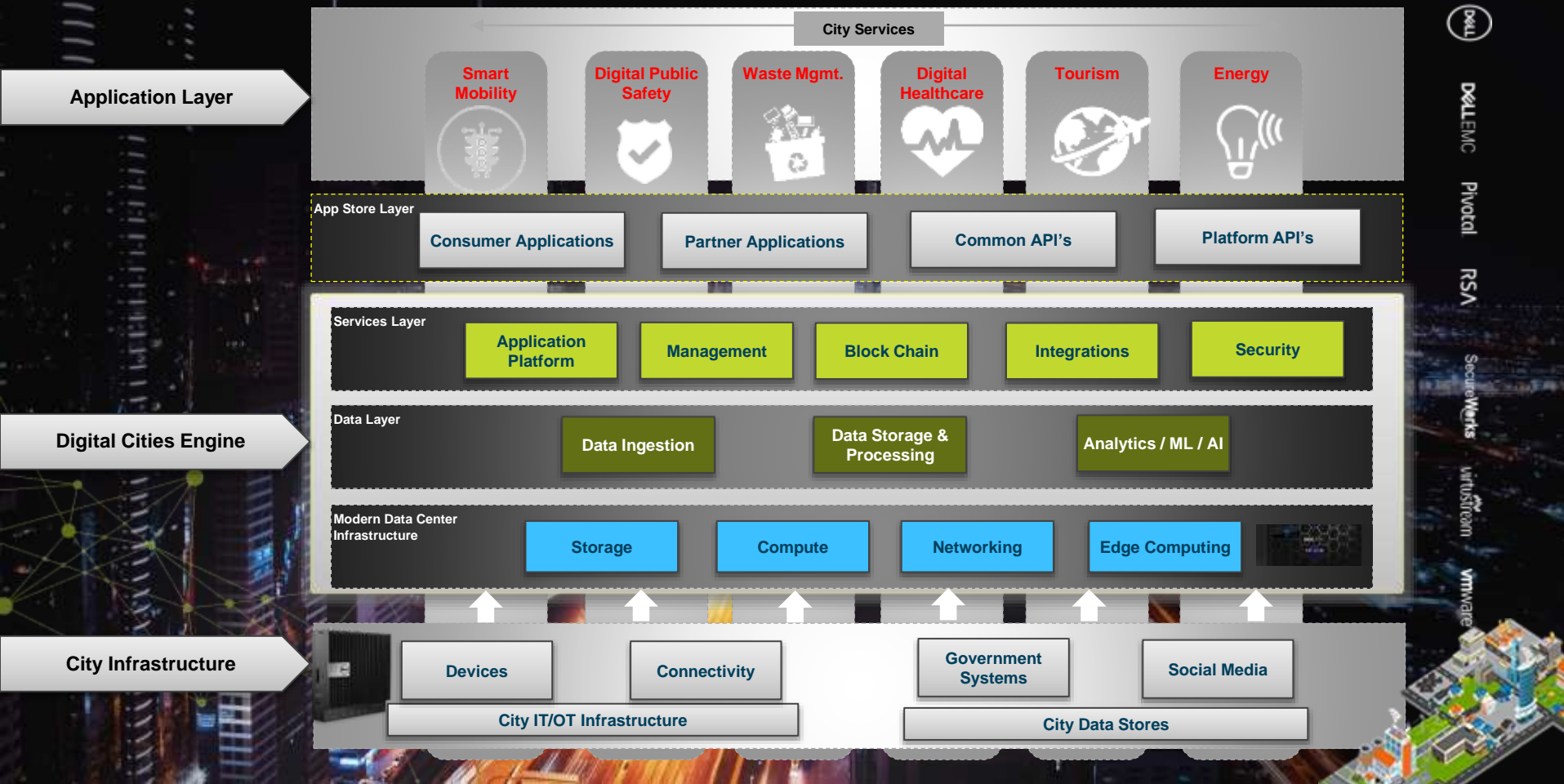
virtustream

vmware

Boomi



# Dell Technologies Digital Smart City Acceleration Architecture



# Dell Technologies

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