

Cloud Computing and Cloud Security for Hong Kong SMEs

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But I'm going to talk about cloud computing in SME setting

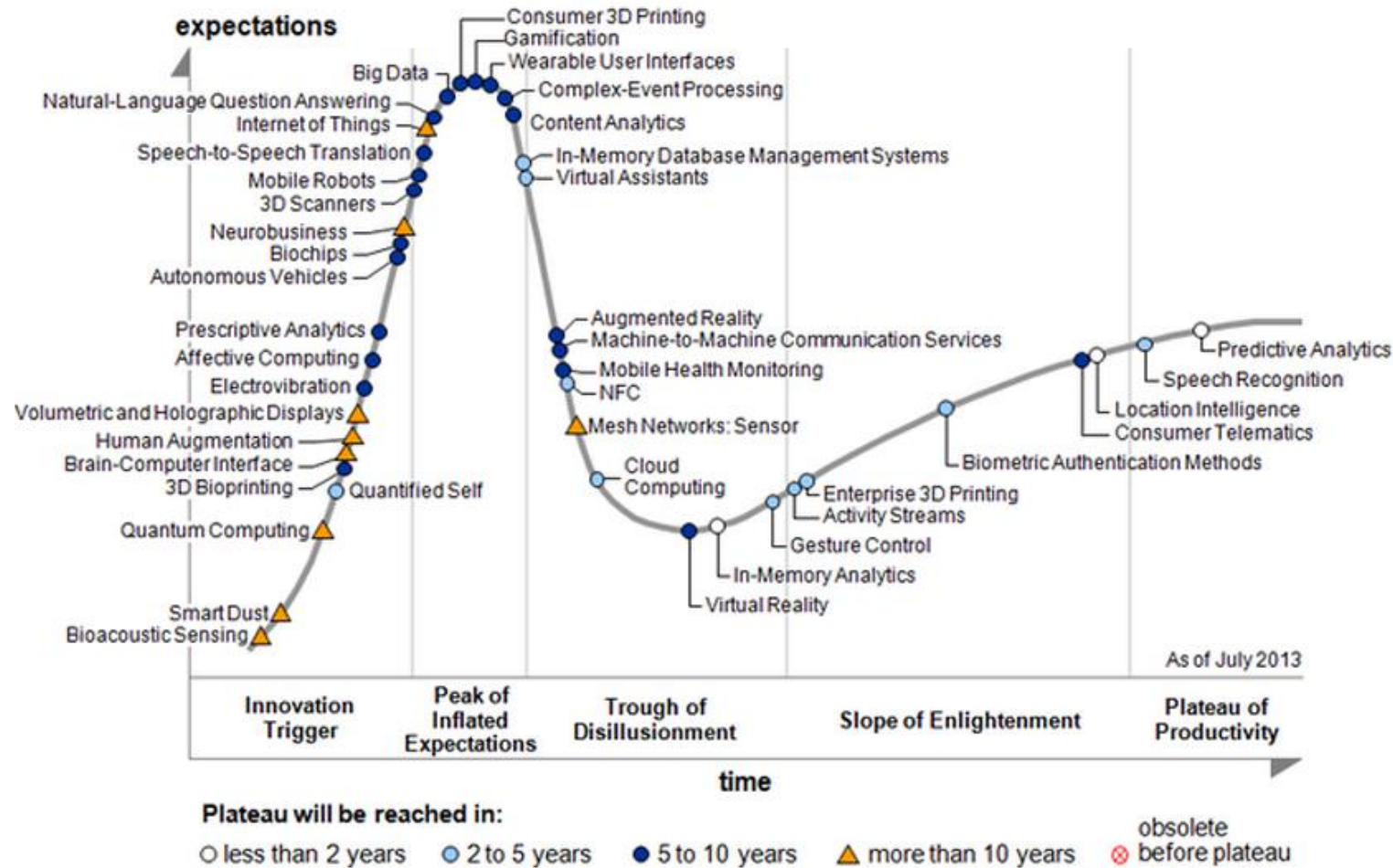
- Background
- Defining the Cloud
- Cloud Architecture
- Managing the Cloud in your organizations
- Adoption & Issues of Cloud in the small and medium-sized enterprise

Computing in the SME

- **Background**
- Defining the Cloud
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Or about to enter the mainstream?

Source: Gartner 19 August 2013 - <http://www.gartner.com/newsroom/id/2575515>



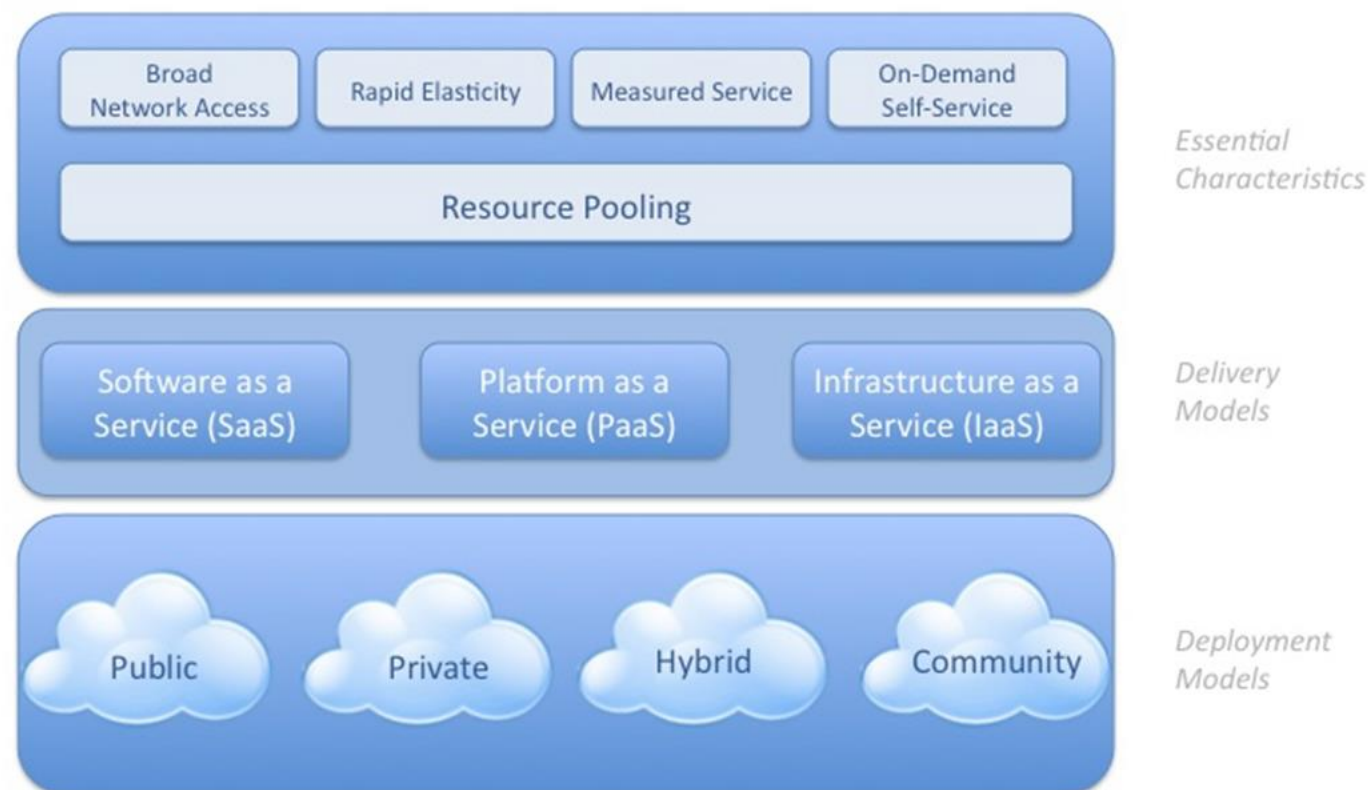
Gartner's hype cycle for emerging technologies, 2013

Cloud Computing in the SMEs

- Background
- **Defining the Cloud**
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Key Components of Cloud

Visual Model Of NIST Working Definition Of Cloud Computing
<http://www.csrc.nist.gov/groups/SNS/cloud-computing/index.html>

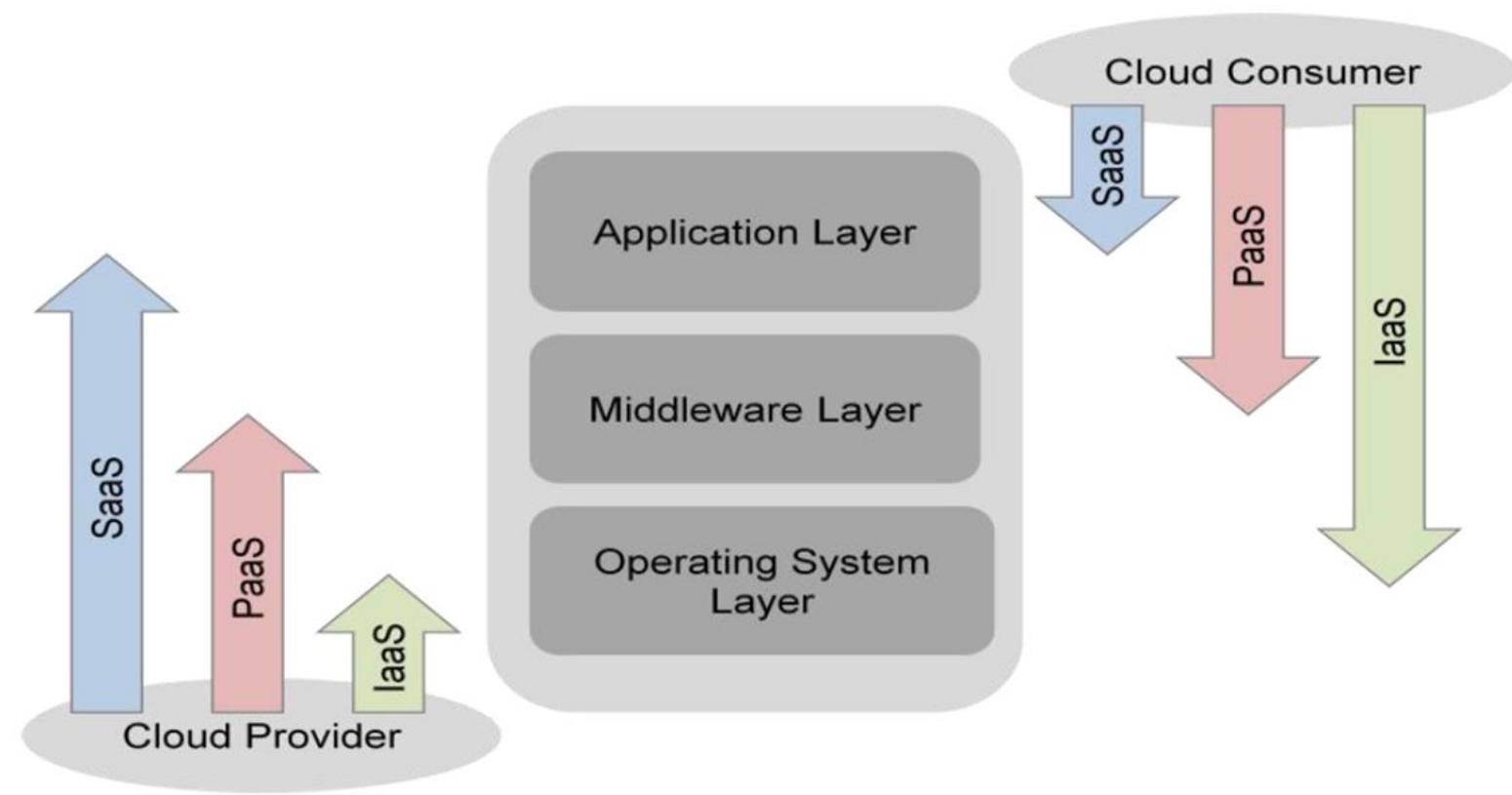


What it delivers – Service Models

Customers may purchase:

- **Infrastructure as a Service (IaaS)**
- **Platform as a Service (PaaS)**
- **Software as a Service (SaaS)**

Scope of Control

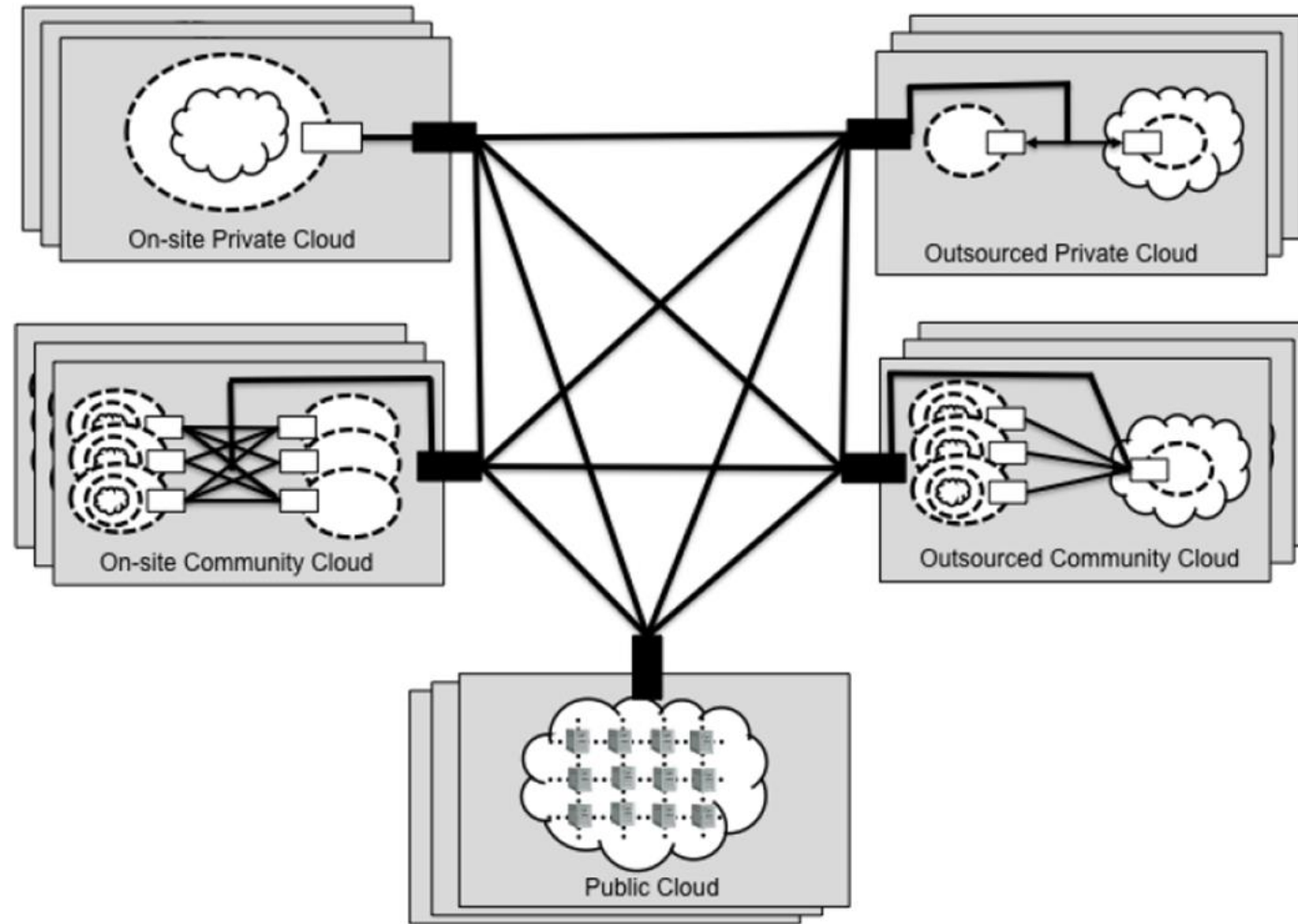


Source: Liu et al (2011) – NIST Cloud Computing Reference Architecture

Essential Characteristics

- **On Demand Self Service**
 - Commoditised
- **Measured Service**
 - Variable Cost Model, pay for capacity you use
- **Resource Pooling**
 - High Utilisation & Economies of scale
- **Rapid Elasticity**
 - Commission / Decommission Capacity
- **Broad Network Access**
 - Accessibility over internet

Hybrid Cloud



Source: Liu et al (2011) – NIST Cloud Computing Reference Architecture

Single Tenancy vs Multi Tenancy

User A @ Company 1

User B @ Company 1

User C @ Company 1



Single Tenancy

User A @ Company 1

User B @ Company 2

User C @ Company 3



Multi Tenancy

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Lack of Auditability

- **Only cloud provider has access to full network**
 - e.g. Whose Jurisdiction?
- **Need mutual auditability**
 - Ability of cloud provider to audit potentially malicious or infected client VMs
 - Ability of cloud customer to audit cloud provider environment

Cloud Computing in the Enterprise

- Background
- Defining the Cloud
- Cloud Architecture
- Managing the Cloud in your organizations
- **Adoption & Issues of Cloud in the Small and Medium-sized Enterprise**

Global adoption of cloud in the SME

- **SMEs adoption of cloud is still immature**
 - In Hong Kong adoption is more cautious still ... less economic incentives
- **Asia's SMEs Still Sceptical of Public cloud**
 - Perceived loss of control & increased levels of risk
 - Outweigh the benefits of public cloud
- **In US much greater Public Cloud adoption within SMEs**

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