Stairways to the Cloud
A Customer Experience
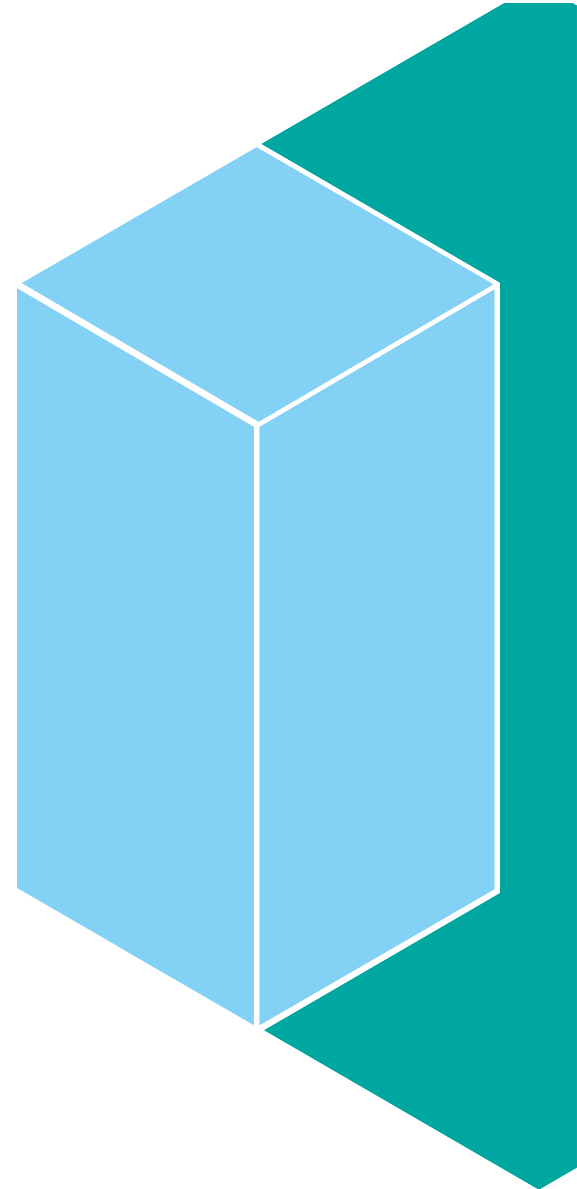
Sharpen your competitive edge
2016 IMS Technical Symposium
March 7 – 10, 2016
Wiesbaden, Germany

www.ims-symposium.com

Agenda

- **BNP Paribas Presentation by Abdelhakim LOUMASSINE**

- **Project Presentation: Rethink our development cycle by Eric BARTOLONE**

BNP PARIBAS — The bank for a changing world

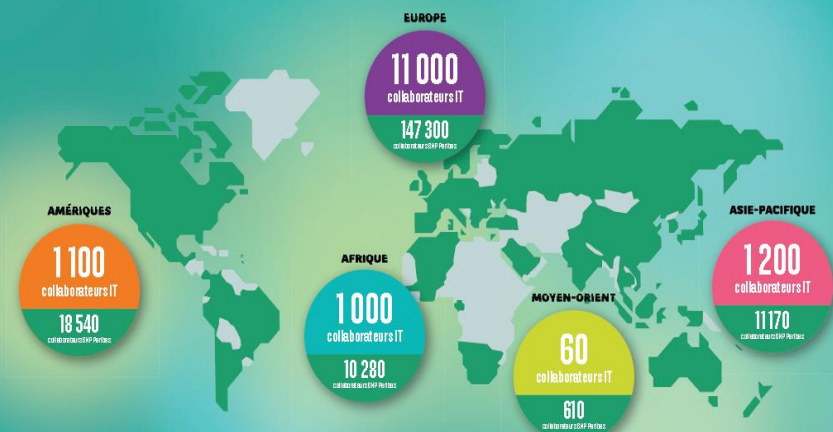# RETAIL BANKING & SERVICES

Domestic Markets

French Retail Banking
Retail Banking in Italy
Retail Banking in Belgium
Retail Banking in Luxembourg
Arval
Leasing Solutions
Personal Investor

International Financial Services

International Retail Banking
Personal Finance
BNP Paribas Cardif
BNP Paribas Wealth Management
BNP Paribas Investment Partner
BNP Paribas Real Estate

CORPORATE & INSTITUTIONAL BANKING

BNP Paribas Securities Services
Global Markets
Corporate Banking

L'IT DE BNP PARIBAS DANS LE MONDE

EUROPE
11 000 collaborateurs IT
147 300 collaborateurs BNP Paribas

AMÉRIQUES
1 100 collaborateurs IT
18 540 collaborateurs BNP Paribas

AFRIQUE
1 000 collaborateurs IT
10 280 collaborateurs BNP Paribas

MOYEN-ORIENT
60 collaborateurs IT
610 collaborateurs BNP Paribas

ASIE-PACIFIQUE
1 200 collaborateurs IT
11 170 collaborateurs BNP Paribas

L'IT DE BNP PARIBAS

CHIFFRES CLÉS*

12 Métiers IT

48 Pays

32 000 m^2 de Datacenter

5 000 Applications

14 300 Collaborateurs internes IT
dont 5 000 en France

700 Recrutements / an (inclus CDD, stagiaires et alternants)

26 000 Serveurs

*Données 2014

Project GOAL: Rethink our development & test cycle

- **Decrease the resources currently allocated and machine consumption average**

- **Optimize the workload of non-production environments.**
  - reduce / rationalize / remove mainframe operations tasks
    - For example, test batch running in integration environment with complete databases resources
  - OK for new business

- **Deliver environments of quality, offering autonomy and flexibility for carrying out the tests.**

Main tasks to meet the goals

- **Task #1 : redefine the lines of business and business activities.**

- **Task #2 : Create and duplicate environments for the integration test phase within in a short timeframe.**

- **Task #3 : Restore the qualification environment to its original role : the validation of the project delivery.**

Specifications

↓

Development

↓

Unit Tests

↓

Integration Tests
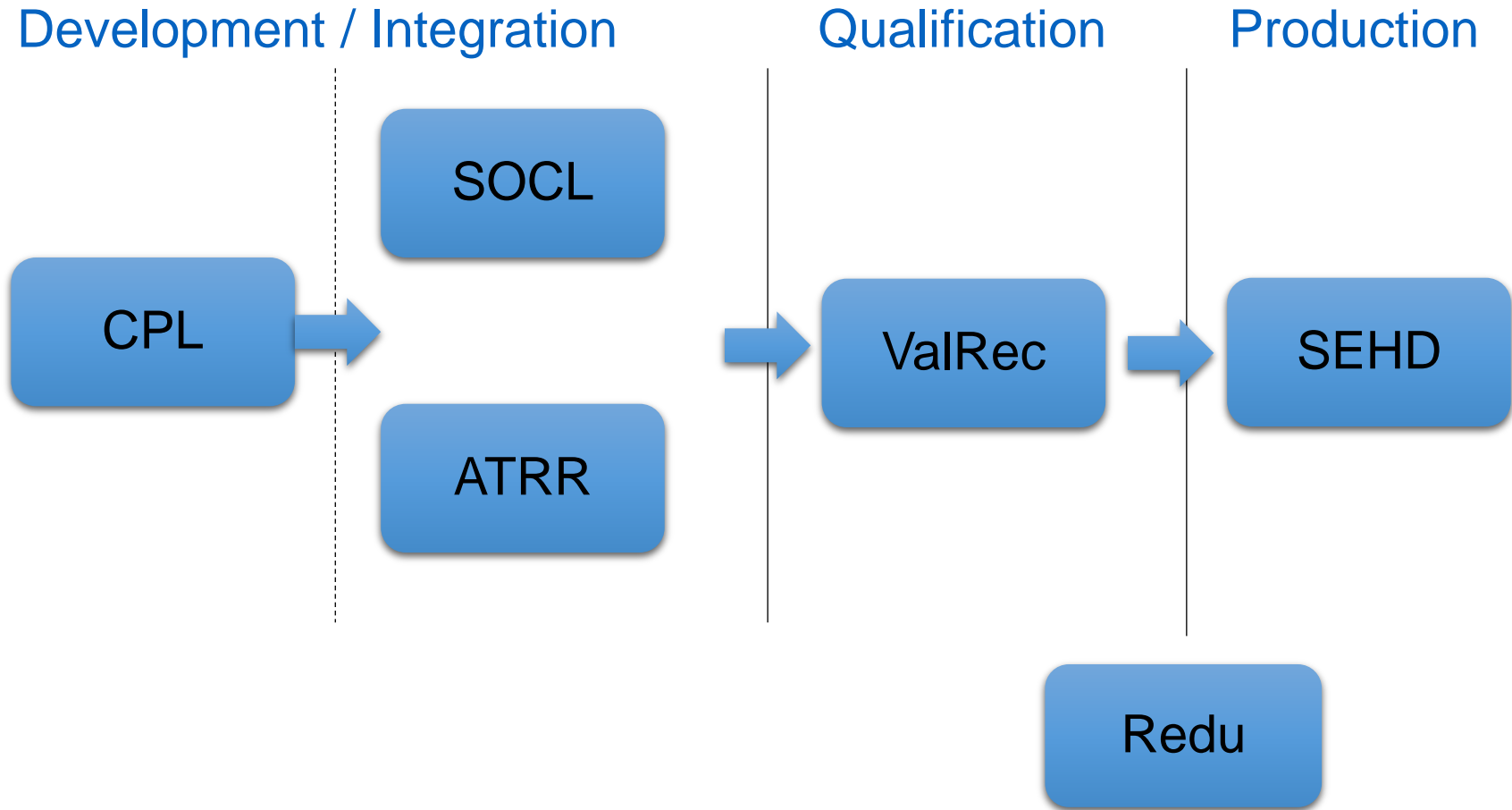
↓

Qualification

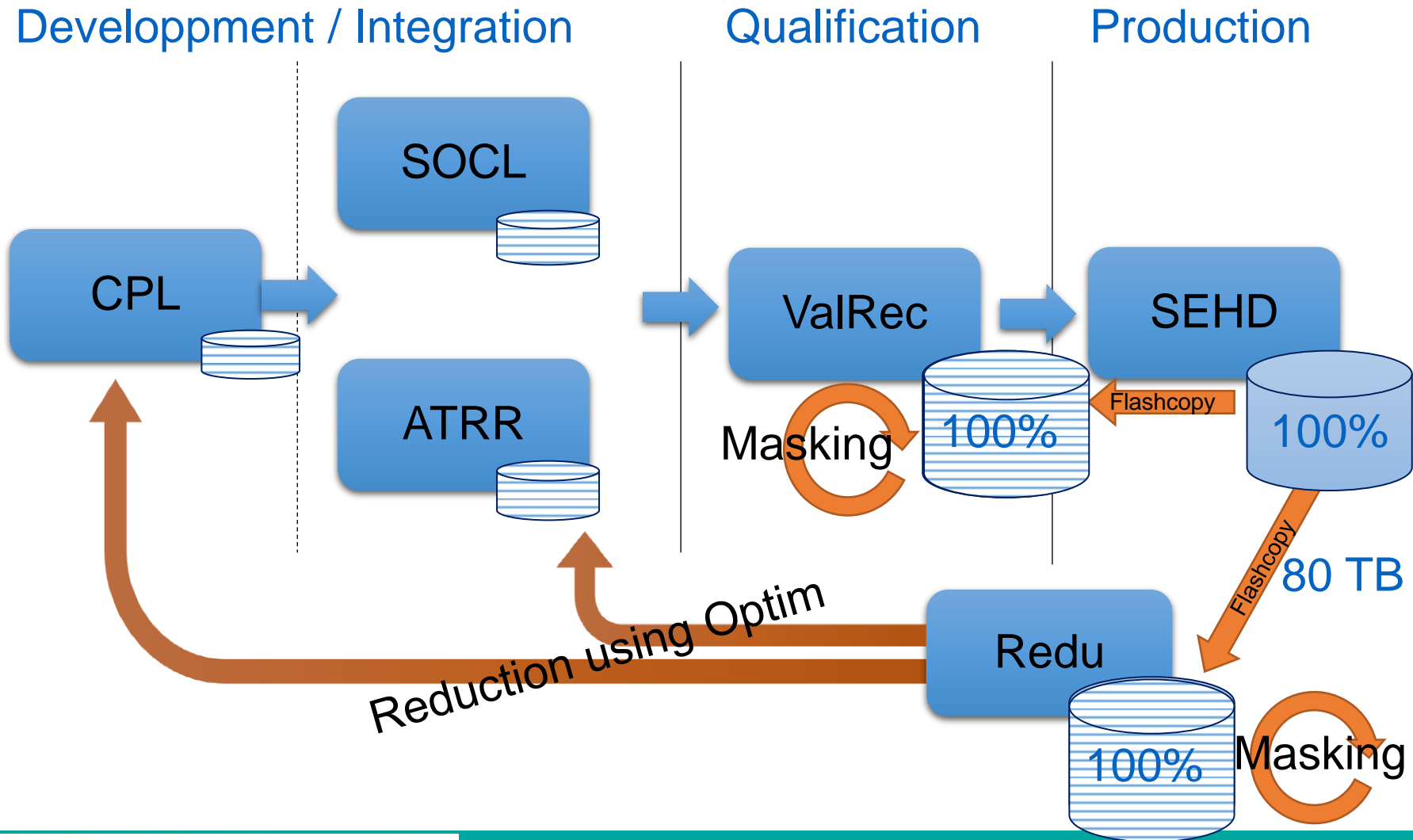↓
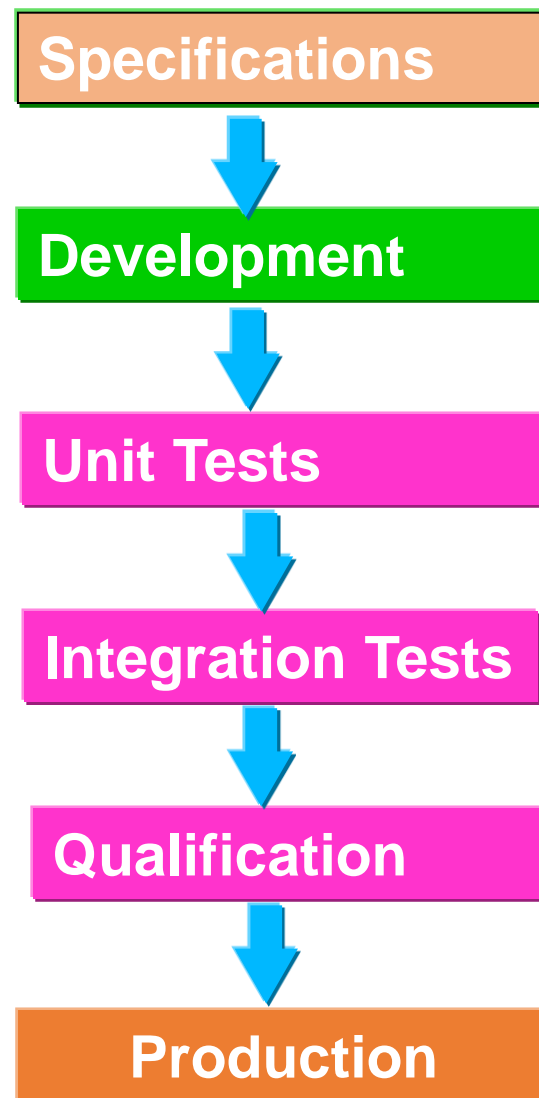
Production

Focus on Qualification

- **Non-production and production partitions sharing the same machine (GCL). Done at first for:**
  - Cost reduction
  - Cpu usage optimisation.

- **Secure the production when all partitions request CPU:**
  - reviewing the Workload Policy → priority to business
  - applying the following action plan on non production partition when CPU is required:
    - Lower the Define Capacity
    - Transaction stop
    - Critical path batch stop

Actual Mainframe Environments & Applications life cycle

Development / Integration   Qualification   Production

SOCL

CPL →

ATRR

→ ValRec → SEHD

Redu

Data/Files & Masking

Developpment / Integration   Qualification   Production

SOCL

CPL

ATRR

ValRec

SEHD

Masking   100%   Flashcopy   100%

Reduction using Optim

Redu

Flashcopy   80 TB

100%   Masking

Challenge #1 : System fundation

▪ **Provide an automated and reproducible procedure:**
  – To build an environment with a set of applications
  – For the integration phase.
  – Within a short timeframe.
  – GOAL in 2 days !

▪ **Part done by IT provider :**
  – Partition provisioning (CPU, Memory, Disk Space) & System Installation (z/Os)
  – Software Installation
    • Subsystems: IMS, DB2, CICS, MQ
    • Products (PDSMAN)
    • Security (Racf or Top Secret)
    • Databases ("create table",...)
  – System connectivity
    • Network (IP, Firewall ,CFT , MQ, IMS Connect,...)

# Challenge #2 : Application fundation « IS Core »

- **Part done by LOB Integration team**

- **Create a base application called "IS Core":**
  - reduced in details (but compliant)
  - planned and managed.

- Line of Business should provide:

  - Applications (code)

  - Application dependencies (Child and Parents Path)

  - Data reduction rules

  - Starting consideration (empty table/files)

  - Schedule rules (ie Cut-off)

- Integration teams will do the installation & startup

  - ~~Not necessary skilled to manage this task alone.~~

CoreAp1

CoreData

CoreAp2

File / Stream

CoreApx

Sheduling
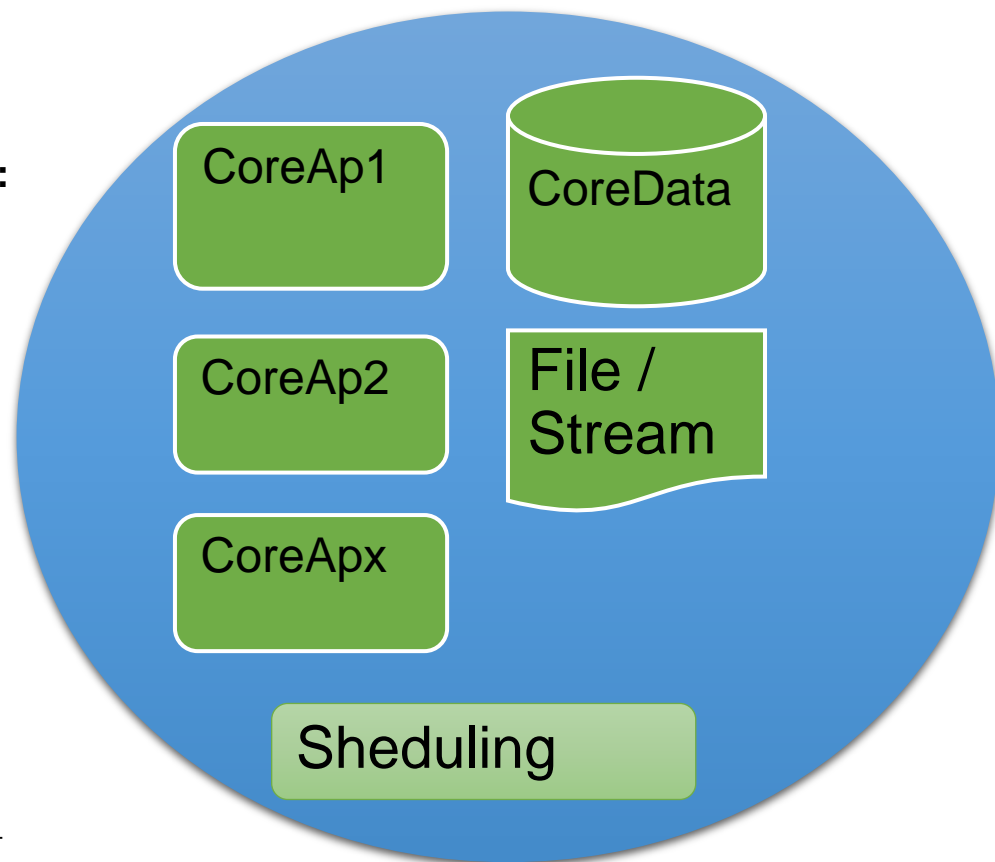
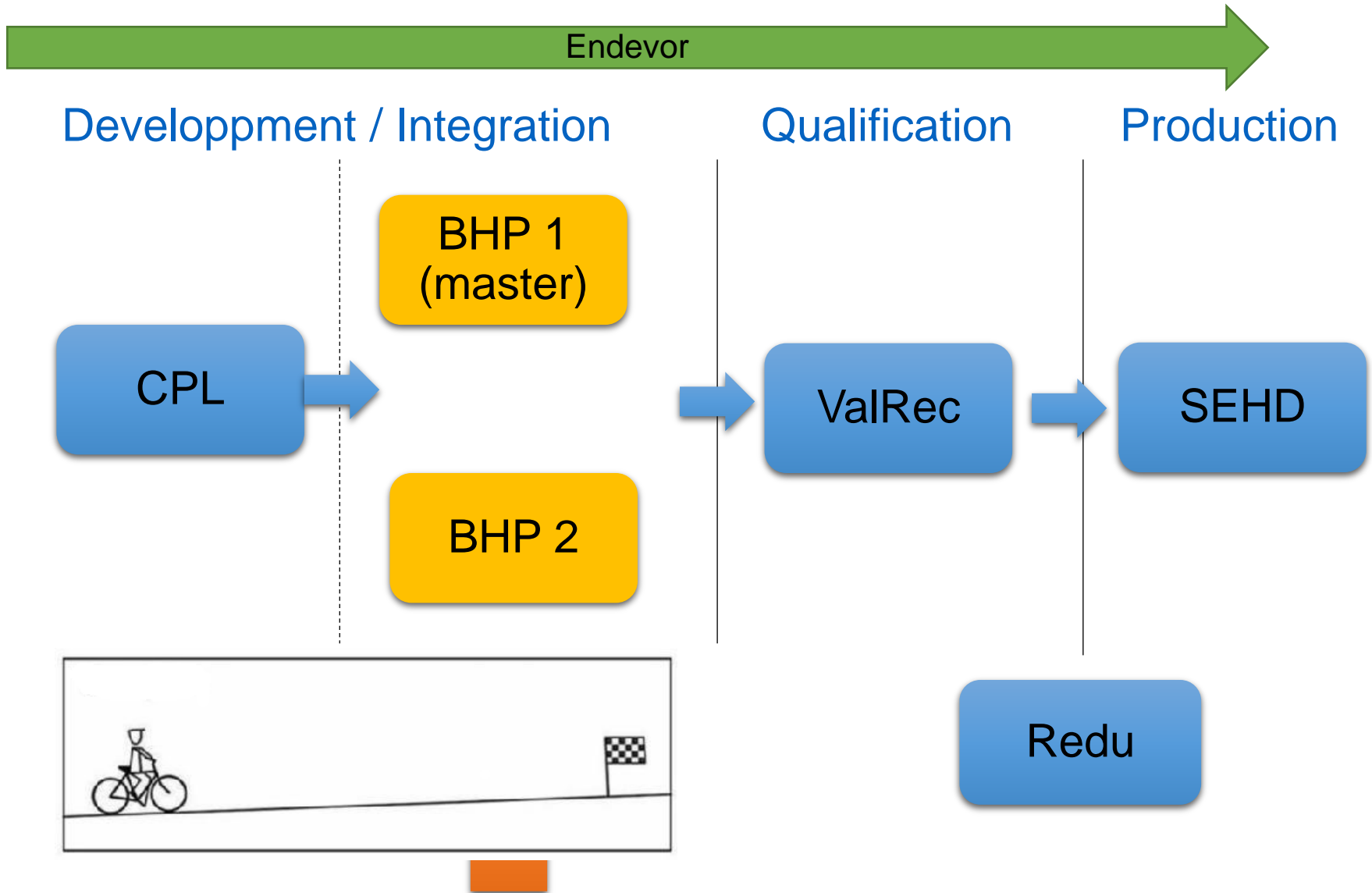## Partition is ready to use for business projects !!

Challenge #3 : Application « on demand »

- Part done by LOB Project team

- **Provide automated procedures for activation/de-activation of application scopes outside "IS Core"**
  - Create/Modify/Update/delete the application set:
    - Applications (code with new functional level)
    - Application dependencies (Child and Parents Path)
    - Data reduction rules
    - Starting consideration (empty table/files)
    - Schedule rules (ie Cut-off)

- **Project team does everything:**
  - Provide code, install and start.
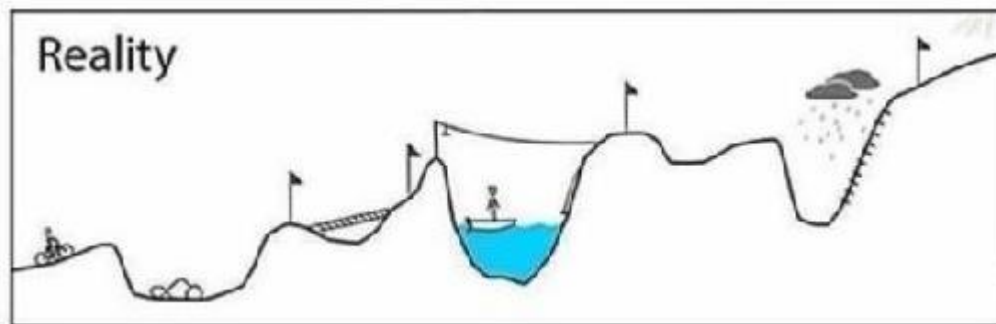 - Push button: skills required !!!

Application

Data   Files

Core Ap1

Core Ap2

Core Apx

Core Data

Files
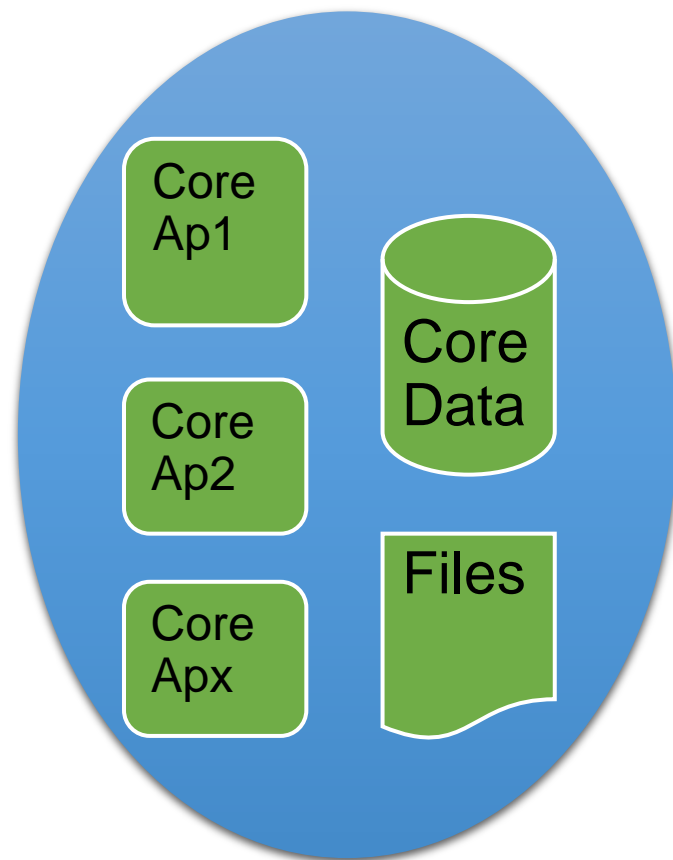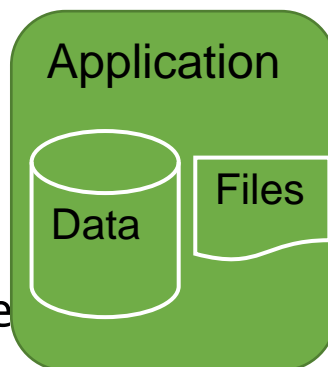
**LOB Project team wants to be self-sufficient.**

- **How the reality came to us !!**
  - The creation of the « master » BHP1 lasted 3 months

  - 2nd test phase took 20 days

Main Lesson Learned

- **Cross-division teaming is mandatory !**

- **System teams:**
  - Didn't understand our needs. Need to adopt same language.
  - Automation requirements were not clearly exposed
  - Missing Software licence on partition (ie CICS; PkZip)

- **BHP Project team:**
  - Distributed side was forgotten at the beginning of the project (distributed part : external client, branch offices)
  - More funding and time was required for the new needs

- **Line of Business:**
  - Application portofolio managers have difficulties getting the rights informations
  - Not reliable concerning/Difficulties to get the correct documention :
    - *Applications dependencies.*
    - *Data reduction processes.*
    - *Starting conditions.*
  - Engagement date for partition availability.
  - Difficult to work on a combined timeline for partition availability
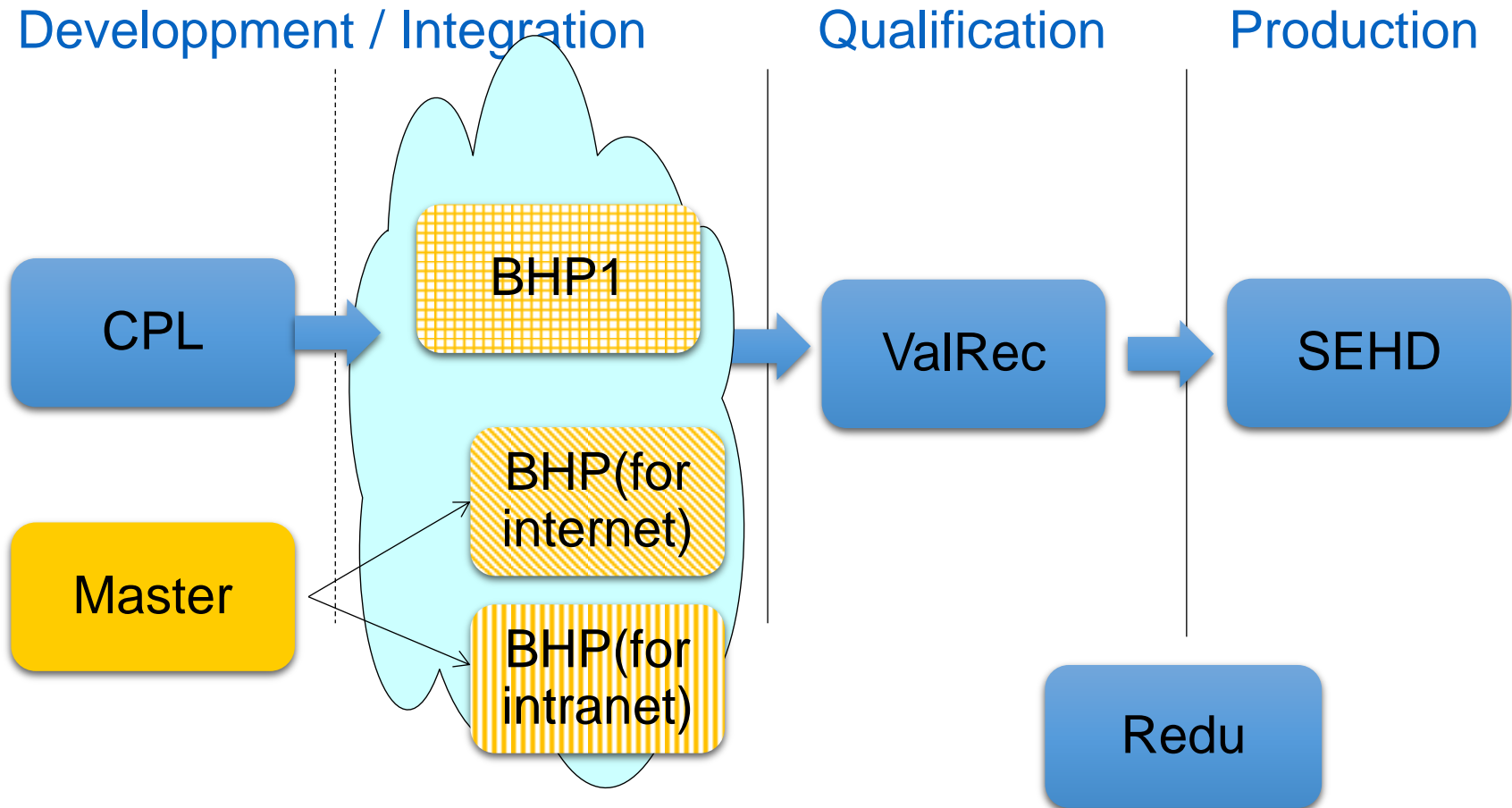
Next Steps : Where is my z/OS based Cloud?

- **We have now all standalone procedures to start building a cloud reference and duplicate it.**
  - Solution: disk copy & masking & DB reduction (Optim TDM)

- **To make a cloud, we need to tie all the processes together and to organize them around a unified interface – Push Button.**
  - Everything must be automated to allow different skilled teams to do it
  - Solution studied: IBM Cloning tool, internal IBM PSSC solution (based on TWS)

- **The global environment must be integrated, including the distributed part.**

- **This must be evolutive & scalable (integration of a new subsystem version, ...)**

Next Steps : Where is my z/OS based Cloud?

- **Use this « master » to create development environment for RD&T and expend the use of RDz.**
  - –Lead us to « devOps » in the futur