Using digital technologies to streamline public administration and increase transparency

Grantly Mailes, Associate Director

March, 2016

Digital Technologies

Digital technology is the biggest story in business today …
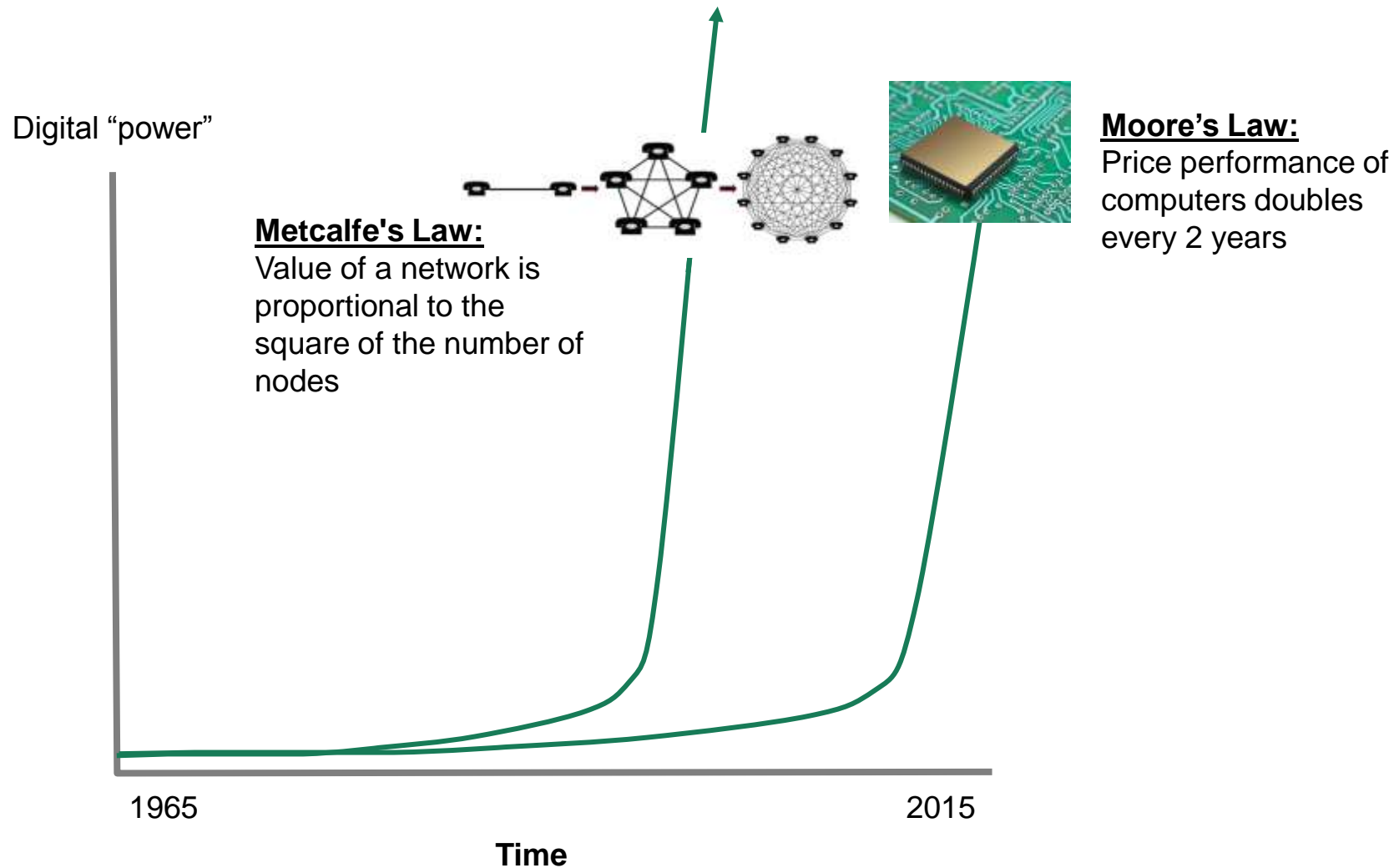
Market Capitalisation
$1.86 trillion

GDP
$1.86 trillion

We have had 50 years of Moore's Law

Digital "power"

Metcalfe's Law:
Value of a network is proportional to the square of the number of nodes

Moore's Law:
Price performance of computers doubles every 2 years
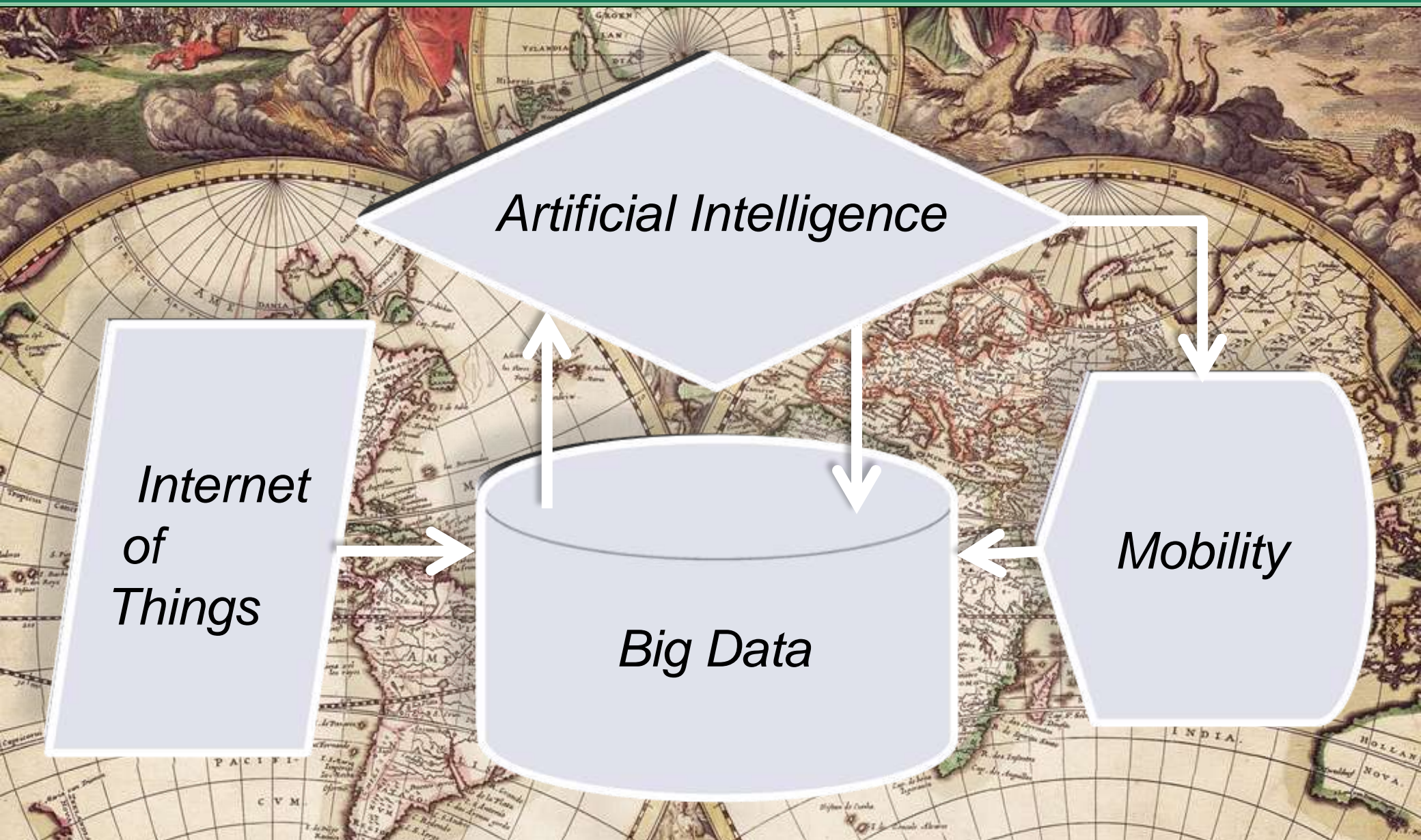
1965

2015

Time

Components have reduced dramatically in size and cost…

…which means anything of value can have its own IP address
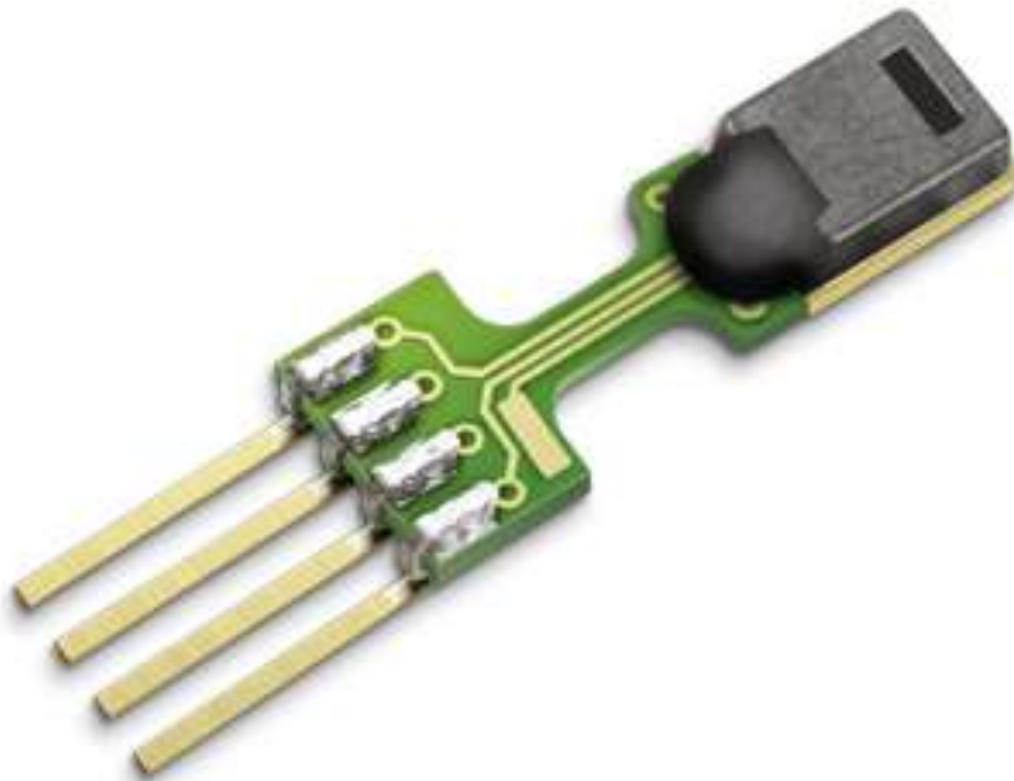
Four mega trends will lead the next generation of digital technologies

Artificial Intelligence
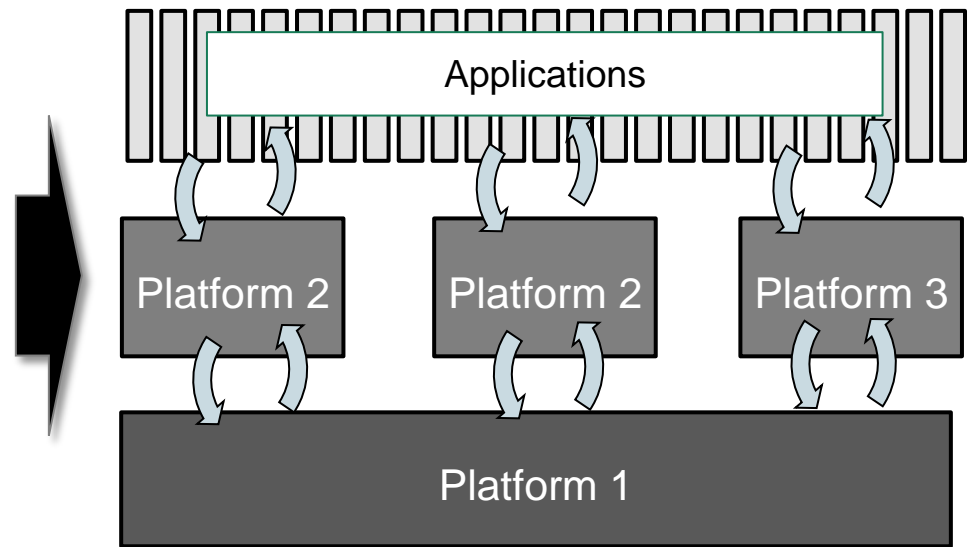
Internet of Things

Big Data

Mobility

Stacked architectures enabled by digital technologies will reduce the cost to serve citizens

These four megatrends will fracture value chains…
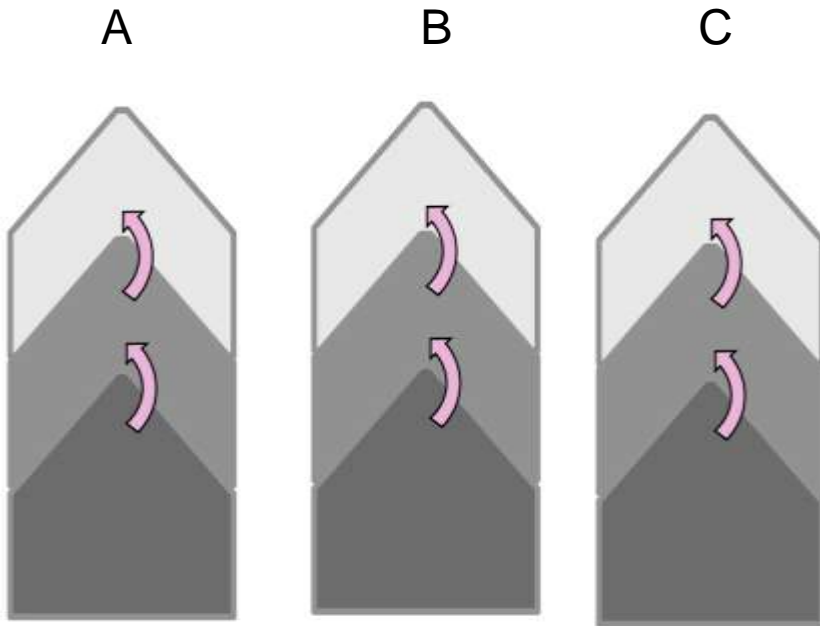
…creating stacked architectures, lowering the cost of digital for governments

A   B   C

Applications

Platform 2   Platform 2   Platform 3

Platform 1

Government Digital Survey - 2016

BCG surveyed 13,570 internet users across 21 countries on their use of digital channels for government services

Norway
Sweden
Russia
UK
Denmark
Estonia
The Netherlands (NL)
France
Germany
USA
South Korea
China
Saudi Arabia (KSA)   UAE   India   Hong Kong
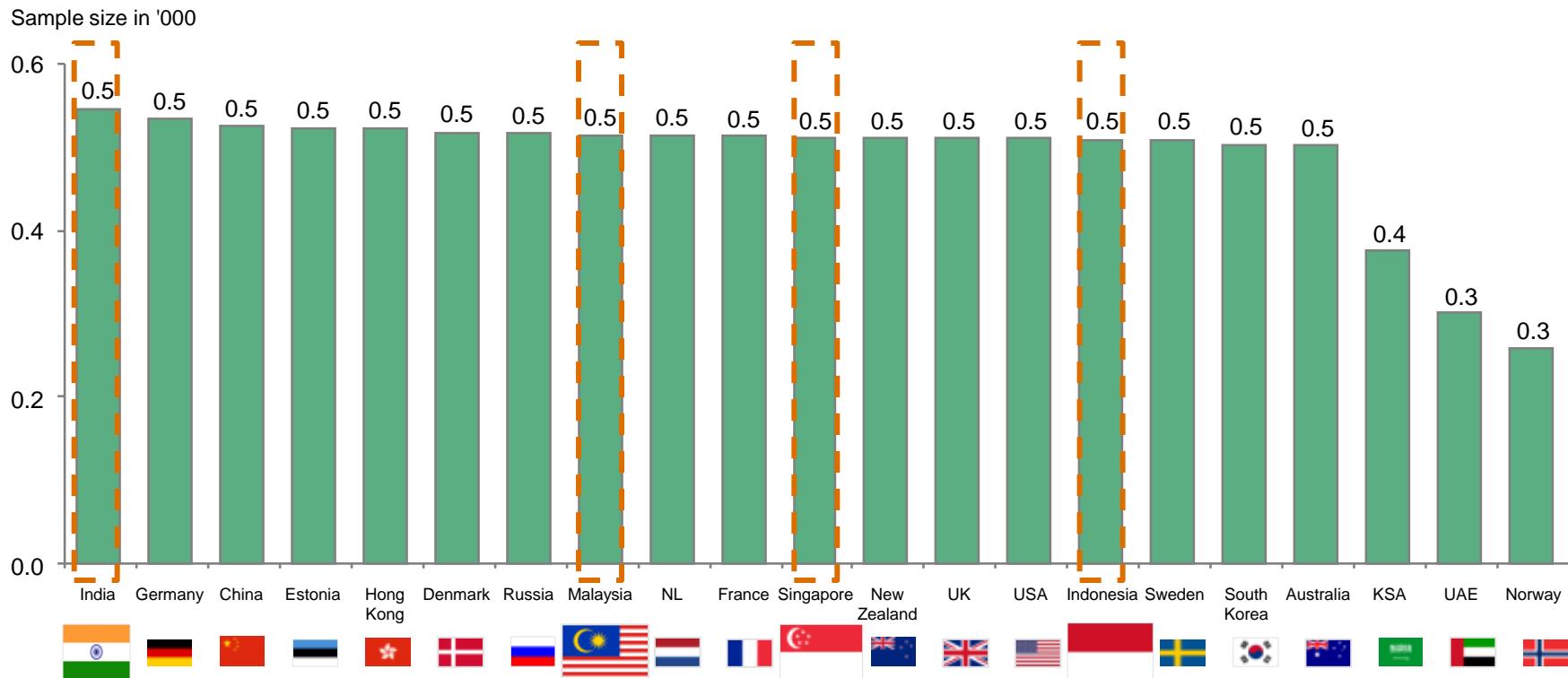Malaysia
Singapore
Indonesia
Australia
New Zealand

Developed countries: USA, UK, France, Netherlands, Denmark, Australia, Singapore, Norway, Germany, Estonia, Sweden, South Korea, Hong Kong, New Zealand
Developing countries: KSA, UAE, Russia, Malaysia, Indonesia, China, India,
Source: BCG 2016 Digital Government Satisfaction Survey

We sampled around 2,000 internet users in four South Asian countries: India, Malaysia, Singapore and Indonesia

Sample size by country

Sample size in '000

Country	Value
India	0.5
Germany	0.5
China	0.5
Estonia	0.5
Hong Kong	0.5
Denmark	0.5
Russia	0.5
Malaysia	0.5
NL	0.5
France	0.5
Singapore	0.5
New Zealand	0.5
UK	0.5
USA	0.5
Indonesia	0.5
Sweden	0.5
South Korea	0.5
Australia	0.5
KSA	0.4
UAE	0.3
Norway	0.3

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# About 85% of respondents used the internet many times a day

86% respondents access internet for personal use more than once daily

% respondents

- More than once a day: 86
- Once a day: 10
- 2-6 times a week: 4
- Once a week: 1

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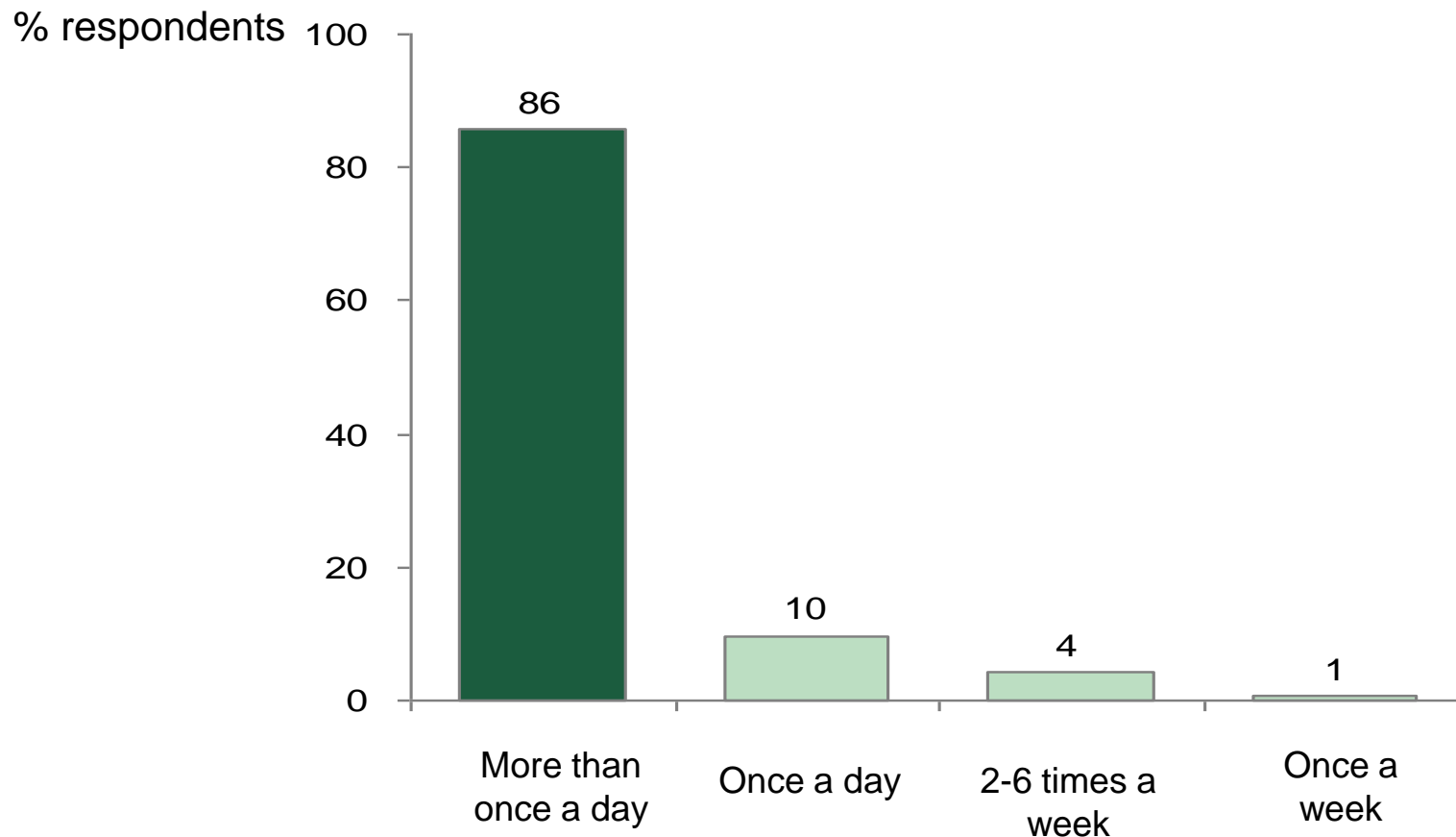
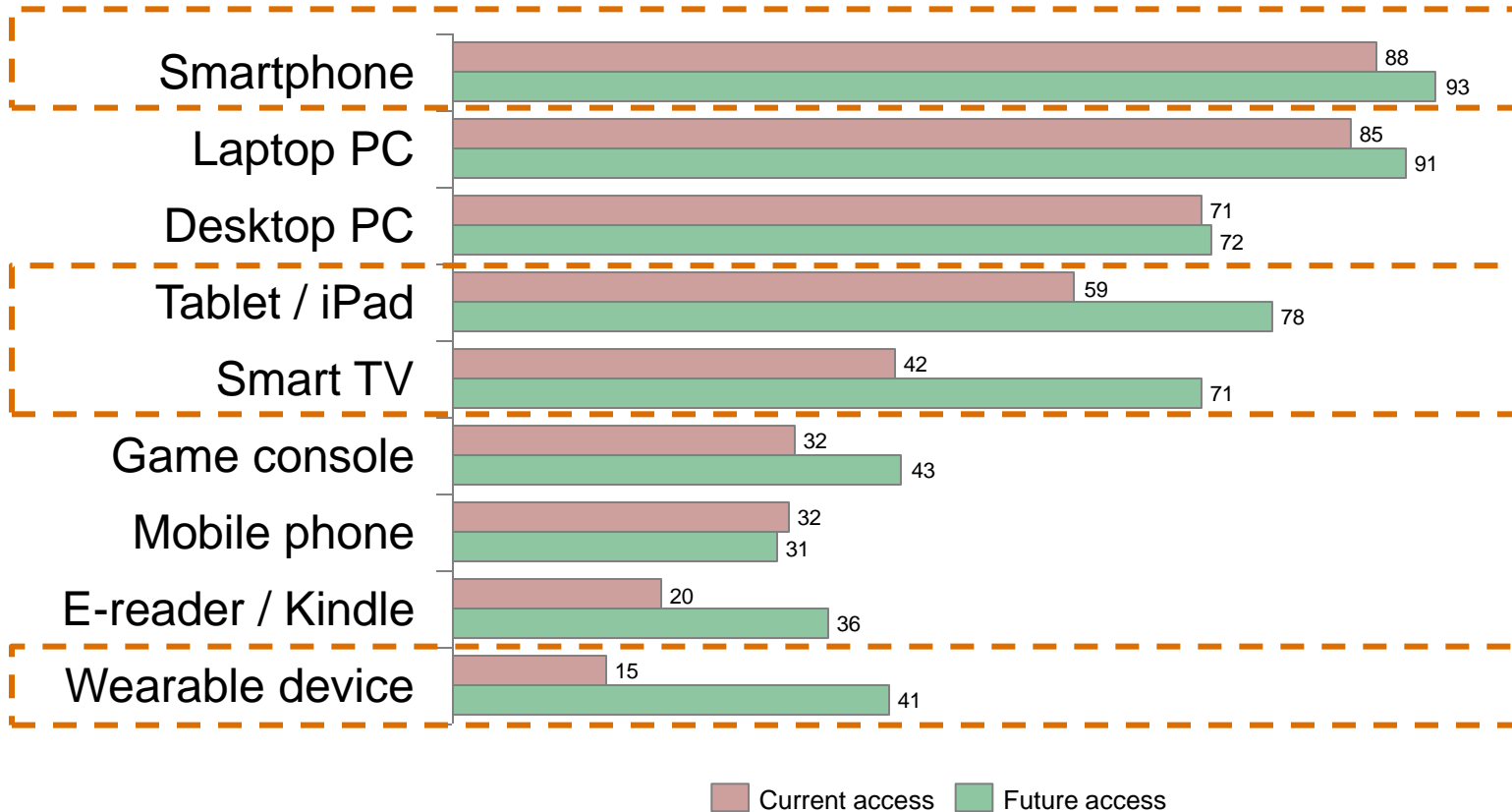# About 85% use three or more devices to access online services

Majority of respondents use more than 1 device to access internet

% respondents

85%

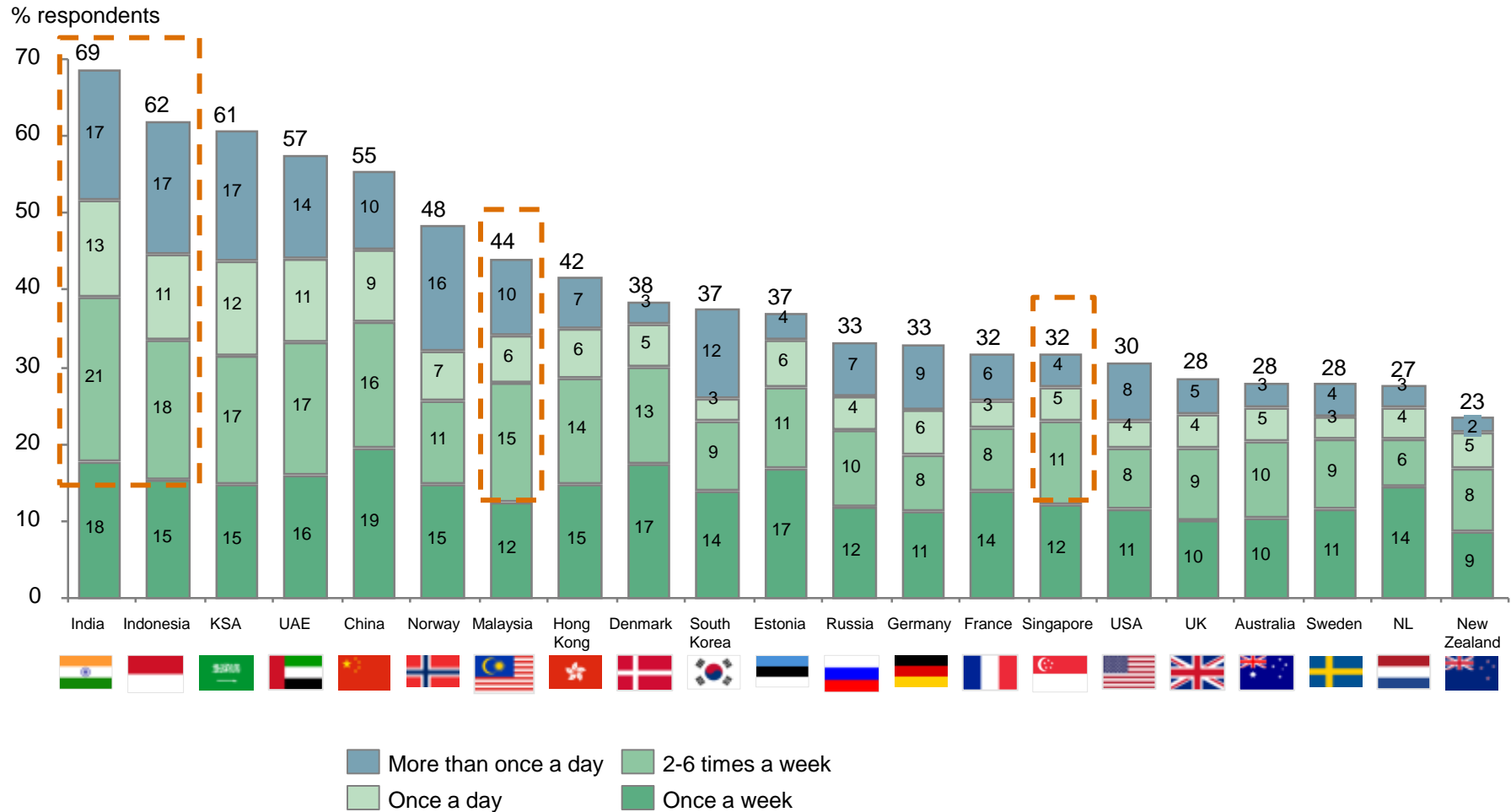| Number of devices	0	1	2	3	4	5	6 or more
	0	2	13	21	21	16	26
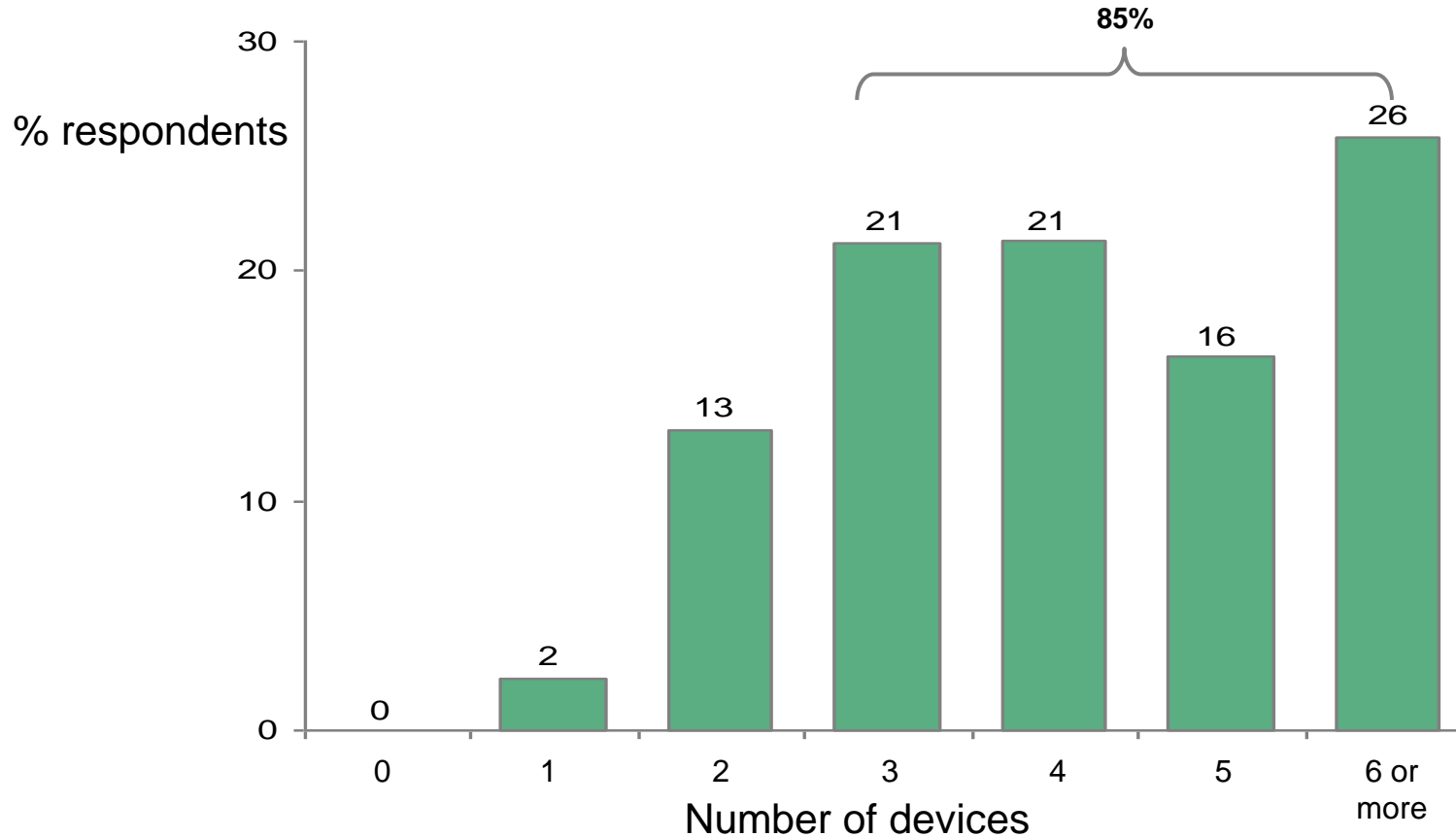
Source: BCG 2016 Digital Government Satisfaction Survey

Mobile Rules - phones have overtaken PCs and we will see the rise of tablets, Smart TV and wearable devices

Smartphone: Current access 88, Future access 93
Laptop PC: Current access 85, Future access 91
Desktop PC: Current access 71, Future access 72
Tablet / iPad: Current access 59, Future access 78
Smart TV: Current access 42, Future access 71
Game console: Current access 32, Future access 43
Mobile phone: Current access 32, Future access 31
E-reader / Kindle: Current access 20, Future access 36
Wearable device: Current access 15, Future access 41

Legend: Current access — Future access

Source:BCG 2016 Digital Government Satisfaction Survey

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South Asian citizens regularly access government services online …

% respondents

Country	More than once a day	Once a day	2-6 times a week	Once a week	Total
India	17	13	21	18	69
Indonesia	17	11	18	15	62
KSA	17	12	17	15	61
UAE	14	11	17	16	57
China	10	9	16	19	55
Norway	16	7	11	15	48
Malaysia	10	6	15	12	44
Hong Kong	7	6	14	15	42
Denmark	3	5	13	17	38
South Korea	12	3	9	14	37
Estonia	4	6	11	17	37
Russia	7	4	10	12	33
Germany	9	6	8	11	33
France	6	3	8	14	32
Singapore	4	5	11	12	32
USA	8	4	8	11	30
UK	5	4	9	10	28
Australia	3	5	10	10	28
Sweden	3	5	9	11	28
NL	3	4	6	14	27
New Zealand	2	5	8	9	23

Legend:
- More than once a day
- Once a day
- 2-6 times a week
- Once a week

... with users accessing many government services

Average number of services per respondent

Source:BCG 2016 Digital Government Satisfaction Survey
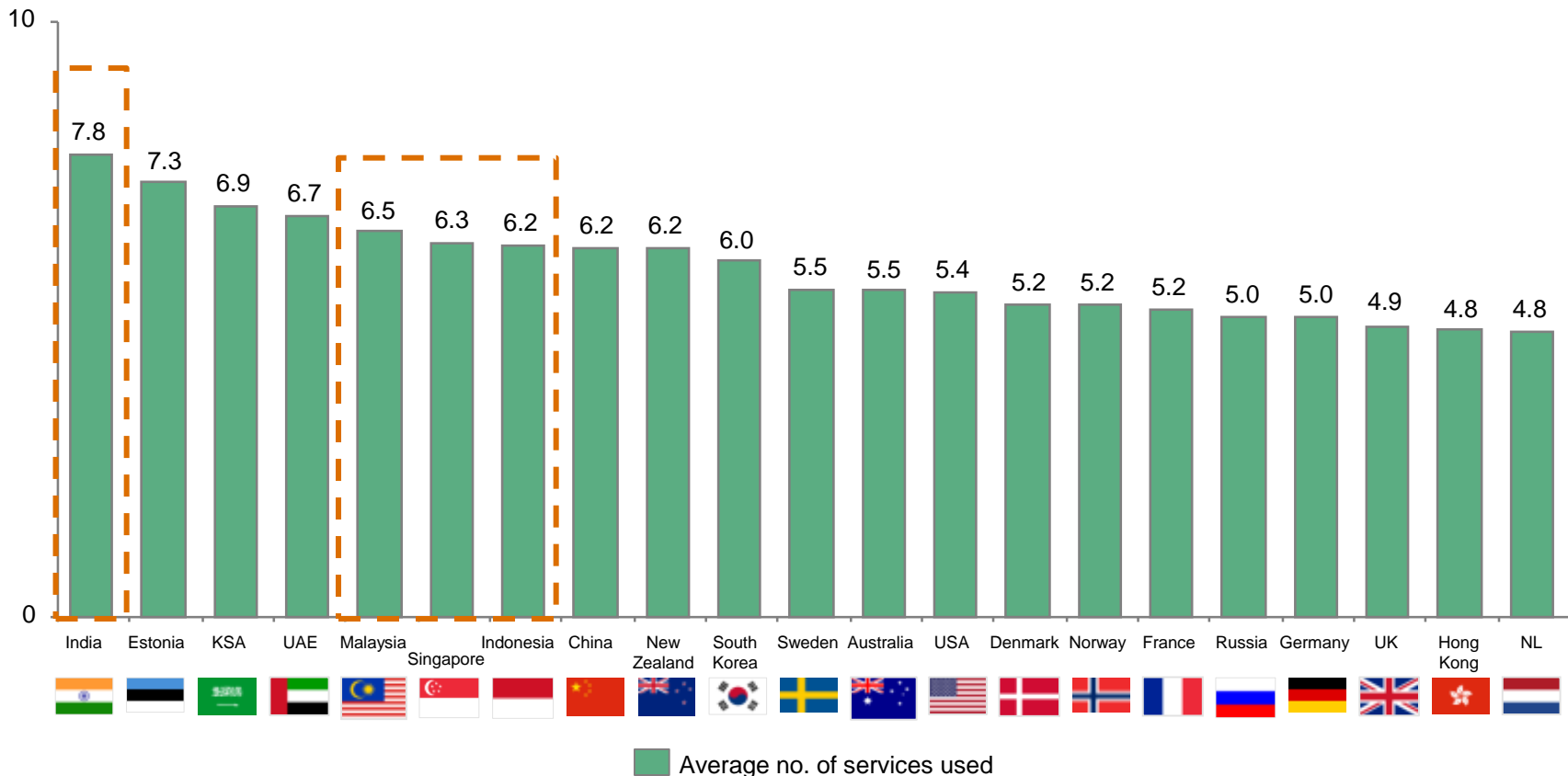
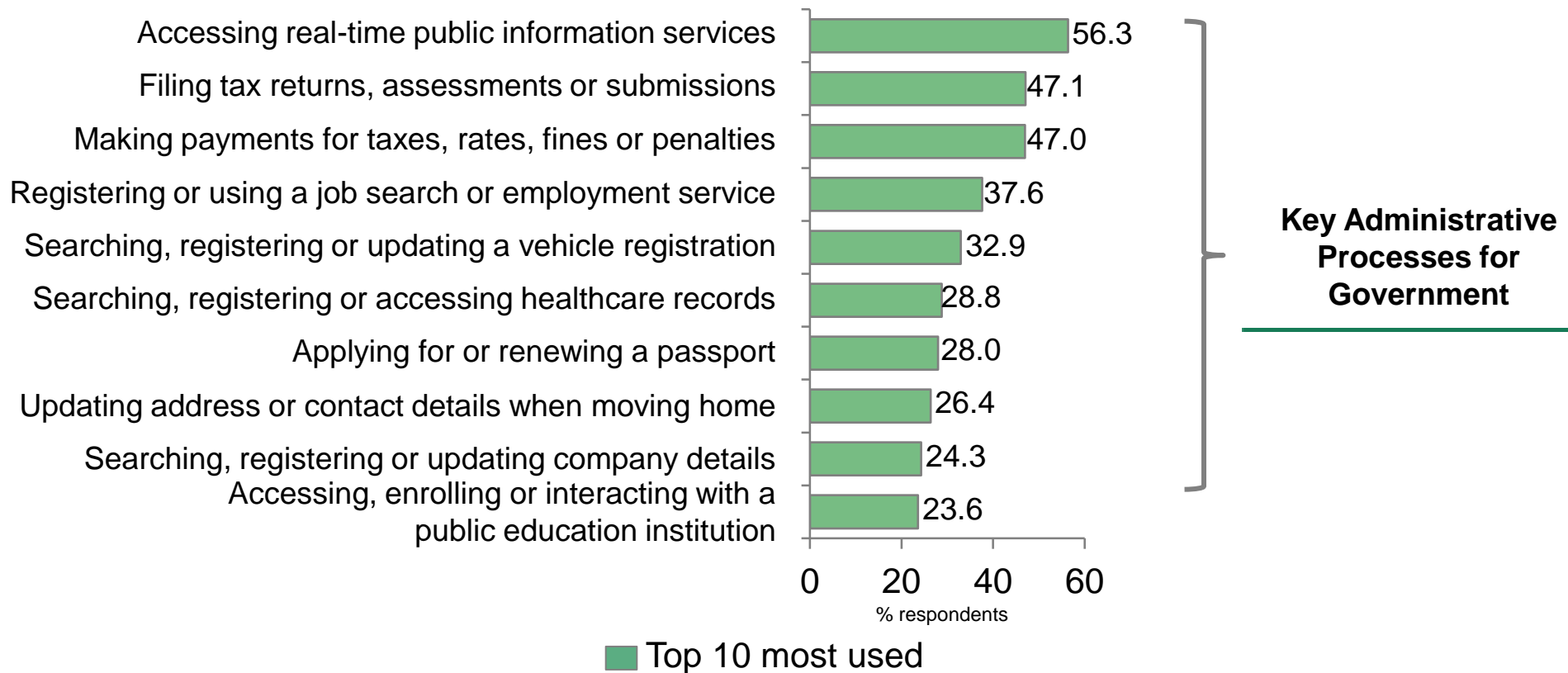# Since 2014, more citizens are accessing online government services more often – especially Indonesia and Malaysia

% Respondents

2014

2016

Legend:
- More than once a day (2014)
- Once a day (2014)
- 2-6 times a week (2014)
- Once a week (2014)
- More than once a day (2016)
- Once a day (2016)
- 2-6 times a week (2016)
- Once a week (2016)

Countries and change percentages:
- Indonesia: +51.5%
- KSA: +32.6%
- UAE: +39.5%
- Malaysia: +16.6%
- Denmark: +2.9%
- Russia: -8.5%
- Singapore: -12.6%
- France: +10.9%
- USA: +42.4%
- UK: +59.7%
- Australia: +9.1%
- Netherlands: +39.8%

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Accessing information, making payments and employment services are most widely used

Online channel most used for information, payments and employment

Service	% respondents
Accessing real-time public information services	56.3
Filing tax returns, assessments or submissions	47.1
Making payments for taxes, rates, fines or penalties	47.0
Registering or using a job search or employment service	37.6
Searching, registering or updating a vehicle registration	32.9
Searching, registering or accessing healthcare records	28.8
Applying for or renewing a passport	28.0
Updating address or contact details when moving home	26.4
Searching, registering or updating company details	24.3
Accessing, enrolling or interacting with a public education institution	23.6

% respondents

■ Top 10 most used

Key Administrative Processes for Government

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78% respondents believe online government services have improved over time

% respondents

Source: BCG 2016 Digital Government Satisfaction Survey

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18
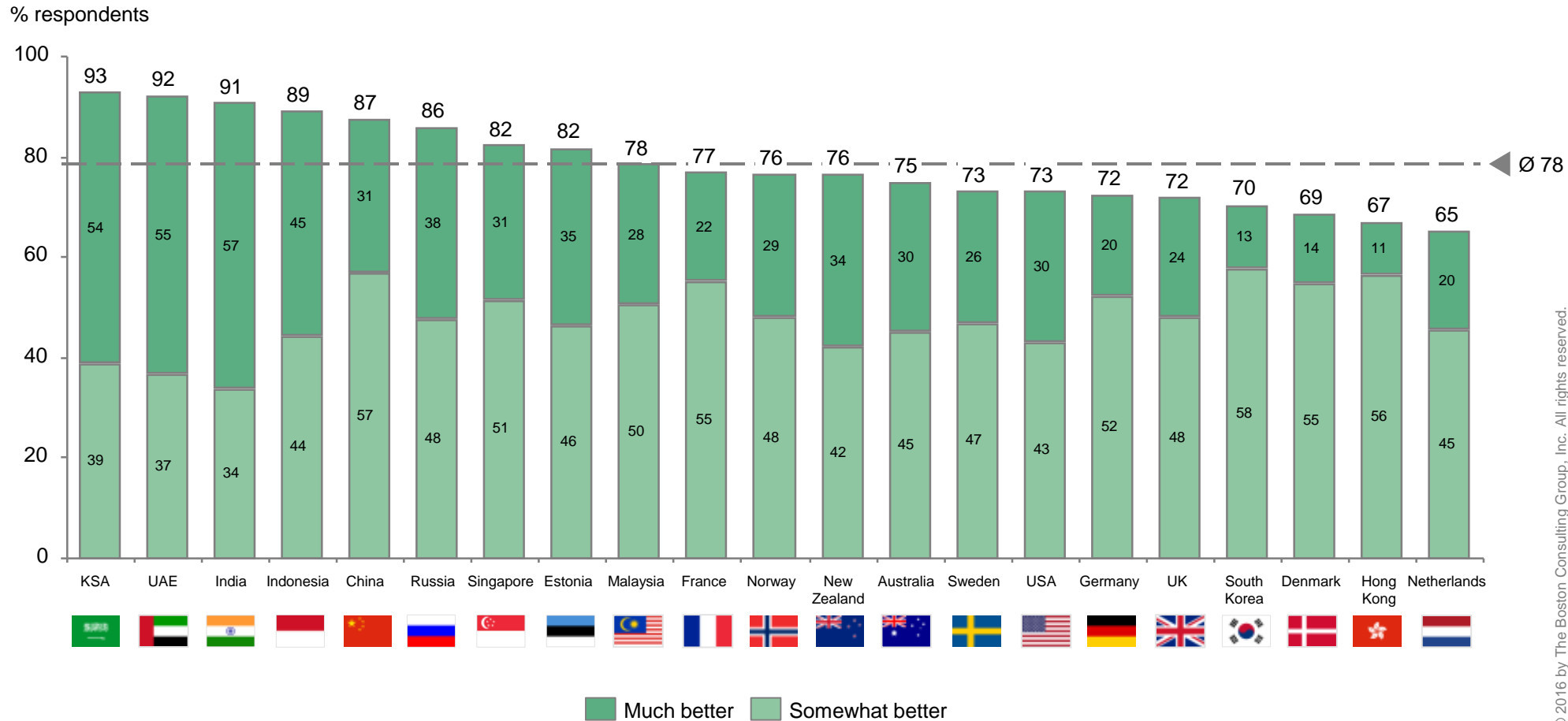
Significant difference in perceptions of quality of online government services compared to private sector

Country	Much worse	Somewhat worse	Somewhat better	Much better	Net perception (% respondents)
UAE	(1)	(7)	35	36	63
KSA	(2)	(9)	35	29	53
Hong Kong	(2)	(17)	39	9	29
Singapore	(1)	-14	32	10	28
India	(4)	(25)	26	27	24
China	(6)	(26)	41	15	24
France	(1)	(11)	26	6	20
Estonia	(1)	(14)	23	7	15
Russia	(3)	(21)	25	14	15
South Korea	(5)	(18)	31	5	12
USA	-4	-23	22	16	10
Indonesia	(5)	(30)	29	15	9
UK	(5)	(19)	23	8	8
Sweden	(2)	(16)	20	5	7
Australia	(4)	(22)	19	10	4
New Zealand	(3)	(19)	20	4	2
Netherlands	(4)	(20)	20	5	1
Norway	-8	-27	18	6	-11
Germany	(12)	(29)	20	7	-14
Denmark	(4)	(26)	12	2	-15
Malaysia	(6)	(37)	22	6	-15
					13

-50   0   50   100

■ Much worse   ■ Somewhat worse   ■ Somewhat better   ■ Much better

% repondents

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Countries tracked since 2014 have mostly shown significant improvement in citizen satisfaction
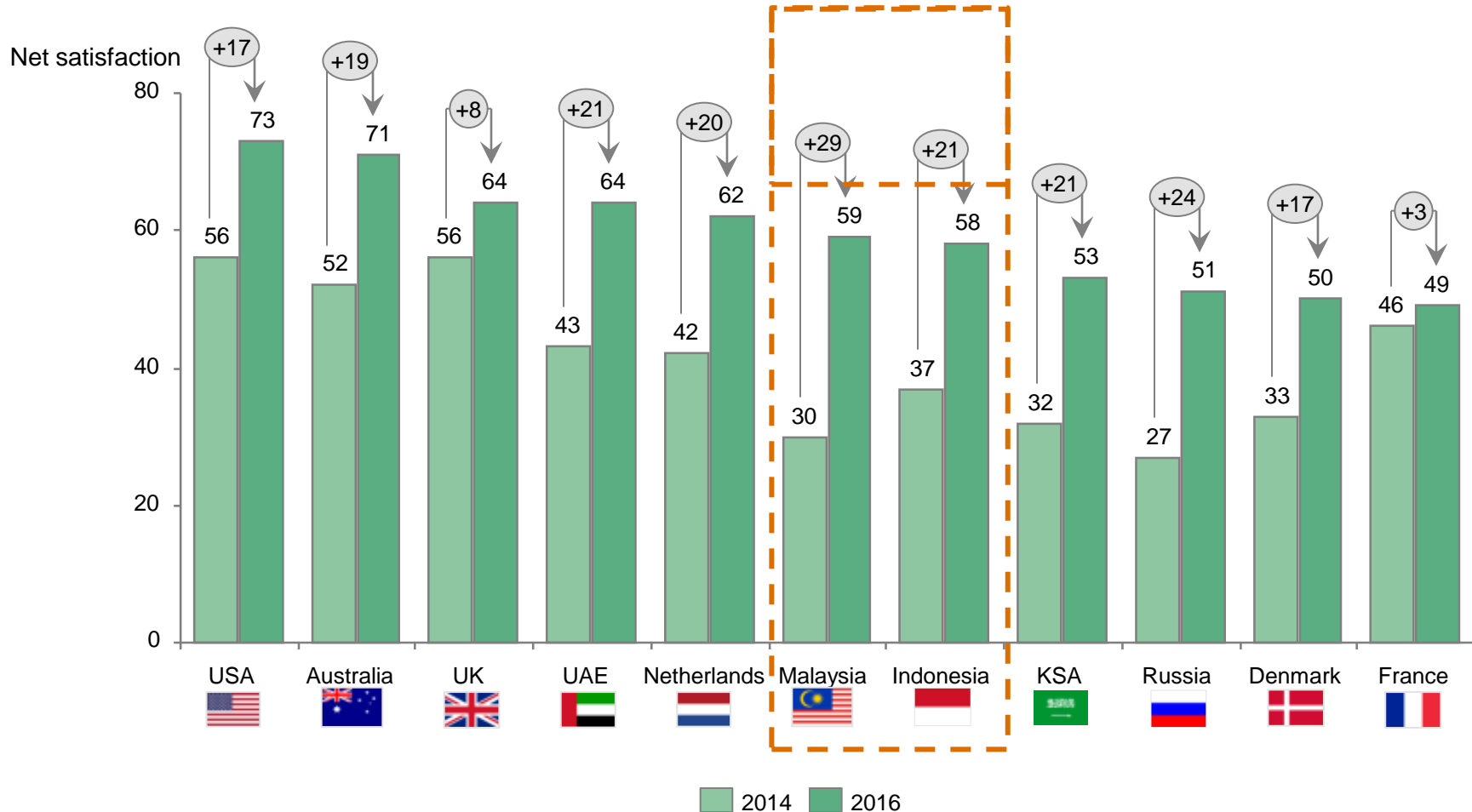
Net satisfaction

Country	2014	2016	Change
USA	56	73	+17
Australia	52	71	+19
UK	56	64	+8
UAE	43	64	+21
Netherlands	42	62	+20
Malaysia	30	59	+29
Indonesia	37	58	+21
KSA	32	53	+21
Russia	27	51	+24
Denmark	33	50	+17
France	46	49	+3

2014   2016

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Efficiency benefits and government savings are the strongest motivators for digital services

Motivations

Category	Motivation	% respondents (Agree)
Eligibility for service	Eligibility for a benefit or service	39
Efficiency and ease of service	I don't have to visit government offices	53
	I have to fill out fewer forms	49
	I spend less time on the phone to government departments	47
	Government services are provided faster	45
	Having my information pre-filled the next time I use a government service	42
Personalisation of services	The government uses personal data to better target services	41
	Possibility to receive personalized information/offers	37
Improvement of services	Health policy improves with the help of my anonymous health data	41
	Transport options improve with the help of my location data	39
	Companies' products or services improve with the help of my anonymous data	36
Social benefit	Social problems are better addressed with the help of my anonymous data	41
Government savings	The government saves money	47

Scale: 0, 10, 20, 30, 40, 50, 60 — % respondents

■ Agree

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Government's use of digital technologies
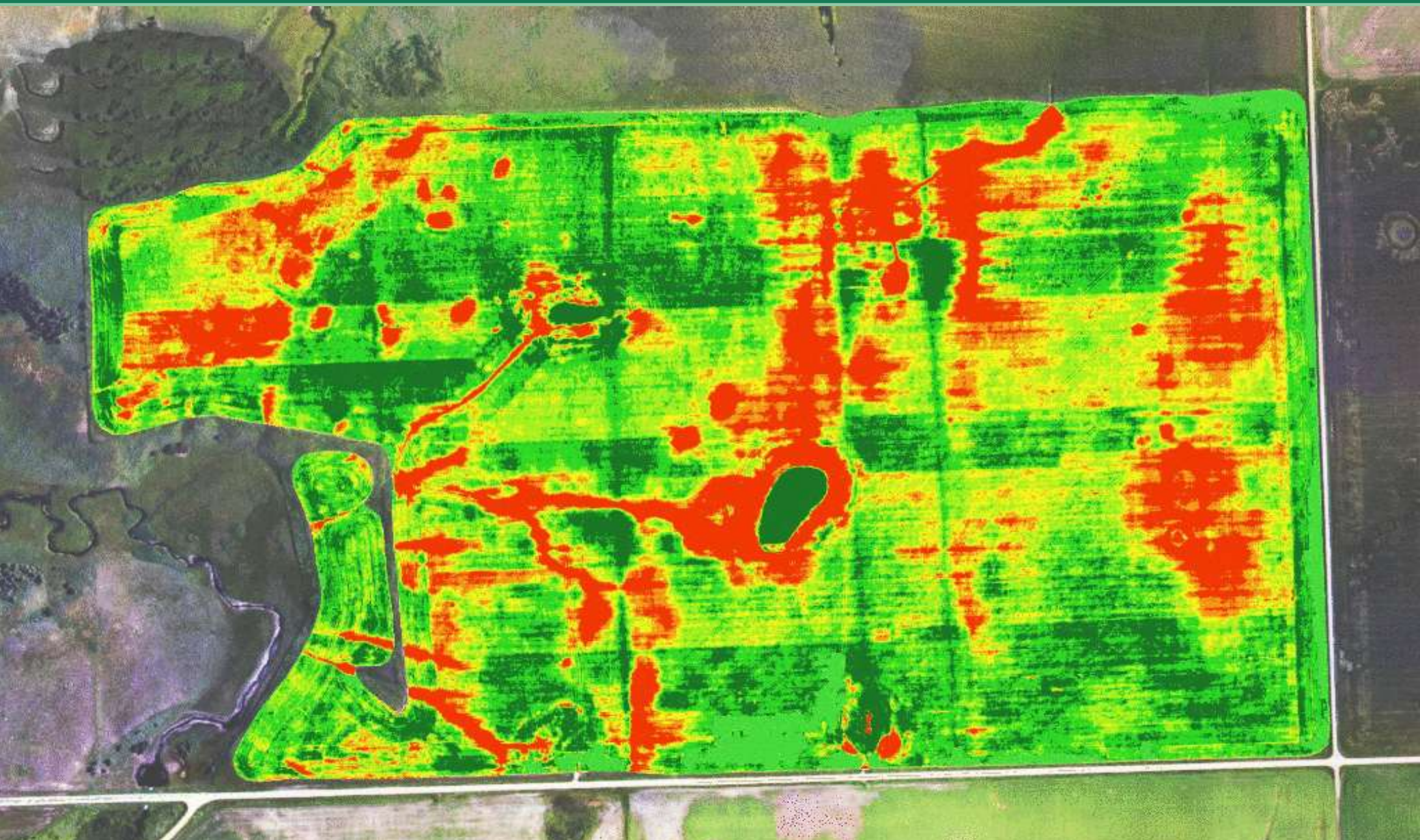
Digital technologies will improve the efficiency of infrastructure
Mapping the unmapped
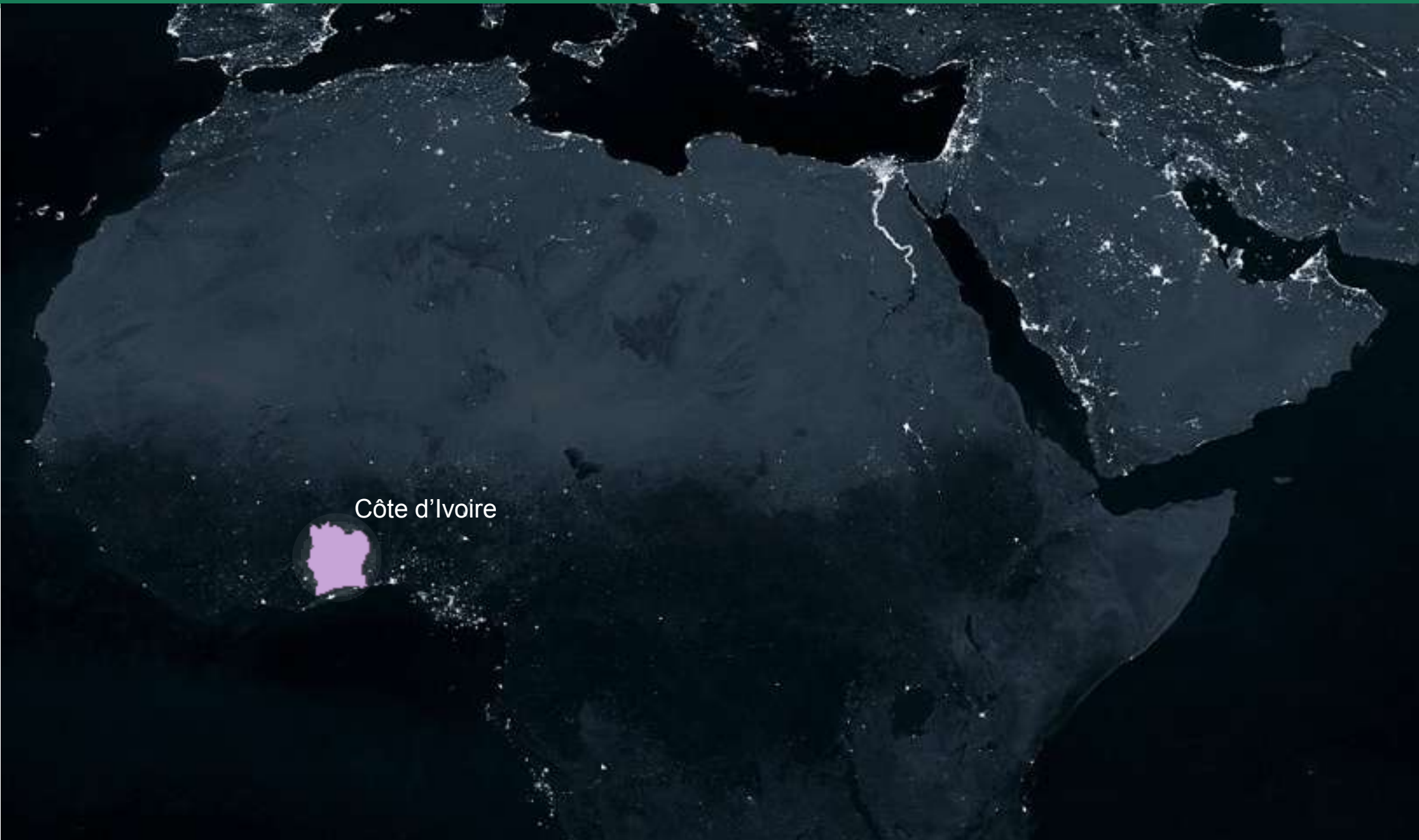
Côte d'Ivoire

Public data can describe the mobility of citizens
Orange: 2.5 billion call records in Côte d'Ivoire

Mobility network
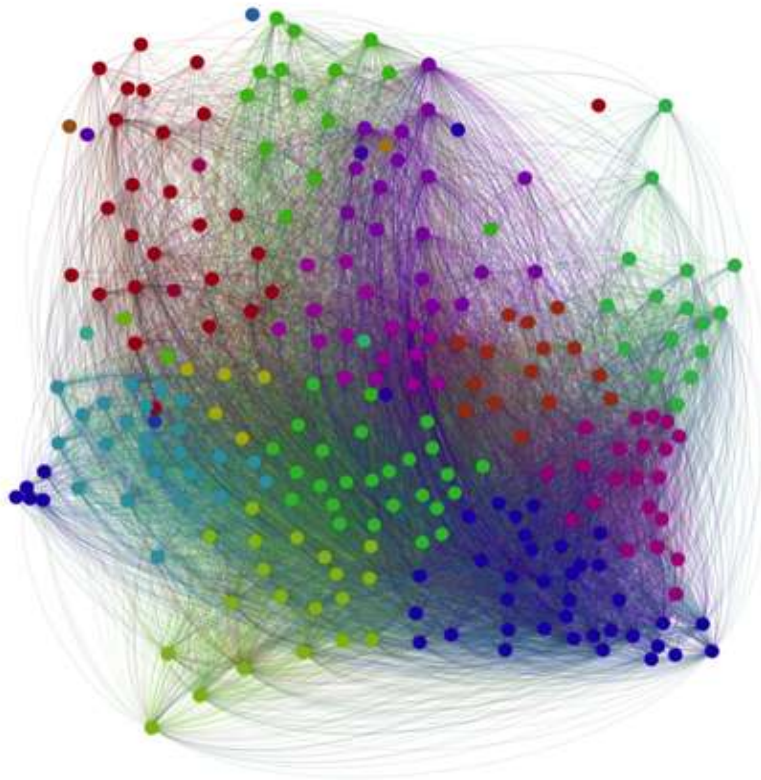
Communication network
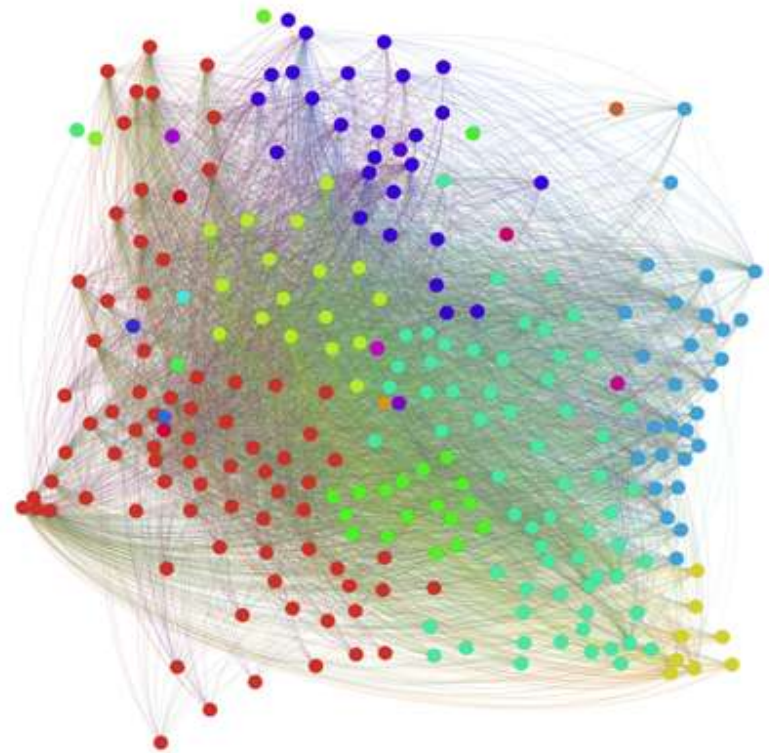
1
2

Open data saves citizens time, improving infrastructure use
IBM Research: Optimizing the bus network in Abidjan, Côte d'Ivoire

Current bus network

Off-network travel
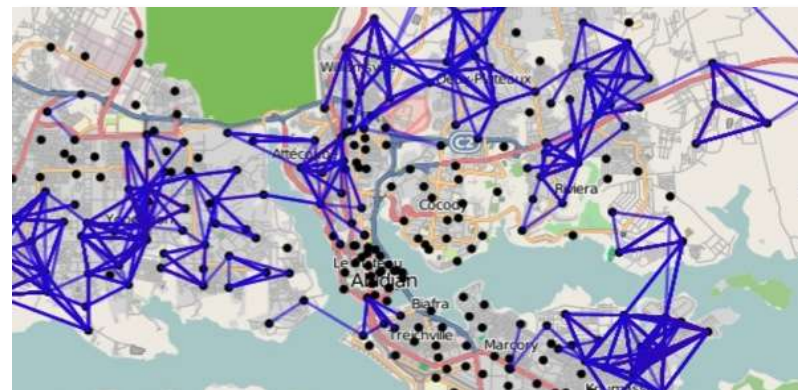
Travel volume to one destination
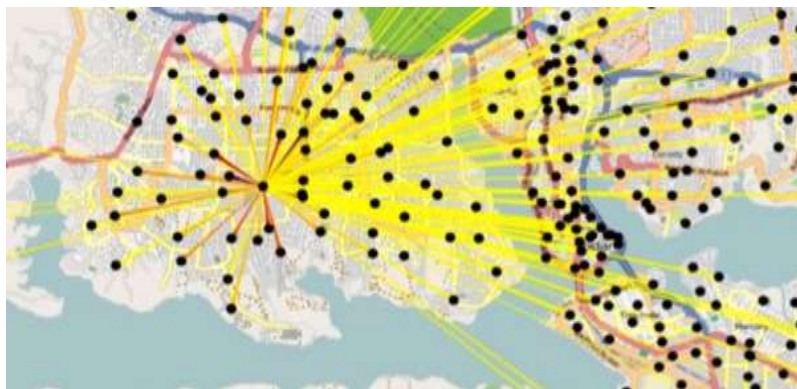
Optimized network
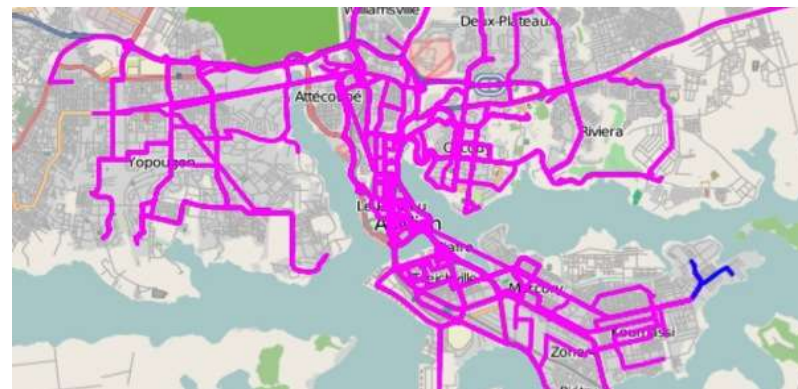
Four new routes proposed. No additional resources required
10% reduction in city-wide travel times

Streamlining the passport process saves Malaysian citizens up to 3 weeks in obtaining passports

Up to 3 weeks

1 hour while you wait
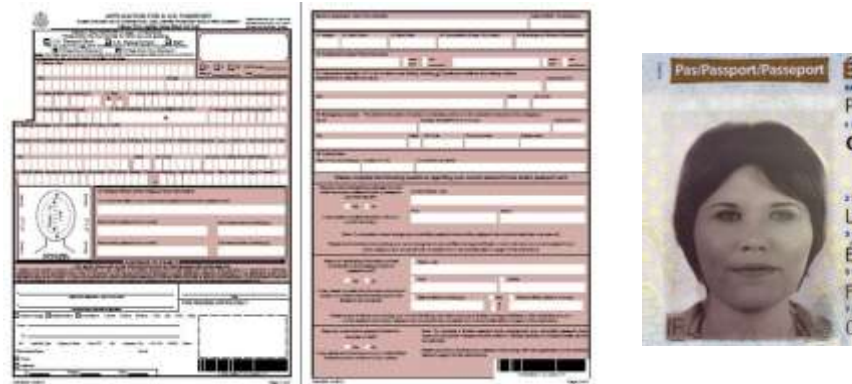
| Electronic Application | Photo and data matching | Issue and print passport |
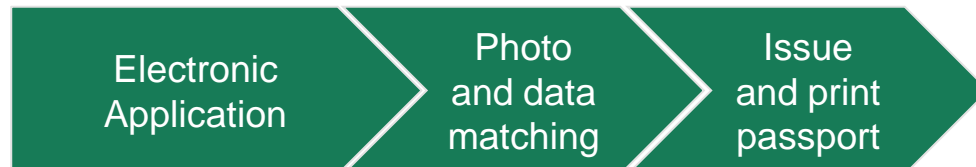
Digital technologies will enter the public sector as "employees"

Machines will also invade the public sector

Governments can use existing platforms to gain speed and reduce cost. Kuwaiti farmers using Instagram to trade sheep

The blockchain will revolutionise the way that public records are managed, including economically vital records
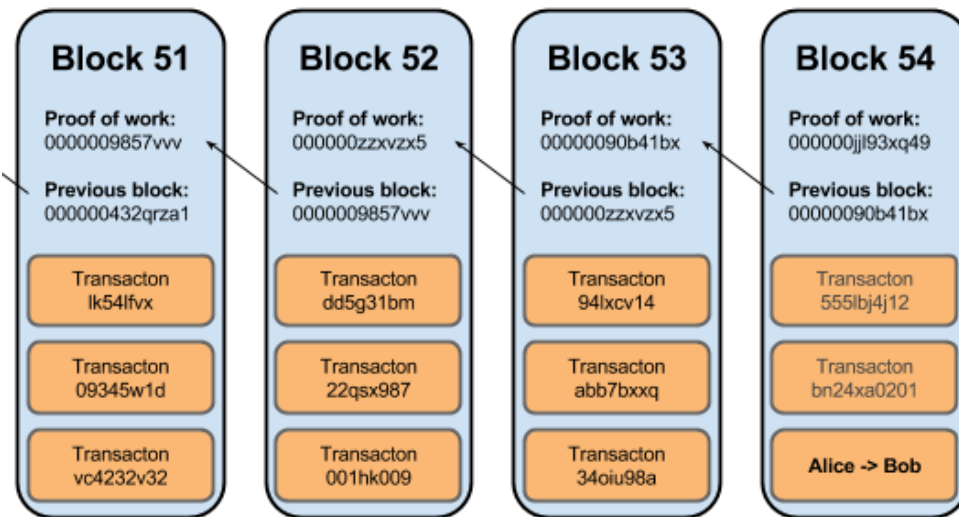
Government processes

1. **Procurement and contracting**

2. **Citizen identity**

3. **Military purchases, including quality controls**

Asset tracking

1. **Property titles**

2. **Supply chain for high value goods**

3. **Financial transactions**

There are a number of success factors for digital government

Public infrastructure

1

- Broadband access
- Cellular coverage
- Education – school education as well as for adults
- Use and publish data as a piece of public infrastructure

Confidence that online transactions will be completed

2

- Close transactions immediately if possible
- Track longer transactions by email or online
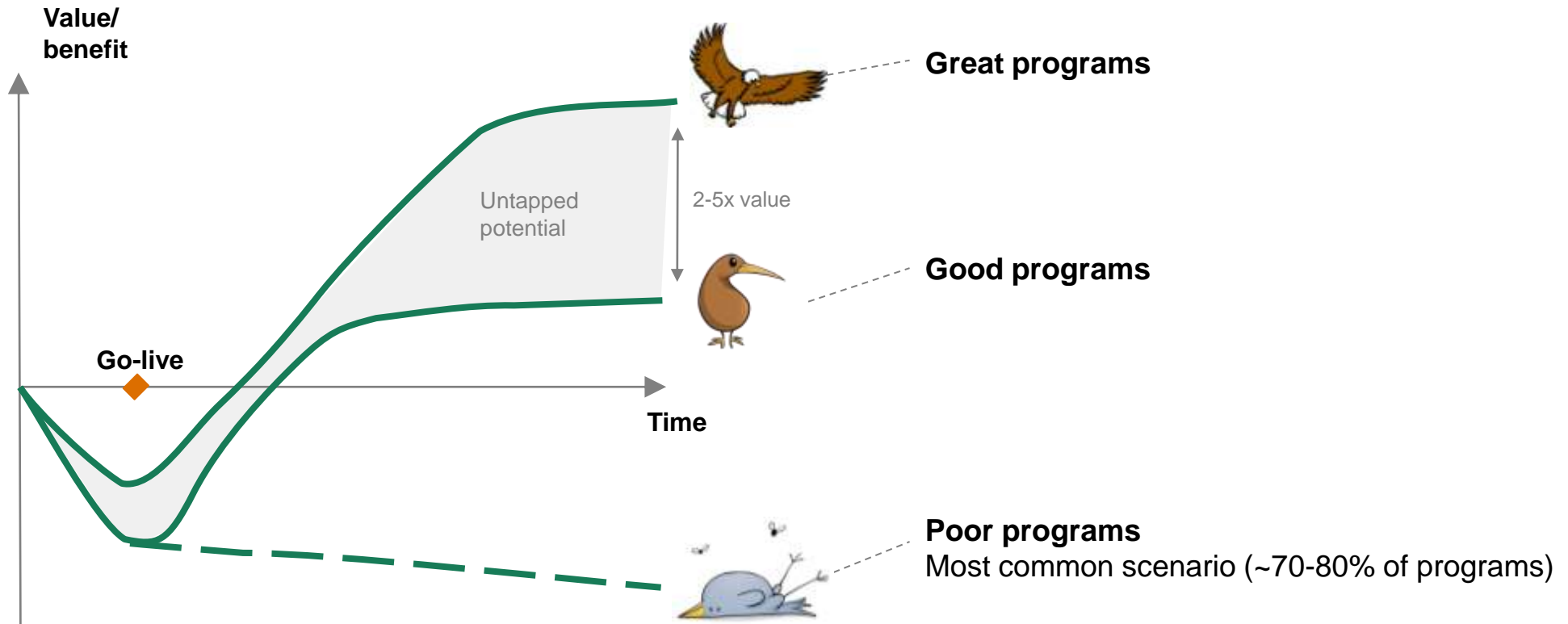- Privacy and security considerations

Invest according to a nationally coordinated roadmap

3

- Long term strategy for the adoption of digital technologies
- Define an enterprise architecture to guide investments across departments
- Define an information architecture to guide data harvesting and analysis

Most organisations never fully realise the value of digital initiatives

Value/benefit

Untapped potential

2-5x value

Go-live

Time

Great programs

Good programs

Poor programs
Most common scenario (~70-80% of programs)

Most organisations aim for good but still fall short

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Finally, a modern digital experience will rely on modernising legacy core systems

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Thank you