



Cloud Computing It's staring to Rein



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Connective Intelligence™

Agenda

- **Cloud 4G Predictive Intelligence**
- **Hyper Connectivity Hyper Competition**
- **Patterns and our Evolving World**

Hyper Connectivity creating a situation of Hyper-Competition , can result in a market characterized by Hyper-choice for the consumer.

Hyper Connected World



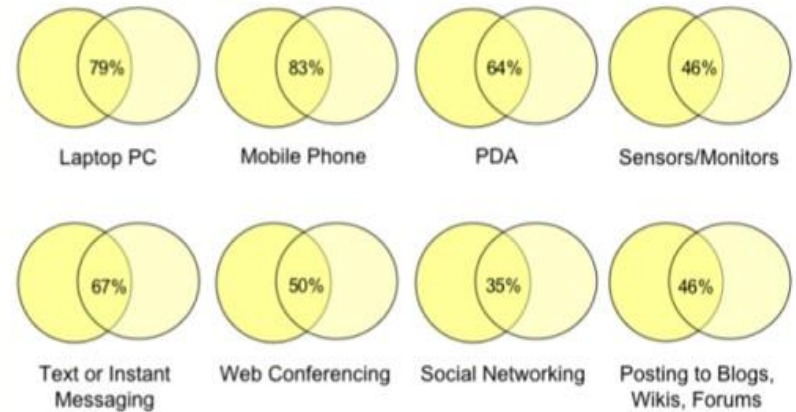
Hyper Connectivity

Hyper Connectivity: 50 Billion Connected Devices in 2020

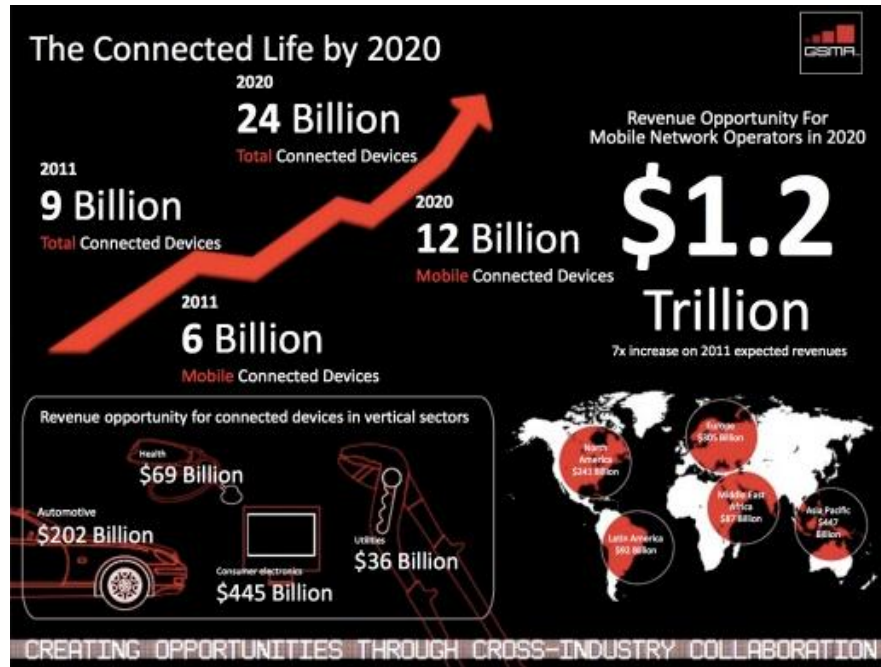


FROST & SULLIVAN

The Blurring Personal and Business Boundary Percent Hyperconnected Both For Business and Personal Use



Hyper Connectivity



Hyper-Connected Home: Real World Example My Home

Computing Devices



Gaming/Streaming Devices



Mobile Devices



Common Applications



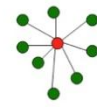
Hyper Competition

Work

Artisans - Hierarchies - Networks



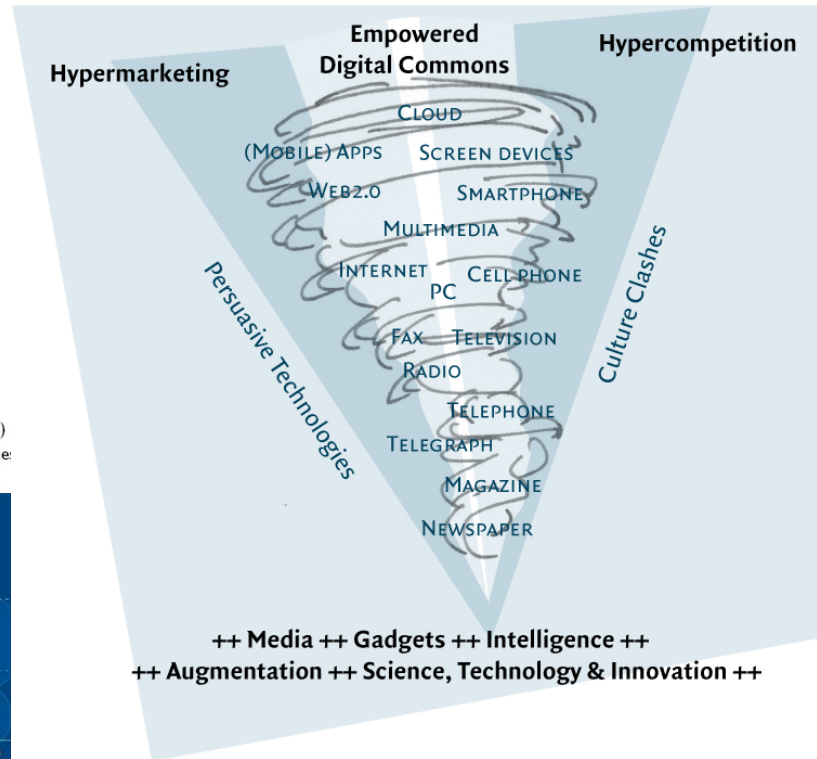
~19th C



+/- 20th C



21st C



Why hyper competition?

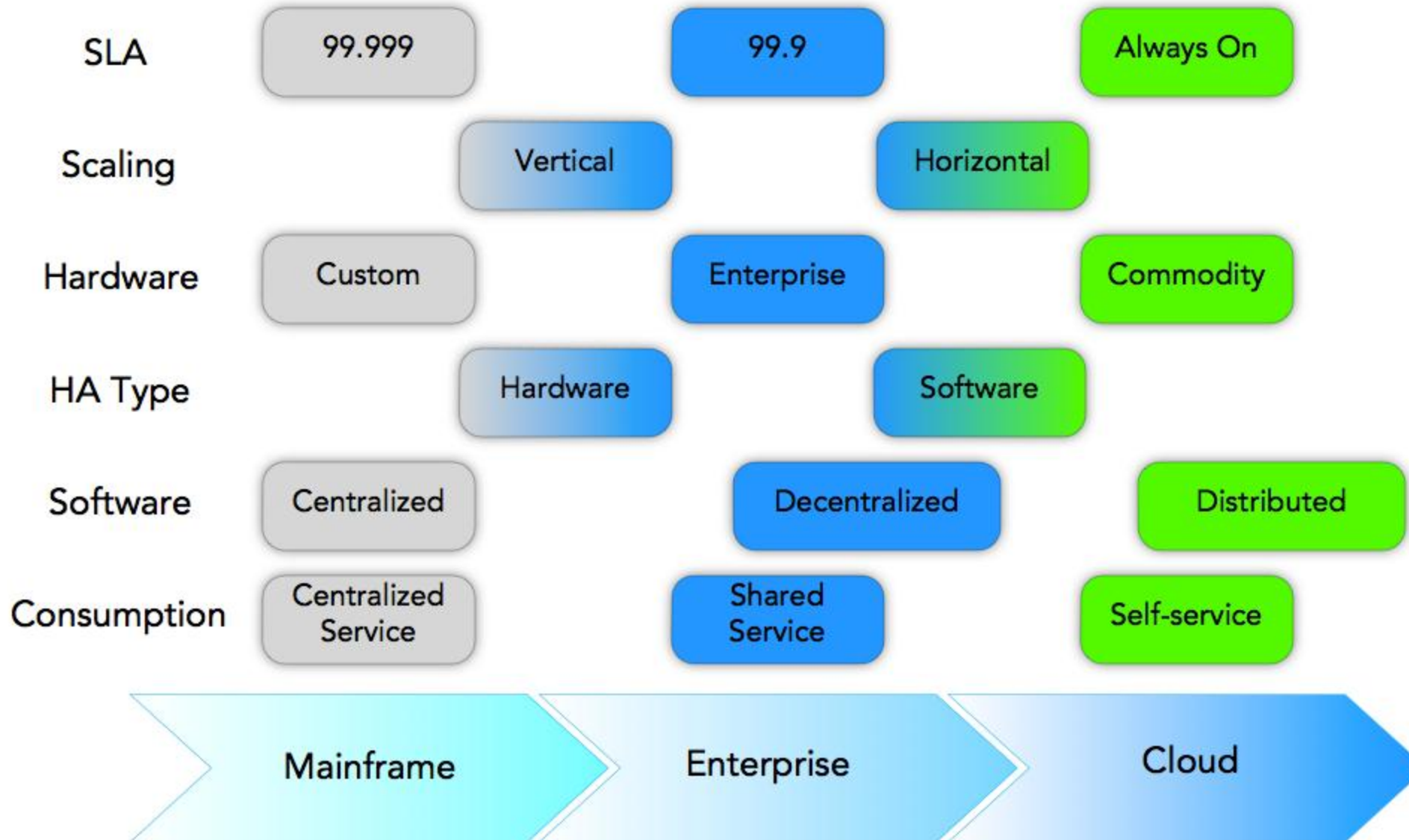
- Globalisation – less trade barriers and efficient transport (e.g. containers)
- Speed of hyper connected communication and the pace of modern business
- Disruptive Technologies



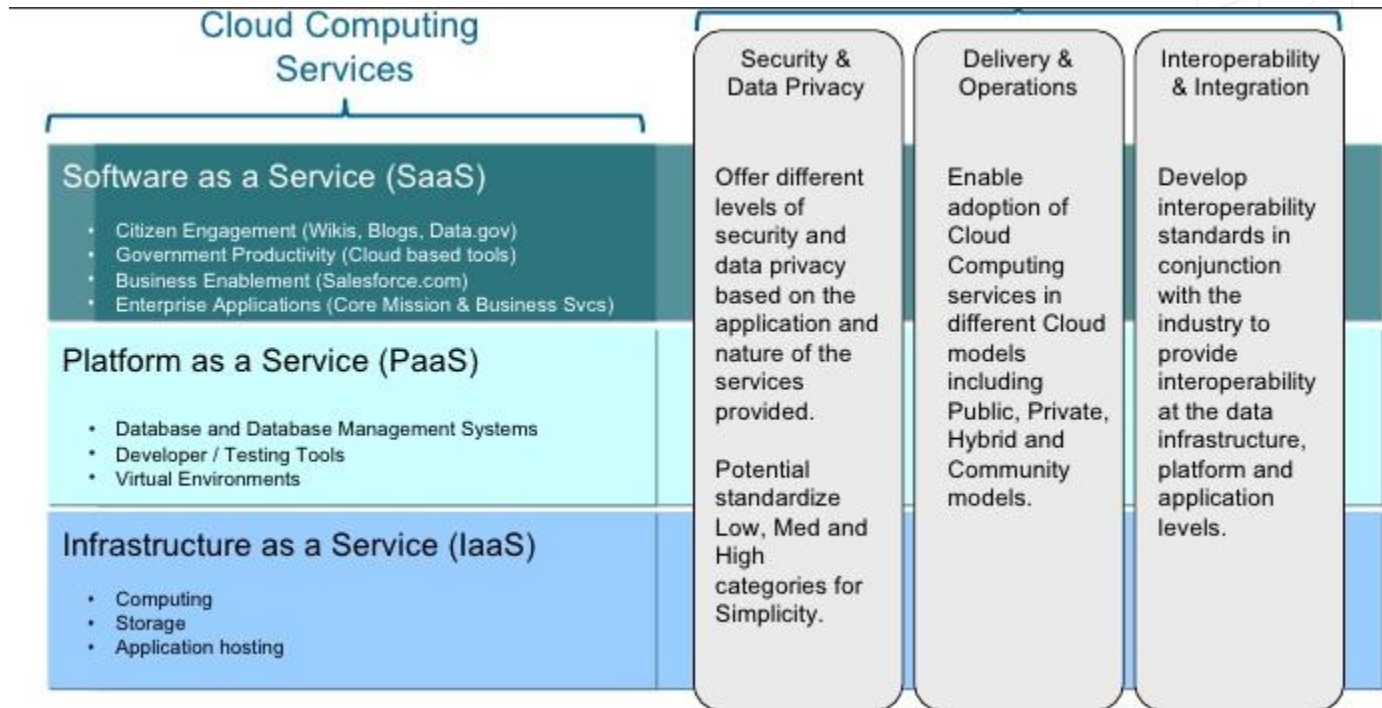
Cloud Job Titles

- The number one position is a Cloud Architect
- Cloud Software Engineer
- Cloud Sales Executive
- Cloud Engineer
- Cloud Developer
- Cloud Systems Administrator
- Cloud Consultant
- Cloud Systems Engineer
- Cloud Network Engineer
- Cloud Product Manager

Evolution of IT Computing Models



Cloud means Service Delivery



Clouds Convergence

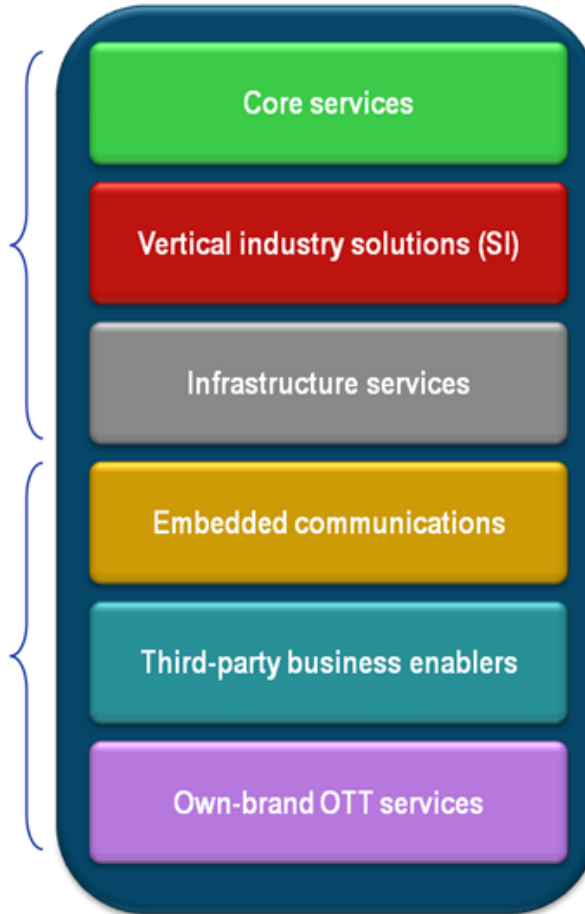
Upstream Customers



Current
focus



Additional
focus



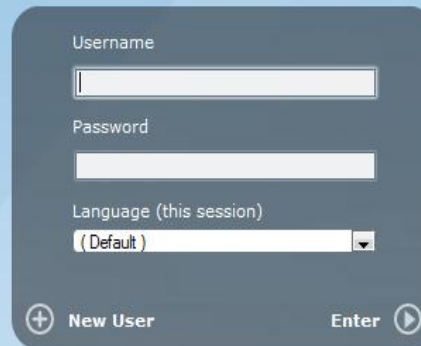
Downstream Customers



RetroFitting Cloudwash model Will Fail



Cloud means Web Where ever you are
Self Service Real Time
it is a peer to peer mesh



Username

Password

Language (this session)

+ New User Enter ▶

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So if it is in the Browser it is on your laptop mobile tv and iPad



Cloud Models

eDaas = everything Digital as a Service

Private Cloud
Public Cloud
Social Cloud
Hybrid Cloud
Media Cloud
Industrial Cloud
Instrumentation cloud
Personal Cloud
Government Cloud
Space Cloud
Network Cloud
Service Cloud
Aggregator Cloud
Military Cloud
Forensic Cloud
Hacker Cloud
Financial Cloud

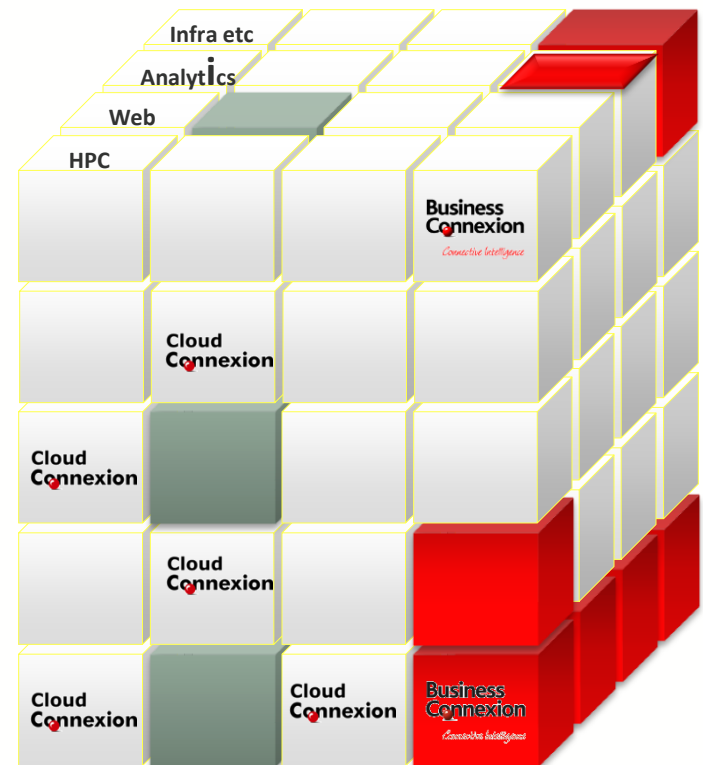
BUSAS

KAAS

SAAS

PAAS

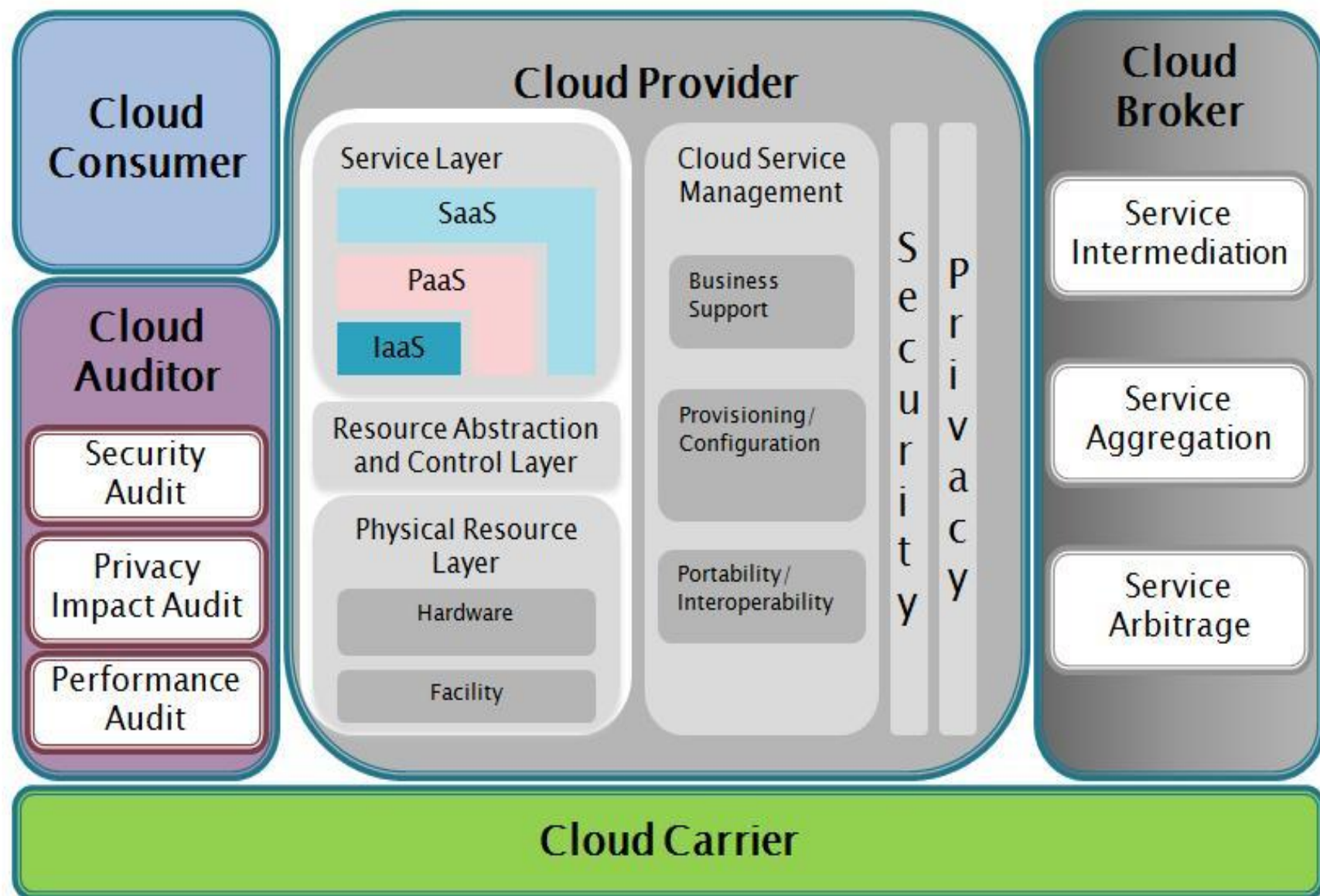
IAAS



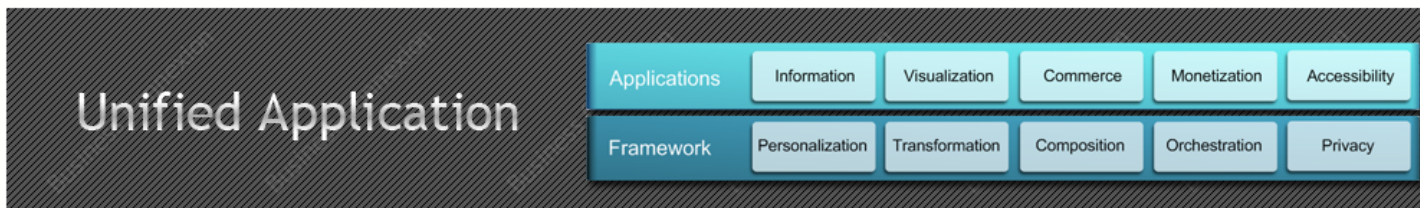
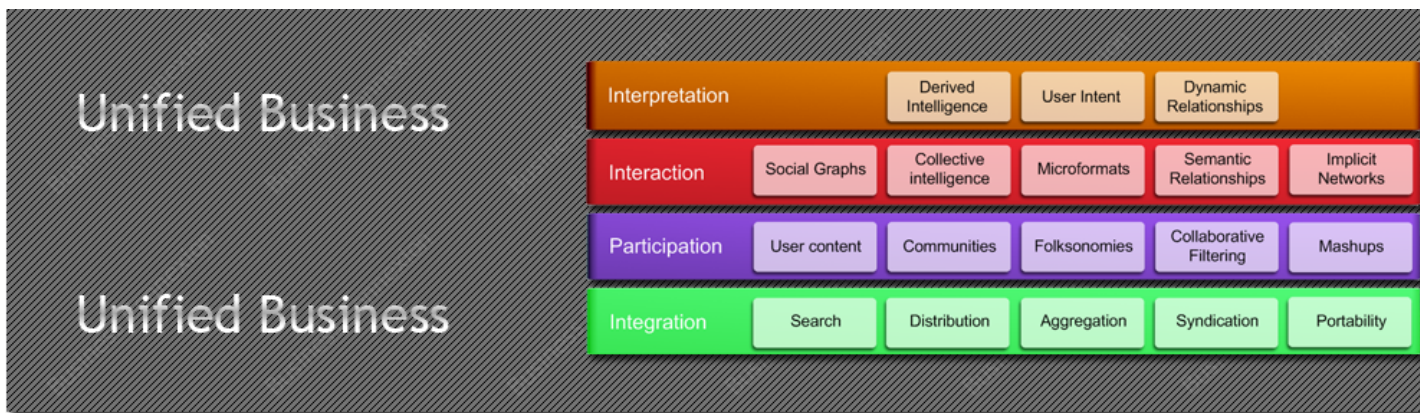
Social Public Hybrid Private

Sky Clouds

NIST Reference Architecture



3 Distinct levels of Cloud Change

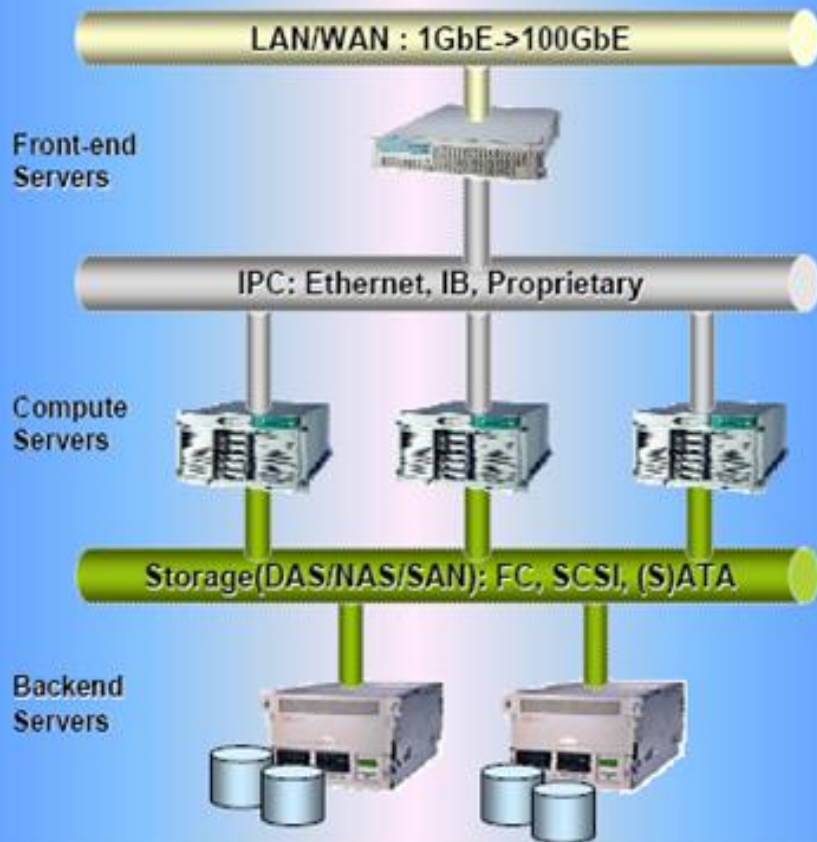


Convergence in the data centre 40G is here

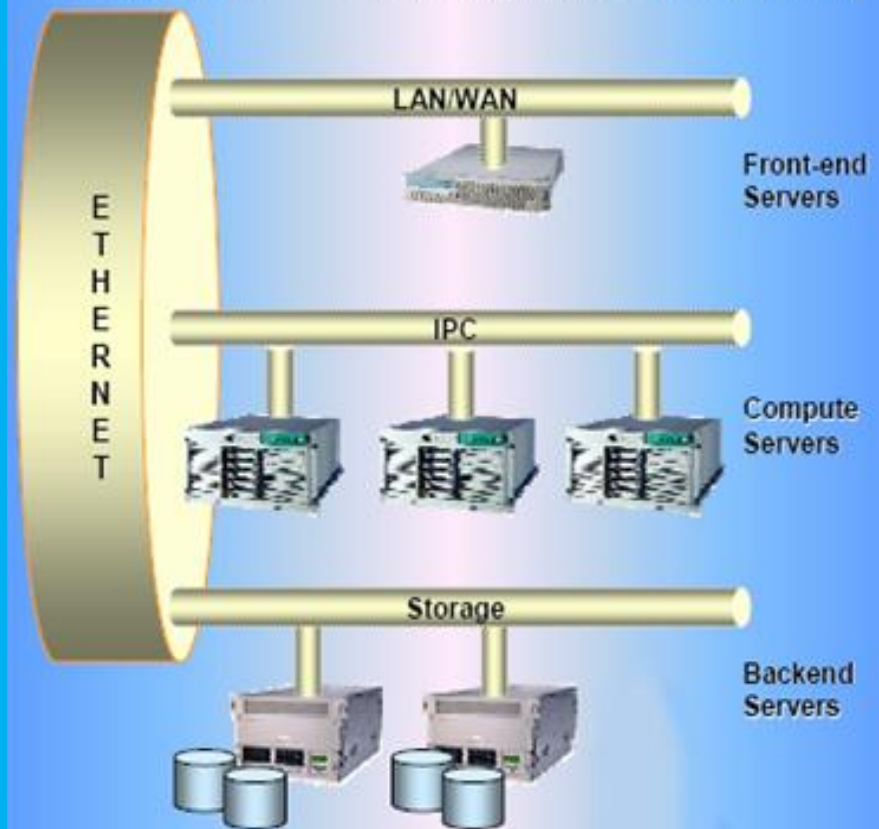
100G Announced 9th May 2012

Unified Infrastructure (Ethernet base) 1TbE 2015 100TbE 2020

Today – 3 Networks

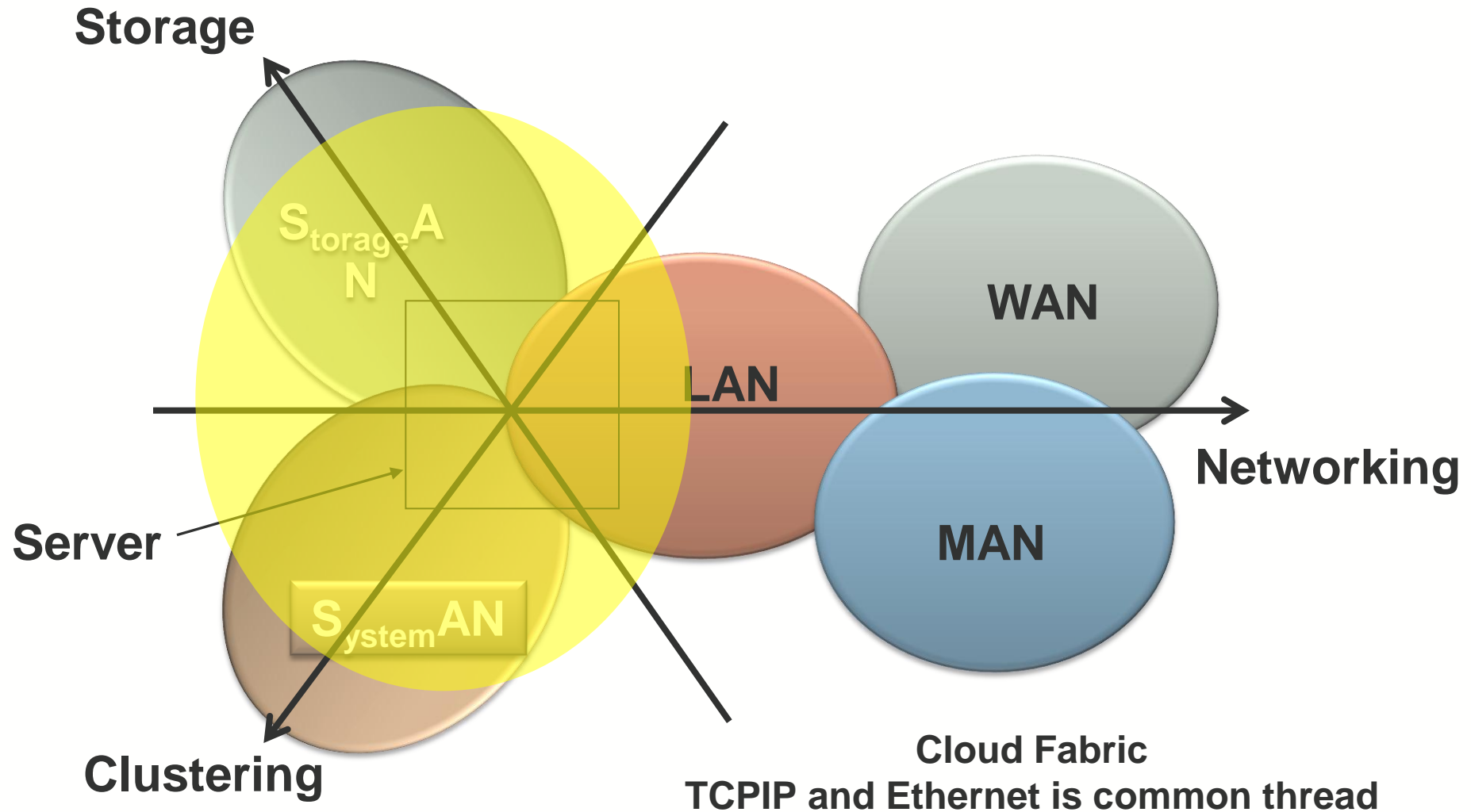


Tomorrow – Convergence on TCP/IP

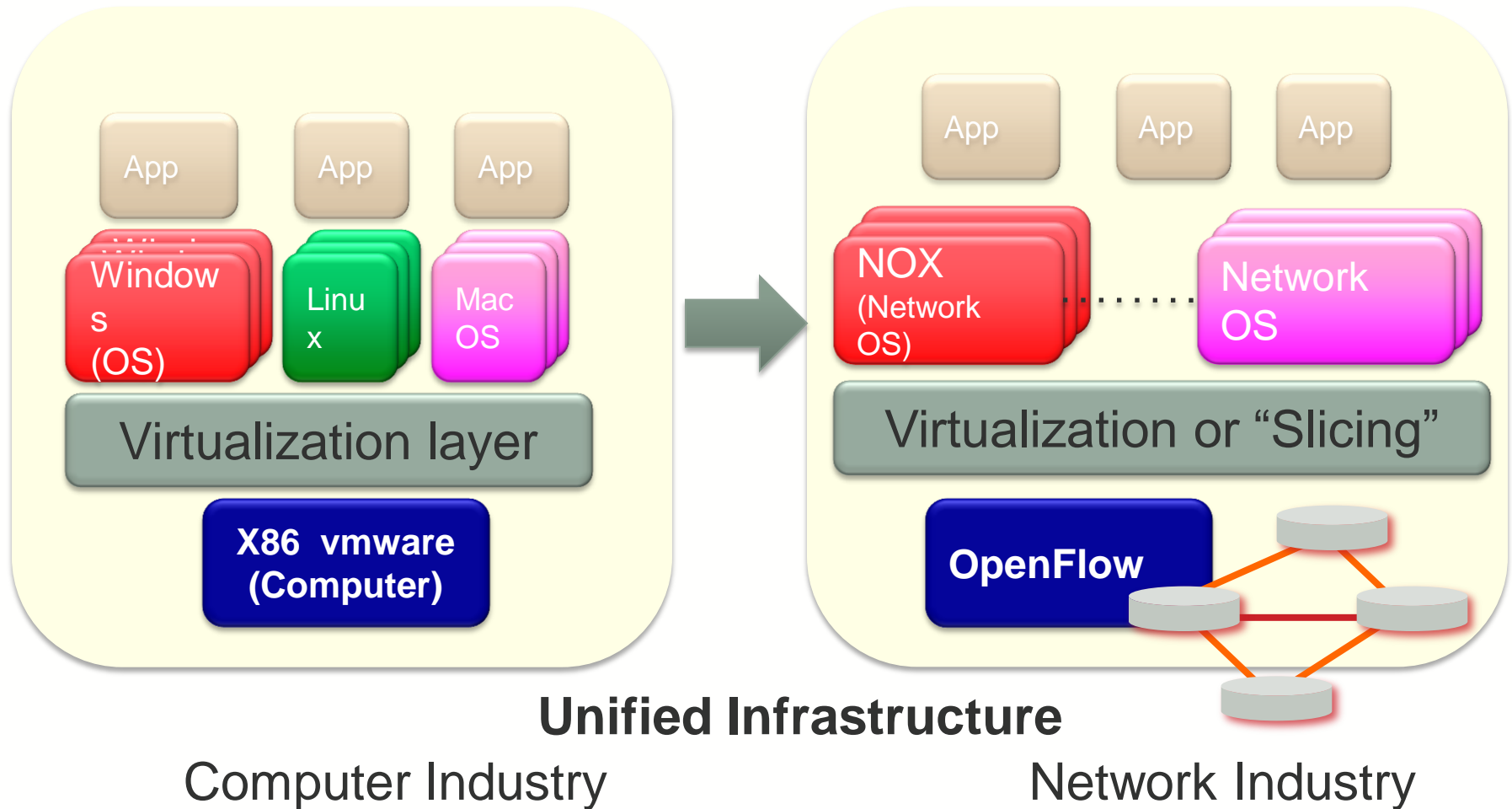


Unified Infrastructure

Unified Infrastructure



OpenFlow Trend



Simple common stable hardware substrate below+ programmability + strong isolation model + competition above = Result : faster innovation

OpenFlow & SDN

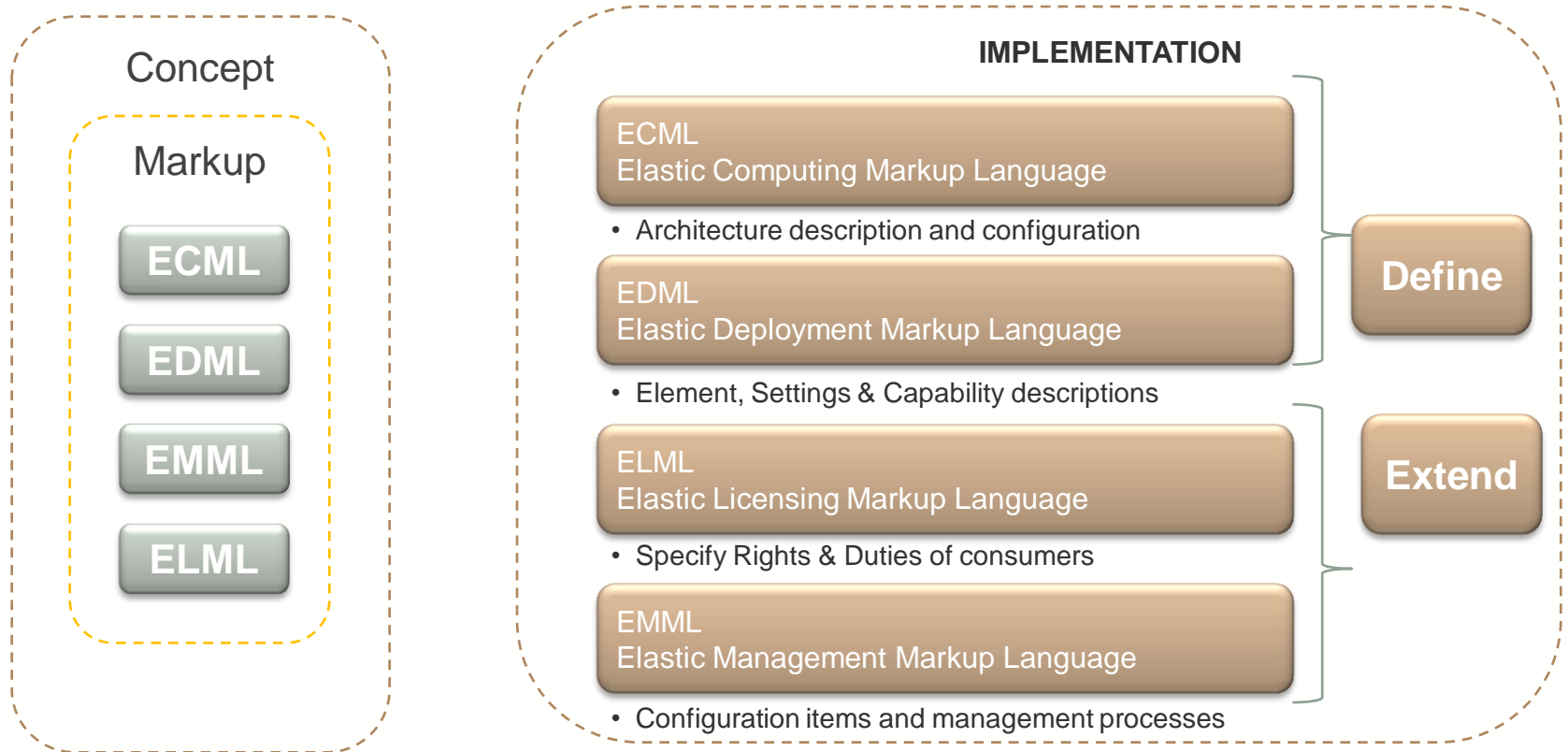
Software Defined Networks

TRILL or Transparent Interconnection of Lots of Links,
SPBM or Shortest Path Bridging MAC mode,
ECMP or Equal-Cost Multi-Path
and MLAG or Multi-Chassis Link Aggregation Protocol

Spanning Tree's Problem is highlighted by Cloud

Unified Applications

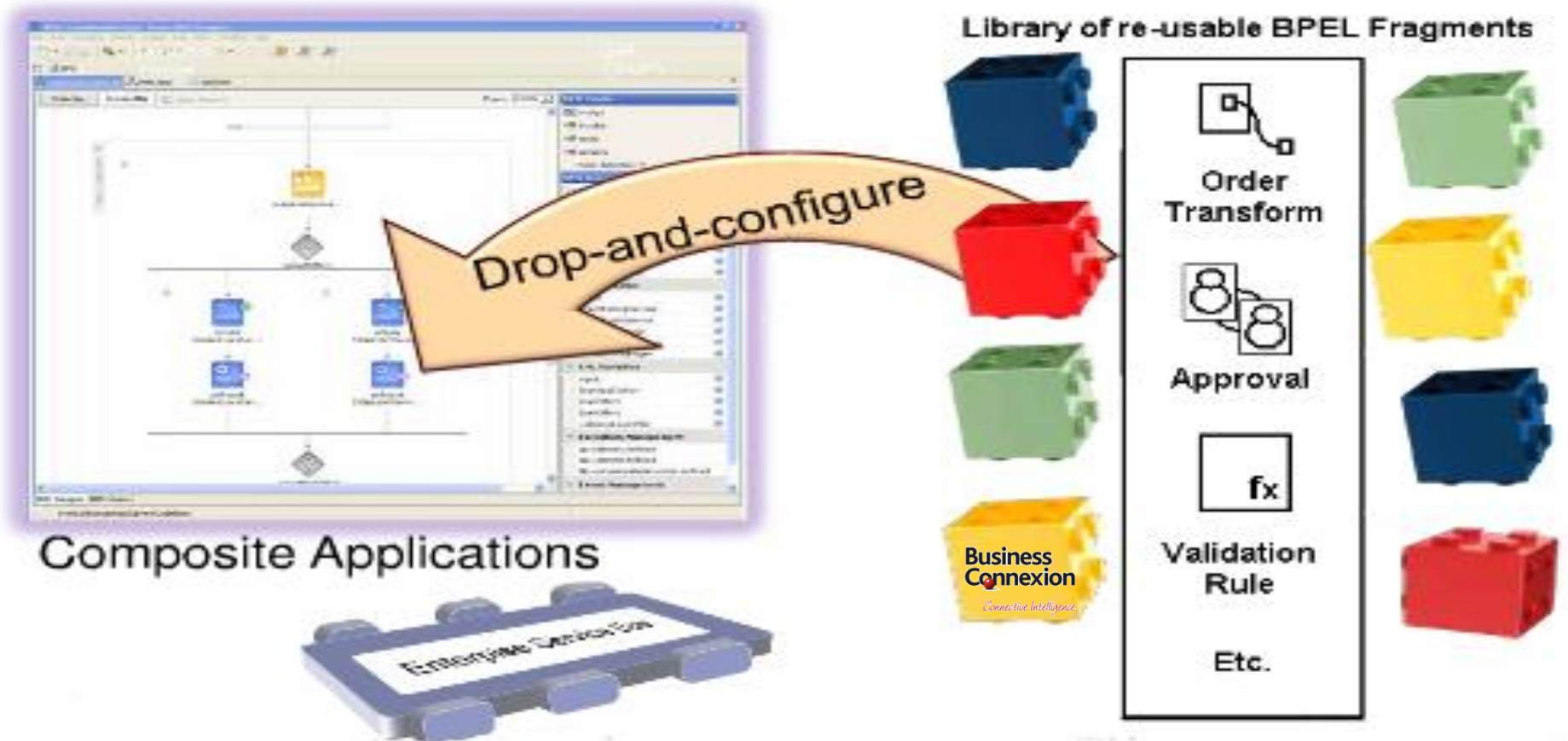
Modular, layered, open-world, “connective tissue”



Interoperable via XML Markup

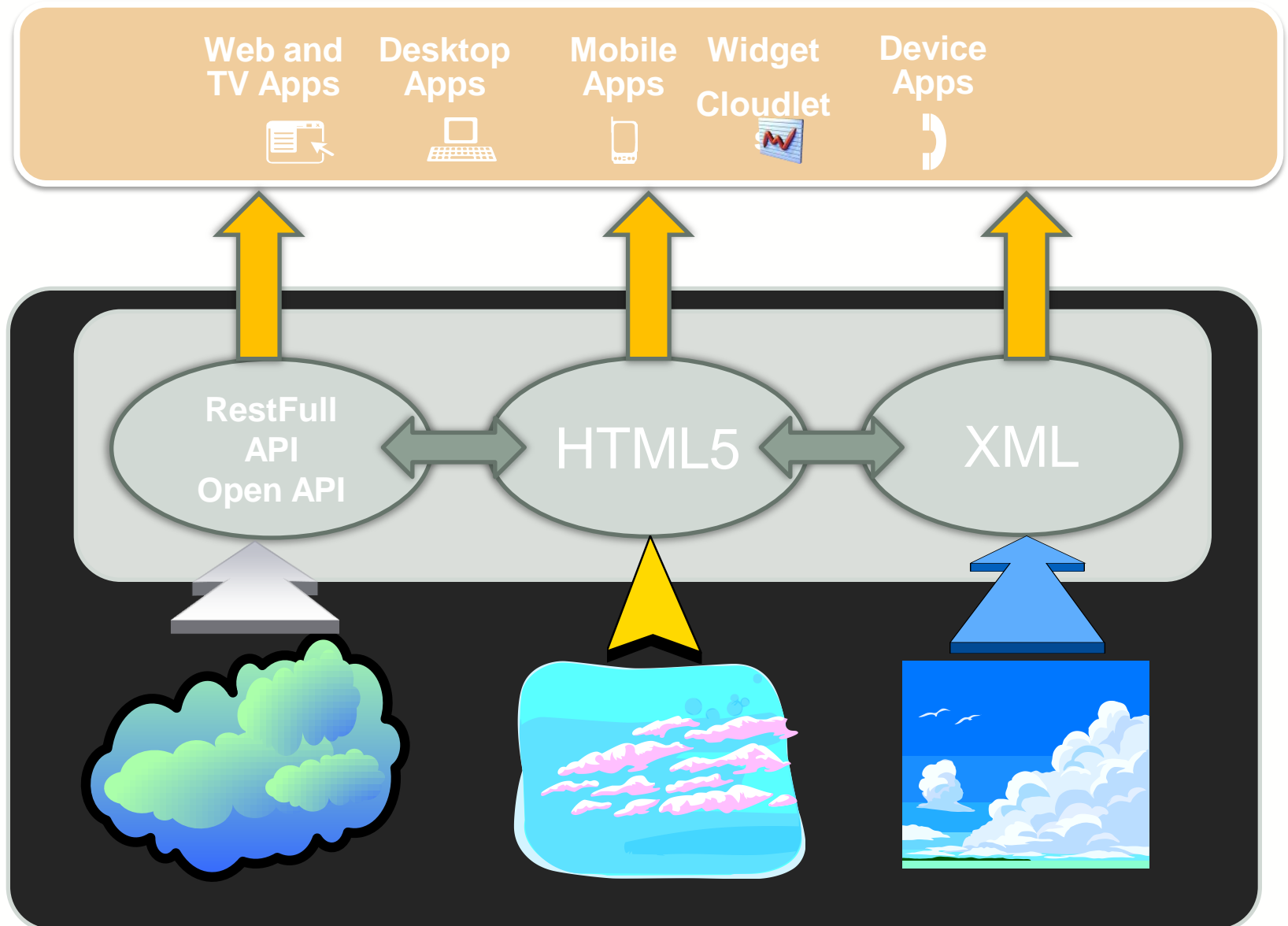
Hyperlinked Cloud Markup Languages

Unified Applications



Web Based Composite Apps
The Unified Applications

Unified Applications



Unified Business

Business Event Processing

Every 20 years a new
disruptive innovation
changes the way we
do IT

Sense and
Respond to
Actionable
situation

1970s

1990s

2010s

Event Driven Paradigm

Holistic (context oriented)
event processing

Process Driven Paradigm

Orchestration (process oriented) of human
and system tasks

Transaction Driven Paradigm

Discrete (data oriented) transaction
processing)

“The real world is mostly event driven, and event-driven situations are best addressed by event-driven business applications”.

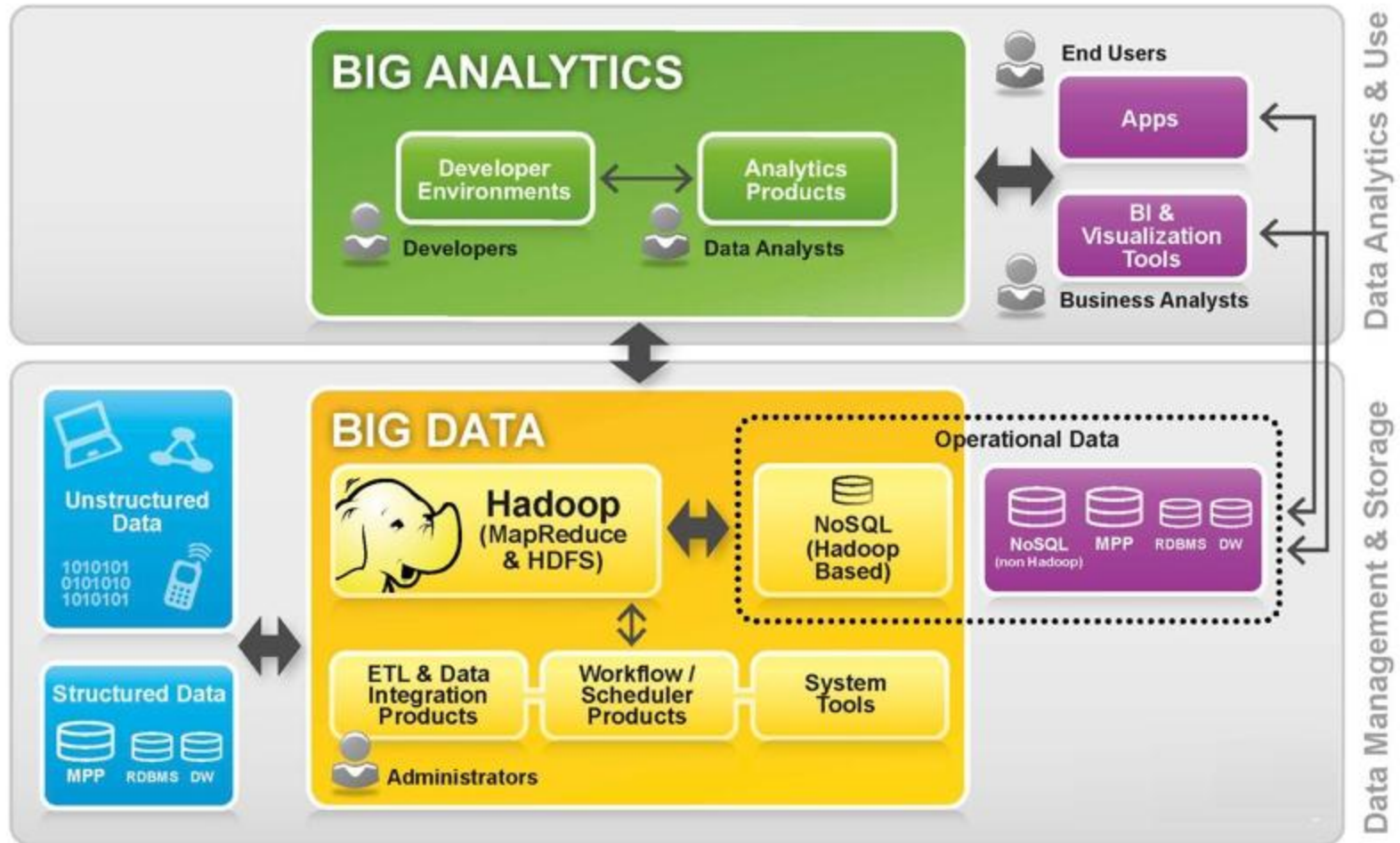
Social Media reflects Events faster than Traditional Business Systems

Iceland Volcanic Eruption Its an Event



the world's greatest
cloud service provider

Big Data Big Analytics Unified Business



What is Broadband ?



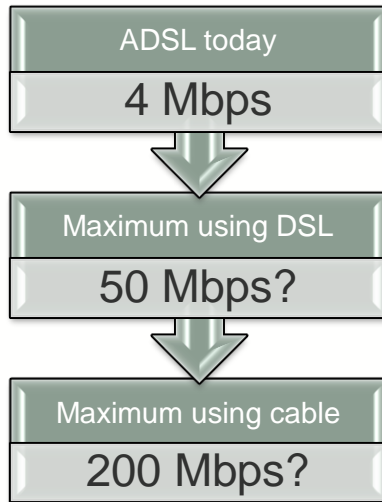
- It used to be the back haul network
- Now it is last mile Where ever you are

But what is it really ?

- Its when you have enough or there is surplus to meet your current requirement.
- If you don't it is a narrow band.

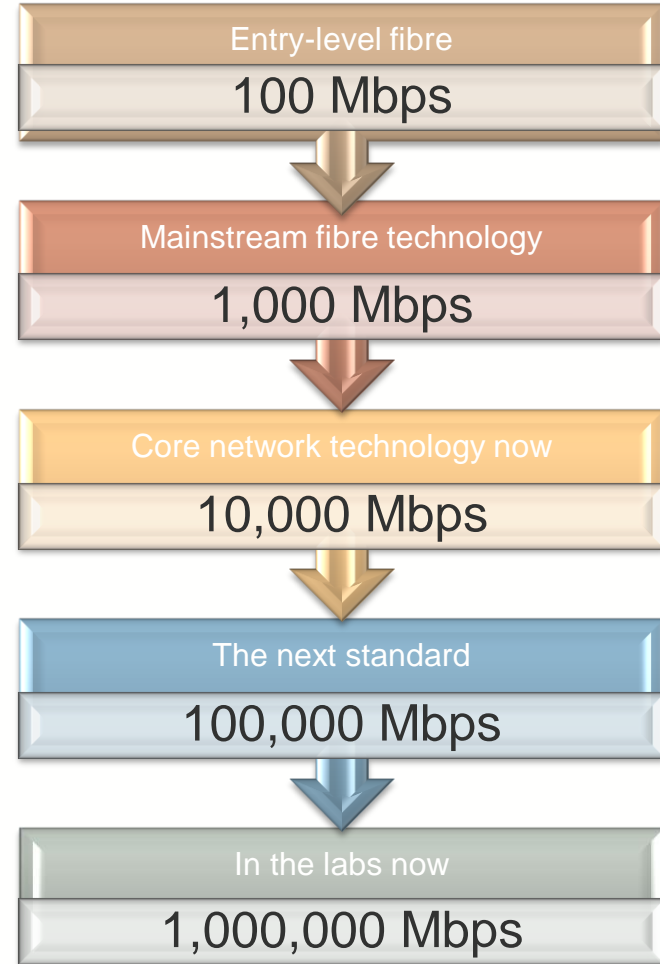
How fast can we go

Copper

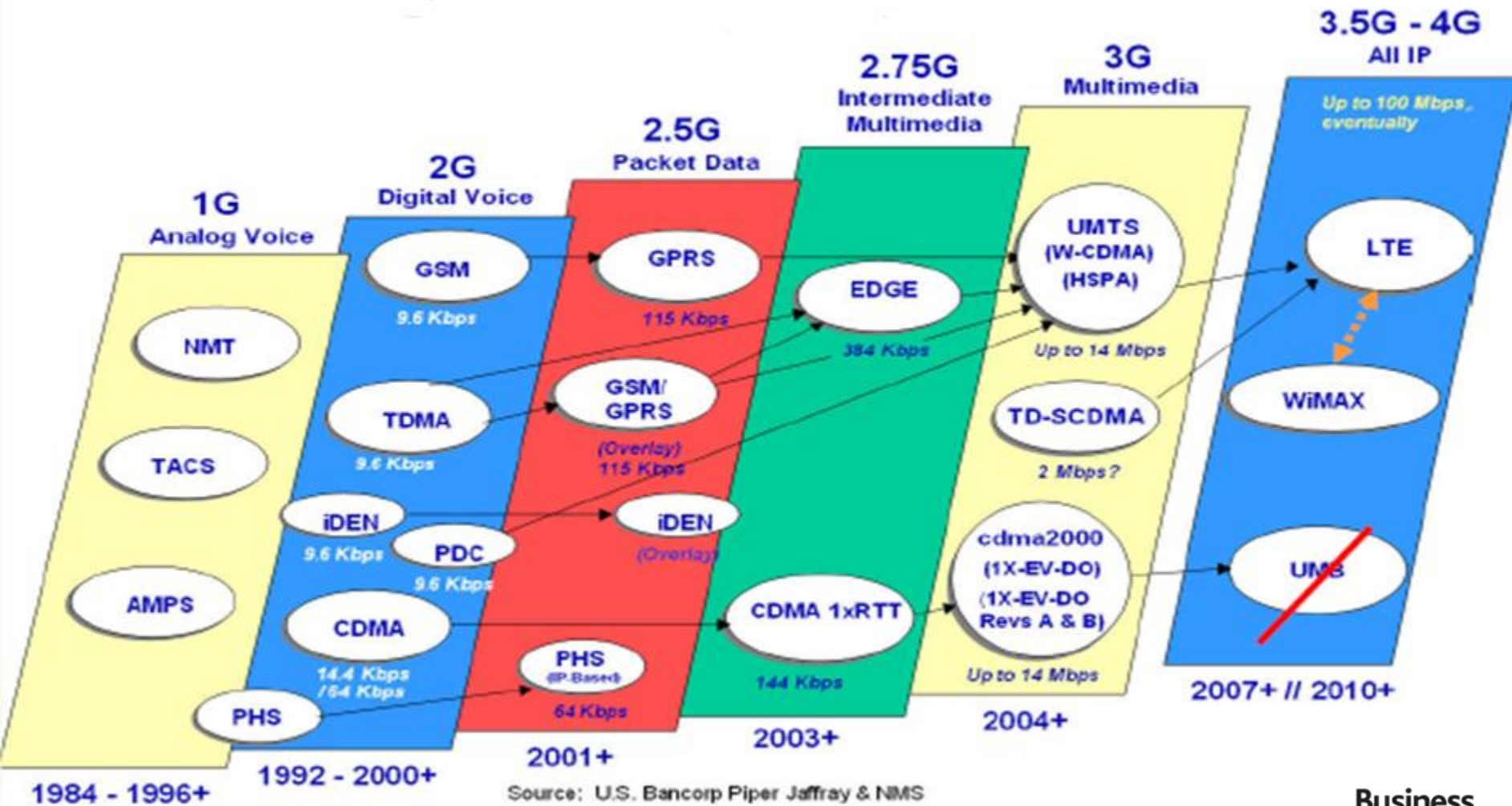


vs

Fibre



Wireless Migration



Source: U.S. Bancorp Piper Jaffray & NMS

Cloud computing will be very disruptive to the old business models

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**The More Broadband we get
the more disruptive it will be**

Cloud Companies “Many in China”



Cloud Bursts Thunderstorms and Floods Cloud is Here

END USER APPLICATIONS

Software-as-a-Service

CRM	Marketing Demand Generation	Human Resources	Finance & Accounting	Content Management	Vertical
salesforce.com 					
Enterprise Social Media	Marketing Analytics	Retail & E-Commerce	Collaboration	Business Intelligence	IT
				bime logo"/> EDGE SPRING logo"/> visier logo"/> mixpanel logo"/> Cloud 9 logo"/> LATTICE ENGINES logo"/> kognitio logo"/> pivotlink logo"/> Datameer logo"/> Rosslyn Analytics logo"/> pentaho logo"/> SUMIWAY logo"/> SpatialKey logo"/>	SPRINTZ logo"/> Symplified logo"/> abiao logo"/> apptio logo"/> Zerto logo"/> keynote logo"/> standingcloud logo"/> CloudLock logo"/> service now logo"/> SCALEXTREME logo"/> inaplogic logo"/> veeam logo"/> ALERTLOGIC logo"/> kapow logo"/> MuleSoft logo"/> SOASTA logo"/> Acronis logo"/> cloudkick logo"/> Boomer logo"/> splunk logo"/> enan logo"/> AppAssure logo"/> XOX AFFRO logo"/> loglogic logo"/> catchpoint logo"/>

DEVELOPERS

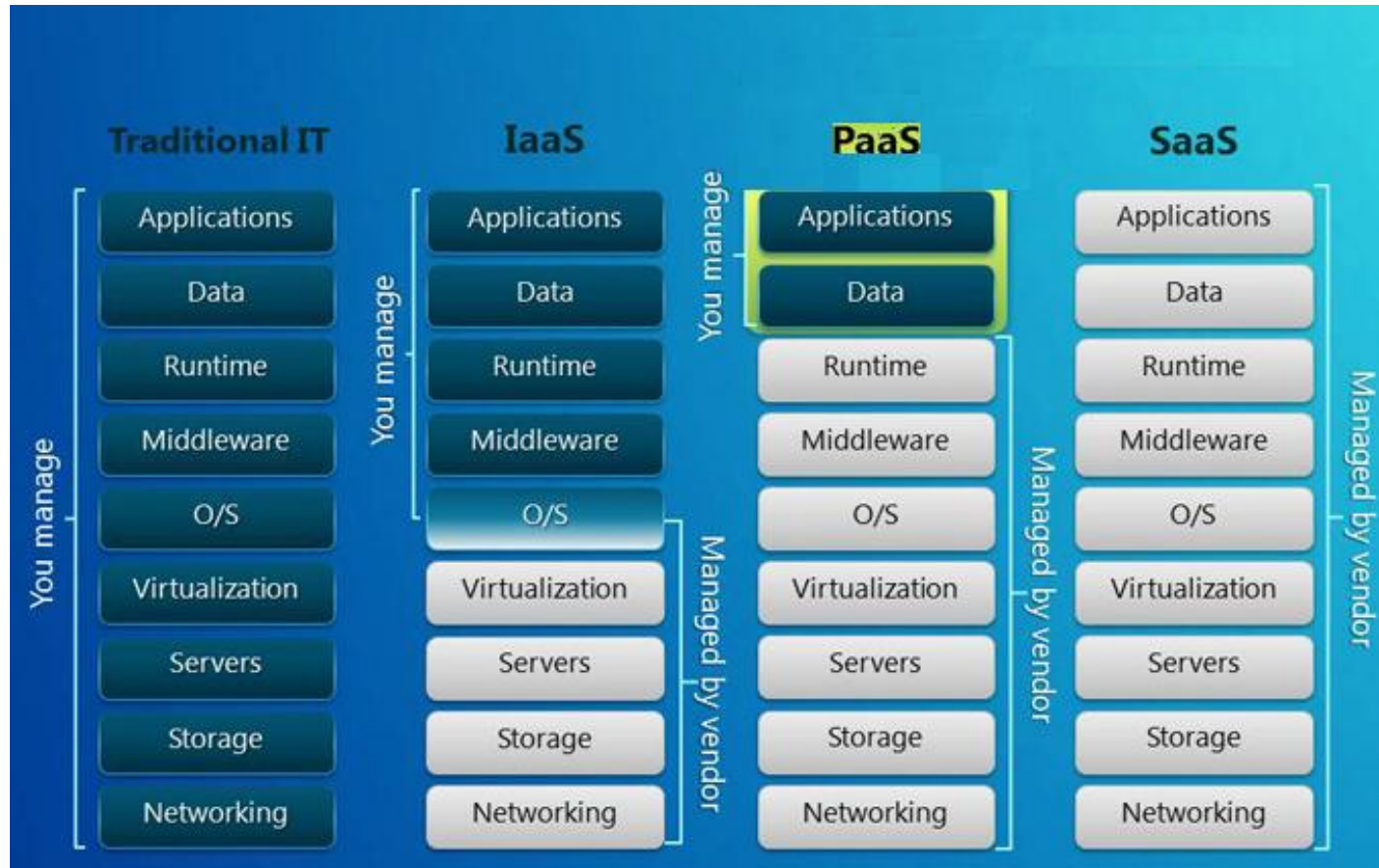
Platform-as-a-Service

	RIGHT SCALE logo"/> CloudPassage logo"/> vaultive logo"/> xeround logo"/> LONGVIEW logo"/> Skytap logo"/> SendGrid logo"/>
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Infrastructure-as-a-Service

GOGRID logo"/> Parallels logo"/> terremark logo"/> citrix logo"/> VERTICA logo"/> hp logo"/> ORACLE logo"/> Joyent logo"/>
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Security is a factor of what you use



Cloud Standards Overview

[Cloud-Standards.org](https://cloud-standards.org)

Standards to watch

Federated security (e.g. identity) across Clouds

Metadata and data exchanges among Clouds

Standards for moving applications between Cloud platforms

Standards for describing resource / performance capabilities
and requirements

Standardised outputs for monitoring, auditing, billing, reports
and notification for Cloud applications and services

Orchestration and middleware tools for creating composite
applications across Clouds

Standards for machine-readable Service Level Agreements
(SLAs)

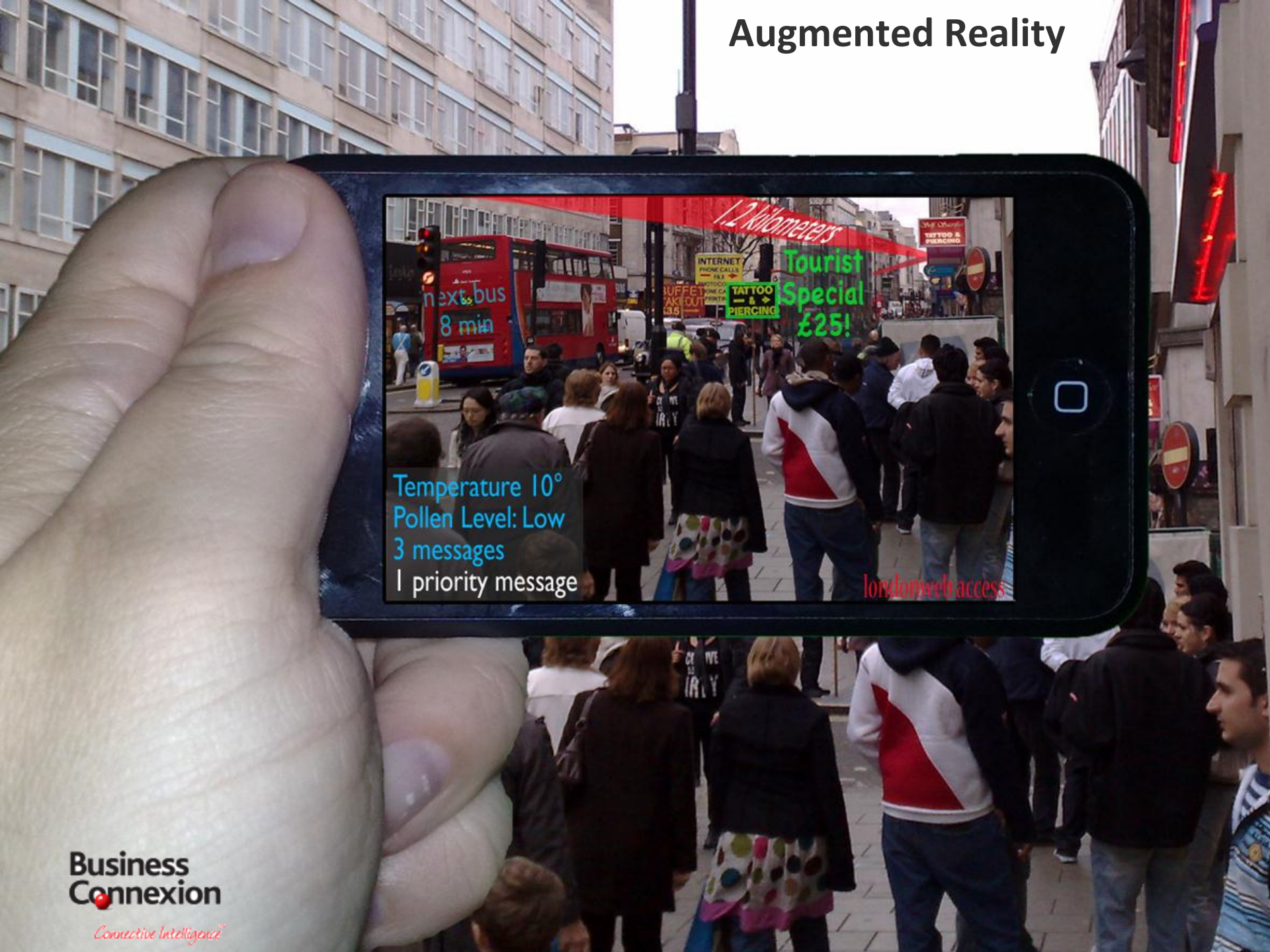
P2301	IEEE	OpenStack	Openflow	OpenAPI
		Hadoop	and	HTML5

Virtual Lab

It is in the Cloud



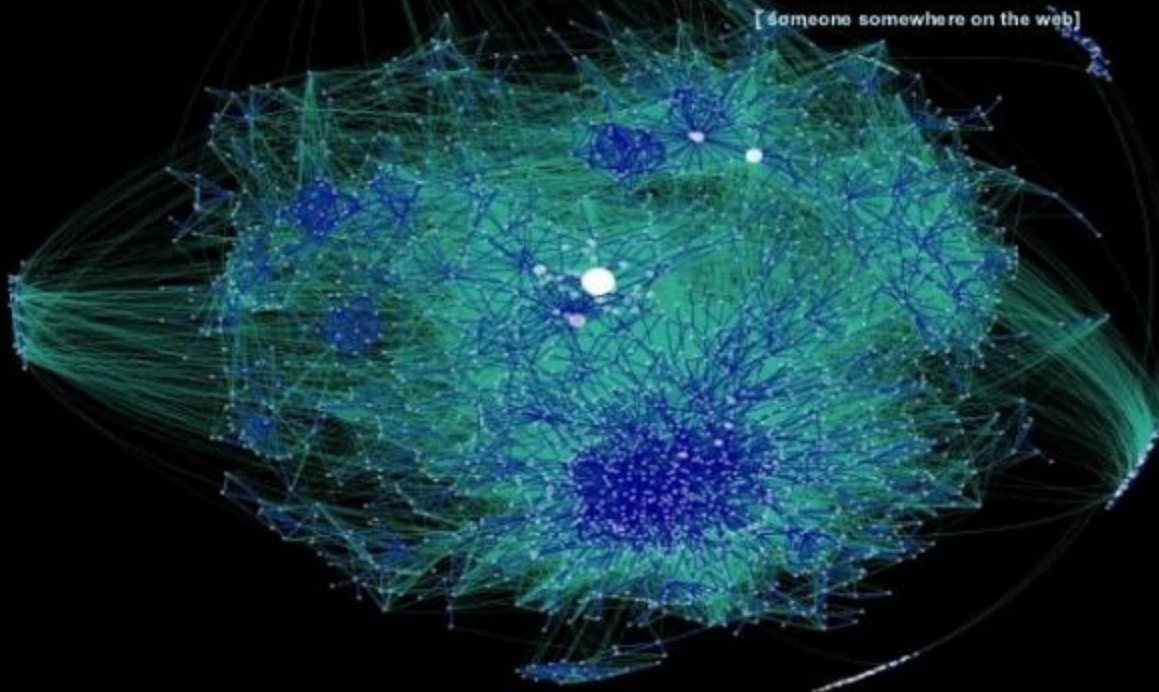
Augmented Reality





"In the old days, brands ~~wanted~~ everybody to pay attention to them.
Now brands need to pay attention to everybody else."

[someone somewhere on the web]



Power shift



Clouds means work for companies up to the Challenge





Strives to keep bad things
from happening



Strives to make good
things happen.

Manager vs. Designer



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Questions






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Thank you



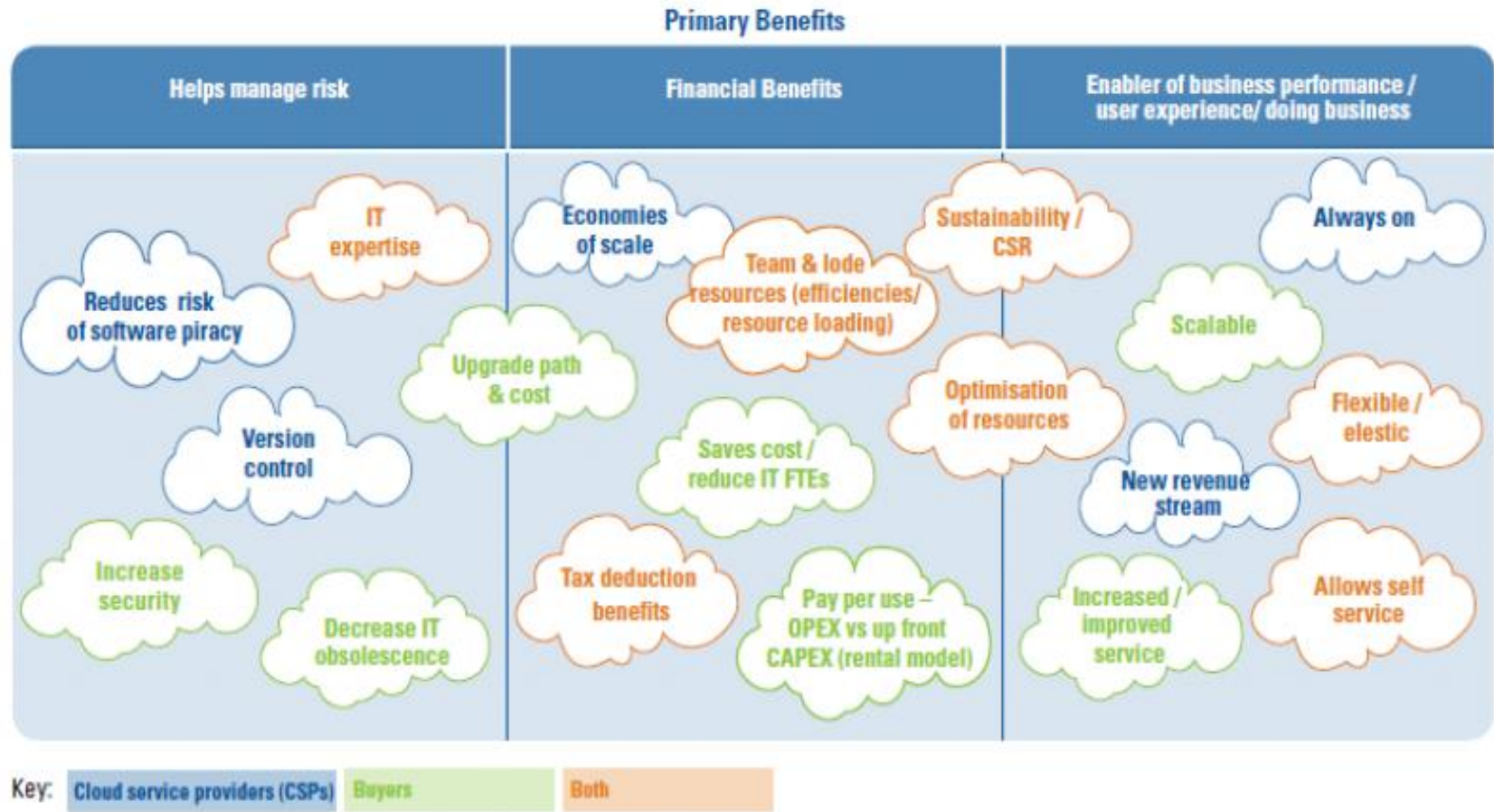
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Thank you

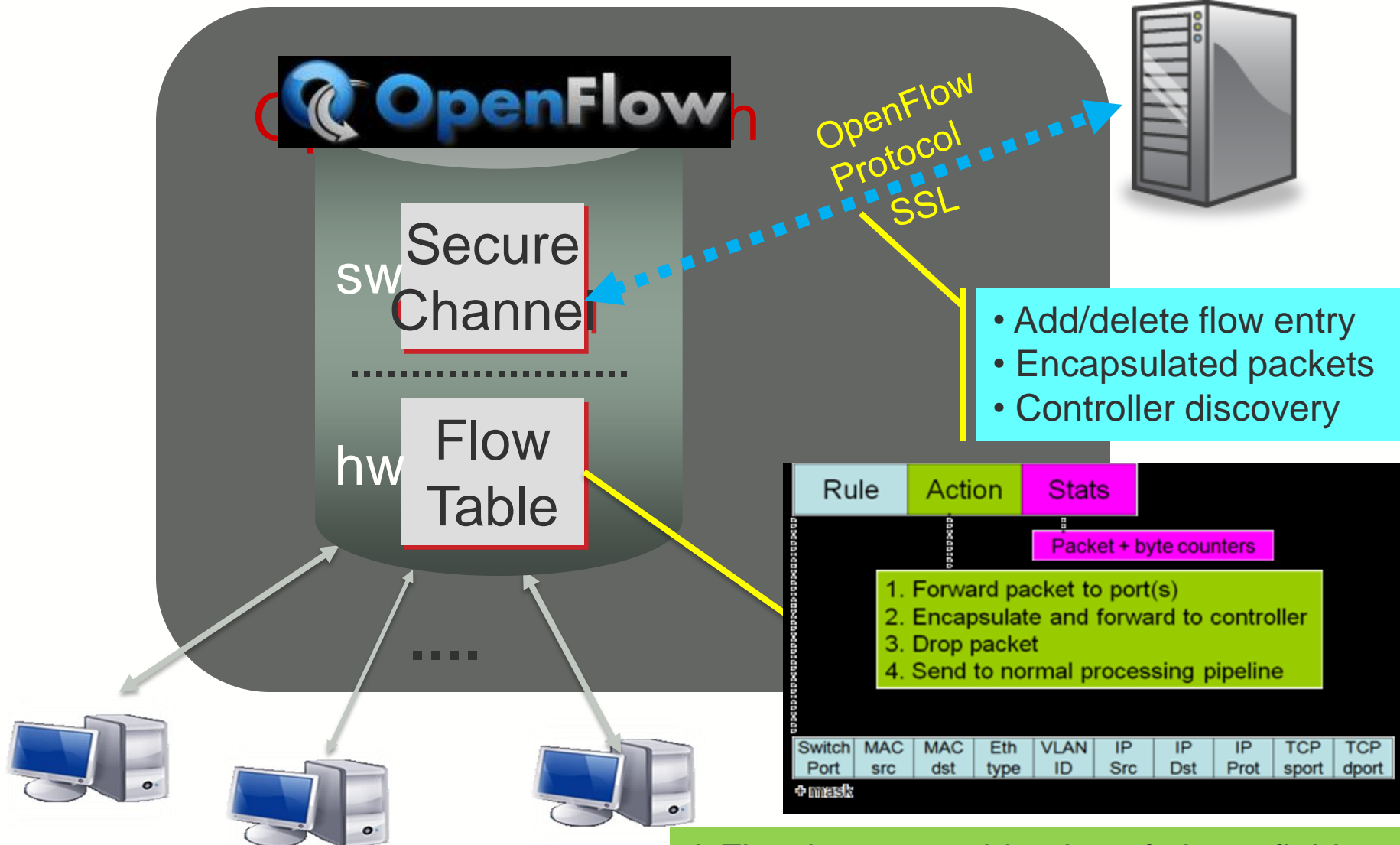
Benefits of cloud computing

Potential benefits can be categorised into three main areas



OpenFlow Switching

Controller



A Flow is any combination of above fields described in the Rule



Questions





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