How to Win in the Digital Era
where are the opportunities for IT solution partners?

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The Emergence of the DX Economy

2/3 of CEOs

Of G2000 companies will have Digital transformation at the center of their corporate strategy by end of 2017

By 2017, revenue growth from digital products and services is 2X that from the traditional product portfolio.

By 2018, company investments in IoT and cognitive-based operational sensing and situational awareness yield a 30% improvement in critical process cycle times.

By 2022, nearly 20% of operational processes are self-healing and learning – minimizing human intervention.

By 2026, 30% of retail revenue is generated by a customer's digital assistant.

Every organization can be a digital enterprise

Singapore 2017

Changi Airport Group
Digital Transformer of the Year

Grab
Digital Disruptor of the Year

M Social
DX Leader, Operational Transformation

DBS Bank
DX Leader, L3D Mastery

Urban Redevelopment Authority
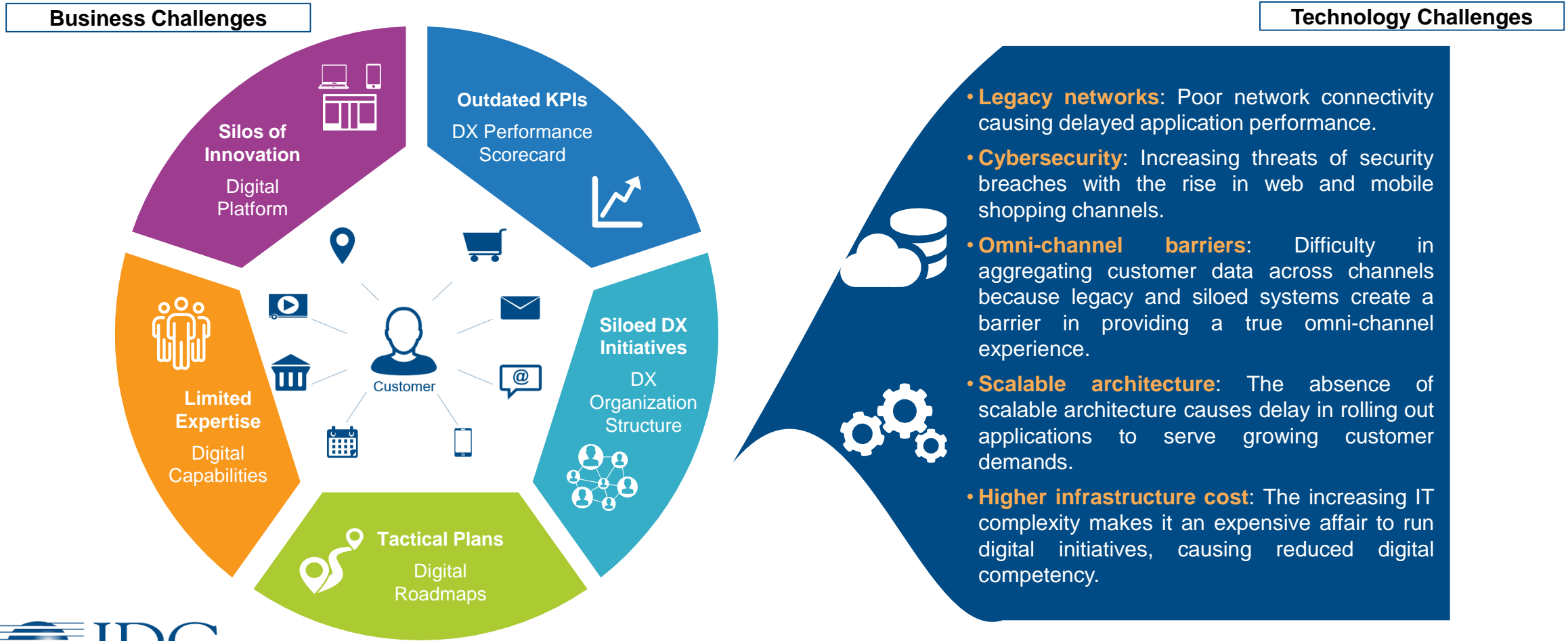*DX Leader, Talent Acceleration*

Urban Redevelopment Authority
DX Leader, Information Visionary

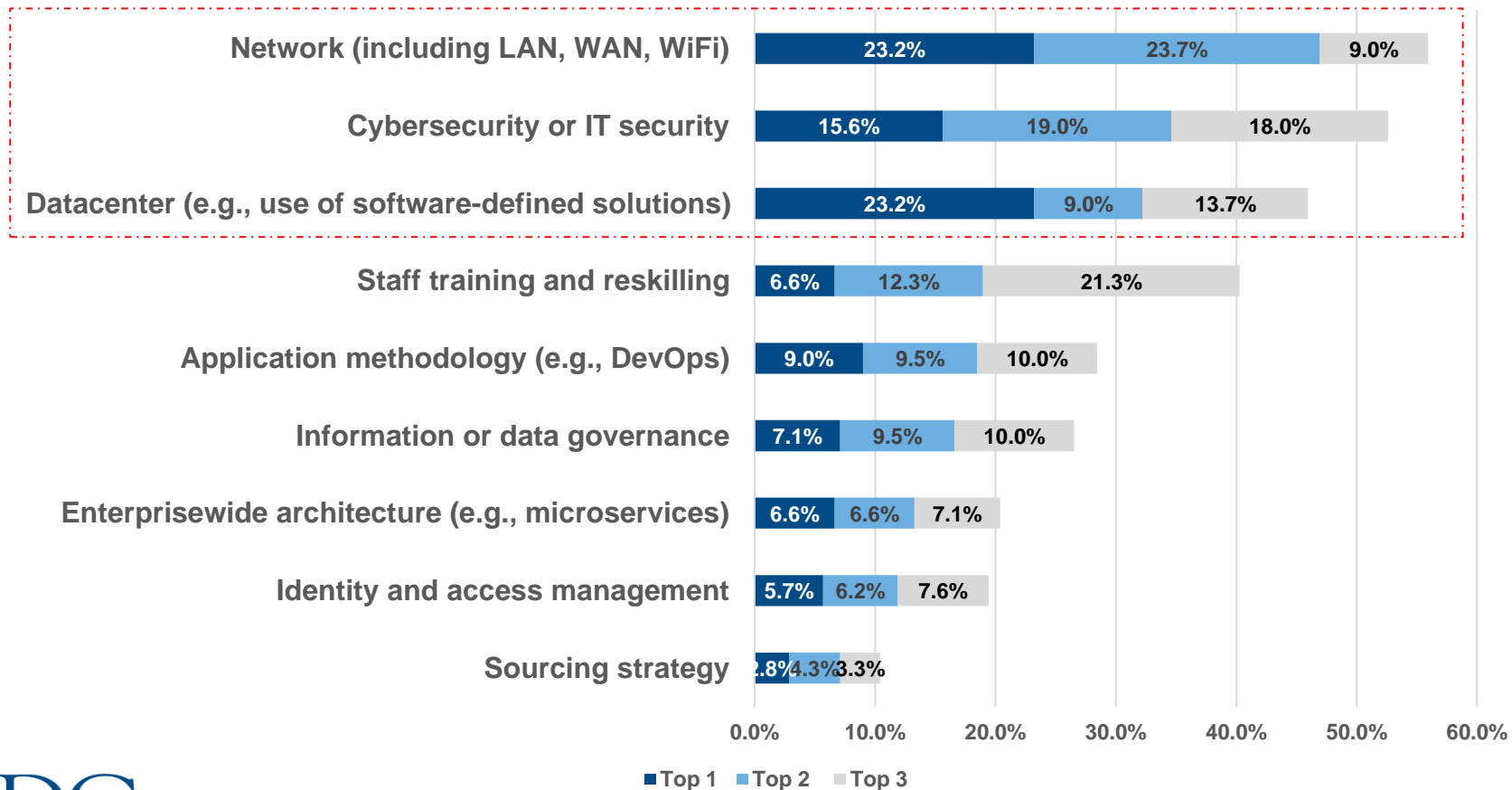For more information, visit www.IDCDXawards.com

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Today,
Digital Transformation is a Priority for 82% of Organizations in Asia Pacific

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Organizations are being held back by a series of challenges

Business Challenges

Technology Challenges

Silos of Innovation
Digital Platform

Outdated KPIs
DX Performance Scorecard

Siloed DX Initiatives
DX Organization Structure

Tactical Plans
Digital Roadmaps

Limited Expertise
Digital Capabilities

Customer

- **Legacy networks**: Poor network connectivity causing delayed application performance.
- **Cybersecurity**: Increasing threats of security breaches with the rise in web and mobile shopping channels.
- **Omni-channel barriers**: Difficulty in aggregating customer data across channels because legacy and siloed systems create a barrier in providing a true omni-channel experience.
- **Scalable architecture**: The absence of scalable architecture causes delay in rolling out applications to serve growing customer demands.
- **Higher infrastructure cost**: The increasing IT complexity makes it an expensive affair to run digital initiatives, causing reduced digital competency.

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Top Areas Need for Immediate Improvement

Which of the areas mentioned below would you like to prioritize for adoption or transformation in response to changes brought about by digital technologies (such as cognitive systems, IoT, etc.)?

Area	Top 1	Top 2	Top 3
Network (including LAN, WAN, WiFi)	23.2%	23.7%	9.0%
Cybersecurity or IT security	15.6%	19.0%	18.0%
Datacenter (e.g., use of software-defined solutions)	23.2%	9.0%	13.7%
Staff training and reskilling	6.6%	12.3%	21.3%
Application methodology (e.g., DevOps)	9.0%	9.5%	10.0%
Information or data governance	7.1%	9.5%	10.0%
Enterprisewide architecture (e.g., microservices)	6.6%	6.6%	7.1%
Identity and access management	5.7%	6.2%	7.6%
Sourcing strategy	2.8%	4.3%	3.3%

- The adoption of next-generation technology requires a solid foundation to avoid potential bottlenecks.

- According to IDC's 2017 APEJ IT Services End-User Survey, APeJ organizations are prioritizing the improvement of their networks, cybersecurity, and datacenters to build the foundation to drive digital initiatives.

Transformation Pillars: Agility, Security and Productivity

- Agile IT resources
  - Hyperconverged & Software Defined
  - Cloud

- Building a Secure Experience
  - Securing Digital Assets
  - From Core to Edge

- Highly Productive Workforce
  - Enable mobile workforce
  - Improving productivity, collaboration and reducing cost

Section I: Driving Agile IT resources

APEJ Cloud Market Snapshot

Adoption Is Heading Toward Hybrid Cloud

Private cloud adoption

85% Embracing private cloud

72% Embracing enterprise private cloud (EPC)

64% Embracing hosted private cloud (HPC)

56% Embracing on-demand HPC

Public cloud adoption

85% Embracing public cloud

69% Embracing software as a service (SaaS)

67% Embracing platform as a service (PaaS)

56% Embracing infrastructure as a service (IaaS)

Different Clouds, Different Drivers

55% Public cloud: Improve business agility

55% EPC: Improve IT security

56% HPC: Improve IT security

With regard to security, majority of the respondents believed that **private cloud** architectures are inherently **more secure** than PCS.

With regard to organizations' use of external cloud vendors, respondents said it was important for their cloud provider to allow them to **pay only for what they use or consume.**
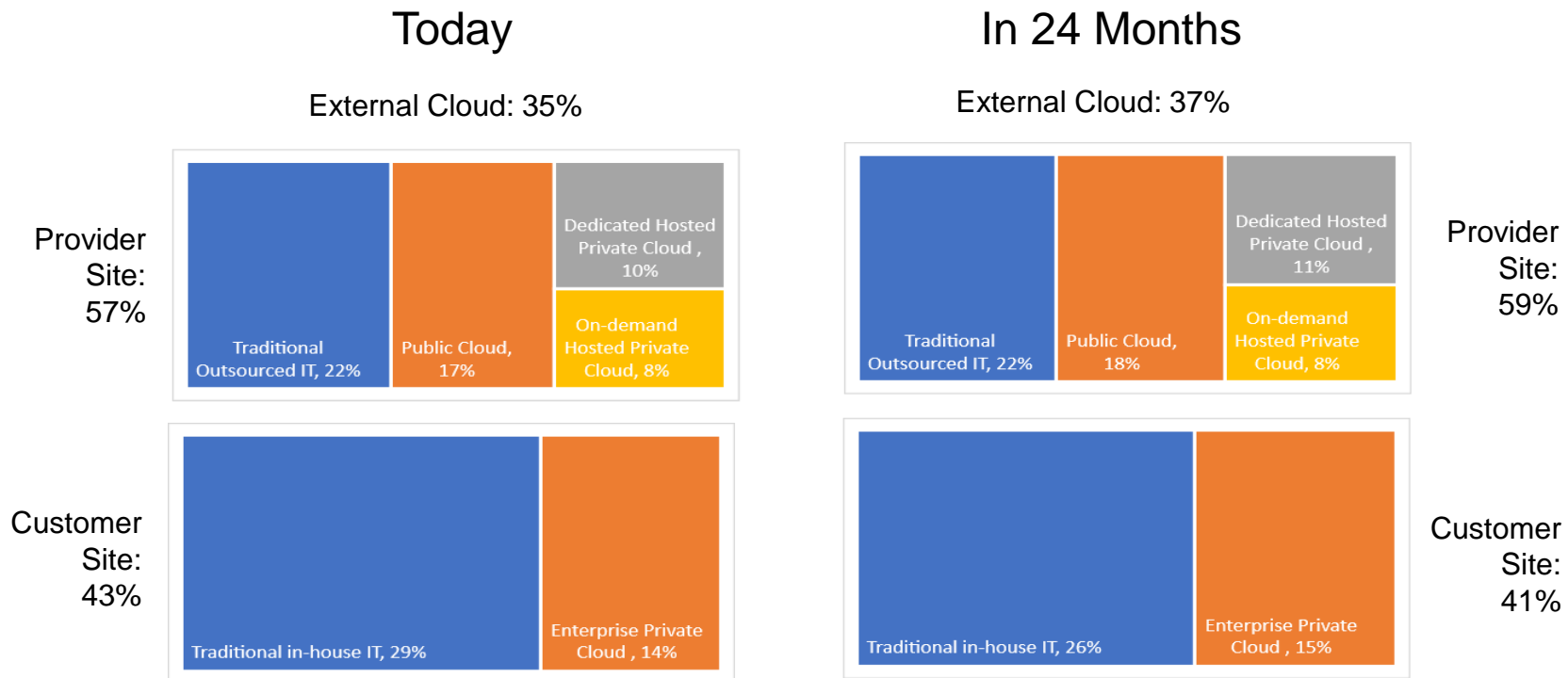
Security is considered the major inhibitor for cloud adoption irrespective of delivery model.

Transparency in pricing model was rated the most important factor while purchasing public cloud services (PCS).

Majority of the organizations said they had a **"cloud-also"** strategy both for procuring net-new IT services and replacing existing on-premise IT services.

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Source: IDC CloudView Survey 2017, APEJ N = 2,321

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Hybrid IT will be considered as a Standard

Despite concerns around security, investments in public cloud continues to grow. However, organizations are as likely to choose private cloud as they ramp up their cloud adoption. As a result, hybrid IT will be considered as a standard for enterprise architectures.

Today	In 24 Months

External Cloud: 35%

External Cloud: 37%

Provider Site: 57%

Traditional Outsourced IT, 22%

Public Cloud, 17%

Dedicated Hosted Private Cloud , 10%

On-demand Hosted Private Cloud, 8%

Provider Site: 59%

Traditional Outsourced IT, 22%

Public Cloud, 18%

Dedicated Hosted Private Cloud , 11%

On-demand Hosted Private Cloud, 8%

Customer Site: 43%

Traditional in-house IT, 29%

Enterprise Private Cloud , 14%

Customer Site: 41%

Traditional in-house IT, 26%

Enterprise Private Cloud , 15%

Q.   Please estimate what percentage of your organisation's total annual IT budget (including servers, applications, software, databases, storage products, networking, IT staff, and services) is allocated to each of the following procurement/management models.

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# Hyperconverged Systems Take Off

Hyperconverged Systems
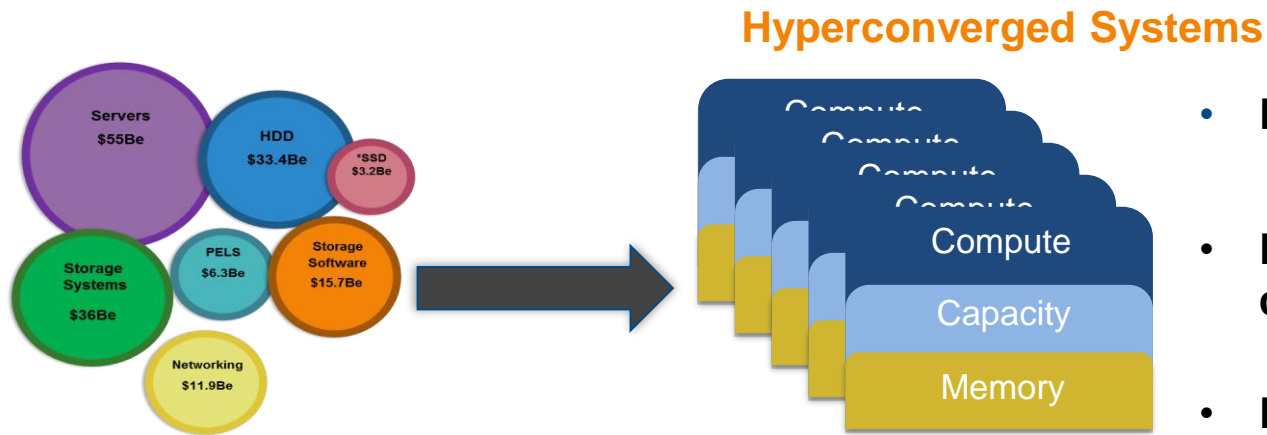
- **Better CapEx & OpEx Balance**

- **Provides similar benefits as 1st gen. convergence more efficiently**

- **Reduces storage silos & storage related management tasks**

Hyperconverged infrastructure and SDI will be foundations for shift to Cloud-based IT

- Permits a high degree of automated orchestration
- Improves speed of infrastructure provisioning and deployment of new services

Cloud 2.0: Moving from Push to Pull
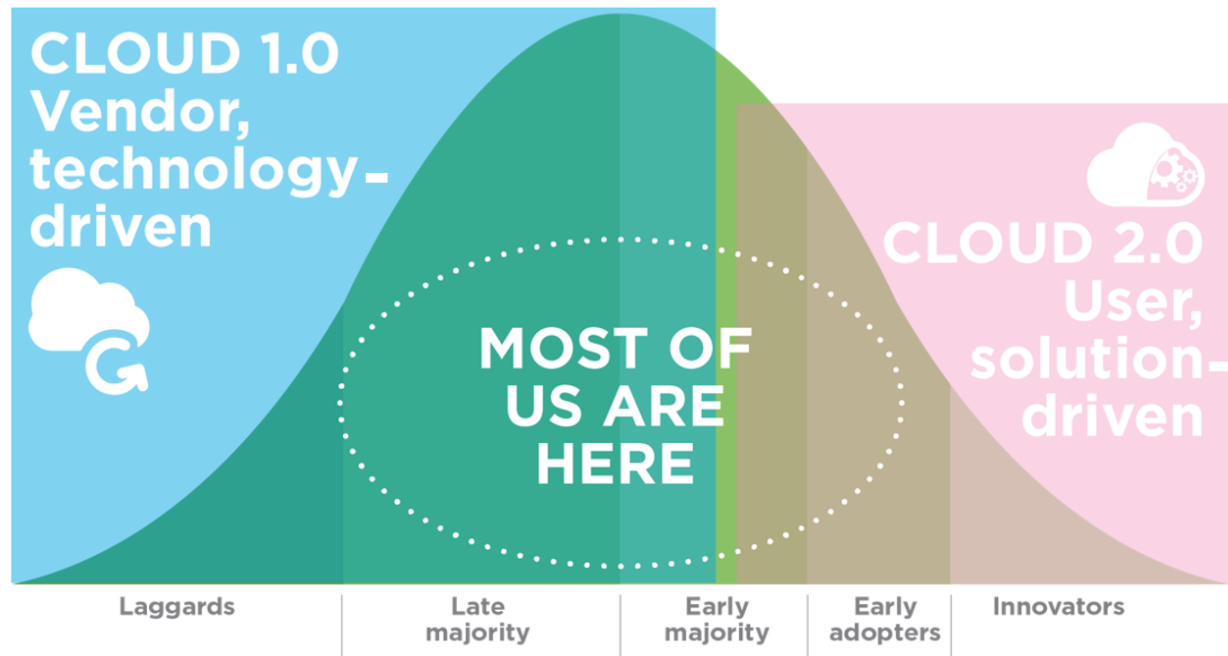
Source: IDC, 2017

Cloud 2.0 Impact

- By 2020, over 70% of cloud SPs' (CSPs') revenues will be mediated by channel partners/brokers.

- By 2020, almost 60% of enterprises will actively participate in industry-specific compliance cloud.

- By 2020, public cloud will be the "secure" option, using cloud-based encryption, threat analytics, blockchain, and compliance.

- By 2021, the number of new datacenter build-outs by SPs will outpace the number of enterprise build-outs by 2.5 to 1.

Section II: Driving Fundamental Changes in Security

Digital Transformation Widens the Security Gap

- ▶ Diminishing perimeter and much more attack vectors introduced by digital technologies

- ▶ Tons of digital assets and more valuable company assets are in the form of data

- ▶ Crossover of cybersecurity and fraud

- ▶ Superior customer experience versus privacy and security

Complexities of enterprise environment

Sophistication of threat landscape

Rise of cybercrime

Cybersecurity proficiency and effectiveness

Source: IDC, 2017
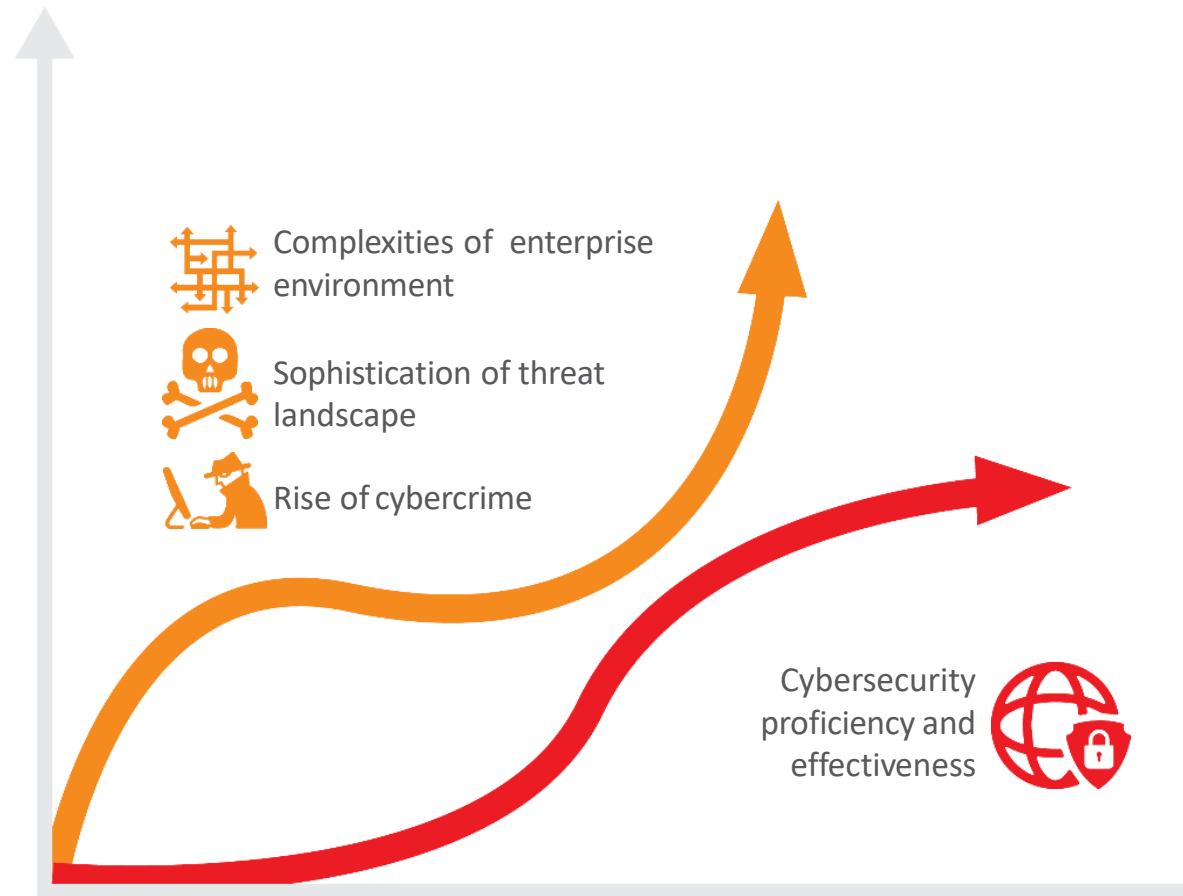
Weakness in Current Approach

81%
Hack-related breaches use either stolen/weak password in 2017[1]

105
Credentials stolen per **second** in 2016[2]

357 Million
The number of new malware variants reached 357 million in 2016 (about 1 million a day)[3]

15 mins
It takes15 minutes from an initial infection to a ransom demand being made[4]

No.1
Malware is the top type of attack in Asia (both as a target and as an originated source)[5]

[1]Verizon Data Breach Incident Response Report, 2017 (rise from 63 percent in 2016)
[2]Shape Credential Spill Report 2017 reported more than 3B credentials reported stolen in 2016
[3] Symantec 2017 Internet Security Threat Report
[4] LogRyhthm, The ransomware Threat whitepaper, 2016
[5] NTT Security 2017 Global Threat Intelligence Report

Cybercriminals Are Automating, Why Can't We?
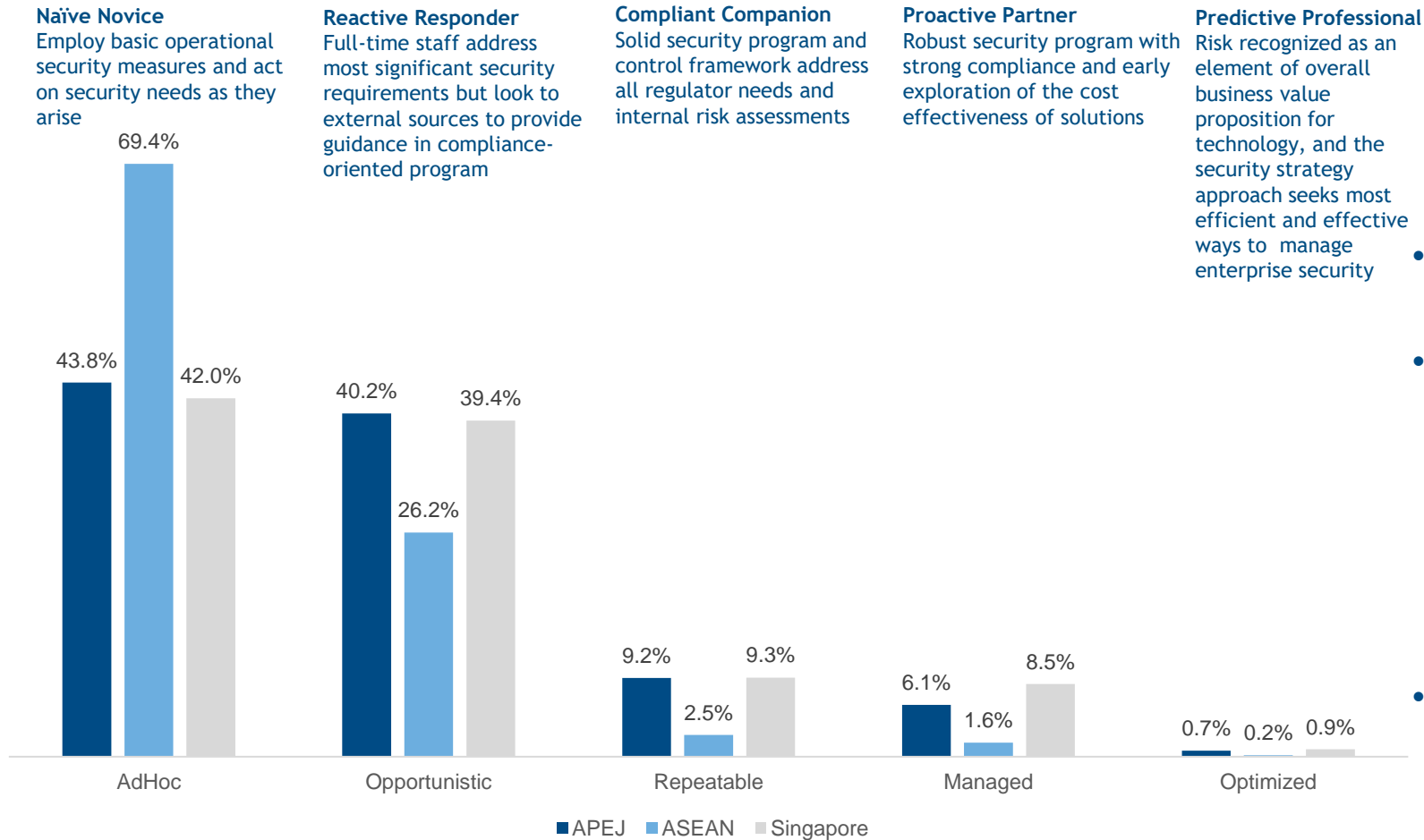
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Distributed Integrity & "Trampoline"

The new security model diminishes the notion of "inside" and "outside"
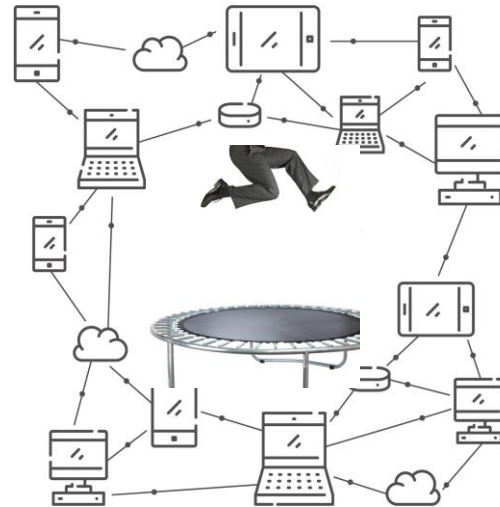
- Focus on business logics, users, data, and applications

- Uses "tracers and tethers" for primary object protection

- Constant monitoring and capable of sharing threat indicators and updating policy based on risk determination.

- The foundation is the ability to **define an identity, authenticate the identity** and accurately provision based on roles and policy associated with that identity.

- Incident Response Strategy

- Crisis Management response (Legal mitigation, Press & PR)

- Mitigate, Forensics, Report/Share, User Training

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IDC IT Security MaturityScape Benchmark Report

Naïve Novice
Employ basic operational security measures and act on security needs as they arise

Reactive Responder
Full-time staff address most significant security requirements but look to external sources to provide guidance in compliance-oriented program

Compliant Companion
Solid security program and control framework address all regulator needs and internal risk assessments

Proactive Partner
Robust security program with strong compliance and early exploration of the cost effectiveness of solutions

Predictive Professional
Risk recognized as an element of overall business value proposition for technology, and the security strategy approach seeks most efficient and effective ways to manage enterprise security

Chart values:

	AdHoc	Opportunistic	Repeatable	Managed	Optimized
APEJ	43.8%	40.2%	9.2%	6.1%	0.7%
ASEAN	69.4%	26.2%	2.5%	1.6%	0.2%
Singapore	42.0%	39.4%	9.3%	8.5%	0.9%

Legend: ■APEJ ■ASEAN ■Singapore

- We observe most investment will be made when companies move through stage 1 and 2. Lots of the investment come from more than just security technology spend, but also security services spend.

- Once stage 3 is reached, security spend becomes incremental.

- From stage ad hoc to opportunistic, we see lots of tech investment. Areas like APT, threat intelligence, endpoint detection & response are top investment areas. Yet, not enough people able to use the technology adequately.

- From stage 2 to repeatable stage and above, enterprises start to change from a purely prevention-centric view to a more holistic and risk-centric view.

Section III: Driving Productivity

Managing a Mobile and Digital Workforce

- **Productivity, Communication and Collaboration**

- **Explosive of Endpoint devices, multi-format support services**

- **Unified directory, Identity access management**

Immerse Scale from Core to Edge

Edge will Drive further Business Case
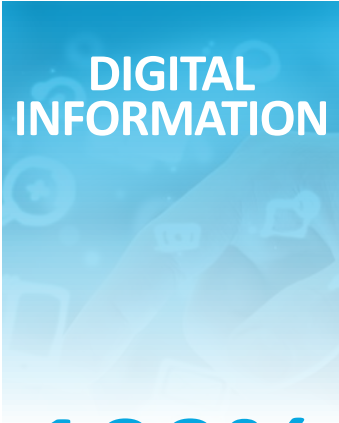
The New KPIs for a Digital Organization

DIGITAL LEADERSHIP

33%

of CEOs will have technology leadership experience

DIGITAL OMNI-EXPERIENCE

35%

improvement in Net Promoter score when customers own their experience

DIGITAL INFORMATION

100%

growth of revenue from information-based products

DIGITAL OPERATING MODEL
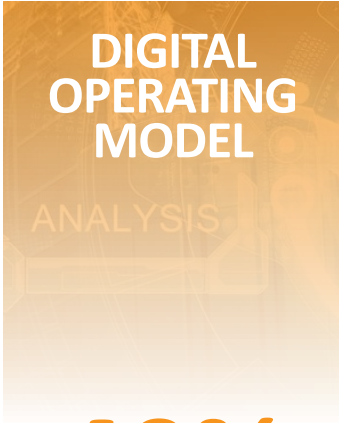
40%

of operational processes will be self healing

DIGITAL WORKFORCE

50%

reduction in management layers

Growth Sustained from 3rd Platform and Innovation Accelerators

Digital Transformation

DEVELOPERS INDUSTRY CLOUDS

Augmented & Virtual Reality Internet of Things Cognitive/AI Robotics

Next Gen Security

INNOVATION ACCELERATORS

3D Printing

Mobility Big Data/Analytics Cloud Social

3rd Platform

SCALING INFRASTRUCTURE
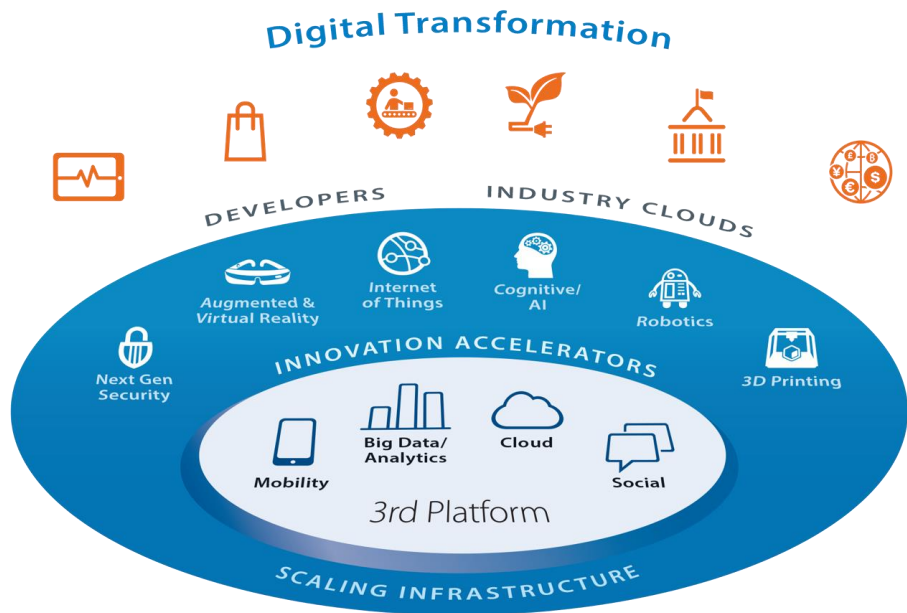
Source: IDC

Legend:
- 2nd platform
- 4 pillars
- 6 IAs

2015: 317.6, 391.3, 406.6
2016: 289.8, 418.7, 463.6
2017: 265.5, 456.1, 532.8
2018: 243.2, 494.6, 614.6
2019: 225.4, 525.1, 719.0
2020: 210.0, 546.4, 863.1

APJ ICT Spend US$B
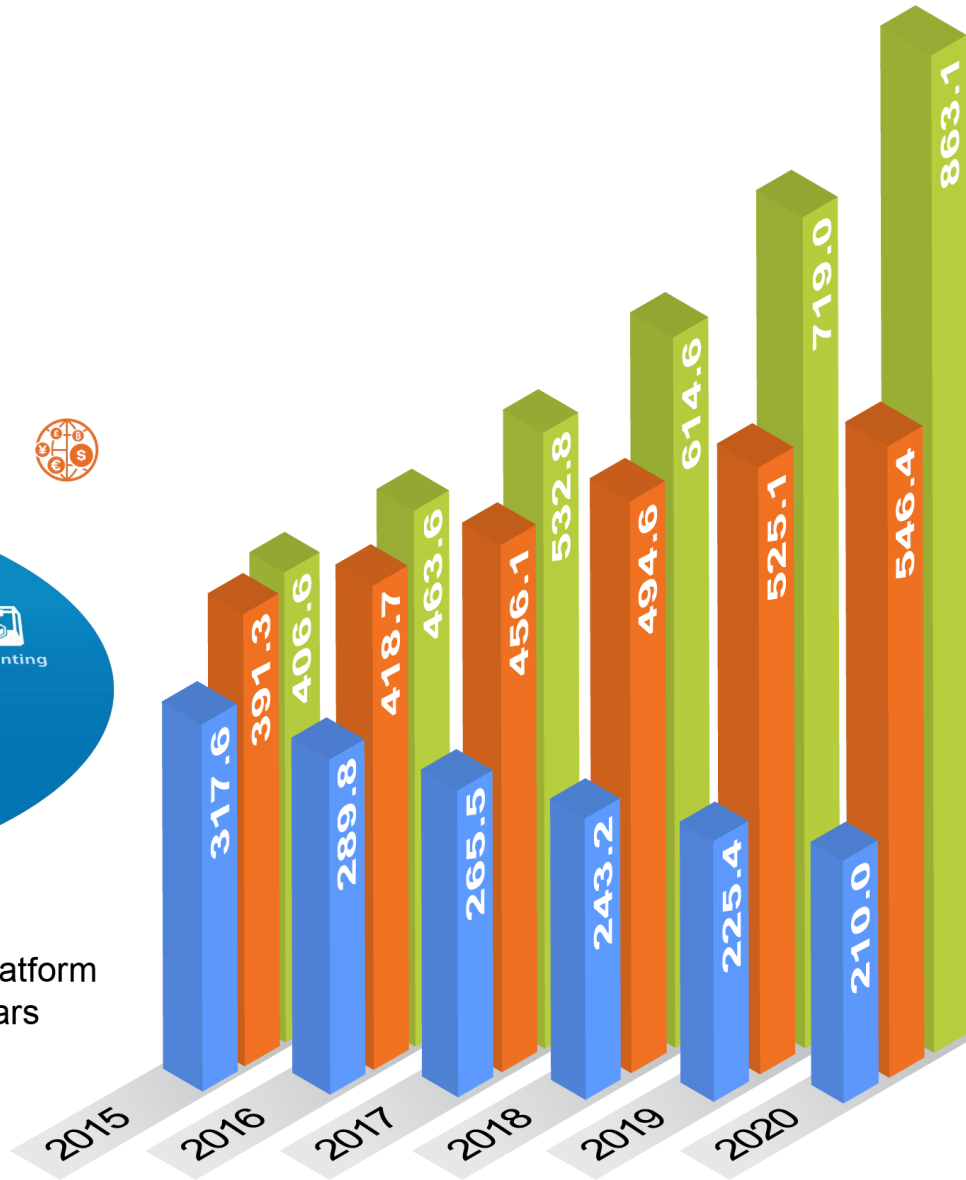
2nd platform: -7.9% CAGR
3rd platform : 12.1% CAGR

Cloud IT infra in SG ('17-'21)
1.3 Bil ->1.5 Bil

Converged System in SG
99 Mil --> 126 Mil in 2021

Public cloud services in SG
828 Mil → 1.6 Bil

Essential Guidance

- Focus on moving to the 3rd platform and moving your company to a recurring revenue type of business, probably around managed services to start.

- Pick one or more verticals, or horizontals (business process) and becoming known for that. It is easy for customers to find a specialist provider versus settling for a generalist commodity supplier.

- Always review your point of differentiation and climb the margin stack by accruing IP value, or increasing professional and managed services on offer.

- Move from "do it ourselves" mentality to being open to forming alliances with other partners to deliver complete business solutions to customers.

- Be prepared for short-term bumps as your business transforms for a solid long-term success.

For More Information

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