

WISE **a Worldwide Integrated** **SAS® Environment** **for today & beyond**

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Paper AD01

Christelle Le-Beaudour
Alain Vasseur

Agenda

Introduction

History & Context

WISE 3 the new global SAS® Platform

- Technical architecture
- Satellites landscape

Why SAS® Enterprise Guide ?

WISE new project objectives

Next steps

Conclusion

Introduction



History



... VAX/VMS SAS 5 to 6



1995 – CPDA SAS Compaq 6.x to 8.2



2000 – SASENV HP SAS 8.x



2004 – CBWCA Sun SAS 8.x



2007 - WISE 1 HP SAS 9.1



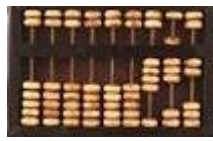
2010 - WISE 2 HP SAS 9.2



2014 - WISE 3 HP SAS 9.2 -> 9.4



Context



Quality/Security

- **Multiplication of internal & external Constraints**
 - 21CFR Part11
 - Multiplication of audits
 - Result confidentiality

Cost

- **Decrease the programming Cost**
 - Improvement of the interoperability of resources
 - Sharing of Licenses SAS & other soft
 - Support

Speed

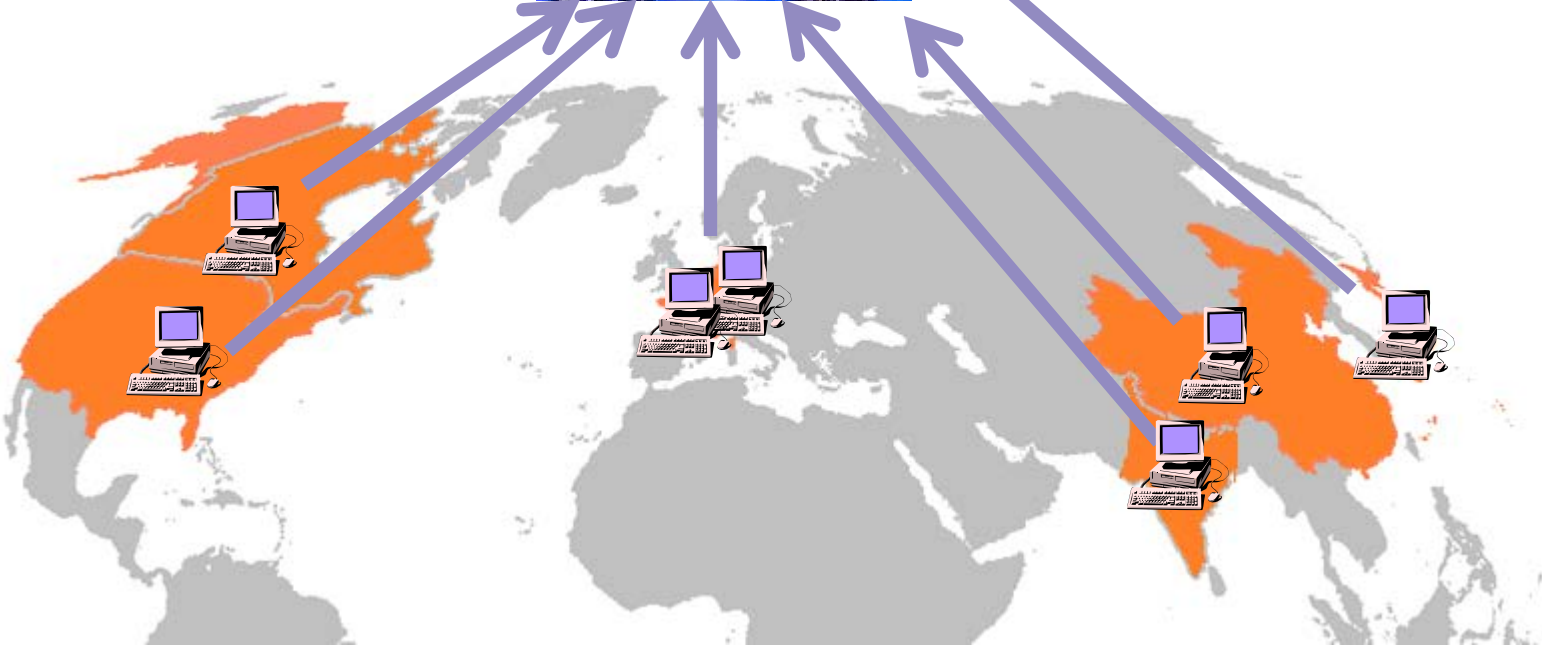
- **Improve performances**
 - Data Volume increasing
 - Improve infrastructure/architecture
 - Standardization of the data
 - programming method and tools

WISE 3 the new global SAS® Platform

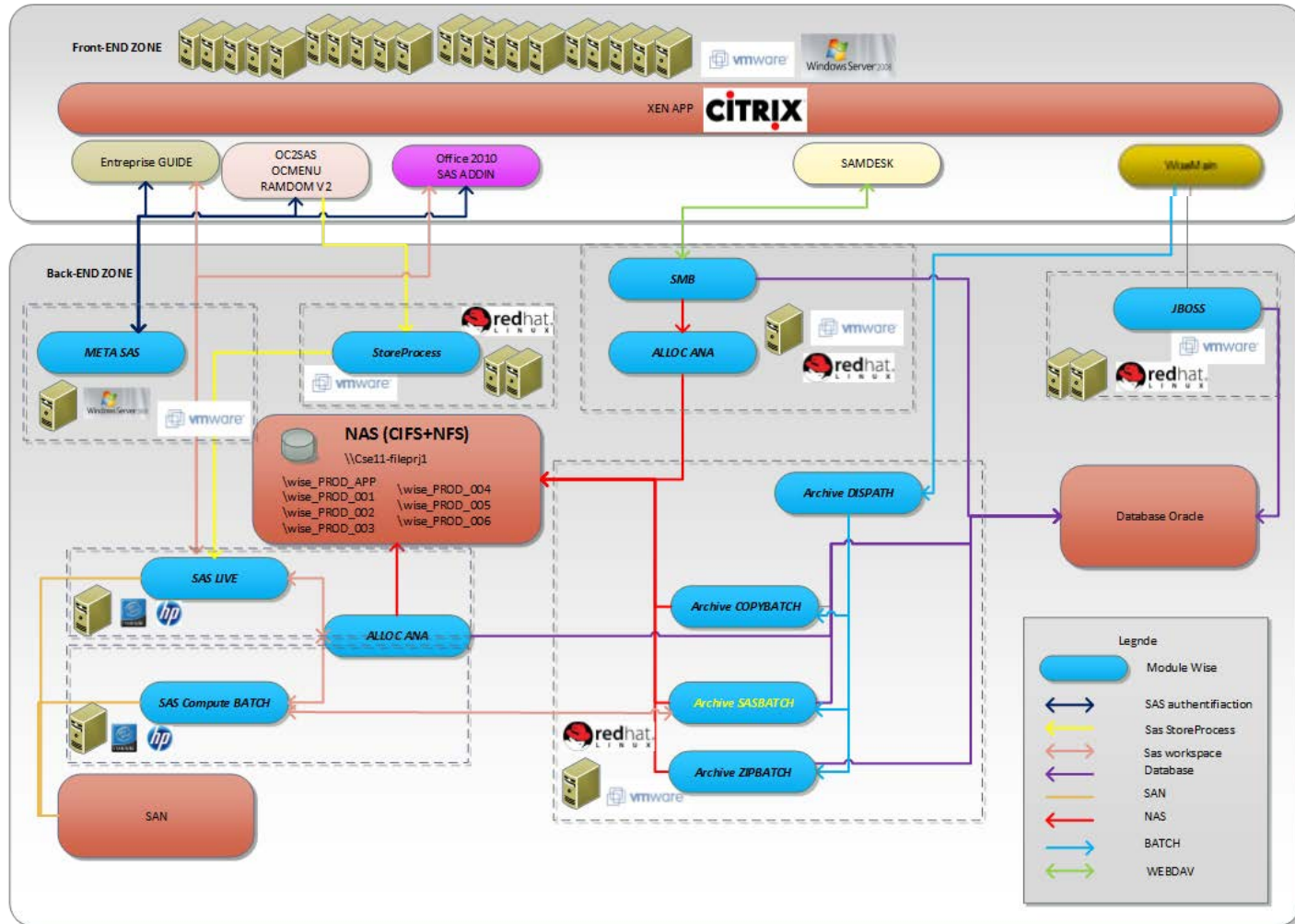
New Global Data Center
(NGDC) in Europe



Worldwide Integrated SAS
Environment



Technical Architecture



Technical Architecture



WISE 3 the new global SAS® Platform

Global secure
SAS environment

- Only identified users are able to connect

1000 users

- Internal and external

3 different profiles

- Write or read access on studies
- Only write access on studies
- Administrator

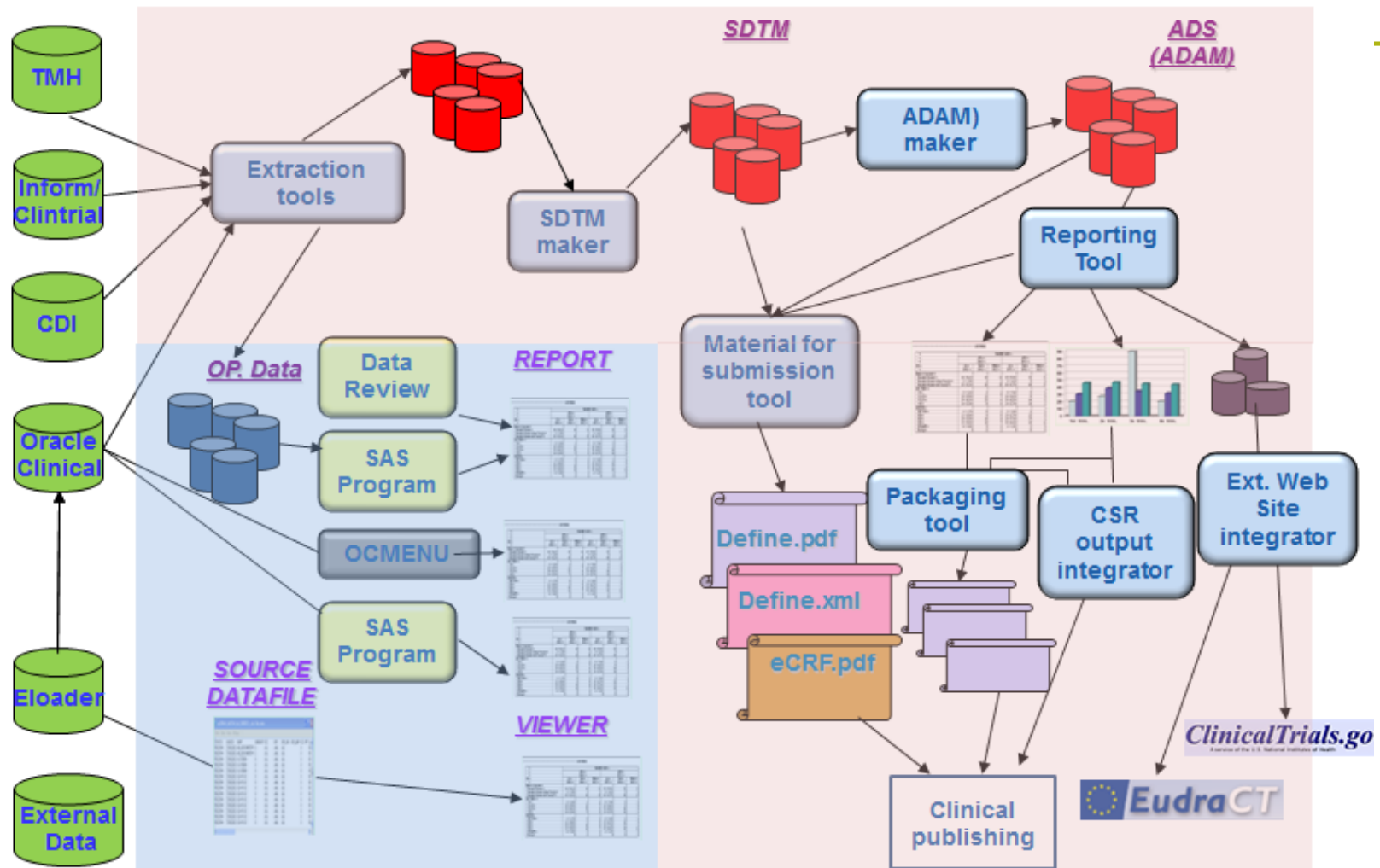
SAS® Enterprise
guide

- The new official SAS® Editor

Multiple plugin

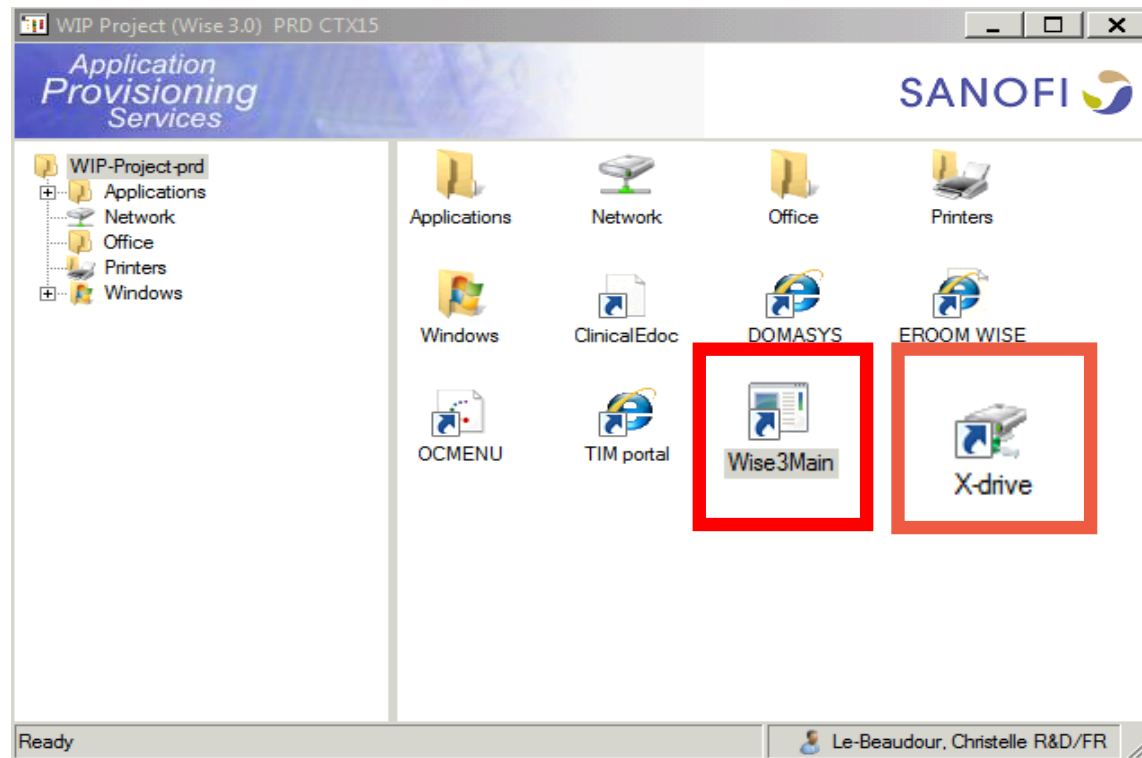
- Internal and external satellites application

Satellites applications Landscape



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Citrix window with direct access to the physical share drive (X)



WISE 3 the new global SAS® Platform

administrator's graphical interface

[illegible]

WISE 3 the new global SAS® Platform

Final user's graphical interface

[illegible]

WISE 3 the new global SAS® Platform

X drive

- Users can see only studies that are defined as visible on his WISE3 grid management windows
- Inside the X drive, 2 environments are available: DEVOPS and PRODOPS

Two levels of accesses

- Read access, which is the same as “view only” access
- Write access, which allows users to create, save and delete on a study
- Confidentiality Management: studies restricted status

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DEVOPS

- Is the working environment
- Running program in interactive mode or in batch mode

PRODOPS

- Is the environment to execute and store the final deliverables
- Running programs only in batch mode
- Audit trail and versioning
- 21 CFR PART 11

DEVOPS and PRODOPS

- Same architecture : Compounds, Studies
- Fixed and cannot be modified

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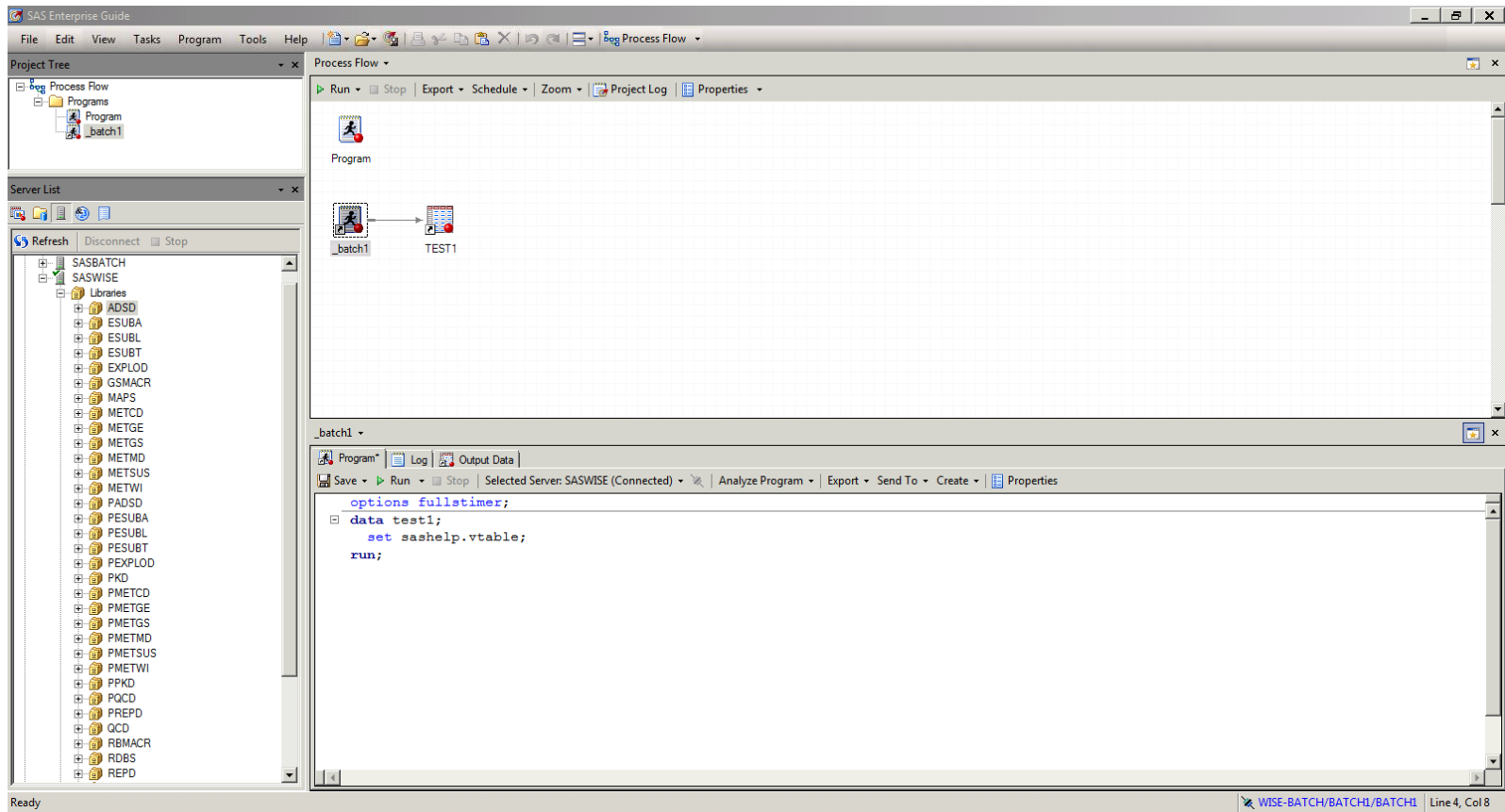
Batch management

- Allows users to schedule or execute immediately programs in batch mode and to follow their status
- Allows users to launch their programs in batch list in sequential order
- Audit trail in PRODOPS

Wise Transfer Disk

- Allows users to exchange files from and to WISE environment
- Audit trail

SAS® Enterprise guide



Why SAS® Enterprise Guide (SEG) ?

SAS® program editor replaced by SEG

- Decrease maintenance and licenses cost
- Use of CITRIX virtualization to increase the capabilities (light client)
- SAS® PROGRAM EDITOR Installation on virtual machine is not recommended by SAS®

New facilities for the code development

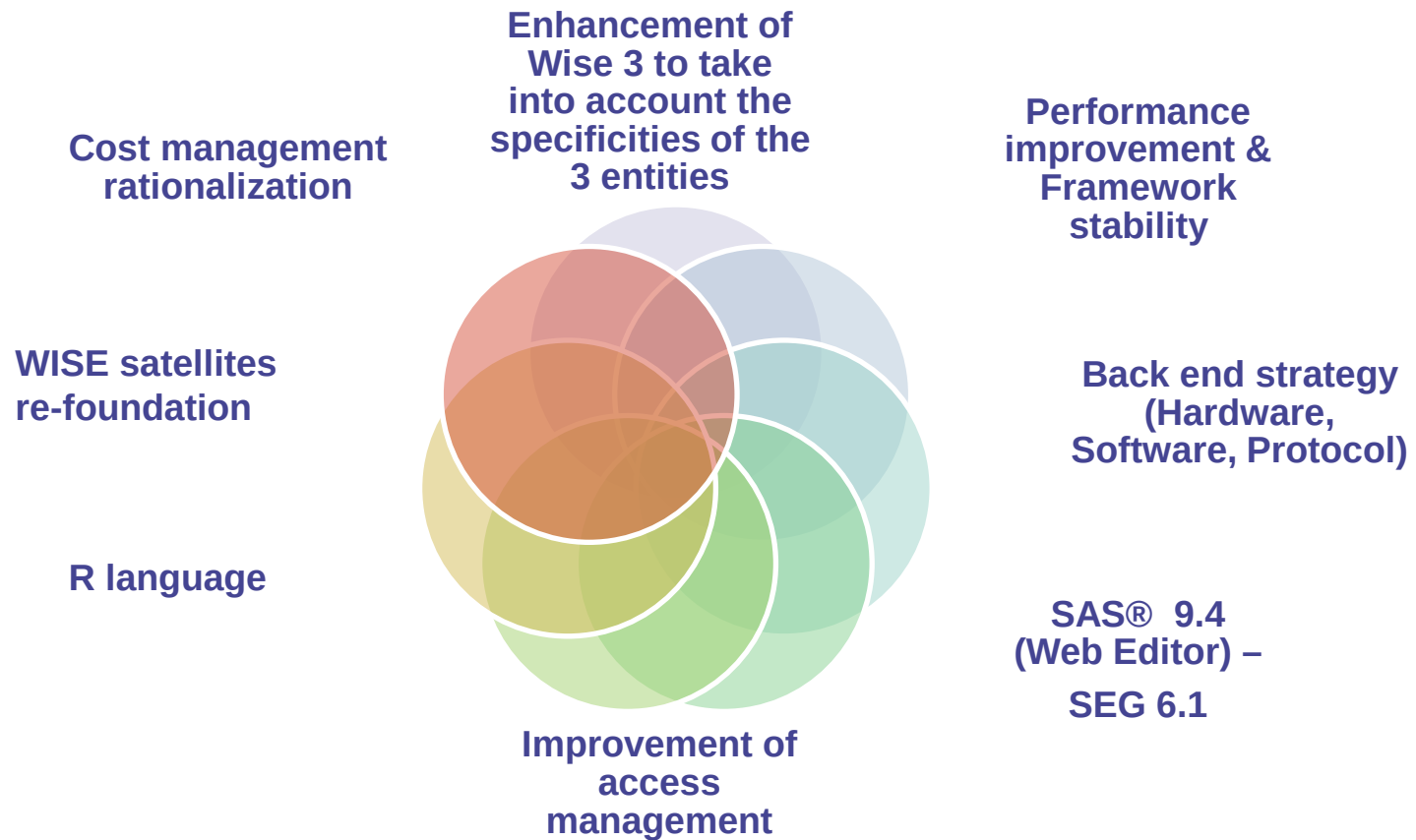
- Stored Processes
- Process Flow
- Code generator
- Programming object oriented
- Included in the new SAS® solution strategy

Change management

- Must be adequately addressed
- An important change for programmers
- Adoption is still ongoing by programmers
- Already adopted by non SAS® specialist
- Work with SAS® to improve SEG and accelerate our SAS® 9.4 integration

WISE New Project Objectives

Wise project : May 2013 – Feb 2015



Next steps



Continuing effort

- Architecture framework related to big data solution
- Grid Management
- Performances (POCs with SAS / TERADATA & Microsoft)
- Access by respecting security
- Profile granularity (definition of new user profiles)
- User mobility

Plug in new Tools / Technology to WISE

- SAS CDI (ongoing)
- SAS WEB Editor (ongoing)
- R Studio (planned)
- JREVIEW (planned)
- JMP Genomic (in use)
- SAS® Visual Analytics and statistic
- QlikView, Tableau

Conclusion



Why a common environment for SAS Usage?

- Quality & Security
- Business resource Interoperability
- License Cost Management
- Infrastructure & support Improvement

Why we developed our internal platform?

- Freedom
- Cost Management
- Performance scalability
- Plug in Flexibility
- Develop our internal tools/processes
- Adapt the framework based on growing business needs



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**THANKS FOR
YOUR ATTENTION
AND
ANY
QUESTIONS?**

Christelle.Le-Beaudour@sanofi.com

Alain.vasseur@sanofi.com

