Enterprise Architecture and Governance Report

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Executive Summary

This report outlines all the work that has been done in the last three (3) months at Seda on the Enterprise Architecture and Governance Project. The project was broken into five (5) phases. Where Phase I was the creating the base line of what was currently in place. Phase II was collecting of Information and Needs analysis from the all the Business Units. Phase III was the development of the To-Be within each of the architectural domains, i.e. Business Architecture, Information Systems Architecture and Technology Architecture. Phase IV was the identification of Gaps between the As-Is and the To-Be scenarios. Phase V was the development of Roadmaps to overcome the Gaps identified.

Enterprise State
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Document Purpose

The main purpose of this document is to:

 ✓ Outline the deliverables completed
 ✓ Give recommendations on the EA implementation
 ✓ Outline the EA approach

Stakeholders

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<tr>
<td>Small Enterprise Development Corporation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Team Members</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.M.Veeraragallo</td>
<td><a href="mailto:MVeeraragallo@rgbs.co.za">MVeeraragallo@rgbs.co.za</a></td>
<td>Enterprise Architect</td>
</tr>
<tr>
<td>Kgaugelo Phochana</td>
<td><a href="mailto:KPhochana@seda.org.za">KPhochana@seda.org.za</a></td>
<td>Business Analyst</td>
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Acronyms and Abbreviations

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<td>GWEA</td>
<td>Government Wide Enterprise Architecture</td>
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Governance and Standards

1. **Project Standards**
   Best Practice as defined by TOGAF 9

2. **Applicable Policies**
   Project Policies for PMBOK and Prince II

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<td>Kgaugelo Phochana</td>
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1. THE ROAD TO ENTERPRISE ARCHITECTURE

1.1. INTRODUCTION

Enterprise Architecture is not just about the enterprise in general terms. It is also about the relationship between the organization and the IT functions that support the business. Without an Enterprise Architecture, it is impossible to understand fully how a large organization works. Enterprise Architecture is about understanding all of the different elements that make up the enterprise and how those elements inter-relate.

1.1.1. BACKGROUND

There are two truisms that exist at the heart of Enterprise Architecture. The first is that if you don't know where you are then a map won't be of any use, while the second is that if you don't know where you are going then any road will do. Enterprise Architecture aims to identify where you are now and, once you know where you want to go, which road to take. In other words, Enterprise Architectures are first and foremost about managing and enabling change.

1.2. THE ELEMENTS OF ENTERPRISE ARCHITECTURE

A high-level view of the different elements that make up an Enterprise Architecture will be outlined. At a high level they consist usually of either Frameworks or so-called Architectural Styles, while at a lower level, all architectural approaches are based on models.

1.2.1. FRAMEWORKS

The most common method of creating an Enterprise Architecture is to use a framework that can be used to break down and categories the various parts of the architecture. The idea behind the framework approach is to focus on particular design criteria while retaining the overall context within which the object is being created. This retention of context is critical.

1.2.2. ARCHITECTURE STYLE

Architectural Style is an approach adopted to resolve a particular business issue using modelling tools and different technologies. The Architectural Style is not only the need to model business processes and strategy on the one hand, and IT processes and strategy on the other, but that these models should be converged (as opposed to diverged) so that they act in synchronicity and do not impede business change. The Architectural Style is not defined in terms of a framework it nevertheless has many similarities to it and, indeed, supports its underlying concepts.

1.2.3. MODELS

All approaches to Enterprise Architecture use models. Why? The most obvious reason is because models make things easier to understand. It is certainly true that it is much easier to understand a pictorial representation that depicts a number of objects and their relationships, than it is when these are described in words. In particular, an Enterprise Architecture encompasses both the IT and business functions of an organization. Often the personnel on either half of this divide do not understand each other’s realms and terminology as well as they might - a picture can go a long way towards bridging any differences that may exist.
1.3. **The Importance of Enterprise Architecture**

There are a number of advantages that can be identified as a result of the implementation of an Enterprise Architecture and can broadly be split between those benefits that are applicable across the business in general, and those that are specific to the IT systems that support the business.

### 1.3.1. General Business Benefits

The impact of staff turnover is reduced - this is because the Enterprise Architecture acts as a resource for all employees to understand how the organization operates, thereby reducing induction times.

Improved decision making - because the whole enterprise is understood in a much clearer way, business decisions can now be made in context where previously they were often made in isolation, or not at all, since the information was often just not available.

The business can change faster - currently, organizations are constrained in the speed with which change can be adopted, whether that be in the adoption of new sales channels, acquisition of other companies or corporate restructuring, because the IT systems need to keep pace with those changes. By using Enterprise Architecture those systems are more closely aligned to business strategies and are therefore better placed to respond more quickly to change. Furthermore, they are structured with clean, well-understood interfaces and are thus amenable to change and refactoring with minimal impact.

The identification and use of hidden assets - it is often the case that the process of creating an Enterprise Architecture unearths hidden corporate assets that are not being fully (or at all) exploited. This can apply both within the IT department and in more general business areas.

Improved operating procedures - because building an Enterprise Architecture involves modelling the organization’s business processes, this provides the opportunity to re-evaluate those processes and improve them.

The removal of redundancy - while this is a major issue for the IT department the Enterprise Architecture will also identify redundancy within general business areas. For example, different departments might be developing products with overlapping capabilities, or the same expertise is being developed in different areas, which could be more cost effectively merged.

The process of creating an Enterprise Architecture is, in itself, beneficial. Personnel from both business and IT functions must be involved in the process of establishing the relevant models that describe the organization. The discussions involved in such a process will encourage greater understanding of the business by IT personnel and vice versa.

### 1.3.2. IT Specific Benefits

Both redundant processes and redundant data can have a significant impact on IT performance and costs. The former means additional maintenance while the latter needs additional hardware. Both of these represent direct costs that can be substantially reduced by the identification and removal of unnecessary redundancy.
Reduced development lifecycles - because enterprise architecture implies impact analysis across the entire enterprise spectrum, identifying every resource that will be affected by any new development, this automatic discovery should help to reduce development times and improve productivity.

Improved quality - cross-enterprise impact analysis should also favourably affect system quality, because there is less likelihood of errors, thanks to the fact that all new developments, and updates, are undertaken within the enterprise context.

Reduced maintenance - impact analysis will also directly affect maintenance, for the same reason.

Applications that meet business needs – because of the alignment of IT with the business.

1.4. ARCHITECTURE CAPABILITY FRAMEWORK

As with any business capability, the establishment of an enterprise architecture capability can be supported by the TOGAF Architecture Development Method (ADM). Successful use of the ADM will provide a customer-focused, value-adding, and sustainable architecture practice that enables the business, helps maximize the value of investments, and pro-actively identifies opportunities to gain business benefits and manage risk. (see, Figure 1 below)
1.5. **CLASSES OF ENTERPRISE ARCHITECTURE ENGAGEMENT**

The engagement for enterprise architecture will achieve various results within each organisation. These activities for the engagement are outlined in Figure 2 below.

![Figure 2 - Classes of Enterprise Architecture Engagement](image)

**Architecture activities that support the identification of a need to change.**

**Architecture activities that support the definition of how change can be achieved.**

**Architecture activities that govern the implementation of change.**

1.6. **ARCHITECTURE PARTITIONING**

Architectures are functionally decomposed into a hierarchy of specific subject areas or segments.
Level of Detail:
- With broader subject areas, less detail is needed to ensure that the architecture has a manageable size and complexity. More specific subject matter areas will generally permit (and require) more detailed architectures.

Time Period:
- For a specific subject matter and level of detail an enterprise can create a Baseline Architecture and a set of Target Architectures that stretch into the future. Broader and less detailed architectures will generally be valid for longer periods of time and can provide a vision for the enterprise that stretches further into the future.

Viewpoint:
- For a particular subject area, level of detail, and time period the stakeholders for architecture will have requirements to see architectures that address particular issues or viewpoints.

Accuracy:
- Finally, each architecture view will progress through a development cycle where it increases in accuracy until finally approved. After approval, an architecture will begin to decrease in accuracy if not actively maintained. In some cases recency may be used as an organizing factor for historic architectures.

Figure 4 - Architecture Partitioning
2. ENTERPRISE ARCHITECTURE ENGAGEMENT

2.1. INTRODUCTION

The Project Approach will be utilising the TOGAF 9 as a Methodology and refer to Zachman Framework for additional guidance which will align with the Government Wide Enterprise Architecture (GWEA). Firstly the methodology needs to be outlined ensuring the reader has a full view of what will be done and the different deliverables. The project approach is graphically depicted below in

![Figure 5 - EA Approach](image)

2.2. PROJECT PHASES

The project was divided into five (5) phases where each phase had a different set of deliverables. The phases and there deliverables are outlined below.

2.2.1. PHASE I

The objective for this phase was to establish baseline architecture based on the current state of the organisation. The activity and its deliverables are outlined in the table 1 below.

Within this phase each of the architectural domains was analysed to create the baseline for each of these domains. The organisational strategy and divisional strategies and business plans were also reviewed to ensure what the organisation
wants to achieve from a strategic perspective and how Enterprise Architecture can assist in achieving these strategic objectives.

Table 1 - Phase I Activities and Deliverables

<table>
<thead>
<tr>
<th>Objective</th>
<th>Key Activity</th>
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<td>Analyse Business Environment</td>
<td>1. Analyse Technological Environment</td>
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<tr>
<td>Analyse Information Management Environment</td>
<td>1. Analyse Current Applications and Databases</td>
<td>Application Matrix Compiled Data Stores</td>
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<tr>
<td>Analyse Technological Environment</td>
<td>1. Analyse current Technological Environment</td>
<td>Compiled Technological Environment</td>
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2.2.2. PHASE II

Within this phase the objective was to determine what are the future needs and requirements of the different business units and how all this links together with the implementation of Enterprise Architecture. This phase forms part of the input to the To-Be Architecture.

Table 2 - Phase II Activities and Deliverables

<table>
<thead>
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<td>Review current Enterprise State</td>
<td>1. Interview with all Business Units on main functions</td>
<td>Compiled Business Requirements Document</td>
</tr>
<tr>
<td>Analyse current and Planned Systems</td>
<td>1. Interview with all Business Units within Divisions</td>
<td>Compiled Business Requirements Document</td>
</tr>
<tr>
<td>Analyse Best Practice and Trend Analysis</td>
<td>1. ICT Governance</td>
<td>ICT Governance Draft – use of Calder-Moir</td>
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2.2.3. PHASE III

Phase III is where the To-Be Analysis is done based on the inputs gathered from the previous two phases. Within this phase the Enterprise Charter and Principles are also developed guiding the overall architecture work that needs to be done as indicated within TOGAF 9 and GWEA. The To-Be modelling was done in Archimate developing the various viewpoints as defined by Archimate 1.0 published by the Open Group. The Viewpoints were developed for each of the architectural domains inclusive of the Layered Viewpoints.

The Viewpoints allows for specific views of the organisation and the layered views outlines the overall view and interrelationship of the architectural domains inclusive of the Business, Information Systems and Technologies employed within the organisation.
Table 3 - Phase III Activities and Deliverables

<table>
<thead>
<tr>
<th>Objective</th>
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2.2.4. Phase IV

Phase IV was where the Gap Analysis was done, i.e. to identify the gaps between the current baseline and the To-Be scenario. The gap analysis assist in identifying what Business requires going forward and what is currently in place. The Gaps cannot immediately be remedied so an approach needs to be developed to overcome and narrow the gaps in planned and systematic way ensuring optimal use of architecture. The approach to narrow the gaps will be done in Phase V where roadmaps will be developed and prioritised to ensure the most critical and fundamental projects are addressed.

Table 4 - Phase IV Activities and Deliverables

<table>
<thead>
<tr>
<th>Objective</th>
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<tr>
<td>Gap Analysis – Information</td>
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<td>Information Systems Gap Analysis, Generic Architectures, Generic Solution Architectures</td>
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<td>Gap Analysis – Technology</td>
<td>1. Identify Gap Analysis</td>
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2.2.5. PHASE V

Phase V was where the roadmaps were developed to ensure the gaps are narrowed and closed. These Roadmaps are prioritised according to the organisational strategy deliverables and business requirements and needs in assisting with performance improvement and service delivery.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Key Activity</th>
<th>Deliverable</th>
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<tbody>
<tr>
<td>Roadmap Approach</td>
<td>1. Develop Roadmaps with Priority</td>
<td>Roadmaps Integration Solution</td>
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3. ENTERPRISE STATE

3.1. INTRODUCTION

The Enterprise State is the current As-Is analysis of the organisation. An outline of the current state will be briefly discussed as it relates to the Enterprise Architecture Domains. The corporate strategy of Seda and all the divisional strategies and business plans were reviewed. This was done to identify what was planned and what has been deployed from a strategic perspective. The information was collated and Value Proposition Models were developed to get a clear sense of services are offered.

3.2. SEDA STRATEGIC OBJECTIVES

Seda Strategic objectives are classified into three (3) areas as indicated in Figure 6 below.

![Figure 6 – Seda Strategic Objectives](image)

Performance in carrying out the strategic objectives are measured on a scorecard that looks at performance from four perspectives:

1. **Client perspective**
   
   To achieve our Vision, we must appear to our customers as the provider of quality services which will bring about an improvement in their businesses.

2. **Financial Perspective**
   
   To succeed financially, we must appear to our shareholder as an organization that brings in the required return on investment and uses the funds with efficiency and efficacy.

3. **Internal Business Processes Perspective**
To satisfy our shareholder and customers, we must excel at our key business processes, including financial management, risk management, and monitoring and evaluation.

4. Learning and Growth Perspective
   To achieve our Vision, we must sustain our ability to change and improve as an organization through consistently enhancing the knowledge and expertise of our staff and management.

Each of the Strategic Objectives and the Strategic Perspectives have defined Key Performance Indicators and defined deliverables. This can further be read in the Seda Strategic Plan.

3.2.1. ICT STRATEGIC OBJECTIVES

The strategic deliverables of the ICT Business Unit is outlined below as well to give an indication of what was planned.
1. To develop business requirements to a sufficient level to determine which IT initiatives should be implemented by Seda over the next 1 to 3 years
2. Analyze the existing systems, IT infrastructure and business processes
3. Assess the current business processes and procedures to assess effectiveness of IT enablement of the business processes
4. To determine which IT systems should be implemented to enable the business process of Seda relating to the Network Operations and Products and Services business focus areas, aligned with the approved business strategy of Seda
5. To highlight risks which were identified during the assessment
6. Development and documentation of the High Level Business Requirements Definition and Information Systems Plan
7. Development and documentation of recommendations regarding the future enterprise architecture i.e. business processes, information, applications, technology and Information Systems (IS) and Information Technology (IT) processes
8. Development of governance model

3.2.2. COOPS AND CPPP STRATEGIC OBJECTIVES

The Cooperatives and CPPP (Coops and CPPP) Programme is a newly formed programme that combines the previous Sector Development and Cooperatives Programme with the revived Community Public Private Partnerships Programme.

1. Objective 1
   Mobilise communities in order to facilitate the development of collectively owned enterprises that lend themselves to partnerships, mainstream possibilities and value chain development in sectors such as agro-processing, community tourism, aquaculture, mining and minerals and trading and auxiliary.

2. Objective 2
   Identify markets, resources, technical assistance and capacity building opportunities in the market to enhance competitiveness and sustainability of enterprises.

3. Objective 3
   Promote the use of industry tools and models that enhance efficiency and planning, implementation, monitoring and evaluation of staff and projects.

4. Objective 4
   Develop, strengthen and support targeted collectively owned enterprises.

The programme offers the following interventions:
a) Establishment of partnership with public private sector
b) Capacity building for coops formed
c) Sector and/or project focused feasibility studies
d) Link coops with the Cooperatives Incentives Scheme (CIS) for infrastructure rehabilitation
e) Identify appropriate value chain for product development
f) Exposure to local and international market
g) Conduct sector related market studies
h) Conducting social and skills scoping of coops supported
i) Develop sector/project based bankable business plans
j) Leverage funding for coops and community based projects

3.2.3. EDD STRATEGIC OBJECTIVES

The Enterprise Development Divisions Strategic objectives are outlined below.

1. Objective 1
Enhance competitiveness and capabilities of small enterprises through coordinated services, programmes and products

   a. Expected Outcome
      i. Client Satisfaction Ensured
      ii. Client business performance improved
      iii. Cost ratio per client assisted optimized
      iv. Client business needs properly understood
      v. Efficient service delivery processes ensured
      vi. Capability of Seda staff to provide quality service enhanced

2. Objective 2
Ensure equitable access for small enterprises to business support services through partnerships

   a. Expected Outcome
      i. Client reach improved
      ii. Client retention improved
      iii. Equity ensured
      iv. Cost sharing with delivery partners increased
      v. Effective management of business development services providers ensured
      vi. Cooperation with service delivery partners increased

3.2.4. FINANCE STRATEGIC OBJECTIVES

The Enterprise Development Divisions Strategic objectives are outlined below.

1. Objective 1
Strengthen the organization to deliver on its mission

   a. Expected Outcome
      i. Cost efficiency improved
      ii. Support systems improved

3.2.5. SCM STRATEGIC OBJECTIVES

Supply Chain Management strives to strengthen the organisation to deliver on its mandate by providing support in the acquisition of goods and services through:

1. Developing and implementing policies, processes and procedures that are effective, efficient and cost effective;
2. The continuous improvement of the procurement processes to reduce Turn-
   Around-Time;
3. Ensuring compliance to SCM policy and legislation;
4. Alignment of SCM policies, processes and procedures to legislative requirements:
   a. PFMA
   b. PPFA
   c. BBBEE
   d. National Treasury Regulations
5. Management and Maintenance of National Supplier Database, PFMA, PPPFA,
   BBBEE, National Treasury Regulations.

3.2.6. **HUMAN RESOURCES STRATEGIC OBJECTIVES**
The HR's Strategic objectives and outcomes are outlined below.

**1. Objective 1**
Strengthen the organization to deliver on its mission
   a. **Expected Outcome**
      i. Employees more satisfied
      ii. Competence of management and staff enhanced
      iii. Result oriented culture instilled
      iv. Staff equity ensured

3.2.7. **CORPORATE SERVICES STRATEGIC OBJECTIVES**
The HR's Strategic objectives and outcomes are outlined below.

**1. Objective 1**
Enhance competitiveness and capabilities of small enterprises through coordinated
services, programmes and products
   a. **Expected Outcome**
      i. Client Satisfaction Ensured

**2. Objective 2**
Ensure equitable access for small enterprises to business support services through
partnerships
   a. **Expected Outcome**
      i. Client reach improved
      ii. Equity ensured

**3. Objective 3**
Ensure equitable access for small enterprises to business support services through
partnerships
   a. **Expected Outcome**
      i. Seda image improved
      ii. Support systems improved
      iii. Employees more satisfied

3.2.8. **STP STRATEGIC OBJECTIVES**
The primary objectives of the Seda Technology Programme are:

1. To promote the establishment and development of sustainable, innovative
technology-based platforms that will contribute to the country’s economic
growth
2. To create and support best practices in the development of technology–based
   platforms for creating and supporting small enterprises throughout Africa
3. To promote, enhance and maintain Quality Standards, Products and Systems for developing the competitiveness of South African firms
4. To support the growth and development of women-owned enterprises through the various platforms and structures
5. To promote a unique team culture based on passion, integrity and reliability, to deliver on government’s mandate to stimulate economic growth in the economy

3.3. **VALUE PROPOSITION MODELS**

The Value Proposition Models were created for each division within Seda, based on the information provided as at the current state.

3.3.1. **SEDA VALUE PROPOSITION MODEL**

The Value Proposition Model for the overall Seda is depicted below in Figure 7. This is the VPM showing the Value delivered by the overall organisation.

![Figure 7 - Seda Value Proposition Model](image)
3.3.2. OCEO VALUE PROPOSITION MODEL

The OCEO’s Value Proposition Model only consists of the Value offered by the Business Units within the Office of the Chief Executive Officer.

![OCEO Value Proposition Model](image)

3.3.3. FINANCE VALUE PROPOSITION MODEL

The Finance Value Proposition Model is the Value offered only by the Business Units within the Finance Division.

![Finance Value Proposition Model](image)
3.3.4. **CORPORATE SERVICES VALUE PROPOSITION MODEL**

The Corporate Services Value Proposition Model is the Value offered by the Business Units within this division.

![Figure 10 - Corporate Services Value Proposition Model](image)

3.3.5. **HUMAN RESOURCES VALUE PROPOSITION MODEL**

The Human Resources Value Proposition Model is the Value offered by the Business Units within this Division.

![Figure 11 - Human Resources Value Proposition Model](image)
3.3.6. **ENTERPRISE DEVELOPMENT VALUE PROPOSITION MODEL**

The Enterprise Development Value Proposition Model is the Value delivered by the Business Units within this Division.

![Enterprise Development Value Proposition Model](image)

**Figure 12 - Enterprise Development Value Proposition Model**

3.3.7. **SEDA TECHNOLOGY PROGRAMME VALUE PROPOSITION MODEL**

The Seda Technology Programme Value Proposition Model is the Value delivered by the Business Units within this Division.

![STP Value Proposition Model](image)

**Figure 13 - STP Value Proposition Model**
4. INFORMATION REQUIREMENTS

4.1. INTRODUCTION

The Information Requirements was the gathering of Information from the Business Units, looking at their planned systems, and Best Practice as it would impact on the future state architecture.

4.2. ENTERPRISE ARCHITECTURE CHARTER

An Enterprise Architecture Charter was developed to guide the overall architecture roles and responsibilities within Seda. This charter is awaiting approval from the Executive Committee, as it is imperative for the Executive to drive Enterprise Architecture within Seda.

The EA Governance Charter identifies the initial roles and responsibilities of work teams and establishes the phases and tasks required to complete each phase. A summary of the high level roles are:

The Executive Steering Committee (ESC) is responsible for prioritizing all IT efforts in relation to the business requirements and for reaching a common vision between the business and IT on the business drivers and on the role of EA and technology.

The Architecture Review Board (ARB) is responsible for providing input for and reviewing and approving the conceptual and domain architectures, including products, domain technologies and standards and granting exceptions to the published standards.

The Architecture Team (EACT) is responsible for facilitating the enterprise architecture process, creating and maintaining deliverables, communicating architecture standards to all interested parties, and reviewing technology infrastructure projects for compliance to the architecture.

4.3. ENTERPRISE ARCHITECTURE PRINCIPLES

The goal of developing enterprise architecture (EA) principles is to define a set of guidelines that will ensure some consistency in the decision-making process across the enterprise. As the EA evolves, architecture viewpoints provide principles and standards for using technologies related to specifically defined logical domains throughout the organization. With this structured approach, multiple projects can leverage a rich variety of technologies operating together, providing adaptable technology services to the enterprise.

Principles are critical — and getting the enterprise architecture and its priorities right is tough, time-consuming work. But if it is not right and no synchronicity exists across the architecture viewpoint teams, the teams can go off in diverse directions, despite starting with a common set of principles. Within the EA itself, all downstream architecture model deliverables must be compliant with the EA principles. Contrary to popular opinion, becoming a principles-based organization has little to do with the choice of principles. Instead, it depends on the successful execution of a process to select, socialize, ratify and adopt the chosen principles that are truly understood by stakeholders. A primary objective for an EA team is to drive consistent decision making across multiple business units, disparate divisions, and multiple projects and initiatives. Without principles, independent groups make independent decisions. The result is inconsistency: information islands, isolated business processes, inefficient technology selection and a lack of integrated business solutions.
4.4. ICT GOVERNANCE

A draft ICT Governance Framework was developed, where ISO 38500 and the Calder-Moir Framework will be used as a basis for deploying ICT Governance within Seda. Seda has developed certain policies already which has been accepted and approved. The ICT Governance approach is depicted in Figure 14 - ICT Governance Approach.

4.5. BUSINESS UNIT INTERVIEWS

All the Business Units within each of the divisions were interviewed to gather their future needs and requirements from an ICT perspective. These do not include the current ICT initiatives currently being deployed or reworked such as the Customer Relationship Management and the Financial Management Application. A summary of applications will be outlined here as extracted from the Seda – Business Requirements document.

4.5.1. BUSINESS INTELLIGENCE

A Business Intelligence tool is required – even though mention was made of a current tool within the organisation. Within this instance clear reports need to be defined separate from the SMART System. This will be reports as it relates to the business operations and the impact on the Business Unit. The reporting will need to include Ad Hoc Reports, Cubes or OLAP for drill down and deeper analysis of an instance, and set reports as defined by the Business Units information requirements.

This will obviously require some form of Database to report from – thus, the specific information requirements need to be defined – which will in turn define the data requirements and thus the database.

4.5.2. VIDEO CONFERENCING

The Video Conferencing will assist in reduced cost for travelling and allow for more closer collaboration of Units throughout the country.
This can be done in a phased approach where a facility such as Skype or Yahoo Chat can be piloted to create an awareness of the functionality within the organisation. Once the users understands the power of this facility a long term plan can be devised to introduce a full scale Video Conferencing facility. In parallel the Skype facility can be used where Branches and Provincial Offices can share information without using the full Video Conferencing facility. This will cause an increase in the use of bandwidth depending on the network infrastructure being used – and if the branches or provincial offices have the capability to make use of a free video conferencing tool such as Skype.

4.5.3. **PORTAL DEPLOYMENT**

The organisation currently has an Intranet and Internet, but the staff is not fully utilising the Intranet to its full capacity – as the Intranet at this point merely serves as a storage facility for Policies and Standard Operating Procedures. The functionality of the Intranet needs to be extended with the aim of modifying it into a portal for staff. The objective of the Intranet extension is to move into a Portal Strategy where all staff when logging onto their systems will be logging on via the Seda Portal – this will allow for multiple organisation communication and ensuring all staff will see important notices without clogging the email network.

4.5.4. **COMMUNICATION CHANNELS**

With Social Networking taking the communities by storm, uses needs to be consider within professional environments. With communication being one of the most challenging objectives within any organisation – this can be managed and monitored via the portal strategy allowing users to use instant messaging (IM) – alleviating the congestion on the email network.

4.5.5. **SHARED DRIVES**

The objective of this requirement is to share large files with other staff members across the country without clogging up the network. This will eliminate the need for mailing these files using the email network. It will allow for staff members to upload files and share them with fellow colleagues – this can be done via the intranet, which will allow additional usage and visibility of the intranet.

4.5.6. **PORTFOLIO AND CHANGE MANAGEMENT**

With the deployment of Enterprise Architecture within the organisation it will be imperative for the EA to work with the Portfolio and Change Management Team as it relates to the projects that will be impacting the organisation as a whole. The Enterprise Architecture Charter also outlines the roles and responsibilities of how the Architecture Review Board and the Portfolio and Change Management will interact ensuring all changes within the organisation are managed and co-ordinated.

4.5.7. **KNOWLEDGE MANAGEMENT**

With Seda having branches within all the provinces of South Africa it will be advisable to investigate the functionality of Knowledge Management where the Communities of Practice (COP’s) can allow for knowledge sharing between the branches. This can be done in a phased approach ensuring a culture of knowledge management is firstly in place before the acquisition of any tools.
4.5.8. **ENTERPRISE INFORMATION MANAGEMENT**

Enterprise Information Management is the collaboration of Enterprise Content Management, Business Intelligence, Knowledge Management, Business Process Management, Enterprise Search, Web 2.0, Information Lifecycle Management. Within Enterprise Information Management there is a comprehensive management of all information within the enterprise irrespective of who owns or generates the information. The concept is raised here to highlight the importance of information within any organisation and the approach in managing the information assets.

4.5.9. **VENDOR RELATIONSHIP MANAGEMENT**

A project/investigation is underway for the deployment of Vendor Relationship Management – it was identified that VRM can be utilised beyond the boundaries of Supply Chain Management – due to the nature of business within Seda. The contracts management part of VRM will also be extremely beneficial for other business units besides Supply Chain Management. Multiple relationships are managed within the organisation which are not Customer based and which is also not a direct vendor

4.5.10. **LEARNING ACADEMY TOOL**

The Learning Academy had to tool requests, i.e. an eLearning Tool and a Tool to assist in managing all the classes and bookings.

Booking courses is a time consuming process creating administration for individual staff, line managers, and that is before they have even started the course.

The Learning Academy requires a course booking Application that will enable them to publish a prospectus of approved training courses so that your entire organisation is aware of the opportunities open to them. The application needs to assist with the budget tracking and approvals to be made, and of course eliminates the cost and pain of paperwork.

The course booking tool must be compatible with both Personal Development Plan (PDP) and Corporate Development Plan (CDP) so that business objectives can be directly linked (and outcomes to be tracked) to training activities. The application needs to enable personal development plans (PDP) to be automatically updated and for line managers to be able to track the training their teams are receiving.

4.5.11. **ENTERPRISE CONTENT MANAGEMENT**

The enterprise content management can be utilised by the current SharePoint installation as this is one of the request by different business units to assist with the workflow of electronic documents.

4.5.12. **HUMAN RESOURCES APPLICATION**

An application is required within this Division to assist with the automation of multiple tasks that are performed manually. At this point HR is using the VIP Payroll which caters for the salaries, but requires a tool to assist with the various staff related matters in terms of Personal Development Plans as it relates to the staff’s performance, the automated management of the type of training and how it relates to the staff's personal development path.
5. BASELINE ARCHITECTURE

5.1. INTRODUCTION

The Baseline Architecture is the current state of the architectural domains within Seda. The current state for Business Architecture, Information Systems Architecture and Technology Architecture will be discussed.

5.2. BUSINESS ARCHITECTURE

The Business Architecture defines the formal link between the enterprise business strategy and the results predicted from supporting strategic initiatives. The Business Architecture provides a single source and comprehensive repository of knowledge from which corporate initiatives will evolve and link. The Business Architecture also provides integration capabilities for software development, packaged software configuration, and process improvement initiatives

5.2.1. ARCHITECTURE VISION

To enable and deploy Seda’s strategic initiatives

5.2.2. ARCHITECTURE MISSION

Ensure Service agility and flexibility within Seda

5.2.3. ARCHITECTURE GOAL

To be the catalyst in Seda becoming the Centre of Excellence for small enterprise development in South Africa

5.2.4. BUSINESS PROCESSES

The Business Processes listed here are the processes currently in place within the organisation.

5.2.4.1 HUMAN RESOURCES DIVISION

- Employment Equity and Recruitment Processes
  1. Motivate and Recruit
  2. Recruit Candidates
  3. Select Candidates
  4. Offer Employment

- Organisational Development and Transformation Processes
  1. Develop Organisation
  2. Manage Employee Performance System
  3. Perform Change Management
  4. Facilitate Training

- Remuneration and Benefits Processes
  1. Manage Contracts
  2. Conduct Litigation
  3. Conduct Criminal Proceedings
  4. Provide Legal Opinion
  5. Manage Compliance
  6. Manage Policies and Procedures
  7. Provide Legal Advice
  8. Arrange Board meetings
- **Employee Relation Processes**
  1. Manage Policies and Procedures
  2. Manage Disciplinary Action
  3. Manage Dispute Resolution

- **Employee Wellness Programme Processes**
  1. Manage Health Awareness Campaign
  2. Manage Employee Wellness

5.2.4.2 **FINANCE DIVISION**

- **Financial Management Processes**
  1. Administer Petty Cash
  2. Manage Cash Flow
  3. Manage Fixed Assets
  4. Manage Accounts Payable / Disbursements
  5. Manage Electronic Transfers

- **Supply Chain Management Processes**
  1. Demand Management
  2. Manage Suppliers Database
  3. Acquire goods and services
  4. Administer Contract

- **Management Accounting Processes**
  1. Administer Budget
  2. Provide Financial and Management Reports

5.2.4.3 **CORPORATE SERVICES DIVISION**

- **ICT Processes**
  1. Manage ICT Structure
  2. Support ICT Services
  3. Manage Records and Documents
  4. Business Analysis

- **Marketing and Corporate Communications Processes**
  1. Internal Communications
  2. Media Management
  3. Brand Management
  4. Event Management
  5. Publications and Promotions Management
  6. Information Centre
  7. Customer Relationship Management (Survey Reports)

- **Stakeholder Relations and Partnership Processes**
  1. Establish Stakeholder Relationship
  2. Manage Stakeholder Relationships
  3. Evaluate and Renew Stakeholder Relationship

- **Facilities Processes**
  1. Manage Stores / Assets
  2. Manage Building Maintenance Repairs
  3. Manage Cleaning Services
  4. Print Shop Management
  5. Manage Drivers and Vehicles
  6. Manage Office Resources
  7. Provide Service (Board Room Bookings)
5.2.4.4 OFFICE OF THE CEO

- **OCEO Administration Processes**
  1. Approval / Review Submissions
  2. Arrange Exco Meetings

- **Strategy and Organisational Performance Management Processes**
  1. Develop Strategic Plan
  2. Develop Business Plan
  3. Compile Quarterly Report
  4. Compile Annual Report

- **Legal / Corporate Governance/Compliance Processes**
  1. Manage Contracts
  2. Conduct Litigation
  3. Conduct Criminal Proceedings
  4. Provide Legal Opinion
  5. Manage Compliance
  6. Manage Policies and Procedures
  7. Provide Legal Advice
  8. Arrange Board Meetings

- **Risk and Audit Unit Processes**
  1. Perform Risk Management
  2. Handle Fraud Prevention
  3. Manage Internal Audit

5.2.4.5 ENTERPRISE DEVELOPMENT

- **CPPP and CO-OPS Processes**
  1. Mobilization
  2. Enterprise Development
  3. Transfer and Transformation

- **Learning Academy Processes**
  1. Capacity Building of Practitioners
  2. Events Management
  3. Training Material Sourcing and Development

- **Programme Analysis and Development Processes**
  1. New Offerings Development
  2. Export Development Programme
  3. Special Projects and Programmes

- **Provincial Affairs Processes**
  1. CRM Process

5.2.4.6 SEDA TECHNOLOGY PROGRAMME

- **Incubation Processes**
  1. Request Business Plan of TRANCHE from each incubator
  2. Committee reviews the TBC, BP’s, and TRANCHE
  3. Submission of Approval and Recommended TBC, TRANCHE, BP
  4. Authorisation
  5. Approval Signed
  6. MOA Created TBC Quarterly Reports Submitted

- **Quality Processes**
  1. Assessment of Liability on Grant
  2. Information Stored in a Database
3. Application goes through assessment process
4. Procurement of Service Provider (Systems Development)
5. After approval submit signed quotations to SABS (Product Testing)
6. After completion verification done
7. SABS sends a copy of the Test Report to STP Seda

- **Technology Transfer Fund Processes**
  1. Collect information on Machine Required
  2. Prepare Application
  3. Depending on requested amount (<R600K)
  4. TTF adjudication panel meeting
  5. Proposal and Motivation to Executive
  6. STP Management Committee decides
  7. Agreed – Finance Process Follows
  8. Not Agreed – Seda Exco Decides
  9. Not Agreed – Final Decision by Seda Board
  10. Reports on Performance Sent Quarterly

### 5.2.5. **BUSINESS SERVICES**

A Divisional Services Catalogue was created refer to Seda – Divisional Services Document.

### 5.3. **INFORMATION SYSTEMS ARCHITECTURE**

The Base-Line Information Systems Architecture is based on the current systems in place and not related to the Target Architecture or To-Be Architecture. Due to the time frame allocated to the project, most of the time was spend on developing the Target Architecture due to the nature of the business and the current scenario the business is at this point in time. It was more advisable to start with the Target Architecture to ensure this can be reviewed and updated to create a baseline starting with the current deployment and plans in place. So the bulk of the work done within this domain was to create the application matrix to determine what applications are being used to provide the functionality and services as required by the business at that point in time.

This approach was adopted due to the transition phase of applications and as recommended by the Gartner Framework – it will save more time working on what is required – the gap analysis will be indentified from the Business Requirements as Business Unit Managers were requested to indicate what they would envisage to have in place to assist them in delivering more efficiently on their current service delivery, from an automated perspective. The transition architecture will be based on the gaps identified and the current work been done on improving services.

### 5.4. **TECHNOLOGY ARCHITECTURE**

As indicated in the Information Systems Architecture above why most of the time was spend on the Target Architecture. The Technology Architecture is one of the most complex areas within any organisation due to the diverse skill set required to ensure the smooth running of multiple systems. Seda has approached a Virtualised Architecture ensuring maximum usage using Microsoft Operating Systems and Microsoft SQL Database to store the data, and Microsoft Clusters for the Application Servers using VMWare as the product of choice within the virtualised environment. The notebooks are Lenovo of choice and the Network infrastructure will be discussed within the Target Architecture and the Gap Analysis.
6. TO-BE ARCHITECTURE

6.1. INTRODUCTION

The To-Be Architecture and the Target Architecture is the same – the modelling that has been done within these domains will be outlined – even though to see the full picture you will need to have Archi installed – as this was the tool that was used to develop all the Views and different Viewpoints. The modelling was done using Archimate and the development of models was done as prescribed by the Archimate 1.0 as published by the Open Group.

6.2. TO-BE BUSINESS ARCHITECTURE

Different Viewpoint was modelled within this domain which can be viewed using Archi. The Viewpoints within this domain are:

1. Organisational Viewpoint
2. Actor Co-operation Viewpoint
3. Business Function Viewpoint
4. Business Process Viewpoint
5. Business Process Co-operation Viewpoint
6. Product Viewpoint

6.3. TO-BE INFORMATION SYSTEMS ARCHITECTURE

The Viewpoints modelled within this viewpoint is more related to Application Architecture as defined by the Archimate Specifications. The Viewpoints within this domain are:

1. Application Matrix
2. Application Behaviour Viewpoint
3. Application Co-operation Viewpoint
4. Application Structure Viewpoint
5. Application Usage Viewpoint

The applications used within the Branches were also included within this modelling, even though it does not reside within the Sedo Infrastructure. The Applications used within the branches are all web driven as per the Business Unit interviewed – which allows for an integrated approach which will be further discussed within the Gap Analysis Section.

6.4. TO-BE TECHNOLOGY ARCHITECTURE

The modelling done within this domain had a few constraints within the Virtualisation Architecture – but, this was resolved as the full spectrum has been evaluated now. The Viewpoints within this domain are:

1. Technology Matrix
2. Infrastructure Viewpoint
3. Infrastructure Usage Viewpoint
4. Implementation and Deployment Viewpoint
5. Information Structure Viewpoint
6. Service Realisation Viewpoint
7. Layered Viewpoint
8. Landscape Map Viewpoint
7. GAP ANALYSIS

7.1. INTRODUCTION

The Baseline Architecture is the current state of the architectural domains within Seda. The current state for Business Architecture, Information Systems Architecture and Technology Architecture will be discussed.

7.2. GAP ANALYSIS BUSINESS ARCHITECTURE

The Gap Analysis for Business Architecture is a consolidated view of all the Business Units requirements as per the interviews conducted and their specific requirements. These gaps are also identified from the Divisional objectives and current Business Processes as aligned to the Services and Functions. As this is an architecture exercise the business gaps will be from an architecture viewpoint.

7.2.1. BUSINESS OBJECTIVES

The Business Objectives for the organisation is clearly defined within their respect business plans as aligned to the overall Seda Strategy. The gaps were identified in terms of how Architecture can assist with attaining these objectives. The Gaps are identified as follows:

7.2.1.1 EVALUATION AND MONITORING

Without an Integrated view of all the Divisions it is extremely difficult to evaluate and monitor whether the Business Units and Divisions are attaining their specified objectives.

7.2.1.2 DEFINED METRICS AND OUTCOMES

The Business Units have identified the Metrics and Outcomes to monitor their objectives – but, this is done manually and not automated appropriately to ensure empirical evidence which can justify achievement of the objective.

7.2.2. BUSINESS SERVICES

The Services within the organisation has clearly been defined the challenges are:

7.2.2.1 SERVICE MONITORING

There are no appropriate tools available besides surveys to ensure that high quality services are offered to Seda clients. Real-time monitoring of Services will ensure in an in-depth analysis of the type services being offered.

7.2.2.2 SERVICE IMPROVEMENT

If the services cannot be monitored it will be more challenging to know what to improve within the service offerings

7.2.3. BUSINESS FUNCTIONS

The Business Functions are in place to support the services offered to the clients, but the challenges are:

7.2.3.1 MANUAL FUNCTIONS

With most of the functions performed manually and in many cases saved to individual spread sheets creates major challenges when it comes to reports that needs to be generated over multiple functions for clear analysis.
7.2.4. **BUSINESS PROCESSES**

Seda has embarked on a Business Process exercise in the past, thus ensuring Business Processes are mapped. The challenges faced with these are:

7.2.4.1 **PROCESS OWNERSHIP**

This is one of the oldest challenges within Business Process due to the fact that the ICT Departments usually assist Business in mapping the process and Business relinquishes ownership. The Business Processes need to be owned by Business.

7.2.4.2 **PROCESS MONITORING**

To overcome the issue of Process Ownership is to implement Automated Process Monitoring which will allow Business to be able to track and monitor their processes so that they can live it because they using it.

7.2.5. **BUSINESS ROLES AND RESPONSIBILITIES**

The roles and responsibilities do pose a challenge within the organisation as indicated by the RASCIK – where the Knowledge component poses the biggest challenge if the data is not easily accessible to be able to do appropriate analysis and then inform, consult and communicate to the appropriate Responsible and Accountable Business Units or Staff Members.

R – Responsible to do  
A – Accountable for  
S – Support the function  
C – Consulted – who needs to be consulted  
I – Informed – who needs to be informed  
K – Knowledge – where you are going to get this information from

7.3. **GAP ANALYSIS INFORMATION SYSTEMS ARCHITECTURE**

The Gap Analysis for Information Systems Architecture will outline only the Gaps related to the this architecture domain – even though the input for this architecture domain is from the Business Architecture domain. The Business Architecture has consolidated what Business requires and how the Information Systems Architecture will implement to fulfil these requirements.

7.3.1. **ENTERPRISE APPLICATION INTEGRATION**

What is required at Seda from the Business Architecture Gaps is an Enterprise Application Integration approach. Enterprise Application Integration can be defined as “making independently designed application systems work together”. Enterprise Application Integration (EAI) further encompasses everything from tightly coupled, request/ reply exchanges among inter-dependent systems to simple, arms-length batch file transfers between separate systems.

7.3.2. **ENTERPRISE INFORMATION MANAGEMENT**

Enterprise Information Management (EIM) can be defined as: “An organisational commitment to structure, secure and improve the accuracy and integrity of information assets, to solve semantic inconsistencies across all boundaries, and support the technical, operational and business objectives within the organisations enterprise architecture strategy.”

EIM is an integrative discipline for structuring, describing and governing information assets regardless of organizational and technological boundaries to improve operational efficiency, promote transparency and enable business insight.
EIM is an integrative discipline because it brings together technology, business and organizational disciplines to exploit information as a strategic asset and overcome existing information silos. EIM contains a set of essential building blocks, which are implemented as a coordinated, on-going program with a defined budget, charter, project plan and resource commitment. It is a process pursued on a continuous basis (rather than as a project constructed and implemented with a defined beginning and end).

EIM provides organized, consistent, secure and accessible content to those individuals who are empowered with the authority, accountability and decision rights for the proper control and oversight of enterprise assets.

EIM spans both described (also known as structured) and un-described (also known as semi-structured or unstructured) content sources, inside and outside the organization. EIM supports IT mandates for flexibility, adaptability and productivity. It addresses current and anticipated information barriers and delivers the continuous and action-oriented flow of information required for the agile enterprise.

EIM eliminates data and process redundancy, enables the lineage of information assets across the applications portfolio and establishes the common information infrastructure required to support business intelligence and performance management initiatives in their use and analysis of information assets and metrics.

7.4. **GAP ANALYSIS TECHNOLOGY ARCHITECTURE**

The Technology Architecture at Seda is in the process or just completed an exercise of Virtualisation of Servers and the creation of Microsoft clusters to host and manage the applications and databases. The gaps identified

7.4.1. **ENTERPRISE APPLICATION INTEGRATION TECHNOLOGY**

The Gap will be the Technological requirements as per the gaps identified in the Information Systems Architecture – which are the gaps from the Business Architecture.

7.4.2. **ENTERPRISE INFORMATION MANAGEMENT TECHNOLOGY**

The Gap will be the Technological requirements as per the gaps identified in the Information Systems Architecture

7.4.3. **SINGLE INTEGRATED VIEW OF THE NETWORK**

A single integrated view of the overall Network and its components will assist the Technical Team to be pro-active, where this is integrated into the Fault Management, Incident Management and Problem Management Suite of tools.
8. ROAD MAPS

8.1. INTRODUCTION

The full document for Roadmaps have been developed called Architecture Roadmaps. From the Gap Analysis the Information System Architecture Gaps will be the major identifiers for the Road Maps. Please refer to Seda – Architecture Roadmap for a full description of the Roadmaps and their outline as it relates to Seda – here only the highlights will be outlined to give the reader a sense of what is being proposed.

8.2. ENTERPRISE APPLICATION INTEGRATION

The overview of the Enterprise Application Integration outlines the components that need to be implemented for this approach. (See, Figure 15 below)

The Application Portfolio of Enterprise Information Management will be strongly relating to the Application Integration part. Enterprise Information Management is largely concerned with the information as an asset within the organisation – where application integration is mostly concerned about creating the integration of these applications with different data stores. The organisation would need to defined which of the separate initiatives are more important as planned for the coming financial year. The components within Enterprise Information Management and Enterprise Application Integration can be done at the same time. But, this will be discussed within the conclusion and recommendation section at length. The components of the EAI are brief discussed to give the reader a sense of what is required in this deployment.
8.2.1. **TIME LINE ROADMAP - EAI**

The following timeline provides an indication of how the EAI solution could be implemented within Seda.

<table>
<thead>
<tr>
<th>Table 6 - Time Line Roadmap - EAI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2011</strong></td>
</tr>
<tr>
<td>Inventory of Applications within Seda</td>
</tr>
<tr>
<td>List of applications to be integrated</td>
</tr>
<tr>
<td>EAI Strategy and Principles</td>
</tr>
<tr>
<td>Business Process Inventory and update</td>
</tr>
<tr>
<td>Identify Business Unit for Pilot</td>
</tr>
<tr>
<td>Start roll-out to other Business Units</td>
</tr>
</tbody>
</table>

8.2.2. **APPLICATION ROADMAP - EAI**

The following is an Application Roadmap over a timeline providing an indication of how the EAI solution could be implemented within Seda.

<table>
<thead>
<tr>
<th>Table 7 - Application Roadmap EAI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2011</strong></td>
</tr>
<tr>
<td><strong>Front End (Portal)</strong></td>
</tr>
<tr>
<td>1. Define the Requirements</td>
</tr>
<tr>
<td>2. Consolidate Requirements</td>
</tr>
<tr>
<td>3. Compare to EIM Requirements</td>
</tr>
<tr>
<td><strong>Access Management</strong></td>
</tr>
<tr>
<td>1. Define the Requirements</td>
</tr>
<tr>
<td>2. Consolidate Requirements</td>
</tr>
<tr>
<td>3. Compare to EIM Requirements</td>
</tr>
<tr>
<td><strong>Business Process Layer</strong></td>
</tr>
<tr>
<td>1. Define the Requirements</td>
</tr>
<tr>
<td>2. Consolidate Requirements</td>
</tr>
<tr>
<td>3. Compare to EIM Requirements</td>
</tr>
<tr>
<td><strong>Enterprise Service Bus</strong></td>
</tr>
<tr>
<td>1. Define the Requirements</td>
</tr>
<tr>
<td>2. Consolidate Requirements</td>
</tr>
<tr>
<td>3. Compare to EIM Requirements</td>
</tr>
<tr>
<td><strong>Evaluate Vendors (EAI)</strong></td>
</tr>
<tr>
<td><strong>Choose a Business Unit to Pilot</strong></td>
</tr>
<tr>
<td><strong>Evaluate Pilot and Proceed Roll-out</strong></td>
</tr>
<tr>
<td><strong>Evaluate deployed EAI</strong></td>
</tr>
</tbody>
</table>
### 8.3. **ENTERPRISE INFORMATION MANAGEMENT**

The Enterprise Information Management reference model breaks the approach for EIM into manageable chunks for the adoption and approach (see, Figure 16).

![EIM Reference Model](image)

#### Figure 16 - EIM Reference Model

### 8.3.1. **TIME LINE ROADMAP - EIM**

The following timeline provides an indication of how the EIM solution could be implemented within Seda

<table>
<thead>
<tr>
<th>Activity</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Business Intelligence and MDM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory of Meta Data Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess Data Tracking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess Data Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define an extensible Meta Data repository</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tool Selection – Data Models and BPM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot with one Business Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start roll-out to other Business Units</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8.3.2. **APPLICATION ROADMAP - EIM**

It will be advisable to first develop the Enterprise Application Integration Infrastructure – as this will then be able to assist with the choose of tools for the Enterprise Information Management.
9. CONCLUSION AND RECOMMENDATIONS

9.1. INTRODUCTION

The conclusion and recommendations will outline the approach on how to go about in adopting and implementing the Enterprise Information Management and Enterprise Application Integration. It is highly recommended that all referenced documents are read in conjunction with this final report as the referenced documents will give an in-depth view of the work that has been done within each of the architectural domains and the approach and methodologies applied to come up with this final report.

9.2. ENTERPRISE INFORMATION MANAGEMENT

Many organizations say information is one of their most important assets. Yet, the practice of managing information (in all its forms) remains haphazard and inefficient. With the volume and velocity of information increasing, a new discipline and strategic focus is needed. Current integration methods created a web of point-to-point interfaces, often containing different versions of the same data (customer, product, employee, supplier, location or vendor attributes). These redundant interfaces are costly to maintain and consume resources that would otherwise be available for new application development projects. Applications developed independently by business units also add to widespread redundancy and data inconsistencies. These business units (sometimes referred to as “shadow IT”) use powerful spreadsheets and desktop database technologies to quickly produce applications with different “versions of the truth”; changing data structures (for example, semantics, formats, names, definitions and business rules) to suit local needs. The lack of controls or safeguards on the integrity and consistency of core information adds risk during compliance and information audits of financial reports. Systems maintain their own version of the data in application-specific (non-enterprise-standard) data sources. Data sources are mostly independent (the purpose is to support local processing needs, not cross-functional needs). There is no central management, accountability or tracking of data.

9.3. ENTERPRISE APPLICATION INTEGRATION

Enterprise Application Integration (EAI) is an integration framework composed of a collection of technologies and services which form a middleware to enable integration of systems and applications across the enterprise. Enterprise Application Integration can serve multiple purposes all dependent on the requirements of the organisation – within this instance EAI will focus on the Data Integration as defined within the Enterprise Information Management. This will focus on the integration of Information in multiple systems and ensures the consistency and integrity. The other focus of EAI within Seda will be to ensure that the business policies or rules from the various applications are maintained even if the applications are removed or replaced. This will assist the organisation in enforcing their Business Policies and Rules while being Vendor or Application independent. This will eliminate the need to re-implement new Business Rules. The other challenge facing Seda is having the staff logging into multiple applications or systems – so the EAI approach will allow for a single consistent access interface throughout the organisation, while shielding the users from having to learn to use different software packages.
9.4. **RECOMMENDED APPROACH**

The Roadmap section outlined ways in which Enterprise Application Integration and Enterprise Information Management can be deployed within Seda. The basis for this recommendation is to ensure that there is a clear understanding that the two approaches are there to complement each other allowing for the maximum value to be derived from adopting such approaches. Seda needs to monitor and evaluate their Strategies, Business Objectives, Business Outcomes, Staff Performance, Report on SMME growth within the country – the commonality here is Seda requires “Information” and not just any information. The need is for data integrity and consistency from multiple systems. This then beckons the need for an Integrated System allowing the extraction from multiple systems.

Seda needs integrated information from multiple systems which is off this highest integrity and consistency.

The initial approach would be to define what type and classes of information is needed to ensure proper monitoring and evaluation. Even if the information sources are not available at that point – the information requirements must be defined so that the organisation can plan from a specific point. Once the information requirements have been identified – the next step is to define what data sources need to be in place to ensure this data can be extrapolated. If this exercise is completed the next question to be asked do we have these systems in place to be able to generate the type of data and information we require. That would allow a clear application landscape to be developed. Once the application landscape has been developed it will be easy to compare the required applications to the current installed applications.

So this will be a journey and not a once off project – thus the overall need for Enterprise Architecture – as architecture will assist in asking and answering the questions. Will be able to assist in defining the various standards and best practices required for acquiring the new resources to ensure efficiency and measurable outcomes.

Architecture will clearly working in conjunction with the Portfolio, Programme Management and Change Management ensuring an agile organisation with flexible resources assisting in efficient services being delivered.

As it is not just about acquiring new equipment – what is the need for this equipment will it fit into the overall architecture landscape of Seda – these are issues that will be addressed by Enterprise Architecture in assisting Seda in deploying Enterprise Information Management and Enterprise Application Integration.
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