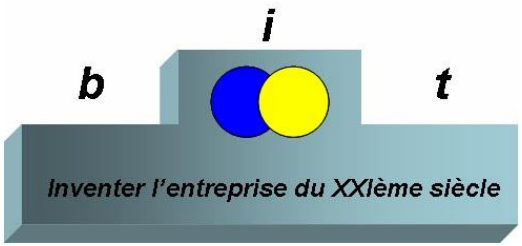
# Business & Information Technology Group




## *Cloud Computing & Saas*

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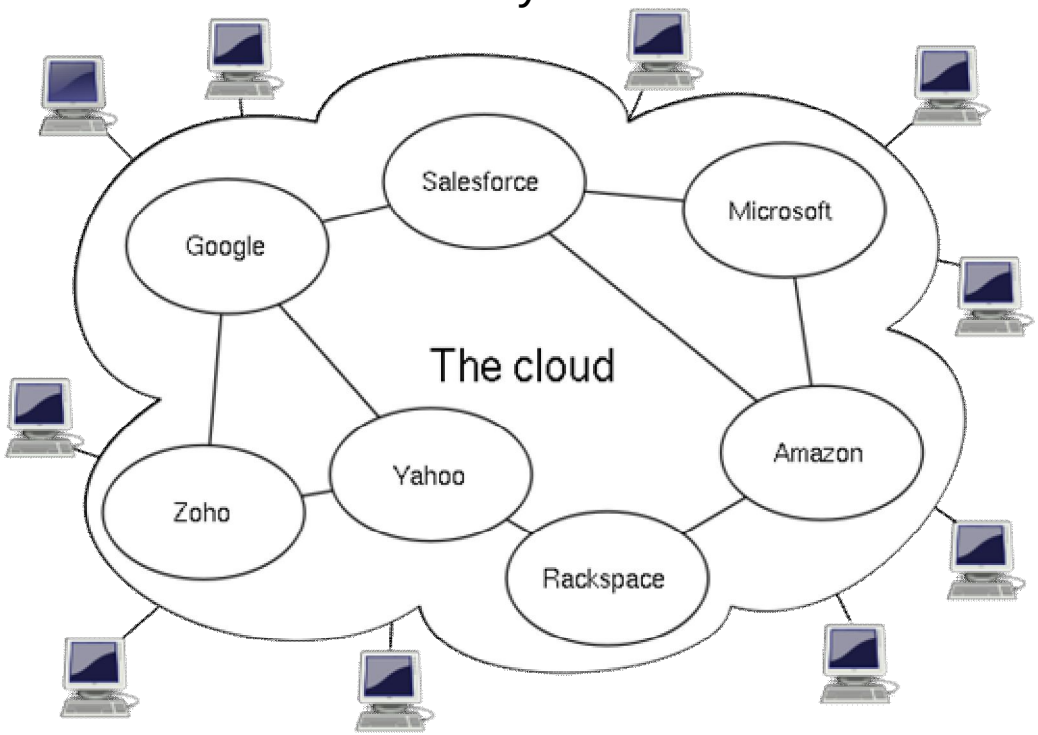
# Agenda

- Cloud définition
- Saas maturity
- Bit Group Vision
- Cloud « Stack »
- Broadband evolution
- Conclusion

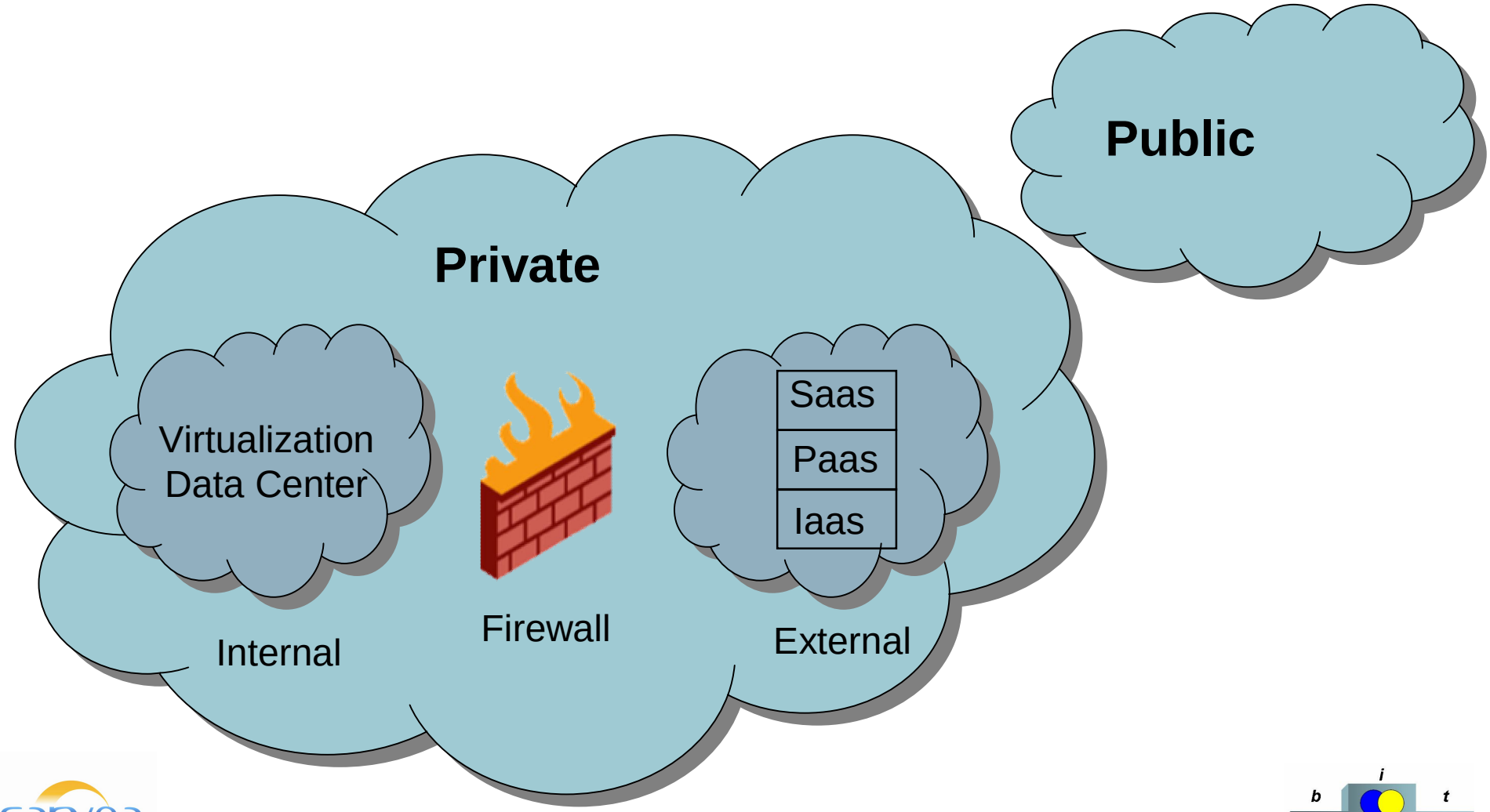
# What is Cloud Computing ?

**Cloud computing** is the provision of dynamically scalable and often virtualised resources as a service over the Internet on a utility basis.



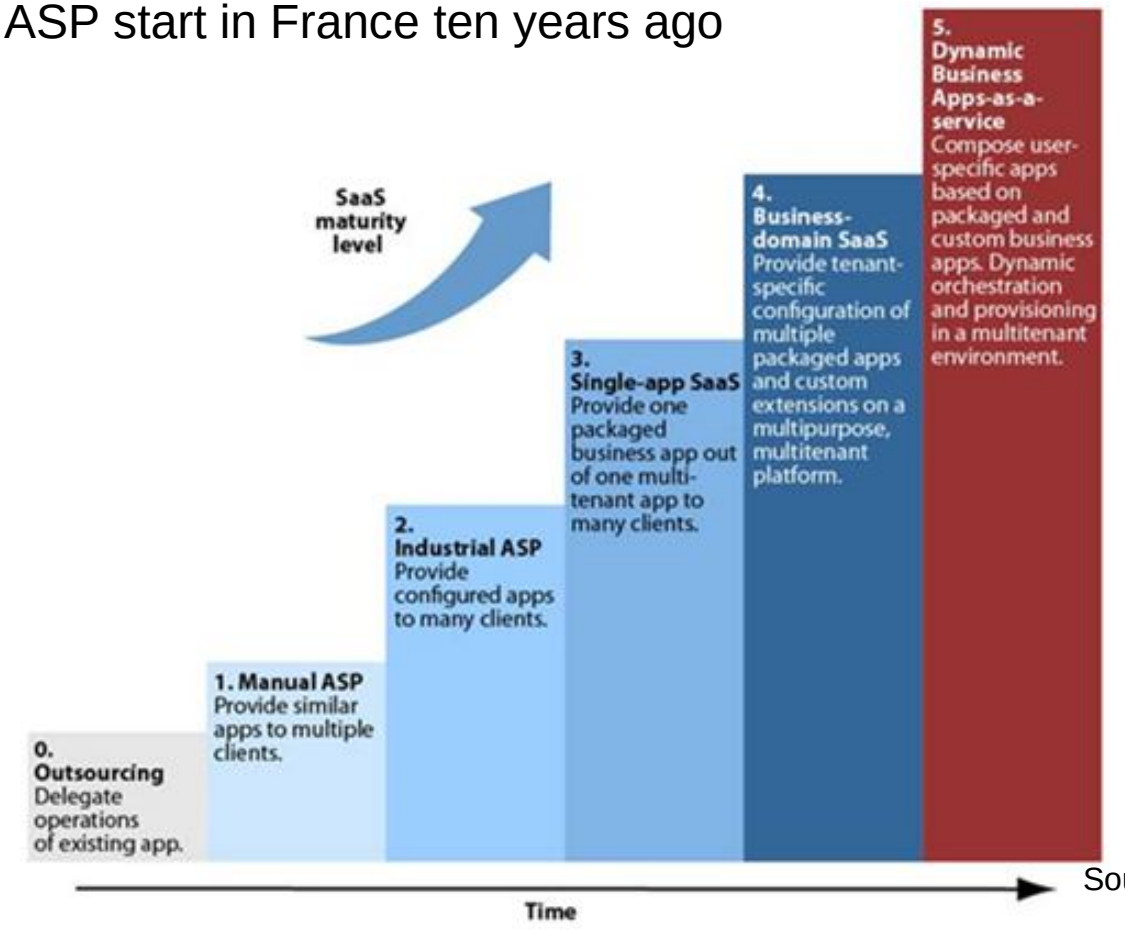

… **virtualized compute power and storage** delivered via platform-agnostic infrastructures of abstracted hardware and software accessed over the Internet. These shared, **on-demand IT** resources, are created and disposed of efficiently, are dynamically scalable through a variety of programmatic interfaces and are billed variably based on measurable usage.

# Cloud Computing
# Public ou Corporate



# History of Saas : 5 levels of maturity

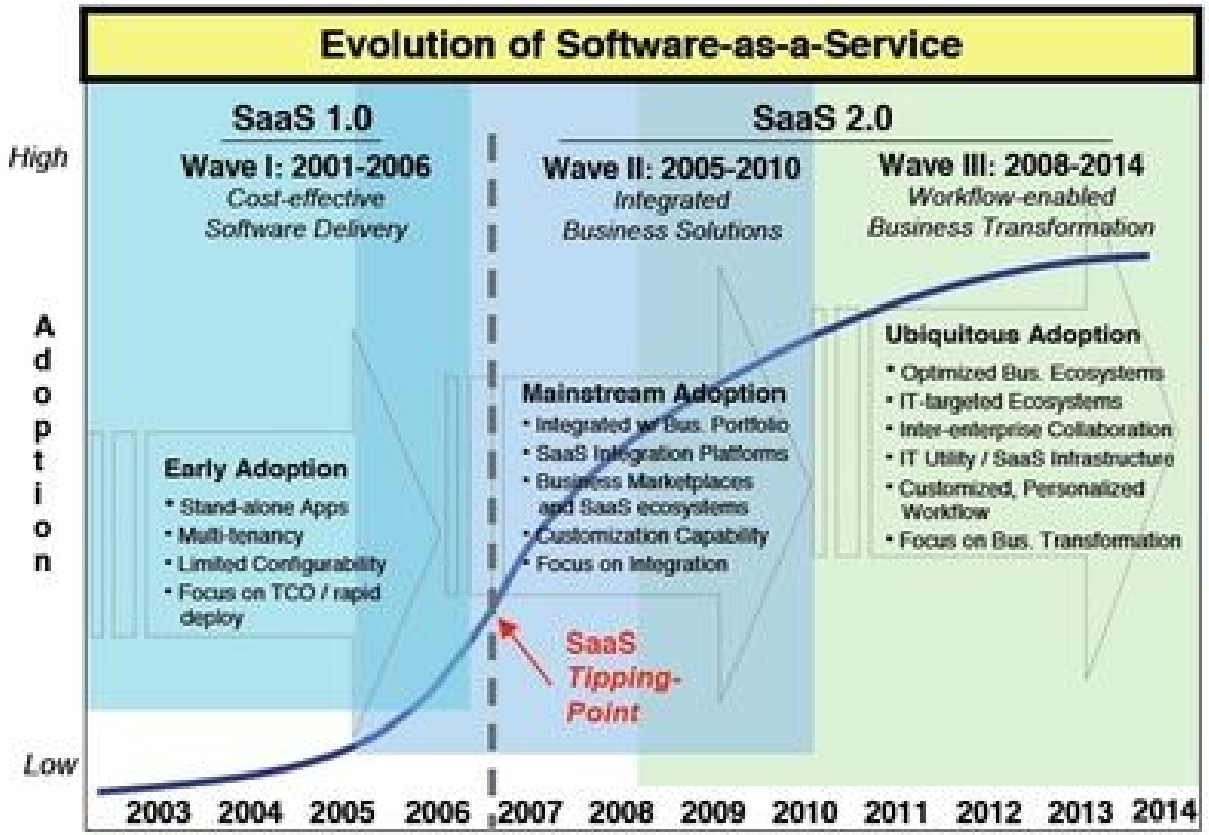
- Stand alone ASP start in France ten years ago




Source : Forrester

# Three Waves of adoption

- We crossed the "**tipping point**" about 3 years ago

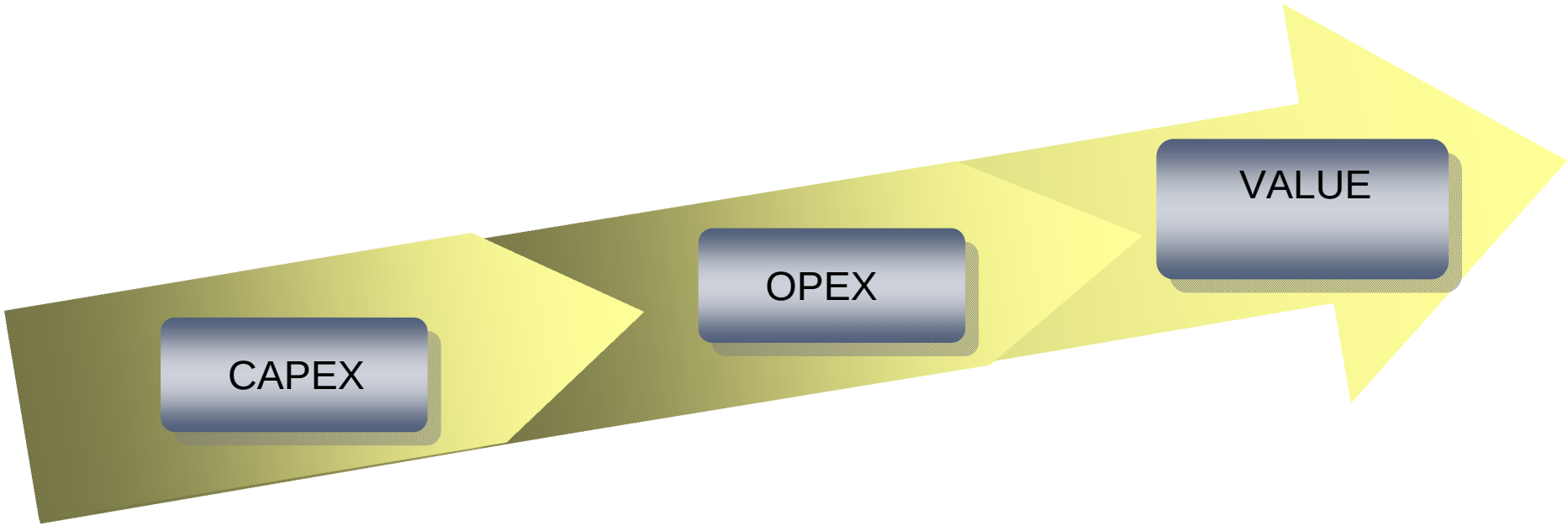



Source: Saugatuck Technology

# Colo vs. Managed vs. Cloud Hosting

| | Colocation | Managed | Cloud |
|---|---|---|---|
| ***Time*** | Weeks to Months | Days to Weeks | Minutes |
| ***Scalability*** | Slowest, Rigid & Costly | Slower, somewhat flexible, Costly | Instant, Flexible, Pay-per-usage |
| ***Cost*** | High CapEx | Costly, sometimes month/year contracts, no CapEx | No contracts, usage based, no upfront costs |
| ***"Green"*** | Low | Low | High - virtualized |
| ***Pricing model*** | Buy Servers & Colo costs whether used or not | Rent Servers & Hosting costs whether used or not | Rent based on usage only |

# Cloud Computing roadmap: three Steps




**Cost reduction** → **Innovation Investment**

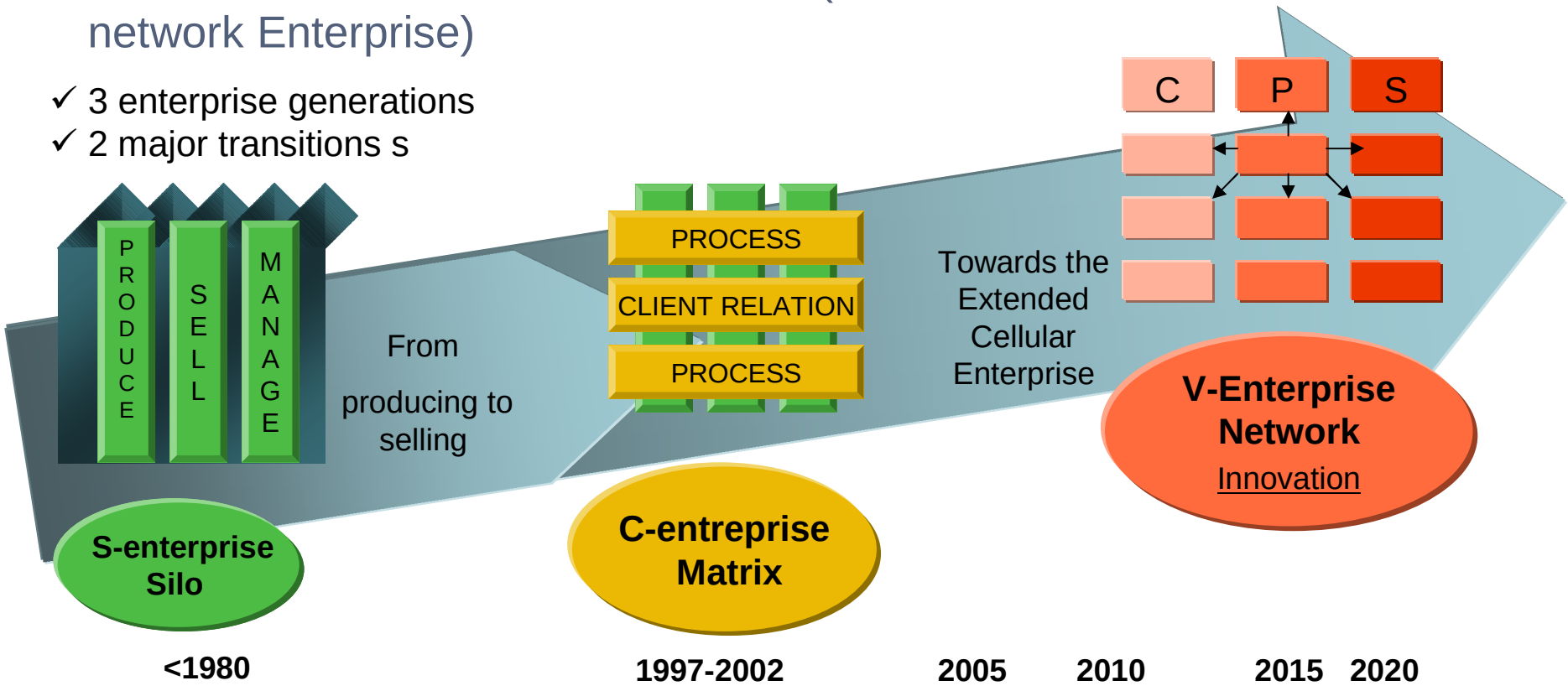
# ENTERPRISE CAP 2020®

## BIT Group's strategic vision for the organizations, the finance and IS/IT functions and IS

INTUG

The Organizations' "horizontalization" process and its two generational transitions : 1980/2000 & 2000/2020 (From silo matrix to the cell network Enterprise)

- ✓ 3 enterprise generations
- ✓ 2 major transitions s




carvea consulting

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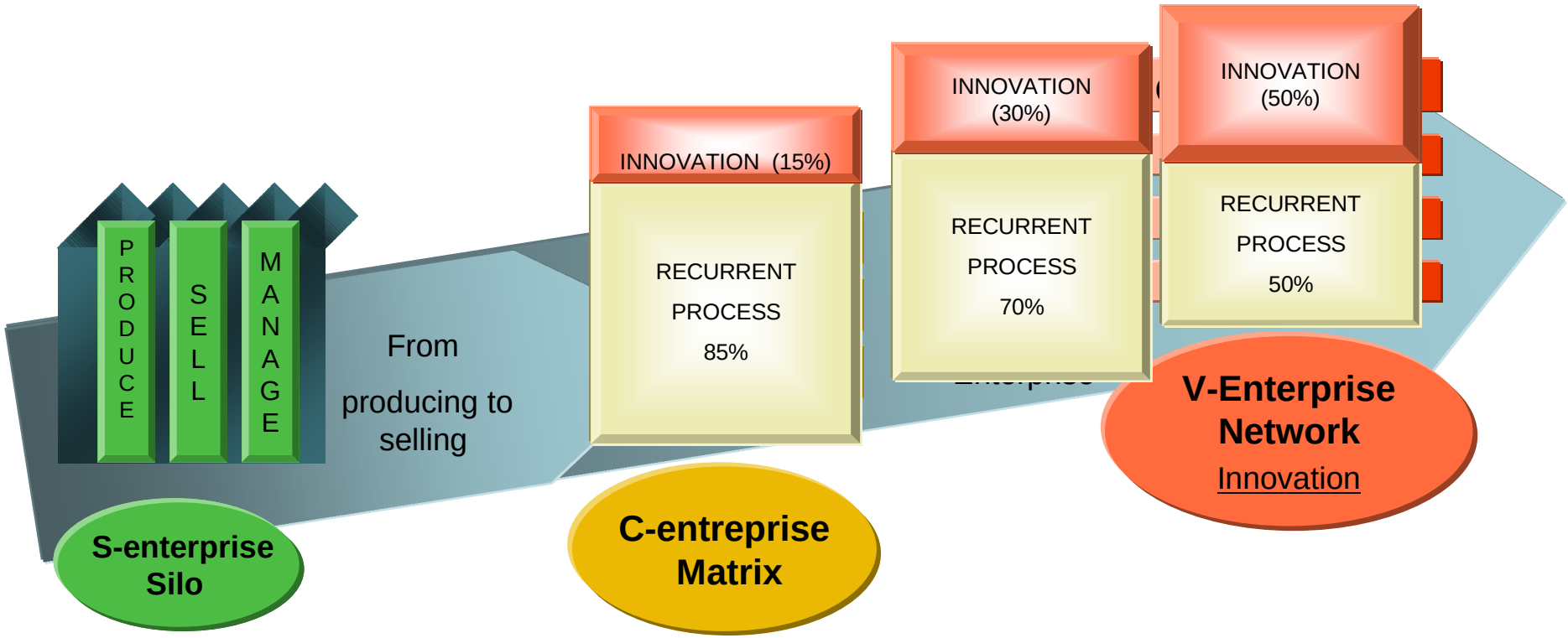
Inventer l'entreprise du XXIème siècle

# ENTERPRISE CAP 2020®

## BIT Group's strategic vision for the organizations, the finance and IS/IT functions and IS

**« Cloud Computing is a Journey »**

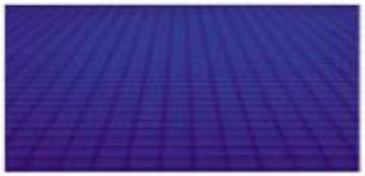


# Cloud computing and technology

- Virtualization technology, distributed storage, broadband Internet access , inexpensive servers have all combined to make cloud computing a compelling paradigm.

**Grid Computing**

- Solving large problems with parallel computing
- Made mainstream by Globus Alliance



**Utility Computing**

- Offering computing resources as a metered service
- Introduced in late 1990s

**Software as a Service**

Network-based subscriptions to applications

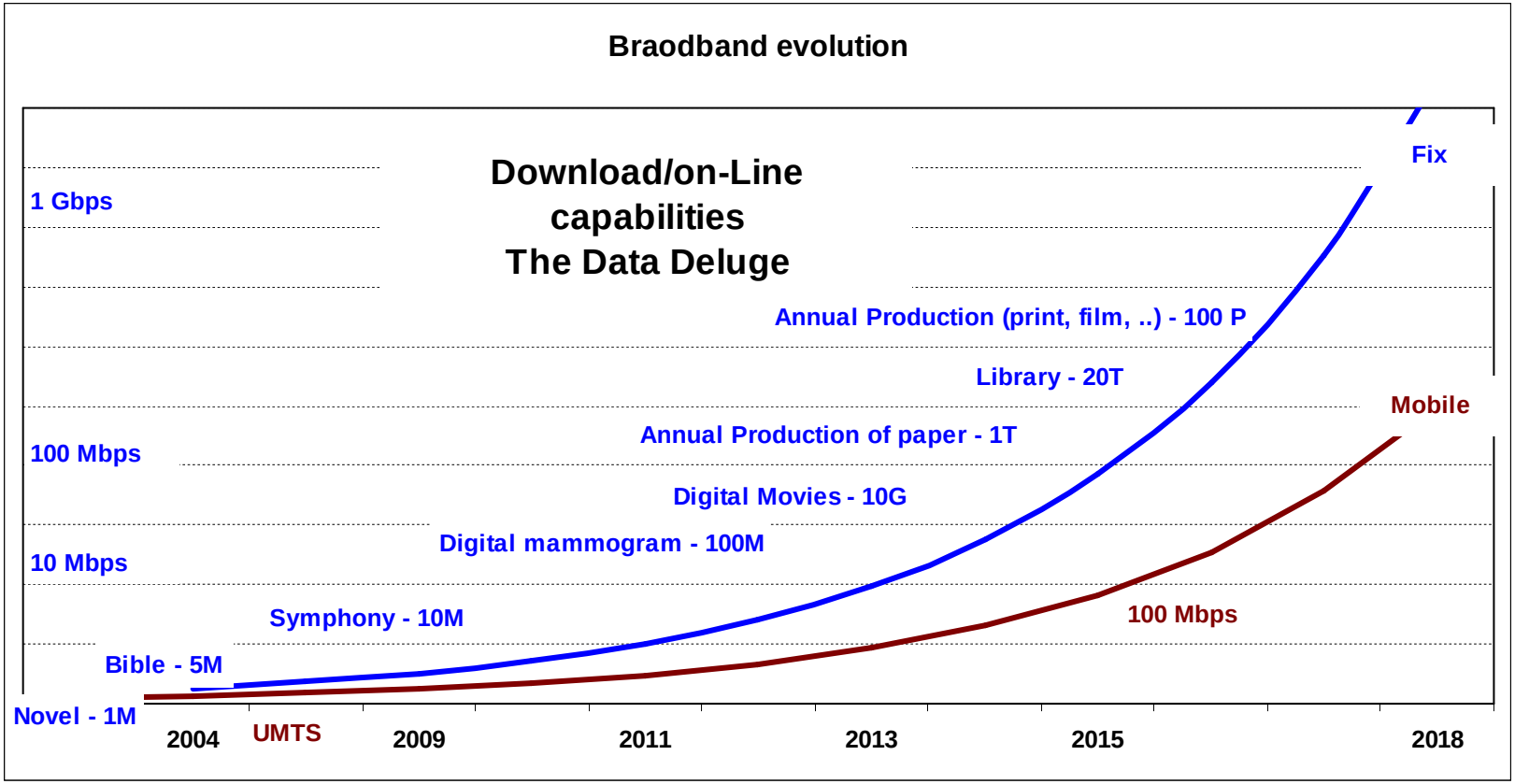
Gained momentum in 2001

**Cloud Computing**

Next-Generation Internet computing

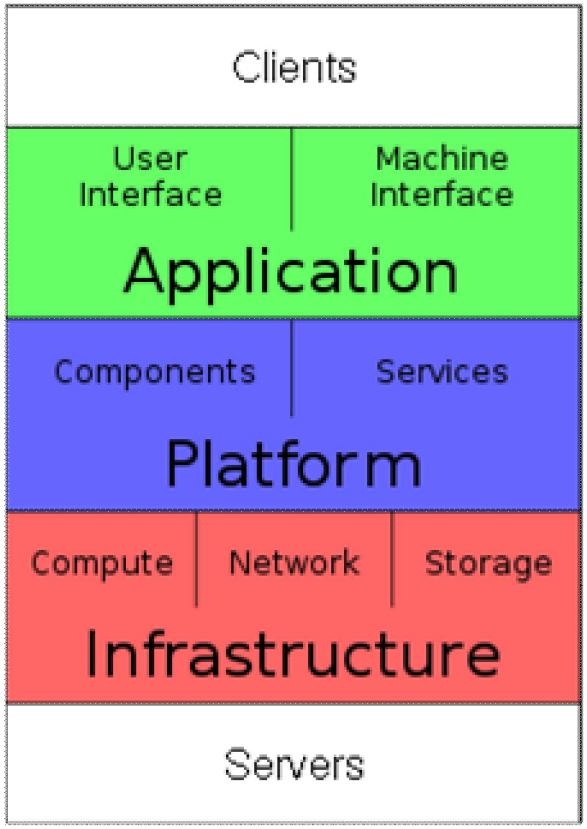
Next-Generation Data Centers

# The data deluge and broadband evolution




Source Carvea Consulting

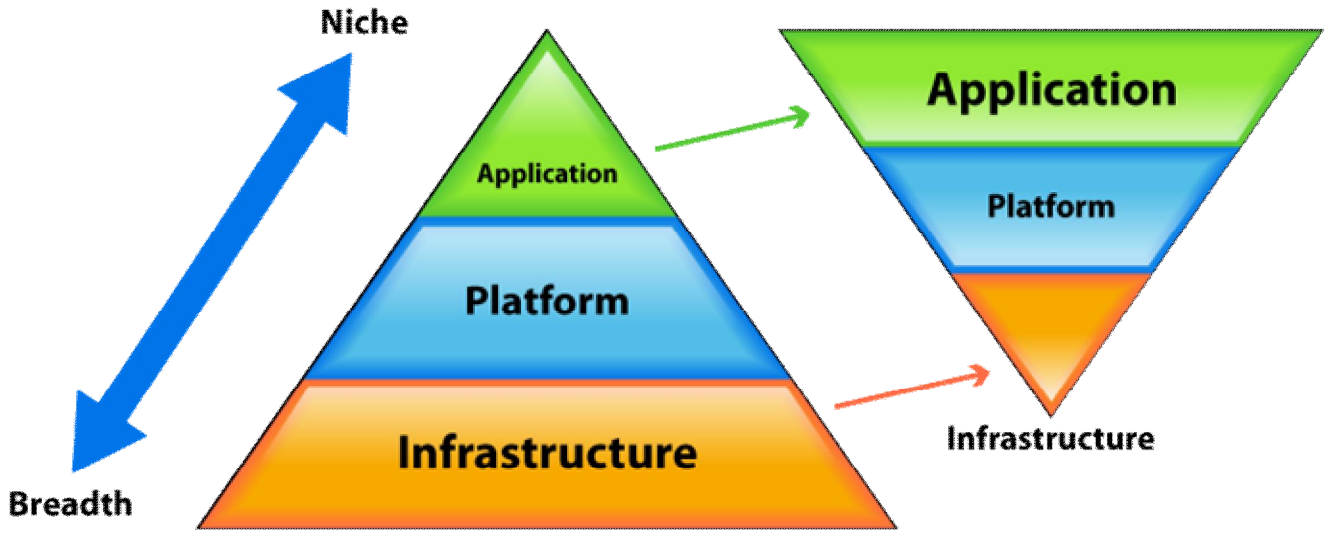
# Cloud Computing stack




| | |
|---|---|
| **SaaS** | **salesforce.com,** |
| **PaaS** | **Force.com** |
| **IaaS** | **Amazon, SunGard** |

# The “Cloud Pyramid” Inversed

- 1000’s of Cloud Applications currently
- Handful of Cloud Platforms
- Elite group of Cloud Infrastructure providers



# Cloud “Applications”

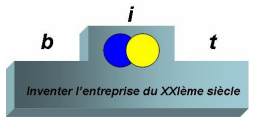
- SaaS resides here
- Most common Cloud / Many providers of different services
- Examples: SalesForce, Gmail, Yahoo! Mail, Quicken Online
- Advantages: Free, Easy, Consumer Adoption
- Disadvantages: Limited functionality, no control or access to underlying technology

# Cloud “Platforms”

- “Containers”
- “Closed” environments
- Examples: Google App Engine, Heroku, Mosso, Engine Yard, Joyent or Force.com (SalesForce Dev Platform)
- Advantages: Good for developers, more control than “Application” Clouds, tightly configured
- Disadvantages: Restricted to what is available, other dependencies

# Cloud “Infrastructure”

- Provide “Compute” and “Storage” clouds
- Virtualization layers (hardware/software)
- Examples: Amazon EC2, GoGrid, Amazon S3, Nirvanix, Linode
- Advantages: Full control of environments and infrastructure
- Disadvantages: premium price point, limited competition



# Cloud Journey, some questions ?

- **Strategic and organization for the « Cloud »**
  - What is the user autonomous to avoid « Shadow IT » with public Cloud ?
  - Internal/ External Cloud ?
- **Humans Resources**
  - New organization and new skills to manage the cloud
- **Process**
  - Change Management
- **Governance**
  - Who is accountable for what kind of IT services ?

# Thank you for your attention

# Contact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