

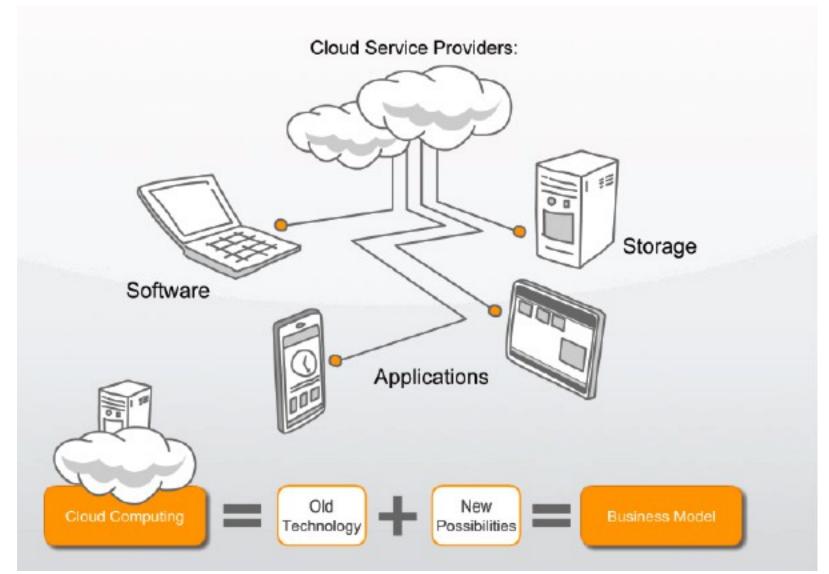
Cloud Computing Implementation

Assoc. Prof. Dr. Thanachart Numnonda Executive Director IMC Institute 3 October 2014



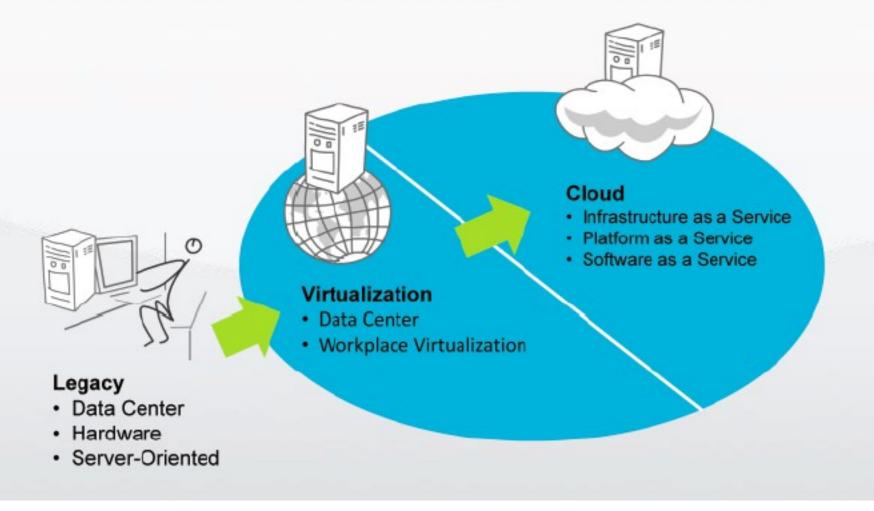
Cloud Computing Definition



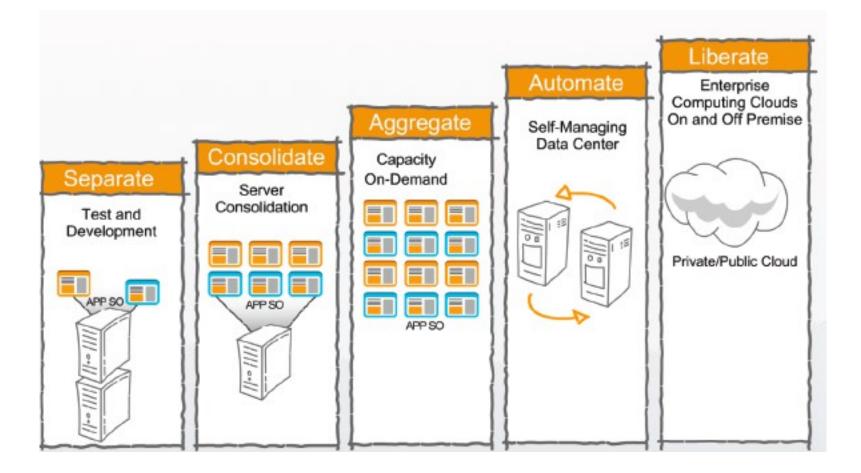




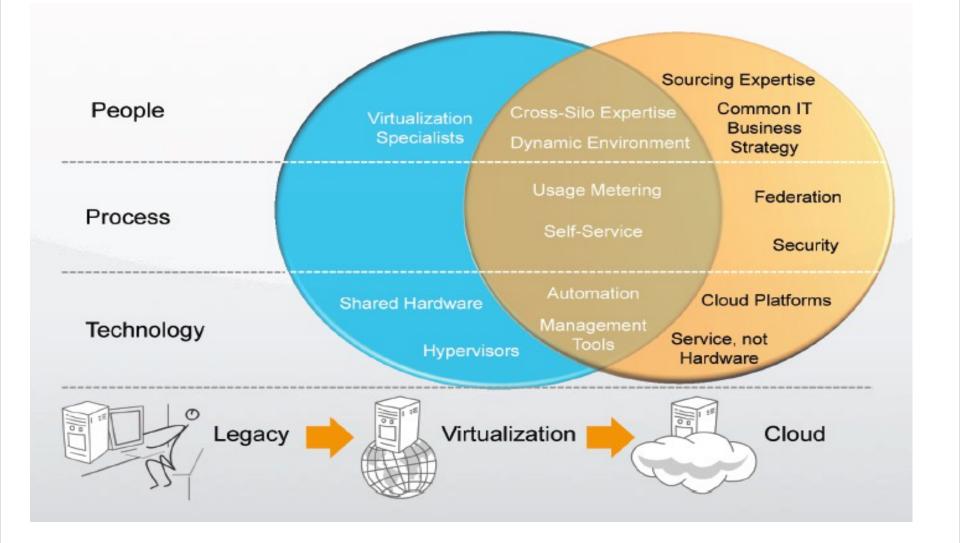
Virtualization is an enabling technology for cloud computing.





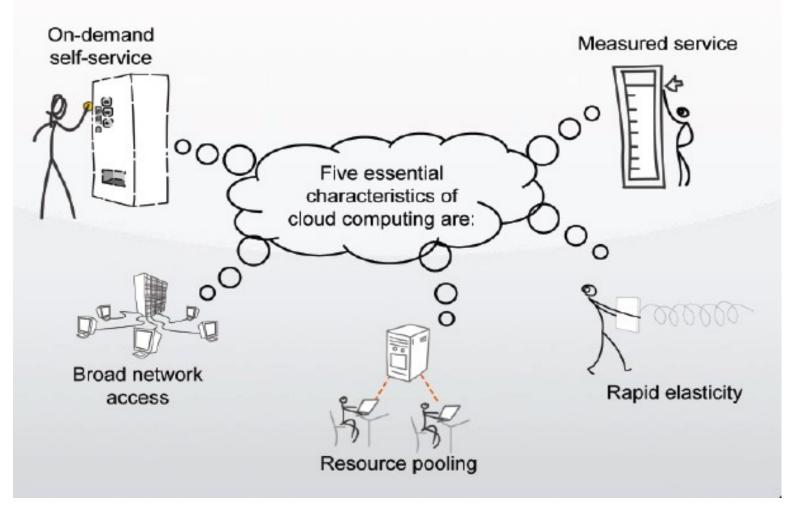








Cloud Characteristics





Cloud Computing change IT as electricity industry







Service Models

Software as a Service (SaaS)



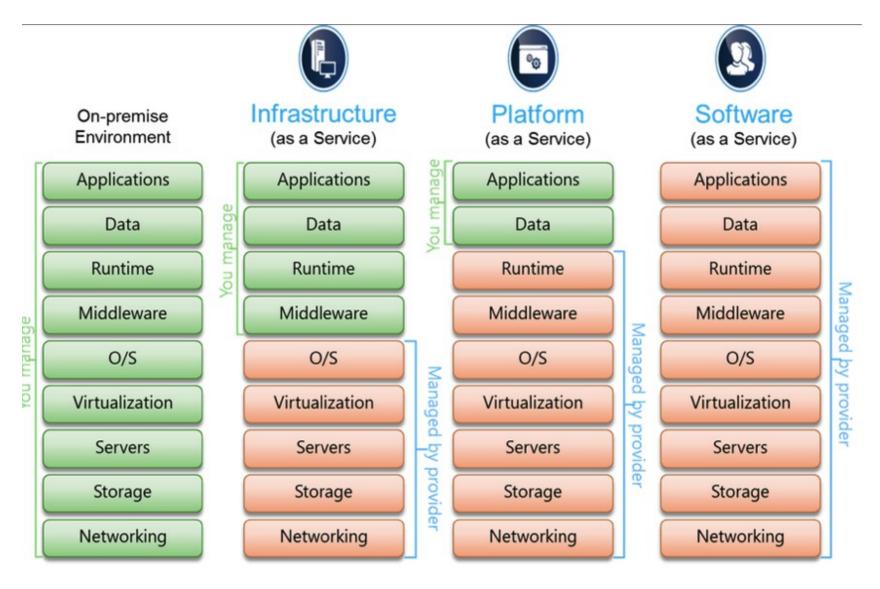
Infrastructure as a Service (IaaS).



Platform as a Service (PaaS)



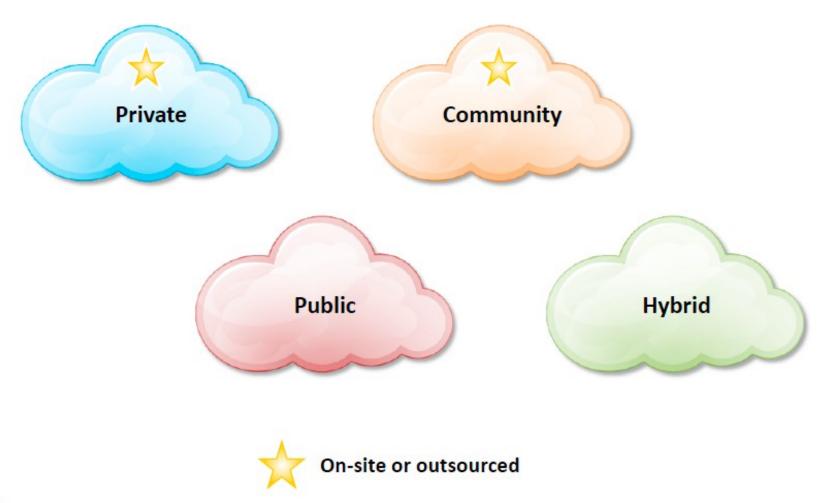




Source : http://acloudyplace.com/



Deployment Models





Impacts!



Change! In IT Industry

- It's not just a platform change.
- Vendors can't charge the same amount.
- It's changing your world.

Source : 3 ways big software companies may fail in the cloud:





Adobe kills packaged software, bets on cloud alone

May 7, 2013

Comments 110

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แอพลิเคชันแตกต่างกันตามแพลตฟอร์ม (Windows/OSX)

สิทธิพิเศษที่ได้รับ

3 เก่า พื้นที่บน SkyDrive 27 GB 60 นาที Skype 2 พีซีหรือแมคและ อุปกรณ์เคลื่อนที่



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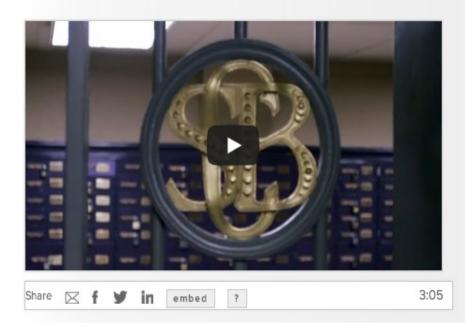
5 พีซีหรือแมคและ อุปกรณ์เคลื่อนที่





Siam Commercial Bank

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"Salesforce allows us to innovate continuously, finding new ways to bring exceptional service to our customers"

– Kannikar Chalitaporn President



IaaS Impacts!

- Local data centers will provide cloud services
- IaaS is not just a normal hosting; it requires large investment on a data center.
- Different architecture and business model.
- Fewer large cloud data center in ASEAN will survive
- Need to compete with big giants; Amazon, Google, Oracle, etc.







laaS





PaaS/SaaS Impact

- Software development will shift toward the cloud.
- Software company may develop their applications on public laaS/Paas; Microsoft Azure, Google App Engines, Heroku, Amzaon S3
- Require new skills



Opportunity to sell aboard.





heroku





Enterprise Application Platform as a Service (aPaaS)

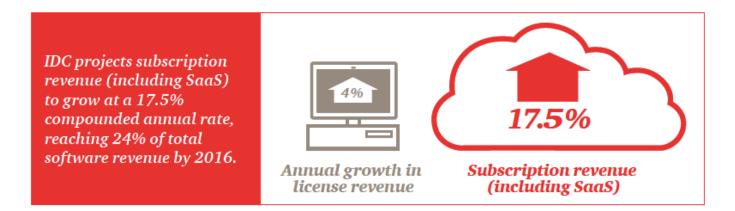
Figure 1. Magic Quadrant for Enterprise Application Platform as a Service





Figure 1:	Top 1	0 SaaS	revenues	amongst	the	Global 1	100
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Company	Country HQ	2011 SaaS revenue (US\$M)	2011 software revenue (US\$M)	SaaS revenue as % of software revenue
Salesforce.com	US	\$1,848	\$2,008.7	92.0%
Intuit	US	\$950	\$2,456.5	38.7%
Cisco	US	\$831	\$1,796.9	46.3%
Microsoft	US	\$788	\$57,668.4	1.4%
Symantec	US	\$572	\$6,330.3	9.0%
Google Inc.	US	\$462	\$575.6	80.3%
Oracle	US	\$446	\$26,175.9	1.7%
Adobe	US	\$410	\$4,154.1	9.9%
Blackboard	US	\$396	\$411.7	96.2%
DATEV	Germany	\$395	\$974.2	40.5%
	Total	\$7,098	\$102,552.16	6.9%



Source : PwC Global 100 Software Leaders May 2013



Personal Clouds

- Personal clouds are becoming a way to store and manage our personal data and documents.
- Personal clouds will be the way to store personal data.
- Personal clouds API









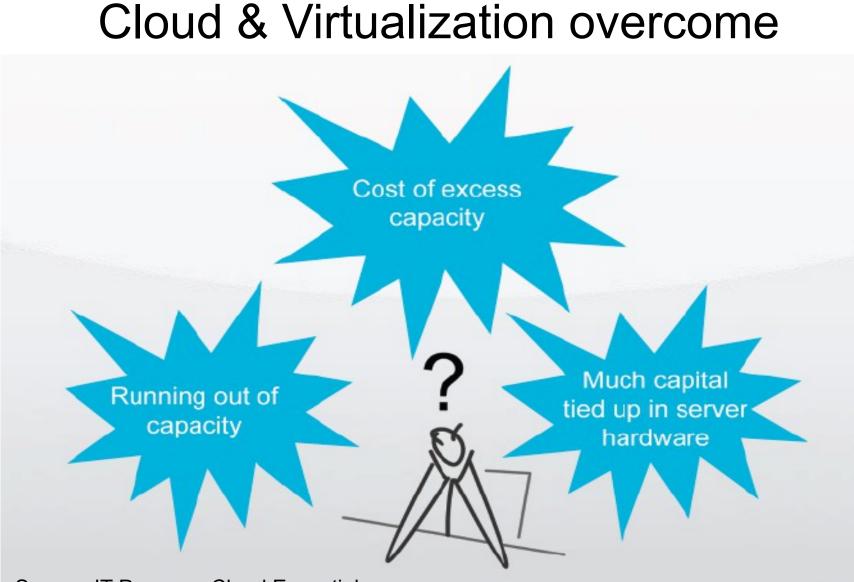
Cloud Maturity Level

Level	1: Performed	2: Defined	3: Managed	4: Adapted	5: Optimized
Focus	Functionality	Competency	Effectiveness	Responsiveness	Automation
Benefits	New features	IT cost savings, avoidance, and control	Time-to-market and agility	Real-time, event- driven and measurable outcomes	Utility as a result of commoditization and industrialization
Success Factors	On-ramp learning, Retooling	Consolidation, Standardization	Alignment, R&D	Best practices, Governance	Thought leadership, Innovation
SaaS	Isolated use of tactical Web-based applications, and ad-hoc SOA	Selected enterprise collaboration applications such as email, productivity tools, and solution development/testing	ERP: Enterprise resource planning (CRM, Financials, HR)	Customize cloud applications and seamless B2B	Enterprise-wide 0-software execution with coordinated integration with partners
PaaS	Internal shift to basic programming platforms, such as Java EE, .Net, Ruby on Rails	Utilize full-blown stack platform internally, like SCA, SEAM, Jboss, CMS	Spin-off home grown apps into cloud service platforms like Hadoop, Nebula	Revamp existing applications towards industry mainstream platforms like Facebook, force.com	Develop bespoke apps on off-premise cloud platforms, such as Google App Engine, MS Azure
laaS	Apply virtualization in internal data centers, such as Xen, VMWare, and Hypervisor	Move selected hosting components to Managed Service Providers (MSP)	Build private clouds and simplify infrastructure by cloudification	Employ on-demand public cloud services (EC2, S3) and explore hybrid cloud	Corporate-wise 0- infrastructure implementation leveraging interoperable clouds for reliable multi-provider SLA



Cloud Adoption Startegy





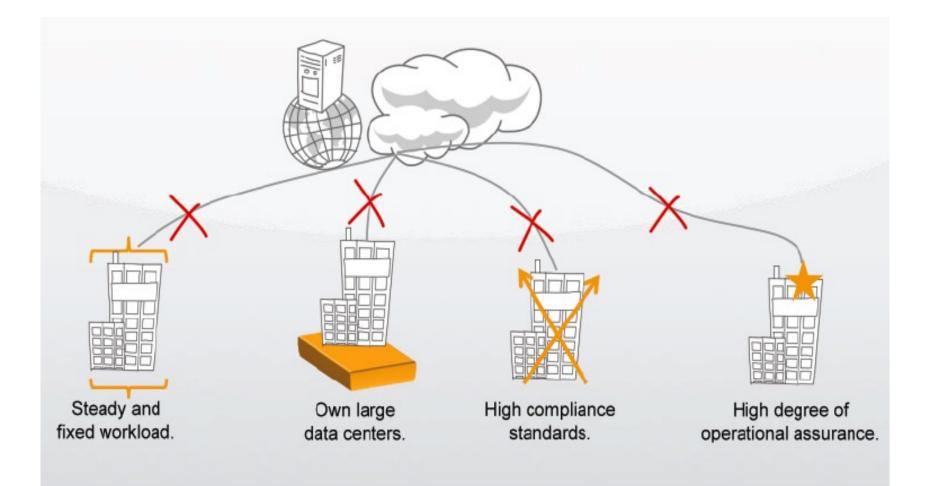


Oraganization suitable for Cloud

- Business is changing rapidly like growing or shrinking on a seasonal basis
- Capital is scare or expensive
- Technology or business is immature
- Senior management is not ready for long-term commitment.



Organization not suitable





Applications Selection

Suitable Apps

- Application development and Testing
- Business Continuity
- Batch and data intensive App
- Peak load App
- Desktop Productivity App
- Community Saas App

Less Suitable Apps

- Legacy Application
- Mission Critical Application
- Marginal Application



Role & Skills

Articulating the business value

- Employing service-oriented architecture
- Evaluating applicability of cloud service models
- SLA
 - Mapping service level agreement (SLA) requirements to offerings
 - Negotiating the parameters
 - o Managing the contract
- Configuration, integration, and provisioning of services
- Managing workload on shared resources
- · Measuring, monitoring, metering, billing, and reporting
- Understanding performance characteristics
- Employing financial engineering
- Managing security, access protection, and risk
- Purchasing, procurement and sourcing



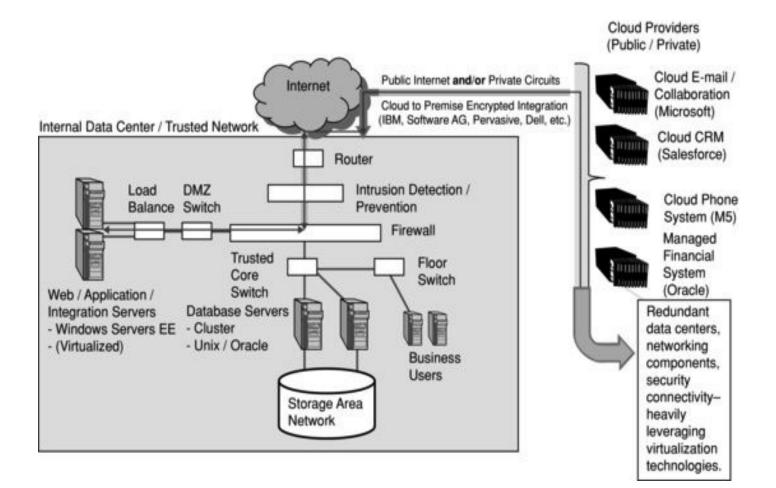


Approach to build Cloud

	Siloed	Conso	lidated	Uni	fied	Auto	mated	Cloud
Acres and a second s	 Departmental Servers Islands of Storage Multiple Networks Branch Computing 	 Conso Infrast Virtual Serve Data 0 	onents olidated tructure lized rs	 Global SAN, Continuous Data Protection / Replication Integrated Infrastructure Blocks Unified Fabric 		 Virtual Machine Mobility Virtual Machine Aware Networking Policy- and Event-Based Behavior 		 Interconnected Clouds Workload Portability Self-Service Provisioning Use-Based Metrics
	IT Initiatives							
	Virtualize Integ		grate	Automate		Clo	loud	



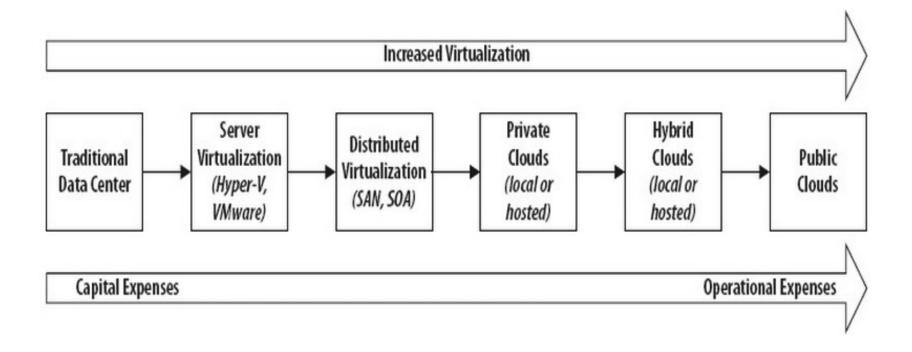
Cloud/Integration Architecture



Source: Straight to the Top: CIO Leadership in a Mobile, Social, and Cloud-based World



Steps to go to the public cloud





How to Prepare for the Cloud?

- What is the organization's risk profile—high, medium, or low?
- Are your data centers and corporate offices optimized for the cloud?
- Transform the desktop and mobile environments to empower the users.
- Determine which applications should be moved to the cloud and define your portfolio of on-premise, private cloud, and public cloud resources and vendors.

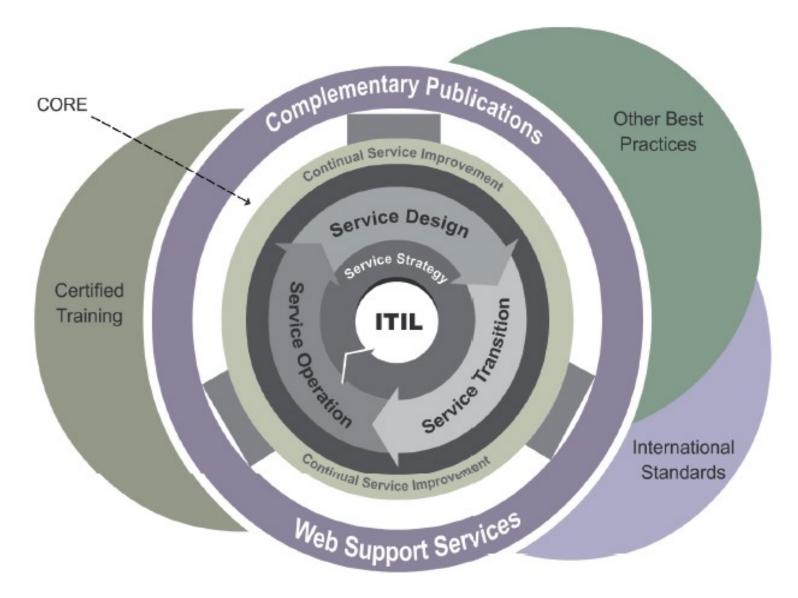
Source: Straight to the Top: CIO Leadership in a Mobile, Social, and Cloud-based World



How to Prepare for the Cloud? (cont.)

- Determine the security and monitoring
- Develop and/or refine your SLAs
- Industrialize IT operations to improve productivity, monitor performance, and manage internal and cloud services.





ITIL = Information Technology Infrastructure Library



Certifications















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