SABS

**APPENDIX A
ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM
IMPLEMENTATION**

SCOPE OF WORK

Framework Agreement for the Provision of an Enterprise Resource Planning (ERP) Solution, covering scope definition, survey and analysis, design, development, testing, deployment, support, maintenance, and training for the successful delivery of the SABS ERP system

PROGRAM MANAGEMENT OFFICE (PMO)

SOUTH AFRICAN BUREAU OF STANDARDS

CELEBRATION • SABS • ANNIVERSARY • 75

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

---

1. PURPOSE OF THE DOCUMENT

The purpose of this document is to **define, describe, and document the business requirements and the scope of work** for the design, development, configuration, and implementation, change management and training, support and maintenance of the Enterprise Resource Planning (ERP) solution at the South African Bureau of Standards (SABS).

This document outlines the **business needs, functional expectations, process improvements, and compliance requirements** that the ERP system must fulfil to support SABS's operational excellence, digital transformation, and governance objectives.
It serves as the **foundation for system design, solution configuration, testing, and acceptance**, ensuring alignment between business users, ICT, PMO, and the appointed service provider.

2. PROJECT OBJECTIVES

Project Objectives – ERP Implementation at SABS

The overall objective of this project is to **design, develop, implement, and support an integrated Enterprise Resource Planning (ERP) solution** that modernises, digitises, and standardises business processes across the South African Bureau of Standards (SABS).

The ERP will enable **data-driven decision-making, operational efficiency, financial transparency, and compliance** with the Public Finance Management Act (PFMA), POPIA, and other applicable frameworks. It will serve as a strategic enabler for SABS's **Digital Transformation and Operational Excellence Agenda (2026–2031)**.

Specific Objectives

1. **Business Process Integration**
   - Consolidate and integrate all core business functions across Finance, SCM, Human Capital, Customer Partnering, Project Portfolio Management, Facilities, and Corporate Performance into a single ERP environment.
   - Enable seamless data flow between modules through a unified Master Data Warehouse (MDW).
2. **Operational Efficiency**
   - Eliminate duplication, reduce manual interventions, and automate repetitive workflows.
   - Enable end-to-end process visibility across divisions, from client onboarding to revenue recognition and reporting.
3. **Regulatory Compliance**
   - Embed compliance with **PFMA**, **POPIA**, **National Treasury Regulations**, **B-BBEE**, and **audit frameworks** directly into workflows.
   - Strengthen governance, control, and auditability through approval hierarchies, traceable logs, and automated reporting.
4. **Financial Management and Accountability**
   - Implement standardised and automated processes for General Ledger, Accounts Payable/Receivable, Fixed Assets, and Budget Management.
   - Improve financial accuracy, cash flow management, and reporting consistency through system-enforced validations and dashboards.
5. **Human Capital and Change Management**
   - Digitise employee management, learning and development, performance tracking, and travel management.
   - Facilitate workforce engagement through self-service functionalities, e-approvals, and integrated capacity management.
6. **Customer and Stakeholder Engagement (CRM)**

- o Provide a 360° view of customer interactions, certifications, and service requests.
- o Integrate client and stakeholder data to improve responsiveness, transparency, and relationship management.

7. **Facilities and ESG Management**

- o Enable digital asset tracking, maintenance scheduling, and fleet management.

8. **Project and Portfolio Management (PPM)**

- o Standardise project planning, execution, monitoring, and reporting using a portfolio-based governance model.
- o Enable benefit tracking, CAPEX management, and project prioritisation aligned with organisational strategy.

9. **Enterprise Performance Management (EPM)**

- o Integrate corporate, divisional, and individual performance management into the ERP ecosystem.
- o Enable automated KPI tracking, Balanced Scorecards, and performance dashboards.
- o Align planning, budgeting, forecasting, and strategy execution within one platform.
- o Support evidence-based reporting to EXCO, Board, and oversight entities (e.g., DTIC, National Treasury).

10. **Master Data Warehouse (MDW)**

- o Establish a centralised and secure data repository serving as the single source of truth for enterprise reporting.
- o Integrate data from ERP modules and legacy systems to support analytics, audit, and regulatory compliance.
- o Enable predictive insights and trend analysis through embedded business intelligence and AI capabilities.

11. **Business Intelligence and Reporting**

- o Deliver real-time dashboards and analytics for financial, operational, and performance reporting.
- o Automate periodic and statutory reports required by PFMA, SANAS, DTIC, and the SABS Board.
- o Facilitate proactive risk management and decision support through consolidated data views.

12. **Scalability and Future Readiness**

- o Implement a **modular, cloud-ready, and scalable ERP architecture** compatible with Zero Trust and hybrid hosting.
- o Future-proof SABS's digital capability by ensuring interoperability with future solutions such as CIMS, LIMS, and SABSTAN.

13. **Learning Management**

- o To implement an External Learning Management Platform integrated within the SABS ERP ecosystem, enabling the management of all external client training services offered by the SABS Academy or equivalent units.
- o The system must automate course enrolment, scheduling, payments, attendance tracking, certification, and reporting while ensuring seamless integration with Finance (AR), CRM, and CIMS.

3. CONTEXT AND BACKGROUND

BUSINESS REQUIREMNTS SPECIFICATIONS

1. Introduction

The **South African Bureau of Standards (SABS)** requires an **integrated Enterprise Resource Planning (ERP) solution** to modernise and standardise its core business processes. This ERP solution will provide a single, centralised platform that supports SABS's mandate and strategic objectives by ensuring transparency, accountability, and operational efficiency.

The ERP solution must seamlessly integrate functions across the following domains:

- **Finance and Accounting** (budgeting, general ledger, accounts payable/receivable, asset management)

- **Supply Chain Management (SCM)** (sourcing, procurement, inventory, vendor and contract management)

- **Human Capital (HC)** (Learning, training and development)

- **Customer Relationship Management (CRM)** (client data management, billing, service delivery, customer engagement)

- **Project and Portfolio Management (PPM)** (programme governance, project tracking, CAPEX monitoring, resource allocation)

- **Facilities Management** (asset tracking, maintenance scheduling, infrastructure management)

- **Performance management (Corporate Performance)-** To enable strategic planning, performance tracking, and decision support across the organization by integrating financial, operational, and project data into a unified performance management framework.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

- **Master data warehouse-** the **central, authoritative repository of enterprise data**, ensuring consistency, accuracy, and integrity of information across all ERP modules and related business systems (Finance, SCM, HR, CRM, PPM, EPM, CIMS, LIMS, and SABSTAN).

By consolidating these functions into one integrated system, SABS will eliminate duplications, improve real-time data availability, and enhance reporting and decision-making capabilities.

2. Problem Statement

Currently, SABS operates with fragmented systems and manual processes that create inefficiencies, data silos, and governance risks. Legacy applications lack full integration, resulting in:

- **Inconsistent data** across divisions and systems.
- **Operational inefficiencies**, including duplication of effort and delays in service delivery.
- **Limited visibility** of enterprise-wide performance metrics for decision-makers.
- **Compliance and audit risks**, given misaligned processes with PFMA, National Treasury frameworks, and ISO standards.
- **Inflexibility** to adapt to the growing complexity of SABS's operations and digital transformation agenda.

These gaps limit SABS's ability to fulfil its statutory mandate effectively and to support the South African economy through efficient standards development, certification, and conformity assessment.

4.   SCOPE OF SERVICES

Service providers appointed under the **ERP Framework Agreement** must be capable of delivering an integrated suite of services across the following **workstreams**:

1. ERP Solution Design & Architecture

- Conduct **business process re-engineering (BPR)** and mapping of *As-Is* and *To-Be* processes across all functional areas.
- Develop **functional, technical, and integration specifications** aligned with SABS's operational and compliance requirements.
- Design **enterprise-wide architecture**, ensuring interoperability between ERP and existing systems, including **CIMS**, **LIMS**, **SABSTAN**, **SharePoint**, **Payroll**, and future digital systems.
- Incorporate **EPM and MDW architecture design** into the overall ERP blueprint to enable integrated analytics, performance management, and data governance.

2. ERP Development & Configuration

- Configure and customise ERP modules (Finance, SCM, HR, CRM, PPM, Facilities, EPM, MDW, etc.) based on approved business requirements.
- Perform **data migration**, validation, and cleansing activities to ensure data integrity and alignment across modules.
- Develop **APIs and middleware integrations** between ERP and third-party systems.
- Establish **data models and structures** for the Master Data Warehouse, ensuring accuracy, lineage, and standardisation across systems.

3. Implementation & Deployment

- Execute **phased and modular roll-outs**, prioritising high-impact business areas first (e.g., Finance, SCM, EPM).

- Conduct **User Acceptance Testing (UAT)** for all modules, including EPM dashboards and MDW reporting layers.
- Facilitate **change management and organisational readiness** initiatives, ensuring smooth adoption and operational continuity.
- Support **Go-Live and Hypercare** processes for each module, including migration of historical data and configuration sign-off.

4. Quality Assurance & Testing

- Implement end-to-end **testing frameworks**, including:
    - Unit Testing
    - Integration Testing
    - Regression and Performance Testing
    - User Acceptance Testing (UAT)
- Validate **data accuracy and report integrity** through MDW reconciliation processes.
- Conduct **EPM performance testing** to ensure accuracy of KPI dashboards and analytics.

5. Training & Knowledge Transfer

- Develop **end-user and super-user training manuals** for all modules, including EPM and MDW.
- Facilitate **train-the-trainer sessions** to enable sustainable in-house capability.
- Conduct **executive performance dashboard training** for management and EXCO stakeholders.
- Transfer full technical knowledge, documentation, and user guides to SABS ICT and PMO.

6. Support, Maintenance & Hypercare

- Provide **comprehensive post-deployment support**, including a minimum three (3)-month **Hypercare Period** for each module.
- Manage incidents, defects, enhancements, and updates under a **Service Level Agreement (SLA)** framework.
- Maintain **MDW infrastructure**, ensuring data synchronisation, backup integrity, and report accuracy.
- Provide **EPM system maintenance and configuration support**, including updates to KPIs, scorecards, and reporting templates.
- Conduct **annual system health checks**, **security assessments**, and **ERP optimisation reviews**.
- Support **licence renewals**, **version upgrades**, and **vendor patch management**.

7. Governance, Security & Compliance

- Ensure **compliance with POPIA**, **PFMA**, **ISO/IEC 27001**, and **SABS internal IT Governance Policies**.
- Implement **role-based access controls (RBAC)**, **audit trails**, and **data protection mechanisms**.
- Embed **data residency controls** and ensure that cloud hosting complies with South African legislation.
- Support **cybersecurity and continuity management** for ERP, EPM, and MDW components.

8. Business Intelligence, EPM & MDW Integration

- Design and implement the **Enterprise Performance Management (EPM)** module for corporate, divisional, and individual performance tracking.
- Configure the **Master Data Warehouse (MDW)** as the central repository for all ERP and non-ERP data.
- Integrate EPM dashboards with MDW analytics to enable **real-time, enterprise-wide reporting**.

- Provide advanced **business intelligence**, **AI-driven forecasting**, and **scenario analysis** capabilities.

5. HIGH LEVEL PROJECT SCOPE

Technical Scope

The ERP implementation will deliver **integrated functional modules** to modernize and standardize SABS's core business processes. The following modules are prioritized:

Functional Domain	Core Business Functions	Key Expected Capabilities
Finance & Accounting	General Ledger, Accounts Payable/Receivable (AP/AR), Fixed Assets, Budgeting, Financial Reporting, Expense Management, Sales Order Management, Works Order Management	IFRS-compliant financial statements; automated bank reconciliations; budget vs actuals tracking; integrated cost-centre reporting; audit-ready financial ledgers.
Supply Chain Management (SCM)	Procurement, Inventory, Contract & Vendor Management	e-Procurement, tender tracking, automated approval workflows, supplier onboarding and performance management, inventory optimisation and replenishment controls.
Customer Relationship Management (CRM)	Customer master data, Quotation, Service Orders, Contract Lifecycle, Client Interaction Tracking	Centralised client view, automated quotation and order management, client issue tracking, digital engagement history, and service-level monitoring.
Project & Portfolio Management (PPM)	Project planning, scheduling, costing, monitoring, reporting	Project prioritisation, milestone tracking, budget utilisation dashboards, CAPEX monitoring, risk management, and integrated PMO governance reporting.
Facilities Management	Fleet, Plant Maintenance, Building Assets, Security Systems	Asset lifecycle tracking, predictive maintenance scheduling.
Enterprise Performance Management (EPM)	Corporate and Divisional Scorecards, KPIs, Performance Dashboards, Forecasting & Strategic Planning	Integrated KPI framework linking divisional and corporate goals; balanced scorecards; automated performance reporting; scenario modelling and forecasting; alignment with strategic plan.
Master Data Warehouse (MDW)	Enterprise data repository, data consolidation, metadata management, business intelligence	Centralised "single source of truth"; integrated data model linking ERP, LIMS, CIMS, SABSTAN; data lineage tracking; predictive and AI-driven analytics.
Integration Layer	APIs, middleware, enterprise data exchange, workflow orchestration	Real-time data synchronisation across ERP and legacy systems; API gateway management; workflow integration with corporate applications (SharePoint, BI tools, etc.).
Data Migration	Extraction, transformation, and loading (ETL) of master and transactional data	End-to-end data migration strategy and execution; data validation and cleansing; reconciliation and audit trail for migrated data; sign-off by business owners.
Reporting & Analytics	Dashboards, KPIs, compliance reports, predictive analytics	Interactive dashboards, automated statutory reports (PFMA, SANAS, Treasury), utilisation and cost-benefit analytics, executive performance insights.
Support & Maintenance	Technical and functional support, version upgrades, incident management	Comprehensive SLA-based support model; 24/7 critical issue resolution; patch and version updates;

system health monitoring; preventive maintenance and optimisation.

Finance Modules

- **General Ledger (GL):** Period closure, year-end processes, integrity reports, journal processing, VAT journals, and budget uploads.
- **Accounts Payable (AP):** Supplier payments, staff claims, staff advances, batch payments, 2- and 3-way matching, remittances, age analysis, and module closure.
- **Accounts Receivable (AR):** Customer billing, receipting, refunds, debit orders, credit notes, recurring billing, statements, reminders, integrity checks, and module closure.
- **Fixed Assets Management:** Asset creation, depreciation runs, capitalization, transfers, disposals, CWIP tracking, and useful life adjustments.
- **Budget and Financial Management:** Budget control, variance analysis, capital commitment monitoring, and job costing.
- **Expense Management**
- **Works Order Management**

Supply Chain & Procurement Modules

The ERP must provide an **end-to-end SCM capability** that is fully compliant with the **PFMA** and applicable **National Treasury SCM Regulations**, ensuring transparency, accountability, and auditability across all procurement and contract management processes.

Key modules include:

- **Procurement & PO Management:** Requisitioning, approvals, purchase order creation, budget hold release, standing POs, CAPEX/OPEX requisitions, attachments, deletions, and PO call-offs.
- **Inventory Management:** Stock requisition, issue, receipts, GRVs (internal/external), stock counts, adjustments, valuation reports, and full audit trail.
- **Vendor/Supplier Management:** Supplier registration, address book masterfile management, vendor performance monitoring, BBBEE compliance tracking, and credit checks.
- **Contracts Management:** Centralised contract repository, lifecycle management (initiation, approval, renewal, termination), monitoring of compliance obligations, and integration with procurement transactions.
- **Regulatory Compliance Integration:** Automated reporting and dashboards to support PFMA compliance, National Treasury Instruction Notes, and internal SABS governance requirements.
- **Audit Trail & Transparency:** Every SCM transaction (from requisition to payment) must have a full digital record to enable oversight, audit readiness, and risk management.

Customer Partnering Modules

The ERP must provide **end-to-end customer engagement, business development, and sales capability**, ensuring seamless management of the customer lifecycle from lead generation to revenue collection. The solution must align with SABS governance frameworks, PFMA requirements, and international best practice for conformity assessment bodies.

Key modules include:

- **Customer Relationship Management (CRM):** Centralised client database, contact management, account history, and communication tracking.
- **Business Development & Lead Management:** Opportunity tracking, pipeline management, quotation generation, and conversion into sales orders.
- **Sales Order Management:** End-to-end handling of customer orders, including order entry, fulfilment, invoicing, and receipting.
- **Revenue Management:** Recurring billing, debit orders, credit notes, refunds, reminders, and generation of customer statements

and financial reports.

- **Customer Engagement Tools:** Portals and self-service platforms for applications, status tracking, quotations, and service requests.
- **Integration with Certification & Testing Services:** Seamless link with CIMS, LIMS, Webstore, and Standards sales platforms for service fulfilment and revenue recognition.
- **Compliance & Audit Trail:** Digital record of all customer interactions, contracts, orders, and payments, with reporting aligned to PFMA and audit requirements.
- **Analytics & Insights:** Dashboards for business development performance, customer satisfaction, revenue pipeline, and market segment analysis.

Human Capital Management (HCM) Modules

The solution must align with SABS policies, South African labour legislation, and PFMA requirements for personnel cost management. Key modules include:

- **Employee & Manager Self-Service:** Online leave applications, payslips, performance reviews, and personal data updates.
- **Compliance & Governance:** Alignment with PFMA, POPIA, BCEA, LRA, and other statutory frameworks; audit-ready reporting on personnel expenditure and workforce data.
- **Analytics & Insights:** Dashboards for headcount, employee costs, turnover, diversity, and training ROI to support strategic workforce planning.
- The Bidder must provide an **integrated ERP Travel Management Module** to automate and manage the full lifecycle of employee business travel — from request to reimbursement — in alignment with the SABS Travel Policy, PFMA, Treasury Regulations, Delegation of Authority, and internal audit requirements.

Project Portfolio Management (PPM) – End-to-End Requirements

The ERP must provide **end-to-end Project and Portfolio Management (PPM) capabilities**, ensuring that SABS's capital projects, operational initiatives, and strategic programmes are effectively planned, governed, executed, monitored, and reported in compliance with the **PFMA**, National Treasury frameworks, and SABS PMO governance standards.

Key Modules & Capabilities

- **Portfolio Governance & Alignment**
  - o Enterprise-wide portfolio oversight aligned to strategic objectives.
  - o Frameworks for project prioritisation, approvals, and stage-gate decision-making.
  - o Compliance with PFMA and NT requirements for CAPEX project governance.

- **Programme & Project Planning**
  - o Project initiation, scoping, and business case development.
  - o Work breakdown structures (WBS), Gantt-based scheduling, and milestone tracking.
  - o Resource assignment (linked to Human Capital Management).
  - o Costing and budgeting (linked to Finance).

- **Execution & Monitoring**
  - o Task management, deliverable tracking, and dependency management.
  - o Risk and issue logging with escalation workflows.
  - o Change control management with full audit trail.

- **Financial Integration**
  - o CAPEX and OPEX tracking per project.
  - o Budget variance analysis, commitment monitoring, and expenditure reporting.
  - o Benefits realisation measurement aligned to financial and operational KPIs.

- **Performance Reporting & Analytics**

- o   Real-time dashboards for executives and project managers.
- o   Portfolio heatmaps (budget, schedule, risk, resource utilisation).
- o   Predictive analytics for risk and resource bottlenecks.
- o   Automated reporting for EXCO, Board, and NT submissions.
- **Knowledge & Document Management**
  - o   Central repository for project charters, approvals, contracts, and deliverables.
  - o   Version control, approvals, and document sharing across teams.
- **Auditability & Compliance**
  - o   Full audit trail of project approvals, budget utilisation, and deliverables.
  - o   Compliance with PFMA, NT Treasury Instruction Notes, and SABS PMO policies.

Performance Management – End-to-End ERP Requirements

The ERP must provide an **end-to-end Performance Management capability** that ensures alignment of SABS's corporate plan with divisional and individual targets, while enabling transparent monitoring, reporting, and stakeholder engagement in line with PFMA and National Treasury frameworks.

Key Modules & Capabilities

1. Strategy & Alignment

- Capture and cascade **Key Performance Indicators (KPIs)** across divisions, sub-divisions, and individuals.
- Support for **scorecards** at corporate, divisional, and individual levels.
- Enable linking of **budgets** to projects and initiatives.
- Support definition of **Key Performance Areas (KPAs)** and metrics for each.
- Flexibility for **non-mandatory structures** to accommodate operational variations.

2. Performance Scorecards

- Create and manage projects, initiatives, KPAs, and KPIs by department/division.
- Enable individual divisions to capture operational KPAs and KPIs.
- Provide **period-based reporting** (monthly, quarterly, half-yearly, annual).

3. Performance Reporting

- Enable structured capture of monthly/quarterly reports (using standard templates).
- Allow divisions to view both **organisational and divisional scorecards**.
- Assign designated reporters per unit to capture monthly actuals.
- Enforce **portfolio of evidence uploads** (proof of results).
- Workflow from reporter → Divisional Head → Strategy team.
- Strategy team override for corrections/rejections.
- Automated **reminders and deadlines** for submission.
- Lockout functionality with reporting on outstanding submissions.
- **Spell and language check** before submission.
- Live **dashboards integrating Finance, HR, SCM, and CRM data**.
- Export to Word templates for **Board and DTI reporting**.
- Access control for Strategy and Audit teams to evidence portfolios.

Facilities Management – End-to-End ERP Requirements

The ERP must provide an **integrated Facilities Management capability** covering the full lifecycle of SABS's infrastructure, fleet, and equipment assets. This functionality must ensure compliance with **PFMA**, **Occupational Health and Safety (OHS)** legislation, and internal governance frameworks, while enabling cost-effective operations and security of physical assets. The ERP must embed a **Facilities Management Module** to automate and integrate the management of physical infrastructure, assets, fleet, and security systems.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Facilities Function	Core Features / Requirements	Integration Points
Fleet Management	Vehicle registry, scheduling, fuel usage, maintenance tracking, licensing, GPS integration, driver logs, and cost accounting	Finance (asset register), SCM (procurement & service contracts)
Plant & Equipment Maintenance	Preventive and corrective maintenance planning, asset lifecycle management, maintenance logs, parts inventory, work orders, and technician scheduling	SCM (spares procurement), Finance (CAPEX), PPM (maintenance projects)
Building & Facilities	monitoring, lease & utilities management, project tracking for renovations and repairs	PMO dashboards, Finance (cost centres),
Security Systems	Access control, CCTV, alarms, and system health monitoring integrated with asset registers and maintenance logs	ICT (network infrastructure), Facilities (security infrastructure), PMO
Asset Register Integration	Unified view of movable and immovable assets across divisions	Finance (fixed asset management), Audit (compliance)

Key Modules & Capabilities

1. Asset & Infrastructure Management

- Centralised register of all buildings, facilities, and infrastructure assets.
- Lifecycle tracking: acquisition, utilisation, maintenance, disposal.
- Asset utilisation reporting integrated with Finance and Fixed Assets.
- Cost allocation per site/division to improve budgeting and control.

2. Plant & Equipment Maintenance

- Preventive maintenance scheduling for laboratory equipment, plant machinery, and critical infrastructure.
- Corrective maintenance workflows with incident logging and escalation.
- Work order management with spare parts and technician assignment.
- Integration with Inventory (SCM) for parts availability and procurement.
- Maintenance cost reporting and downtime tracking.

3. Fleet Management

- Centralised database of vehicles, registration details, licensing, insurance, and compliance documents.
- Vehicle assignment, usage logs, trip authorisations, and fuel consumption tracking.
- Preventive maintenance schedules (servicing, inspections, licensing renewals).
- Monitoring of mileage, utilisation, and replacement cycles.
- Integration with Finance for cost recovery and expense allocation.

4. Physical Security Management

- Centralised security asset register (cameras, access systems, alarms, fire detection).
- Visitor and contractor access control logs.
- Incident reporting and escalation workflows.
- Integration with Facilities and HR for staff/visitor access permissions.
- Security compliance dashboards (safety audits, breach reporting).

6. Compliance & Governance

- PFMA-aligned reporting on facilities and fleet expenditure.
- OHS compliance tracking for plant and building safety.
- Integration with Audit and Risk Management for assurance.
- Full audit trail of maintenance, security, and fleet activities.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

7. Analytics & Reporting

- Dashboards for facilities costs, fleet utilisation, and security incidents.
- Predictive analytics for maintenance scheduling and asset replacement.
- Consolidated reporting for EXCO, Board, and regulatory submissions.

Additional Functional Modules – End-to-End ERP Requirements

In addition to the core Finance, SCM, Human Capital, Customer Partnering, PPM, and Facilities modules, the ERP must support the following **cross-cutting functional modules**:

1. Sales Order Management

- End-to-end **lead-to-revenue cycle management**, from quotation to order fulfilment.
- Management of **distribution sales** and integration with Customer Partnering/CRM.
- **Internal revenue tracking** for laboratory services, standards sales, and certification.
- Integration with Accounts Receivable for invoicing, credit notes, refunds, and revenue recognition.

2. Job Costing

- Allocation of costs to projects, jobs, or contracts.
- Integration with **Budget & Financial Management** for variance analysis.
- Support for monitoring **labour, material, and overhead costs** per project or service.
- Reporting on profitability of specific projects, services, or business units.

3. Capital Asset Management

- Lifecycle tracking of **capital assets** in alignment with budget and financial systems.
- Monitoring of **capital commitments, expenditures, and balances**.
- Integration with Fixed Assets for depreciation and valuation.
- Reporting on **capital project performance and asset utilisation**.

4. Expense Management

- Management of **staff expense claims**, including workflows for approvals.
- Tracking of **staff advances, reimbursements, and deductions**.
- Capture of **internal purchases** (vouchers, petty cash).
- Integration with Accounts Payable and Payroll for settlement and audit trail.

5. Audit Planning & Scheduling

- Scheduling of **internal and external audits** aligned with organisational processes.
- Integration with Finance, SCM, and Certification to track compliance evidence.
- Linkage with **Work-in-Progress (WIP)** and manufacturing-related processes for assurance.
- Automated reminders, workflows, and dashboards for audit readiness.

6. Business Intelligence (BI) & Reporting

- Embedded **BI Publisher** or equivalent official reporting tool.
- Real-time dashboards for executives, managers, and operational teams.
- Automated reporting for **PFMA, NT Treasury, SANAS, and Board submissions**.
- Predictive analytics and "what-if" scenario modelling to support decision-making.
- Compliance outputs, including irregular expenditure monitoring, revenue forecasts, and workforce analytics.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

6. FINANCE FUNCTIONAL REQUIREMENTS

No	Requirement	Description
1	General Ledger (GL)	Centralised chart of accounts with business unit and cost centre structures. Supports standard and recurring journal entries, integrity checks, and error logs. Enables period/month-end and year-end closure including roll-forward of balances.
2	GL – Budget Upload	Ability to upload, adjust, and align budgets with divisional structures. Must support multiple versions and revisions.
3	GL – multi-Currency	System must support multi-currency transactions with consolidated reporting across divisions.
4	Accounts Payable (AP)	Supplier invoice processing with 2-way and 3-way matching (invoice vs PO vs GRV). Batch payment processing, remittances, and allocation.
5	AP – Staff Claims & Advances	Capture and process staff claims, advances, and reimbursements with approval workflows.
6	AP – Supplier Age Analysis	Generate supplier age analysis, balances, and liability tracking. Must include module closure with audit trail.
7	Accounts Receivable (AR)	Customer invoicing, recurring billing, debit orders, credit notes, and refunds. Automated receipting for cash, EFT, and card payments.
8	AR – Credit Management	Credit checks, discount rules, credit holds, activity logs, and reminders/bulk reminders for overdue customers.
9	AR – Statements & Integrity	Generate customer age analysis, statements, integrity checks, and closure reports.
10	Fixed Assets Management	Full lifecycle of assets: acquisition, capitalisation, transfers, depreciation, disposals. Must include CWIP tracking and reporting.
11	Assets – Depreciation & Revaluation	Automated depreciation runs, useful life assessment, revaluation functionality, integrated with GL.
12	Assets – Integration	Integration with Facilities and Plant Maintenance modules for asset upkeep and lifecycle control.
13	Budgeting & Financial Management	Budget preparation, approval workflows, version control, variance analysis, and job costing.
14	Budget Control & Commitments	Capital commitment tracking, expenditure monitoring, and variance reporting. Must support multi-year MTEF planning.
15	Integration with PPM	Link CAPEX budgets and project costs directly to Project Portfolio Management for real-time CAPEX monitoring.
16	Banking & Cash Management	Bank reconciliation (manual and automated), integration with commercial banks for batch payments, cash flow forecasting, and liquidity management.
17	Treasury & Investments	Tracking of short-term investments, interest earned, and cash management in line with PFMA.
18	Compliance & Governance	Alignment with PFMA, IFRS, NT Instruction Notes, and SABS financial policies. Full audit trail with segregation of duties and role-based access.
19	Irregular Expenditure Tracking	Automated reporting on irregular, fruitless, and wasteful expenditure in line with PFMA requirements.
20	Reporting & Analytics	Real-time dashboards for Finance, Executives, and Auditors. Monthly, quarterly, and annual reporting in National Treasury formats.
21	Drill-Down & Consolidation	Capability to drill down from high-level dashboards to transactional details. Must support consolidated financial reporting across all SABS divisions.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

22	Predictive Analytics	Ability to run forecasting and scenario modelling for budgeting, expenditure, and financial risk management.

- **Banking Integration:** Bank balance reconciliation and integration with physical banks.

Sub-Module	Key Functional Requirements	Integration Points	Expected Outcome / Value
1.1 General Ledger (GL)	- Multi-dimensional chart of accounts aligned to IFRS and National Treasury reporting structures. - Automated journal entries from sub-ledgers (AP, AR, Assets, Payroll, Projects). - Real-time budget vs actual tracking by cost centre. - Multi-year comparative and consolidation reporting. - Period-end close automation and audit trail generation.	SCM, Payroll, Project System, Fixed Assets	Unified, real-time financial position; improved accuracy in management and statutory reporting.
1.2 Accounts Payable (AP)	- Supplier invoice capture, validation, and matching (2- or 3-way match). - Automated payment runs with workflow-based approvals . - Credit note management, early payment discounts, and duplicate prevention. - Integration with Procurement and Vendor Master data.	SCM, Treasury, Budget Control	Reduced processing time, improved supplier relations, and audit-ready payment traceability.
1.3 Accounts Receivable (AR)	- Customer billing and invoicing linked to service delivery or certification projects. - Debtor ageing analysis and dunning workflows. - Receipts, credit management, and bank reconciliation automation. - Integration with CRM for revenue recognition.	CRM, Project Accounting, Treasury	Improved cash flow, reduced debtor days, and visibility of revenue performance.
1.4 Budgeting & Planning	- Annual and multi-year budgeting (operational and CAPEX). - Scenario-based forecasting (baseline, revised, and actual). - Integration with HR (cost of employment), SCM (procurement plan), and PMO (project budget). - Mid-term and quarterly reforecasting capabilities. - Budget version control with approval workflows.	HR, SCM, PPM, Treasury	Improved predictability and financial discipline through integrated planning and forecasting.
1.5 Treasury & Cash Management	- Bank account management and reconciliation automation. - Cash flow forecasting integrated with AR/AP movements .- Short-term investment tracking and interest calculation. - Petty cash, advances, and fund transfers. - FX exposure management and hedging.	Finance (GL), Treasury Systems, PMO	Better liquidity management, reduced idle cash, and improved compliance with Treasury directives.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

1.6 Fixed Assets & Capitalization	- Asset creation from procurement or project completion. - Asset categories and depreciation methods (straight-line, reducing balance). - Asset revaluation, disposal, and impairment tracking. - Integration with Facilities for building, fleet, and plant asset updates. - Automatic capitalization from project cost lines.	Facilities, SCM, PMO, Projects	Accurate asset register, audit compliance, and effective CAPEX management.
1.7 Project Accounting / Cost Control	- Project-level budgeting, cost capture, and commitment tracking - Integration with PMO for progress-based expenditure recognition. - Multi-project roll-up for CAPEX programmes. - Earned value and variance analysis dashboards. - Call-off contract cost control (ERP Phase 1, Phase 2, etc.).	PMO, SCM, ICT, Finance	End-to-end visibility of project financials and compliance with PFMA Section 38(1)(c)(ii).
1.8 Grants & Revenue Management	- Management of government and donor funding streams. - Allocation, drawdown, and utilization tracking. - Deferred revenue recognition. - Automated financial reporting per grant agreement.	Finance, Treasury, PMO	Transparency in grant utilization, supporting accountability to DTIC and Treasury.
1.9 Financial Reporting & Analytics	- Standard financial statements (Income, Balance Sheet, Cash Flow). - IFRS-compliant disclosures and note templates. - Management reports by division, cost centre, and project. - Interactive dashboards (variance, trends, performance ratios).	All modules	Reliable, on-demand financial and management reporting.

Key Integration Requirements:

Integration Partner System	Purpose / Data Exchange
SCM / Procurement	Vendor data, purchase orders, invoices, and payment schedules.
HR / Payroll	Salary journals, benefits, and cost of employment budgeting.
PMO / Project System	Project budgets, expenditure tracking, milestone-based billing.
Facilities Management	Asset acquisition, maintenance costs, depreciation data.
CRM / Customer Billing	Revenue generation, customer invoicing, collections.
Treasury Systems	Bank statements, investment schedules, FX rates, and reconciliations.

Compliance and Control Requirements

- **PFMA Alignment:** Adherence to sections 38 and 51 for financial control, governance, and reporting.
- **IFRS Compliance:** Standardized chart of accounts, asset recognition, and financial disclosure.
- **Audit Trail:** All transactions traceable with immutable timestamps.
- **Segregation of Duties:** Distinct roles for initiation, approval, and review across all sub-ledgers.
- **Delegation of Authority Integration:** Workflow automation linked to approved SABS Delegation Matrix.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

- **Budget Control Rules:** Pre-commitment validation before any financial obligation is recorded.

Financial Costing Model Integration

The **Finance module** must directly interface with the **Costing Model subsystem**, allowing:

- Automatic roll-up of costs per phase, project, or module (ERP, LIMS, Facilities, etc.).
- Budget allocation, commitment, and actual expenditure tracking in real-time.
- Variance analysis dashboards (budget vs committed vs actual).
- Multi-year funding visibility and call-off tracking.
- Financial forecasting and cash flow projections aligned to approved budgets.

Reporting & Analytics Requirements

- **Operational Reports:** Daily transaction summaries, overdue payables, open commitments.
- **Strategic Reports:** Budget utilization, CAPEX performance, cost-to-completion.
- **Regulatory Reports:** Annual Financial Statements (AFS), quarterly Treasury submissions, internal audit extracts.
- **Visual Dashboards:** Executive financial scorecard integrated into PMO and EXCO dashboards

The ERP solution must include a **Costing Model Sub-System** that enables:

Feature	Description
Total Cost of Ownership (TCO)	Track total cost across software, hardware, implementation, training, and maintenance over 5–7 years
CAPEX vs OPEX Visibility	Categorise and monitor costs in compliance with PFMA and National Treasury guidelines
Phased Costing & Call-Off Tracking	Enable phased implementation budgeting aligned to available funding (e.g., R87m CAPEX Phase 1)
Scenario Analysis	Simulate cost options (cloud vs on-prem, licensing tiers, outsourcing vs insourcing)
Integration with Finance Module	Real-time feed to GL, budgeting, and asset capitalization
Audit & Governance	Cost approval workflows, traceable change control, and audit-ready reporting
Cash Flow Forecasting	Automated phasing by quarter, incorporating inflation, FX, and escalation factors

- **Comprehensive Total Cost of Ownership (TCO)** tracking (software, services, infrastructure, training, support).
- **CAPEX vs OPEX visibility**, aligned with PFMA spending controls.
- **Call-off phase costing** and tracking for multi-year implementation.
- **Scenario analysis** (baseline, deferred, and optimized options).
- **Cash flow forecasting**, escalation handling, and FX adjustments.
- **Integration with Finance & SCM modules** for budget control and actuals reconciliation.
- **Automated variance analysis** (budget vs actual vs forecast).
- **Audit trail and approval workflows** for cost adjustments and variations.

ERP Travel Management Requirements

Sub-Module	Key Functional Requirements	Integration Points	Expected Outcome / Value
Travel Request &	• Electronic travel request	• ERP Workflow engine	• Controlled, auditable travel

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Approval	• Purpose, justification, expected business outcome • Domestic vs international routing •Delegation of Authority-aligned approval workflow• Budget availability check prior to approval •Attach supporting docs (invitation, agenda, passport, visa letters) • Audit trail & timestamps • Notification & escalation rules	• Cost centre master data • DoA module • Budget control engine	approvals •PFMA / Treasury compliance • No travel without budget & authorised approval •Reduced irregular expenditure risk
Travel Booking Management	• Integration with preferred travel suppliers • Booking flights, accommodation, car hire, visa, shuttle • Travel advance request & approval • Standard travel class enforcement (economy, exceptions logged) • Itinerary management	• Procurement / approved suppliers list• Contracted travel agency system/API• Document management	• Streamlined booking• Compliance with travel policy• Better supplier leverage & negotiated rates
Travel Advance & Settlement	• Advance request workflow• Tracking & ageing of advances• Automatic deduction/recovery if not cleared• Advance settlement within defined SLA	• Payroll (for recoveries) • AP module • GL accounting	• Improved financial control• No outstanding advances beyond policy limits • Reduced audit findings
Expense Capture & Claim Submission	• Mobile & web claim submission• OCR receipt scanning & matching • Automated mileage calculation (mapping integration) • Per diem table & rate enforcement • Expense categorisation (meals, accommodation, mileage, tolls) • Track & store receipts and documents	• Finance GL/AP• Payroll (where reimbursement applies)• HR employee profile• Document repository	• Faster, accurate reimbursements • Reduced manual admin & paperwork • Digitised audit evidence
Subsistence & Per Diem Management	• Per diem rules by location • Auto calculation for duration & rates • Subsistence thresholds & exceptions approval	• HR master data (grades, roles) • Finance policy engine	• Consistent application of rates• Policy-aligned spend control
Mileage & Transport Management	• Built-in mileage calculator • Vehicle category controls • Verification through map distance calculation	• GPS/maps integration • Finance cost centre • HR employee data	• Prevent inflated mileage claims• Reduced fraud risk
Policy & Compliance Controls	• Enforcement of travel policy • Exception routing (CFO/ACEO/Board where required) • Audit trail for approvals & edits • Document retention for audit• Real-time controls & alerts	• DoA matrix• Risk & compliance reporting• Document management	• PFMA, Treasury and AGSA compliance • Reduced irregular & wasteful spend
Accounting, Reimbursement & Clearing	• Automatic posting to GL/AP • Allocation to cost centre & project codes • Bank payment file export • Payroll recovery for unaccounted advances	• Financials (GL, AP, AR) • Payroll system • ERP bank integration	•Accurate travel cost allocation •Timely employee reimbursement

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

			• Full audit traceability
Reporting & Analytics	• Real-time dashboards & reports •Travel cost by cost centre/ division/programme/project • Forecast travel spend • Exception reporting (policy breaches) • Outstanding advances ageing	• ERP BI/reporting layer•Budget & planning module	• Visibility on enterprise travel spend •Decision-support for executive management • Strengthened governance & budget discipline

ERP Works Order Management Requirements

Sub-Module	Key Functional Requirements	Integration Points	Expected Outcome / Value
Work Order Creation & Planning	• Electronic work order request & registration • Work type classification (preventive, corrective, emergency, ad-hoc, project-related) • Prioritisation matrix (criticality, safety, compliance) • Work order scheduling & resource allocation • Ability to attach supporting docs, drawings, SOPs	• Asset registry / CMMS • Project & job cost centres • Maintenance plans & schedules • Document repository CIMS and LIMS	• Structured and auditable work commissioning process • Improved planning & prioritisation • Reduced maintenance & operational downtime
Work Authorisation & Approval	• Delegation of Authority routing • Budget availability check before work initiation • Acceptance & release workflow • Contractor/vendor assignment where applicable	• DoA module • Budget & finance module • SCM vendor list	• Compliance with PFMA & SCM controls • Avoidance of unauthorised spend • Traceable accountability trail
Work Execution & Tracking	• Work instructions and task lists • Time & labour logging per task/resource • Material & spare parts consumption tracking • Real-time progress updates & status changes • Safety & compliance checklist capture	• HR time & attendance•Inventory/warehouse management• Health & Safety system	• Real-time visibility of execution• Accurate job costing• Compliance with safety standards
Materials & Inventory Usage	• BOM linking to work orders • Automatic material reservation and issue • Stock level validation and reorder alerts • Ability to assign purchased materials to work order	• Inventory & warehouse module•Procurement system• Supplier database	• Effective stock planning • Reduced stock-outs & emergency procurement • Accurate inventory costing

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Work Completion & Closure	• Work completion confirmation & checklist • Quality and performance verification • Asset condition update and status change • Final sign-off and closure workflow	• Asset register • Preventive maintenance module • QA/QC records	• Verified and traceable closure • Enhanced asset reliability & lifespan
Costing & Financial Posting	• Capture labour, material, contractor costs • Expense allocation to cost centre/project • Automated journal entries & GL posting • Work order financial settlement & reporting	• GL, AP, AR • Payroll • Project accounting	• Transparent cost control • Improved CAPEX/OPEX planning • AGSA-compliant audit trail
Preventive & Predictive Work Orders	• Preventive maintenance schedule generation • Automated work order triggers from meters/IoT/inspections • Predictive analytics alerts (optional)	• Asset maintenance strategy • IoT/sensors (where applicable) • Reporting & BI	• Reduced unplanned downtime • Higher equipment reliability and performance
Contractor Work Management (if external work)	• Contractor onboarding & assignment • Verification of contractor work & permits • Rate card / contract terms enforcement • Evaluation & performance scoring	• SCM vendor records • Contract management • Accounts payable	• Controlled external spend • Accountability & improved contractor performance
Work Order Reporting & Dashboards	• Work order age analysis • Labour hours, material usage, & cost reports • SLA tracking and efficiency KPIs • Asset history & maintenance cost profile • Exception & overdue alerts	• BI / reporting layer • Planning dashboards	• Visibility to support decision-making • SLA & performance management • Executive reporting & audit support

Integration Architecture Requirements

Integration Scope	Key Functional Requirement	Expected Value / Outcome
CIMS ↔ ERP Works Order Module	• Auto-generation of work orders for certification audits, technical reviews, corrective actions, and site inspections • Sync assignment of auditors/inspectors • Track audit progress back to CIMS	• Full visibility of certification workflow • Reduced audit & certificate delays • Accurate audit costing & resource utilisation

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

	• Capture cost, hours, travel, non-conformance tasks • Return outcomes & evidence (certification decisions)	
LIMS ↔ ERP Works Order Module	• Auto-trigger laboratory work orders for sample testing, calibration, maintenance of lab equipment, and client requests • Link sample ID / batch / test request to work order • Track equipment usage, reagents, staff time, job costing • Real-time status tracking & SLA monitoring	• Improved lab efficiency & turnaround time • Traceable resource use & cost allocation • Regulator-grade audit traceability (ISO/IEC 17025)
SABSTAN ↔ ERP Works Order Module	• Auto-initiate work orders for standards development tasks, technical committee preparation, standard revision cycles • Assign project owners, experts, and committee admin support • Link document version control, comments, and approval workflows	• Structured standards development lifecycle • Better time & resource allocation • Governance over standards updates & development
Cross-System Resource & Schedule Sync	• Sync resource availability (auditors, lab scientists, technical experts) • Avoid double-booking resources • Real-time calendar alignment	• Central visibility of skilled resource commitments• Removal of scheduling conflicts & audit postponements
Finance & Costing Integration	• Link work orders to cost centres, programmes, and projects • Post labour, materials, travel & external contractor costs • Support revenue attribution & costing for certification/lab/testing work	• Accurate costing and profitability analysis • Financial governance & PFMA compliance
Document & Evidence Sync	• Auto-attach lab reports, audit files, standards draft, test certificates • Evidence stored in ERP DMS or integrated SharePoint	• Single source of truth • Digitised audit trail for AGSA & accreditation bodies
Notifications & Workflow	• Cross-platform notifications and escalation • Status updates visible in all systems • End-to-end workflow execution	• Faster turnaround • Improved accountability & transparency

7. SUPPLY CHAIN MANAGEMENT (SCM) FUNCTIONAL REQUIREMENTS

The Supply Chain Management (SCM) module forms a critical pillar of the ERP ecosystem, enabling transparent, efficient, and compliant procurement and contract management processes across the organisation. It must automate all stages from demand planning to payment, fully aligned with PFMA, PPPFA, and National Treasury Instruction Notes.

No	Requirement	Description
1	End-to-End SCM Compliance	ERP must support the entire procurement lifecycle in line with **PFMA** and **National Treasury SCM Regulations**, ensuring transparency, accountability, and full audit trail.
2	Procurement & PO Management	Enable requisition creation, approvals, purchase order issuance, standing POs, CAPEX/OPEX requisitions, call-offs, attachments, and deletions.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

3	Budget Hold & Release	Automated budget checks before PO approval. Support for budget hold and release in line with PFMA compliance.
4	Vendor & Supplier Management	Centralised supplier register, onboarding workflows, performance tracking, B-BBEE compliance, and credit checks.
5	Contracts Management	Centralised repository of contracts with lifecycle management (initiation, approval, renewal, termination), monitoring of compliance obligations, and integration with procurement.
6	Inventory Management	Track stock requisitions, issues, receipts (GRVs – internal and external), stock counts, adjustments, and valuation reports.
7	Warehouse & Materials Management	Manage warehouse stock, safety levels, batch/lot tracking, and integration with Finance and POs.
8	Compliance & Auditability	Full audit trail of all SCM transactions, aligned to PFMA, NT Instruction Notes, and SABS governance policies.
9	Irregular Expenditure Tracking	Automated monitoring and reporting of irregular, fruitless, and wasteful expenditure.
10	Transparency Dashboards	Real-time dashboards for procurement spend, supplier performance, contracts, and outstanding requisitions.
11	Integration with Finance	Seamless integration for budget control, commitments, and payment processing.
12	Integration with Facilities & Projects	Link SCM with Facilities (asset acquisition) and PPM (CAPEX pro
	Logistics and Receiving	Controls **goods receipt, shipment tracking, and delivery confirmations** across internal and supplier channels.

Sub-Module	Key Functional Requirements	Integration Points	Expected Outcome / Value
1.1 Demand & Procurement Planning	- Annual and rolling procurement plan preparation per cost centre and project. - Demand consolidation across divisions and CAPEX/OPEX categorisation. - Procurement method selection (open bid, panel call-off, deviation, etc.) aligned to thresholds. - Integration with Budget Control and PMO for approved project requirements. - Workflow-based review and approval.	Finance (budget), PMO (project plans), HR (resource plans)	Improved visibility, prioritisation, and alignment between demand and available budget.
1.2 Bid Specification Committee (BSC)	- Automated workflow for committee composition, approvals, and quorum verification. - Secure uploading of specifications and benchmarking documents. - Role-based digital signatures and record retention. - Integration with ECM (document management).	SCM Governance, Legal, ICT	Compliance with SCM governance; consistent specification quality and auditability.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

1.3 Bid Evaluation Committee (BEC)	- Electronic evaluation templates aligned with PPPFA scoring (price, functionality, preference points) .- System-based weighting, scoring, and consolidated reports. - Audit log of evaluator comments and scores .- Workflow for conflict-of-interest declarations.	Finance (cost validation), Legal (contract vetting), Audit	Transparent evaluation, reduced manual errors, and full traceability for audits.
1.4 Bid Adjudication Committee (BAC)	- Workflow automation for BAC submissions and approval routing. - Integration with Delegation of Authority Matrix. - Generation of decision register and audit reports. - Notifications to SCM and Finance upon award.	Finance (commitment update), SCM Contracts	Faster approvals, reduced cycle time, and compliance with governance thresholds.
1.5 Contract & Vendor Management	- Contract repository with metadata (start/end dates, values, variation orders). - Alerts for expiry, renewals, and extensions. - Vendor master with tax, BBBEE, CSD, and bank verification.- Performance evaluation (KPI tracking, SLAs, scorecards).	Finance (commitment tracking), PMO (project contracts), ICT (vendor master)	Centralised visibility of contractual obligations and supplier performance.
1.6 Purchase Requisition & Order Management	- Requisition creation with automated budget validation. - Multi-level workflow approvals. - Automatic PO generation post-BAC approval. - PO change control and versioning. - Three-way matching with GRNs and invoices.	Finance (budget, AP), SCM (inventory), PMO (project costs)	Reduced manual processing, faster procurement turnaround, and PFMA-aligned controls.
1.7 Inventory & Stores Management	- Inventory cataloguing, stock valuation, batch tracking, and reorder thresholds. - Integration with maintenance and lab consumables .- Goods Receipt Note (GRN) generation and issue control. - Stock audits and variance reporting .- Barcoding and warehouse mapping.	Finance (costing), Facilities (maintenance spares), LIMS (lab consumables)	Accurate stock control, reduced wastage, and cost optimisation.
1.8 Logistics & Asset Delivery Tracking	- Delivery scheduling, receipt confirmation, and vendor delivery SLAs. - Shipment tracking, waybill management, and exception alerts.- Integration with	PMO, Facilities, Finance	Enhanced visibility of project and asset delivery timelines.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value
		Projects and Facilities for asset delivery milestones.		
1.9	Supplier Performance & Compliance Management	- Automated KPI-based performance reviews (quality, timeliness, compliance). - Linked to contract and payment performance. - Supplier risk ratings and historical scorecards. - Blacklist or restriction management per Treasury guidelines.	Contracts, Finance (payment record), Audit	Improved supplier accountability and value-for-money assurance.
1.10	Procurement Reporting & Analytics	- Real-time dashboards for spend analysis, tender progress, vendor performance. - Reports on compliance (BEE, local content, deviations). - PFMA Section 51 compliance reports and SCM performance dashboards.- Integration with PMO reporting dashboards.	Finance, Audit, PMO	Improved governance oversight and performance management.

.

8. HUMAN CAPITAL MANAGEMENT (HCM) FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
7	Learning & Development(Internal employees)	Training scheduling, course management, skills tracking, learning histories, and ROI reporting.
8	Succession & Talent Management	Identify critical roles, succession planning, career progression, and high-potential talent pipelines.
10	Compliance & Governance	Alignment with PFMA (personnel cost reporting), POPIA (data privacy), BCEA, and LRA. Full audit trail of HR actions.
11	Workforce Analytics	Dashboards for headcount, demographics, turnover, diversity, payroll costs, and training effectiveness.
12	Integration with Finance	Automatic linkage of payroll and benefits to financial reporting and budgeting.
13	Integration with PPM	Workforce allocation and utilisation reporting across projects and programmes.
14	Health, Safety & Wellness	Tracking of workplace incidents, medical surveillance, wellness programmes, and compliance with OHS requirements.
15	Reporting	Monthly, quarterly, and annual workforce reports aligned to National Treasury and Board templates.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

7	Learning & Development	- Training scheduling, course management, skills tracking, and ROI reporting	- Integrate with Performance Management (training needs) - Integrate with Finance (training budget and expenditure) - Link to employee master data	- Enhanced employee capability - Evidence-based training investment decisions
8	Succession & Talent Management	- Identification of critical roles- Succession planning and career progression- High-potential talent pipeline tracking	- Integrate with Performance Management and HR Core - Link to Learning & Development (career pathways)	- Business continuity through succession readiness- Improved leadership development
10	Compliance & Governance	- Compliance with PFMA, POPIA, BCEA, and LRA - Full audit trail of HR actions and access control	- Integrate with Document Management (policy and audit archives) - Integrate with ICT (access management and data protection systems)	- Strengthened governance and audit readiness - Full regulatory compliance
12	Integration with Finance	- Automatic linkage between payroll and financial reporting - Budget alignment and personnel cost control	- Direct integration with ERP Finance module - API/middleware for real-time posting to GL and budgets	- Accurate financial reporting - Improved payroll and cost reconciliation
13	Integration with Project & Portfolio Management (PPM)	- Workforce allocation and utilisation tracking across projects- Time and resource data integration	- Interface with PPM (resource planning, timesheets) - Link to HR Core (employee availability)	- Improved resource utilisation - Accurate labour cost reporting for projects
14	Health, Safety & Wellness	- Incident tracking, medical surveillance, wellness programmes, OHS compliance	- Integrate with HR Core (employee data) - Link with Facilities and Risk Management systems	- Safer workplace - Improved regulatory compliance
15	Reporting	- Monthly, quarterly, and annual workforce reports aligned with NT and Board templates	- Integrate with Data Warehouse and BI tools for automated reporting - Link with Finance and HR systems for consolidated data	- Standardised and timely reporting - Improved oversight and decision support
16	Systems Integration (Cross-Functional)	- Enterprise-wide integration using API or middleware - SSO and master data synchronisation - Integration with external regulatory platforms where applicable	- Connect with Finance, Procurement, PPM, ICT	

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

9.   CRM, BUSINESS DEVELOPMENT & SALES) FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
1	Centralised Customer Database	Maintain a single, consolidated repository of client records, including history, contacts, and segmentation.
2	Lead & Opportunity Management	Capture and track business development opportunities, pipeline stages, quotations, and conversion into sales orders.
3	Sales Order Management	Manage the full lead-to-revenue cycle, from quotation, order capture, fulfilment, invoicing, and receipting.
4	Customer Engagement Tracking	Log communications, meetings, and interactions with clients across divisions for visibility and relationship management.
5	Revenue Management	Support recurring billing, debit orders, credit notes, refunds, customer receipts, and automated statement generation.
6	Customer Portals & Self-Service	Provide clients with portals for applications, order tracking, quotations, and document submission.
7	Integration with Certification & Testing	Link with CIMS, LIMS, Standards Sales, and Webstore platforms for seamless order fulfilment and revenue recognition.
8	Contract & SLA Management	Store customer contracts, monitor obligations, and track SLA compliance.
9	Business Development Analytics	Dashboards for opportunity pipelines, conversion rates, revenue forecasts, and sector/market analysis.
10	Customer Satisfaction & Feedback	Capture customer satisfaction surveys, complaints, resolutions, and feedback loops into continuous improvement.
11	Reporting	Generate customer engagement and revenue reports for EXCO, Board, and National Treasury, including audit-ready outputs.
12	Compliance & Governance	Ensure all customer transactions, contracts, and revenue management processes comply with PFMA, POPIA, and SABS policies.
13	Integration with Finance	Automate linkages between CRM, Accounts Receivable, and General Ledger for billing and reporting.
14	Marketing & Campaign Management	Support targeted campaigns, event tracking, and conversion monitoring for business growth.
15	Predictive Insights	Provide AI-driven insights on client behaviour, renewal likelihood, and revenue growth opportunities.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value
1	**Customer Relationship Management (CRM)**	- Centralised customer database and contact management - Client segmentation (by sector, product, region) - Customer interaction tracking (calls, meetings, emails, service requests) - Customer history and engagement analytics	- Integrate with ERP Core (Finance, Projects, Billing) - Integrate with CIMS, LIMS, and SABSTAN for client activity linkage - Link with Outlook/Email systems for communication tracking	- Single source of customer truth - Improved customer visibility and relationship management
2	**Sales Pipeline & Opportunity Management**	- Capture leads and opportunities by sector - Track deal stages, win/loss ratios, and revenue forecasts- Automate sales opportunity lifecycle and approvals	- Integrate with Finance (quote-to-order) - Link with Project Management and Delivery modules (handover to operations)- Interface with BI tools for sales analytics	- Improved sales forecasting - Higher conversion rates and revenue predictability
3	**Quotations & Proposals Management**	- Generate standardised quotations and proposals - Version control and workflow approvals - Preloaded product and service pricing (Certification, Testing, etc.)	- Integrate with Finance (pricing and cost structures)- Interface with Document Management for version control- Link to Product Catalogue and Pricing Engine	- Faster quote turnaround - Improved accuracy and consistency of proposals
4	**Client Onboarding & Account Management**	- Automated client registration and verification workflows- Manage client profiles, key contacts, and communication preferences - Track service contracts and renewals	- Integrate with ERP Master Data (client records)- Link with CIMS/LIMS for operational onboarding - Interface with Compliance (KYC, PFMA supplier vetting)	- Streamlined onboarding - Compliance with governance and regulatory requirements
5	**Marketing &**	- Plan and execute marketing	- Integrate with CRM for lead-to-	- Improved market

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

No	Requirement			
	Campaign Management	campaigns (email, digital, events) - Lead generation tracking- Campaign performance analytics	opportunity tracking - Link with BI for campaign ROI reporting - Interface with website and customer portal	engagement - Data-driven marketing decisions
6	Customer Service & Case Management	- Manage service requests, complaints, and feedback - Track service-level agreements (SLAs) - Automated escalation workflows and case tracking	- Integrate with CRM (customer profiles)- Link with CIMS/LIMS for operational case resolution - Interface with BI for customer satisfaction analytics	- Enhanced customer satisfaction and responsiveness - Transparent service performance reporting
7	Contract & Account Management	- Contract creation, versioning, and renewal tracking - Automated alerts for expiry or renewal - Linkage to pricing and performance metrics	- Integrate with Finance (billing and payments) - Link with Document Management (contract repository) - Interface with Project Delivery modules (contract fulfilment)	- Improved contract compliance- Reduced revenue leakage
8	Pricing & Revenue Management	- Centralised pricing governance for all products/services- Configurable pricing rules and discount controls- Margin and profitability analysis	- Integrate with Finance and Costing modules - Link to Product Catalogue and Approval workflows - Interface with BI for revenue dashboards	- Transparent and controlled pricing - Improved revenue assurance
9	Customer Portals (External Access)	- Secure online portal for clients to view certificates, quotations, and invoices- Real-time application status track	- Integrate with CRM, CIMS, and Finance - Link to Document Management for certificate retrieval - Interface with Authentication/SSO systems	- Improved customer experience - Reduced manual client queries
10	Reporting & Business Intelligence	- Real-time dashboards for leads, conversions, customer satisfaction, and revenue - Automated monthly and quarterly reports - Drill-down analytics by region, product, or service type	- Integrate with Enterprise BI, Finance, and PPM - Consolidate data from CRM, CIMS, and LIMS	-Improved executive insight - Data-driven sales and customer strategy decisions
11	Integration & Data Synchronization	- Bi-directional integration between CRM and ERP Core Modules - Middleware-based data exchange - Real-time synchronization of customer, contract, and billing data	- Integrate with Finance, PPM, Procurement, and Service Delivery systems - Interface with ICT Data Warehouse for analytics	- Enterprise-wide data consistency - Elimination of duplication and manual entry

10. PORTFOLIO MANAGEMENT (PPM) FUNCTIONAL REQUIREMENTS

No	Requirement	Description
1	Portfolio Governance & Alignment	Enable enterprise-wide portfolio oversight, project prioritisation, and approvals in alignment with corporate strategy and PFMA CAPEX governance.
2	Project Initiation & Business Case	Support creation of project charters, feasibility assessments, and business case approvals with structured workflows.
3	Programme & Project Planning	Provide tools for WBS creation, Gantt-based scheduling, milestone tracking, dependency management, and resource allocation.
4	Resource Management	Allocate human and material resources across projects, linked to HCM and SCM modules for utilisation tracking.
5	Budgeting & Financial Integration	Link project budgets and CAPEX/OPEX costs directly to Finance for real-time budget control and variance analysis.
6	Execution & Monitoring	Track progress of tasks, deliverables, and KPIs; log risks, issues, and dependencies with escalation workflows.
7	Change Control	Manage project scope changes, approvals, and impact assessments with full audit trail.
8	Risk & Issue Management	Log risks and issues, assign mitigation actions, monitor statuses, and escalate as required.
9	Benefits Realisation	Define, monitor, and report on benefits linked to strategic objectives, APP targets, and financial outcomes.
10	Reporting & Analytics	Generate dashboards for project health (budget, schedule, risk, benefits). Provide portfolio heatmaps and predictive analytics.
11	Auditability & Compliance	Maintain full audit trails of project approvals, costs, and deliverables. Ensure compliance with PFMA, NT frameworks, and SABS PMO policies.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

12	Document & Knowledge Management	Centralised repository for project documents (charters, approvals, deliverables, contracts) with version control and collaboration features.
13	Integration with Finance & HR	Link projects to GL, budget, and payroll for cost tracking; integrate with HR for resource assignment.
14	Stage-Gate Reviews	Provide configurable stage-gate checkpoints for project progression with EXCO/Board approval workflows.
15	Portfolio-Level Dashboards	Real-time view of all projects/programmes with drill-down to individual project status, KPIs, risks, and financials.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value
1	Portfolio Management	- Centralised project and programme repository - Classification of projects by strategic objective, CAPEX/OPEX, division, or funding source - Portfolio prioritisation and ranking based on strategic alignment and resource availability	- Integrate with Finance (budgeting, CAPEX tracking) - Link with HR (resource planning) - Interface with Operational Excellence dashboards	- Improved strategic alignment and investment visibility - Evidence-based portfolio prioritisation
2	Programme Management	- Group related projects under programmes - Manage dependencies, benefits, risks, and performance across projects - Multi-level programme reporting and milestone tracking	- Integrate with Finance (programme budget and spend)-Link with Risk Management and Benefits Realisation modules	- Enhanced coordination across related projects - Improved benefits delivery and accountability
3	Project Management	- Standardised project lifecycle management (initiation to closure) - Automated templates for charters, plans, and reports- Task, milestone, and deliverable tracking - RAID (Risks, Assumptions, Issues, Dependencies) logs	- Integrate with HR (resource allocation and workload tracking) - Link to Finance (budget vs. actual) - Interface with Document Management (project artefacts)	- Improved delivery predictability - Consistent application of PM methodology and governance
4	Resource Management	- Resource allocation by skill, role, and availability - Capacity planning and utilisation reporting - Forecasting of resource demand and bottlenecks	- Integrate with HR (skills and availability data) - Link with Timesheets and Finance (cost recovery)	- Optimised resource utilisation - Enhanced workforce planning and productivity
5	Financial Management (Project Budgeting)	- Project budgeting, forecasting, and cost tracking - Linkage to CAPEX and OPEX categories - Automated budget approvals and version control	- Integrate with Finance (GL, commitments, and actuals) - Interface with Procurement (purchase orders, invoices)	- Real-time budget control - Prevention of cost overruns and financial non-compliance
6	Procurement & Contract Linkages	- Capture project-related procurement requests - Monitor supplier performance and contract milestones - Link contracts to project deliverables	- Integrate with SCM/Procurement module- Link with Finance (payments, commitments)	- Improved procurement planning- Transparent contract performance management
7	Performance Tracking & Reporting	- Automated dashboards for schedule, cost, scope, and quality KPIs - Earned Value Management (EVM) capability - multi-level reporting (Project, Programme, Portfolio, Executive)	- Integrate with BI/Analytics tools - Link to Operational Excellence dashboards- Interface with EXCO reporting templates	- Improved visibility of delivery performance - Data-driven decision-making
8	Governance & Stage Gate Management	- Configurable stage-gate approvals (Concept, Business Case, Design, Implementation, Closure) - Role-based approval workflows - Automated alerts and audit trails	- Integrate with Document Management and Workflow Engine- Link with EXCO approval system and QMS repository	- Strengthened project governance - Full compliance with PFMA and internal delegation of authority

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

9	Benefits Realisation Management	- Define and monitor expected project benefits - Track financial and non-financial outcomes - Benefit-to-investment ratio and variance analysis	- Integrate with Finance (actual savings/revenue realised) - Link with Strategic Planning (performance KPIs)	- Clear linkage between projects and organisational outcomes - Evidence-based reporting to EXCO and Board
10	Risk & Issue Management	- Project-level and portfolio-level risk registers - Risk impact analysis, mitigation tracking, and escalation workflows - Automated reminders and reporting	- Integrate with Enterprise Risk Management system - Link with Project Delivery and Audit functions	- Proactive risk mitigation - Improved governance and accountability
11	Change Control Management	- Log and track change requests-Automated approval workflows and audit trails - Impact assessment on cost, scope, and schedule	- Integrate with Document Management and Project Baselines - Link with Finance (budget revisions)	- Transparent and auditable change management - Controlled scope and budget adjustments
12	Timesheet & Effort Tracking	- Capture resource time by project, task, and activity - Approval workflows for timesheets - Labour cost tracking and utilisation analysis	- Integrate with HR (employee profiles and rates) - Link with Finance (cost allocation, billing)	- Improved cost transparency - Accurate effort reporting and resource planning
13	Document & Knowledge Management	- Central repository for all project artefacts - Version control, metadata tagging, and search - Access control by project or role	- Integrate with Enterprise Document Management System (EDMS) - Link with QMS for project templates and audit records	- Enhanced traceability and audit readiness - Streamlined document access and collaboration
14	Reporting & Business Intelligence	- Automated dashboards and analytics by project, division, and period - Exportable reports aligned to Board, EXCO, and NT templates - Predictive analytics for schedule and cost performance	- Integrate with Data Warehouse and BI tools - Link with Operational Excellence dashboards	- Consistent, real-time reporting - Early identification of performance deviations
15	Integration & Interoperability	- Real-time integration with ERP Core, Finance, HR, and Procurement modules- Data synchronisation through APIs or middleware - Common project codes across systems	- Integrate with Finance (budget), HR (resources), SCM (contracts), ICT (systems) - Interface with Strategic Planning, Operational Excellence, and BI dashboards	- Unified project data environment - Improved data integrity and decision support

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

11. FACILITIES MANAGEMENT (INCL. FLEET, SECURITY, PLANT MAINTENANCE & ESG) FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
1	Asset & Infrastructure Register	Maintain a centralised register of all buildings, facilities, and infrastructure assets with lifecycle tracking (acquisition, utilisation, maintenance, disposal).
2	Plant & Equipment Maintenance	Schedule and track preventive and corrective maintenance for laboratory equipment, plant machinery, and critical infrastructure. Link work orders to technicians and spare parts inventory.
3	Maintenance Workflows	Generate and manage work orders, escalate urgent incidents, and integrate with Inventory (SCM) for spare parts and procurement.
4	Fleet Management	Maintain database of vehicles (registration, licensing, insurance, compliance). Track assignments, mileage, utilisation, servicing schedules, fuel consumption, and replacement cycles.
5	Fleet Cost Integration	Link vehicle costs (fuel, maintenance, insurance) to Finance for accurate reporting and cost allocation.
6	Physical Security Asset Management	Register and manage physical security systems (cameras, alarms, access controls, fire detection). Track asset condition, testing, and replacements.
7	Access Control & Visitor Logs	Record and manage access permissions for staff, visitors, and contractors. Maintain digital visitor logs and generate security compliance reports.
8	Security Incident Management	Log, escalate, and track incidents, breaches, and corrective actions. Provide dashboards for security status and compliance.
14	Compliance & Governance	Ensure compliance with PFMA, OHS Act, Environmental Regulations, and internal SABS governance policies. Provide full audit trail of activities.
15	Reporting & Analytics	Generate dashboards and reports for facilities costs, maintenance schedules.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value
1	**Facilities Asset Management**	- Centralised register of all SABS facilities, equipment, and infrastructure - Asset lifecycle tracking (acquisition, maintenance, disposal) -	- Integrate with Finance (asset register, depreciation) - Link with Procurement (asset acquisition) - Interface with GIS or building systems (if applicable)	- Accurate facility and asset data - Improved asset utilisation and maintenance planning
2	**Preventive & Corrective Maintenance**	- Maintenance scheduling based on time, usage, or condition - Work order generation and technician assignment- SLA tracking and contractor performance management	- Integrate with Finance (maintenance costs)- Link with Procurement (service contracts and POs) - Interface with Fleet/Plant systems for shared equipment	- Reduced downtime and maintenance costs - Improved compliance with maintenance standards
3	**Plant & Equipment Maintenance**	- Equipment tracking (calibration, inspection, breakdown logs) - Preventive maintenance and spares management - Failure root cause analysis and maintenance history	- Integrate with Inventory (spares and consumables) - Link with Finance (CAPEX/OPEX tracking)- Interface with Health & Safety (incident records)	- Increased equipment reliability - Reduced operational interruptions
4	**Fleet Management**	- Vehicle inventory and assignment - Trip scheduling, fuel usage, mileage, and maintenance tracking - Driver licence validity and compliance management	- Integrate with Finance (fleet cost centre) - Link with Procurement (fuel, insurance, and maintenance contracts) - Interface with HR (driver records)	- Improved fleet utilisation - Controlled costs and compliance with transport policies
5	**Security Management**	- Access control and visitor management - CCTV monitoring and incident tracking - Security asset inventory (radios, gates, alarms)	- Integrate with Facilities (building access), HR (employee credentials), and ICT (access systems) - Link with Risk Management and OHS modules	- Safer workplace- Improved incident response and security compliance

8	Health, Safety & OHS Compliance	- Guard duty scheduling and incident escalation workflows - Incident and accident reporting - Risk assessment and mitigation workflows - Medical surveillance and safety inspections	- Integrate with HR (employee health data) - Link with Facilities and Plant Maintenance modules - Interface with Compliance and Risk systems	- Reduced workplace incidents - Improved OHS legal compliance
9	Contractor & Service Provider Management	- Registration, vetting, and contract tracking- Contractor work orders and SLA monitoring- Performance scoring and compliance certification	- Integrate with SCM/Procurement (contract management)- Link with Finance (payments and penalties)- Interface with Document Management (certifications and reports)	- Improved contractor accountability- Reduced service delivery risks
11	Work Order & Helpdesk Management	- Centralised helpdesk for maintenance, cleaning, and security requests - Automated ticket assignment, tracking, and closure- SLA compliance monitoring	- Integrate with HR (user profiles), Facilities (tasks), and Finance (cost centres) - Interface with ICT (ticketing system)	- Improved service responsiveness - Enhanced employee satisfaction
12	Inventory & Spares Management	- Stock management for facility consumables, cleaning materials, and maintenance spares - Minimum stock levels, reorder alerts, and supplier tracking	- Integrate with Procurement and Finance- Link with Plant Maintenance (work orders)	- Reduced stock-outs - Better cost control and supply reliability
13	Reporting & Dashboards	- Real-time dashboards on maintenance status, - Monthly and quarterly reports aligned to NT and Board templates	- Integrate with BI tools and Data Warehouse - Link with Finance, HR, and Operational Excellence dashboards	- Improved oversight and compliance - Data-driven asset and facility management
14	Integration & Interoperability	- Seamless integration with ERP Core Modules (Finance, SCM, HR, ICT, PPM) - Data synchronisation through middleware or APIs- Single sign-on (SSO) and central asset coding	- Integrate with Finance (asset cost), SCM (procurement), HR (personnel), ICT (infrastructure), and PPM (project-based facilities)	- Unified facilities data environment- Streamlined processes and reporting consistency

12. PERFORMANCE MANAGEMENT (CORPORATE PERFORMANCE) FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
1	Strategy Alignment	Enable cascading of corporate KPIs/KPAs from the Corporate Plan down to divisions, sub-divisions, and individual scorecards. Must allow flexibility for non-mandatory intermediate structures.
2	Corporate Scorecard	Create and manage corporate-level scorecards with defined KPAs, metrics, and KPIs linked to strategic objectives.
3	Divisional/Departmental Scorecards	Allow divisions and departments to capture operational initiatives, KPAs, and KPIs aligned to corporate objectives.
4	Budget Linkages	Enable linking of budgets and resources to projects, initiatives, and KPIs for performance accountability.
5	Period-Based Reporting	Support reporting cycles (monthly, quarterly, half-yearly, annual) aligned to APP/Annual Report requirements.
6	Portfolio of Evidence (PoE)	Enforce mandatory PoE uploads for KPI results, ensuring audit readiness and traceability.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

7	Workflow Approvals	Route performance reports from reporters → Divisional Heads → Strategy Team for approval and consolidation.
8	Strategy Team Overrides	Allow Strategy Team to unlock submissions, reject, and send back for corrections with audit trail.
9	Reminders & Deadlines	Automated reminders for submission deadlines; enforce lockouts after due dates.
10	Compliance Reporting	Enable generation of reports aligned with PFMA, National Treasury, EXCO, and Board formats.
11	Auditability	Maintain full audit trail of performance targets, submissions, corrections, and approvals.
12	Dashboards	Provide live dashboards with integrated view of KPIs across Finance, HR, SCM, Customer Partnering, and Projects.
13	Drill-Down Analytics	Ability to drill down from corporate performance dashboards to divisional and individual scorecards.
14	Document & Template Management	Generate reports in Word/Excel templates for EXCO, Board, National Treasury, and DTI reporting.
15	Stakeholder Visibility	Provide access for authorised stakeholders (EXCO, Audit, Strategy) to scorecards and PoEs.
16	Data Validation	Enforce spell check, language validation, and data integrity checks before report submission.
17	Integration	Integrate performance data with Finance (budget variance), HR (workforce KPIs), SCM (procurement KPIs), and CRM (customer KPIs).
18	Predictive Analytics	Provide insights on trends, forecasting of KPI achievement, and identification of underperforming areas.
19	National Treasury APP/Annual Report Alignment	Ensure system supports alignment and reporting against APP indicators and Annual Report submissions.
20	Risk & Intervention Tracking	Allow identification of at-risk KPIs and capture corrective actions, interventions, and responsible owners.

No.	Functional Area	Key Features / Capabilities	Integration Requirements	Expected Outcomes / Business Value
1	**Corporate Strategy & Planning Alignment**	- Capture and cascade SABS strategic objectives, outcomes, and initiatives - Align divisional and project KPIs with corporate goals - Enable annual and multi-year performance planning (APP, MTEF)	- Integrate with PPM (strategic projects) - Link with Finance (budget alignment) - Interface with HR (performance linkages)	- Clear alignment between strategy, operations, and resource allocation - Improved organisational focus and accountability
2	**KPI & KPA Management**	- Define, assign, and monitor KPIs/KPAs across divisions, projects, and individuals- Link performance indicators to measurable outcomes - Support weighted scoring and target setting	- Integrate with HR Performance Management (individual KPAs) - Link with Operational Excellence dashboards- Interface with BI/Analytics	- Consistent performance measurement across levels - Transparent linkage between corporate and individual goals
3	**Performance Data Collection & Validation**	- Capture and validate performance data at source (projects, divisions, finance, HR) - Role-based submission, review, and approval workflows - Evidence upload for audit purposes	- Integrate with PPM (project performance data) - Link with Finance (budget and expenditure data)	- Reliable, auditable performance data - Reduced manual reporting errors

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

			- Interface with Document Management (evidence repository)	
4	Scorecards & Dashboard Reporting	- Configurable scorecards by division, programme, or KPI theme - Real-time dashboards with drill-down capability- RAG (Red-Amber-Green) performance tracking	- Integrate with BI/Data Warehouse - Link to EXCO and Board reporting systems - Interface with National Treasury reporting templates	- Improved visibility and oversight - Data-driven executive decision-making
5	Quarterly & Annual Reporting	- Automated consolidation of divisional and project reports - Generate quarterly, mid-year, and annual performance reports - Track variances against approved Annual Performance Plan (APP)	- Integrate with Finance (budget execution data) - Link with PPM (programme progress) - Interface with Board and NT reporting systems	- Efficient and standardised performance reporting - Enhanced compliance with NT and PFMA requirements
6	Performance Review & Analysis	- Trend analysis, variance identification, and root-cause tracking - Performance improvement plan generation - Integration of lessons learned and corrective actions	- Integrate with Operational Excellence and Risk Management - Link with HR (capacity improvement plans)	- Continuous improvement in performance outcomes - Strengthened decision support
7	Governance & Approval Workflows	- Configurable workflow for submission, validation, and approval of performance reports - Digital sign-offs by Executives and Accounting Officer - Full audit trail of actions	- Integrate with Document Management (sign-offs) - Interface with QMS and Governance Portal	- Strengthened governance and accountability - Transparent performance validation
8	Risk & Compliance Linkage	- Correlate performance indicators with organisational risks - Escalate non-performance or high-risk areas automatically - Embed compliance indicators within KPIs	- Integrate with Enterprise Risk Management and Audit Systems - Link with PPM and Operational Excellence frameworks	- Enhanced performance-risk visibility - Early intervention and mitigation
9	Benefits Realisation Tracking	- Link achieved results to strategic and financial benefits - Quantify value creation from projects and programmes - Compare planned vs. actual benefits	- - Integrate with PPM (project benefits) - Link with Finance (actual financial impact) - Interface with EXCO dashboards	- Evidence-based performance improvement - Demonstrable return on investment from strategic initiatives
	Compliance & Regulatory Reporting	- Support NT, PFMA, and DPME-aligned performance structures - Generate standard templates for APP, QPR, and Annual Reports - Maintain audit-ready repository	- Integrate with Document Management (performance evidence) - Link to NT/DPME reporting systems	- Improved audit outcomes - Full compliance with statutory reporting requirements

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Forecasting & Scenario Planning	Scenario Planning - Predictive performance analytics and scenario modelling - What-if simulations for resource and performance planning - Trend-based forecasting for MTEF periods	- Integrate with Finance (budget forecasts) - Link with BI and Operational Excellence dashboards	- Enhanced strategic foresight - Better-informed resource allocation decisions
Integration & Interoperability	- Enterprise-wide data integration (Finance, HR, PPM, Risk, BI) - Automated data exchange and reconciliation - Support for single data warehouse and unified dashboards	- Integrate with ERP Core, HR, PPM, Finance, and Risk Systems - Interface with BI/Analytics layer and Board reporting tools	- Single source of truth for performance data - Streamlined reporting and decision support

Area	Business Requirement	Functional Description
2.1 Strategic Planning & Alignment	Ability to define strategic objectives, outcomes, and initiatives aligned to the organisational strategy.	- Capture and manage multi-year strategic goals and KPIs. - Cascade goals to divisions, programmes, and projects. - Align targets to APP and Annual Performance Plan indicators.
2.2 Performance Indicators & KPI Library	Central repository of indicators (financial, operational, HR, project, compliance).	- Define SMART KPIs with metadata (owner, baseline, frequency, formula, weight). - Configure KPI categories (Strategic, Operational, Compliance). - Auto-link KPIs to ERP data sources (Finance, HR, PPM, SCM).
2.3 Target Setting & Weighting	Enable configuration of performance targets per quarter, month, or year.	- Assign quantitative/qualitative targets. - Apply weightings for composite scoring. - Support individual and departmental performance targets.
2.4 Data Integration & Automation	Integrate with other ERP modules for automatic data updates.	- Integration with: • Finance (budget vs. actual)• HR (staffing KPIs, training)• Projects (PPM performance)• SCM (procurement cycle time)• Customer Partnering (client satisfaction).
2.5 Performance Monitoring & Dashboards	Provide real-time dashboards and scorecards for management.	- Configurable dashboards by division/level. - Traffic-light performance indicators (RAG). - Drill-down to underlying transactions or projects.
2.6 Variance Analysis & Alerts	Identify deviations and trigger corrective actions.	- Automatic variance alerts (threshold-based). - Root-cause commentary fields. - Workflow escalation for underperforming KPIs.
2.7 Reporting & Analytics	Produce organisational performance reports for internal and external stakeholders.	- Standard and custom report builder. - Quarterly and annual performance reports (aligned to APP). - Automated report generation in Word/PDF. - Integration with BI tools (Power BI, SAC).
2.8 Employee / Unit Performance Management	Enable linkage between corporate and individual performance.	- Support Balanced Scorecard (BSC) model. - Employee performance dashboards. - 360-degree review workflow.
2.9 Scenario Planning & Forecasting	Simulate different scenarios to assess impact on targets.	- What-if analysis (budget, HR, or project impact). - Predictive analytics for performance forecasting.

2.10 Audit Trail & Governance	Maintain full traceability and accountability of performance data.	- Record user actions, data changes, and approval timestamps. - Provide secure access and role-based permissions.
2.11 Document & Evidence Management	Support attachment of evidence supporting performance results.	- Upload and link supporting documents. - Metadata tagging for audit verification.
2.12 Change Management & Workflow	Define approval and review workflows.	- Automated routing for verification, review, and approval of performance submissions.
2.13 Integration with BI and Analytics	Provide analytical insight using historical and current data.	- API-based integration with enterprise data warehouse or BI solution. - Predictive trend analysis and executive dashboards.

12. LEARNING MANAGEMENT (EXTERNAL)

Functional Area	Detailed Specification	Integration / Dependency
3.1 Client Registration & Profile Management	- Allow new clients (individuals and organisations) to create online accounts. - Capture contact details, VAT numbers, training history.- Link profiles to CRM Customer Master.	CRM, CIMS, Finance (AR)
3.2 Course Catalogue & Scheduling	- Publish courses with details (content, duration, price, prerequisites).- Support categorisation by type (ISO, Quality, Safety, etc.).- Manage schedules, trainers, and venues.	SharePoint (course materials), SCM (facilities booking)
3.3 Online Booking & Payment	- Enable clients to book and pay online (EFT, card, purchase order).- Generate invoices and receipts automatically.- Handle refunds, cancellations, and discounts.	Finance (AR / Cash Management), Web Payment Gateway
3.4 Training Delivery & Attendance Tracking	- Manage instructor-led, virtual (Teams/Zoom), and self-paced courses.- Track attendance, assessment scores, and completion rates.	LMS Core, CRM (client profile)
3.5 Certification & Record Management	- Issue digital certificates with QR verification and expiry dates.- Store certificates in client portal and SABS repository.- Integrate with CIMS for clients holding SABS certifications.	SharePoint, CRM, CIMS
3.6 Instructor & Resource Management	- Assign internal/external trainers to courses.- Manage trainer evaluations, ratings, and schedules.- Track training costs and profitability.	SCM (Service Provider Management), Finance (Costing)
3.7 Client Portal / Self-Service Access	- Clients can browse, register, pay, and access certificates online.- Multi-channel notifications (email/SMS).- Track their history, invoices, and feedback.	CRM, Finance (AR), PMU Dashboards
3.8 Feedback & Evaluation	- Capture post-course feedback, surveys, and Net Promoter Scores (NPS).- Feed into quality dashboards for continuous improvement.	CRM Analytics, BI Layer
3.9 Reporting & Analytics	- Reports on course attendance, revenue, satisfaction, and region distribution.- Custom dashboards for management (revenue vs targets).	BI Layer / Data Warehouse
3.10 Integration with Marketing & CRM	- Share upcoming course data for campaigns.- Manage targeted email marketing and lead follow-up.	CRM, Marketing Systems
3.11 POPIA Compliance & Data Security	- Store client data securely with consent management.- Allow clients to access and delete personal data per POPIA.	ICT Security & Governance

3.12 Scalability & Multilingual Capability	- Support multiple business units and regions.- Interface in English and optionally other South African languages.	Web Portal / ICT
3.13 Document & Content Management	- Store training materials, course notes, and templates.- Version control and access restriction for facilitators and clients.	SharePoint / ECM
3.14 Integration with External Accreditation Bodies	- Optional integration for CPD points and accreditation validation (e.g., SAQA, NRCS, SANAS).	External APIs / Data Exchange

TECHNICAL REQUIREMENTS

Category	Specification
4.1 Deployment Model	SaaS (Cloud or equivalent LMS integrated via API to ERP Framework).
4.2 Hosting & Data Residency	Primary hosting in Cloud Region; replicated data stored in Johannesburg OCI region for POPIA compliance.
4.3 Integration Points	ERP (Finance AR, Costing, CRM, CIMS, SCM), Payment Gateway, BI Layer.
4.4 Authentication	Secure login via OAuth2 / SSO, MFA enabled for internal users.
4.5 Scalability	Minimum 2,000 concurrent client users; ability to expand regionally.
4.6 Performance & Uptime	≥ 99.5% uptime, <3s response time for portal transactions.
4.7 Branding & Customisation	Full SABS visual identity, logo, and colour palette.
4.8 Security Compliance	POPIA, ISO 27001, PCI-DSS (for payment integration).

DELIVERABLES

Deliverable	Description
LMS Configuration Document	Setup of course catalogue, workflows, pricing rules, user roles.
Integration Design Document	Integration with ERP, CRM, CIMS, Finance (AR), Payment Gateway.
Portal Design & UX Prototype	Client-facing interface, branding, and user journey.
Data Migration Plan	Import of legacy training records and historical clients.
UAT Plan	End-to-end testing scripts for booking, payments, certificates.
Go-Live & Hypercare Plan	Transition and support during the first 3 months.
Support & Maintenance Plan	SLA, escalation procedures, and patch management schedule.

INTEGRATION FRAMEWORK

System / Layer	Integration Purpose
ERP – Finance (AR / CM)	Invoice generation, payment reconciliation, and revenue posting.
CRM	Client data synchronisation, marketing campaigns, NPS tracking.
CIMS	Certification linkage for clients trained on regulated products.
SCM / Facilities	Venue booking, trainer contracts, supplier management.
SharePoint / ECM	Course material storage, digital certificates, records.
BI / MDW	Dashboards for enrolment, financial performance, client satisfaction.
Payment Gateway	Secure EFT / Card / PO processing.
Email / SMS Gateway	Booking confirmations, reminders, feedback surveys.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

EXPECTED OUTCOMES

- Unified digital platform for all SABS external training programmes.
- Seamless integration of course management, payments, and certification.
- Enhanced customer experience via online registration and tracking.
- Real-time visibility of training revenue, attendance, and impact metrics.
- Improved audit trail and compliance for training and financial transactions.
- Strengthened link between SABS Academy, CRM, and ERP finance systems.

13. ADDITIONAL FUNCTIONAL MODULES – FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
1	Sales Order Management – Lead-to-Revenue	Enable end-to-end lead-to-revenue cycle management, from quotation to order fulfilment, with full audit trail.
2	Sales Order Management – Distribution Sales	Manage distribution sales processes with integration to Customer Partnering/CRM.
3	Sales Order Management – Internal Revenue	Track internal revenue streams for laboratory services, standards sales, and certification services.
4	Sales Order Management – Integration with Finance	Integrate with Accounts Receivable for invoicing, credit notes, refunds, and revenue recognition.
5	Job Costing – Allocation	Allocate costs to projects, jobs, or contracts, including labour, material, and overheads.

6	Job Costing – Financial Integration	Integrate with Budget & Financial Management for variance analysis and project cost control.
7	Job Costing – Profitability Analysis	Provide reporting on profitability of projects, services, and business units.
8	Capital Asset Management – Lifecycle Tracking	Track the full lifecycle of capital assets in alignment with budget and financial systems.
9	Capital Asset Management – Commitments & Balances	Monitor capital commitments, expenditures, and balances across projects and divisions.
10	Capital Asset Management – Fixed Assets Integration	Integrate with Fixed Assets for depreciation and valuation of capital assets.
11	Capital Asset Management – Performance Reporting	Report on capital project performance and asset utilisation.
12	Expense Management – Staff Claims	Manage staff expense claims with approval workflows and audit trail.
13	Expense Management – Advances & Reimbursements	Track staff advances, reimbursements, and deductions.
14	Expense Management – Internal Purchases	Capture internal purchases (petty cash, vouchers) with integration to AP and Payroll.

14. MASTER DATA WAREHOUSE FUNCTIONAL REQUIREMENTS MATRIX

No	Requirement	Description
1	Centralised Data Repository	Provide a centralised enterprise data warehouse that consolidates master data across all ERP modules (Finance, SCM, HR, CRM, PPM, Facilities, etc.).
2	Master Data Management (MDM)	Establish governance, processes, and tools for creating, maintaining, and validating master data (customers, suppliers, employees, assets, projects).
3	Data Integration	Enable seamless integration with ERP modules, legacy systems (JDE, CRS/Payrol, performance management, etc.), and external platforms (CIMS, LIMS, Webstore,sabstan).
4	Data Quality Management	Provide tools for data validation, cleansing, deduplication, and enrichment to ensure data integrity across the enterprise.
5	Data Governance & Stewardship	Support data ownership, approval workflows, version control, and audit trails for changes to master data.
6	Security & Compliance	Enforce role-based access to master data. Ensure compliance with POPIA, PFMA, and audit requirements.
7	Metadata Management	Capture and manage metadata definitions, data lineage, and business rules for transparency and governance.
8	Reporting & Analytics Integration	Provide structured data sets optimised for BI, predictive analytics, and reporting dashboards across SABS divisions.
9	Single Source of Truth	Ensure consistent and authoritative master data available organisation-wide for decision-making.
10	Scalability & Performance	Support high transaction volumes and scalability for future modules and data growth.
11	Data Archiving & Retention	Provide policies and tools for archiving, retention, and retrieval of historical data in compliance with legislative and audit requirements.
12	Real-Time Data Sync	Enable near real-time synchronisation between ERP modules and the master data warehouse for up-to-date reporting.
13	External Data Integration	Support controlled ingestion of external data (regulatory databases, stakeholder systems) into the warehouse.
14	Data Auditability	Maintain a full audit trail of data creation, updates, and deletions with timestamps and user accountability.
15	Master Data Dashboards	Provide dashboards for monitoring data quality, completeness, duplicates, and governance KPIs.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Category	Business Requirement	Functional Description
3.1 Master Data Integration	Establish a single master dataset shared across ERP modules.	- Integrate core domains: Customer, Supplier, Employee, Product/Service, Asset, Project, and Financial Master Data. - Ensure data synchronization with upstream systems (ERP, LIMS, CIMS, etc.).
3.2 Data Standardization & Cleansing	Maintain data accuracy and consistency across all systems.	- Define data quality rules and validation routines. - Detect and eliminate duplicates, incomplete or inconsistent entries. - Automated cleansing and enrichment using configurable rules.
3.3 Metadata Management	Enable documentation, classification, and lineage tracking of data elements.	- Maintain metadata catalog (data dictionaries, definitions, and source mappings). - Support lineage tracking from source to report.
3.4 Data Governance Framework	Implement governance structures to manage data lifecycle.	- Role-based ownership (Data Stewards, Custodians, and Owners). - Data access controls, versioning, and approval workflows. - POPIA compliance and audit trail on all changes.
3.5 Data Integration and ETL (Extract, Transform, Load)	Automate data extraction and transformation from multiple sources.	- Develop ETL pipelines using industry tools (e.g., SSIS, Informatica, Talend, ODI). - Schedule daily incremental and weekly full loads. - Apply transformation rules and data harmonization logic.
3.6 Data Quality Management	Monitor, measure, and improve data accuracy and completeness.	- Data quality dashboard and scorecards. - Automated alerts for quality breaches. - Manual correction workflows.
3.7 Master Data Domains	Consolidate and maintain core data domains.	- **Finance:** Chart of accounts, cost centres, budgets. - **HR:** Employees, positions, departments. - **Projects:** Project codes, milestones, deliverables. - **Clients:** Customers, certification clients, industries. - **Suppliers:** Vendor master, contract details. - **Assets:** Laboratory, ICT, facilities assets. - **Standards:** Technical and product codes linked to SABSTAN.
3.8 Reporting and BI Enablement	Provide accurate, near real-time analytics.	- Integration with Power BI, Analytics Cloud, or equivalent. - pre-built subject-area data marts (Finance, HR, Projects, etc.). - Self-service reporting and visual analytics.
3.9 Data Security and Compliance	Ensure POPIA and cybersecurity alignment.	- Encryption at rest and in transit. - Role-based access controls (RBAC). - Full audit logging and regulator-compliant data retention.
3.10 Data Archiving & Retention	Manage data lifecycle and optimize storage.	- Automated archival of historical data per retention policy. - Retrieval-on-demand for audit and reporting.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

No.	Phase / Deliverable	Detailed Description of Deliverables	Means of Verification
2	System Architecture and Environment Setup	- Establish development, testing, and production environments. - Install and configure database, ETL, and metadata tools. - Establish secure connections with ERP, LIMS, CIMS, and SABSTAN.	Signed Environment Readiness Report and Configuration Checklist
3	Data Integration & ETL Development	- Develop and configure data extraction, transformation, and loading (ETL) processes. - Create APIs and integration scripts for all ERP modules. - Define data flow mappings and reconciliation rules.	Data Flow Diagrams and Successful ETL Test Reports
4	Master Data Model Configuration	- Define and configure data domains (Customer, Supplier, Asset, Employee, Project, Standards). - Implement data hierarchies and validation rules. - Configure de-duplication logic.	Signed Configuration Document and Validation Logs
5	Data Cleansing and Standardization	- Profile and cleanse legacy data. - Standardize naming conventions, codes, and classifications. - Validate accuracy and completeness of data prior to migration.	Data Quality Report and Migration Validation Sign-off
6	Metadata Management & Governance Setup	- Configure metadata repository and lineage tracking .- Define data ownership roles and approval workflows. - Deploy governance dashboard.	Approved Governance Framework and Audit Log Verification
7	Reporting & BI Enablement	- Develop dashboards and reports for Finance, HR, SCM, Projects, and EPM. - Configure analytics layer and BI integration (Power BI, SAC). - Deliver 10 standard and 5 custom reports.	User Acceptance Sign-off and Live Reports Demonstration
8	Testing, UAT & Go-Live Deployment	- Conduct system integration testing (SIT), user acceptance testing (UAT), and final migration. - Obtain go-live approval and transition to support phase.	UAT Sign-off & Production Deployment Certificate
9	Change Management & Training	- Facilitate training for SABS data stewards, business users, and administrators. - Deliver user manuals, SOPs, and knowledge transfer sessions.	Attendance Registers & Training Materials Signed by SABS

10	Documentation & Handover	- Deliver all technical documentation (architecture, ETL mappings, security configurations). - Submit final project closure and handover report.	Signed Project Closure Report and Knowledge Transfer Record

Integration Requirements

Integration Type	Description
ERP Modules	Real-time synchronization of master and transactional data (Finance, SCM, HR, PPM, EPM).
LIMS & CIMS	Periodic and batch-level integration for product test results, certifications, and client data.
SABSTAN (Standards System)	Integration for standards metadata and publication data.
External Systems	Integration with regulatory databases (NRCS, DTIC), customer portals, and partner systems.
BI and Analytics Layer	Direct interface with reporting tools for dashboards and performance analysis.

Technical & Non-Functional Requirements

Area	Requirement
5.1 Architecture	Hybrid cloud/on-prem model with ETL engine, staging area, and data marts.
5.2 Performance	Data refresh latency ≤ 1 hour for operational dashboards; ≤ 24 hours for strategic reports.
5.3 Scalability	Must support data growth up to 10TB and integration with future systems.
5.4 Availability	99.5% uptime with failover redundancy.
5.5 Security	POPIA-compliant encryption, authentication, and audit logging.
5.6 Usability	Simple administration UI for data governance, cleansing, and monitoring.

15. INTEGRATION & MASTER DATA FUNCTIONAL REQUIREMENTS MATRIX

The South African Bureau of Standards (SABS) is transitioning from multiple fragmented legacy applications to a unified, cloud-based Enterprise Resource Planning (ERP) environment. This architecture establishes a single integrated platform to manage enterprise-wide functions including Finance, Supply Chain, Human Capital, Customer Relationship Management, Projects, Plant Maintenance, Travel Management, and Analytics.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

The ERP environment forms the core operational backbone of SABS's digital transformation programme and is designed to interface seamlessly with both internal business systems and external national platforms, enabling full data visibility, governance, and performance tracking.

System Transition & Migration Approach

Legacy Systems to be Phased Out

Phase 1 of the ERP implementation will decommission the following legacy and standalone applications:

- **JD Edwards (JDE)** – Financials, Procurement, and Asset Management
- **Siebel CRM** Customer Relationship Management
- **Neptune / AS25** – Travel Management
- **CRS HR & Payroll** – Human Resources and Payroll
- **Limelight** – Project Tracking
- **Signify** – Miscellaneous operational utilities

Data Migration (ETL)

All master and transactional data from these systems will be extracted, transformed, and loaded (ETL) into the new ERP cloud environment. This process will include:

- Data cleansing, standardisation, and validation.
- Mapping to the ERP chart of accounts, cost centres, and master data structures.
- Migration of open transactions and balances (e.g., purchase orders, invoices, payroll data).
- Archival of historical data for audit purposes.

Integration with Core Business Applications

The ERP system integrates with the following **SABS Core Business Applications** through web services (APIs) and data interfaces:
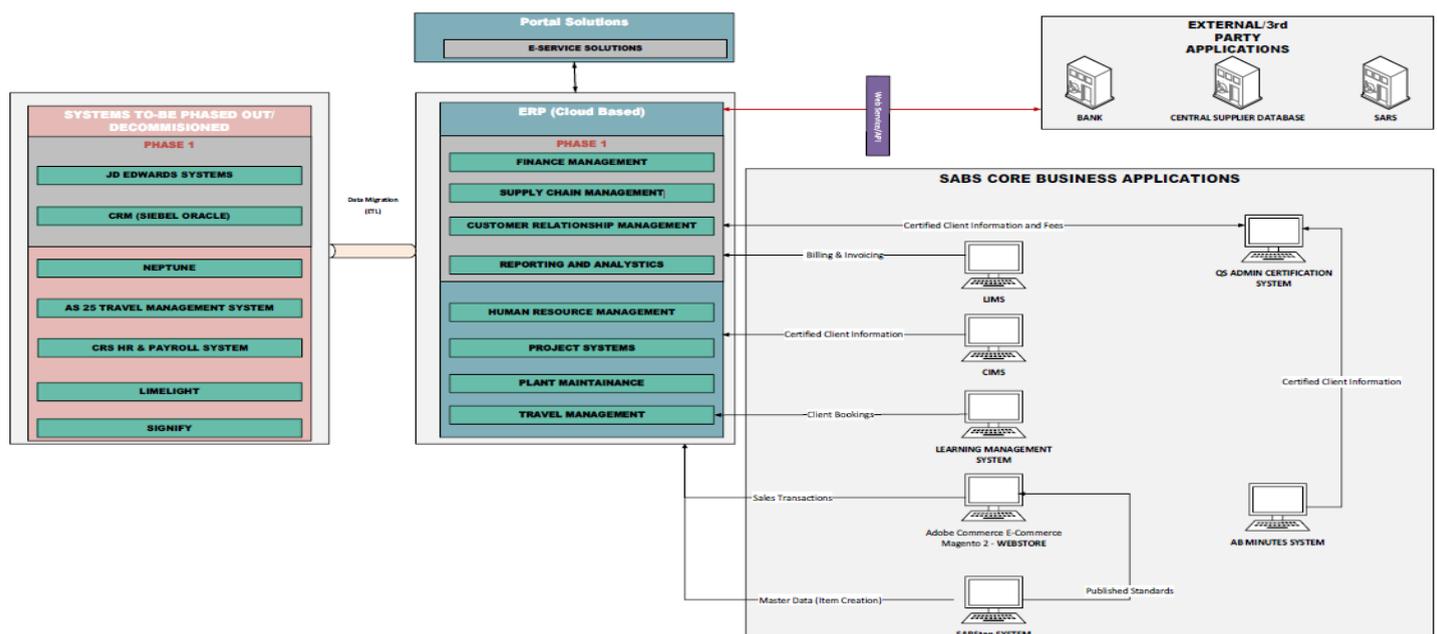
Figure 1: Enterprise Architect

Integrated System	Purpose of Integration	Data Flow
CIMS (Certification Information	Links ERP billing, customer master, and certification	Certified client data ↔ Finance (AR)

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Management System)	client data for invoicing and revenue tracking.	
LIMS (Laboratory Information Management System)	Synchronises test request data, invoicing, and certified results.	Laboratory test fees ↔ Finance (AR)
LMS (Learning Management System)	Links training enrolments, client billing, and certification tracking.	Training fees & client records ↔ Finance (AR) / CRM
Learning Management System (External Clients)	Enables customer training, e-commerce payment, and certification issuance.	Course booking ↔ CRM / Webstore / Finance
Webstore (Adobe Commerce / Magento 2)	Facilitates online sales of standards and services.	Sales orders ↔ Finance (AR) / SABSTAN
SABSTAN System	Manage the end-to-end standard development, publication and sale of standards.	Item master data ↔ Webstore / Finance
QS Admin Certification System	Provides certification administration and client information for cerification validation and approval	Certification data ↔ ERP / CRM
AB Minutes System	Records governance and board meeting outcomes.	Policy, approval, and compliance data ↔ ERP / SharePoint

External Integrations

The ERP also interfaces with several external third-party systems to enable compliance, financial transactions, and reporting:

External System	Purpose of Integration	Method
Banking Systems	Real-time payments, reconciliation, and bank statements.	Web Services / API
Central Supplier Database (CSD)	Supplier validation and vendor master updates.	Web Service API
South African Revenue Service (SARS)	VAT, PAYE, and tax reporting automation.	File-based or API submission
E-Service Portal Solutions	Front-end client self-service platform for submissions and inquiries.	Portal API ↔ ERP Cloud

Portal and E-Service Solutions

The ERP cloud will be the transactional backbone supporting **SABS's external-facing portal environment** (E-Service Solutions). These portals will allow clients to:

- Submit service requests, orders, or applications online.
- Track order progress, payments, and certification status.
- Access training, testing, and certification services in one integrated interface.

The portal integrates directly with the ERP via **secure APIs**, ensuring end-to-end visibility from customer engagement to billing, delivery, and reporting.

7. Reporting, Analytics, and Data Architecture

The **Reporting and Analytics Layer** provides centralised dashboards and management insights across all modules and systems. Data from ERP, CIMS, LIMS, CRM, and Webstore is consolidated in the **Master Data Warehouse (MDW)** for analytics, forecasting, and KPI tracking.

Key dashboards include:

- Financial performance and audit trails (Finance & SCM).
- Certification revenue and service profitability (CRM & CIMS).
- Project progress and CAPEX utilisation (PPM).
- Training effectiveness and revenue analysis (LMS).
- Compliance and governance dashboards for EXCO and the Board.

Security, Hosting, and Data Residency

- The ERP is hosted in **Cloud (SaaS model)** with replication to **SA/Johannesburg OCI Region** for data residency and POPIA compliance.
- All integrations use **secure HTTPS, REST APIs, and data encryption (AES-256)**.
- The environment enforces **role-based access controls**, **multi-factor authentication**, and **segregation of duties** in line with PFMA and ISO 27001 standards.

Expected Outcomes

- Full replacement of legacy systems with a single, integrated ERP platform.
- Enhanced visibility, reporting accuracy, and audit readiness.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

- Improved data consistency across certification, testing, learning, and financial systems.
- Seamless digital client experience through portals and self-service.
- Strengthened compliance with PFMA, POPIA, and AGSA audit requirements.
- Foundational architecture for future digital transformation phases.

Summary Architecture Flow
Data Migration (ETL) → ERP Cloud (Core Business Modules) → Core Business Applications (CIMS, LIMS, LMS, SABSTAN, Webstore) → External Systems (Banks, CSD, SARS) → Master Data Warehouse (BI & Analytics)
This architecture ensures end-to-end data flow, traceability, and governance across the entire SABS operational value chain.

No	Requirement Area	Description
1	Standards Systems (SABStan)	ERP must integrate with SABStan for automatic transfer of metadata (standard details, publication status, pricing), generation of sales items, and real-time synchronisation of status changes.
2	Certification Systems (CIMS)	ERP must synchronise with CIMS for client onboarding, certification lifecycle management, suspensions, cancellations, complaints, appeals, and financial data (statements, invoices, balances).
3	Laboratory Systems (LIMS)	ERP must integrate with LIMS to manage quotations, test orders, intercompany controls, job/test closures, non-conformities, test results reporting, and invoicing in Finance ERP.
4	Customer Relationship Management (CRM)	ERP must serve as the enterprise CRM hub, linked to CIMS, Finance, and LIMS for client account creation, quotations, engagements, sales orders, revenue management, and appeals.
5	Finance ERP	Finance must be the financial backbone, integrating with CRM (account creation, invoicing), LIMS (quotations, job closures), CIMS (audit invoicing, certification cancellations), and SABStan (standards sales).
6	Human Capital Management (HCM)	ERP must integrate HCM data with LIMS and CIMS for resource planning, auditor competency mapping, training schedules, leave availability, and workforce allocation to projects.
7	Audit Management	ERP must connect CRM, Finance, LIMS, and CIMS for audit planning, resource allocation, pricing, quotations, job closures, invoicing, non-conformities, disputes, and outcome reporting.
8	Sales & Quotation Management	ERP must integrate CRM, Finance, and LIMS for seamless quotation lifecycle (initiation, expiry, reactivation, acceptance, breakdowns), client credit checks, and pro forma invoicing.
9	Intercompany/Business Unit Integration	ERP must enforce correct intercompany/inter-BU account structures during quotations, sales orders, and job closures, ensuring separation of buying vs selling BUs.
10	Resource Management	ERP must ensure HCM pushes competencies, availability, and training into LIMS and CIMS for planning; Finance ERP must reflect resource utilisation costs.
11	Client Engagement & Communication	ERP must automate exchange of engagement records (suspensions, complaints, appeals, communications) across CRM, CIMS, and Finance.
12	Held Reports & Credit Control	ERP Finance must push "Held Reports" into CIMS and CRM to enforce financial discipline and prevent non-compliant service delivery.
13	Certification Lifecycle	ERP must manage end-to-end certification lifecycle integration (issuance, renewals, suspensions, cancellations, complaints, appeals) between CRM, CIMS, and Finance.
14	Reporting & Dashboards	ERP must consolidate reporting from all specialised systems (Finance, CRM, CIMS, LIMS, SABStan, HCM) into integrated dashboards for EXCO, Board, and NT reporting.
15	Master Data Warehouse	ERP must anchor all integrations into a central Master Data Warehouse to ensure consistent, validated, and audit-ready master data (clients, suppliers, employees, standards, assets, projects).
16	Compliance & Auditability	All integrations must provide audit trails, role-based access, and compliance with PFMA, POPIA, OHS Act, SANAS, and NT Instruction Notes.
17	Automation & Notifications	ERP must provide automated workflows, reminders, escalations, and notifications across systems (e.g., quotation expiries, contract renewals, certification cancellations).
18	Scalability & Future-Readiness	ERP integration architecture must be scalable to support additional future systems (e.g., new lab systems, digital platforms) without compromising governance.

No	Requirement	Description
1	SABStan Integration – Metadata	ERP must automatically import metadata for approved standards (details, publication status, pricing) from SABStan.

2	SABStan Integration – Sales Items	ERP must auto-generate sales items from SABStan metadata for newly approved standards.
3	SABStan Integration – Synchronisation	ERP must synchronise status of standards with SABStan (published, updated, withdrawn).
4	SABStan Integration – Invoice Processing	ERP must allow efficient invoice processing, including travel invoices matched to approved requests.
5	CRM/ERP – Customer Initiation	Customer requests captured in CRM or via SABS web portal must auto-route into CRM (ERP).
6	CRM → Finance ERP	Customer information must flow from CRM to Finance for new account creation with unique account number.
7	Finance ERP → LIMS	Customer account info must flow into LIMS for quotation generation.
8	Pricelist Integration	Pricelist info must be synchronised between LIMS and Finance ERP in real-time.
9	CRM Application Forms	ERP must generate application forms (CRM/web portal), convert accepted quotes into full customer accounts, and trigger credit assessments.
10	Finance ERP → LIMS – Credit Status	Customer financial clearance and upfront payment status must be pushed to LIMS before work commences.
11	Intercompany/BU Controls	LIMS must enforce correct inter-BU account selection; Finance ERP must validate selling vs buying BU.
12	Quotation Integration	ERP must handle quotation expiries, reactivations, acceptance, breakdowns, and account/payment status across CRM, Finance, and LIMS.
13	Resource Management Integration	Resource availability and competencies must flow from HCM ERP into LIMS and CIMS for planning.
14	Job/Test Management	Job closures in LIMS must trigger invoicing in Finance ERP, manage non-conformities, refunds, and escalation to CRM.
15	Reporting Integration	Test result reports from LIMS must be shareable via CRM (ERP) with customers.
16	CRM ↔ Finance ↔ CIMS	Client account creation, status updates, engagement packs, and milestone billing must flow between CRM, Finance, and CIMS.
17	Audit Management	Finance ERP, CRM, CIMS, and LIMS must integrate for audit pricing, quotations, invoicing, non-conformities, job closures, disputes, and competency mapping.
18	Client Management	CRM and CIMS must synchronise client onboarding, certification status, suspensions, communications, and financial information (statements, balances).
19	Held Reports	Finance ERP must push "Held Reports" to CIMS for clients not honouring agreements.
20	Certification Cancellations	CRM, CIMS, and Finance ERP must handle cancellation workflows (client requests, approvals, invoicing stop, notifications).
21	Certification Complaints & Appeals	CRM ↔ CIMS must manage complaint/appeal records, disputes, feedback, and updates to clients and certificates.
22	Master Data Synchronisation	All client, supplier, resource, and financial master data must be consistent across ERP, CIMS, LIMS, SABStan, and CRM through the central Master Data Warehouse.

16. HOSTING & DATA MANAGEMENT REQUIREMENTS MATRIX

Data Residency

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

The service provider shall ensure that a complete, continuously synchronized copy of SABS ERP transactional and master data is hosted within the Cloud Infrastructure Johannesburg region, under SABS tenancy or secure backup service, to maintain data sovereignty and compliance with the Protection of Personal Information Act (POPIA).

Data Ownership Clause

All data generated, processed, or stored in the ERP environment remains the exclusive property of SABS. The service provider shall provide, upon request, a full export of all data in machine-readable format, including metadata and audit logs, without additional licence cost."

Data Recovery / DR Clause

"In the event of system unavailability or cybersecurity incident affecting the primary (offshore) environment, the service provider shall restore operations using the local replicated data copy within Johannesburg OCI within 24 hours or as per SLA."

POPIA and AGSA Compliance Clause

The service provider shall ensure that all data handling, transmission, and storage comply with the South African Protection of Personal Information Act (POPIA), the PFMA, and audit requirements as defined by the Auditor-General of South Africa (AGSA)."

No	Requirement	Description
1	Data Sovereignty	All ERP data (production, backup, DR) must be hosted by the service provider in compliance with national data sovereignty regulations. Establish multiple disaster recovery sites. (Establish secondary locations , often in different geographic regions to ensure business continuity in the event of a primary site failure.
2	POPIA Compliance	ERP must ensure protection of all personal information in line with the **Protection of Personal Information Act (POPIA)**, including collection, processing, storage, access, and disposal.
3	Data Classification	The service provider must enforce classification of data (confidential, restricted, internal, public) in line with the Protection of State Information Act and SABS governance.
4	Encryption	All data must be encrypted at rest and in transit using globally accepted standards (AES-256, TLS 1.3).
5	Role-Based Access Control	Implement strict role-based access control (RBAC), segregation of duties, and least-privilege access.
6	Multi-Factor Authentication	Require MFA for all privileged accounts and remote access to ERP environments.
7	Logging & Audit Trails	Maintain immutable logs of all access, data changes, and transactions for compliance and forensic investigation.
8	Data Backup & Recovery	Ensure automated daily backups, offsite replication, and disaster recovery capabilities with RPO ≤ 24 hours and RTO ≤ 8 hours.
9	Cloud / Hybrid Hosting	The service provider must support hosting that is compliant to SA legislative frameworks and POPIA Act or a compliant hybrid model (cloud offshore + on-premise south Africa data centre).
10	Data Retention & Archiving	Define and enforce retention policies for financial, HR, and client data, aligned with South African law, National Treasury, and audit requirements.
11	Data Anonymisation & Minimisation	Support anonymisation and pseudonymisation for sensitive data where full identity is not required, in compliance with POPIA.
12	Incident Response	Provide incident detection, alerting, and reporting capabilities, with defined response protocols aligned to South African cybersecurity frameworks.
13	Vendor & Third-Party Compliance	Any third-party hosting or data service provider must be POPIA-compliant and certified to ISO 27001 or equivalent standards.
14	Data Portability	The service provider shall:

- Support secure data export/import to prevent vendor lock-in and enable migration between compliant environments.
- Provide SABS with **complete and unencrypted data exports** in a **structured, non-proprietary format** (such as CSV, XML, JSON, or database dump) sufficient to enable full re-use, migration, and restoration of the data in another system.

Data exports shall include:

- All transactional, master, configuration, and audit data.
- Full data schema, relationships, and metadata documentation.
- User and role mapping tables.

The service provider shall **cooperate with SABS and its appointed migration partners** to validate and verify the completeness, accuracy, and integrity of the exported data.

	Transition and Migration Support	At least **six (6) months prior** to contract expiry, the service provider shall provide transition assistance, including technical and procedural support for data extraction, schema mapping, and migration planning.

The service provider shall **make available qualified technical personnel** (database administrators, integration specialists, etc.) to support SABS and its implementation partners during the transition phase, on a time-and-materials or fixed-cost basis as agreed.

- Shall maintain **data access continuity** until written confirmation from SABS that data migration and validation are complete.
- shall not claim or exercise any rights over SABS data except to fulfil the contracted services."

15	Business Continuity	ERP service provider must include hosting redundancy, failover, and continuity planning aligned to SABS disaster recovery policies. The SABS will need the environment to be tested-
16	Monitoring & Alerts	Real-time monitoring of data access, system health, and security events with automated alerts for unusual or unauthorised activities.
17	Compliance Reporting	Provide dashboards and reports for audit readiness, regulatory compliance, and Board/EXCO oversight.
18	**Zero Trust – Continuous Verification**	No implicit trust is granted; all users and devices must be authenticated and authorised at every access attempt.
19	**Zero Trust – Micro-Segmentation**	Segment ERP workloads, networks, and applications to minimise lateral movement in case of a breach.
20	**Zero Trust – Device Security**	Enforce endpoint verification before granting ERP access (e.g., managed devices, up-to-date patches, no compromise indicators).
21	**Zero Trust – Least Privilege Enforcement**	Ensure every identity, service, and API has only the minimal permissions required for its function.
22	**Zero Trust – Adaptive Access**	Apply contextual access policies (time, location, behaviour) to increase security and block anomalies.
23	**Zero Trust – Encryption Everywhere**	Mandate encrypted connections across all ERP integrations (CRM, CIMS, LIMS, SABStan, HCM, etc.).
24	**Zero Trust – Threat Detection**	Implement AI/ML-based anomaly detection to flag insider threats, privilege escalation, or data exfiltration.

25	Zero Trust – Governance	Document and enforce Zero Trust security policies, reviewed annually in line with SABS ICT governance and PFMA compliance.
26	Security and Compliance	Data transfer and extraction must comply with **POPIA** and SABS's internal information security and data classification standards. The service provider must ensure **secure transmission channels** (e.g., encrypted SFTP or VPN) and provide SABS with a **certificate of data destruction** post-migration.
	Audit Rights	SABS reserves the right to **audit compliance** with the data ownership and exit provisions at any time prior to and following contract termination to verify full adherence to the agreed data handover process.

17. SYSTEM SECURITY REQUIREMENTS MATRIX PENETRATION TESTING)

No	Requirement Area	Description
1	Data Encryption	All sensitive user data must be encrypted using industry-standard algorithms (e.g., AES-256). Encryption must cover both data in transit and data at rest.
2	Access Control	Implement role-based access control (RBAC) ensuring users can only access relevant functionalities and data. Provide system-generated reports for tracking access and activity logs.
3	Authentication & Authorisation	Support and enforce multi-factor authentication (MFA) for all access, particularly administrative and remote access.
4	Vulnerability Management	Solution must undergo regular vulnerability scanning, patching, and security updates to address weaknesses and protect against emerging threats.
5	Monitoring & Reporting	ERP must be connected to a Security Operations Centre (SOC) for activity monitoring. Must support 24/7 monitoring and proactive security management to enable rapid incident response.
6	Governance Integration	Solution must integrate with SABS internal access management and governance tools for unified monitoring and compliance reporting.
7	Penetration Testing – Initial Baseline	Implementation partner must support an initial penetration test (prior to go-live an after go live during the hyper care phase) to validate ERP and hosting environment resilience.
8	Penetration Testing – Periodic	The system must undergo regular penetration testing (at least annually) conducted by SABS or an independent certified provider.
9	Penetration Testing – Post-Change	Mandatory penetration testing must be performed after any major system upgrades, patches, or integrations.
10	Penetration Testing – Remediation	The solution provider must support remediation of vulnerabilities identified during tests, with documented closure reports provided to SABS.
11	Compliance Alignment	All penetration testing activities must align with South African cybersecurity policies, POPIA, and international best practices (e.g., OWASP, NIST).

18. RISK MANAGEMENT AND MITIGATION

Risk Category	Specification / Contractual Requirement	Purpose / Alignment

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Cybersecurity Risk	- Compliance with ISO 27001, NIST, and POPIA. - Implement 24/7 SIEM, intrusion detection, and patch management. - Include an Incident Response SLA. - Mandatory cyber insurance cover by vendor.	The vendor shall protect SABS data from breaches and cyberattacks; ensure rapid recovery and liability protection.
Business Continuity	- Vendor must maintain a Business Continuity and Disaster Recovery Plan (BCP/DRP) tested quarterly.	The vendor shall ensure system recovery and resilience in event of outages or cyber incidents.
Integration Complexity	- Single Prime Systems Integrator accountable for all sub-vendors. - Provide integration architecture documentation. - Maintain interface change control under ICT oversight.	The vendor shall prevent fragmented delivery and enforce accountabilities for all integrations.
Data Migration and Quality	- Perform data profiling, cleansing, validation, and parallel reconciliation pre-go-live. - Conduct three dry runs and independent audit validation. - Payment linked to successful UAT sign-off.	The vendor shall ensure audit-ready, accurate financial and HR data migration.
Scope Creep / Governance	- All scope changes require written PMO approval. - Include Performance Guarantee (15%) and Retention (10%) clauses. - Formal change control log to be maintained.	Enforce project discipline and control contractual deviations.
Change Management / User Adoption	- Vendor must deliver a Change Management and Skills Transfer Plan approved by SABS. - Deliver post-go-live training and adoption monitoring.	Improve system uptake and reduce resistance to change.
Knowledge Retention / Sustainability	- Vendor must train and certify SABS personnel in ERP configuration and administration.	Build internal capacity for long-term sustainability.
Legal and Compliance Risk	- Adhere to POPIA Act, Cyber security Act and all applicable legislated framework	Ensure legal compliance and governance alignment.

Lesson Learned	Specifications	Contractual Clause(s)
The incident highlighted the critical importance of timely patch management, proactive vulnerability monitoring, and strict external exposure controls to mitigate the risk of zero-day exploits within enterprise systems.	**1. Implement a Robust Patch Management Framework** – Establish a formal patch management policy with defined timelines, responsibilities, and escalation processes. Automate patch tracking and reporting across all systems. **2. Enhance Vulnerability and Threat Intelligence Monitoring** – Subscribe to OEM and industry threat feeds (e.g., CISA, MITRE). Conduct periodic vulnerability scans and penetration tests to detect emerging threats. **3. Strengthen External Exposure Controls** – Limit unnecessary internet-facing services, apply network segmentation, and deploy Web Application Firewalls (WAF) and Intrusion Prevention Systems (IPS).	**1. Cybersecurity & Data Protection Clause** – Service Provider to maintain industry-standard cybersecurity controls, including SIEM, vulnerability management, and 24-hour breach notification. **2. Liability & Indemnification Clause** – Provider indemnifies SABS against losses arising from failure to maintain adequate cybersecurity or delayed patching. **3. Patch & Vulnerability Management Clause** – Critical patches must be applied within five (5) business days; non-compliance constitutes breach of contract. **4. Data Residency & Confidentiality Clause** – Data remains the property of SABS and may not be transferred outside South Africa without written

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

	4. Integrate Cybersecurity into Change and Release Management – Enforce mandatory security validation during change control, ensuring patches and configurations meet security baselines before deployment. **5. Establish Incident Readiness and Response Protocols** – Create zero-day response playbooks, define escalation procedures, and conduct regular simulation exercises. **6. Enhance Governance and Accountability** – Assign clear cybersecurity risk ownership within ICT governance structures and ensure quarterly reporting of patch compliance and vulnerability status to EXCO/Audit Committee.	consent (POPIA compliance). **5. Audit & Compliance Rights Clause** – SABS reserves the right to conduct periodic security audits or third-party verification. **6. Cyber Insurance Clause** – Provider must maintain cyber-liability insurance with sufficient cover (**R25million** per incident). **7. Termination for Security Breach Clause** – SABS may suspend or terminate the contract if vulnerabilities are not remediated within agreed timeframes.
Weak change management and insufficient user engagement during ERP rollout can lead to system underutilisation, data inaccuracies, and process disruptions.	**1. Develop a Structured Change Management Plan** – Integrate communication, stakeholder engagement, and training schedules into project milestones. **2. Implement UAT Governance Framework** – Mandate end-user participation in acceptance testing with clear signoffs. **3. Strengthen Training & Post-Go-Live Support** – Provide role-based system training, refresher courses, and post-implementation helpdesk.	**1. Change Management Clause** – Vendor to provide structured change management, training, and UAT support services as part of deliverables. **2. Performance Accountability Clause** – Payment milestones linked to verified user adoption and system performance metrics.
Poor data governance and lack of data classification expose organizations to POPIA violations and reputational risk.	**1. Establish a Data Governance Framework** – Define ownership, data quality standards, and classification. **2. Conduct Regular Compliance Audits** – Review data handling and retention policies against POPIA. **3. Deploy Data Loss Prevention (DLP) tools** and restrict data exports.	**1. Data Privacy & POPIA Clause** – Vendor shall comply with POPIA and ensure data processing agreements are in place. **2. Confidentiality Clause** – Reinforces that SABS retains data ownership. **3. Breach Notification Clause** – Mandates reporting within 24 hours. 4. All data, metadata, configurations, and derived datasets created, processed, or stored under this contract shall remain the **exclusive property of the South African Bureau of Standards (SABS)**. 5. The service provider or OEMs and/or its subcontractors shall have **no ownership rights, lien, or license** over SABS data, and may not use, copy, or disclose such data for any purpose other than to fulfil contractual obligations. 6.Upon contract expiry or termination, the service provider shall **cease all processing** and **return or securely delete** all SABS data in accordance with SABS's written instructions and applicable

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

		South African data protection laws (POPIA).
Overdependence on third-party vendors increases operational risk during ERP implementation and integration phases.	**1. Strengthen Vendor Risk Assessments** – Evaluate financial stability, capacity, and past performance before contracting. **2. Diversify Support Models** – Establish internal knowledge transfer from vendors. **3. Implement SLA-Based Performance Reviews.**	**1. Service Level Agreement (SLA) Clause** – Defines measurable service levels and penalties for non-performance. **2. Knowledge Transfer Clause** – Vendor to train internal teams during the project lifecycle. **3. Step-In Rights Clause** – Allows SABS to take over delivery if the vendor fails to perform.
Weak infrastructure resilience (power outages, hardware failures) can disrupt ERP availability and business continuity.	**1. Implement Geo-Redundant Infrastructure** – Include secondary data centers or cloud DR instances. **2. Test DR Plans Quarterly** – Simulate failover scenarios and recovery timelines. **3. Strengthen UPS and Generator Maintenance Schedules.**	**1. Business Continuity & DR Clause** – Vendor must maintain tested DRP/BCP with documented RTO/RPO. **2. Infrastructure Resilience Clause** – Provider to ensure redundancy and failover systems. **3. Liability Clause** – Vendor responsible for downtime beyond agreed SLA.
Cost overruns and procurement delays arise from poor project governance, inadequate scope definition, and lack of phased funding control.	**1. Establish PMO Oversight** – Implement stage-gate reviews and governance reporting to EXCO. **2. Use Framework Contracting Model** – Enable as-and-when funding deployment. **3. Maintain Risk & Change Control Logs.**	**1. Cost Governance Clause** – Payment milestones tied to approved deliverables. **2. Framework Contract Clause** – Allows phased implementation aligned with budget confirmations. **3. Change Control Clause** – All scope adjustments must be approved through formal governance.

19. SYSTEM EXECUTION REQUIREMENTS MATRIX

No	Requirement Area	Description
1	Scalability	The system must be scalable to support future demands by enabling scale-up (vertical expansion) or scale-out (horizontal expansion) capabilities.
2	Accessibility – Cross-Platform	The system must ensure cross-platform compatibility (desktop, mobile, tablet) and provide responsive interfaces.
3	Accessibility – Web Access	The solution must be accessible via secure online / web channels, with compliance to accessibility standards.
4	Availability	The solution must provide 99.9% uptime SLA, excluding scheduled maintenance.
5	Notifications	The system must support email and SMS notifications for alerts, workflows, and user communications.
6	Interfaces / Integration – Flat File	The system must support flat file interfaces (bi-directional) for data exchange with external systems.
7	Interfaces / Integration – EDI	The system must support Electronic Data Interchange (EDI) for structured document exchange with suppliers, customers, and partners.
8	Interfaces / Integration – APIs	The system must integrate with external systems by exposing APIs for consumption or consuming APIs exposed by other systems (aligned to documented integration requirements).

| 9 | Integration with Active Directory | The system must integrate with Active Directory (AD) or equivalent directory services for authentication, authorisation, and user management. |

20. 36-MONTHS SUPPORT & MAINTENANCE REQUIREMENTS MATRIX

No	Requirement Area	Description
1	Support Period	Service provider must provide 36 months of post-implementation support and maintenance, starting from ERP system go-live acceptance. After the hyper care hyper care period of three months per module.
2	Service Levels (SLAs)	Support must be governed by agreed Service Level Agreements (SLAs), including response and resolution times for incidents, aligned to business criticality (Critical = 4 hrs, High = 8 hrs, Medium = 24 hrs, Low = 72 hrs).
3	Helpdesk & Ticketing	Provide a dedicated support helpdesk and ticketing system (email, phone, online portal) for incident logging, tracking, and escalation.
4	Support Hours	Provide 24/7 support for critical incidents and business hours support (08:00–17:00) for standard issues, with escalation procedures for after-hours.
5	Knowledge Transfer	Support provider must provide ongoing knowledge transfer to SABS IT/PMO teams, including system administration, troubleshooting, and reporting.
6	Onsite & Remote Support	Provide both remote support (for most incidents) and onsite support for complex issues requiring physical intervention.
7	Preventive Maintenance	Perform regular system health checks, database tuning, patch management, and optimisation every quarter.
8	Corrective Maintenance	Resolve software defects, integration issues, and system errors as they arise, ensuring minimal disruption to business operations.
9	Adaptive Maintenance	Implement necessary adjustments to ERP configuration to accommodate regulatory changes (PFMA, POPIA, NT Treasury reporting, SANAS requirements).
10	Security Patching	Ensure monthly security patching and immediate patching of vulnerabilities rated High/Critical.
11	Upgrade Management	Provide minor upgrades (patches, service packs) as part of support. Major upgrades must be planned with SABS, tested in staging, and deployed with rollback plans.
12	Performance Monitoring	Proactively monitor ERP performance, uptime, and resource utilisation, with monthly performance reports to SABS ICT governance.
13	Reporting	Provide monthly support and maintenance reports including logged tickets, resolutions, SLA compliance, system performance, and outstanding issues.
14	Disaster Recovery Support	Ensure ERP is integrated into SABS DRP/BCP (Disaster Recovery/Business Continuity Plans). Support partner must test DR failover at least annually.
15	System Documentation	Maintain up-to-date system and support documentation, including configurations, customisations, and integrations.
16	Change Management	All changes must follow formal change control processes, including impact assessment, approvals, testing, and rollback procedures.
17	User Support & Training	Provide refresher training for end-users and administrators annually or as requested. Maintain an online knowledge base and FAQs.
18	Dedicated Account Manager	Assign a dedicated Account/Support Manager as a single point of escalation for SABS.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

19	Continuous Improvement	Propose improvements to ERP usability, performance, and functionality during the 36-month support period.
20	Exit Strategy	At the end of the 36 months, provider must support handover/transition of ERP support to SABS internal teams or another appointed vendor, including knowledge transfer and data migration support.
21	Costing – Transparency	Support and maintenance costs must be itemised by service category (helpdesk, preventive, corrective, adaptive maintenance, security, upgrades, training).
22	Costing – Structure	Costs must be structured into CAPEX (upgrades/enhancements) and OPEX (support, monitoring, patches), aligned with PFMA reporting requirements.
23	Costing – SLA Penalties	Support costs must be linked to SLA compliance. Failure to meet SLA metrics must result in penalty fees or credits to SABS.
24	Costing – Fixed or Capped	Annual support fees must be fixed or capped, with clear escalation clauses (e.g., CPI-linked increases). No hidden/variable costs allowed.
25	Resource Skills – Functional Consultants	At least 2 ERP functional consultants with expertise in Finance, SCM, HR, and PPM modules to provide application-level support.
26	Resource Skills – Technical Consultants	At least 2 ERP technical consultants (DBA, system integration, API, security) for system administration, patching, and performance optimisation.
27	Resource Skills – Security Specialist	One dedicated ERP Security Specialist responsible for vulnerability scanning, patching, penetration testing support, and compliance reporting (POPIA, Zero Trust).
28	Resource Skills – BI/Reporting Specialist	One BI/Reporting Specialist for dashboards, analytics, NT Treasury/Board reporting, and data warehouse optimisation.
29	Resource Skills – Change & Training Lead	One Change Management & Training Lead to manage knowledge transfer, user training, and communication.
30	Resource Skills – Account/Support Manager	One dedicated Account Manager to oversee SLA compliance, monthly reporting, and act as the main liaison with SABS PMO/ICT.
31	Resource Certifications	All vendor resources must have relevant ERP vendor certifications, plus ITIL certification for support management.
32	Resourcing Continuity	The vendor must ensure resource continuity – no key support staff may be rotated off the account without SABS approval and replacement by equally skilled personnel.

Support Service Model

Support Tier	Responsibility	Coverage
Tier 1 – User Helpdesk	SABS internal ICT/PMO first-line support	Logging and triage of incidents, minor assistance, password resets.
Tier 2 – Application Support (Service Provider)	ERP Implementation Partner	Functional and technical issue resolution, configuration fixes, minor enhancements.
Tier 3 – OEM / Vendor Escalation	Original Equipment Manufacturer (e.g., Oracle, SAP, Microsoft)	Critical defect resolution, core application patching, and version upgrades.

Service Level Commitments.

Service Type	Description	Target Response Time	Target Resolution Time	Availability Target
Incident Management	Responding to and resolving incidents affecting users or business processes.	30 minutes (P1); 2 hours (P2); 4 hours (P3); 1 business day (P4)	4 hours (P1); 8 hours (P2); 2 business days (P3); 5 business days (P4)	99.5% uptime

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Service Request Management	Handling user requests such as report creation or configuration changes.	4 hours	3 business days	99%
Problem Management	Root cause analysis for recurring or critical incidents.	1 business day	Within 5 business days	—
Change Management	Implementation of approved system changes or enhancements.	As per change calendar	10–15 business days	—
Patch/Upgrade Management	Deployment of new versions, patches, and security updates.	—	Quarterly or as required	99.5% system availability
Backup and Recovery	Daily system backup; restoration testing quarterly.	—	RTO ≤ 4 hours; RPO ≤ 24 hours	99.9% data integrity
Monitoring and Reporting	24/7 system monitoring, monthly performance and SLA reports.	Continuous	Monthly reporting	99% monitoring coverage

Incident Classification

Priority	Description	
P1 – Critical	Complete system outage or major business process disruption.	ERP login failure; database crash; financial posting blocked.
P2 – High	Major function unavailable with workaround possible.	Payroll export failing; integration not syncing.
P3 – Medium	Non-critical module defect or partial functionality loss.	Report error; incorrect data mapping.
P4 – Low	Cosmetic issue or enhancement request.	UI layout error; report alignment change.

Governance and Reporting

Governance Aspect	Description
Monthly Service Review	Review of SLA performance, incident trends, open issues, and planned improvements.
Quarterly Steering Committee	Strategic review involving SABS PMO, ICT, and Service Provider executives.
Performance Dashboard	Monthly dashboard covering incident KPIs, uptime, and SLA adherence.
Root Cause & Corrective Action (RCCA) Reports	Mandatory submission for repeated P1/P2 incidents.

Escalation Matrix

Level	Designation	Response Time
Level 1	ERP Service Desk Lead	Immediate
Level 2	Service Delivery Manager	Within 1 hour
Level 3	Head: ICT / PMO	Within 4 hours
Level 4	Executive Sponsor	Within 8 hours

21. CHANGE MANAGEMENT & TRAINING REQUIREMENTS MATRIX

No	Requirement Area	Description
1	Change Management Framework	The service provider must establish a formal Change Management Framework, aligned with SABS ICT governance and PMO policies, covering process, system, and organisational change.
2	Change Control Process	All ERP changes (functional, technical, or configuration) must follow a formal change request, impact assessment, approval, and rollback plan documented in the ERP Change Log.
3	Change Advisory Board (CAB)	Major changes must be presented to a Change Advisory Board (including ICT, PMO, Business Owners, Risk/Compliance) for approval before implementation.
4	Risk & Impact Assessment	Each change request must include impact on business processes, security, compliance, cost, and performance, with mitigation actions.
5	Change Communication	Service provider must provide structured communication on changes, including release notes, business impact notices, and timelines.

6	Emergency Change Handling	An emergency change procedure must be in place for urgent fixes (e.g., critical security patches), with post-change validation and reporting.
7	Change Documentation	All changes must be documented, version-controlled, and auditable, with records accessible to SABS auditors and ICT governance teams.
8	Regulatory Alignment	Changes must comply with PFMA, POPIA, SANAS, and NT Treasury reporting requirements where applicable.
9	Knowledge Transfer	Every major change must include knowledge transfer sessions for SABS ICT and business teams to ensure sustainability.
10	Training Strategy	Service provider must develop a Training & Capacity Building Strategy covering end-users, administrators, and ICT support staff.
11	Training Materials	Provider must deliver training manuals, quick reference guides, e-learning modules, and videos, tailored to SABS divisions.
12	End-User Training	Conduct role-based training (Finance, SCM, HCM, CRM, PPM, Facilities, etc.) before go-live and for new users during the 36-month support period.
13	Administrator/Technical Training	Provide specialised training for ERP administrators, super-users, and ICT staff on system configuration, integration, security, and reporting.
14	Refresher Training	Annual refresher training sessions must be provided for users, covering system updates, new modules, or enhancements.
15	Train-the-Trainer Model	Service provider must implement a train-the-trainer approach, enabling SABS super-users to cascade knowledge internally.
16	Change & Training Reporting	Monthly reporting on change requests, training attendance, user adoption, and outstanding skills gaps must be submitted to SABS PMO.
17	Adoption Monitoring	Service provider must provide metrics on user adoption, system usage, and training effectiveness, with interventions where adoption is low.
18	Continuous Improvement	Change management and training approaches must be continuously improved based on feedback, lessons learned, and ERP system evolution.

Training requirements:

User group	Training required	Training format	Training material	User number
Departmental end-users	All modules (for each of the identified licensing requirements)	Online modular training	Videos	1348
Executives	ERP reporting and approvals	Online	Online modular training	20
User Administration	Admin Training	On-the-job and formal training	Online modular training	20
Advanced (Super Users)	Business Admin Training	On-the-job	Online modular training	20

All end users must be trained before Go-Live. Advanced and support training must be done as part of the project execution (on the job). Admin and advanced on-job-training will be conducted virtually and on-site.

Licensing requirements:

Department	# of users
Customer Partnering (CRM)	250
Facilities	46
Finance & SCM	213
Human Capital Management	744
Office of the CEO /EPM	55
PMO Dept	35
Total	**1343**

22. ERP MIGRATION REQUIREMENTS MATRIX

No	Requirement Area	Description
1	Migration Strategy	A comprehensive migration strategy must be developed, covering data, processes, integrations, and users. Must align with SABS ICT and PMO frameworks.
2	Migration Planning	Define detailed migration plans including scope, timelines, cutover strategy, and rollback procedures.
3	Data Assessment	Perform a data inventory and quality assessment across legacy systems (JDE, CIMS, LIMS, SABStan, CRM, etc.) to identify gaps, duplicates, and inconsistencies.
4	Data Cleansing	Cleanse, de-duplicate, and validate legacy data before migration to ensure integrity and compliance with POPIA and audit requirements.
5	Data Mapping	Establish data mapping rules between legacy systems and ERP modules (Finance, SCM, HCM, CRM, PPM, Facilities, etc.).
6	Data Transformation	Apply transformations (formatting, enrichment, standardisation) during migration to ensure compatibility with ERP data structures.
7	Migration Tools	Use automated ETL (Extract, Transform, Load) tools or ERP vendor-recommended utilities to minimise errors and speed up migration.
8	Test Migration	Conduct test migrations in sandbox/staging environments to validate accuracy, completeness, and performance.
9	Parallel Run	Run ERP in parallel with legacy systems during cutover to validate financials, transactions, and reporting before full switchover.
10	Cutover Plan	Define a cutover strategy with clear go/no-go decision points, fallback/rollback plans, and business continuity arrangements.
11	Security & Compliance	Ensure migrated data complies with POPIA, PFMA, NT Treasury rules, and SABS internal security policies (encryption, access control, auditability).
12	Audit Trail	Maintain an audit trail of migrated data, including migration logs, error reports, reconciliations, and approvals.
13	Stakeholder Sign-Off	Require sign-off from business owners and ICT governance at each migration stage (test, mock runs, final cutover).
14	Master Data Governance	Ensure that master data (clients, suppliers, employees, assets, projects) is standardised and managed through the Master Data Warehouse post-migration.
15	Migration Reporting	Provide daily/weekly migration progress reports during migration windows and a final reconciliation report post go-live.
16	Knowledge Transfer	Service provider must train SABS ICT and PMO staff on migration processes, tools, and data governance.
17	Post-Migration Validation	Validate migrated data against legacy system records (balances, invoices, payroll, asset registers) to ensure accuracy.
18	Business Continuity	Ensure critical operations (Finance, SCM, HR, Testing, Certification) remain functional during migration with minimal downtime.
19	Continuous Improvement	Lessons learned from migration must be documented and applied for future ERP enhancements or additional module rollouts.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

23. DEPLOYMENT & HOSTING REQUIREMENTS MATRIX (CLOUD)

No	Compliance Criteria	Requirement Description
1	Data Sovereignty Preference	Primary ERP hosting must be in South Africa. If hosting is offshore, service provider must justify and obtain SABS & National Treasury approval.
2	POPIA Adequacy Test	Offshore hosting is only permitted in jurisdictions with equivalent or stronger data protection laws (e.g., EU-GDPR). Provider must submit legal proof of adequacy.
3	Cross-Border Data Transfer Agreement	Provider must enter into a legally binding data transfer agreement with SABS, covering processing, storage, and deletion of personal information offshore.
4	Data Subject Rights	ERP must guarantee POPIA rights for individuals (access, correction, deletion, objection), regardless of hosting location.
5	Encryption & Key Management	All offshore data must be end-to-end encrypted (AES-256/TLS 1.3). Encryption keys must be generated, stored, and controlled by SABS in South Africa.
6	Local Replication Requirement	Even if hosted offshore, ERP must provide a replicated copy of critical data in South Africa (for reporting, DR, and continuity).
7	Third-Party Government Access	Provider must guarantee data will not be disclosed to foreign governments or third parties without explicit written authorisation from SABS.
8	Audit Rights	SABS must retain the right to audit offshore data centres (directly or via independent certified assessors) to verify POPIA compliance.
9	Incident Response & Breach Notification	Provider must notify SABS within 24 hours of any breach or unauthorised access to offshore-hosted data. Incident reporting must comply with POPIA Section 22.
10	Data Portability & Exit	Provider must guarantee full data portability — SABS must be able to securely repatriate all ERP data back to South Africa at contract end, vendor exit, or on demand.
11	Retention & Deletion	Offshore-hosted data must comply with POPIA's minimality and retention principle. Provider must support certifiable secure deletion of data when no longer required.
12	Service Provider Certification	Cloud/data centre provider must hold relevant certifications: ISO 27001, ISO 27701, SOC 2 Type II, and be POPIA-compliant.
13	Latency & Performance SLA	If hosted offshore, provider must guarantee low-latency (<200ms) access for SA users, with 99.9% uptime SLA.
14	National Treasury & DTIC Alignment	Any offshore hosting arrangement must be reported to and approved by National Treasury (PFMA compliance) and DTIC, if data involves trade/standards.
15	Legal Jurisdiction & Dispute Resolution	Contract must stipulate that South African law governs all data (even if hosted offshore), with dispute resolution in SA courts.

24. WHAT MUST HAPPEN IF INFRASTRUCTURE IS OFFSHORE

Area	Requirement
POPIA Compliance	Vendor must prove the host country has equivalent data protection laws (e.g., EU-GDPR), or obtain explicit consent for cross-border transfers.
Contractual Safeguards	Ensure data is not shared without SABS approval, and that offshore hosting meets POPIA & ISO 27001.
Data Encryption	All data must be encrypted end-to-end, with encryption keys managed and controlled by SABS inside South Africa.

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

Data Replication in SA	Even if hosted offshore, vendor must provide a local replicated copy (e.g., reporting database or DR site in SA) to meet sovereignty and continuity requirements.
Audit Rights	SABS must retain the right to audit offshore data centres (directly or via certified third parties).
Latency Mitigation	Vendor must commit to low-latency access (<200ms) and guarantee performance SLAs for SA users.
Exit / Migration Rights	Contract must guarantee that SABS can migrate all data back to South Africa at contract end or on demand.
Legal Jurisdiction & Dispute Resolution	**South African law governs all data** (even if hosted offshore), with dispute resolution in SA courts.

25. ERP LICENCE REQUIREMENTS MATRIX

No	Requirement Area	Description
1	Licence Model Transparency	The service provider must disclose the full licensing model (user-based, concurrent, subscription, perpetual, or hybrid) including modules covered.
2	Licence Type Flexibility	ERP must support named user, concurrent user, and role-based licensing to match SABS's operational structure (e.g., auditors, lab staff, managers).
3	Licence Cost Structure	Vendor must provide a clear cost breakdown by module, user type, and environment (production, test, development). Costs must be PFMA-compliant (CAPEX vs OPEX).
4	Licence Duration	Minimum licence validity of 36 months, aligned with support/maintenance agreements. Longer-term options (5–7 years) must be offered for cost predictability.
5	Scalability of Licences	The service provider must allow scaling up/down of licences (users, modules) without penalty, based on business needs.
6	Licence for Non-Production Environments	Development, testing, training, and DR environments must be covered under non-production licences at reduced/no cost.
7	Licence for External Users	ERP must include licensing provisions for external users (e.g., suppliers, auditors, clients via portals) without requiring full internal licences.
8	Licence Compliance & Audits	Vendor must support annual licence audits and provide a compliance certificate, ensuring no hidden or retrospective costs.
9	Licence Transferability	Licences must be transferable across users (role changes, staff exits) without additional cost.
10	Licence Portability	Vendor must guarantee that licences remain valid if ERP is migrated from one infrastructure to another (on-prem ↔ cloud).
11	Licence Buy-Out Option	SABS must be offered the option to convert subscription licences to perpetual or buy out licences if required for long-term cost efficiency.
12	Licence Consolidation	Multiple ERP modules must be offered in bundled or enterprise licensing packages to reduce overhead.
13	Licence Reporting	Vendor must provide monthly licence usage reports to support cost tracking and internal audit requirements.
14	Licence Lock-In Mitigation	ERP licences must not restrict SABS from changing service providers (support/hosting) during the contract period.
15	Penalties & Escalations	Licence cost escalations must be capped (e.g., CPI-indexed) and included in the contract. No hidden or retrospective charges allowed.

16	Open Standards & Interoperability	Licence terms must not restrict integrations with external systems (CIMS, LIMS, SABStan, CRM).
17	Licence Compliance with PFMA	All licensing models must be compliant with PFMA, with transparent CAPEX/OPEX reporting for NT Treasury.
18	End-of-Contract Provisions	At contract end, vendor must allow read-only access to ERP data for 12 months under a low-cost licence, to support audits and transition.

26. HYPERCARE PERIOD REQUIREMENT

The **Hypercare Period** represents the immediate **stabilisation and post–go-live support phase** that follows system deployment. Its objective is to ensure operational readiness, rapid resolution of post-implementation issues, and full transfer of ownership to business and support teams. The Hypercare period bridges the transition between **Project Mode** and **Operational Support Mode**.

Duration

- The Hypercare Period shall run for **a minimum of three (3) months** following each module's go-live date.
- Duration may be extended (by written agreement) if system stability or performance thresholds have not been met.
- The formal handover to the **Support & Maintenance Phase** occurs only upon **stabilisation acceptance** by SABS.

Category	Description of Activities
4.1 System Stabilisation	- Continuous monitoring of application and integration performance.
	- Immediate remediation of technical or functional defects.
	- Load and performance testing validation.

4.2 Incident Management	- 24/7 availability of functional and technical support team for critical issues.
	- Root cause analysis and resolution within SLA.
	- Daily issue log updates and closure reporting.
4.3 Data Verification & Validation	- Validation of migrated master and transactional data.
	- Correction of data errors identified during live operations.
	- Daily reconciliation of transactions across integrated modules.
4.4 Business Process Support	- On-site/remote support to end-users during go-live.
	- Monitoring of business process execution and approval workflows.
	- Refinement of configuration and forms based on real-use feedback.
4.5 Integration & Interface Monitoring	- Monitoring and troubleshooting of data exchanges between ERP, LIMS, CIMS, MDW, and other systems.
	- Logging and resolution of integration failures.
4.6 Reporting & Dashboards	- Verification of report outputs and KPI dashboards.
	- Correction of data mismatches or formula errors.
	- Testing of scheduled and ad-hoc reports.
4.7 Training Reinforcement	- Conduct refresher and just-in-time training sessions.
	- Address user queries and improve adoption.
	- Update manuals based on user feedback.
4.8 Change Control & Enhancements	- Log and prioritise enhancement requests identified during Hypercare.
	- Submit approved changes through formal change-control process.
	- Update configuration documentation.
4.9 Knowledge Transfer	- Detailed documentation of system configuration and known issues.
	- Handholding of internal SABS support staff (ICT, PMO, Functional teams).
	- Creation of a knowledge base and FAQs.

Performance and Acceptance Criteria

Area	Acceptance Target
System Uptime	≥ 99.5% during Hypercare period.
Critical Incident Resolution	100% of P1/P2 issues resolved within agreed SLA timeframes.
Data Accuracy Validation	≥ 100% reconciliation between source and ERP post-load.
User Adoption Rate	≥ 100% of users actively performing transactions by end of Hypercare.
Knowledge Transfer Completion	100% of support documentation handed over and validated by SABS ICT/PMO.
Final Acceptance	SABS to issue "Stabilisation Sign-Off Certificate" after meeting all targets.

Handover to Support Phase

Formal handover will occur once:

1. All defects and snag list have been cleared.
2. All critical and high-priority incidents (P1/P2) are resolved.
3. Performance KPIs are met or exceeded.
4. Knowledge transfer is completed and validated.
5. All configuration, technical, and functional documentation is stored in the SABS repository.
6. PMO and ICT jointly approve the **Hypercare Closure Certificate**.

Extension Conditions

ERP IMPLIMENTATION REQUIREMENTS SPECIFICATIONS

The Hypercare period may be **extended** by up to 4 additional weeks if:

- There are unresolved P1/P2 defects.
- System performance is unstable.
- User adoption and training gaps persist.

Extension of unresolved issues due to the fault of the service provider will be at the service provider's cost.