



**Cloud - the new World Economy**

**Avner Algom, CEO  
IGTCloud**

**[www.meetup.com/IGTCloud](http://www.meetup.com/IGTCloud)**

## About Us



**Israeli Cloud Organization +5,400 Members**



### **Network**

with

**Partners, Customers, Investors and  
Potential Employees**



### **Learn**

from each other about

**Case Studies, New Technologies and  
SaaS Business**



### **Market**

**Your Added Values**



### **Be Part**

**of a Professional Cloud Community**

**BIG Data & SaaS Business  
OpenStack, DevOps, Analytics,  
Social, Cyber, Mobility**

**[www.meetup.com/IGTcloud](http://www.meetup.com/IGTcloud)**

**[www.meetup.com/IGTCloud](http://www.meetup.com/IGTCloud)**

And we brought some honor to the family...

**Congratulations to [IGTCloud](#) in Tel Aviv, for most RSVPs in the month of March!**

We've been keeping a close eye on the Tech scene in Israel, and it looks like their community is skyrocketing. IGTCloud has ultra-successful Meetups several times a month. That's a great way to engage members, build momentum—and apparently climb to the top!

**Check out the top ten list below.** And if you want to see your Tech Meetup make the greatest hits, [schedule a Meetup](#) if you're an Organizer and don't forget to [RSVP](#) if you're a member.



MOST RSVPs



**[IGTCloud](#) - 1008 - Tel Aviv, Israel**

**[NY Tech Meetup](#) - 906 - New York, New York**

**[Bay Area Game and App Development Group](#) - 730 - San Carlos, California**

**[New Tech Boulder](#) - 722 - Boulder, Colorado**

**[Northeast Scala Symposium](#) - 720 - Cambridge, Massachusetts**

**[SFBay OpenStack](#) - 690 - San Francisco, California**

**[LJC - London Java Community](#) - 669 - London, U.K.**

**[Silicon Valley Android Developers Meetup](#) - 659 - Palo Alto, California**

**[San Francisco Cloud Mafia](#) - 623 - San Francisco, California**

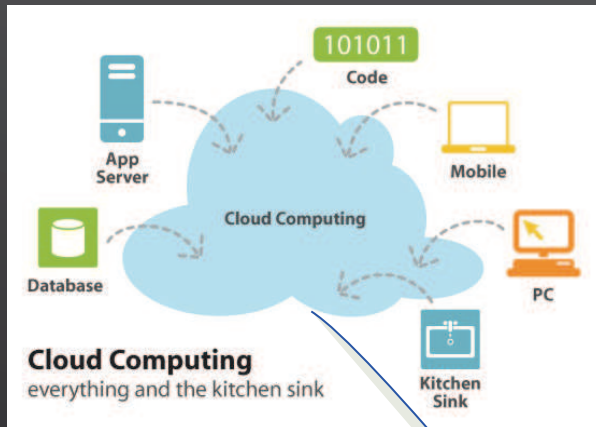
**[DC Tech Meetup](#) - 603 - Washington, D.C.**

**[www.meetup.com/IGTcloud](http://www.meetup.com/IGTcloud)**

**[www.meetup.com/IGTCloud](http://www.meetup.com/IGTCloud)**

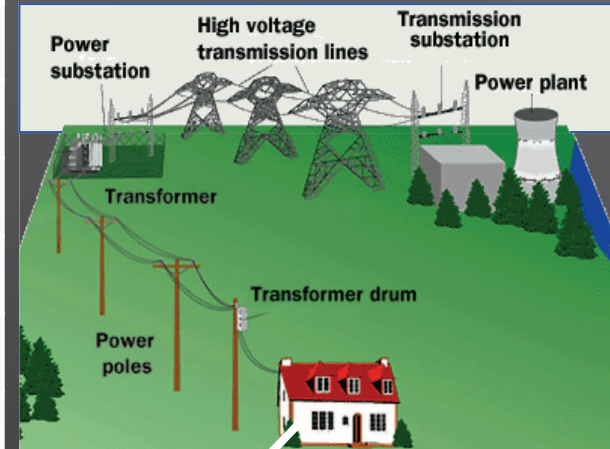
# What is Cloud Computing?

## Think Electricity



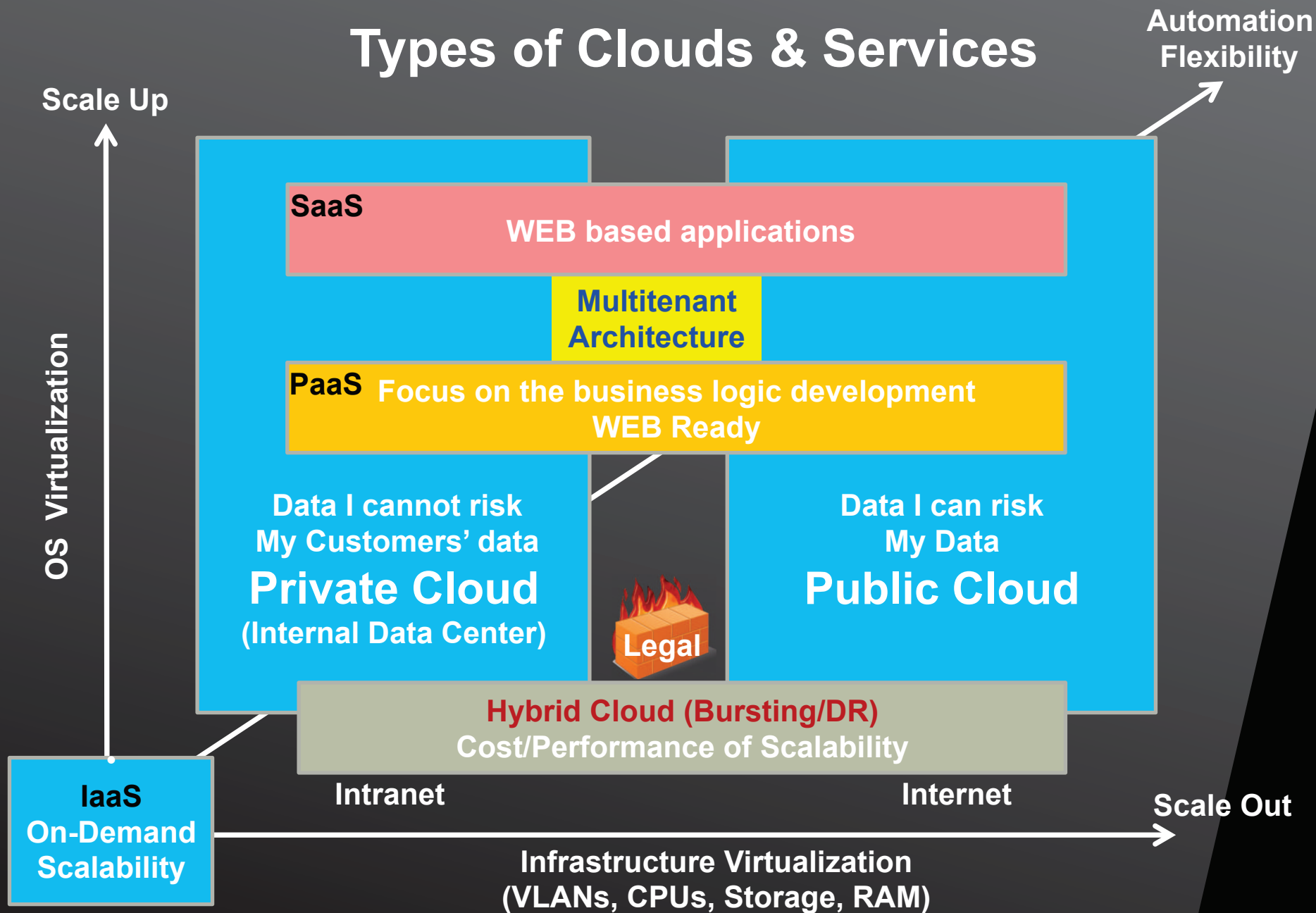
**Computers First  
Networks Later**

- ### UTILITY Model
- On-Demand Services
  - Pay per Use/Time
  - Auto Scale
  - Load Balancing/HA
  - Transparency
  - Water Cooling
  - Network Based
  - SmartGrid



**Electricity First  
Networks Later**

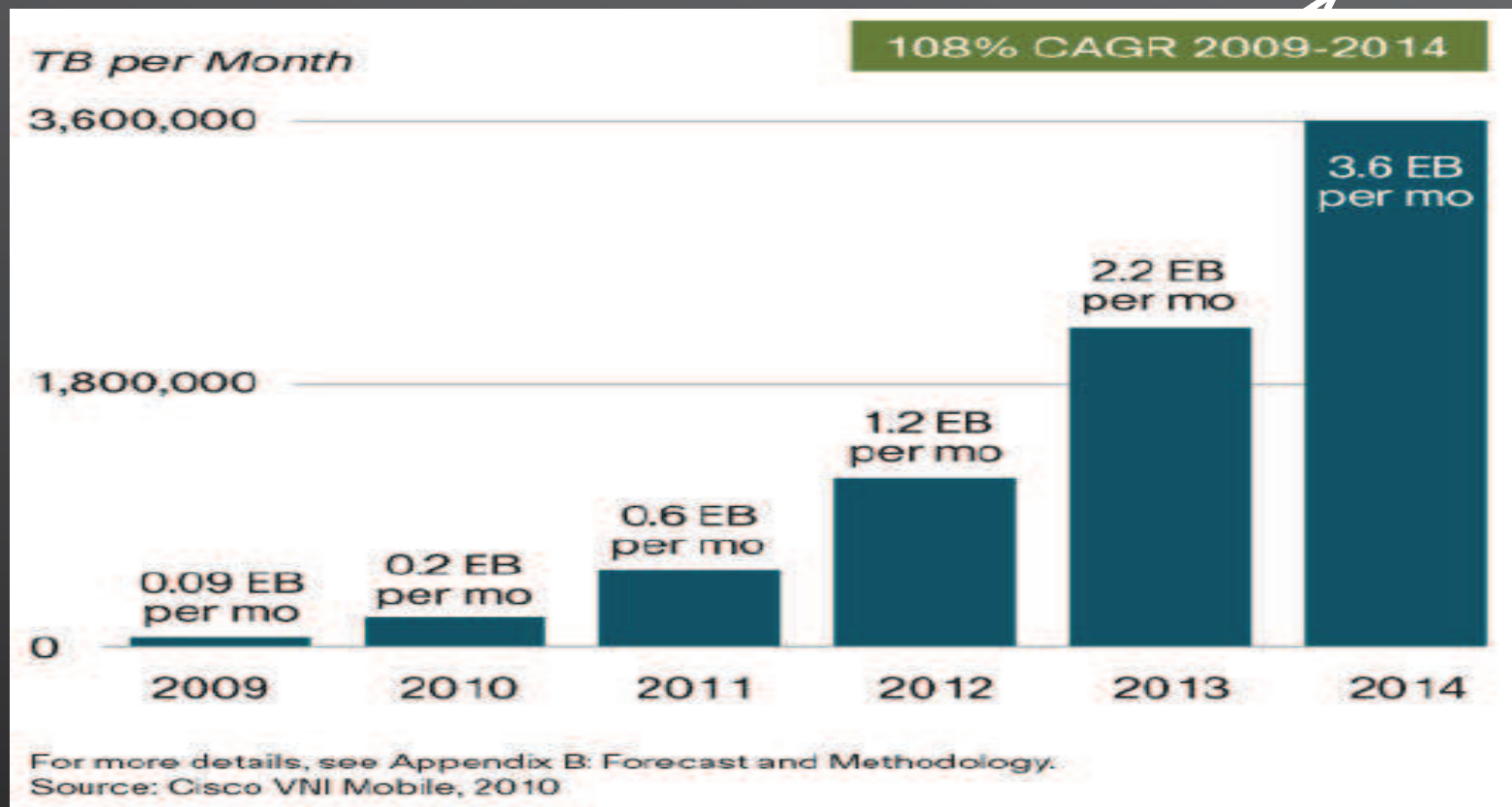
# Types of Clouds & Services



BIG Data

The Evolution of Clouds/Applications

Distributed  
Clouds



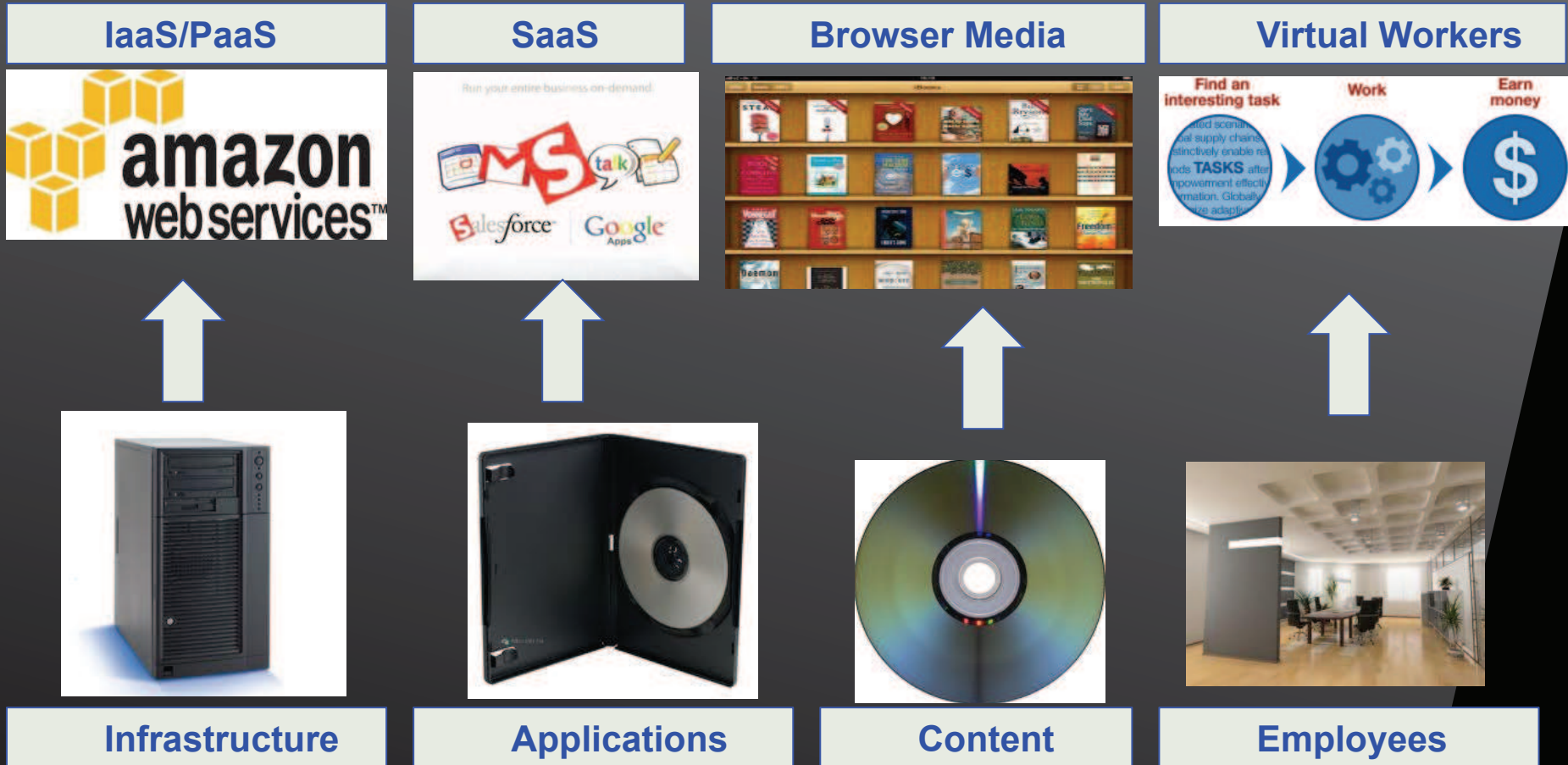
IaaS  
On-Demand  
Scalability

The Network is the Computer  
Network as a Service – Symmetrical & BoD

Network  
Performance

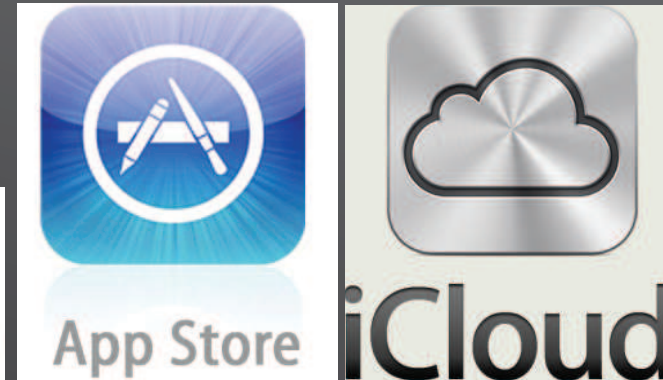
# Moving our data to the cloud

## To Real-time On-Demand Services



From Manual Physical Resources/Products

***“This is the cloud the way it should be:  
automatic and effortless.” Apple***



**Short Time to market**

# Cloud/SaaS changing the Business models and operating model

Centralized  
BIG Data



To unified on-demand services

Distributed Data  
Multiple customers



From Product installation & maintenance per customer

# Large Enterprise SaaS Customers

## Moving our data to the cloud

### Workday

HR, Payroll, Financial,  
and Worker Spend  
Management

- Carlyle Group
- Chiquita Brands International
- Flextronics
- H.B. Fuller
- Life Time Fitness
- Sony Pictures Entertainment
- Valspar
- Lenovo
- Arrow Electronics
- Brady Corporation

### Salesforce.com

Sales and CRM

- Allianz Insurance
- Avis Budget Group
- Cisco
- Dell
- Google
- Kaiser Permanente
- Motorola
- NBC Universal
- Ryder
- Sprint Nextel

### Success Factors

Business Execution  
Software solutions

- American Airlines
- Arrow
- Avnet
- BT
- Clear Channel
- ConAgra
- Expedia
- GAP
- Hilton
- ING
- Kawasaki
- Kimberly Clark
- SEGA

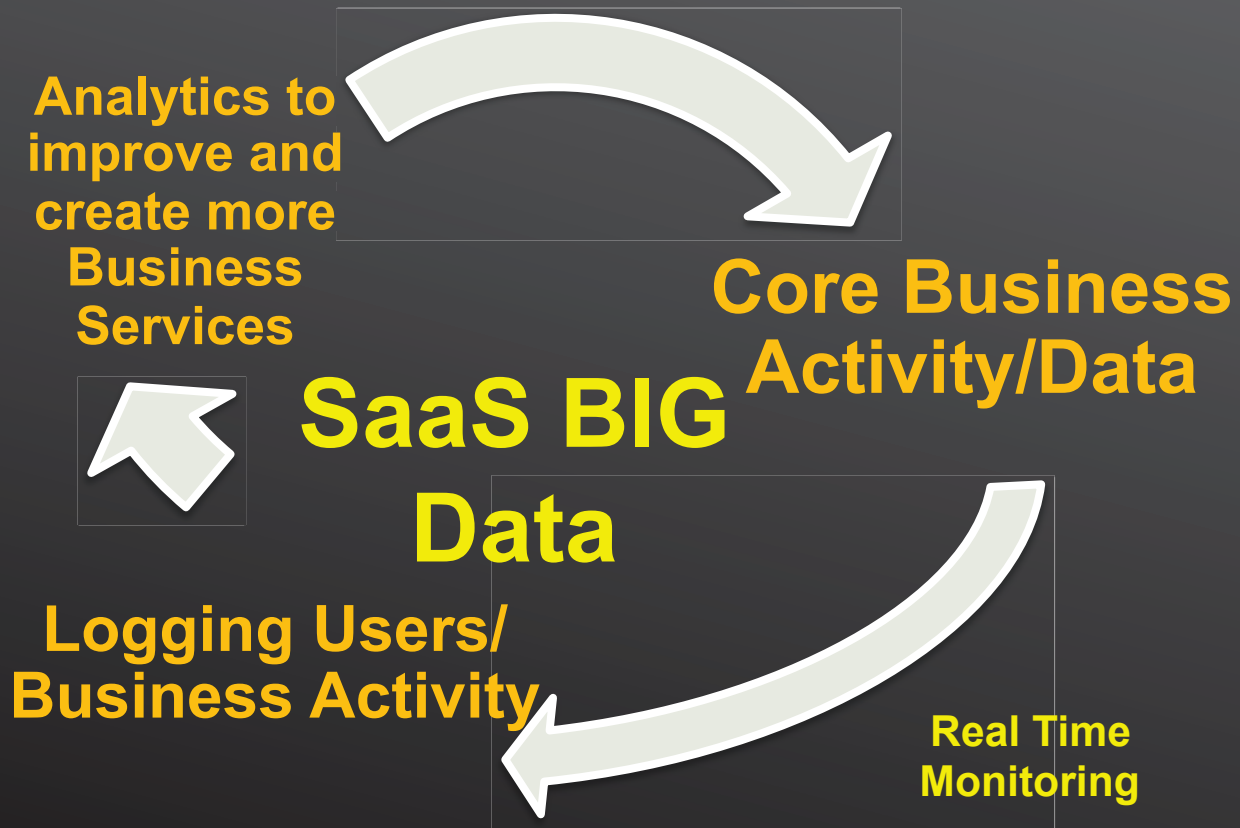
### RightNow

customer experience  
solutions

- British Airways
- Cabela's
- CarFax
- DeVry University
- Drugstore.com
- Electronic Arts
- Eurostar
- Graco
- Nikon
- Overstock.com
- Travelocity

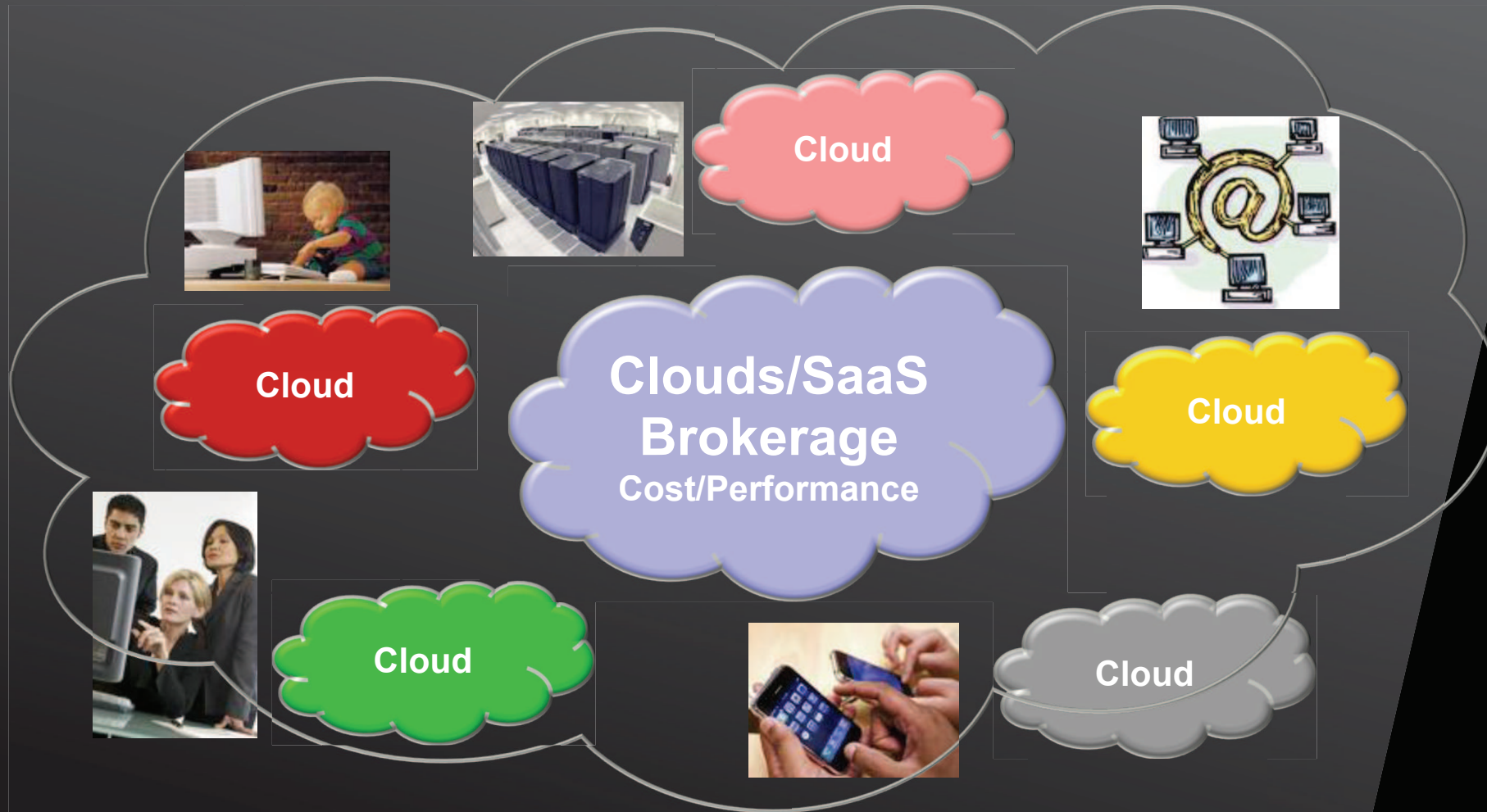
**The Analytics  
impact on  
applications**

## **The Life Cycle of SaaS Application**



# Cloud of Clouds

Open Market for IT services that Gather most of the Data  
(I do not want to be locked in)



# BIG Data

## Big Data in the Headlines



**Apache**

**Hadoop** awarded "Innovator of the Year", described as the "Swiss Army Knife of the 21st century"

The guardian, May, 2011



HP yokes Autonomy, Vertica together for big data push

Gigaom, November, 2011



Aster Data helps Teradata embrace Big Data

Ovum, October 2011



**Big Data** will earn its place as the next "must have" competency in 2012 ....Over 90% of this information will be unstructured – full of rich information, but challenging to understand and analyze"

IDC: December, 2011

**Gartner**

Gartner predicts that data will grow by **800** percent in five years, and **80%** of which is unstructured

Gartner, 2011



IBM Cloud Harnesses Hadoop Elephant

Wired, October 2011



The VC behind Facebook, Groupon, is creating **\$100M** fund dedicated to Big Data.

Forbes, November, 2011



"Cloud and Big Data are the most sweeping trends in IT"

EMC CEO, March, 2011



Microsoft Embraces Elephant of Open Source Hadoop, ditching its proprietary platform

Wired. November. 2011



Oracle Taps Cloudera for Hadoop Distribution of Big Data Appliance

TechCrunch, January, 2012



Hadoop-based startup Cloudera raises **\$40M** from Ignition Partners, Accel, Greylock

Deals & More: November 2011

**McKinsey&Company**

Big data: **The next frontier for innovation, competition, and productivity**

McKinsey Global Institute: June, 2011

# BIG Data

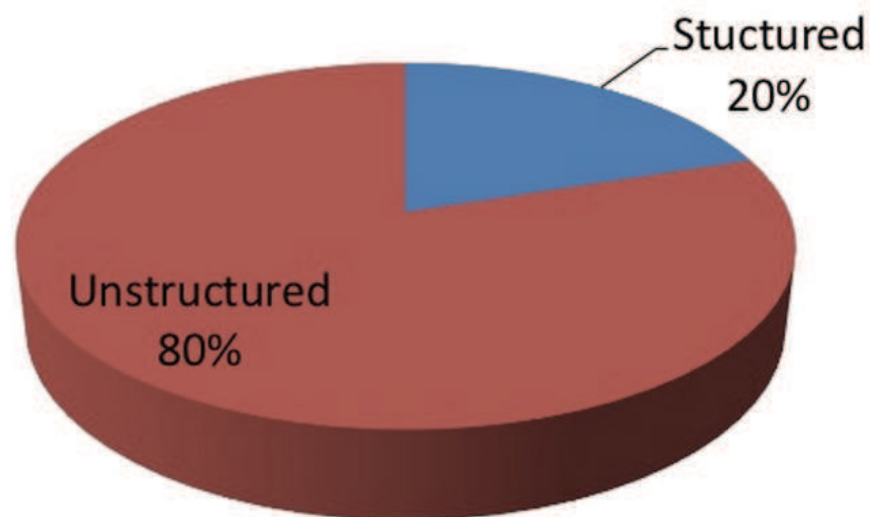
## Explosive Growth of Data - Mostly Unstructured



Data will grow by **800** percent in five years, **80%** of which is unstructured

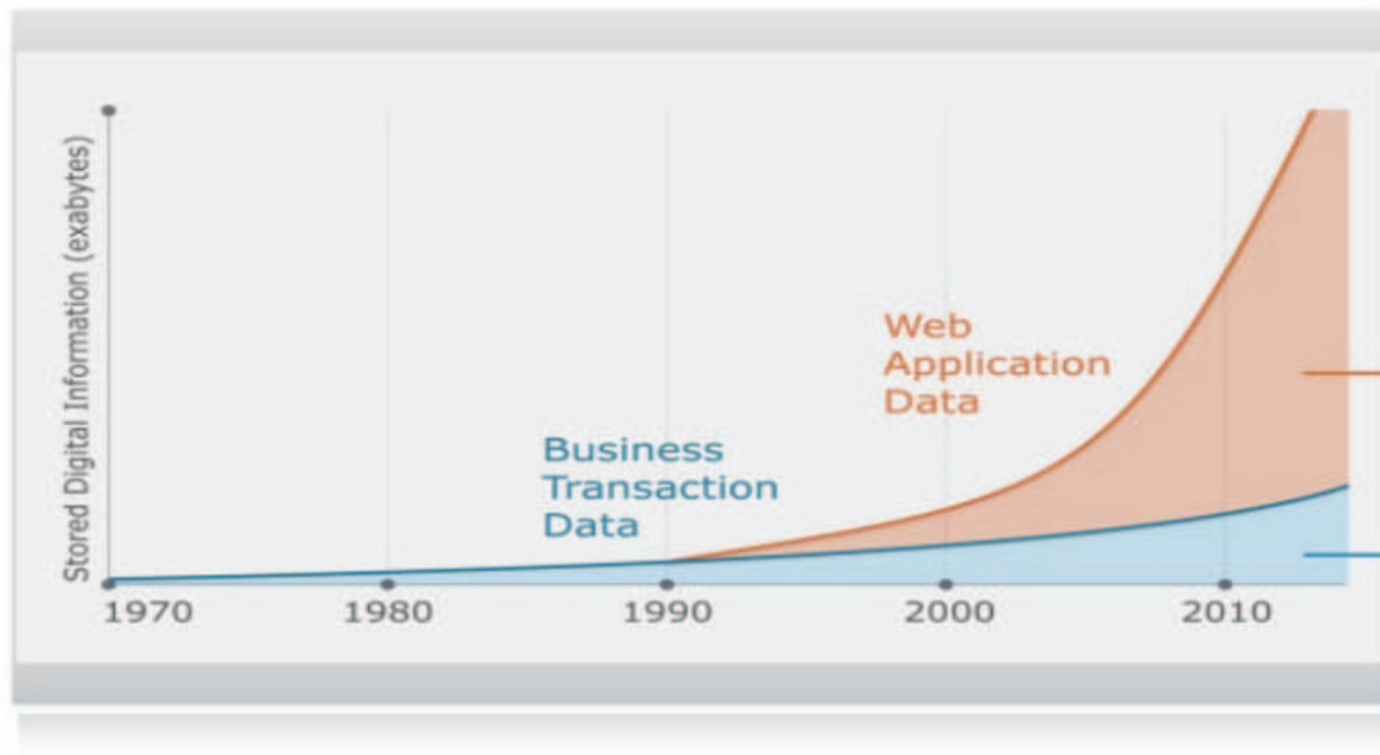
**Gartner**

Gartner, 2011



# BIG Data

## Explosive Growth of Unstructured Data



Interaction data =  
unstructured or  
semi structure data

Transaction data  
=structured data  
= relational data

Source: IDC



WITH NO SIGNS OF SLOWING, THE DATA KEEPS GROWING

These are just some of the more common ways that Internet users add to the big data pool. In truth, depending on the niche of business you're in, there are virtually countless other sources of relevant data to pay attention to. Consider the following:

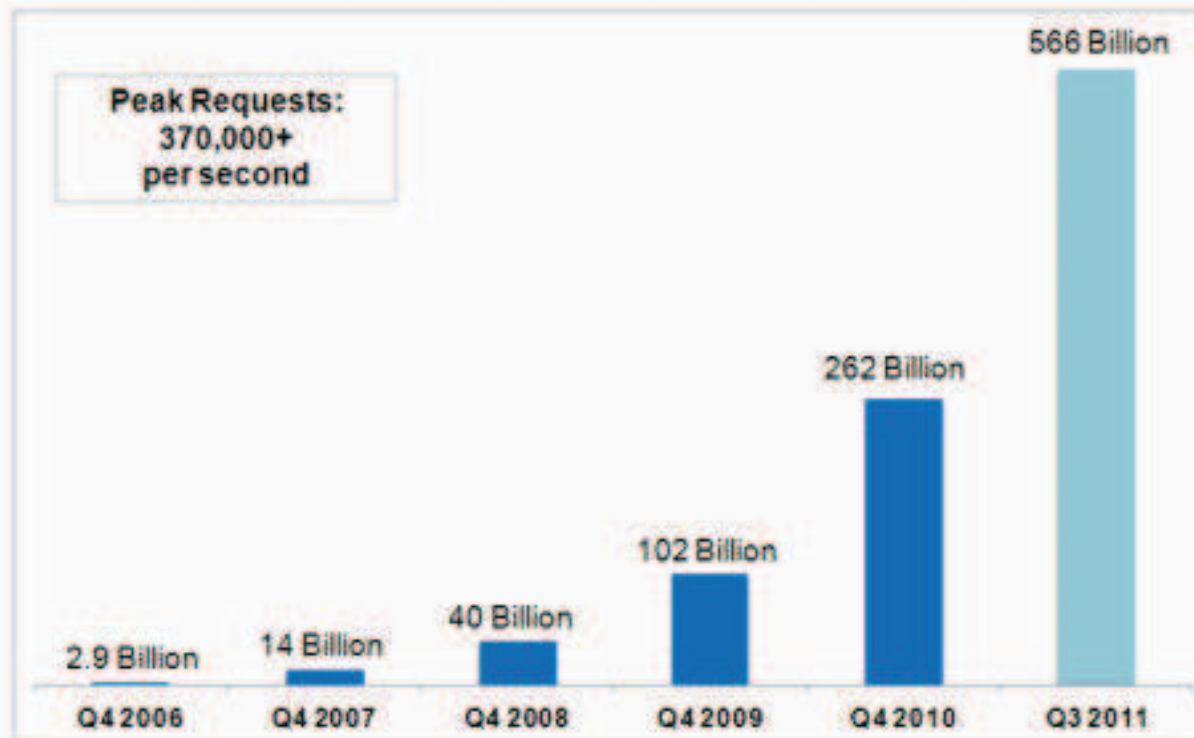
The global Internet population grew 8.59 percent from 2010 to 2011 and now represents

2.1 BILLION PEOPLE.

# AWS Case study

9000% growth in 5 years!

## The Cloud Scales: Amazon S3 Growth



Total Number of Objects Stored in Amazon S3



# Mobile is 24x7 Social Monitoring



**In 12 Year: 2000-2012**  
**the World Population grew 16%**  
**the Internet Population grew 700%**

**INTERNET USAGE STATISTICS**  
**The Internet Big Picture**  
**World Internet Users and Population Stats**

**WORLD INTERNET USAGE AND POPULATION STATISTICS**  
**June 30, 2012**

World Regions	Population ( 2012 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2012	Users % of Table
<u>Africa</u>	1,073,380,925	4,514,400	167,335,676	15.6 %	3,606.7 %	7.0 %
<u>Asia</u>	3,922,066,987	114,304,000	1,076,681,059	27.5 %	841.9 %	44.8 %
<u>Europe</u>	820,918,446	105,096,093	518,512,109	63.2 %	393.4 %	21.5 %
<u>Middle East</u>	223,608,203	3,284,800	90,000,455	40.2 %	2,639.9 %	3.7 %
<u>North America</u>	348,280,154	108,096,800	273,785,413	78.6 %	153.3 %	11.4 %
<u>Latin America / Caribbean</u>	593,688,638	18,068,919	254,915,745	42.9 %	1,310.8 %	10.6 %
<u>Oceania / Australia</u>	35,903,569	7,620,480	24,287,919	67.6 %	218.7 %	1.0 %
<u>WORLD TOTAL</u>	7,017,846,922	360,985,492	2,405,518,376	34.3 %	566.4 %	100.0 %

# Cloud Economy

**CLOUD MARKET TO HIT \$240 BILLION BY 2020  
(\$40B in 2011)**

**X6 in the next 9 years (*Forrester*)**

**By End of 2014 at Least 10 Percent of Enterprise Email Seats Will Be  
Based on a Cloud or Software-as-a-Service Model (Gartner)**

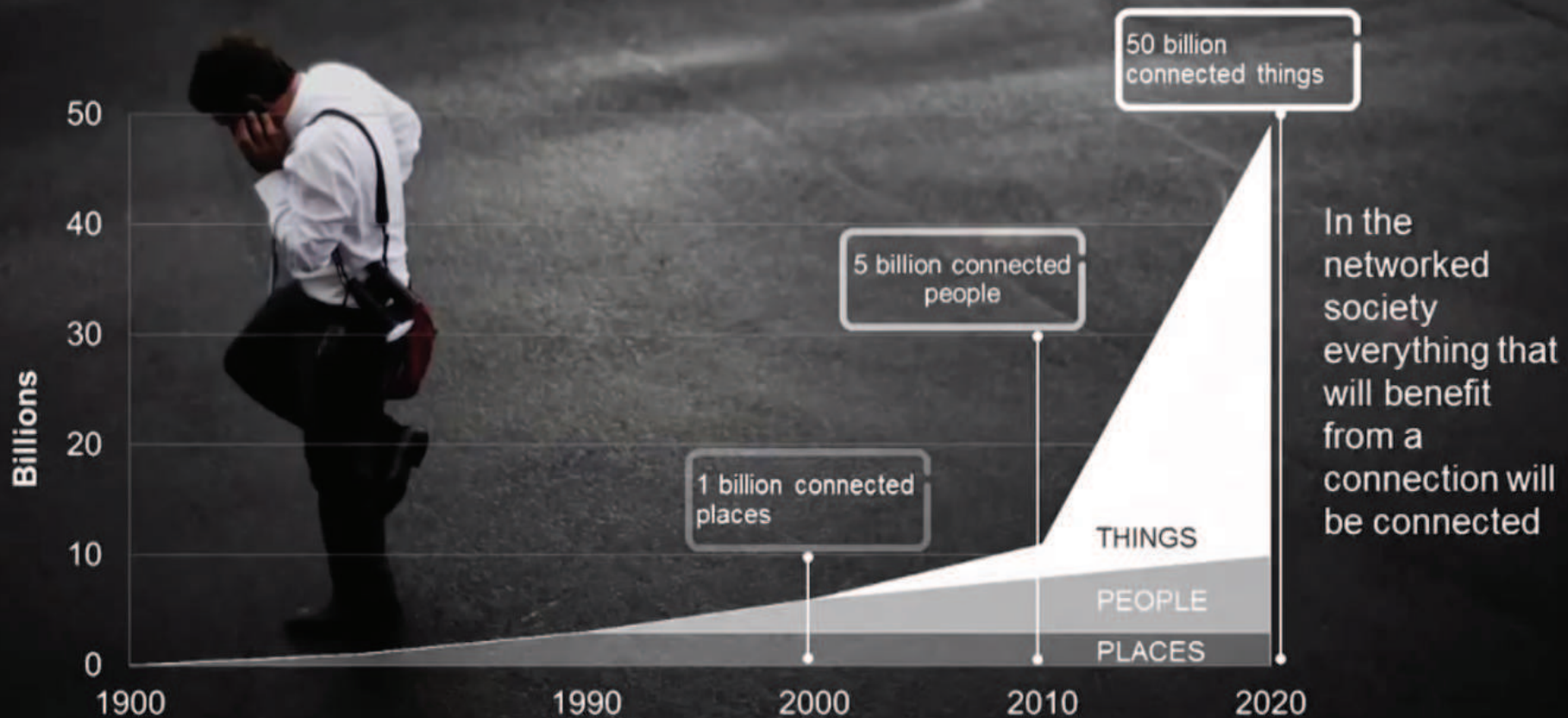
**From 2010 to 2011**

**SaaS based ERP sales increased by 22%**

**SaaS sales in Israel grew 50%**

**Salesforce has +700 customers Israel**

# NETWORKED SOCIETY



**Next Big Thing - Internet Of Things (IoT)**

# Why Telco and Cloud Computing?

Figure 1: Market forecasts from leading research firms

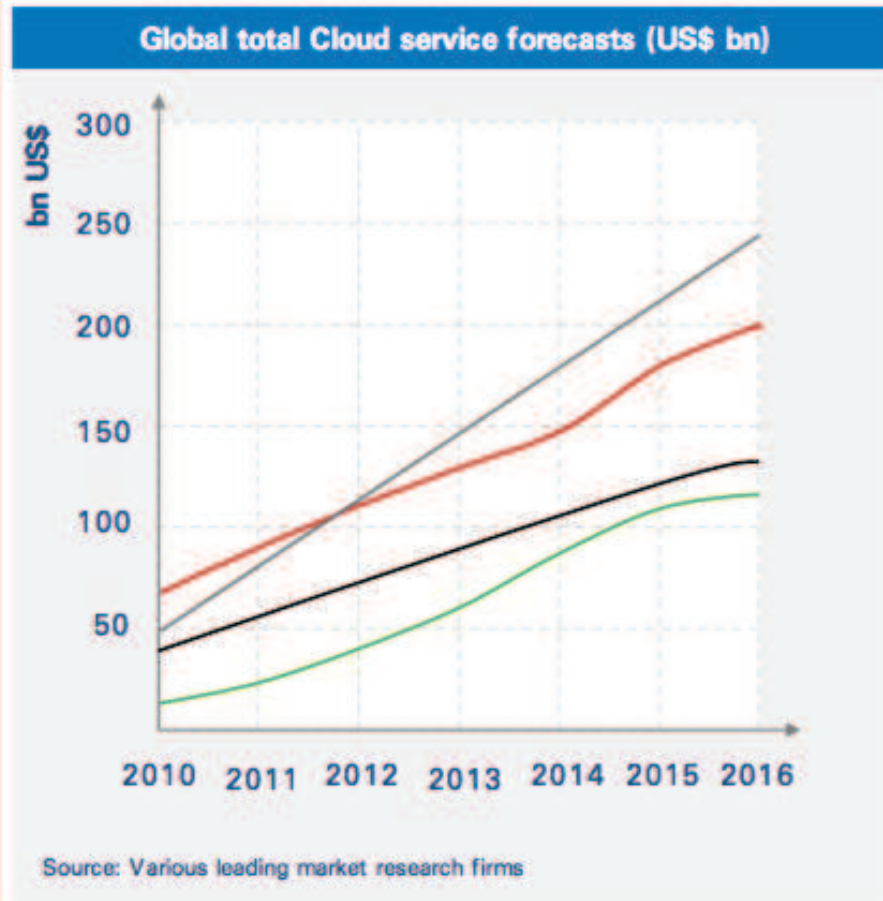
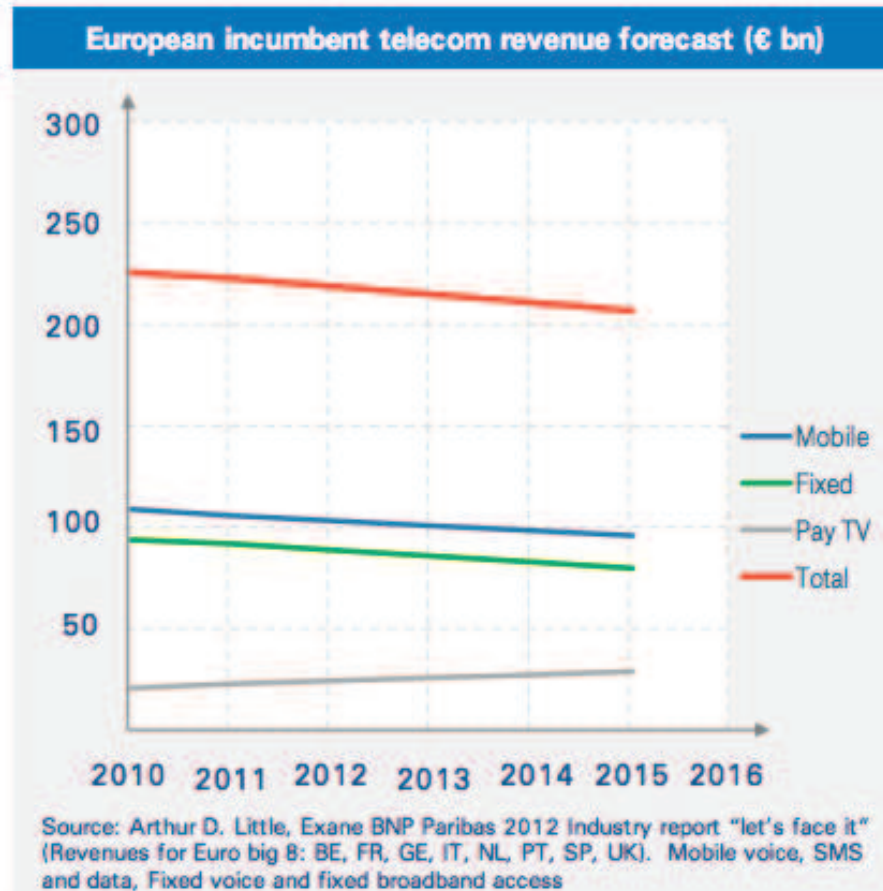


Figure 2: European incumbent TelCo revenue forecasts



# Why Telco and Cloud Computing?

1. Telco have the infrastructure to become Cloud Service Provider (CSP)
2. Fast Networks, Data Centers, IT/PS
3. Telco have existing customers base to start with
4. Telco can create new offerings for new segments like SMBs
5. Every country needs local cloud providers – Latency, Network cost
6. Main Services: DR, Backups, SaaS applications, email/CRM, Bursting
7. Trust, local culture, local regulations/legal



**Figure 5: Select Examples of Telco Foray into Cloud Computing**

	2003-2004	2007-2008	2009-2010	Planned
SaaS	BT Open Orchard  T-Systems Dynamic Services	Telstra T-Suite  Orange IT Plan	NTT Biz Security  Telefónica Aplicateca  TeliaSonera Business Class Cloud Services	
PaaS		T-Systems (Database and Middleware Environments)	SK Telecom Cloud Computing Platform	AT&T  Telstra
IaaS		AT&T Synaptic Hosting  Deutsche Telekom Zimory*	Orange Flexible Computing  Verizon Computing as a Service  AT&T Synaptic Storage and Compute  BT Virtual Data Center	Telecom Italia  NTT

Source: Capgemini TME Strategy Lab Analysis; Company Websites

Note: Deutsche Telekom spun off from Zimory as an independent subsidiary in November 2007

**Figure 6: Categorization of Cloud Offerings from Telcos**

Telcos	SaaS	IaaS	PaaS
BT	✓	✓	✗
Orange Business Services	✓	✓	✗
Deutsche Telekom/T-Systems	✓	✓	✓
TeliaSonera	✗	✓	✗
Belgacom	✗	✓	✗
Telefónica	✓	✓	✗
AT&T	✓	✓	✓ (Planned)
Verizon Business	✓	✓	✗
Telstra	✓	✓	✓ (Planned)
SK Telecom	✗	✓	✓
NTT	✗	✓	✗
Bharti Airtel	✗	✓	✗
Tata Comm	✗	✓	✗

Source: Capgemini TME Strategy Lab Analysis

# Telco Clouds need NaaS Automation and Flexibility

1. **Software Defined Networks (SDN)**  
for real-time management of QoS, BoD
2. **Network Function Virtualization (NFV)**  
to improve economies of scale, scalability, lower Capital Expenditures (CAPEX) and Operating Expenditures (OPEX)



# NFV

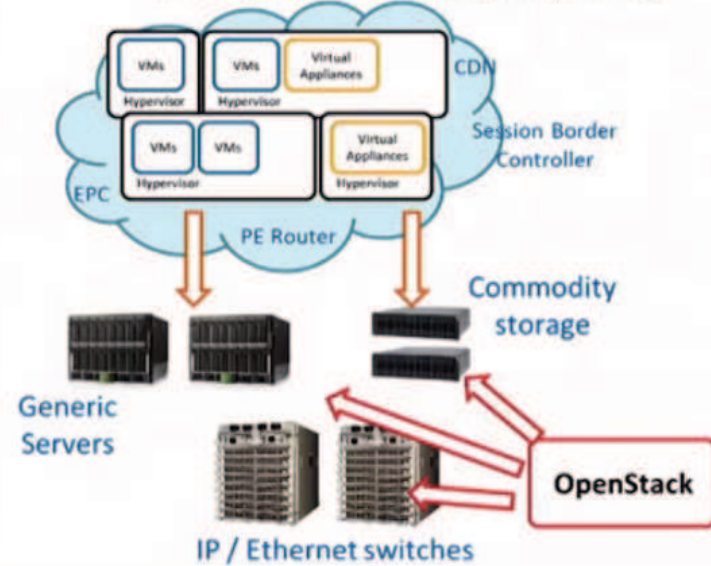


## NETWORK FUNCTION VIRTUALIZATION

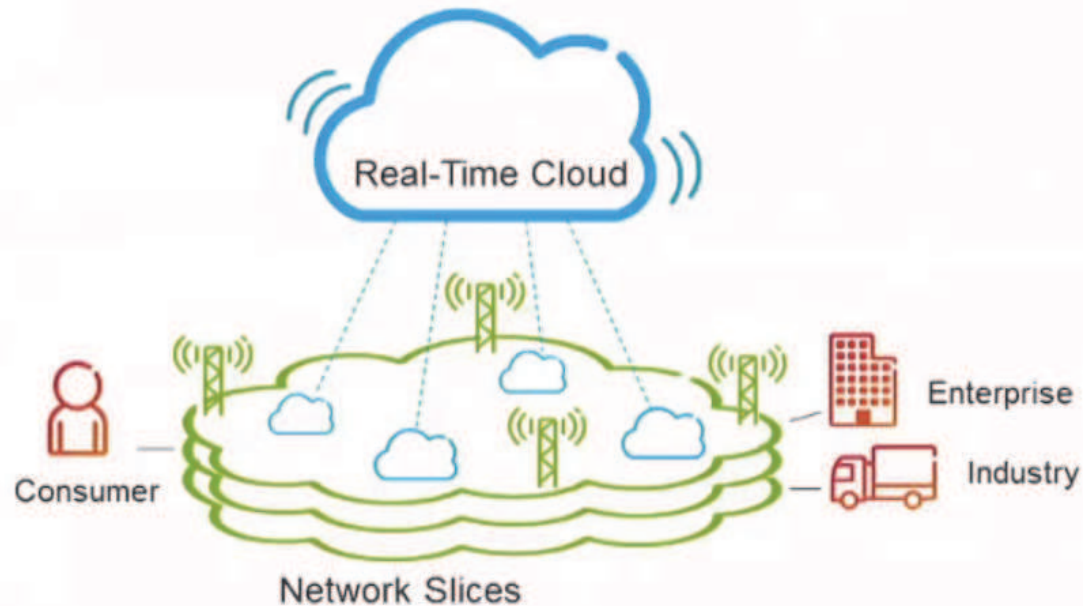
### Physical NW Function (PNF)



### Virtual NW Function (VNF)



# REAL-TIME CLOUD



## CLOUD

- Flexible deployments
- Real time performance
- Virtualized infrastructure

Ericsson Internal | 2014-02-07 | Page 12

## NFV

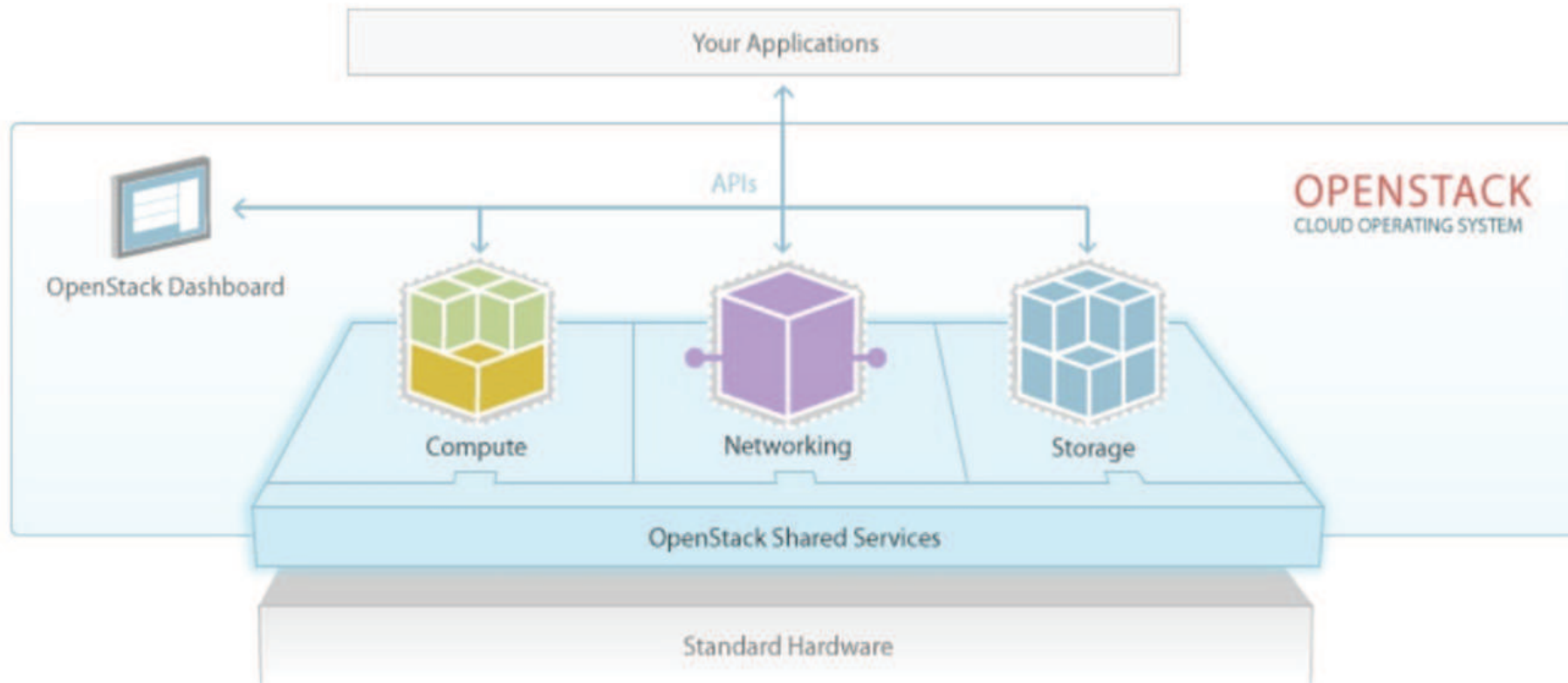
- Relocate VNFs for network efficiency
- Rapid e2e full service deployment
- Virtualized network functions

## SDN

- Service chaining
- Automatic connectivity orchestration
- Virtual networking

# Open Cloud Standards

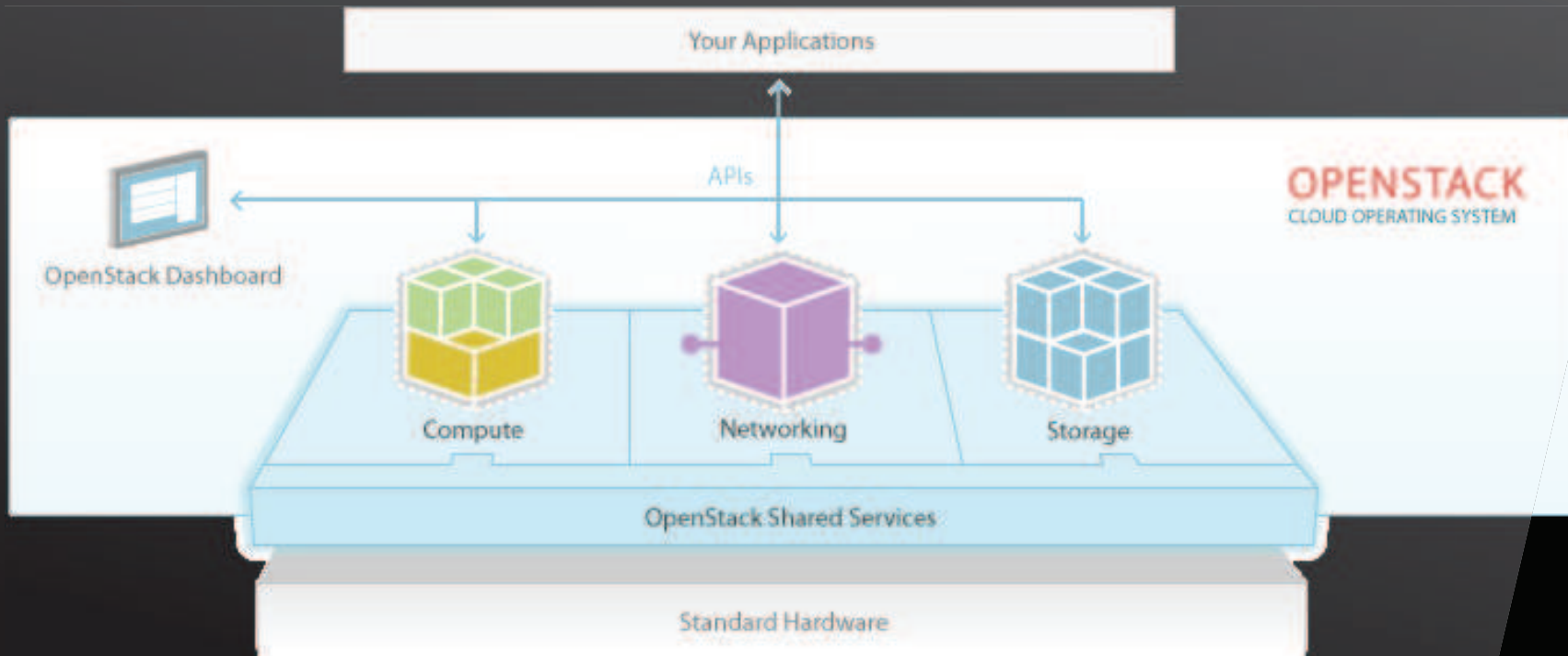
## OpenStack (IaaS)



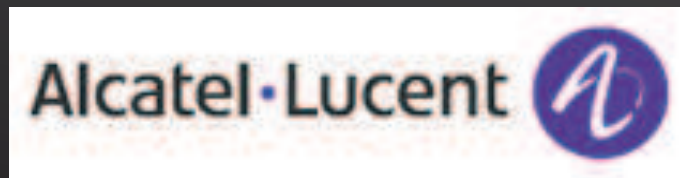
# OpenStack in Israel



Alcatel-Lucent



IGT Members  
Cloud R&D in Israel – International Companies

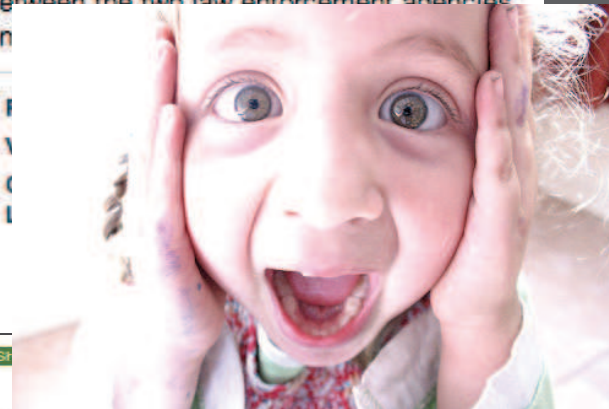


# What about Security?

## Hackers Breach FBI, Scotland Yard



FBI launches investigation into group called Anonymous after it releases what is purported to be a 15-minute conference call between the two law enforcement agencies on



2 February 2012 Last updated at 16:12 GMT

664

### Hackers outwit online banking identity security systems



By Spencer Kelly  
Click presenter

Criminal hackers have found a way round the latest generation of online banking security devices given out by banks, the BBC has learned.

After logging in to the bank's real site, account holders are being tricked by the offer of training in a new "upgraded security system".

Money is then moved out of the account but this is hidden from the user.



Since banks brought in "two-factor" authentication, official figures have shown fraud fell significantly

# Cloud Security

**Is the cloud more secure?**

**Can we trust the Cloud?**

**Can I afford not to?**

# עצות ענן למנהל המחשוב

1. בנה תוכנית עבודה לניצול יתרונות הענן עבור הארגון שלך
2. בכל בקשה להצעה בקש גם הצעה מבוססת ענן והשווה עלות / תועלת / לו"ז
3. בדוק איזה מידע ניתן לשמור בענן (מגבלות חוקיות / רגולציות)
4. בדוק שירותי ענן ל- DR
5. בדוק שירותי ענן לפיתוח תוכנה ובדיקות תוכנה
6. מפה את האפליקציות העסקיות של הארגון ובדוק אלטרנטיבות מבוססות SaaS
7. בקש מספק הענן רשימת תקנים להם הוא מחוייב (אבטחת מידע / PCI וכו')
8. בקש מחיר מיוחד לתקופה
9. בדוק שירותי גיבוי נתונים מהענן אליך
10. בדוק שירותי אינטגרציה של אפליקציות קיימות לשירותי ענן
11. בדוק משמעות העברת אפליקציות קיימות לענן



**Thank you!**

**[avner.algom@cloud.org.il](mailto:avner.algom@cloud.org.il)**

**[www.meetup.com/IGTCloud](http://www.meetup.com/IGTCloud)**