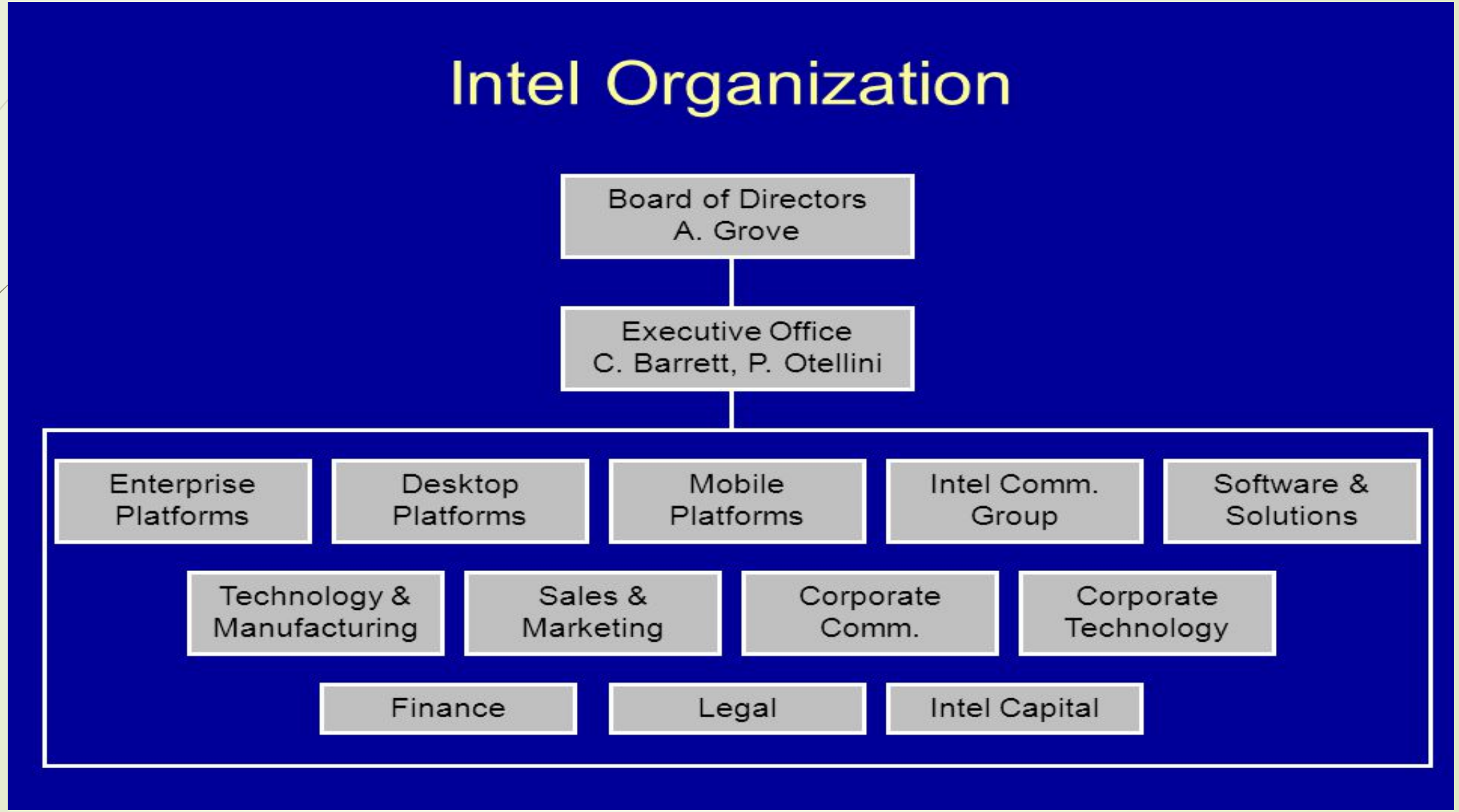
Intel Strategy, Governance, Adoption, and Innovation

Assignment 6

MET CS 782 - Fariborz Norouzi - April 24

Intel Organizational Background



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Intel Organizational Background

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Intel Virtual Technology (VT)

Virtualization is a combination of software and hardware engineering that creates Virtual Machines (VMs).

Intel Virtualization Technology provides a comprehensive roadmap to address virtualization challenges and includes support for CPU and I/O virtualization and a strong VMM ecosystem. Intel was the first and is the leading provider of hardware support for virtualization technologies.

Intel VT Goals:

- Reduce VMM Complexity
- Enhance Reliability, Security and Protection
- Improve Functionality
- Increase Performance

Advantages of Using Virtualization:

- Server Consolidation
- Testing and development
- Dynamic Load Balancing and Disaster Recovery
- Virtual Desktops

Intel Virtual Use and Benefits

Operational Uses and Benefits:

Intel Virtualization Technology Benefits

Software-only Virtualization Solution	Virtualization with Intel® VT	End-user Benefits
Paravirtualization is required with certain Operating Systems	No paravirtualization required	Lower support and maintenance cost. No paravirtualization support required with update of guest OS
Large memory overhead required	CPU virtualization assistance reduces the need for memory overhead	Lower TCO a nd lower platform, energy, cooling, maintenance and inventory costs
De-privileging OS limits number of Operating Systems supported	OSs can often run on their intended layer avoiding the need to de-privilege	Increased functionality: mixed and varied OS
Only possible through complex VMMs that add latency and cost	Assists the VMMs with silicon based functionality	Resulting on lower cost, more powerful virtualization solutions

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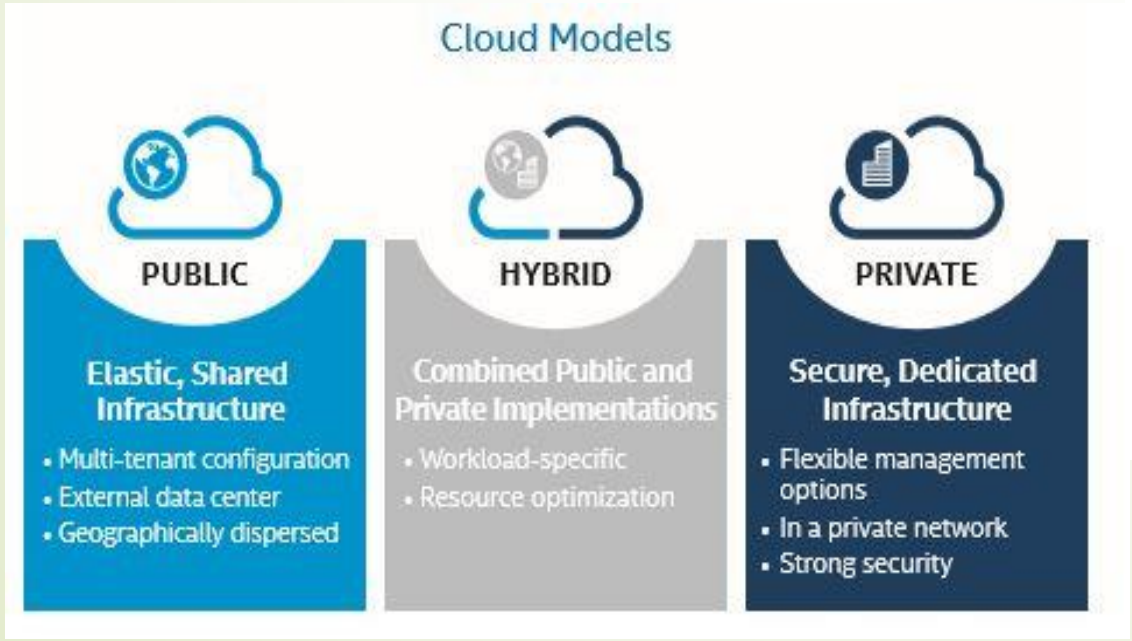
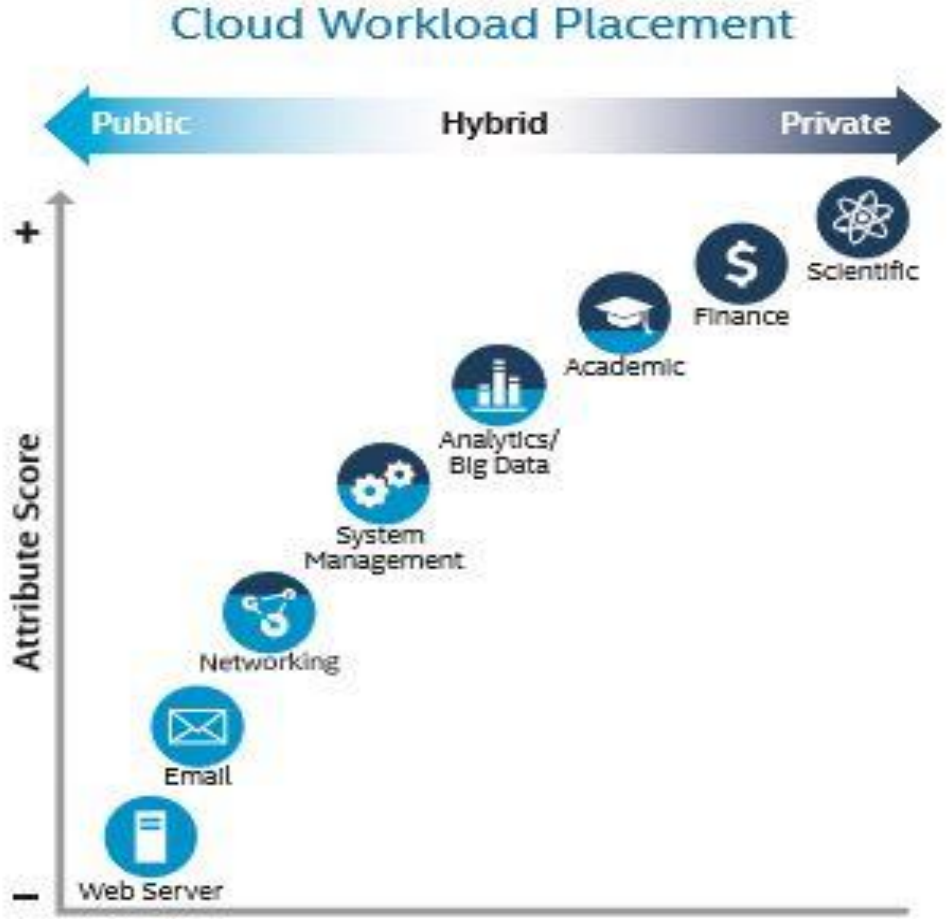
Intel Virtual Use and Benefits

Competitive Uses and Benefits:

- ✓ Rapid Deployment
- ✓ Scalability
- ✓ Innovation
- ✓ Reduce Costs



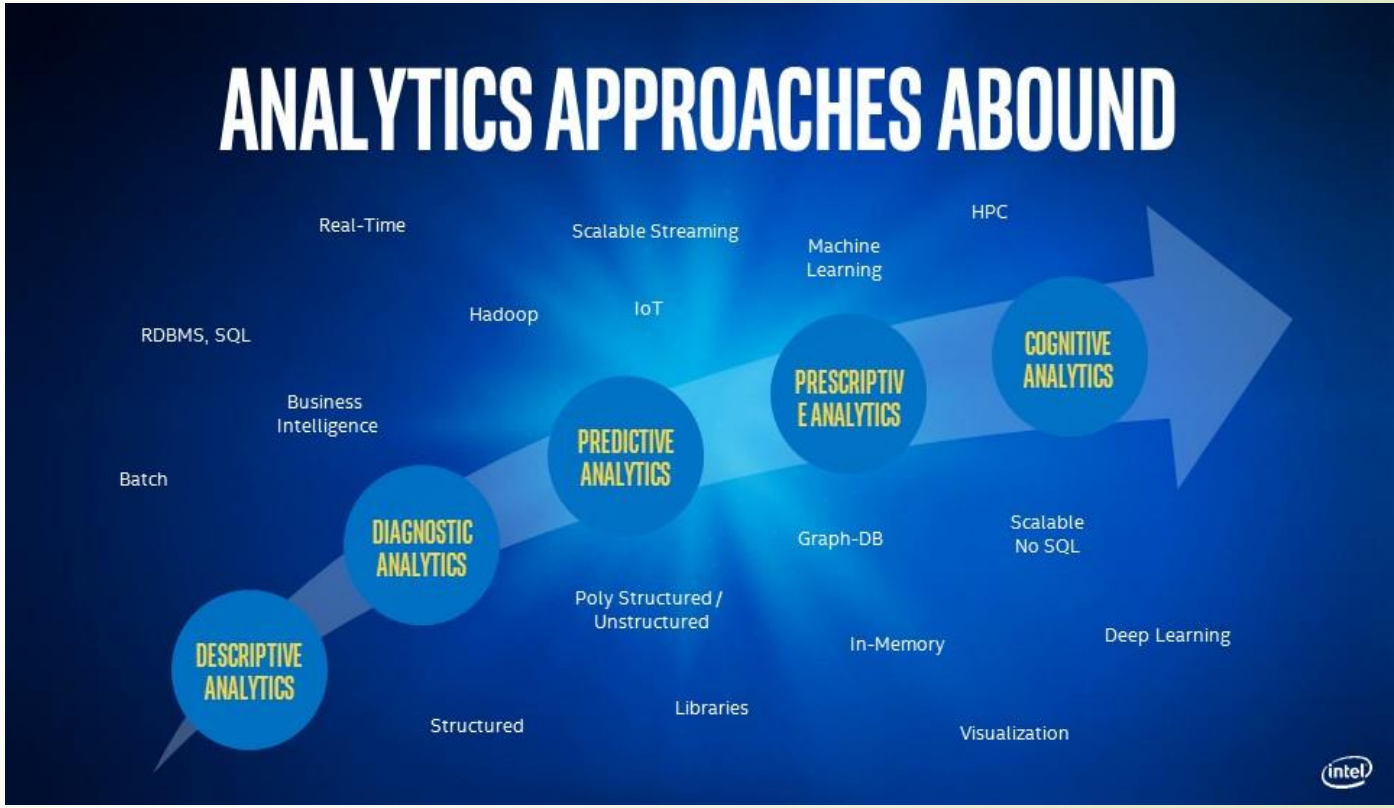


Technology Analysis

Technology Maturity:
The Analytics Maturity Curve breaks down the past, present, and future of analytics into five phases. From descriptive to predictive to cognitive and everything in between, finding the phase that's right for your business depends on your unique needs.

The 5 Phases Of Analytics included:
-Descriptive analytics
-Diagnostic analytics
-Predictive analytics
-Prescriptive analytics
-Cognitive analytics

Analytics-maturity-model



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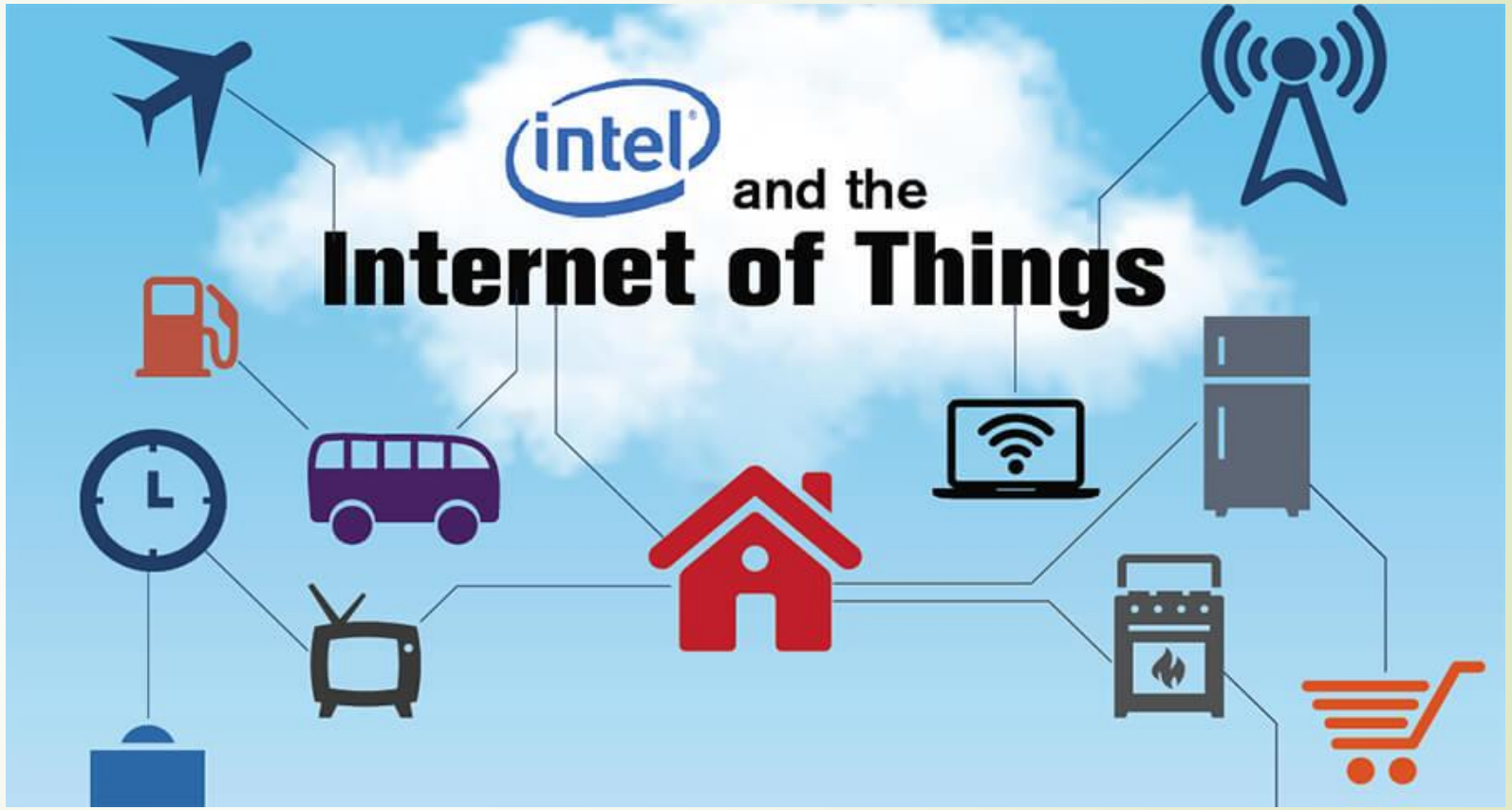
Technology Analysis

Technology Impacts

The Internet of Things (IoT) will represent impacts high technology and society in general.

According to International Data Corporation (IDC), by 2020 the entire Internet of Things market is expected to grow to $8.9 trillion.



Gartner expects 26 billion connected things by 2020. (http://www.gartner.com/newsroom/id/2636073)

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Technology Analysis

Technology Evolution

- The cloud is the most important trend shaping the future of the smart, connected world and thus Intel's future.

- The many "things" that make up the PC Client business and the Internet of Things are made much more valuable by their connection to the cloud.

- 5G will become the key technology for access to the cloud and as we move toward an always-connected world.

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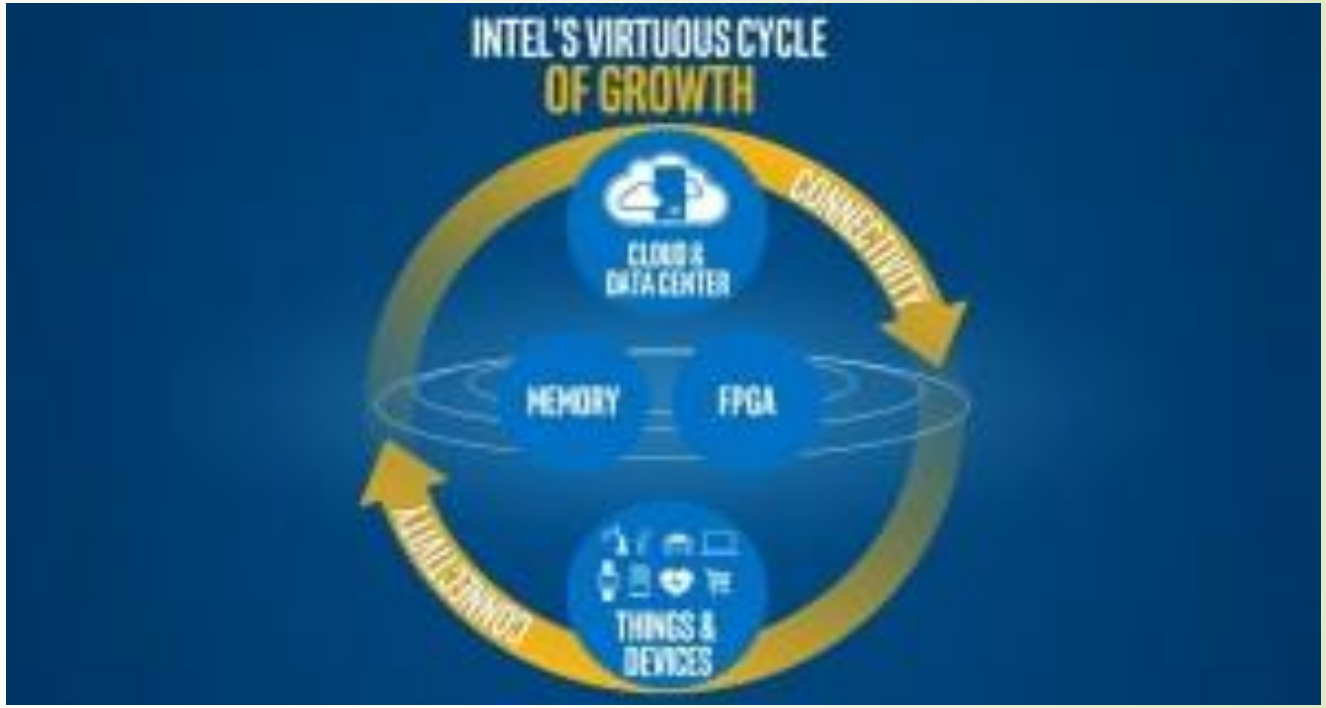

- Memory and programmable solutions such as FPGAs will deliver entirely new classes of products for the data center and the Internet of Things.

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Technology Analysis

Technology Alternatives

Intel reveals vision of a high-tech future

Charging furniture

Smart Clip

Basis Peak

MICA bracelet

SMS Audio

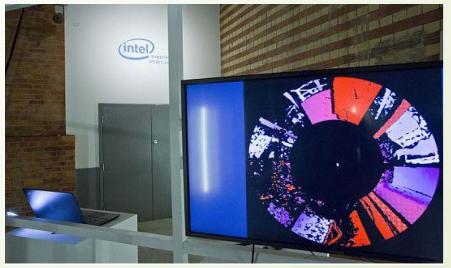
HP Sprout

Smart Home Gateway

3D printing

3D Scanning

3DMe



RealSense technology

Self-navigating Drones

Operational and Competitive Risks

A critical security flaw in Intel chips could make nearly every computer, phone, and server from the last 20 years vulnerable to dangerous bugs.

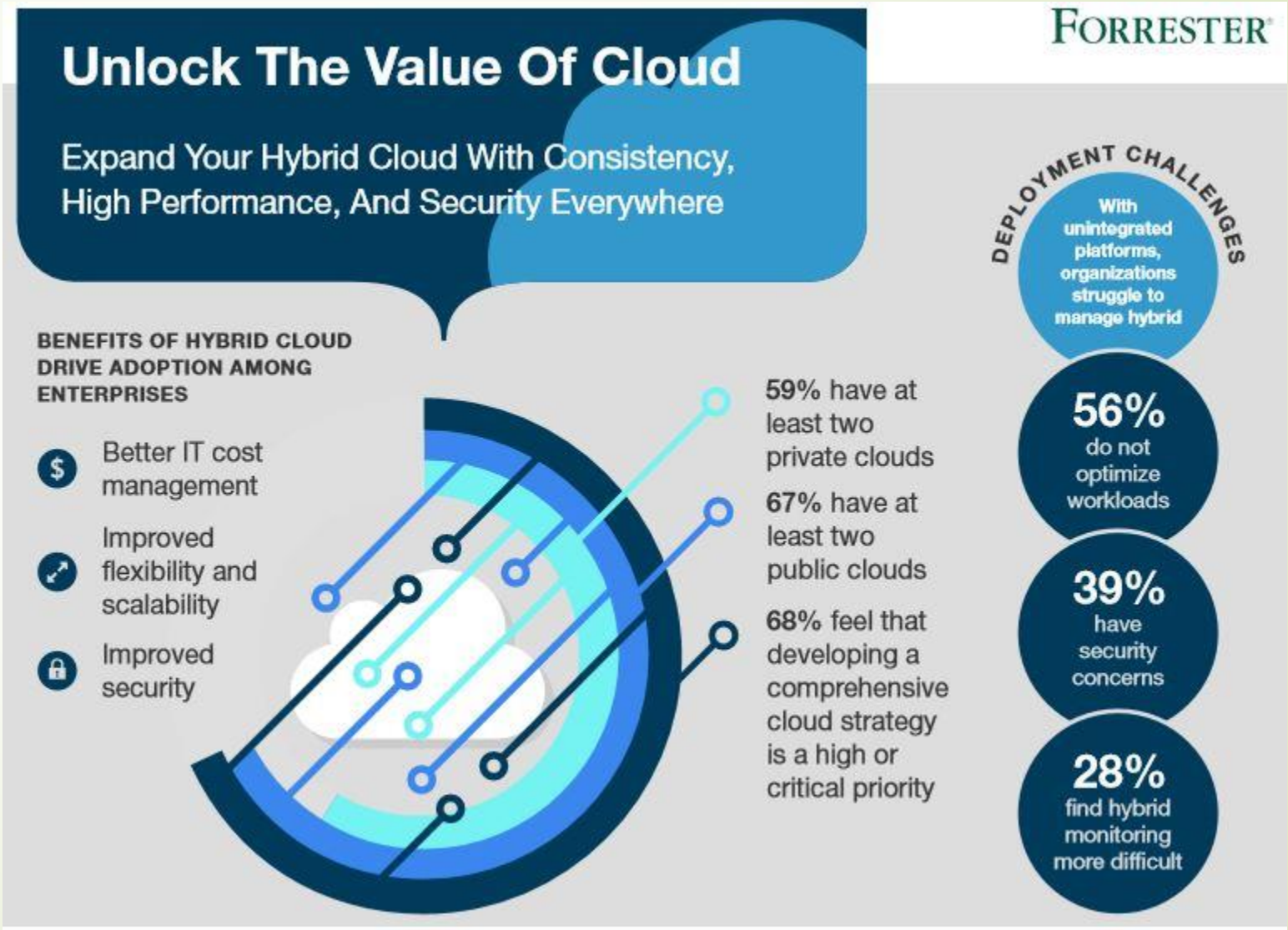
The critical vulnerability could allow malicious actors to steal passwords and sensitive information from smartphones, laptops, computers, and the servers that store so much of your personal information.

Microsoft and google have been working closely with Intel to develop and test mitigations to protect their customers

Adoption Analysis Summary

Intel is developing a comprehensive cloud strategy, focusing on the combination.

The benefits of using the Hybrid Cloud include better IT management, greater flexibility, scalability, and better security.



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Adoption Analysis Summary

REVENUE

$62.8B

up $3.4B or 6% from 2016; up 9% excluding the Intel Security Group (ISecG)

Stabilizing PC market, solid growth in data center and adjacent businesses

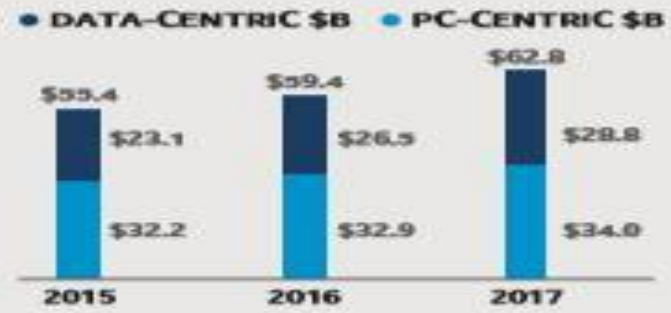
GOAL

PC-centric business decline in low single digits and low double digit growth of data-centric businesses.

RESULT

PC-centric business growth exceeded expectation at 3%. Excluding ISecG, data-centric businesses grew 16%.

ACHIEVED



OPERATING INCOME

$17.9B GAAP
up $5.1B or 39% from 2016

$19.6B non-GAAP[1]
up $3.0B or 18% from 2016

Higher revenue and gross margin along with better spending leverage and lower restructuring charges, excluded from non-GAAP operating income

GOAL

Grow non-GAAP operating income faster than revenue.

RESULT

On a non-GAAP basis, operating income grew at 18%, faster than revenue growth of 6%.

ACHIEVED

EPS

$1.99 GAAP
down $0.13 or 6% from 2016

$3.46 non-GAAP[1]
up $0.74 or 27% from 2016

Higher revenue, sales of equity investments, and the one-time charge from Tax Reform[2], excluded from non-GAAP EPS

GOAL

Grow non-GAAP earnings per share (EPS) faster than non-GAAP operating income.

RESULT

On a non-GAAP basis, EPS grew at 27%, compared to 18% growth in non-GAAP operating income.

ACHIEVED

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Adoption Analysis Summary

Adoption Cost and Value

Intel Corporation's ROI over the last five Years

INTC Annual Return On Investment	(Dec 30 2017) 2017	(Dec 31 2016) 2016	(Dec 26 2015) 2015	(FY 2014) (Dec. 30, 2014)	(Dec 28 2013) 2013
Y / Y Investment Growth	*13.62 %*	*6.36 %*	*16.27 %*	*-3.62 %*	*10.27 %*
Y / Y Net Income Growth	*-6.93 %*	*-9.67 %*	*-2.43 %*	*21.66 %*	*-12.59 %*
Annual Return On Investment	**9 %**	**10.99 %**	**12.93 %**	**15.41 %**	**12.21 %**

In (Dec 30 2017) ROI decreased compared to previous year to 9 %, due to deterioration of net income.

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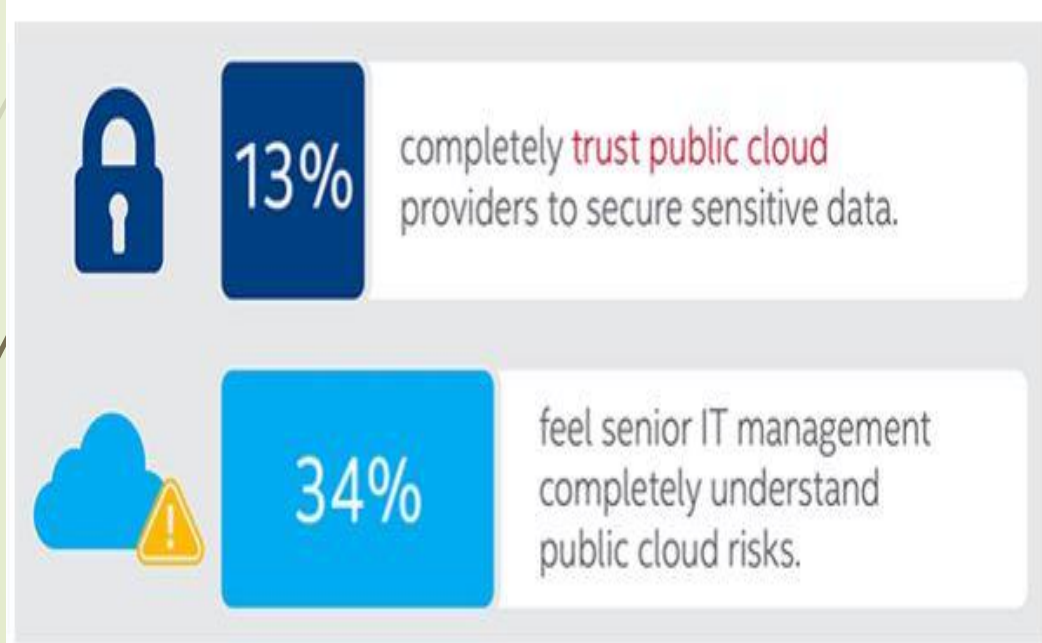
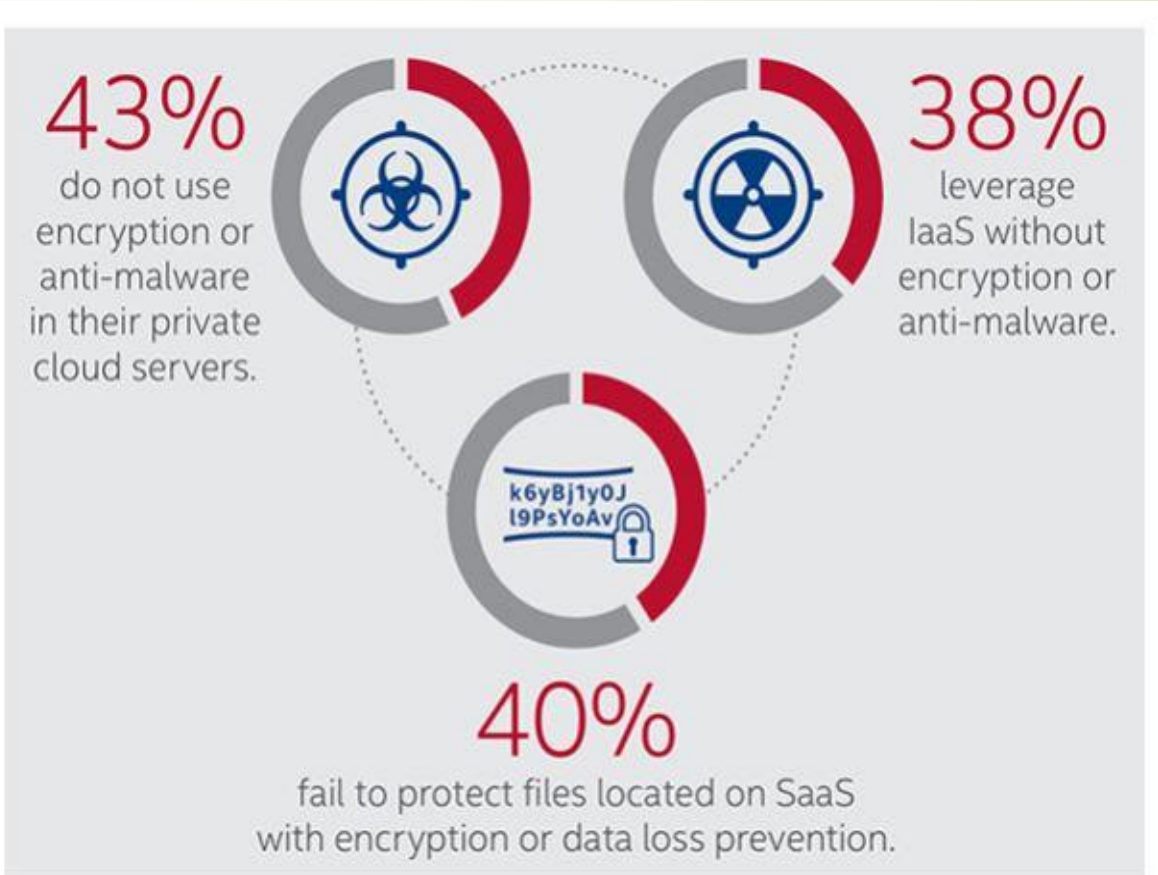
Adoption Analysis Summary

Risks of Adoption

These findings highlight improved trust and security are critical to encouraging continued adoption of the cloud.





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