

RDA ALM Project

04-03-2015

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1. Project Status
2. Governance
3. Initiatives & Timelines
4. 2015 Reporting Scope

Annex



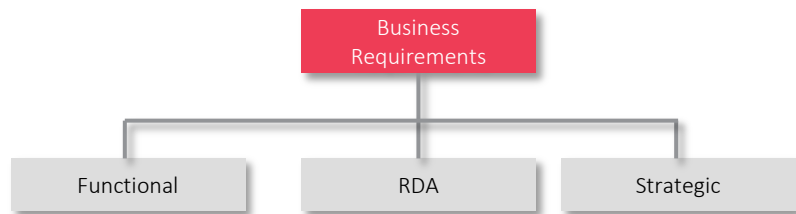
1 Project Status

Architecture Diagram

Below is detailed the **status** of the RDA ALM Project.

Business Requirements

- There is a document that gathers all **business requirements** that are necessary for the **RDA ALM Project**. Those requirements have been defined by the areas involved.



	Sno	ALM / Liquidity Requirement
Functional Requirements	1	<u>Granularity</u> : Contractual data for Wholesale and Retail positions and Accounting data for non-sensitive items.
	2	<u>Data enrichment</u> : e.g Liquid Asset (y/n), Encumbered (Y/N), Insured Deposits (y/n), ...
	3	<u>Additional Financial Fields</u> : RWA, Callable Option, etc. (See RDA ALM Data dictionary)
	4	<u>Consolidated SAN US/IHC</u> : SBNA, SCUSA, NY, Miami and PR
	5	<u>Full Balance Sheet Representation</u> : assets, liabilities and non-sensitive items and off-balance sheet positions: derivatives, commitments, etc.
	6	<u>GL Reconciliation</u> : of the full scope of entities, identifying internal dealing, eliminations, etc.
	7	<u>Regulatory Scope</u> : LCR, NSFR, FR2052b, SG, CCAR
	8	QRM as the ALM/Liquidity cash flow engine
	9	IDM/MMI is solely utilized for data segmentation and aggregation purposes
RDA Requirements	1	<u>Data completeness</u> : single source and repository
	2	<u>Integrity</u> : All process and components of the ALM IS must ensure that the information is kept under strict control from getting spoiled or manipulated
	3	<u>Quality Assurance</u> : Validation process will generate a report where all the data issues identified during the process will be displayed with the aim of providing the user the ability to oversee the overall quality of the information.
	4	<u>Traceability</u> throughout the data handling and maintenance process (contracts, pools, structural data, dimensions)
	5	<u>Timeline & Timeliness</u> :
	5a	For IRR the frequency requirement is monthly. The information should be ready to be analyzed in QRM no later than on the 16th day of the month.
Strategic Requirements	5b	For Liquidity Risk the frequency requirement is daily. The information should be available to be analyzed in QRM no later than on 12 pm of the following day
	6	<u>Data archiving and recovery process</u> : In order to ensure information backups and data analysis based on historical data
	1	Back office. Dedicated team for data administration from quality and delivery perspective.
	2	Timely Assistance maintenance, immediate assistance and resolution on potential incidences
	3	Flexibility in architecture and design. New functional requirements that can be needed in the future with immediate implementation.
	4	IHC and BHC timely compliance. All Santander entities by January 2016 in a unique repository of data.

Data Dictionary

- A data **dictionary** that involves all the **attributes** necessary for RDA ALM Project – management and regulatory requirements- **is being developed** and consolidated

1 Project Status

Current Architecture Diagram

ENTITY SYSTEMS

SBNA

FMIS
Other

SCUSA

Golden Source

NY

~~Golden Source~~

Puerto Rico

~~Golden Source~~

Miami

~~Golden Source~~

SFTP

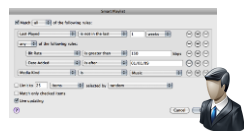
EY Liquidity
Data Mart
RAW

EY Liquidity
Data Mart
Structured

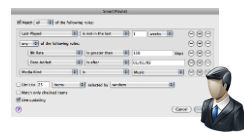
2052A/B

TDM

BUSINESS RULES



ADJUSTMENTS



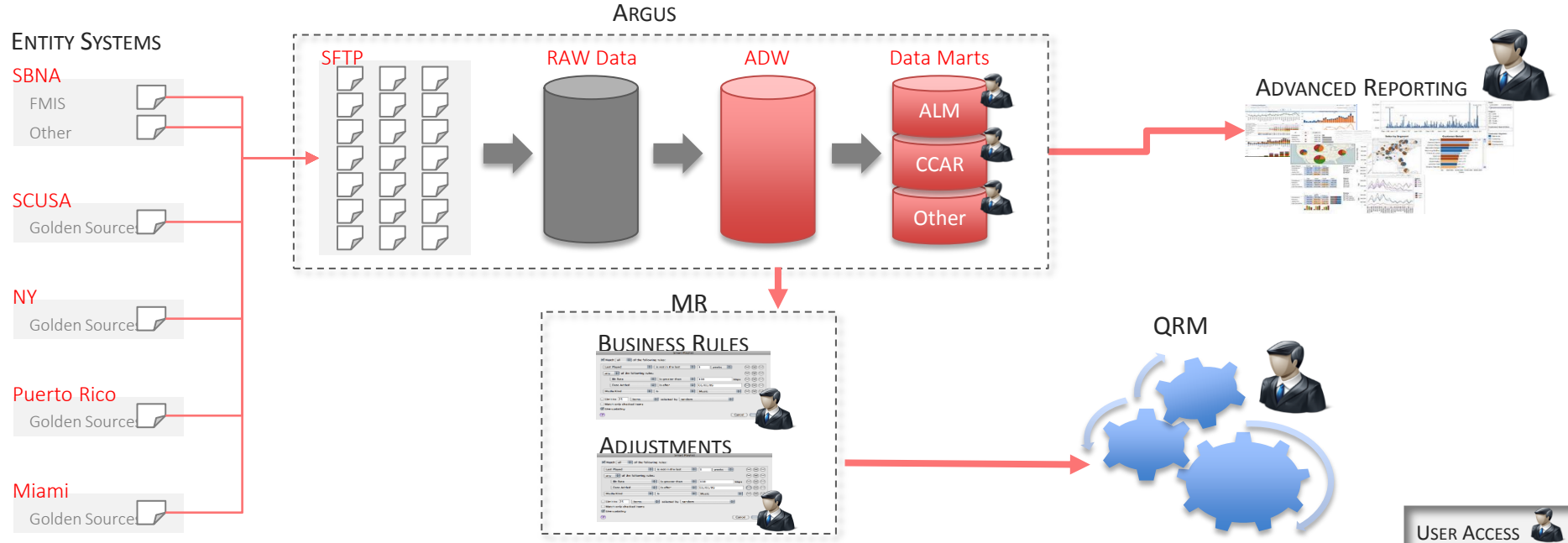
QRM

USER ACCESS

1 Project Status

2015 Implementation Phase I

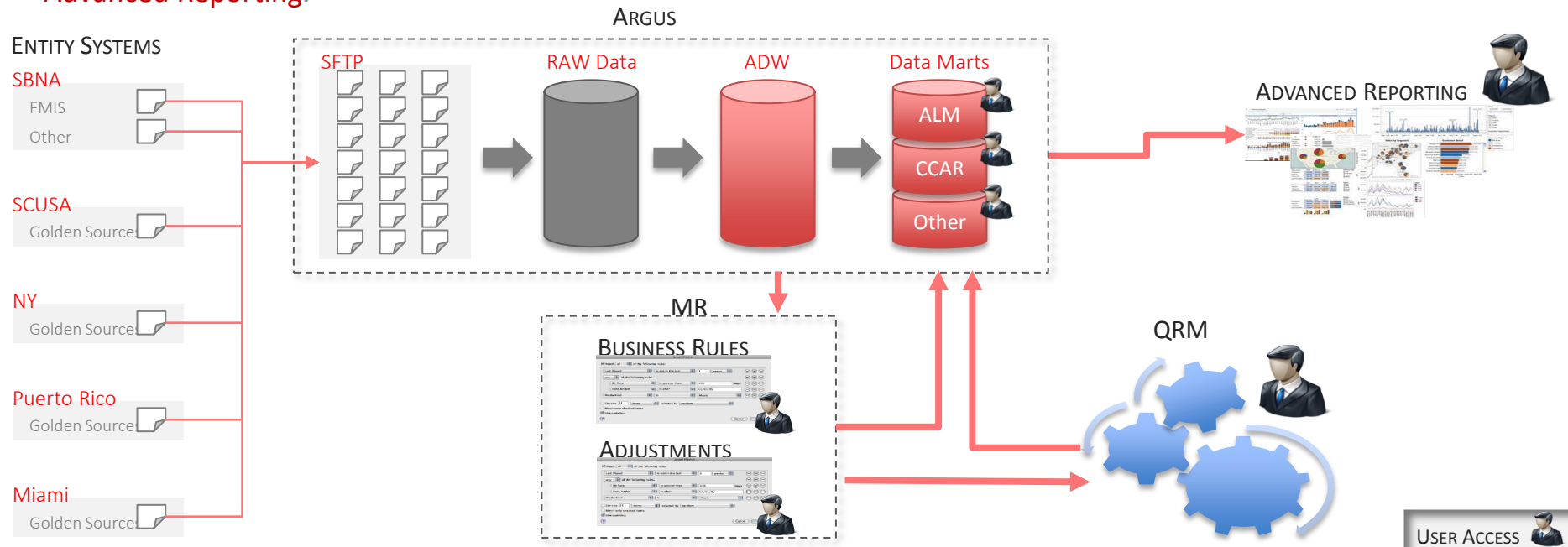
The following chart shows the **first phase** defined for the **RDA ALM Project**. Addresses the provisioning of data to **centralized repository**, availability of **advanced reporting** and **single file** integration with **QRM**.



1 Project Status

2016 Implementation Phase II

The following chart shows the **second phase** defined for the **RDA ALM Project**. Fully integrates QRM provisioning and stores QRM **stratified data and the modeling/stress results** in the ALM Data Mart and makes them available in **Advanced Reporting**.



1 Project Status

Architecture Diagram

ENTITY SYSTEMS

SBNA

FMIS
Other

SCUSA

Golden Source

NY

Golden Source

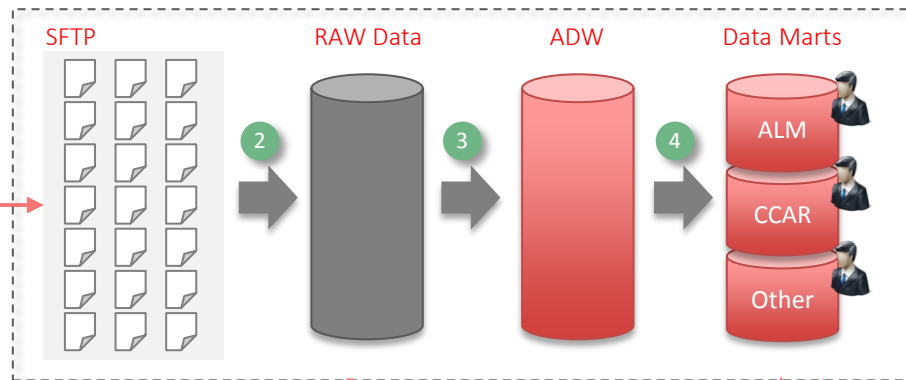
Puerto Rico

Golden Source

Miami

Golden Source

ARGUS



ADVANCED REPORTING

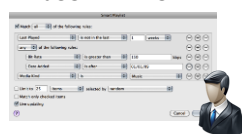


MR

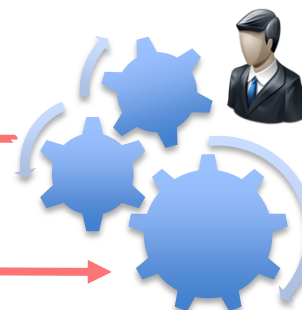
BUSINESS RULES



ADJUSTMENTS



QRM



USER ACCESS



1 Architecture Explanation

ADW & Liquidity Solution

- 1 **Source System Files** are transferred to Argus systems by **SFTP** using **PGP** strong encryption
- 2 Files are loaded into a SQL Server Data Base in **RAW format**, without any validation processes
- 3 Data flow goes through a **detailed validation workflow** where several checks are performed such as logic format validations, row numbers and growth, referential integrity,... During this process workflows are defined and executed assigning staff owners for each step of the process
- 4 Data is loaded from the Data Warehouse into different **Data Marts**, such as the **Liquidity** Data Mart. New validation workflows take place during this step to ensure the quality of the processes.

Reporting tools are provided for **data quality** checks and **simple reports, such as 2052b**.
- 5 Data is extracted to MR in an **interface format defined by MR teams**.
- 6 **Data is transformed in MR**, adjusted, aggregated and set to feed QRM.
- 7 Data is **fed back** to Argus, both transformed “**pools**” -data adjusted and aggregated by MR- and QRM **simulation results**
- 8 **Advanced reporting** using contract level information, business rules definitions and QRM results will be defined using advanced reporting tools.

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2 Governance

Organizational Chart

The following chart shows the main areas involved in the RDA ALM Project & briefly defined what their main responsibilities are.

Functional Team

- Business Governance
- Business Requirements
- Functional Certification
- QRM Modeling
- UAT Strategy
- IT Support



Technical Team

- Technical Governance
- Reporting Infrastructure
- Provisioning Strategy
- Components Testing
- System Maintenance
- Argus

- ✓ Both **Functional & Technical** teams are **coordinated by Project Office**
- ✓ **Periodically Committees** will be carried out to follow up the Plan & ensure the success of the project
- ✓ These **Committees** will have **different purposes & attendance** may vary depending on the complexity of the existing issues
- ✓ **Steering Committee & Working Group** Committee have been planned, although it is **not meant to be definitive** since their attendance & structure needs to be **approved by all teams involved**

2 Governance

Steering Committee



Goals

- **Executive Committee**, attendants are the **head stakeholders** of the project as well as the ones defined as responsible for each area -first slide-
- **Follow-up** plan and escalated **risks** that have not been able to be solved in lower meetings

Attendees

- | | | |
|---|--|------------------|
| • John H Corston - CRO SHUSA | • Julio Somoza - Managing Director T&O | • Victor Morillo |
| • Jerry Plush – CFO | • Juan Carlos Álvarez – Treasury CFO | • Martin Hillion |
| • Edward Smith – Risk MI | • Manolo Lasso - Chief Market Risk Officer | |
| • Daniel Budington – Strategic Planning | • Ken Goldman - Finance | |

Frequency

- Weekly on Fridays 8AM as part of SHUSA Liquidity Risk Management Steering Committee *

2 Governance

Working Group



Goals

- Working Group
- Follow-up with daily and weekly work streams
- Primary decision-makers from Business Areas must provide support and direction for the project work streams

Attendees

- | | | |
|---|------------------|-------------------|
| • Manuel Aya – Liquidity / Treasury | • Victor Morillo | • Functional Team |
| • Niraj Biswas – IRR / Treasury | • Martin Hillion | • IT Team |
| • Roberto Severino – Liquidity / IRR / MR | | |
| • Joe Princi – Strategic Planning / CCAR | | |
| • Andrew Pfaff – Finance | | |



Sign-Off Business
Requirements*

* The business requirements sign-off is the responsibility of the stakeholders indicated on the previous board, even if they delegate their teams to the working group.

Frequency

- Weekly on Fridays at 10:30AM

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3 Initiatives & Timelines

ALM Initiatives

Current **LDM Solution** is set as the critical path towards regulation reporting. A **Strategic Solution** is being developed and is expected to be deployed by phases throughout 2015-2017. A **Contingency Plan** has been defined to have a robust-enough solution in time in case of deviations in the Strategic Solution

Option I – LDM Solution 2014-2015

- Currently reporting 2052b
- Expected to report 2052a by the end of 2015



Option II – Strategic Solution

2015-2016

- Robust solution with an optimized provisioning strategy and data cleansing processes
- Advanced reporting tools for both regulation and management
- Integrated with QRM engine and Data Marts including Advanced Reporting Tools
- Will gradually include all ALM / Liquidity reports



Contingency Plan – Strategic Solution with Tactical Provisioning




2015-2016

- Strategic plan deviation alternative: this solution provides a robust-enough system, with an IHC perimeter, where provisioning and data cleansing are recreated through manual processes while strategic solution is set up
- Solution is based on the same reporting layer as the Strategic Solution. It would be transparent to end-user
- Integrated with QRM engine and Data Marts including Advanced Reporting Tools

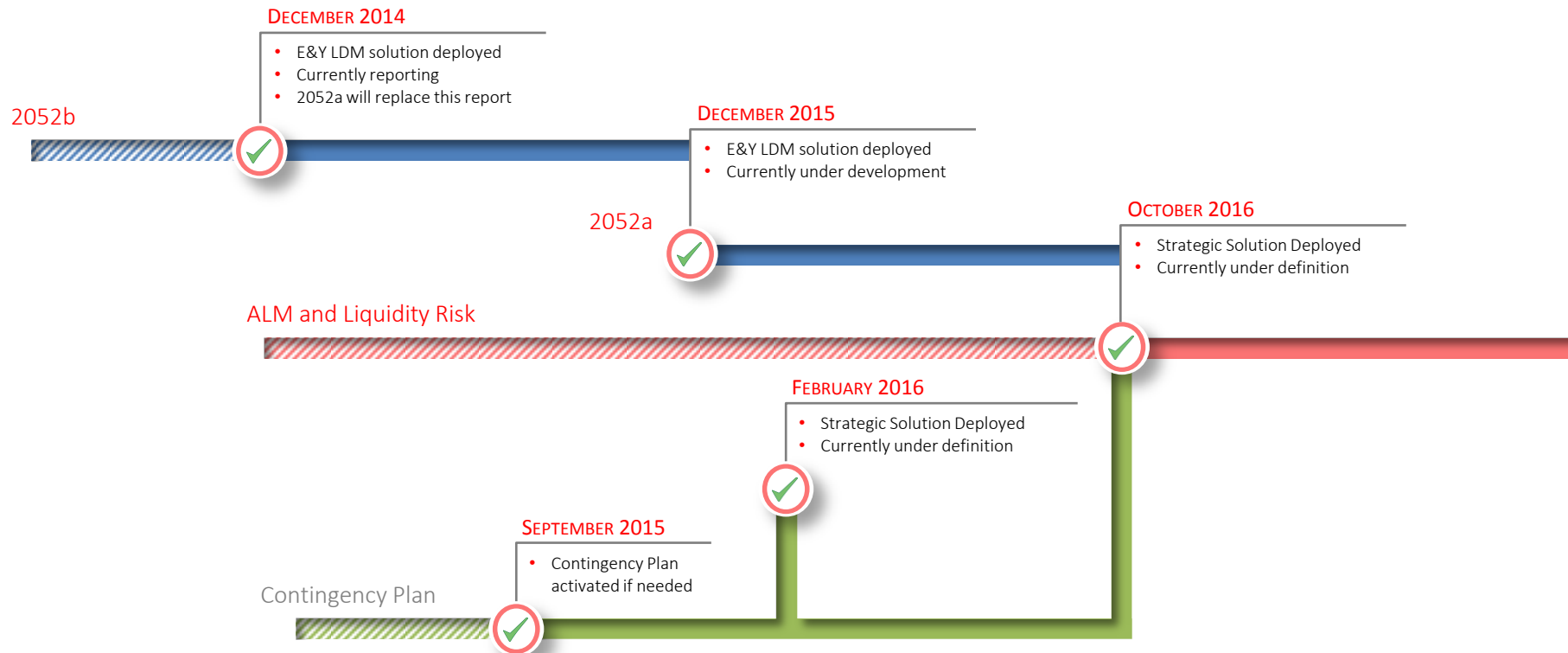


3 Initiatives & Timelines

ALM Timelines

E&Y LDM Solution 
Strategic Solution 
Contingency Plan 

Following diagram represents **main milestones** for each of the solutions, as well as when the contingency plan should be activated



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4 Reporting Scope

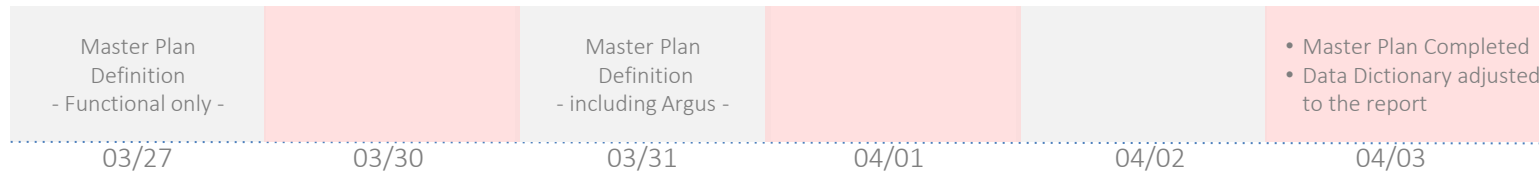
2015

The chart below shows the planning for RDA ALM 2015/2016



Next Steps

- Global **Master Plan** including in detail all the different projects involved
- Specific **Data Dictionary** including all the necessary attributes for the **reporting developed by 2015**.



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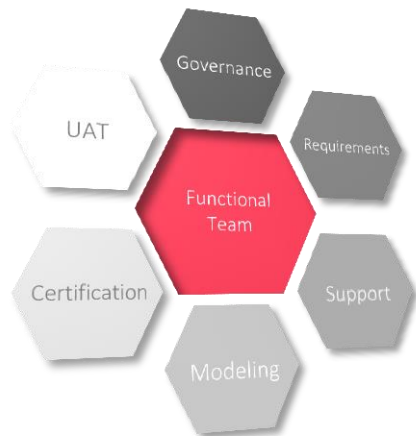
Annex



A Annex

Functional Team Responsibilities

The functional team is responsible for coordinating all **Business Users** in gathering requirements for the RDA ALM Project.



Governance

- **Coordinate** business teams
- **Integrate** business and technical **plans**
- Coordinate **Steering Committee**



Requirements

- Define **management and regulatory** requirements
- Review and **validate** **DDRs**



Support

- Provide business and **functional support** for IT teams



Modeling

- **QRM** modeling setup
- Define new **chart of accounts**
- Implement **new QRM environment** in order to allow new **dimensions & data** exploitation
- Determine potential impacts in liquidity and IRR **scenarios**



Certification

- Functional certification of all **system components**
- **Data validation** and **general ledger** reconciliation in conjunction with the finance team



UAT

- Define **UAT Strategy**
- Execute **UAT Cycles**
- Certify **readiness** for production deployment

All Outputs Require Business Areas Sign-Off



A Annex

T&O Team Responsibilities

The T&O team is responsible for designing, developing and deploying the **technical solution** as well as the coordination of **Argus Team**.



Governance

- **Coordinate** technical teams
- **Define** technical **plan**
- Coordinate **QA Committee**



Reporting

- Provide **infrastructure** for the reporting layer
- Coordinate the **integration** with ADW



Argus

- **Coordinate** team communication
- **Track** progress
- **Centralize communications** for any issues or questions



Provisioning

- Define **provisioning strategy**
- **Develop provisioning processes** from local legacy systems to the ADW



Testing

- **Unit testing** for all components
- **Integrated testing** for all components
- **Performance testing** for all system components



Maintenance

- System **troubleshooting**
- **QRM Infrastructure** Support
- **Local components** maintenance

