



Nihilent in South African Revenue Service (SARS)

Background

About SARS

The South African Revenue Service Act of 1997 amalgamated the former Inland Revenue, and the Customs and Excise departments, resulting in the formation of South African Revenue Service (SARS). SARS' mandate is to collect and administer national taxes, duties and levies, as well as to protect and support the South African economy by facilitating trade and managing stakeholder relationships. SARS, being in the best position to judge the exchequer potential of the economy, also advises the Ministry of Finance in South Africa on tax reforms, widening tax base, tax simplifications and concessions.

SARS' Metamorphosis

The South African Revenue Service launched a transformation program titled Siyakha in early 2000. This program intended to change the Revenue collection process from a "products administration" to a "customer services" orientation.

While the organisation was readying itself for this fundamental paradigm shift, SARS faced challenges in terms of efficiencies of its systems, processes, and the organization itself, compounded by the lack of reliable performance monitoring leading to surprises.

With a view to addressing these challenges, SARS embarked on a number of coordinated initiatives under the Siyakha transformation program.

These initiatives have yielded visible results – ever-increasing, challenging revenue targets that have been consistently met; a constantly widening tax base, increasing compliance, and reducing unrealised debt – metamorphosing SARS into an organisation driven by a metrics-based performance culture, operating through well-integrated, refocused and reengineered business processes supported by appropriate technology.

“The SARS team has taken the lead in transforming their organisation into one that prizes efficiency above bureaucracy, customer relations over authoritarianism, and assistance above obfuscation.”

Minister of Finance, South Africa



Nihilent's Role

Nihilent has played – and continues to play – a key role in this transformation, spearheading several of these initiatives.

In achieving a holistic renewal of processes and systems, Nihilent initiatives have:

- Defined revised processes, organization structure, and systems needed
- Scuttled high cost, low impact initiatives
- Reviewed Application Portfolio to identify improvements and renewal / optimisation opportunities
- Instituted a Metrics Office to define performance measures, and rollout the metrics-based performance management program
- Defined the requirements for the dashboard to monitor the metrics, and developed the dashboard
- Developed and deployed quick win solutions in areas of maximal impact

Some of the key initiatives are summarized here.



NSP

The New Service Program (NSP) involved not only providing technology enablement of business processes but also an integration of People, Process, Technology and Infrastructure levers to enable a fundamental culture transformation that would facilitate customer loyalty, societal development and eventually wealth creation for the government of South Africa.

Highlights

Nihilent was the lead consultant in the consortium comprising Accenture, Arivia.com, and Nihilent to conduct the scoping exercise for the New Service Program (NSP).

The project involved:

- Analysing SARS' business context and strategic objectives
- As-is Business Process Modelling of all the business processes (core and support), identification of constraints, and assessing the level of support provided by systems
- Analysing the gaps in terms of limitations in delivering to SARS' objectives, and an impact assessment of the limitations discovered
- Designing the to-be processes, with focus on ensuring better compliance from the taxpayer while providing better service to the taxpayer across tax types
- Define the to-be business architecture and the corresponding high-level enterprise data model and technical architecture
- Identification of change initiatives required across the People, Process, Technology and Infrastructure dimensions

This was supported with a business justification and a transition plan to show the organisation the options for a seamless migration from the current state to the desired state of existence.

The initiatives that were recommended at the end of the scoping exercise were:

- Enabling the reengineered Siyakha Business Processes
- Holistic Knowledge and Change Management
- Metrics-based Performance Management
- Contact Centre and Universal Customer Profile implementation
- Enterprise Data Warehouse with Analytics
- Enterprise Knowledge Portal
- Electronic Document Management System

These were supported by the following complementary initiatives:

- Enterprise Data Modelling
- Legacy renovation and selective replacement
- Data Migration
- Application interoperability facilitated by an Operational Data Store
- Enterprise Applications Integration
- Phased Deployment Infrastructure



Methodology

Rational Unified Process (RUP) was used as the project methodology. Business Process Modelling for the As-Is and To-Be processes was done through IDEF. Business Use Cases were represented using the UML notations.

Knowledge transfer to SARS was a crucial element of the project charter. The designated SARS team worked with the Nihilent consultants all through the project, thus facilitating knowledge transfer, and ensuring the SARS team could assume responsibility during and after the implementation.

Metrics Office

Lack of reliable performance monitoring was a known risk – one that led to often unpalatable surprises. Even as the new processes were being rolled out, the lack of reliable performance metrics would obfuscate the benefits.

Metrics were essential to ensuring the organisation as a whole was working to realise its vision; that the new processes were delivering; that the expected results would follow; and, that there would be no surprises

Nihilent established the Metrics Office. Reporting to the Commissioner of SARS, the Metrics Office was charged with helping realise the corporate strategy by implementing a corporate performance measurement system. Specifically, the Metrics Office would:

- Translate the corporate strategy into measurable objectives
- Define a hierarchy of measures to disseminate the strategy, align all activities with the strategy, and provide a basis for monitoring performance and ensuring the organisation remains aligned to strategic objectives
- Plan and conduct corporate-wide performance reviews
- Track critical projects in the organisation
- Track strategic activities in the organisation
- Report corporate performance to the Commissioner, highlighting deviations
- Monitor impact of any remedial measures instituted

Highlights

The Metrics Office was instrumental in bringing focus and direction to strategic planning and monitoring.

Methodology

The setting up of the Metrics Office involved:

- Facilitating SARS management in formulating the corporate objectives
- Arriving at corporate measures
- Aligning divisional objectives to SARS objectives
- Aligning business planning to SARS strategy
- Aligning divisional measures to corporate measures



- Instituting templates for reporting and reviews
- Inducting SARS team members in the project for training and eventual take over

The Management Dashboard

With organisation-wide metrics defined, the stage was set for metrics-based performance management. While the Commissioner and the Executive were beginning to get performance metrics, the real benefits would accrue only if the metrics culture were to proliferate through the organisation. Besides, one needed speedier reporting as events unfolded.

Hence, the need for the Management Dashboard.

Developed by Nihilent in close collaboration with SARS, the Management Dashboard is an extremely powerful executive engine built on the principle of *cause and effect* relationships, which:

- makes results predictable
- Provides a process view of the organisation
- Creates the basis for consistent and continuous review of key indicators, especially lead indicators
- Provides critical inputs on areas for continuous improvement
- Focuses on measuring efficacy, rather than just efficiency
- Facilitates the consistent review of productivity and measurable improvement
- Facilitates causal analysis to help identify factors inhibiting optimum performance
- Enables organisation-wide correlation of trend analysis, and resultant corrective actions
- Identifies trends and patterns of common problems; identification of exceptions
- Provides both post-facto and predictive analysis of causal factors, decisions taken and their impact, thus facilitating organisational learning
- Facilitates continuous proactive planning, measurement, and fine-tuning, thus reducing re-work, lost time, and missed opportunities
- Helps focus on business processes most critical to achieving desired results
- Allows for the above analysis to be cascaded to departmental, functional or individual role levels

The Dashboard is a Framework for defining performance requirements, measuring and analysing performance, and initiating interventions.

To help with its implementation, Nihilent mapped the information required to various IT applications and other sources, developed data extraction and capture mechanisms, and defined a Dashboard-based Performance Management process.

Knowledge Mapping

For the Knowledge Management (KM) initiative at SARS, Nihilent was responsible for creating the knowledge maps for an enterprise-wide KM implementation. Nihilent applied elements of its proprietary MC³ methodology for knowledge mapping and knowledge gap analysis.



This initiative yielded a lucid picture of:

- Knowledge needed by the various business functions
- Whether and where in the organisation that knowledge is available

This Knowledge Map together with the gap analysis has formed the basis of focussed knowledge capture and knowledge acquisition initiatives to enhance responsiveness and effectiveness.

Application Portfolio Review

Not unexpectedly, the reengineered processes predicated a rationalisation of the underlying IT systems.

SARS has over a hundred applications, developed over the years, each having its own data. Most have undergone major changes; many are the products of adhoc initiatives. This has resulted in duplication of application functionality, duplicate and potentially inconsistent data across systems, maintenance problems, integration issues, et al.

SARS had the need to take stock of its existing Applications Portfolio, consolidating and renovating its Information Systems – first, to ensure effective support to the reengineered processes, and then, as a precursor to deciding the future course of its IT investments,

Towards this, Nihilent Technologies carried out an Application Portfolio Review (APR), leading eventually to a Technology Roadmap.

Highlights

The APR identified several problems ranging from the chronic to the latent, and offered recommendations to significantly optimize the management of SARS' application portfolio, while enabling the IS organisation to be more responsive to SARS' business needs. The approach adopted was especially effective in analysing several endemic problems with the software engineering processes as well. It spawned several initiatives of strategic importance, many of which would proceed in parallel. Together, they make a significant impact on the efficacy and responsiveness of IT systems and processes, as well as the TCO of the Application Portfolio.

Methodology

The APR addressed the following:

- A review of SARS' Business Architecture; Identification of gaps, if any; Impact Assessment of the identified gaps; Recommendations on how to address from an Information Systems perspective
- Definition of a customised Application Portfolio Review model that formed the basis of the Application Portfolio Review; This will form the basis of the subsequent Application Portfolio Review in terms of Application and Data Architecture gap analysis
- Gap Analysis for Application Architecture. The Application Portfolio Review gave recommendations to optimise the TCO of the IS portfolio, based on an assessment of whether an application needs to be:
 - Retained, because it provides adequate functional support to the business, and is technically sound
 - Enhanced, because it is technically sound but does not provide adequate functional support to the business



Nihilent
evolving ideas

- Rewritten, because it is providing adequate functional support to the business, but is technically poor
- Replaced, because it neither provides adequate functional support to the business, nor is technically sound
- Merged or Integrated with other applications to eliminate duplication or redundancy of data or functionality
- Retired, because either the functionality exists elsewhere, or is not needed any more
- Gap Analysis for Data Architecture, with a view to facilitate:
 - Unified view of taxpayer across tax types
 - Risk Analysis
 - Reporting And Analytics
 - Reconciliation Of Taxpayer Transactional Data
- Broad recommended Principles for Application and Data Architecture, to enable rationalisation of the Application Portfolio
- Based on the Applications Portfolio Review and the key initiatives identified, to deliver a recommended Roadmap, taking into account dependencies and business impact

Quick Wins

Even as the longer term, broader initiatives recommended by the Application Portfolio Review were being rolled out, a number of “Quick Wins” – interventions that will have maximal impact with minimal effort – were identified and implemented. These were essentially in the area of simplified filing, Business Intelligence, and reconciling transactional information from various sources.

Risk Mitigation in IT Applications

An analysis of the systems had also identified risks in applications – weaknesses that could potentially be exploited for fraud.

Further security audit was carried out for the identified applications, the risks identified, and remedial measures implemented.

Compliance Facilitation

A senior Nihilent consultant has been involved over an extended period in holistically facilitating the following aspects of the Compliance function:

- Strategy & Planning
- Quality Assurance
- Finance
- Legal
- HR
- Technical Support
- Operational Support



IT Process Improvement – CMMI

The Application Portfolio Review had identified several endemic problems with the software engineering processes, which were adversely impacting the responsiveness, effectiveness, and efficiency of the IT function.

Nihilent has been assessing the existing Software Engineering processes with respect to SEI's CMMI framework to identify gaps and define reengineered processes to lead SARS' IT function on the path to sustained process improvement.

IT Modernisation Advisory

With SARS' long-term plans of modernising its IT applications, Nihilent has been engaging in an advisory capacity to assess and recommend options.

Enterprise Architecture

Concurrent with a major reorganisation of SARS's IT function, senior Nihilent consultants have been engaged with SARS's IT function in an advisory capacity to institute an Enterprise Architecture framework, together with the definition of the necessary artefacts, roles, and processes for interaction across different functions in the organisation.

Best Practices in IT

Senior Nihilent consultants have been engaged with SARS's IT function in an advisory capacity to institute a framework to effectively manage IT investments across the organisation, introduce formal Software Engineering discipline in all areas of IT, and adopt & disseminate best practices in technology & processes, to deliver demonstrable and measurable benefits to business.