



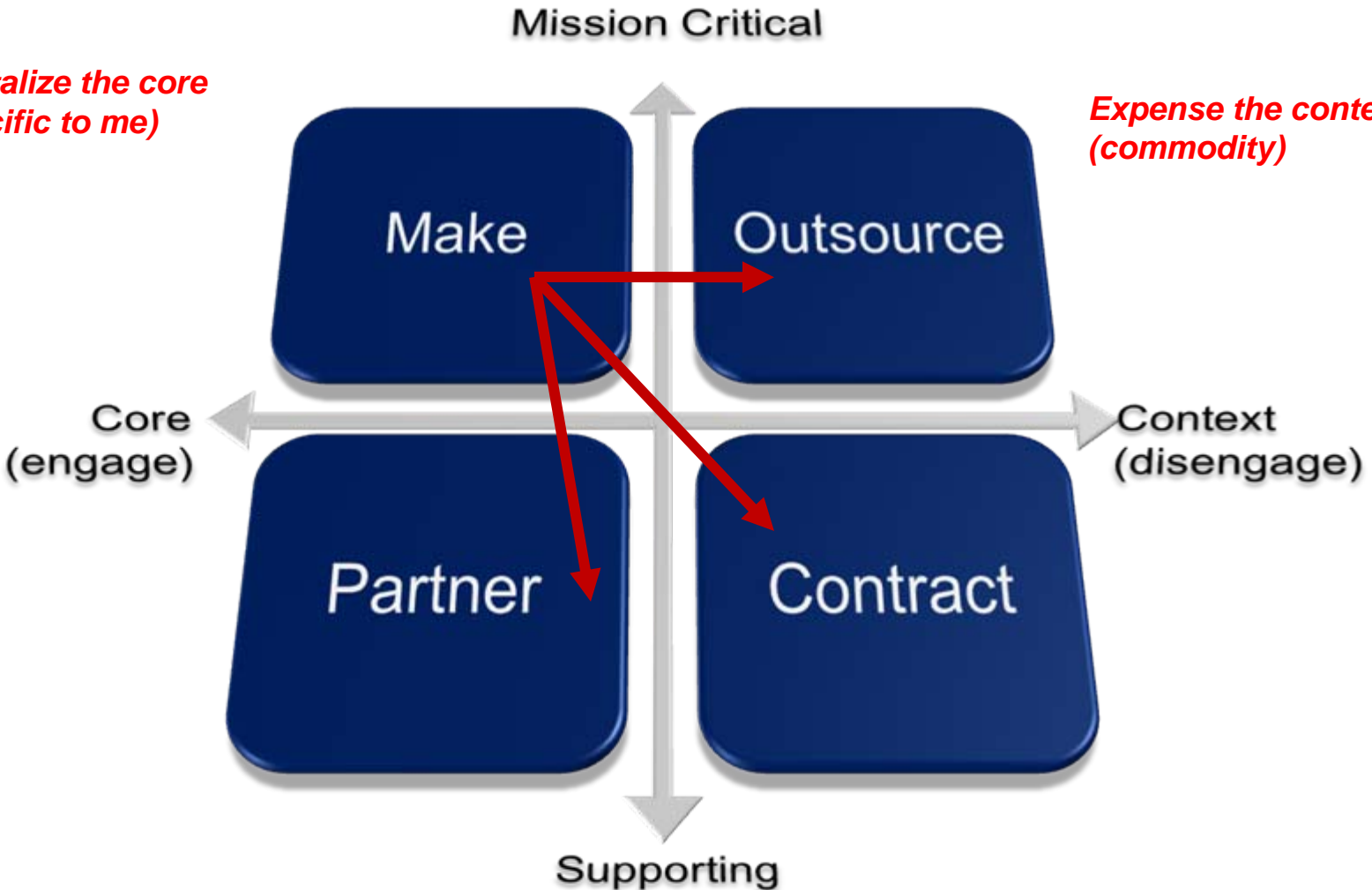
# Why, What, and How of Cloud Computing

*Deepak Chebbi*



*Capitalize the core  
(specific to me)*

*Expense the context  
(commodity)*



# What is Cloud?

- 1. Software as a service
- 2. Platform as a service
- 3. Software Infrastructure as a service
- 4. Hardware infrastructure as a service

Public Cloud

An Business capability as a service outside a firewall that providers offer to consumers via the public Internet – typically in a multitenant environment-

Private Cloud

An Business capability as a service within the organization’s firewall offer by IT organization to a closed internal network of corporate or division offices, business partners and other organizations intimately connected with a corporate motherhip

External Cloud

An IT capability as a service offered to members of an applications groups that is not hosted by its own IT organization in an elastic environment.

Internal Cloud

An IT capability as a service within the organization’s firewall offer by IT organization to members of an applications group in an elastic environment.

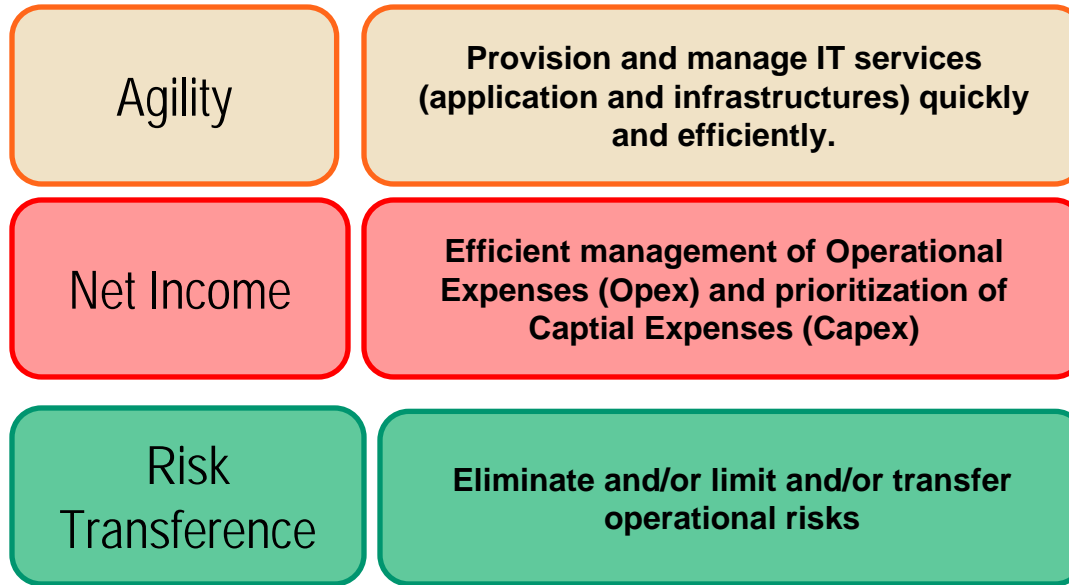
Example
Google Apps, Salesforce.com, ADP, PayChex, Gartner or Burton Subscription Websites
Rice University provides a private cloud, a secure environment for sharing IT resources for educational and/or research projects and collaborations includes Email, Wikis, Blogs .etc.
Amazon EC2, force.com, Microsoft Azure, Appian Anywhere, EMC’s Mozy
VMware, Citrix, Rackspace

•**Elastic:** Applications group who (in the vision of cloud computing) fills out a web form that identities type and amount of resources, (e.g., two virtual processors, so much memory, network connectivity, storage, and so on) clicks the submit button, and, voila, compute resources appear, ready to use, in a matter of minutes.

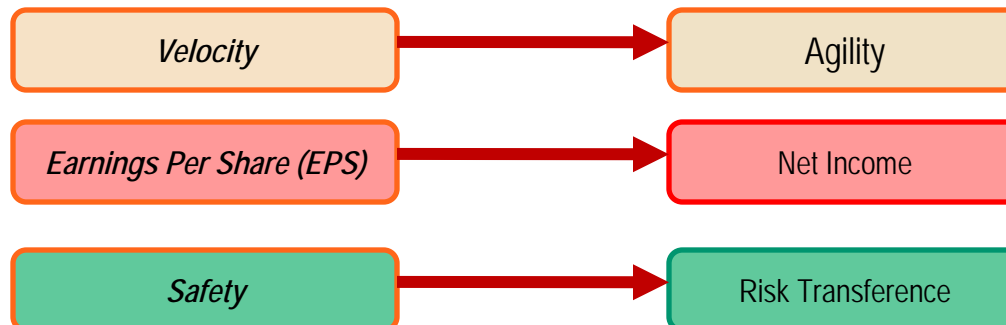
\* **Multitenant environment:** cost-efficiently shares a single stack of resources to satisfy the needs of multiple organizations.



# Why Cloud Computing?



## Relating to Corporate Goals (Conceptual)

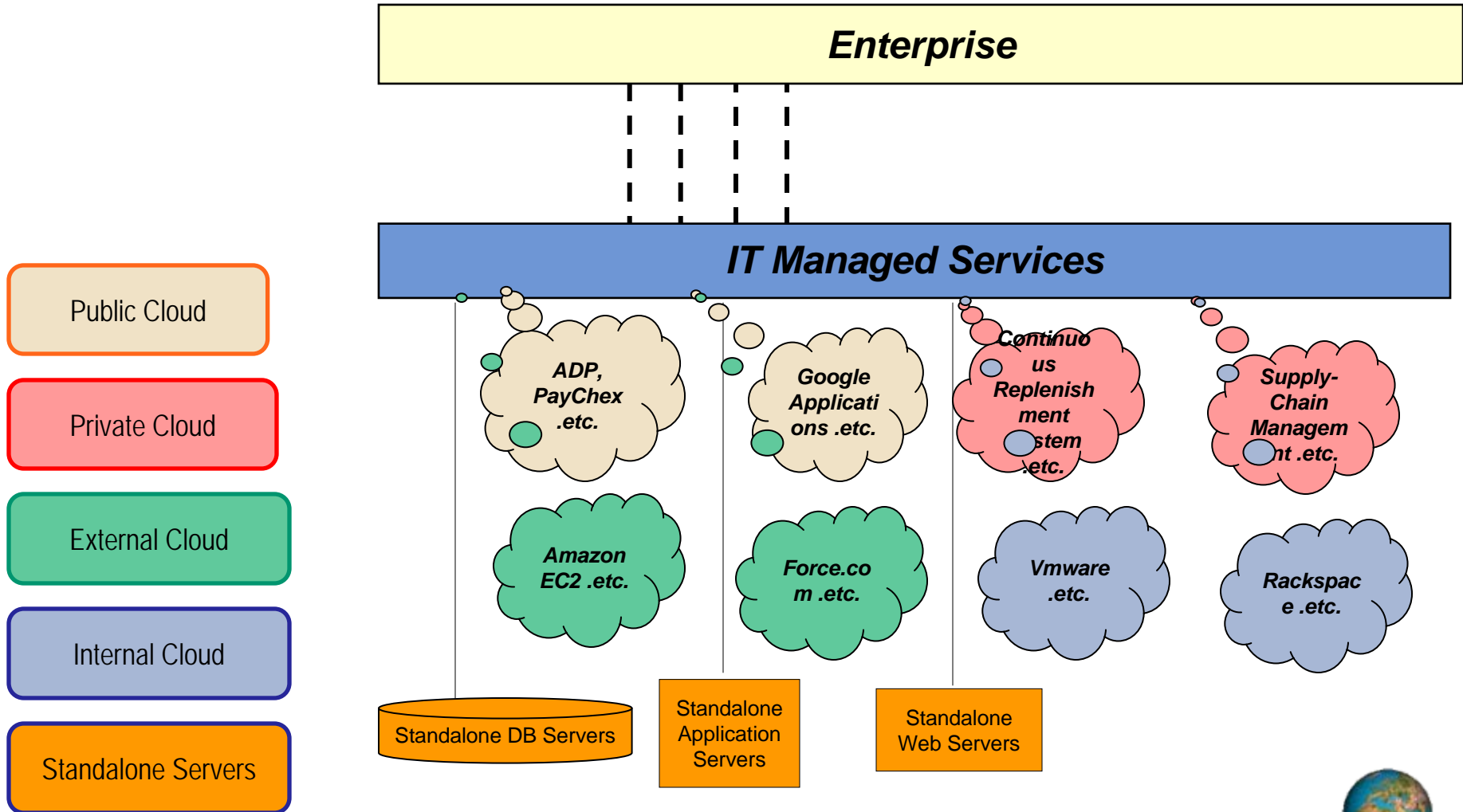


# Public- and External, Cloud Computing Concerns

- Service availability, capacity and performance guarantees
- Uncertain failure remediation
- No transparency to provider operations; hidden supply chain (subcontracting by provider)
- Commitment requirements, lock-in
- Ability to customize
- Data ownership, security and protection
- Provider security, privacy and disaster recovery
- Regulatory requirements
- Support for e-discovery and investigations
- Integration with on-premises systems
- Immaturity of vendors, standards
- Immaturity of application development skills
- Licensing issues
- Unproven financial model and real costs



# Reality of Cloud Computing for Infrastructure and Operations



# General Recommendations

- Conduct Business Impact Analysis to aide transition planning
- Address areas such as Legality, Availability, Security, Scalability, Performance, Economic Value, Cost Center Model, Human Resource Allocation
- Identify Hidden Costs
- Create a Managed Service Organization to act as liaison between Business, Providers, and IT
- Create a strategy to adopt Public-, Private-, Internal-, and External Clouds



# Almost Every Major Play is offering Cloud Services and Customer success stories keeps growing

- **Google – Google Applications .etc.**
- **Microsoft – Azure, Exchange Cloud .etc.**
- **EMC – Mozy .etc.**
- **Amazon – EC2, S3, Virtual Private Cloud .etc.**
- **IBM – Cloud Burst**
- **VMWARE**
- **RACKSPACE**
- **Salesforce – salesforce.com, force.com .etc**
- **...**

