



MOBILE TELECOMMUNICATIONS LIMITED

MTC30-18-RFP

REQUEST FOR PROPOSAL (RFP)

**SUPPLY AND MAINTENANCE OF A CONVERGED BSS/OSS [BILLING AND REVENUE
MANAGEMENT, CUSTOMER AND PRODUCT MANAGEMENT, INVENTORY MANAGEMENT,
ESB] SOLUTION**

CLOSING DATE:

SUBMISSIONS OF RFP'S AND QUESTIONS: tenders@mtc.com.na

CONTACT NUMBERS: 0612802134/2019

PART C: BUSINESS REQUIREMENTS

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1. INTRODUCTION

This Request for Proposal (RFP) document outlines the requirements for Mobile Telecommunications Limited (MTC) in looking for a suitably experienced bidder to partner with in its endeavors to transform its business support systems (BSS) and operational support systems (OSS) environment from a transactional to an automated ecosystem. MTC will achieve this by deploying a Converged next generation BSS/OSS system, which is compliant to the TM Forum Framework and Fixed–mobile convergence (FMC).

For MTC an FMC compliant solution would comprise of convergence in the key modules of CRM, Charging, Billing and Product Catalogue.

- CRM: the customer management of both fixed and mobile customers within a single CRM platform; including trouble ticketing, order management and self-care, Point of Sale Module.
- Charging: the online and offline charging of both fixed and mobile services within a single Charging platform; including real-time balance management or credit control, and the ability of sharing free or discount units/resources across fixed and mobile services.
- Billing: the converged billing and discounting of fixed and mobile products and services for the same customer or customer groups, and generating a single FMC invoice.
- Product Catalogue: the single unified platform for the management of all fixed and mobile products and services; bundles or promotions.

2. BACKGROUND

MTC is a Namibian mobile communications operator founded in 1995. It offers general access to mobile network services (voice and data), covering about 95% of the population. There are currently 2.5 million active subscribers on the mobile network. This year, the company announced its venture into “fixed-network” domain with the launch of FTTX and cloud services.

MTC today face an increasingly competitive business environment as the dominant source of ARPU shifts from traditional voice and messaging services into a diverse set of data services. To retain customers MTC needs to offer appealing service portfolio along with transparent subscription management, service quality, availability and pricing. At the same time, it should be able to cut the OPEX going into customer service and systems management, reduce CAPEX and cycles of systems integration, have autonomy, shorter time to market and be truly flexible, agile, and responsive to fast-changing customer profiles. Furthermore, MTC should be able to use the same OSS/BSS infrastructure to manage customers in both the fixed and mobile domains seamlessly.

In order to use the same OSS/BSS infrastructure to manage customers in mobile and fixed domains, evolution from vertical silos to well defined modular, component-based architecture is needed. The new architecture should not re-invent the wheel. Instead, the systems should utilise mature mainstream integration layer, such as

enterprise service bus, and technologies in order to simplify the infrastructure and provide hardware independency.

3. PURPOSE

The purpose of this RFP is to appoint a BSS/OSS vendor or a BSS/OSS system integrator for the supply, delivery, installation, commissioning and acceptance of a set of telecom carrier grade OSS/BSS systems which conform to the TM Forum Framework, to replace the current BSS/OSS systems supplied by Oracle.

MTC's current BSS/OSS environment comprises of the following systems:

1. Oracle Siebel CRM;
2. Oracle Communications Billing and Revenue Management (BRM);
3. Oracle Application Integration Architecture (AIA).
4. Ericsson Mediation(Will not be replaced)
5. Siebel POS (point of sales with webservices interface)
6. Order Orchestration: NBIA/EMA (Ericsson multimedia Activator)
7. Selfcare: iCare webservices enables selfcare setup
8. SIM / Number Management: Ericsson TNM (Will not be replaced)
9. DOC1/E2vault – PDF Invoicing generation, dispatching and invoice archiving
10. DPS - Dealer payment systems.
11. ReceiptIT - FNB webservices enables bank interface.

Some of the benefits desired by MTC and driving the replacement of the current BSS/OSS environment are listed below:

- Be autonomous, not vendor or hardware dependent;
- Be agile, with shorter time to market;
- Shared Information Data across the entire BSS/OSS environment;
- Fully-featured Business Process Management (BPM) engine to control enterprise tasking;
- Fully featured Basic Activity Monitoring (BAM) to monitor enterprise processes;
- Enterprise Service Bus for full vertical and horizontal system/functional Integration;
- Service Oriented Architecture with exposed, open APIs;
- Comprehensive customer intelligence 360° view from a single, intuitive interface;
- Integrated Geographic Information System (GIS);
- Interactive Product Catalogue;
- Resources view to ensure provisioning readiness before order capture;
- Converged offline and Real Time rating for mobile and fixed (Voice, Data, SMS etc.);
- Customer Self Care portal (Fulfillment, Assurance and Billing);

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- Enhanced data billing for Fixed and Mobile Data;
 - Seamless Dealer Portal and Sales Force Management;
 - Resource and Inventory Management;
 - Number portability for the mobile voice services as well as fixed line;
 - Automatic Provisioning of all Network elements.

4. SCOPE OF SERVICES

The scope of this RFP entails the supply, implementation and support of a next generation BSS/OSS solution which will allow MTC to offer both Mobile and Fixed services seamlessly to its customer. The proposed solution is expected to cover the full spectrum of BSS/OSS functional areas to enable an automated end-to-end fulfilment solution in a modern digital service and telecommunication provider.

MTC is aware that a single homogeneous system may not exist with the capabilities to satisfy all requirements, thus challenges Bidders to provide their own choice approaches, ingenuity and unique ideas. More than one option can be provided and Bidders are strongly encouraged to team up with other vendors or system integrator/s who can supply components in areas which are not core business of the bidder. It is however the bidder's responsibility to ensure that in such cases integration is properly done and maintenance of such is the bidder's responsibility.

The following requirements should therefore be addressed to deliver all the required systems and functionality as a single solution:

- Bidders are strongly encouraged to partner with other suppliers for modules/systems which are not part of their solution or are perceived as weak within their solution;
- Where a Bidder cannot provide functionalities/requirements as stipulated by in this document, they must propose alternative or better ways of achieving the functionality/requirement;
- Bidders must indicate licensing and system requirements for each of the modules/systems as well as costing information;
- Indicate how integration will be done to provide MTC with a robust BSS/OSS solution via the Enterprise Service Bus (ESB);
- Indicate supplier/partner of the modules/systems which are not the bidder's in-house module;
- Indicate roadmap and upgrades of all modules/systems.

MTC would like to embrace the next generation of BSS/OSS systems that will support future services, technologies, payment options and changing customer demands. Emphasis is placed on following key modules as detailed by the Business Process Framework (eTOM) and identified by TM Forum Applications Framework (TAM):

- Market / Sales Management;
- Product Management;
- Customer Management;

- Service Management;
- Resource Management;
- Supplier/Partner;
- Application Integration Infrastructure.

Strong emphasis is placed on application integration layer (ESB) to ensure seamless integration of various systems via open, reusable interfaces. Business Process Management and Business Activity Monitoring engines are sought as key components of the ESB.

Customer facing application must offer a seamlessly web-based interaction with Customer Service Representative, Call Center Agents and MTC customers, both Residentials and Cooperate.

4.1 CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

CRM encompasses the end to end lifecycle of the customer, from customer initiation/acquisition, sales, ordering and service activation, customer care and support, proactive campaigns, cross sell/up sell and retention/loyalty.

The customer may represent an end-customer or a wholesale customer that resells the product provided, generally with some added value. The customer may also be a corporate customer that potentially has many contact people, departments, sites, services and billing accounts with MTC.

Each bidder must indicate what systems or modules they will use to support the following mandatory applications:

- Customer Information Management
- Transactional Document Production
- Customer & Network Care
- Customer Insight Management
- Customer Self-Management
- Customer Service Representative Toolbox
- Customer Loyalty Management
- Customer Order Management
- Customer SLA Management
- Customer Problem Management
- Case Management
- Collection Management
- Receivables Management
- Charge Calculation and Balance Management

4.2 CUSTOMER EXPERIENCE MANAGEMENT (CEM)

CEM needs to involve all the touch points and channels to the customer, including contact center, retail stores, dealers, self-service, and field service, as well as via any media (phone, face to face, web, mobile device, Chat, Email, SMS, mail, the customer's bill, etc.).

MTC requires a CEM system to leverage real-time analytics to track and manage not just the customer's journey but also their experience across myriad sales channels.

The CEM platform must include the following:

- An engagement platform comprising a customer portal and digital marketing platform;
- Integration to CRM;
- Voice of Customer (VOC) insight;
- Net Promoter Score;
- Customer metrics;
- Survey development;
- Markets/Customer segmentation;
- Customer Touch Points;
- Customer Journey Maps;
- Integration with social media, computer telephony integration (CTI) and line of business (LoB) applications.

4.3 BILLING & RATING

Each vendor must indicate what systems or modules they will use to support the following mandatory business functions:

- System should support all the telecommunication technologies (2G, 3G, 4G, 5G, IMS and latest technologies);
- System should support all CSP (communication service provider) mobile, fixed-line, broadband, TV provider, content provider, IoT (Internet of Things) and OTT (Over the Top), Cloud;
- System should be very user friendly, scalable and highly configurable;
- Real time Promotion, discount and Campaign Management;
- System should be open interface for 3rd party integrators;
- System should have smart revenue solutions;
- High configurable Financing Reports and Financial Analysis;
- Number portability between Namibian operators features (fixed and mobile);
- Cyclic, Hot, Wholesale Billing, Split Billing and Milestone billing;
- Roll back process in Billing.
- Billing Inquiry, Dispute & Adjustment Management
- Billing Event Management
- Billing Account Management
- Bill Calculation
- Invoicing, Credit and Debit Notes
- Journalization of financial transactions and General Ledger integration
- Collections and Promise to Pay Management
- Roaming & NRTRDE Management
- Product/Service Rating
- Tax calculation
- Offline/Online Charging System

4.3.1 Specific/Special Billing Requirements

MTC requires a Fully Convergent Billing system/solution.

The converged billing platform is required to have interfaces with the Mobile, Fixed networks and IMS for enablement of call/session-control.

- **Electronic bill presentation (e- bill)**

MTC requires the capability to send out e-bills over and above the current paper-based format. This will form part of customer self-care and will reduce printing and distribution costs.

- **Quality Assurance bill run**

To provide an audit of the bill runs. The process could be executed for an entire bill cycle or to test a sample of customer invoices.

- **Payment Gateway**

The system should be able to handle customer payments made at 3rd parties e.g. Banks. A payment gateway for such transactions would enable seamless integration with a variety of 3rd party payment points

- **Import Payments**

The system should be able to import/load payments via batch files (for example to allow/enable the direct debit payment method).

- **Balance Management**

Rating platform should be able to track usage and trigger alarms at flexibly defined intervals/thresholds to notify the subscriber. At defined limits the customer must be automatically prevented from using the service unless they top up

- **Bill on Demand (hot billing)**

System must have capability to produce an up-to-date bill on demand e.g. when a customer wants to terminate their contract

- **Consolidations, Hold back and Invoice Suppression**

The system should be able to support the hold back of customer invoices (the invoices are generated but not sent to the customers) and the invoice suppression (to exclude customers from a bill run).

In addition, the system must support the consolidation of invoices (e.g. in case the amount of the invoice is too small).

- **Entitlements and Free units**

The system should be able to manage the allotment of free units such as time, bandwidth or money.

- **Flexible discount wizard**

The billing platform should be able to cater for complex scenarios such as applying multiple discounts on a single billing event, depending on defined thresholds.

Real-time rating & discounting - application of call discounts and bonus calculations at rating time rather than at billing time.

All functionality available for Prepaid subscribers should be available for Postpaid subscribers for both Fixed and Mobile Networks.

- **Billing of Partially Completed Order**

The Billing Platform should support billing of partially completed orders, example: Customer orders 100 V-SAT sites. If only 50 sites are active at billing time, then billing can start for those 50. Remaining sites will be billed as they are activated.

- **Support Milestone Payments**

The Billing Platform should support advanced Workflow tools that allows the management of some project milestones (acceptance, PO, etc.) that affect milestone payments.

- **Multi-Tenancy**

Multi-tenancy in case MTC would like to expand into being MVNE or even act as a biller for companies in other verticals.

4.4 **MARKETING & SALES MANAGEMENT DOMAIN**

The Market/Sales Domain includes data and contract operations that support the sales and marketing activities needed to gain business from customers and potential customers. On the Sales side, this includes sales contacts/leads/prospects through to the sales-force and sales statistics. Market includes market strategy and plans, market segments, competitors and their products, through to campaign formulation.

Each bidder must indicate sub modules under following main functions:

- Campaign & Funnel Management
- Compensation & Results
- Sales Account Management
- Sales Aids
- Sales & Marketing Reporting

- Channel Sales Management
- Solution Management
- Contract Management
- Sales Portals

4.5 PRODUCT MANAGEMENT DOMAIN

MTC Product Management is about identifying what products to sell, what they are comprised of, who they are sold to, how they are sold, supported and serviced, how they perform in the market and how they are managed through to retirement. MTC products are not always discrete or a single item. Hence a product can be a number of components associated together and sold as a single purchasable entity. Bidder must make sure a user is able to build their own product suite from available services at ad-hoc, or on request, with little or no limitations.

Each bidder must indicate what systems or modules they will use to support the following mandatory functions:

- Product Strategy / Proposition Management
- Product Catalogue Management
- Product Lifecycle Management
- Product Performance Management

4.6 SERVICE MANAGEMENT DOMAIN

This group of applications must support MTC to focus on service delivery and management as opposed to the management of the underlying network and information technology.

The functions listed below must be closely connected to the day-to-day customer experience and should involve short-term service capacity planning; the application of a service design to specific customers or managing service improvement initiatives:

- Service Catalog Management
- Service Inventory Management
- Service Test Management
- Service Order Management
- Service Problem Management
- Service Quality Management
- Service Performance Management

4.7 RESOURCE MANAGEMENT DOMAIN

In a digital service world, application and computing management are as important as management of the network resources. Moreover, network, computing and applications resources must increasingly be orchestrated and managed in an integrated fashion. To cope with these needs, the eTOM framework includes the Resource Management & Operations process grouping (together with the corresponding Resource Development &

Management grouping within SIP), to provide integrated management across these three sets of resources: applications, computing and network.

The bidder must indicate which systems/module they will use to help MTC manage its complete network, subnetwork and information technology infrastructures with the following modules:

- Resource Lifecycle Management
- Resource Test Management
- Resource Process Management
- Resource Inventory Management
- Workforce Management
- Location Management
- Network Number Inventory Management
- Resource Domain Management
- Resource Order Management
- Resource Performance Management
- Fault Management
- Usage Management

4.8 ENTERPRISE SERVICE BUS (ESB)

MTC is looking at deploying a SOA Integration Bus that supports intelligent routing of information between business components distributed across a network. The platform is expected to support both requests and replies, as well as event-driven interactions between business components on a single technology base with a shared component model and common tools for design, development, deployment, security and administration.

Business requirements:

- Invocation: Support for Synchronous and asynchronous transport protocols;
- Intelligent event processing: Event interpretation, correlation, pattern matching;
- Routing: Addressability, static/deterministic routing, content-based routing, rules-based routing, policy-based routing;
- Mediation: Adapter, protocol transformation, service mapping
- Messaging: Message processing, message transformation and message enhancement;
- Management: Business Process Management and Business Activity Monitoring, audit, logging, metering, admin console;
- Other quality of Service: Security, encryption and signing, reliable delivery, transaction management.

5. SUPPORT AND SERVICES

The bidder must provide knowledge transfer plan, support and maintenance matrix, which indicate roles and responsibility between MTC and the vendor.

5.1 SOFTWARE

- 5.1.1 The solution must be able to run on Huawei fusion cloud platform;
- 5.1.2 Bidder must provide a Framework Product Conformance Certification Report CRM, BRM and ESB;
- 5.1.3 Indicate roadmap and evolution of all modules/systems.

5.2 DATA CLEANSING AND MIGRATION

- 5.2.1 MTC consents that existing data will require extensive cleanup before or during the migration process and understands the importance of Data Quality Assurance. The scope of information includes, (1) Business, (2) Systems and (3) Network information.
- 5.2.2 The bidder is required to provide the data migration plan (CRM and BRM) and the costing thereof.
- 5.2.3 MTC requires bidder to ensure that migration is completed 100% by delivering migration assurance reports.

5.3 SYSTEMS AND PROJECT DOCUMENTATION

- 5.3.1 MTC requires bidder to provide online system documentations; user manuals/guides with descriptions of functions and feature; glossary of system terms and terminology etc.
- 5.3.2 The bidder must provide the implementation and project plan

5.4 TRAINING

- 5.4.1 MTC require two set of training, namely, additionally to what the vendor/partner might propose:
 - A. Training before implementation on the system setup, configurations and maintenance;
 - B. Training after implementation on how to use the system.

5.5 EXISTING SYSTEMS TO BE INTEGRATED

- 5.5.1 Integration into Call Centre for CTI;
- 5.5.2 Integration into the Enterprise Data Warehouse and Business Intelligence;
- 5.5.3 Integration into HR Management;
- 5.5.4 Integration into Financial, Interconnect, Revenue and Fraud Detection Systems;
- 5.5.5 Integration to all 3rd Parties (Banks, Credit Bureaus, Content Providers, ERP Systems).
- 5.5.6 Integration into GSM Core Network (NSS)/IMS
- 5.5.7 Huawei ManageOne
- 5.5.8 Ericsson Online Charging System (OCS)
- 5.5.9 Clearing house: Comfone Clearing house with TAP 3.11
- 5.5.10 ERP: IFS ERP with webservices for integration
- 5.5.11 Bank Interface: FNB webservices enables bank interface
- 5.5.12 Kiosk: Inhouse Application based on Xml and webservices to integrate Self-service Kiosks.
- 5.5.13 Commissioning: IFS module for dealer commissioning
- 5.5.14 Microsoft AD (Single Sign On - LDAP)
- 5.5.15 Content Provider Interfaces: Hive
- 5.5.16 Inventory System: IFS module for inventory management
- 5.5.17 EDW System: RYFT and Big Data
- 5.5.18 CRS
- 5.5.19 Interconnect System: T.One

5.6 LICENSING

- 5.6.1 The bidder must indicate the licensing model/regime pertaining to systems, users, services/customers, integration, etc. and frequency of the licenses i.e. Monthly, Annually, Once off.

5.7 TOTAL COST OF OWNERSHIP

- 5.7.1 Bidders should clearly indicate solution total cost of ownership over a Five (5) Year period.

6. APPENDIX 1: SOLUTION GUIDELINE

Below is the Architecture Guide for the required OSS/BSS solution

6.1 CURRENT BSS ARCHITECTURE

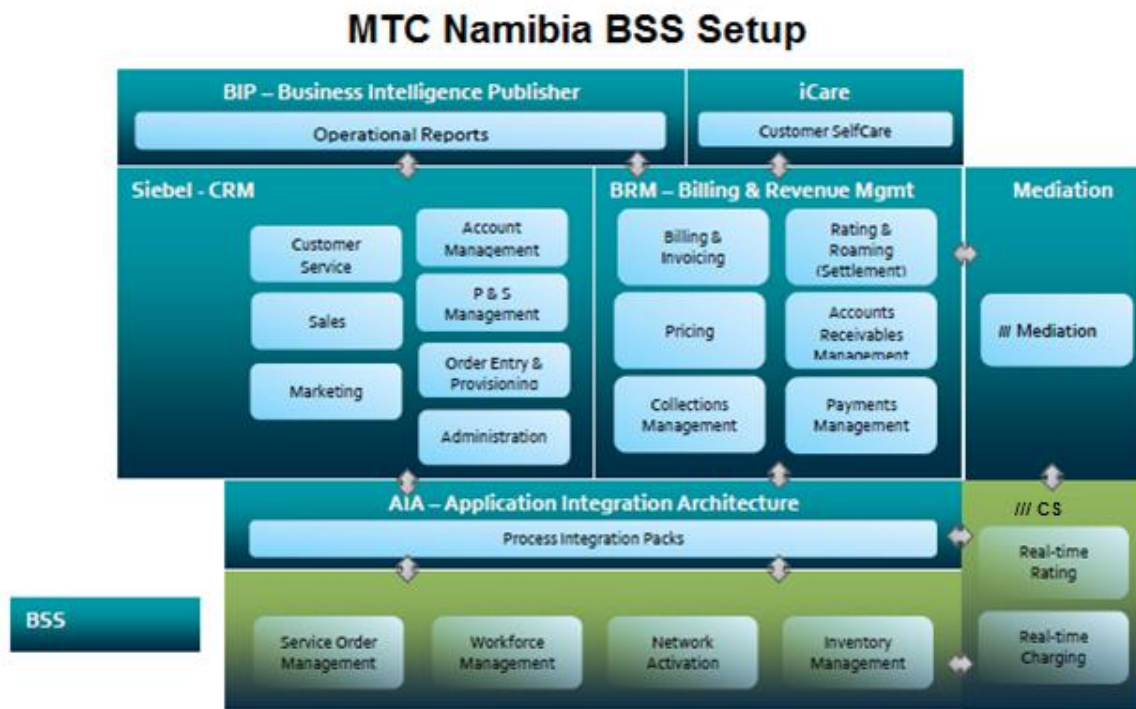


Figure 1: Current BSS Architecture

6.2 ENTERPRISE SERVICE BUS

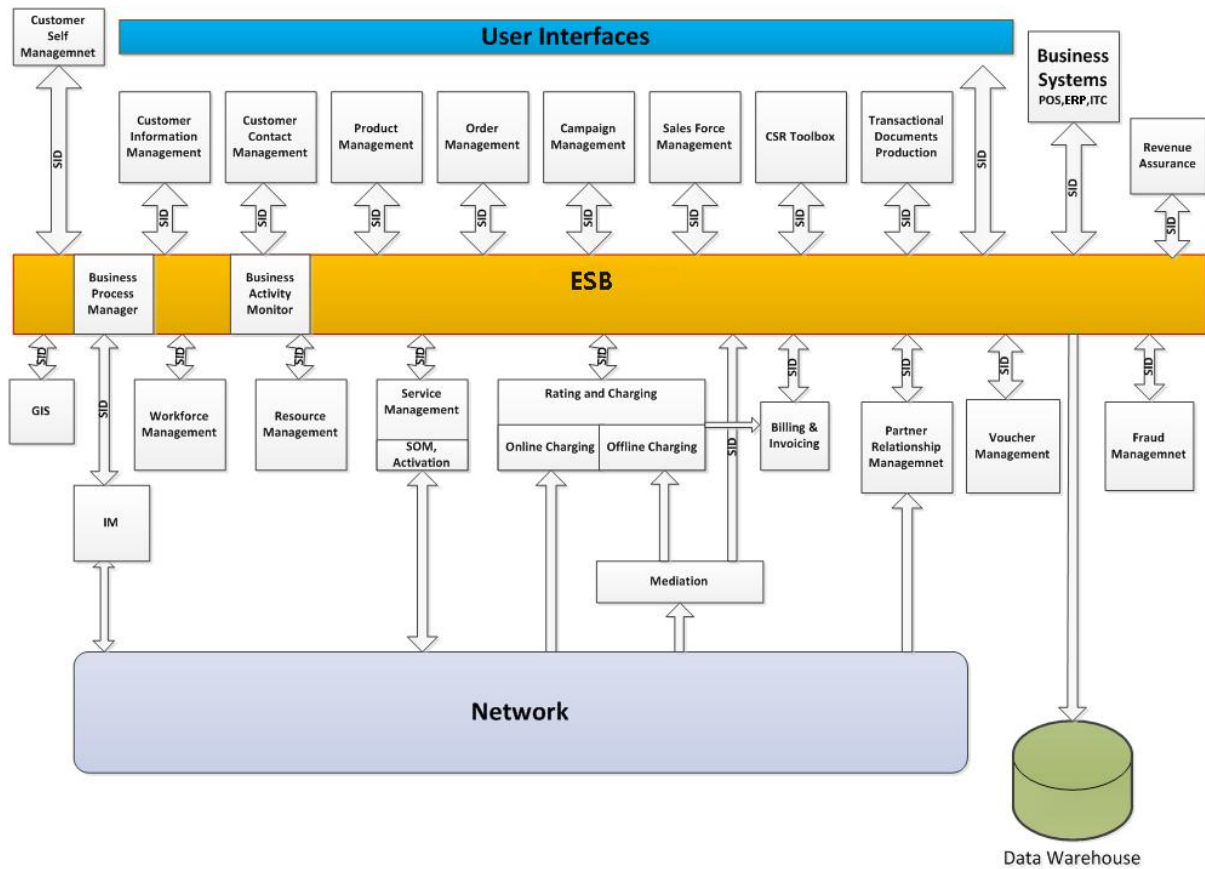


Figure 2: Integration Bus

NB: All systems in the OSS/BSS landscape are required to have Open and Reusable Interfaces published to the middleware.