

Application Renewal Services

Re-engineering the Past to Insure your Future



Transforming Your Legacies into Current-day Assets

The global economic slowdown is creating immense pressure on organisations, including Insurance companies, to reduce costs, increase efficiencies, retain existing customers and attract new ones by delivering an innovative and unmatched value proposition. With a spate of M&A activity in the industry, insurers are faced with challenges of application integration, consolidation and de-commissioning in an effort to unify disparate Insurance IT systems. Antiquated technological infrastructure results in poor business-IT alignment, inflexible technology infrastructure, minimal system documentation and non-availability of skilled resources capable of comprehending legacy code.

Faced with these challenges, a large chunk of a typical insurer's IT budgets gets diverted towards support and maintenance activities, leaving precious little for new products and initiatives. Clearly, the need of the hour is functionally rich, highly flexible business applications that are easily accessible to internal and external stakeholders.

Over the years, NIIT Technologies has been instrumental in addressing the concerns of insurers effectively. Its host of services in the application renewal space ensures that insurers are not saddled with sub-optimal systems that detract from their goals of business agility and innovation.

NIIT Technologies' Approach to Legacy Code

Some of the biggest challenges faced when dealing with legacy applications are code comprehension, knowledge retention and skills availability. This is primarily due to lack of system documentation, different coding standards followed by different sets of developers and legacy technology being unattractive to the new work force. Especially in the case of homegrown legacy applications, the system documentation is minimal and developers of the system are either on the verge of leaving the system or are long gone. Our Legacy Maintenance and Modernisation (LMM) services acknowledge these challenges of comprehension, knowledge management, and inadequacy of legacy competencies, and are hence pivoted on the following three pillars:

- Insight, our Legacy Comprehension and Transformation Tool
- Matrix, our Knowledge Management Framework
- Competency Development Framework that addresses the skills availability and continuity challenges

Using the above, we are able to develop expertise on any homegrown or vendor application.



The methodology being used for developing expertise on these applications and/or any home grown legacy code primarily includes four steps:

Knowledge Acquisition

Here, we understand the functionality and the technical details like environment, database, information processing etc. of the applications using our Legacy Comprehension Framework.

- For Bottom-up analysis, we use our code comprehension tool 'Insight' to understand the legacy code
- For Top-down analysis, we use a two-pronged approach—well defined Instructor led Knowledge Transfer Training Sessions, and Observation and Documentation, where NIIT Technologies' staff sits alongside the team maintaining these applications, and observes and documents their "experience"
- The above enables us to find actionable information buried in repositories of enterprise information

Knowledge Architecting

This involves defining the templates for knowledge encapsulation and the initial learning management system. The learning management system is designed to ensure that all key tenets of the application are taught extensively and the knowledge gained is tested and certified by application experts. This phase also results in the development of a Knowledge Portal that is then used to institutionalise the static as well as dynamic knowledge of the application, wherein all changes being made to the application within an organisation, with their associated challenges and learnings, are captured in this "living" portal.

Competency Development Plan

This is about identification of key competencies required for each type of role-holder (BA, SME, Developer, Tester) on the application, identification of mechanisms to develop the same (self study, classroom, hands on, KSAK- knowledge sharing amongst knowledgeable etc.) and finally, assessment criteria for evaluating the same.

Continuously focusing on developing tools and frameworks

The aim here is to demystify the application and automate its associated processes.

This expertise is then utilised to enhance the effectiveness and efficiency of the projects that are handled on these applications, be it support and maintenance, migration and/or modernization projects.

For instance, here's what we did for one of our Support and Maintenance customers in the US:

- We used our expertise on the policy administration application to reduce the total time taken for processing various policy transactions by 30 percent, to ensure that downstream applications like customer reporting, policy reserves, customer portals accounting, asset valuations, statements etc., got additional time to recover from

any disruptions. This ensured that the systems were up and ready when the business users needed them, thus enabling the customer's IT team to meet its commitment to the Business.

- In the area of payout administration applications, in the first year of engagement itself, we proactively identified the problem that was causing a miscalculation of tax incidence that had been resulting in the customer paying penalties of approximately US\$ 1.74 million per annum. We rectified the same (the customer had assumed the problem lay in its tax reporting application and was trying to analyse the same). Subsequently, we helped the client merge two versions of its payout system, thereby reducing the cost per contract by 37 percent.
- We improved the system availability of the customer's commission system from 95 percent to 100 percent within five months of taking over the application.
- In its customer reporting and statements applications, we reduced the CPU runtime by 40 percent, enabling the company to meet its business SLAs and avoid SEC penalty.

Service Offerings

The spectrum of services offered in the application renewal space features:

- Re-engineering/migration
- Web-enablement
- Performance improvement
- Rationalisation/consolidation and decommissioning

Re-engineering/Migration

Business rules are frequently embedded in monolithic legacy systems written decades ago, thus making legacy system comprehension not only an onerous task, but also a key success driver for any legacy re-engineering engagement. NIIT Technologies' comprehensive business rule extraction methodology, based on the Business Processes-Tasks-Activities-Methods (BTAM) model, can be tailored to suit the needs of individual business scenarios.

Following this model, business rules from the legacy system are extracted and used as a base to derive the business rules and requirements for the new system. The entire traceability matrix, from business requirements to tasks, through to activities and methods, and finally to program code, is established, ensuring that requirements do not get missed in the new system.

On release of the finalised requirements for the new system, a re-engineering of the complete end-to-end solution, including presentation, business logic and data, is undertaken, transforming the legacy environment to an open, business-driven, flexible target environment. User Interface and workflow typically changes completely in the new system. NIIT Technologies' solutions integrate the new re-engineered application with other retained applications, using middle-ware and connectors.

For migration projects, the focus is on impact assessment and degree of process automation, aided by Insight, NIIT Technologies' legacy code mining framework.



Using our re-engineering services, for a large European composite insurer, we were able to bring about significant time-to-market savings in their life and non-life proposal systems, by reducing the time to implement a new product by approximately 35-50 percent (depending upon the complexity of the product).

Web-enablement

Web-enabled interfaces are used by NIIT Technologies to extend the accessibility of an application through screen scraping and wrapper techniques. The existing legacy system is kept intact with all inherent business logic, to keep the security sub-system built into the application unchanged, thus reducing the possible risks of a security breach for mission-critical systems. The web-enabled interfaces use graphics and other visual components to enhance the look and feel of the system. This, in turn, improves the usability of the system. Such projects are characterised by a non-invasive approach, coupled with a high degree of process automation. Legacy web-enablement enables effective and secured e-Business and internet computing in reduced time, and at lower cost and risk.

Using these services for one of our customers in Europe, we have effectively extended their applications by developing adapters on their Enterprise Service Bus (ESB) that connect their legacy applications to their various portals.

Performance Improvement

The formal methodology for performance improvement of legacy systems designed by NIIT Technologies has, in numerous cases, given an ROI in as less as one year. The proprietary Insight Framework is used extensively for impact analysis and assessment. Some typical areas of performance improvement include:

- Reduction in excessive disk and tape usage, leading to lower storage costs
- Fixing historical defects considered a low priority owing to existing production support load
- Implementing change requests pending for long
- Eliminating redundant files/tables/fields that contribute to higher infrastructure costs

For a customer in US who was constantly facing system outages and difficulties in producing quarter-end and year end statements due to data inadequacies (incorrect, redundant or garbage information), we automated the contract correction process. We also implemented a new process to identify possible errors in the contract and correct them before their next processing date. This resulted not only in a 10 percent reduction in system outages and a 100 percent meeting of SLA, but also led to cost savings of approximately US\$ 400,000.

Consolidation and Decommissioning

It is quite common for large financial institutions to have multiple systems with more or less the same functionality, with differing technologies, all carrying their own license, infrastructure and support costs. Also, these fragmented systems pose obstacles to unified data

analysis, usage of BI tools etc. This calls for rationalisation of these multiple systems, porting functionality of applications that would be eventually de-commissioned on to those that would be retained, and finally, de-commissioning the former.

NIIT Technologies leverages its proven Insurance Consolidation Framework to provide a holistic approach towards risk mitigation in consolidation engagements. The framework effectively factors for the risks involved in the IT infrastructure consolidation exercise. The underlying theme is to identify automation opportunities in both application transformation as well as data migration.

While consolidating the PAS applications for one of our customers in ANZ, we created a utility for product implementation on Life/400. This effort helped the client reduce its time-to-implement a product line (comprising around 3-4 products) from 5-6 weeks to 2-3 weeks.

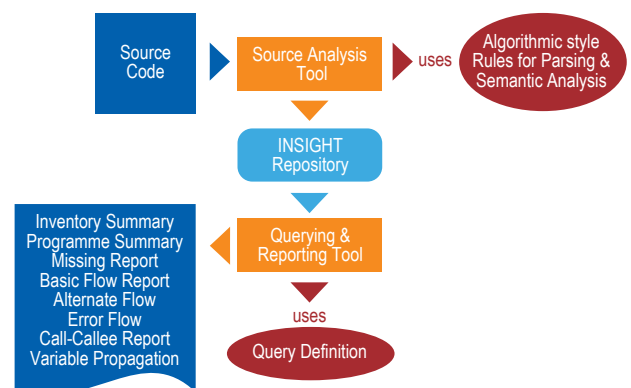
Differentiators

Matrix—Consistent Knowledge Management

As a differentiator and value-add to our customers, NIIT Technologies has developed a unique knowledge management platform for each customer engagement, which plays an important role in transitioning knowledge from the client's team to the NIIT team. During steady state, the Knowledge Management tool serves the purpose of a centralised repository of project documents to provide the right information to the right people at the right time. This also reduces the risk of person-dependency and institutionalises the (often tacit) project knowledge.

As a testimony to the value our clients accord to our Knowledge Management Framework, NIIT Technologies currently has over 120+ active deployments of knowledge portals built on this framework, for its various customers across the globe.

Insight—Code Comprehension Framework



This tool, developed in-house, greatly aids the understanding of, and generating reports for legacy code. Insight helps in legacy code assessment study, impact analysis, code mining, business rule extraction and migration. This is a rule-based framework with language parsers and automation tools for projects involving COBOL, RPG/400, CL/400, PL/1, IBM Assembler and JCL. The Framework is extensible and designed for the addition of languages.

Benefits to clients

Client - A global insurance and banking major

Challenges – The client had an in house team which was taking care of two of its RPS installations, as part of the Annuities Payout system which handled its annuities business during payout phase. The existing team was unable to meet the increasingly stiff SLAs, driven by the changing nature of the business and increased competition due to globalisation.

Solution – NIIT Technologies took over the support and maintenance of both these installations, with predefined SLAs. Thereafter, NIIT undertook an RPS merger project where the functionality of the application planned to be de-commissioned was merged into the application that was retained.

Business Benefits Delivered

- Reduced maintenance costs per annuity contract from US\$ 23.56 to US\$ 14.46
- Realised annual savings of US\$ 225,000 due to a reduction in IT support and eliminated license costs
- Created a variable payout capability across the organisation (prior to the merger, the variable payout facility was available only on one version of the application)
- Managed to configure the application for some of the businesses that were originally maintaining manual payout processes
- Eliminated the use of TPAs for the payout business

Client - A large composite insurer in Europe

Challenges – The client had a number of standalone applications for proposal management on multiple technology platforms. Besides leading to duplicate processing and maintenance costs, these applications also required a high turnaround time for configuring new products, involved complex processes for generating reports, and were unwieldy, with questionable accuracy of reported data.

Solution – NIIT Technologies helped in end-to-end reengineering of the existing proposal management systems, ensuring that multiple business lines were accessible through a single window and were on a common platform. Establishing online connectivity with the back-end core systems, NIIT also integrated a product rules and calculation engine, which was used for actuarial purposes.

Business Benefits Delivered

- Reduction in time taken to configure a new product on the system by almost 50 percent
- Facilitation of comparison of benefits and premiums across products

Explore Insurance @ NIIT Technologies

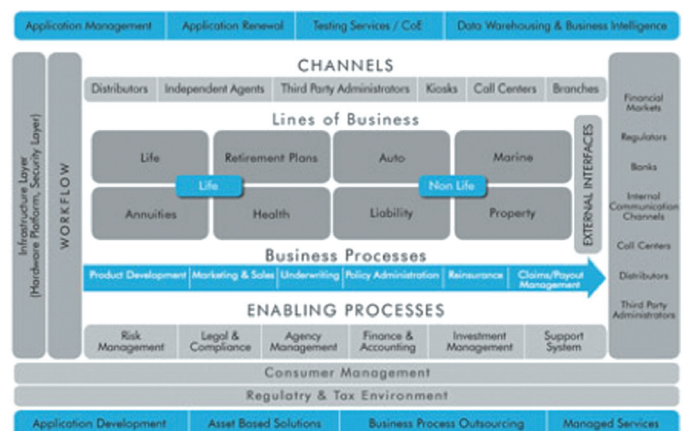
NIIT Technologies is a global IT Solutions major, servicing customers in Europe, North America, Asia and Australia. We offer services in Enterprise Solutions including Managed Services, Application Development and Maintenance and Business Process Management to enterprises in the Insurance, Banking and Financial Services, Travel, Transportation and Logistics and Manufacturing and Retail sectors.

Built on robust product partnerships and a proven global delivery model, NIIT Technologies' services to the Insurance Industry integrate technology with a sound understanding of the business processes inherent to this sector. NIIT Technologies delivers effective solutions that have lasting business impact. It also provides its customers with an executable roadmap to meet their ever-increasing technology needs, while always aiming for improved efficiencies through the effective use of IT.

We offer services in the areas of:

- Application Development
- Application Maintenance and Support
- Legacy Migration and Modernisation
- Independent Validation and Verification
- Data Warehousing and Business Intelligence
- Business Process Outsourcing

Our Insurance Experience Spectrum



Trust us to find the way

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