

INFO13: Cloud Computing - Issues of Privacy, Security, Risk and Records

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Statistics

- "Cloud computing will displace \$150 Billion in spending by 2012...". - *Gartner*.
- "20% of business will have no IT assets by the year 2012". - *Gartner*

DEFINITION OF CLOUD

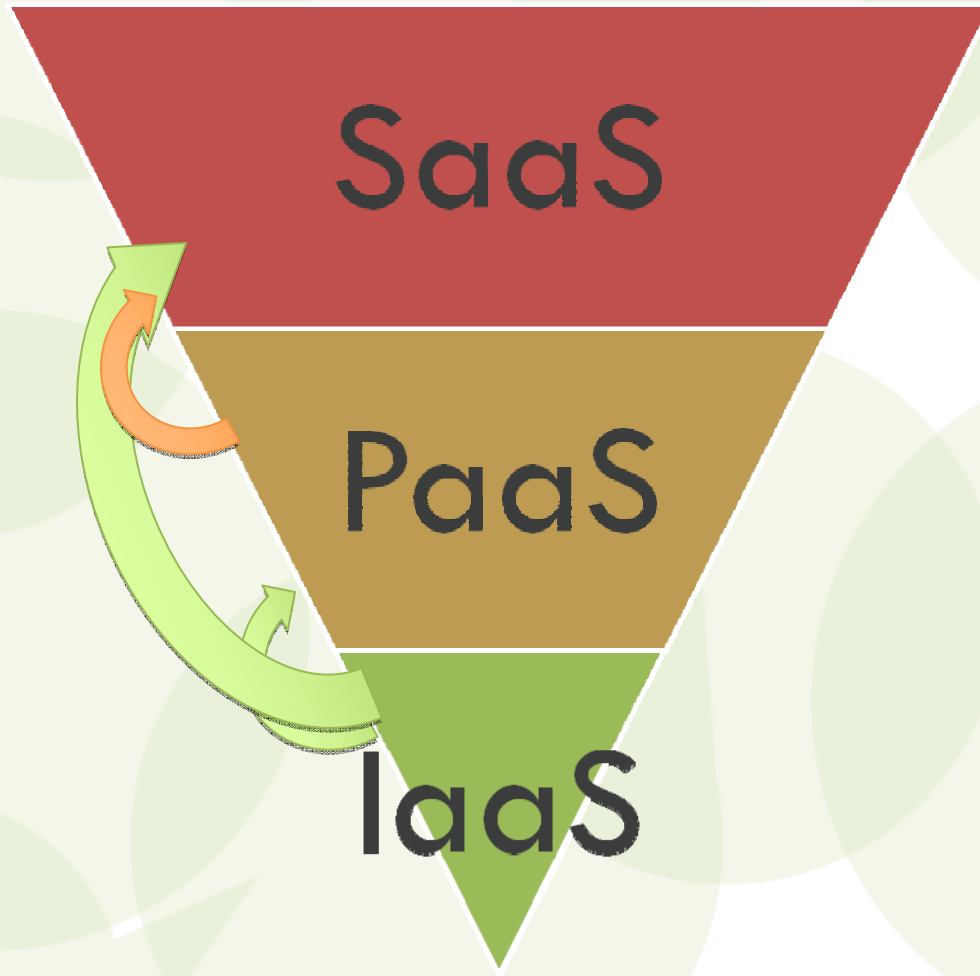
To be considered a Cloud Service there must be:

1. On-Demand Self Service
2. Broad Network Access
3. Resource Pooling
4. Rapid Elasticity
5. Measured Service

“So how come suddenly everybody is a cloud?”



VARIANTS OF CLOUDS



Google Apps | salesforce.com ~~SOFTWARE~~ Success On Demand™

netdocuments®
Content Elevated

force.com®
platform as a service

Google
App Engine

n SCALED



amazon
web services™



MOSSO
the hosting cloud

GOGRID
A ServePath Company

VARIANTS OF CLOUDS

Public

Hybrid

Private

“The use of public clouds is not recommended for anything but the lowest assurance classes of data.”

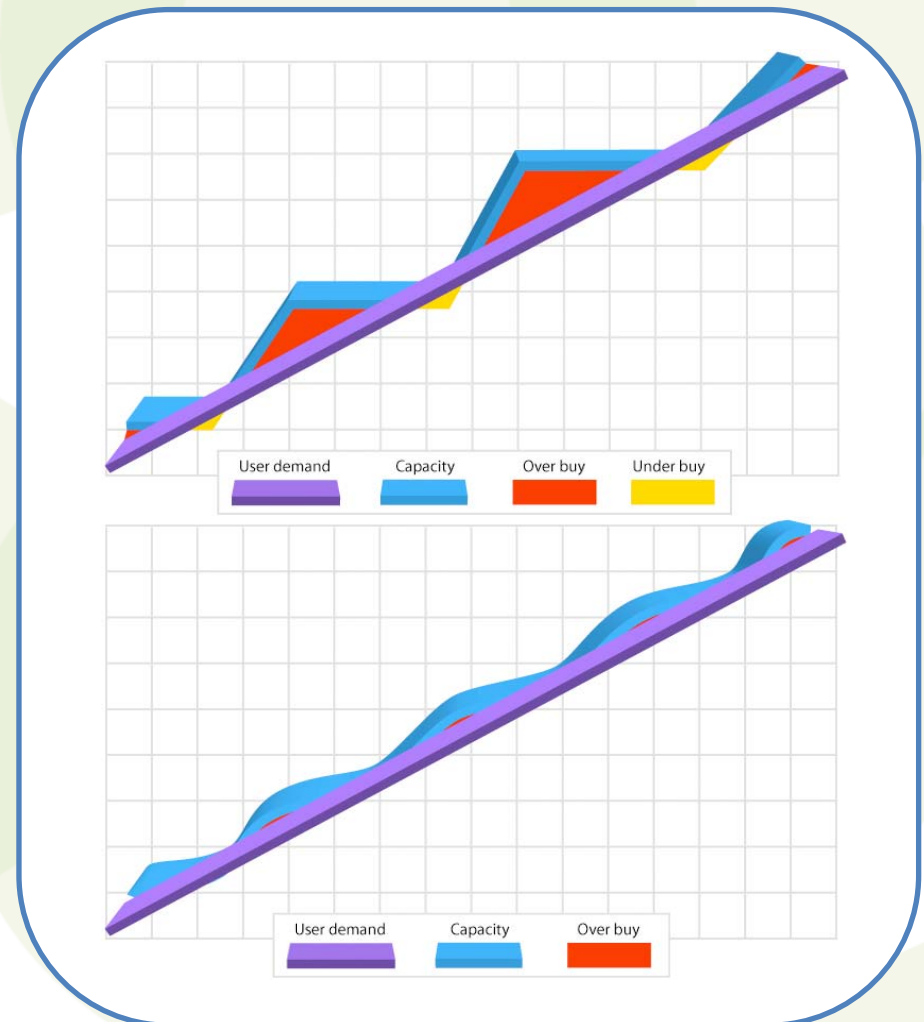
Elasticity

Cost

Security

CLOUD BENEFITS

- Scale on-demand
- OPEX vs. CAPEX
- Less overall cost
- Rightsize infrastructure
- Buying expertise
- Strategic refocus

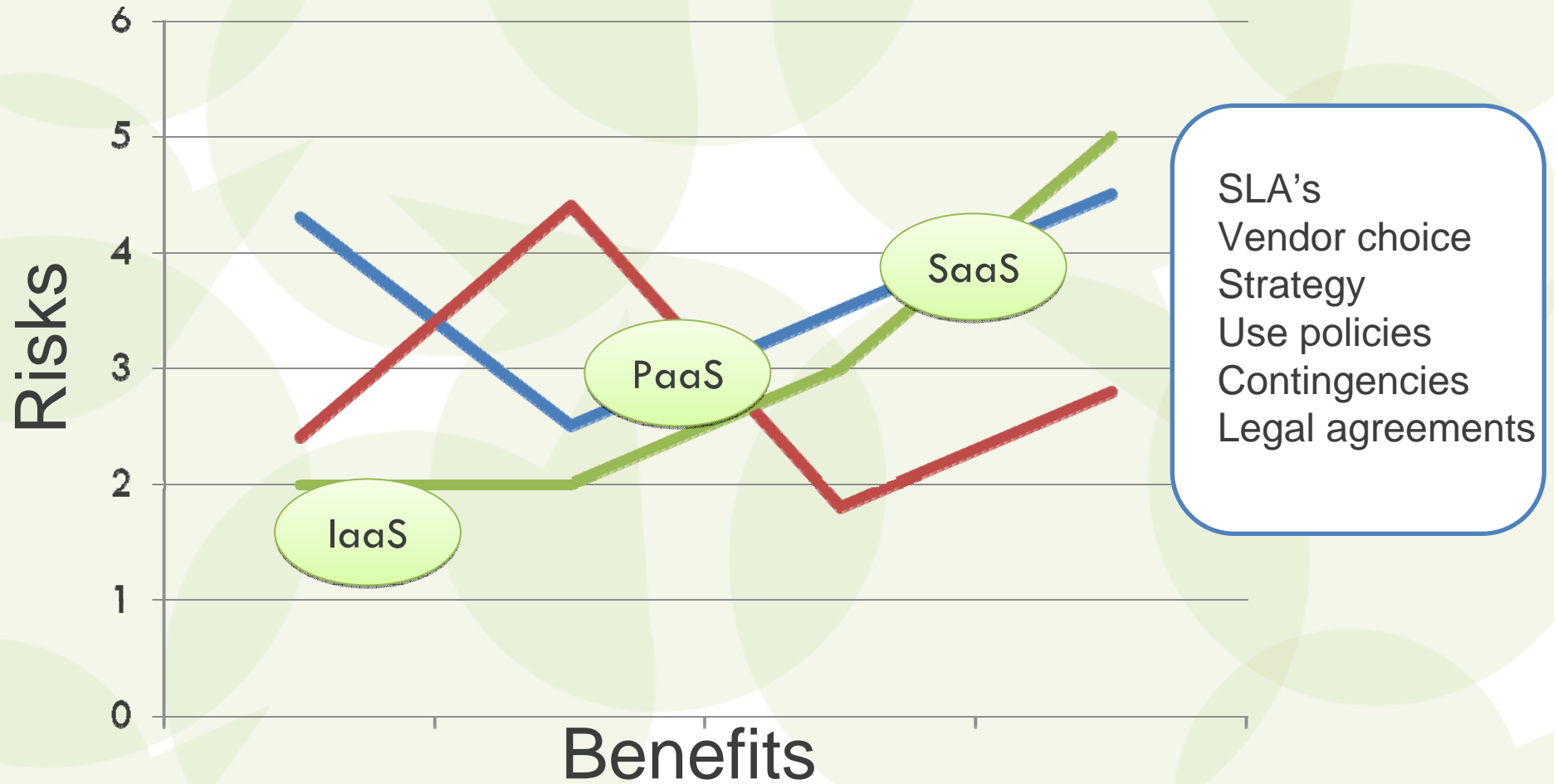


RISKS OF NOT USING CLOUDS

- Lack of redundancy
- Getting left behind / out competed
- Reliance on internal staff / turnover risk
- Lack of expertise

- The top three adopters:
Technology (with 53 percent)
Financial services (40 percent)
Legal (37 percent)
- Government smallest with
only 19 percent.

FINDING THE BALANCE



POTENTIAL RISKS

- Vendor Lock-in
- Audits
- Data Privacy
- Compliance
- Bankruptcy
- Loss of governance
- Security

“You can outsource responsibility, but you can't outsource accountability.”



FORMULATING A STRATEGY

- Look beyond SaaS
 - There is a lot of potential gain in IaaS / PaaS
- Look for elastic demand
 - Disaster recovery is an obvious fit for the cloud
- Don't use the word 'cloud'
 - Consider each solution on its specific merits
- Avoid novelty
 - Mature technologies will stand the test of time

Assessing Risk

		Likelihood of incident scenario	Very Low (Very Unlikely)	Low (Unlikely)	Medium (Possible)	High (Likely)	Very High (Frequent)
Business Impact	Very Low		0	1	2	3	4
	Low		1	2	3	4	5
	Medium		2	3	4	5	6
	High		3	4	5	6	7
	Very High		4	5	6	7	8

PROBABILITY				
4	5	6	7	8
R.5 R.6	R.15 B R.19 R.25	R.26 R.9 R.10 R.11 R.14		
R.33 R.34 R.35	R.4 R.17 R.27 R.28 R.0	R.8 B R.23 R.1 R.12 R.13 R.15 A R.21 R.29 R.0		R.2 R.3 R.22
	R.20 R.31 R.7 R.30	R.8 A R.18 R.24		

Source:



Further Reading

- **NIST** : <http://csrc.nist.gov/groups/SNS/cloud-computing/>
- **Cloud risk whitepaper**: www.nscaled.com/draw
- **Cloudrisk.org**
- **ENISA**: <http://www.enisa.europa.eu/act/rm/files/deliverables/cloud-computing-risk-assessment>