



The cloud as a vehicle for innovation in the financial industry

Belgian Finance Club

25 February 2019

Agenda



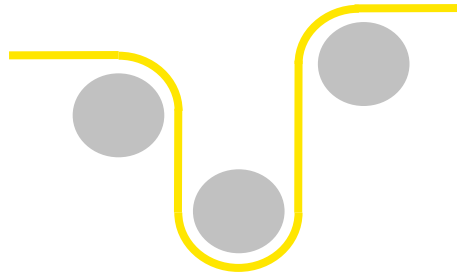
1. Why?
2. How?
3. What?
4. Who, when?

The cloud is a vehicle for innovation in the financial services industry



Three major innovation domains: (1) improvement of customer facing services, (2) optimization of product operations, finance and risk management, and (3) workforce innovation.

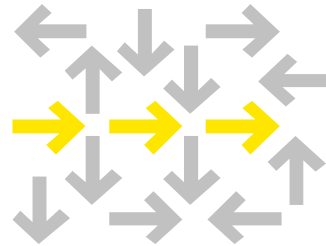
Deliver a new (improved) service, or existing service to a new market.



Customer Intimacy

- ▶ Real time
- ▶ Any Time Any Where Any Time,
- ▶ Advanced personalization
- ▶ Chatbot
- ▶ Open Ecosystem integration
- ▶ Integration with IoT

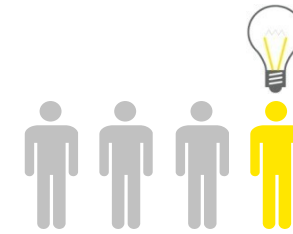
Optimize processes, enhance integration capabilities, extend the power of data



Operational Excellence

- ▶ Radically reduce finance liquidity processing time
- ▶ Raise compute utilization from 10% to actual units consumed for Risk Analytics
- ▶ Rapid provisioning of compute power for Valuation Services
- ▶ Advanced analytics
- ▶ From RPA to Smart Automation

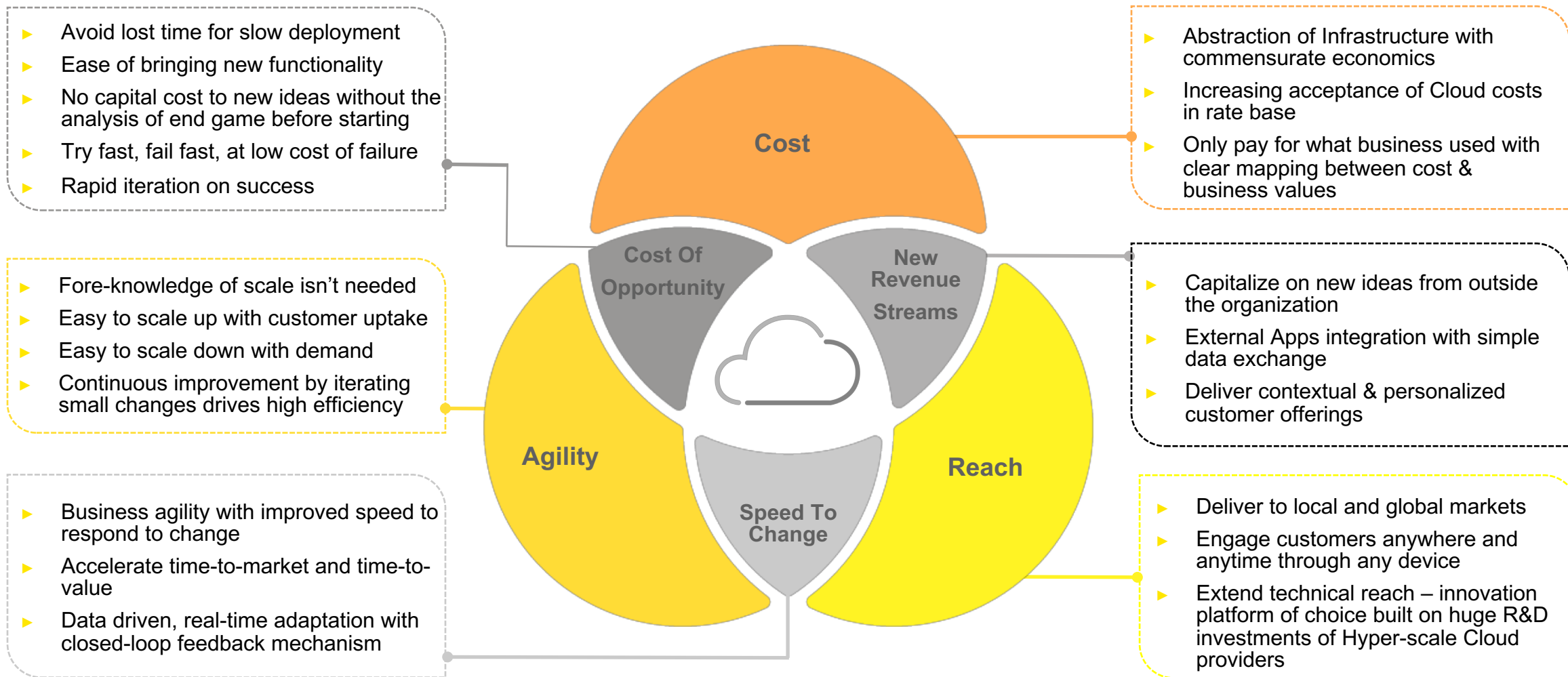
Arming your people with the best tools to increase productivity.



Collaboration

- ▶ Implement new technology applications based on user requirements and increasing mobility demand
- ▶ Improve end user driven collaboration (maximize productivity)

Innovation stems from reduced costs, increased agility and reach



The cloud enables to transform hardware into software, with the concept of infrastructure as code



```
provider "hcp" {  
  region = "eu-west-1"  
}
```

Datacenter

```
resource "hcp_dbs_cluster_instance" "my-postgresql" {  
  count = 2  
  identifier = "${var.environment}-my-postgresql-  
  ${count.index}"  
  cluster_identifier = "${hcp_dbs_cluster.my-  
  postgresql.id}"  
  db_subnet_group_name = "${hcp_db_subnet_group.my-  
  postgresql.name}"  
  engine = "cloud-postgresql"  
  engine_version = "10.4"  
  instance_class = "db.r4.large"  
}
```

2 Large
Machines

```
resource "hcp_dbs_cluster" "my-postgresql" {  
  cluster_identifier = "${var.environment}-my-postgresql"  
  engine = "cloud-postgresql"  
  engine_version = "10.4"  
  db_subnet_group_name = "${hcp_db_subnet_group.my-postgresql.n  
  database_name = "demodb"  
  master_username = "root"  
  master_password = "verysecure"  
  vpc_security_group_ids = ["sg-demo"]  
  storage_encrypted = true  
}
```

Encrypted
Database

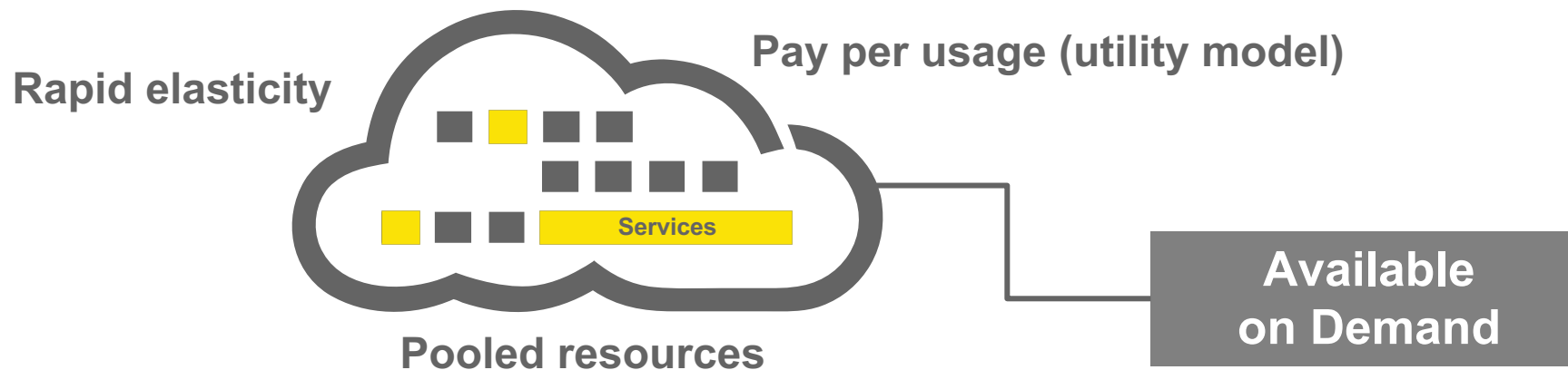
```
resource "hcp_db_subnet_group" "my-postgresql" {  
  name = "${var.environment}-my-postgresql"  
  subnet_ids = ["a-subnet-id"]  
}
```

Private
Network

How does it work?

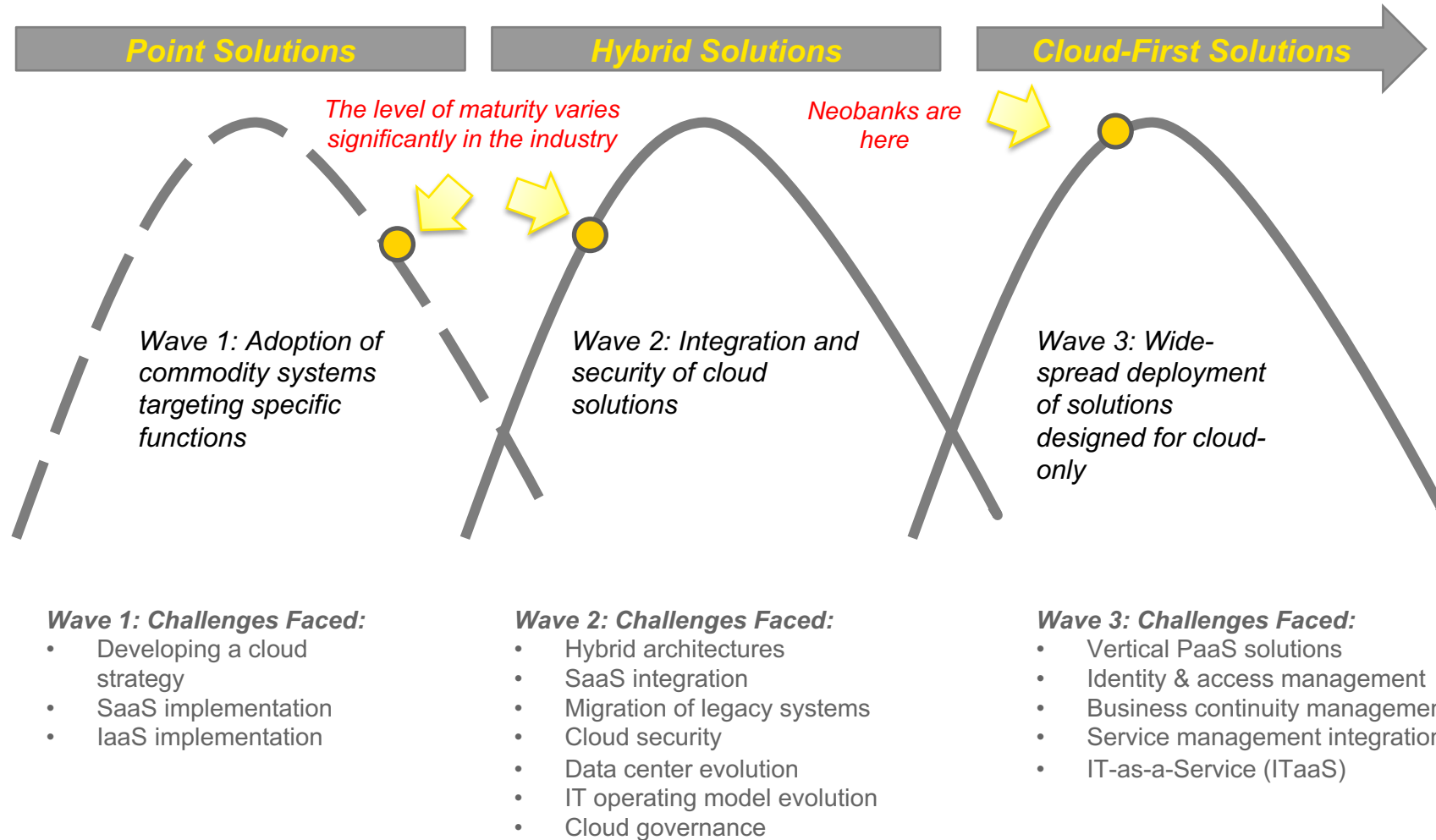


Cloud computing is a new paradigm where resources are available on-demand and on a pay-per-use basis to enterprises and users.



- ▶ Cloud computing uses the internet to access someone else's software running on someone else's hardware in someone else's data center.
- ▶ Industry swings between centralized computing models (mainframe of 1960s) to host-centric ones ("client-server" technology of 1980s). Cloud computing is a logical extension of the dot-com era web app - further enabled by advances in bandwidth, datacenter architecture, and large-scale storage.
- ▶ There are five defining characteristics of cloud computing: **on-demand, broadly accessible, pooled, elastic, and metered.**

We believe that cloud adoption will undergo three major waves of adoption





CLOUD ADOPTION ROADBLOCKS

While Cloud is well-supported by regulators, adoption in the banking industry stays low. Here are some of our key findings:

01

Clarity over regulatory compliance

What controls are required to be compliant across regions?
How do I evidence compliance?
How do I keep on top of changing regulations?

02

Data classification and data governance

How do I classify data?
How do I handle different classifications?
What controls do I need to cover the entire data lifecycle?

03

Operational risk management

How do I monitor and manage the flow of data in & out?
How do I manage the proliferation of shadow IT?
How do I measure and report the operational risk?



Thank you