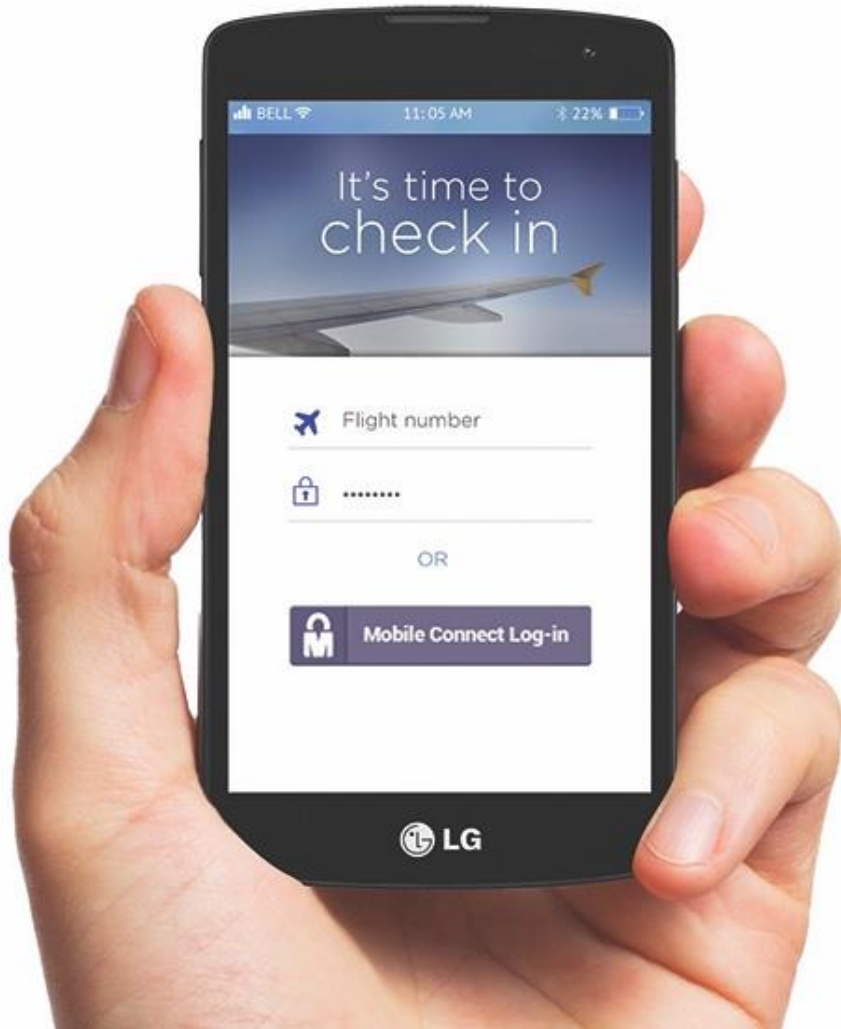

Mobile Connect as a global service - Asia is leading the way

Julian Gorman

Head Strategic Engagement, Asia Pacific, GSMA



A mobile operator facilitated global digital identity solution



- **Simple, secure** and **convenient** access to online services
- Combines the user's unique mobile number and optional PIN to:
 - **Authenticate** users online
 - **Authorise** digital transactions and payments
 - **Verify** identity
 - **Confirm attributes** about user or device

Mobile Connect makes everyday access to digital services more convenient, private and secure



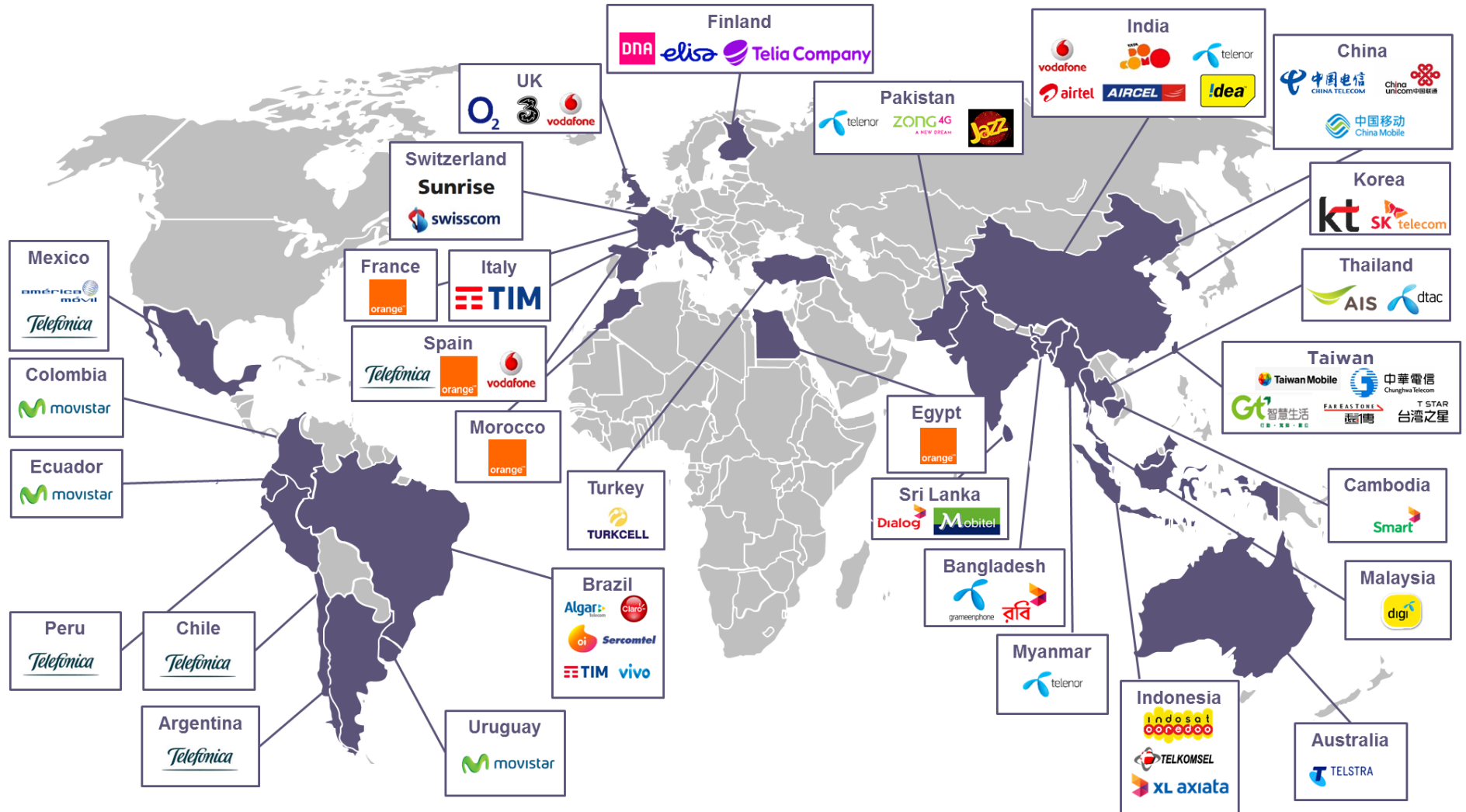
62 operators launched in 30 markets

3bn

Enabled users world-wide

105m

Mobile Connect registered users



What factors influence Mobile Connect success?



Govt Focus



Digital Economy



Identity Data



Collaboration



Mobile Penetration

- **India** – 6 largest operators launched on common platform enabling SPs to authenticate users and securely identify MSISDN of visitors to online presence
- **Taiwan** – 5 operators' My Number identity verification service (Mobile Connect) is now available as part of Taipei Governments' Smart City and Payment Platform with payment authorisation services
- **Pakistan** – 4 operators launched and building on mandatory prepaid registration of SIMs with NADRA to make available eKYC to financial institutions
- **Korea** – MNOs making existing proprietary digital authentication platforms compatible with Mobile Connect to enable cross border and regional authentication



Mobile Connect is being deployed for government services



US – National Strategy for Trusted Identities in Cyberspace (NSTIC) by National Institute of Standards and Technology – proof of concepts using Mobile Connect for authentication, identification and attribute verification (financial services, consumer goods, health, e-Government)



EU – European-wide solution for log-in to government services (eIDAS)



UK – user identity verification service to confirm identity for e-Government services
EU funded project on transferring identity cross-border to open bank account (eIDAS)



Spain – Use of Mobile Connect to log into digital public services in Catalonia



France – French government pilot with Orange France on accessing government services using Mobile Connect

Launching Mobile Connect as a government service use-case



Mr Jiunn-Rong Chiou, Deputy Minister, National Development Council (NDC)

Ms Cijay Tseng, Business Manager, Alliance Digital Technology Co. (ADTC)



新·群信

Cijay Tseng




GSMA Global Connect Summit

Growth of the Digital Economy in ASEAN and the importance of Cybersecurity

November 21st, 2017

Gareth Pereira, Senior Principal, AT Kearney

ASEAN has a great foundation to become a global leader in the emerging Digital Economy



Young Connected Population

40%


...with >90% of them connected to the Internet



AEC Implementation

\$2.7tn GDP


...as a single market



Huge ICT Investments

\$115bn (2016)

... with ~15%+ CAGR over the past 5 years











High Literacy

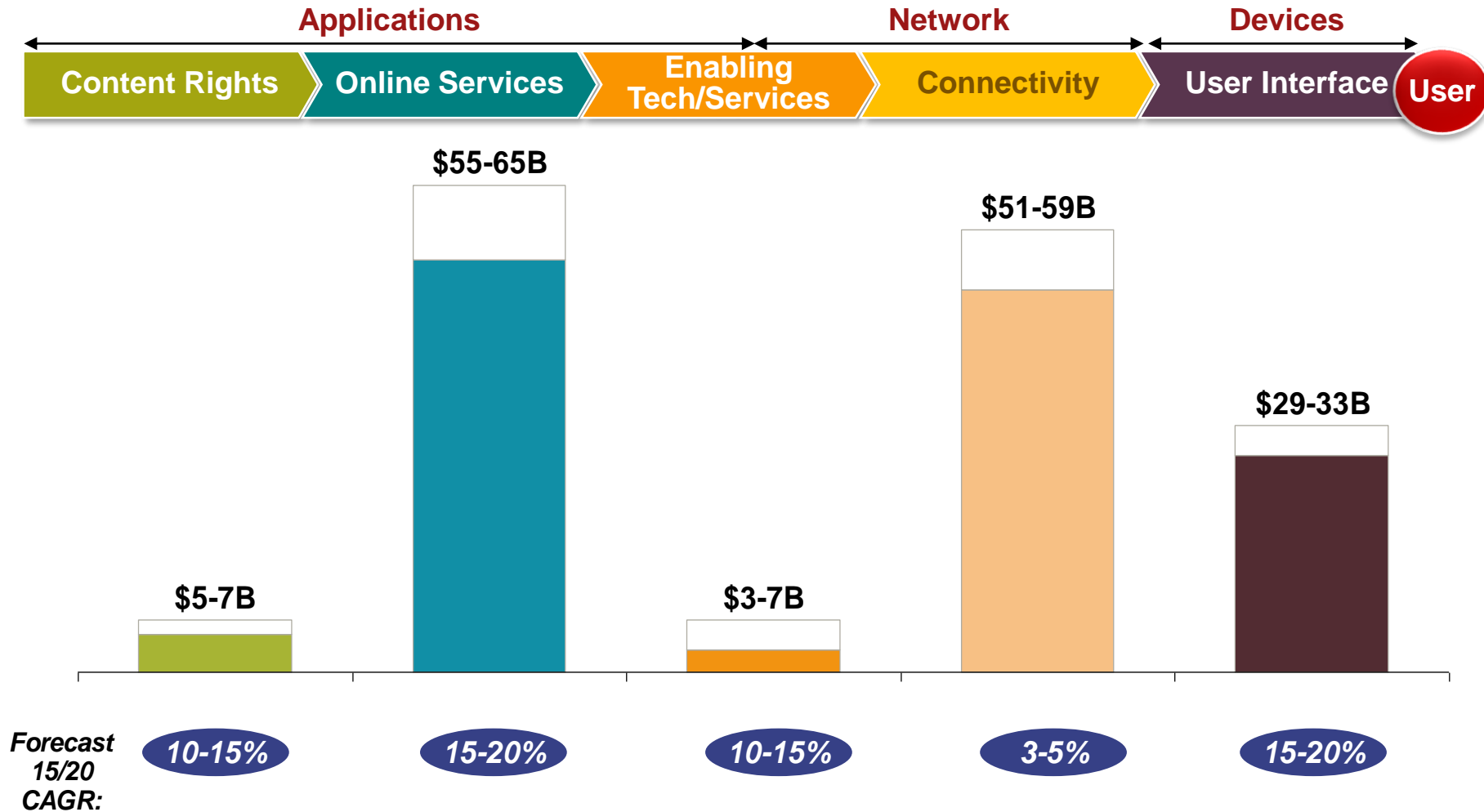
94%

...which is 10% above global average of 84%

If ASEAN were a country, it will be globally ranked #3 in population and #7 in GDP

		Population 2017	Global Rank (Population)	GDP (nominal; USD) 2017	GDP Growth (2017-2022)
	ASEAN	645 mn	3	\$2.7 tn	8.2%
	US	326 mn	5	\$19.3 tn	4.0%
	China	1,410 mn	1	\$11.9 tn	9.0%
	India	1,340 mn	2	\$2.4 tn	9.4%
	EU	512 mn	4	\$17.1 tn	4.1%
	GCC ¹	54 mn	30	\$1.5 tn	4.8%
	NAFTA ²	482 mn	-	\$22.1 tn	4.1%
	MERCOSUR ³	303 mn	6	\$2.8 tn	5.3%

The ASEAN Digital Economy was \$150B+ in size (by revenues) in 2016





Current rankings of Digital Economy suggests that ASEAN punches below its weight in terms of digital potential

		UN ICT Index (2016)	World Digital Competitiveness (IMD, 2017) ¹	Digital Evolution Index (Tufts Uni, 2017)
ASEAN	Singapore	20	1	Stand out
	Brunei	77	-	-
	Malaysia	61	24	Stand-out/ Break out
	Thailand	82	41	Watch out
	Vietnam	105	-	Break out
	Philippines	107	46	Break out
	Indonesia	115	59	Break out
	Cambodia	125	-	-
	Laos	144	-	-
	Myanmar	140	-	-
Select Peers	United States	15	3	Stall out
	China	81	31	Break out
	India	138	51	Break out
Group Averages	EU	29		
	GCC	45		
	NAFTA	44		
	MERCOSUR	69		
	ASEAN	98		

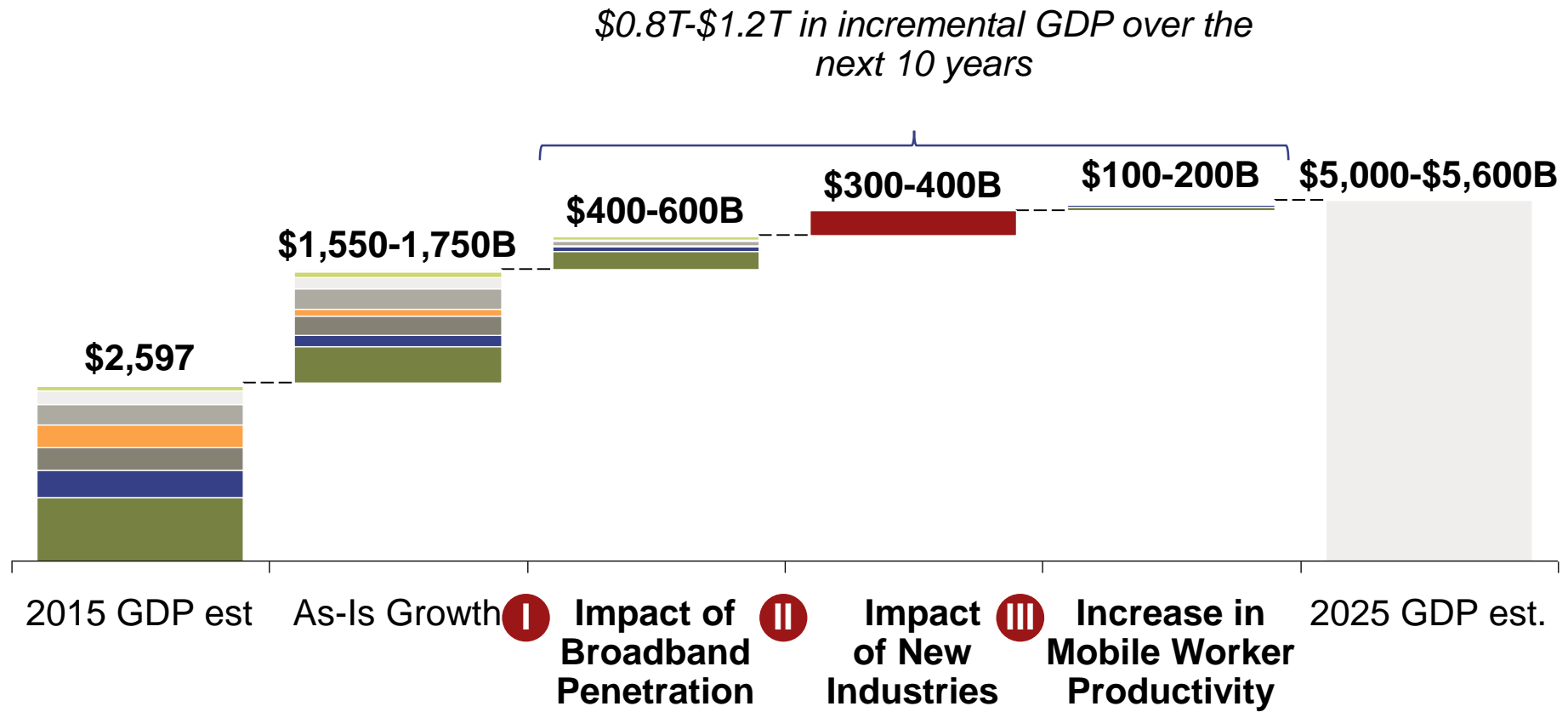
Stand out = High digital advancement & High momentum
Stall out = High digital advancement & slowing momentum
Break out = Low digital advancement & high momentum
Watch out = Low digital advancement & low momentum

1. Ranking against top 60 countries
 Source: ITU, EIU, Tufts University, A.T. Kearney

ASEAN has not kept pace to usher in the digital era

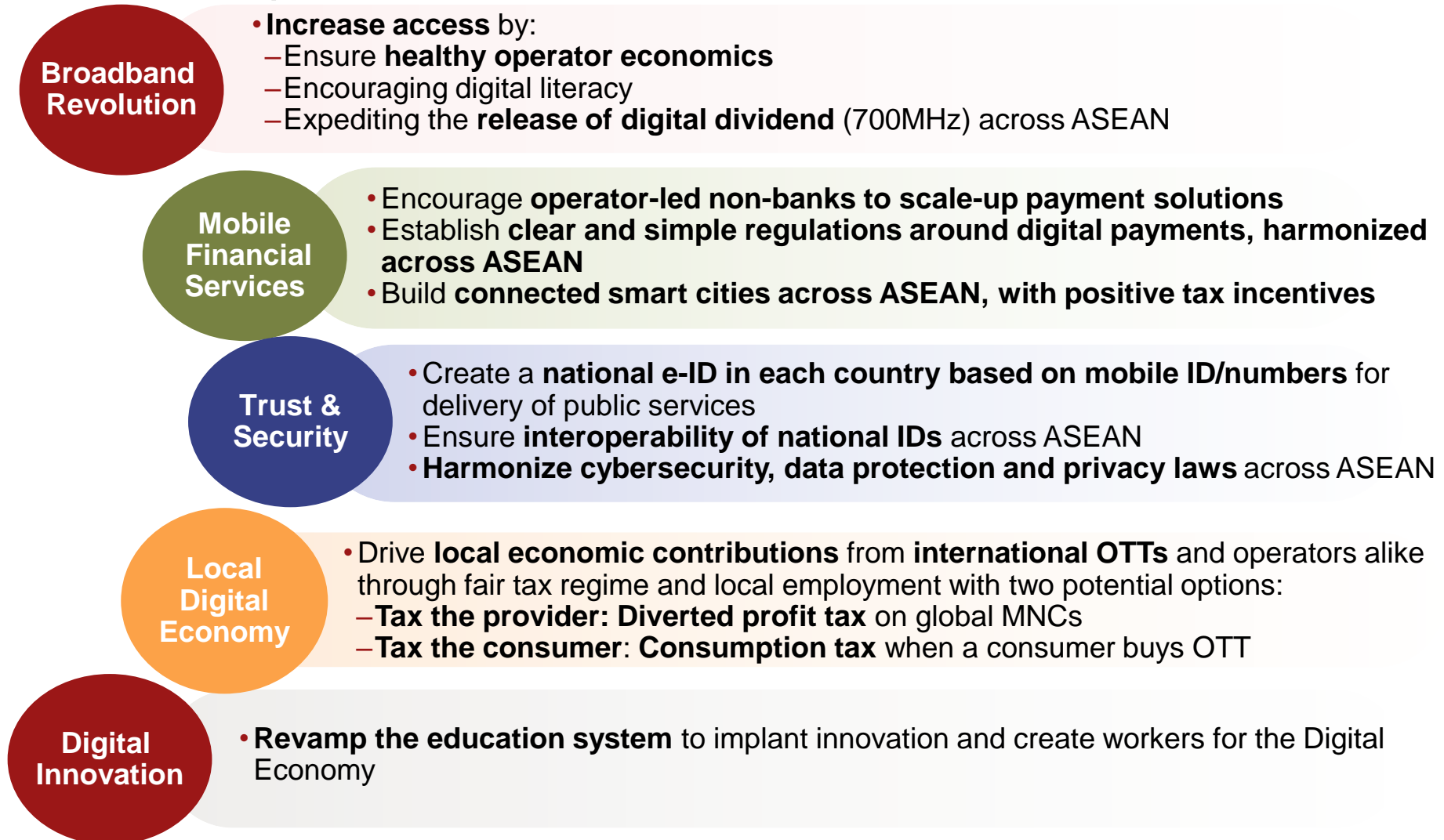
	European Union 	ASEAN 
Region-wide Digital Vision	<ul style="list-style-type: none"> • Single Digital Agenda established – 7 pillars • Digital Economy and Society Index (DESI) ranking of countries with tracking metrics 	<ul style="list-style-type: none"> • e-ASEAN Framework Agreement as high level guidelines only – No actions defined • Limited measures and tracking to evaluate progress
Consumer Protection (Privacy, Cyber Security)	<ul style="list-style-type: none"> • EU-wide common privacy initiatives driven by new <i>General Data Protection Regulation</i> • Cybersecurity a regional priority; region-wide cybersecurity agency (ENISA), NIS Directive 	<ul style="list-style-type: none"> • Only half the countries (MY, SG, PH, ID, TH) have privacy laws in-place • Cybersecurity now a priority but no region-wide unifying framework in place
Development Of E-commerce And MFS	<ul style="list-style-type: none"> • Mobile-only banks are operational e.g. Fidor Bank, Number26, Hello Bank • Market consultation launched for EU-wide instant payments service 	<ul style="list-style-type: none"> • Cash payments still primary method, but increasing demand for mobile payments • New platforms, e.g. K-pay, OCBC's mobile payment app
Digital Public Services	<ul style="list-style-type: none"> • Region-wide rollout of e-Public Services e.g. <ul style="list-style-type: none"> – eIDAS Regulation: cross-border mutual recognition of eIDs (electronic IDs) – Health & care: enabling citizens' secure access to health data across-borders 	<ul style="list-style-type: none"> • Statement of intent expressed in high-level Framework agreement, no actions or monitoring mechanisms so far
Industry Structure (Definition of Digital, OTT)	<ul style="list-style-type: none"> • Directive to establish European Electronic Commissions Code – to extend regulations to OTT players 	<ul style="list-style-type: none"> • Regulations on traditional providers not yet extended to OTT players

Digital Economy has a potential to add an incremental ~\$1T to GDP over the next 10 years

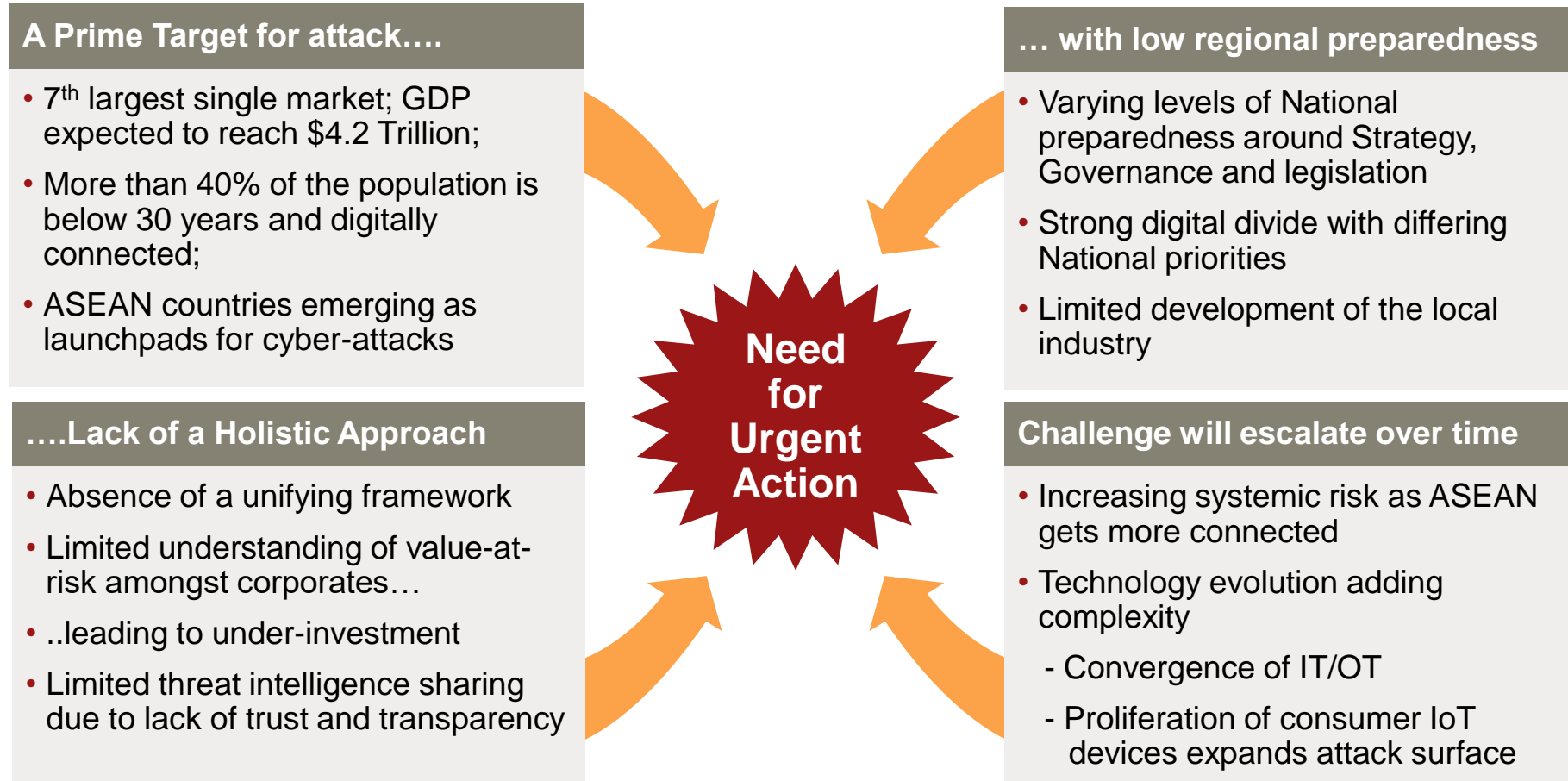


1. Based on current prices; uses 2015 as baseline to project future nominal GDP growth
 Source: GSMA, World Bank, Broadband Commission for Digital Development, IMF, ITU, Deloitte, Telenor, Jones Lang LaSalle, Warsaw Institute for Economic Studies, A.T. Kearney

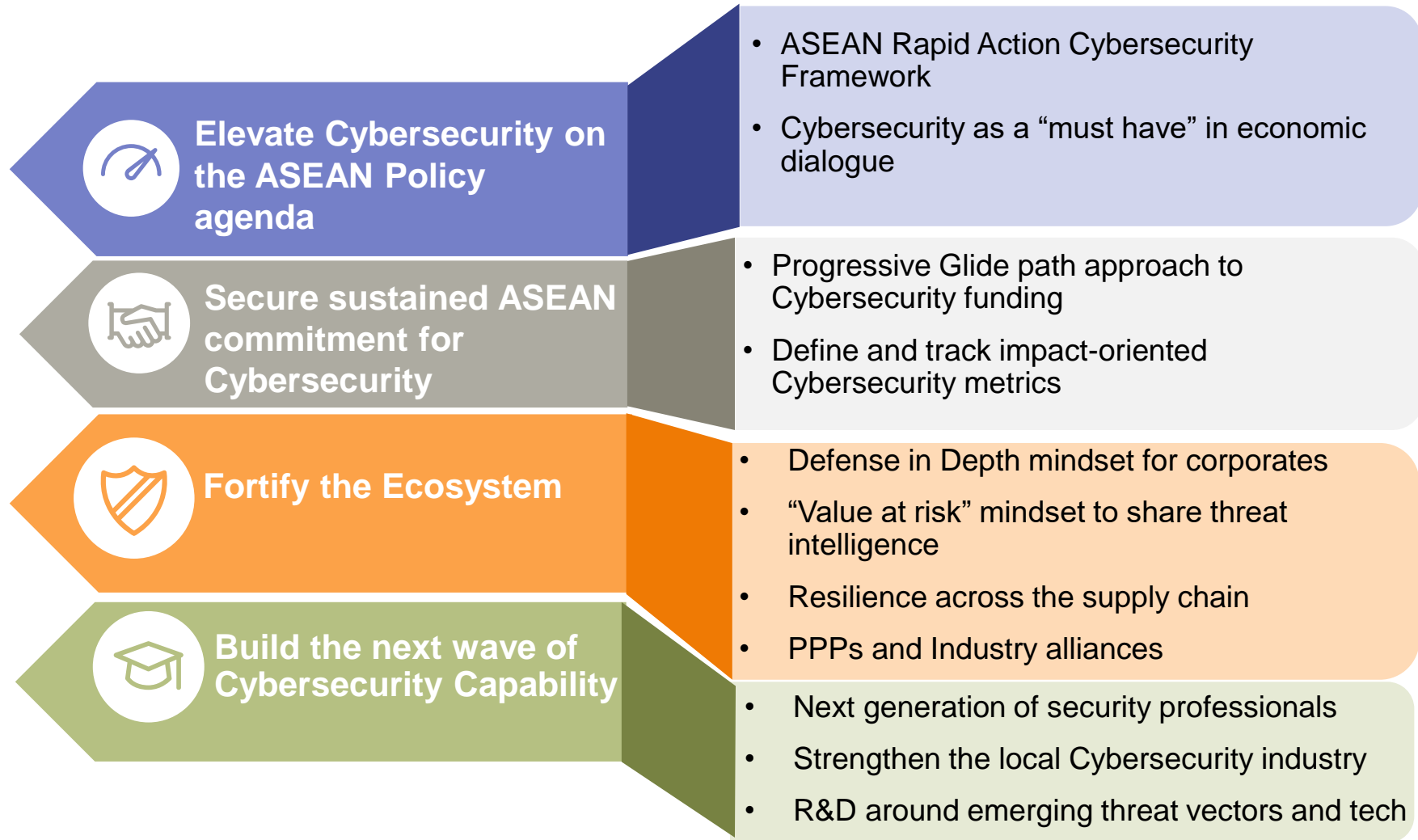
Five key policy imperatives are critical to enable ASEAN to achieve full potential



Cybersecurity is a clear and present danger for ASEAN's digital economy aspirations



ASEAN Cybersecurity – A Call to Action



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Using Mobile Connect to bring benefits and overcome the challenges of e-Gov services and regulation in Asia



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