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ARASCO أراسكو

Arabian Agricultural Services Company | ARASCO

SAP Controls and Utilization Assessment

Reading Material for ARLT

March 23, 2021

175 MAKING AN IMPACT THAT MATTERS since 1845

Contents

Workstream Assessment Summary

Workstream 1 & 2

Business Configurable Controls and Functionality Utilization Assessment

WS1&2 | Business Configurable Controls and Functionality Utilization Assessment

Background:
ARASCO is using SAP as core ERP for running its business processes. ARASCO management is looking forward to optimize the SAP utilization and ensure that adequate risks and controls are implemented, and processes are standardized and automated. Accordingly, SAP assessment was conduct covering: **WS1 – SAP Business Configuration Controls Assessment** and **WS2: SAP Functionality Utilization Assessment**.

Assessed **8** **SAP modules** used by **10** **entities**.

Workstream wise assessment summary:

WS1: SAP Business Configuration Controls Assessment

57	36	12

75 control gaps and 30 optimization areas identified

WS2: SAP Functionality Utilization Assessment

16	18	5

39 Utilization areas identified.

* The Satisfaction scale is an indicative evaluation based on subject matter judgment and not intended to be a quantitative measure.

Observations, Impact and recommendations are classified using following scale, respectively:

Observation Categories:

| Control Gap	Missing controls in the SAP Solution
Optimization Gap	SAP functionalities relevant for business but not configured such as leading practices, data quality process automation etc.
Utilization Gap	SAP functionalities configured but not used by the business

Significance:

High	Action plan and related corrective action to be implemented as a matter of urgency
Medium	Action plan and related corrective action to be implemented as a matter of priority
Low	Action to be taken to address weakness within a reasonable agreed time frame

Action Plan Timelines:

Quick-Win	**0 – 60 days:** minimum efforts & stakeholders' involvement, largely standalone requirements
Tactical	**60 – 120 days:** need stake holder's involvement, minor impact on process. Requirements which has dependencies.
Strategic	**120+ days:** need significant stakeholder involvement, process and data change.

WS1&2 | Detailed Analysis – Controls and Optimization Assessment (1/3)

Control & Optimization

57	36	12

Utilization

16	18	5
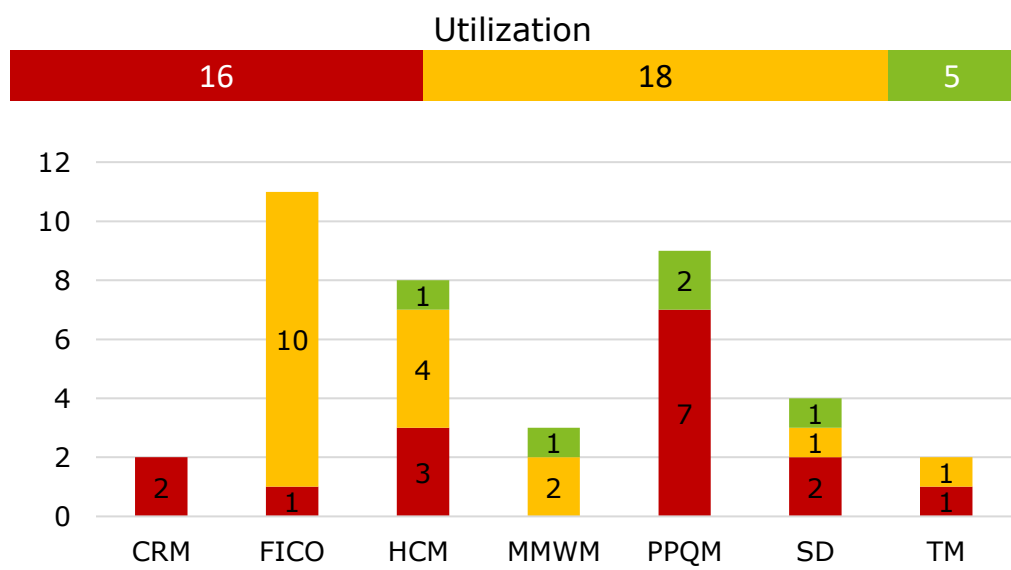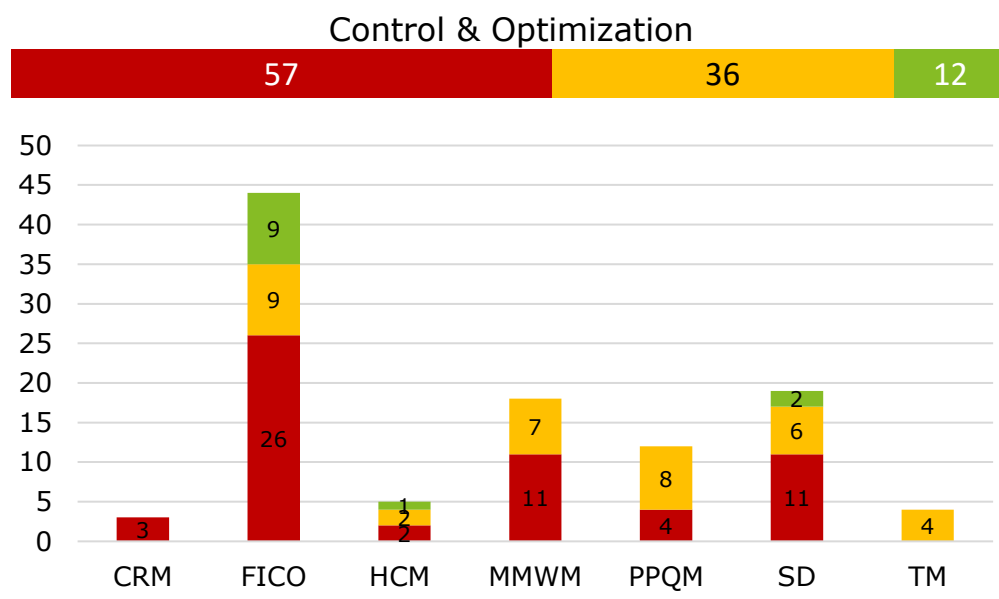
BU / Module	FI	CO	MM	SD	CRM	PP	QM	TM	HCM
Corporate	42	5	11						13
Feed	44	6	20	19	1	13	5		13
Logistics	43	5	14	11				6	13
OLMASCO	41	5	5	11	1				13
FOOD	40	9	19	15	1	13	5		13
IDAC	44	5	16	2	5		6		13
ALEMAR	44	5	19	17	1				13
MEFSCO	44	5	18	15	1	12	7		13
ARASCO Investment	35	5	1						13
Alwafa	34	5	14	14	1				

● Low ● Medium ● High

Observations by Processes:

Finance and Accounting	Org Structure	Master Data	Account Receivable	Account Payable	Asset Accounting	Banking	Taxation	Period End Closing
	1 | 2	13 | 3 | 6	4 | 4	6 | 1	1	1 | 2	2	1

Controlling and MIS	Org Structure	Master Data	Product Costing	Cost of Sales Accounting	Profit Centre Accounting	Profitability Analysis	Budgeting	
		1 | 1 | 1	2 | 3				1	

Material Management & Warehouse Management	Org Structure	Master Data	Purchase Requisition	Purchase Order	Inventory management	Physical Inventory	Invoice Processing	Warehouse Management
		4 | 5 | 1	2 | 1	2 | 2	3			1

Sales & Distribution	Org Structure	Master Data	Pre-Sales	Sales Processing	Order Fulfillment	Invoicing	Sales Returns	
	1 | 1	2 | 2	1	2 | 2 | 3	1 | 1	3	3	

Customer Relationship Management	Org Structure	Master Data	Pre-Sales	Sales Processing	Invoicing	Returns	Complaint Mgmt	
		1	2	2				

Manufacturing and Quality Management	Org Structure	Master Data	S&OP/LTP	Demand Mgmt	MRP	Shop Floor Execution	Quality Inspection Planning	Quality Inspection Execution
		5	1	2	2	1 | 2 | 1	2 | 1	3

Transportation Management	Integration with ERP	Master Data	Transport Planning	Carrier Planning	Forward Settlement	Invoicing	Service sheet	Customs Clearance
	1		1		1 | 1			1

Human Capital Management	Org Structure	Employee Master Data	Recruitment	HCM Features	Time Management	Payroll & Self Service	Appraisals	Retirement
	1	1 | 1 | 1	1	1	1 | 1		1 | 1	1

Legend:
- Process Operating Effectively
- Optimization areas identified
- Process requires significant improvement
- Manual process (SAP Solution Available)

6

Observation Categories:

Category	Description
Control Gap	Missing controls in SAP Solution
Optimization Gaps	SAP functionalities relevant for business but not configured such as leading practices, data quality process automation etc.
Utilization Gaps	SAP Functionalities configured but not used by business

Significance:

Level	Description
High	Action plan and related corrective action to be implemented as a matter of urgency.
Medium	Action plan and related corrective action to be implemented as a matter of priority.
Low	Action to be taken to address weakness within a reasonable agreed time frame.

Action Plan Timelines:

Type	Description
Quick-Win	**0 – 60 days:** minimum efforts & stakeholders' involvement. largely standalone requirements
Tactical	**60 – 120 days:** need stake holder's involvement, minor impact on process. Requirements which has dependencies.
Strategic	**120+ days:** need significant stakeholder involvement, process and data change.

Workstream wise Key Observations:

	Quick-Win	Tactical	Strategic
	0 – 60 days: minimum efforts & stakeholders' involvement. largely standalone requirements	**60 – 120 days:** need stake holder's involvement, minor impact on process. Requirements which has dependencies.	**120+ days:** need significant stakeholder involvement, process and data change.

WS1: SAP Business Configuration Controls Assessment

Quick-Win:

70 recommendations are identified as quick wins and are spread across Control Gaps, Optimization Gaps and Utilization Gaps.

Category	Count
Control Gap	42
Optimization Gaps	16
Utilization Gaps	12

- ARASCO needs to focus on master data control gaps to resolve transactional issues
- Few optimization & utilization opportunities in quick wins are enhancing the controls on transactions by enabling the validations, using special period for financial adjustments after financial closures, validation of double invoice etc.

Tactical:

59 recommendations are identified as Tactical and are spread across Control Gaps, Optimization Gaps and Utilization Gaps.

Category	Count
Control Gap	33
Optimization Gaps	12
Utilization Gaps	14

- ARASCO can use the standard functionalities as a part of tactical recommendations like, activate workflow for parking & posting, using cash flow management, modify the master data to optimize the usage of credit management, use quality management to track the sales return, etc.

WS2: Functionality Utilization Assessment

Strategic:

15 Recommendations are classified as strategic. They are classified as New Modules identified:
- Funds Management
- Warehouse Management
- Extend CRM modules

Major Functionality Upgrades:
- Utilizing Material Requirement Planning, Capacity Planning, Sales & operations planning & long-term planning functionalities
- Decision mechanism to treat the slow moving, dead and shelf-life expired material stock management
- Usage of closing cockpit, EBS (electronic bank statement) & auto payment functionalities in finance
- Usage of trading freight, executing & monitoring freight functionalities in transportation management
- Usage of promotion, demotion & succession planning in HR

These strategic areas will require significant stakeholder involvement and need to be considered in the existing SAP ECC implementation. Moreover, if upgrade to SAP S4HANA is considered by ARASCO in future, an alignment with these areas will be required.

Roadmap

Short to Mid-term (2 - 4 Months) – to be addresses internally, short and independent projects

Strategic initiatives, need to be considered in the existing SAP ECC implementation. Moreover, if upgrade to SAP S4HANA is considered by ARASCO in future, an alignment with these areas will be required

Workstream 3

**Segregation of Duties & Sensitive Access Assessment**

WS3 | Segregation of Duties (SoD) and Sensitive Access (SA) Assessment

As part of the SAP Controls and Utilization Assessment, in this workstream we performed an assessment of Segregation of Duties (SoD) and Sensitive Access (SA) to identify, examine, and analyze whether adequate level of controls have been designed, implemented, and operating effectively with regards to assigning sensitive responsibilities and segregating conflicting / incompatible functions.

Scope of SoD & SA Assessment

The following Company Codes and Modules were covered as part of the scope for SoD & SA Assessment:

In-scope Company Codes

Company Code	Description
1000	CORPORATE
1100	FEED
1200	LOGISTICS
1300	OLMASCO
1400	FOOD
1500	IDAC
1600	ALEMAR
1700	MEFSCO
1800	INVESTMENT
2000	ALWAFA

In-scope SAP Modules:
1. FICO
2. PP
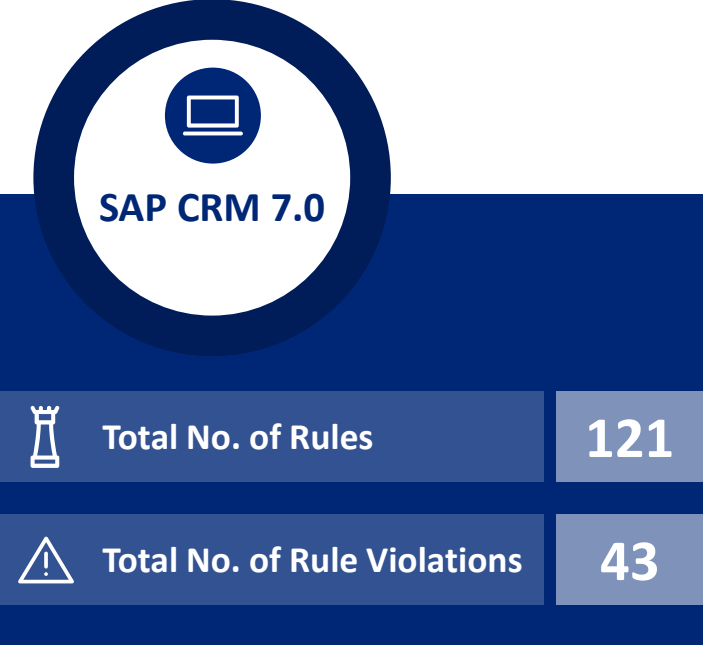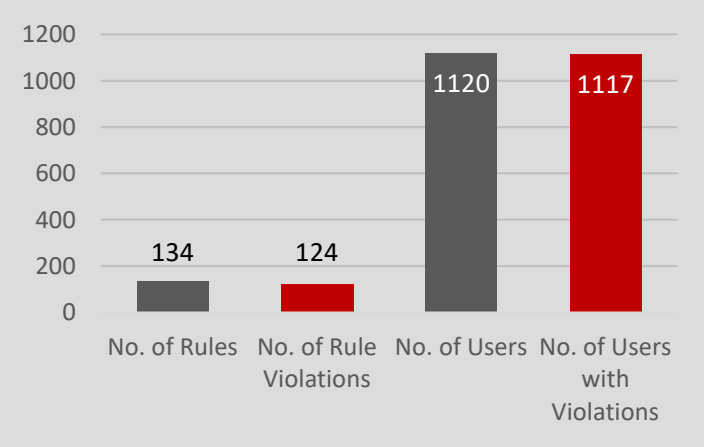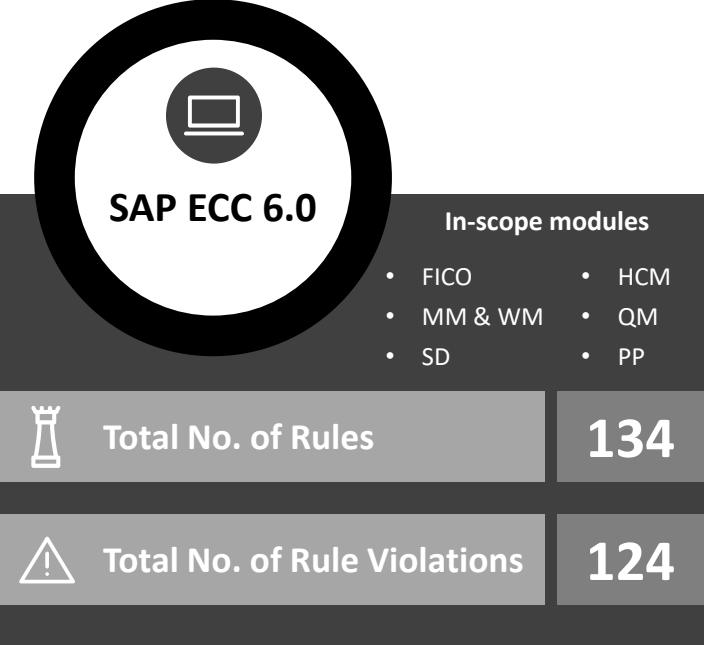3. QM
4. HCM
5. SD
6. TM
7. CRM
8. MM / WM
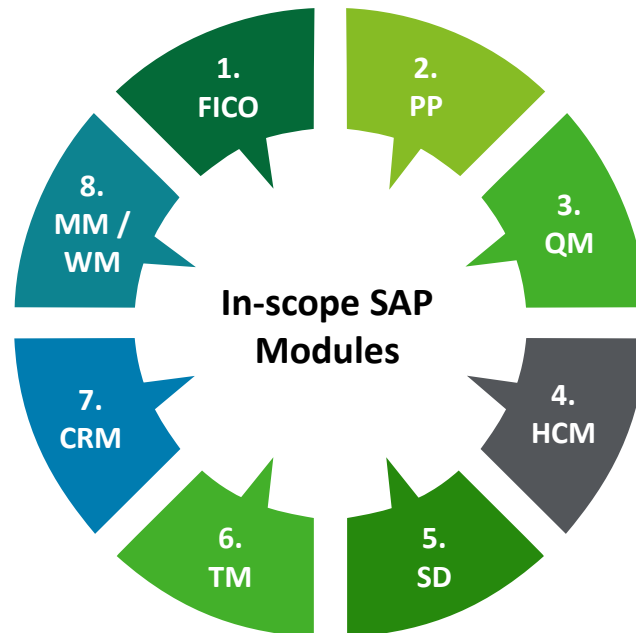
Objectives of SoD & SA Assessment

SODs & SAs are a primary internal control intended to prevent or decrease the risk of errors or irregularities, identify problems, and establish necessary level of accountability. This is achieved by ensuring that no single individual has control over all phases of a business transaction. SOD & SA Assessment was performed based on the following considerations / themes which were used to create the rules:

1. **Setup vs. Transaction:** Users have the ability to change the configuration setup within a module and process transactions within the same module.
2. **Master Data vs. Transaction:** Users possess the ability to create master data in addition to transaction processing.
3. **Master Data vs. Setup:** Users possess the ability to create master data in addition to change the configuration setup within a module.
4. **Cross function:** Users possess the ability to process two or more sensitive transaction in a business process area.
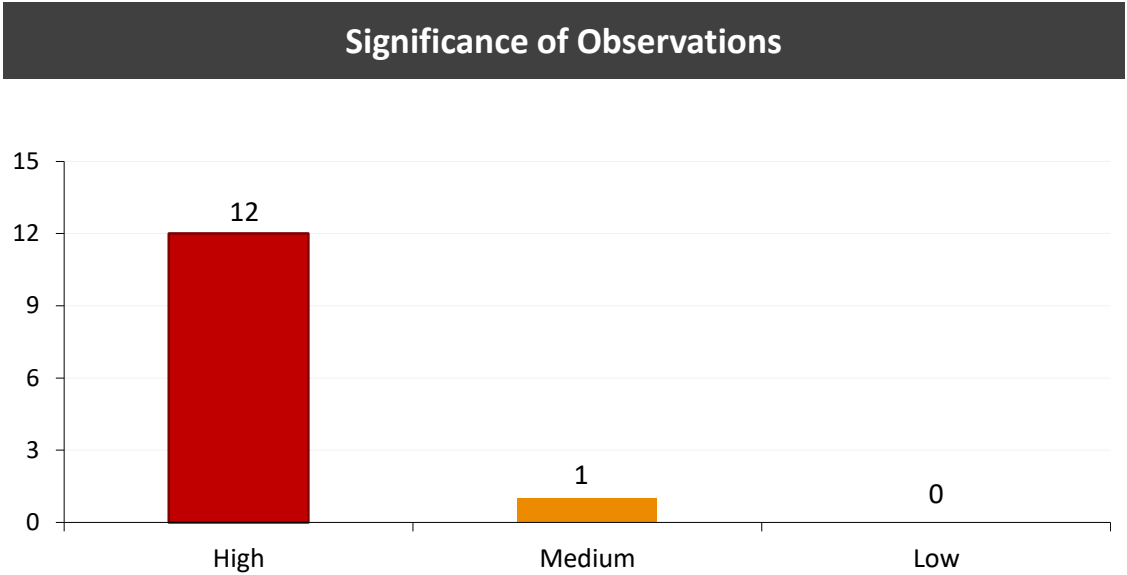
WS3 | Assessment Analytics – Rules Violation Analysis

SAP ECC 6.0

In-scope modules
- FICO
- MM & WM
- SD
- HCM
- QM
- PP

Total No. of Rules	134
Total No. of Rule Violations	124

SAP CRM 7.0

Total No. of Rules	121
Total No. of Rule Violations	43

SAP TM 9.0

Total No. of Rules	06*
Total No. of Violations	06
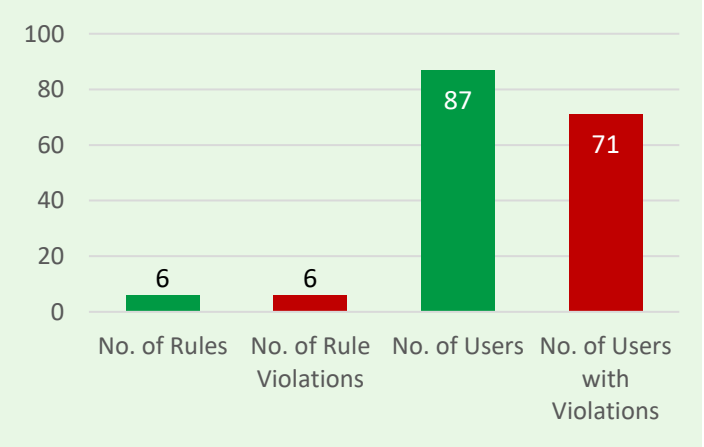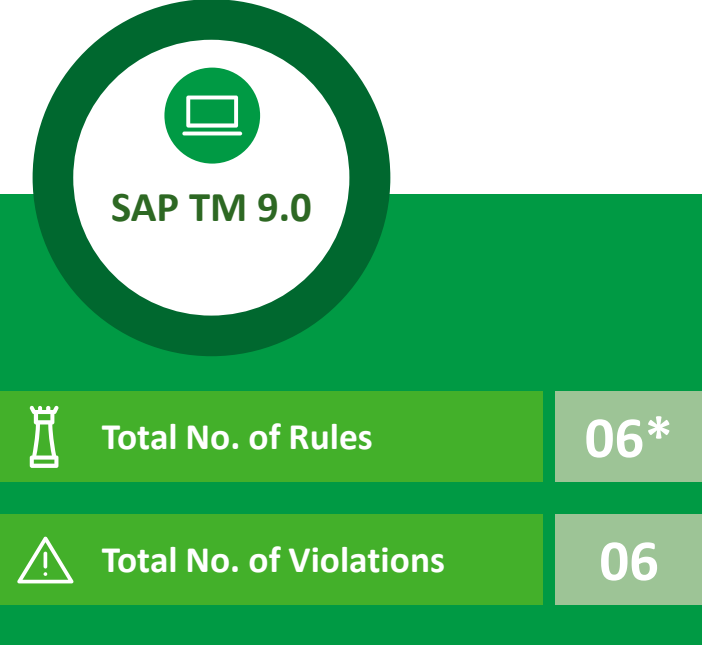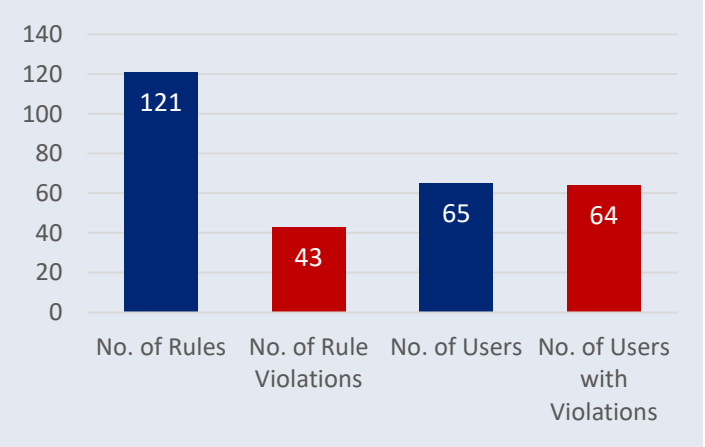
* The assessment for SAP TM was done manually selecting the most critical six (6) SoD / SA rules designed in alignment with the implemented SAP TM version and business processes of ARASCO.

WS3 | Assessment Analytics – Observation Priority Analysis

Our detailed observations and suggestions for improvement are included in the following section of this assessment report. To enable management to set priorities on their action plans, we have reported our findings in three categories: **High**, **Medium**, and **Low**. The findings are sorted in a descending order based on their importance level, from the highest risk to the lowest.

Significance of Observations

	Description
High	Action plan and related corrective action to be implemented as a matter of urgency.
Medium	Action plan and related corrective action to be implemented as a matter of priority.
Low	Action to be taken to address weakness within a reasonable agreed time frame.

Workstream 4

Business Planning Consolidation Assessment

WS4 | Business Planning Consolidation Assessment

🟢 Optimal   🟡 Sub optimal   🔴 Not configured / Not effective

Key Notes on Group Consolidation Assessment

- SAP Business Planning Consolidation (BPC) is a critical application for business consolidation. Some of the key benefits delivered by SAP BPC are automation of consolidation process, enablement of workflows and systematic approach for capturing data from source systems, business rules configured in system to eliminate manual intervention, reduce cycle time of consolidation and provide an audit trail for consolidation activity on continuous basis.

- SAP brings leading practices across various sub-processes of consolidation. During our assessment, it was observed that the solution design is sub-optimal and not scalable (Intercompany Elimination and Cash Flow). Below are some of the key observations:
  - **Balance Carry Forward:** Manual journal entries data is not being carried forward to the next year as opening balances as mentioned in the design.
  - **Intercompany Elimination:** Configuration for intercompany eliminations was not done in Account dimension and business rules.
  - **Reporting:** KPIs, reports and dashboard are yet to be defined and build.
  - **Cash Flow:** Configuration for cash flow process was incomplete.
  - **Security:** Security design and configuration are not discussed in the Business Blueprint (BPP) and not configured in the system.

- A robust Program Management aligned to SAP Implementation methodology is important. Multiple flaws were observed in the BPC project management:
  - System design is not aligned with **Solution document** (blueprint).
  - No audit trail / evidences / sign-offs maintained for **testing & training.**
  - **Changes** made to production server without testing in quality.
  - Project plan without actual activity tracking

- As an immediate next step, business team shall consider resolving the identified defects (refer to Section 4 – Detailed Observations) Prior and/or while proceeding with the to-be solution. Thorough testing and training is required along with adequate documentation for future references.

- Close monitoring of project is required to ensure that all the observations (solution and PMO) are addressed before go-live and signed off by the business.

Business Process Solutioning

1. Maintain Exchange Rates	🟢	7. Run Intercompany Matching	🔴
2. Maintain Ownership Data	🟢	8. Run Group Consolidation	🟡
3. Load SAP Entities TB	🟢	9. Post Group Adjustments	🟡
4. Run Copy Opening	🟡	10. Run Cash Flow Process	🔴
5. Run Controls	🔴	11. Generate Reports	🟡
6. Run Currency Translation	🟡	12. Work Status	🔴

Project Management

1. Project Plan	🟡	8. Training strategy	🔴
2. Project charter/ RACI matrix	🔴	9. Training manuals	🟡
3. Business blueprint document	🟡	10. Go-No Go check list	🔴
4. Data migration plan	🔴	11. UAT Sign off	🔴
5. Testing strategy & Plan	🔴	12. FS/TS documents RICEFW	🔴
6. Testing scripts	🟡	13. Authorization strategy	🔴
7. Testing defect logs	🔴		

WS4 | BPC - Business Planning Consolidation – Implementation Heat Map

Business Process	Design	Master Data	Configuration	Reports	Documentation
Maintain Exchange Rates	🟩	🟩	🟩	🔵	🟦
Maintain Ownership Data	🟩	🟩	🟩	⬜	🟦
Load SAP Entities TB	🟩	🟩	🟩	🟩	🟦
Run Copy Opening	🔵	🟩	🔵	🔵	🟦
Run Controls	🟦	🟦	🟦	🟦	🟦
Run Currency Translation	🔵	🟩	🟩	🔵	🟦
Run Intercompany Matching	🟦	🟦	🟦	🟦	🟦
Run Group Consolidation	🔵	🟩	🔵	⬜	🟦
Post Group Adjustments	🟩	🟩	🔵	🔵	🟦
Run Cash Flow Process	🟦	🟦	🟦	🟩	🟦
Work Status	🟩	🟩	🟩	⬜	🟦

Key Notes

- In overall implementation, **training & testing process** is not effective and needs immediate attention for effective adaptability. e.g., UAT documents sign off from business, effective training with reference to change in design, defect tracking etc.

- Deployment of designated PMO will ensure the effectiveness of project documents (e.g., training manuals, functional design documents, Go / No-go parameters etc.) and it will also **mitigate the risk** of missing configuration, testing, Knowledge Transfer (KT) to support or operate team for future.

Legend:
- 🟩 Effective process implementation
- ⬜ Manual (Process not in SAP)
- 🔵 Process needs some changes to make it effective
- 🟦 Process needs significant improvement

Draft for Discussion Purposes Only

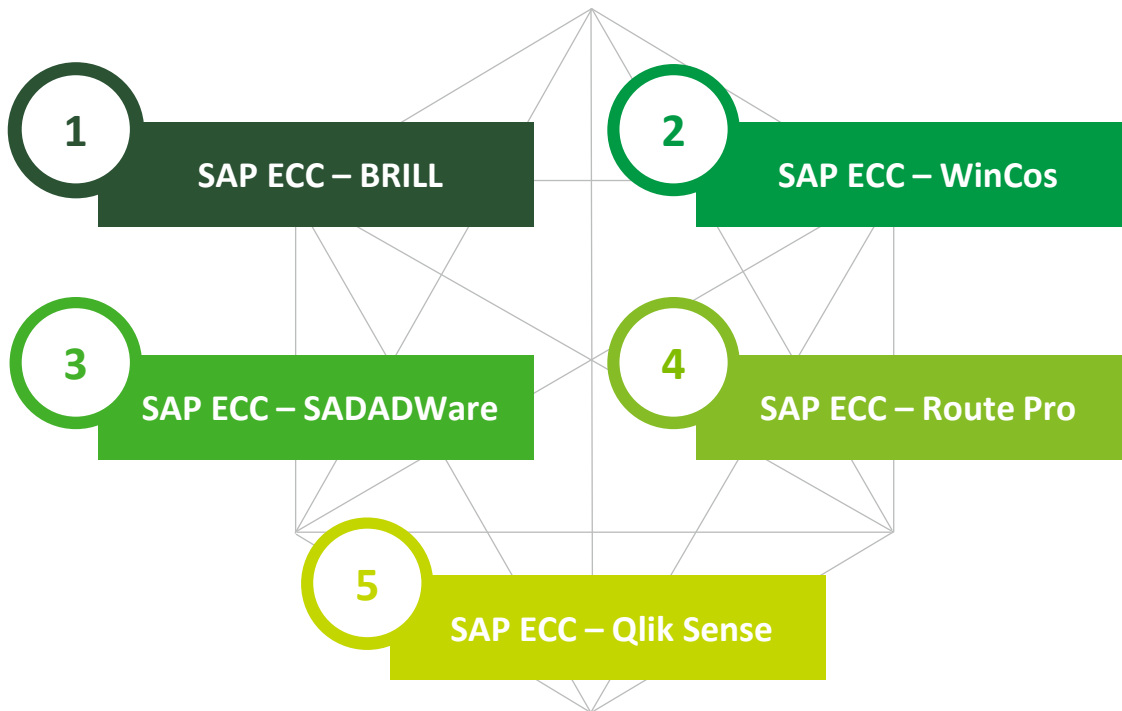# Workstream 5

Interface Assessment

WS4 | Interface Assessment

As part of the SAP Controls and Utilization Assessment, in this workstream we performed an assessment of the selected interfaces with SAP ECC to determine whether control activities are designed, implemented, and operating effectively to transfer data from source to destination systems accurately, completely, and securely, and appropriate monitoring mechanisms are in place to identify any deviations.

Interface Assessment Scope

The following interfaces were covered as part of the scope for interface assessment:

1 SAP ECC – BRILL

2 SAP ECC – WinCos

3 SAP ECC – SADADWare

4 SAP ECC – Route Pro
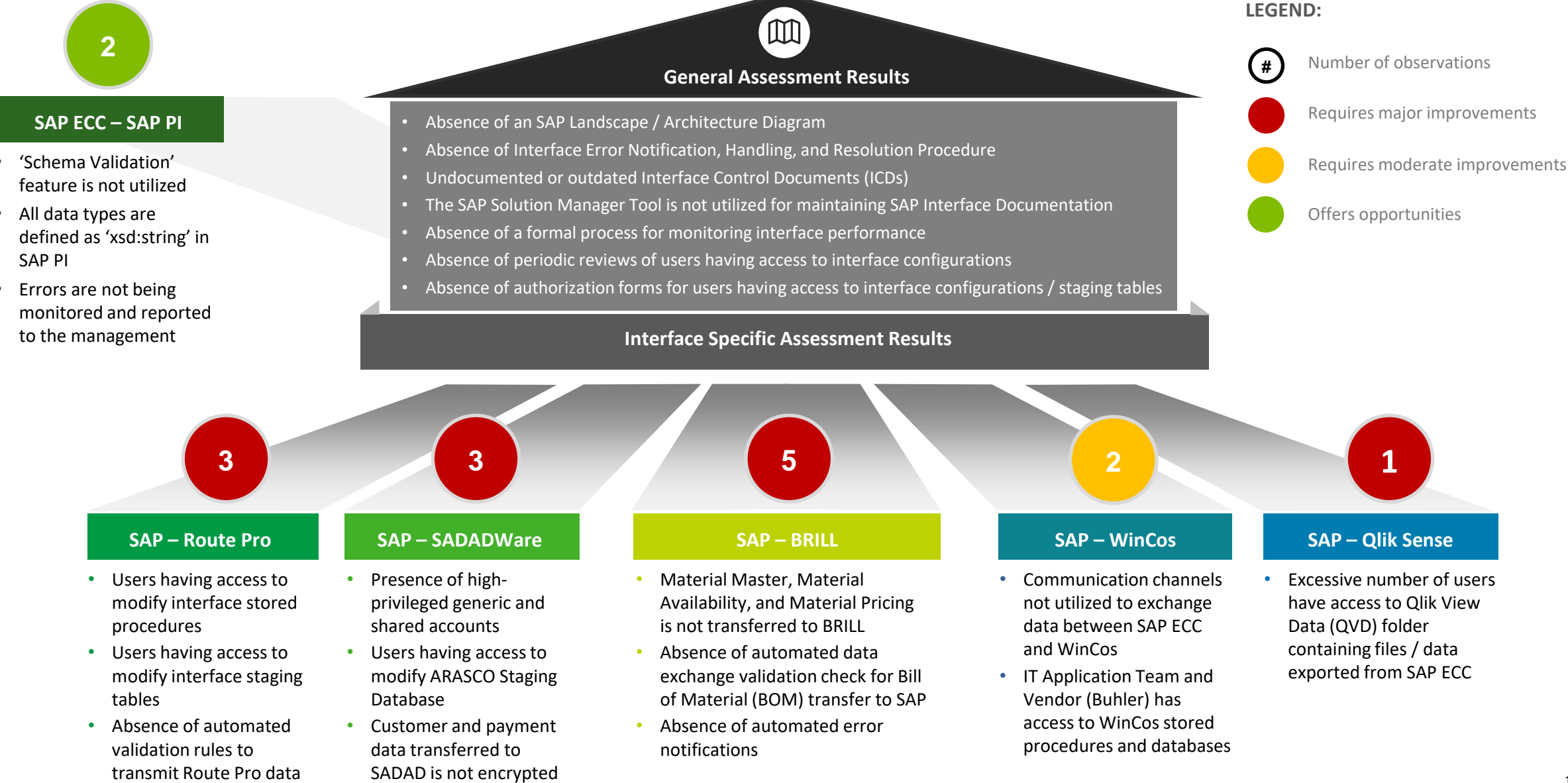
5 SAP ECC – Qlik Sense

Interface Assessment Objectives

The assessment focused on the following key controls objectives over interface configurations and data exchanged between the interfacing systems:

1. Documentation
2. Completeness
3. Accuracy / Validity
4. Security / Restricted Access
5. Change Management
6. Error Detection & Handling
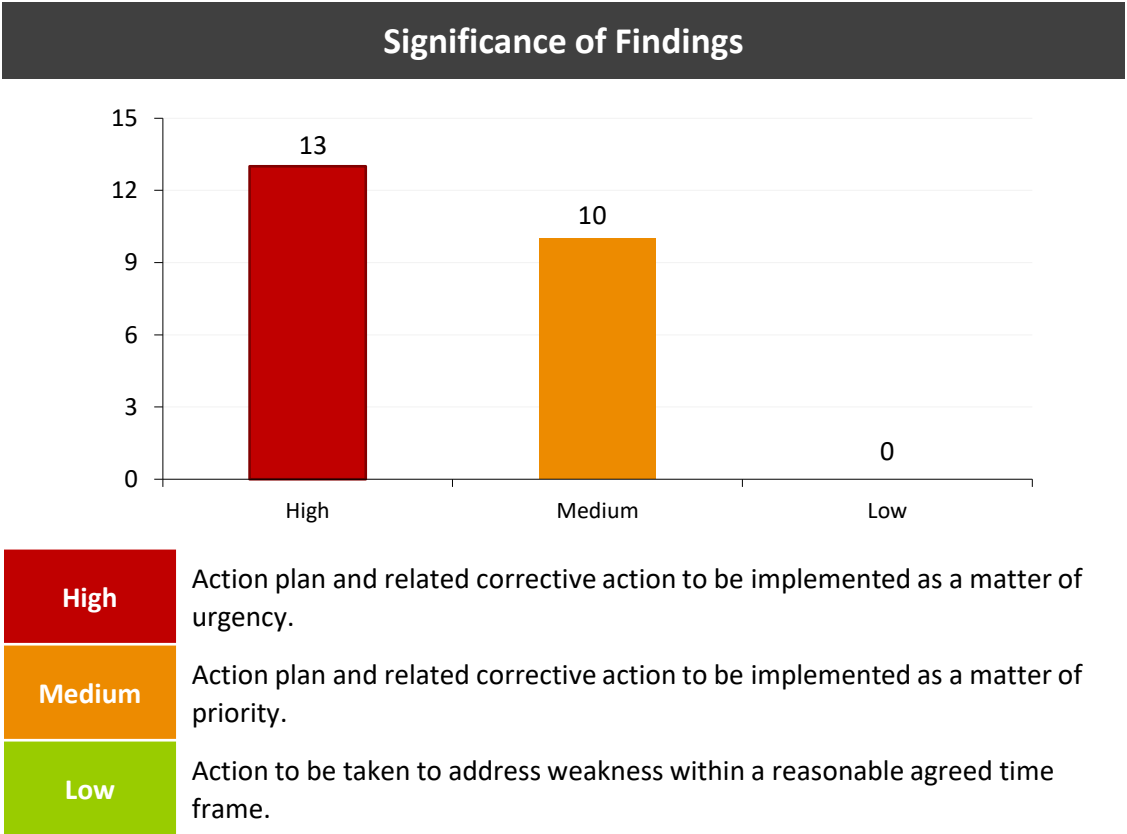
In order to assess the aforementioned controls objectives, existing interface related documentation were reviewed; series of meetings were conducted with relevant stakeholders from IT and business to understand interface functionality and operations; and walkthroughs were performed of interface configurations, data exchange mechanisms, security protocols, and error handling procedures.

WS5 | Assessment Analytics

2

SAP ECC – SAP PI

- 'Schema Validation' feature is not utilized
- All data types are defined as 'xsd:string' in SAP PI
- Errors are not being monitored and reported to the management

General Assessment Results

- Absence of an SAP Landscape / Architecture Diagram
- Absence of Interface Error Notification, Handling, and Resolution Procedure
- Undocumented or outdated Interface Control Documents (ICDs)
- The SAP Solution Manager Tool is not utilized for maintaining SAP Interface Documentation
- Absence of a formal process for monitoring interface performance
- Absence of periodic reviews of users having access to interface configurations
- Absence of authorization forms for users having access to interface configurations / staging tables

Interface Specific Assessment Results

LEGEND:

- **#** Number of observations
- ● Requires major improvements
- ● Requires moderate improvements
- ● Offers opportunities

3

SAP – Route Pro

- Users having access to modify interface stored procedures
- Users having access to modify interface staging tables
- Absence of automated validation rules to transmit Route Pro data

3

SAP – SADADWare

- Presence of high-privileged generic and shared accounts
- Users having access to modify ARASCO Staging Database
- Customer and payment data transferred to SADAD is not encrypted

5

SAP – BRILL

- Material Master, Material Availability, and Material Pricing is not transferred to BRILL
- Absence of automated data exchange validation check for Bill of Material (BOM) transfer to SAP
- Absence of automated error notifications

2

SAP – WinCos

- Communication channels not utilized to exchange data between SAP ECC and WinCos
- IT Application Team and Vendor (Buhler) has access to WinCos stored procedures and databases

1

SAP – Qlik Sense

- Excessive number of users have access to Qlik View Data (QVD) folder containing files / data exported from SAP ECC

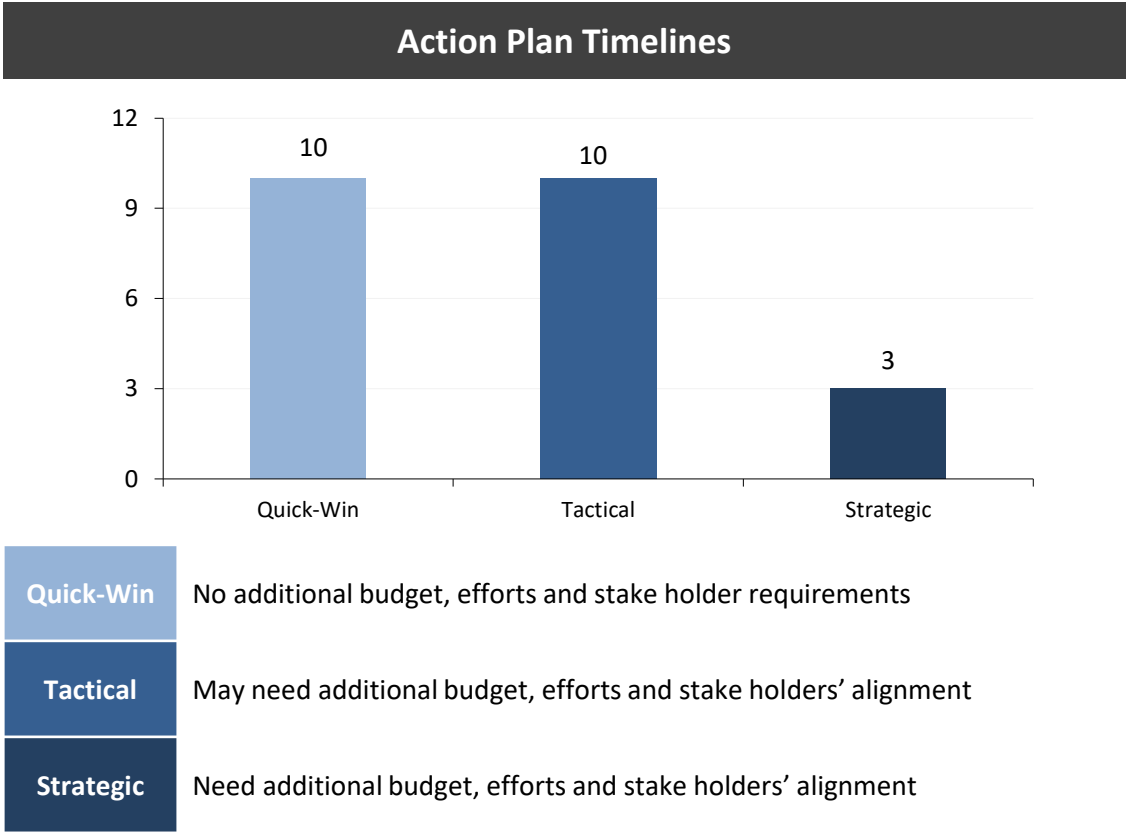Draft for Discussion Purposes Only

WS5 | Assessment Analytics – Observation Priority Analysis

Our detailed observations and suggestions for improvement are included in the following section of this assessment report. To enable management to set priorities on their action plans, we have reported our findings in three categories: **High**, **Medium**, and **Low**. The findings are sorted in a descending order based on their importance level, from the highest risk to the lowest.

We have identified the action plan timelines for each observation noted into three categories: **Quick-Win**, **Tactical**, and **Strategic** to enable management to prioritize the implementation of our recommendations based on realistic amount of effort required to mitigate the risk.

A summary of the findings and action plan timelines noted during the course of the assessment are presented in the graphs below.

Significance of Findings

High: 13
Medium: 10
Low: 0

Action Plan Timelines

Quick-Win: 10
Tactical: 10
Strategic: 3

High — Action plan and related corrective action to be implemented as a matter of urgency.

Medium — Action plan and related corrective action to be implemented as a matter of priority.

Low — Action to be taken to address weakness within a reasonable agreed time frame.

Quick-Win — No additional budget, efforts and stake holder requirements

Tactical — May need additional budget, efforts and stake holders' alignment

Strategic — Need additional budget, efforts and stake holders' alignment

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WS5 | Assessment Analytics – Observation Root-cause Analysis

As part of the assessment, we also identified the key causes and factors which contribute to the existence of the noted observations. We have classified the interface related observations into four root-cause categories: **Process Gap**, **Documentation Gap**, **Configuration Gap**, and **Utilization Gap**. This categorization will enable relevant stakeholders (including members of management, business, and IT) to understand the reasons underlying the identified observations. Moreover, it will provide the management the precise area to focus on in order to address the associated risks and impacts.

A summary of the findings and their root causes are presented in the graph below.

Root Cause

Process	Documentation	Configuration	Utilization
4	3	13	3
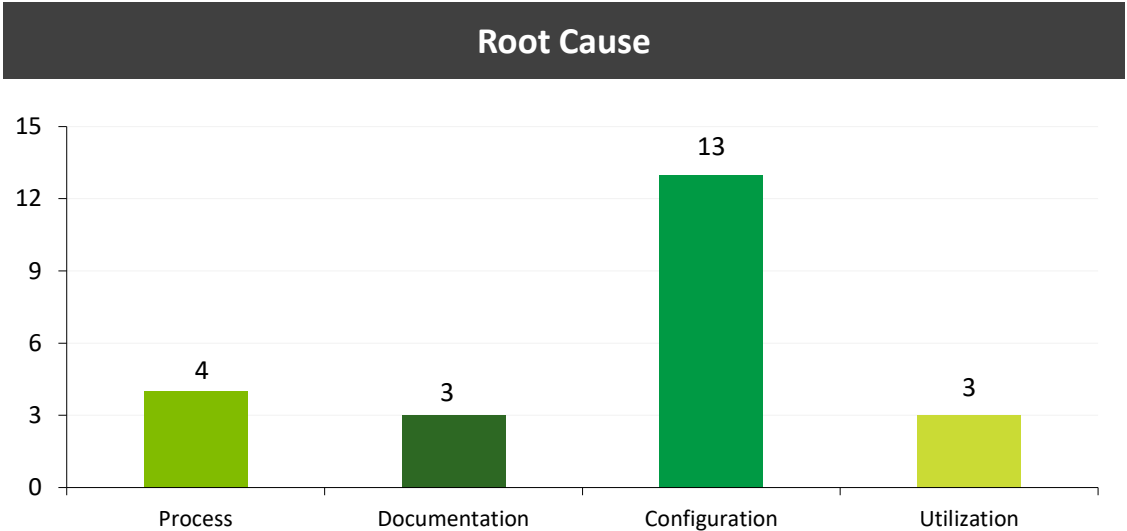
Process Gap	Absence of an appropriately designed, implemented, or followed-up process.
Documentation Gap	Unavailable or inadequate maintenance and management of essential documentation.
Configuration Gap	Control gaps which can be addressed by making changes to access rights, system and / or database configurations.
Utilization Gap	Features, functionalities, and automation opportunities provided by the system which are currently not being utilized.

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