MYRIAD
TECHNOLOGIES

Capabilities Statement

People ✦ Portals ✦ Processes

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People ✦ Portals ✦ Processes

I created Myriad Technologies to give my customers a better level of service than I could on my own. I found that the only way to help companies was to build a team of people, who believe as I do in providing outstanding customer service and the best advice and solutions possible. Myriad Technologies have dedicated the years since it was created in 2007, with just a single employee (who I am delighted to say is still with the company today), to serving customers by helping build and manage knowledge.

I named the company Myriad Technologies to reflect the sheer number of technology choices available to ourselves and our customers in providing information management solutions. It is important to us that every team member at Myriad has had exposure to a broad range of technologies and industries, which provides understanding and experience that can be leveraged for our customers.

Our tagline: 'People, Portals, Processes' was created with the following purpose:

People: Our people must provide outstanding service and quality to organisations they are helping. We also recognise that your people are a key component to delivering successful solutions. This is a fundamental component that so many large corporates lose as they grow. It is important to me that we never lose sight of this, and why I have made it the leading part of our tagline.

Portals: These are the basis of our business and what we deliver on a daily basis – intranets, public facing websites and extranets. We see portals as a bridge that enables people to explore and visualise their information. The successful implementation of any portal should fundamentally change the way people interact with their information and each other.

Processes: Processes are the glue that ties people and technology together. By providing a way for business processes to be seamlessly linked to people and portals, we feel we can add greater value than other organisations that do not.

With these building blocks, Myriad Technologies has established a solid platform for building the right teams to deliver outstanding technology solutions that deliver day to day improvements in business processes to our customers.

Initially, we focused purely on Microsoft SharePoint. These days, however, we focus on the technologies that help our customers achieve their goals. This has expanded our portfolio to include Microsoft Dynamics CRM, Project Server and other Microsoft technologies that support our core goals and objectives.

Myriad Technologies will always aim to deliver customer and process centric solutions using the very best People, Portals and Processes available.

> " Myriad Technologies will always aim to deliver customer and process centric solutions using the very best People, Portals and Processes available. "

James Milne
Chief Technical Officer
Myriad Technologies

Our Team

Myriad Technologies boasts a team of industry professionals qualified in a range of technology and business consulting services, including Microsoft Certified IT Professionals, Developers and Trainers, as well as customer relationship managers and business and strategic analysts. Although our experience and qualifications are some of the best in the country, our defining feature is our passion for the technologies we use and delivering the best possible solutions to our clients.

Who is Myriad

Myriad Technologies is a proud Microsoft Gold Partner based in Brisbane specialising in information management, technology alignment and best practices for Microsoft SharePoint and related business management applications. This alignment allows us to deliver end-to-end solutions for our customers. From the beginning we have been committed to giving companies a better way to organise, protect and access business information.

Myriad Technologies delivers a range of information technology, business management and training services that incorporate Microsoft SharePoint's wide range of capabilities - improving communications, leveraging information and encouraging knowledge-sharing cultures to revolutionise the way organisations operate.

Myriad Technologies has experienced tremendous growth, with over 20 valued staff members, by focusing on our customers' needs and working with them by delivering enterprise level skill sets and solutions to meet their needs.

Microsoft Gold Partner

Myriad Technologies has the advantage of a close relationship with Microsoft through our Gold Partnership. This enables us to obtain exclusive access to Microsoft's latest strategies and technologies that directly benefits our clients through our application of this knowledge. All of our consultants receive the latest training and certifications through Microsoft, ensuring you are receiving the most up to date advice.

SharePoint End-to-End

The SharePoint platform has an infinite amount of possibilities, which makes it very difficult for one person to understand the technology as a whole. Our team of consultants each specialise in a specific area of the platform, allowing our clients to take advantage of that breadth of knowledge and experience to receive the best possible solutions and advice.

Commitment to Quality and Assurance

The team at Myriad Technologies are committed to a high level of service and delivery to our clients. Through proven methodologies and our dedication to best practices, we are able to strive for a consistently exceptional level of service to our clients and partners.

"Myriad's expertise and experience with the Microsoft SharePoint product was invaluable to RACQ, helping to guide our business in avoiding many of the pitfalls that have caused similar intranet projects in other organisations to fail."

Tony Butcher - Internal Communications and Innovations Manager for RACQ

Our partners

Microsoft Partner
Microsoft
Gold Collaboration and Content
Gold Cloud Platform
Gold Datacenter
Gold ISV
Silver Cloud Productivity

NINTEX®

iOra

OnePlace Solutions

Sharegate

Active Sharing

Business Solutions

Myriad's business consultants possess a unique mix of passion, creativity and real world experience that allows us to produce exceptional solutions and help you reduce those pain points in your business. Through tried and tested methodologies, we can help you produce a strategy for giving your business the competitive edge through efficient processes, effective management and educated and inspired team members.

ICT Strategy and Governance

Our principal consultants have over 10 years' experience in understanding the importance of strategic governance and by using proven strategic governance methodologies can help guide you through your SharePoint journey.

- Strategic Governance
- Operational Governance
- ICT Strategy
- SharePoint BluePrint

Business Consulting

We know that each business is different, which is why we offer a range of business-specific services to help you distinguish and define your business requirements. Through our experienced and supportive business analysts, you can design a system and strategy that fits the needs of your staff and culture.

- Business Analysis
- Process Mapping and Optimisation
- Requirements Analysis and Design
- Graphic Design and User Experience
- Project Management

Training

Our training courses are developed and delivered by highly experienced Microsoft Certified Technical Specialists and Microsoft Certified Trainers in SharePoint, who work in the real world with multinational corporations. We are the only Australian company to produce SharePoint courseware and have been recognised as having developed some of the best training materials for SharePoint in the world. The training materials offered with our courses are used world-wide by companies such as New Horizons Learning Centre.

- SharePoint Site Members
- SharePoint Site Owners
- Electronic Forms (InfoPath)
- Workflow (Nintex)
- SharePoint Designer
- SharePoint Administrator
- Custom Training and Workshops

Technical Solutions

Our team of experienced consultants can work with you from the beginning to the end of your SharePoint implementation or alternatively provide support to your own SharePoint team by filling in the gaps. We understand that every business progresses at a unique rate through the SharePoint adoption process and has unique SharePoint resourcing challenges. Our end to end services have been developed to allow your business the flexibility to select the services you need and the ones you don't, maximising your SharePoint implementation and supporting your staff while at the same time reducing overall implementation and ongoing maintenance costs.

Technical Consulting

Our team of Technical Consultants are Microsoft Certified specialists that possess over 20 years collective experience with SharePoint. We are passionate not just about SharePoint's powerful technology, but how we can leverage this technology to meet our client's individual and unique requirements. When incorporated with our business consulting services, we can deliver you an end-to-end SharePoint solution that fully meets your business needs.

- Installation & Configuration
- Customisation
- Features and Solutions
- SharePoint Designer
- Business Intelligence
- Migration & Upgrades
- Content Replication

Customer Care

Our customer care program provides you with the support to ensure that your SharePoint solutions always stay available and productive to your business. We provide a choice of plan levels to suit your business needs (Bronze, Silver, Gold or Platinum).

- Platform Support
- Application Support
- End User Support
- Monitoring & Maintenance

Cloud Services

Through our hosted SharePoint services, your organisation can have the flexibility of utilising SharePoint's powerful features without the overhead of on-premise servers. We offer a number of different approaches to hosting your SharePoint solution that can suit your business, from public facing websites to extranets and private intranet portals.

- Public
- Private
- Hybrid
- Office 365

Products

Our team of professional individuals have been delivering quality products for our clients, developed on the Microsoft SharePoint platform, for over ten years. Our team can work with you to assess and develop customised products to meet the unique requirements of your organisation.

- Employee Management System
- Safety Management System
- Contract and Obligation Management System
- Learning Management System
- Business Management System

- Compliance Portal
- Vehicle Management System
- Capital Expenditure System
- Knowledge Base

Partner Products

Myriad Technologies believes in ensuring our clients have a range of options when achieving their goals. Myriad Technologies partners with a number of solution providers for SharePoint related technologies and add-ons. Our consultants are skilled in all of our partners' technologies, giving you the ability to develop a solution that is fully customised to your needs.

- Nintex Forms
- Nintex Workflow
- iOra Geo-replicator
- Scinaptic OnePlaceMail
- ELearning Force SharePoint LMS
- RecordPoint
- Axceler ControlPoint
- Metalogix

Overview

Country or Region Australia

Industry Defence

Also applicable to
Mining, Maritime,
Exploration & Government

Customer Profile
The Australian Government
Department of Defence
aims to promote the
security of Australia, and to
protect its people and its
national interests.

Business Situation
The Australian Department
of Defence needed
to communicate and
collaborate between
deployable joint force
(mobile, sea bearing HQ),
brigade (established remote
HQ) and battle group
headquarters (temporary,
mobile remote HQ)
remote locations. Issues
with connectivity were a
frequent issue, resulting in
unreliable transmission of
communications.

Solution
With Myriad Technologies,
the Australian Department
of Defence created a stable
SharePoint replication
solution to provide
connectivity to their troops
in the field.

Benefits
• Stable end user utilisation
  even when using
  low bandwidth and
  high latency satellite
  connections.

• Greatly reduced data
  usage that minimises the
  cost of data transfers.

• Allow SharePoint to be
  always available regardless
  of connectivity.

The Australian Department of Defence has undertaken field
trials to deploy Microsoft SharePoint into their tactical theatre.
The tests have specifically focused on deploying SharePoint
within low and unstable bandwidth environments and the
initial results are extremely positive.

The main focus of the project is the modernisation and strategic planning
of communication and collaboration systems for Defence to increase the
effectiveness of sharing information, collaborating and communicating. The
communications team worked with the consultants at Myriad Technologies
to perform initial proof of concept design and ultimately real world field
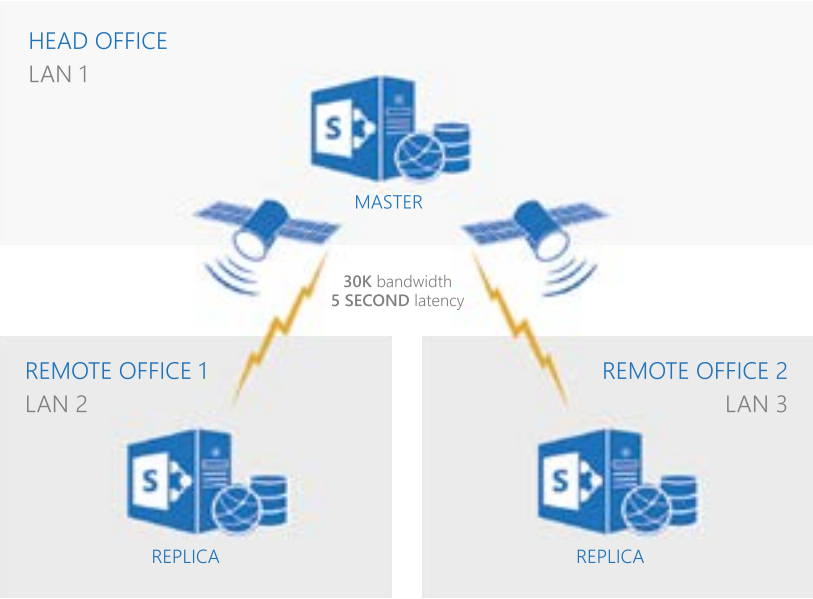trials of the technology.

SharePoint's open architecture also provided an ideal platform for ancillary
objectives focused on interoperability and provided consultants the ability
to integrate the platform with cisco messaging software and a three-
dimensional, geo-spatially aware real time battle planning suite.

The Challenges

Defence has traditionally relied on manual; paper based process or built
bespoke solutions for its communication and collaboration environments.
Project sponsors identified opportunities available to the organisation
through the implementation of Microsoft SharePoint.

Some of the key challenges facing Defence is the geographically dispersed
networks both in Australia and abroad. Network connectivity between these
sites is provided through FDMA/CDMA Satellite links made possible through
temporary and portable satellite dishes. Subsequently, network connectivity
and/or signal strength cannot be guaranteed as the medium and associated
kit is subject to intermittent power and volatile weather patterns. Sharing
information in these hostile environments has previously been limited
and the need to exchange intelligence, mission and command data about
operations in the field is critical.

Finally, out of the handful of applications and suite's chosen for use in the
tactical network, SharePoint was the only non-defence specific application
reliant on Microsoft Active Directory services. As a result and as part of the
overall solution, Myriad Technologies designed, implemented and continues
to support the underpinning Active Directory infrastructure.

Department of Defence - SharePoint in the Theatre

HEAD OFFICE
LAN 1

MASTER

30K bandwidth
5 SECOND latency

REMOTE OFFICE 1
LAN 2

REPLICA

REMOTE OFFICE 2
LAN 3

REPLICA

SharePoint is replicated to multiple locations over low bandwidth connections using a highly evolved byte level that differentiates engine to drive interchange rates to the lowest possible level

The Solution

The solution needed to be able to operate completely autonomously in the event of network outage or complete node isolation, allowing collaboration on documents to occur in multiple locations regardless of the network status. To achieve this Microsoft SharePoint 2010 technology combined with Iora's Geo-Replicator server to server technology is utilised.

iOra provides a highly advanced 'Epsilon' level of replication. This goes way beyond simply doing a 'delta' replica of data and provides the bare minimum bandwidth necessary to achieve replication of content. It is important to understand that the technology employed is not doing just compression (aka PKZIP). It is utilising a highly evolved byte level differencing engine to drive data interchange rates to the lowest level possible.

Using the open architecture provided by the Microsoft SharePoint platform, Myriad Technologies extended the solution to see hand-held images taken from a GPS aware camera automatically published into a custom KML map layer overlayed within the 3 Dimensional battle planning interface. Troops on the front line would upload pictures into a local instance of SharePoint and in conjunction with the replication, the integration piece provided decision makers (back at HQ) key information in the form of detailed imagery to make the right decisions without leaving their battle planning interface.

The Benefits

The replicated site structure provides a seamless and common site structure for users regardless of their location. This means that the same information can be accessed at the same time in the same way from any one of the regions, allowing teams to collaborate, reducing duplication and providing a "point of truth".

By replicating the SharePoint content from one site to another, the solution provides an "always on" service which enables the users to access their content at LAN speeds rather than having to go through the slow, unreliable WAN connections.

A significant and clear financial benefit can be identified by comparing the cost of data being transferred across expensive links (or full upgrades to provide better links).

Overview

Country or Region
Australia

Industry
State Government

Also applicable to
Public Sector, Finance, Education, Health Care, Mining, Energy and Construction.

Customer Profile
Queensland Treasury and Trade provides a diverse range of services including core economic and financial policy advice to the Queensland Government, and also connects directly with businesses and the community.

Business Situation
Queensland Treasury was experiencing limitations and lack of use and acceptance with its existing intranet and applications.

Solution
Myriad Technologies provided a world class intranet that allows Queensland Treasury to revolutionise the way their staff interact by using the range of tools in available in SharePoint.

Benefits
• Increase in intranet use and productivity across the organisation.

• Improve Queensland Treasury's ability to inform and engage staff.

• Created opportunities for effective knowledge sharing and problem solving.

Queensland Treasury and Trade provides a diverse range of services including core economic and financial policy advice to the Queensland Government. Treasury and Trade also connects directly with businesses and the community when delivering services in the areas of revenue collection and administration, economic and statistical research, and motor accident and public liability insurance.

The Client

Queensland Treasury was experiencing limitations and lack of use and acceptance with its existing intranet and applications. After careful consideration of their strategic goals, Queensland Treasury selected SharePoint 2010 as a platform to build their intranet, associated applications and collaboration space. Following this Myriad Technologies was engaged to develop the new intranet, incorporating new applications and key line of business systems.

Intranet Solution

The project journey began with a series of workshops and discussions with key stakeholders at Queensland Treasury to determine their requirements and brainstorm the best approach to their solution. The workshops incorporated elements for graphic design and creative elements, information architecture, technical and infrastructure, optimisation of search as well as governance and training.

From the requirements, the project team was able to design and build a corporate intranet that incorporated the following key elements that set it apart from any other system implemented at Queensland Treasury:

• A site structure that reflects the complex nature of the organisation, while also allowing users to quickly and easily find information.

• An eye-catching graphic design that incorporated different colour schemes for corporate, social and collaborative spaces.

• Customised search that was optimised to the organisation's searching behaviours.

Queensland Treasury - The Social Intranet

- A social space for Treasury staff to interact on a social level, including a bulletin board, an area for staff to post items for sale and other staff social topics.
- Social features throughout the intranet that made employees want to visit the intranet.
- A collaboration space for staff to post questions and discuss with each other on a specific topic.
- A staff directory that extends SharePoint's built-in search and user profiles capabilities to allow for easy searching and viewing of people within the organisation.

To assist user adoption, training for the system was planned and executed in a number of ways through Myriad's SharePoint end user training courses and internal training mechanisms. Myriad Technologies also provided advice on governance and planning to ensure the system is kept well maintained in the years to come.

Line of Business Systems Integration

As part of the staff 'Phonebook', integration between SharePoint, Lotus Notes and Active Directory was required. This was achieved by customising SharePoint's existing user profiles and search to synchronise with the line of business systems and present in an attractive interface that utilised SharePoint 2010's light-box functionality

Applications

A number of applications were developed as part of the Treasury intranet to automate approvals. As part of this Myriad developed a re-usable approval module that allows common business rules to be easily applied to multiple approval processes. Using InfoPath and Nintex Workflow, we were able to easily apply the approval module to the following processes:

- Service Desk request application with integration to Service Desk Express
- A Government ID access request
- A building access request process

Quantifiable Outcomes

Queensland Treasury were able to see significant improvements to the way they do business shortly after rollout of their new Intranet. Some key outcomes that were identified by the business include:

- Staff dramatically increased their use of the Nexus intranet and productivity improved across the organisation.
- Queensland Treasury's ability to inform and engage staff improved significantly.
- Queensland Treasury have opportunities for effective knowledge sharing and problem solving.
- Improved Queensland Treasury's ability to manage innovation and continuous improvement process by providing an easy to use and accessible feedback mechanism.
- Queensland Treasury was supported in achieving best practice business intelligence and information systems.
- A solid and powerful SharePoint 2010 platform to provide for future growth and greater return on the investment for subsequent projects.
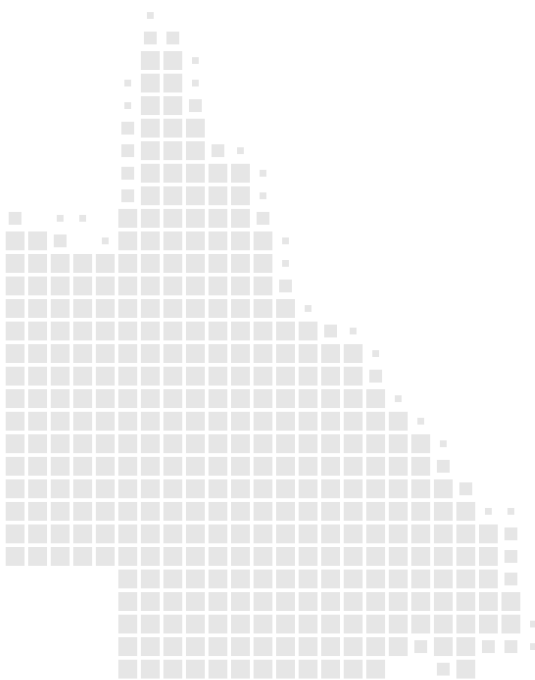
Queensland Treasury were able to see significant improvements to the way they do business shortly after rollout of their new Intranet.

Overview

Country or Region
Australia

Industry
Transport, Postal and Warehousing/Trade, Import and Export

Also applicable to
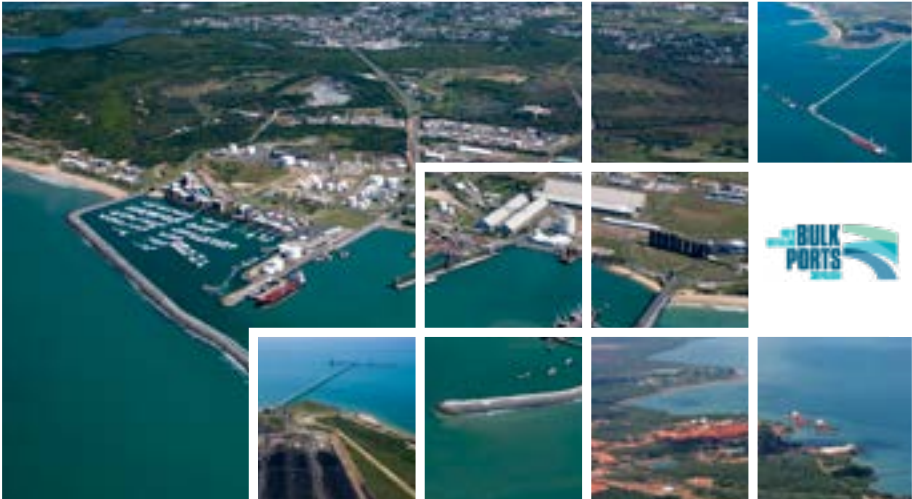Construction and Manufacturing

Customer Profile
Based in Abbot Point, Hay Point, Mackay, and Weipa, North Queensland Bulk Ports is one of Australia's largest port authorities, by tonnage.

Business Situation
North Queensland Bulk Ports needed a highly responsive technical support system that their staff could rely on around the clock.

Solution
After initial consultations to determine scope, Myriad Technologies established a Managed Services support agreement to monitor, manage and provide long-term SharePoint support to NQBP.

Benefits
• Staff are confident knowing highly experienced consultants are at hand to quickly resolve issues and restore normal operations

• Ongoing monitoring of SharePoint to proactively avoid problems and downtime

• Peace of mind that the platforms are being monitored and maintained

North Queensland Bulk Ports (NQBP) is one of Australia's largest port authorities, by tonnage. More than half the weight of Queensland's trade passes through their ports, which are based in Abbot Point, Hay Point, Mackay, and Weipa.

Myriad Technologies - specialising in information management, technology alignment, and best practice within Microsoft SharePoint - was hired to proactively monitor, manage and provide long-term support to NQBP's SharePoint platform.

Formed as the result of the 2008 Queensland Government Review of the Queensland Port Network Structure, the aim of NQBP's creation is to meet the state's long-term supply chain and trading needs. Through sound planning and risk management, NQBP utilises 'good practice' corporate governance to accomplish its outcomes and obligations.

As a port authority, NQBP is responsible for: port planning; port business and infrastructure development; environmental management and marine pollution; security and safety; port efficiency; the maintenance of navigable port depths for shipping; licence, lease and permit issuing to other organisations, and more.

NQPB is also responsible for pilotage operations and navigation at the Hay Point and Mackay ports. At all NQBP locations, towing and stevedoring are outsourced to approved contractors.

The Challenges

After adopting SharePoint as their digital collaboration system, NQBP staff had a number of concerns about using the new intranet, and no internal support capabilities to assist them. No resources were dedicated to monitoring or maintaining consistency across sites, installing updates or correcting errors as they arose. NQBP required an insurance policy in the form of an external, pro-active support system that could be reached at any time.

Finding the right company to manage this work was also a challenge, NQBP chief information officer Bruce Fisher explained. "We were looking for somebody that was Brisbane-based and more boutique - and who could

offer a better service - rather than going for a very large organisation overseas," Mr Fisher said.

"Myriad Technologies has the expertise and they ticked all the boxes of being local, independent, and easy to deal with. They've been able to provide that bespoke service for us."

The Solution

Myriad Technologies conducted a series of workshops and discussions with NQBP to derive the necessary information needed to assess what deliverables and design would be most beneficial for NQBP. Using this information, Myriad Technologies introduced their SharePoint Managed Services program. The service delivers proactive monitoring, maintenance, and management of the SharePoint environment; utilising a range of services and skills to keep it stable, consistent, and issue-free - ensuring business productivity and efficiency.

With a focus on being proactive, Myriad Technologies Managed Services use their collective knowledge and experience to provide monthly detailed reports to NQBP as well as ensuring that the SharePoint environment has all the latest updates and enhancements.

Furthermore, NQBP employees can contact Myriad Technologies at any time for technical support.

The Implementation

Myriad Technologies began engagement by first doing a thorough assessment of the NQBP SharePoint environment. This assessment provides an overview of the server infrastructure and baselines the current state of the platform. The baseline assists Myriad Technologies in implementing Managed Services by identifying any immediate or critical changes that are required.

After completing the initial assessment, Myriad Technologies then established the monitoring solution. This monitoring solution alerts the Myriad Technologies Managed Services team to any issues or events in the NQBP farm that require immediate attention.

Myriad Technologies then conducted an engagement briefing session with the NQBP staff to provide the contact information, engagement process, and escalation processes.

The Benefits

NQBP has observed a number of benefits since Myriad Technologies' Managed Services was made a part of their business. "Managed Services is timely, effective, efficient, and the guys are always on the ground and able to sort issues out for us," Mr Fisher said. "Being able to have our staff comfortable, knowing they're being listened to and having their issues sorted out as quickly as possible, is always of benefit."

NQBP now have both confidence and peace of mind when using their SharePoint environment, knowing access to long-term support is only a phone call or email away.

"During the whole development of our intranet, over the years we've had it, and through the different iterations and changes we've made, Managed Services have made those changes very fluid and easy to manage"

Bruce Fisher
North Queensland Bulk Ports

Overview

Country or Region
New Zealand

Industry Defence

Also applicable to
Mining, Maritime, Exploration, Military Industries, Army, Navy, Airforce, Government

Customer Profile
The New Zealand Defence Force aims to promote the security of New Zealand, and to protect its people and its national interests.

Business Situation
The New Zealand Defence Force requires the ability to share information of a highly sensitive nature from the field and across the organisation in a timely manner; a specific challenge being the ability to move such information from a secure network to a deployed location.

Solution
With Myriad Technologies, the New Zealand Defence Force created a highly commended original solution.

Benefits
- Secure transfer of sensitive information across security boundaries

- Improved access to information allows more informed decision making

- Reduced demand on personnel time to manually replicate content

- Personnel can instead focus on tasks and activities that computers cannot automate
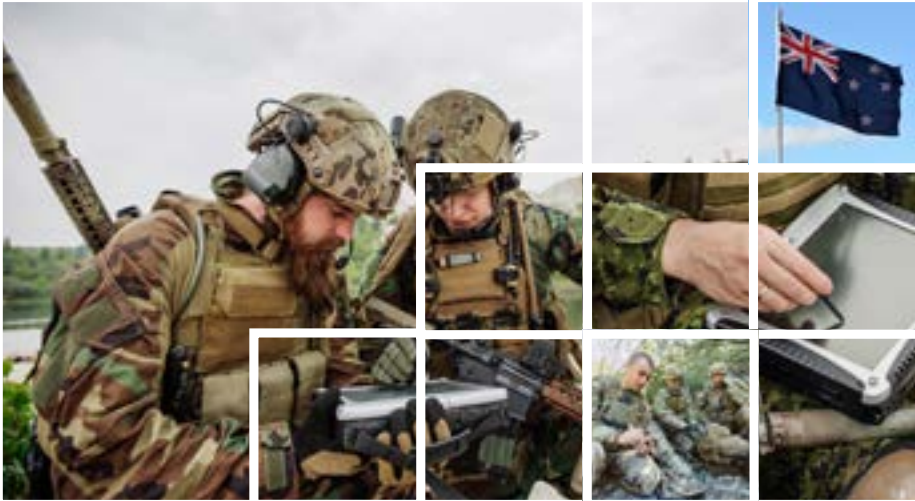
Myriad Technologies has a proven track record of developing and delivering award-winning solutions for military organisations. Myriad Technologies is the Microsoft Gold Partner selected by the Land Network Integration Centre to develop the Mission Secret Network. The New Zealand Defence Force (NZDF) Project is an extension of the information-sharing requirements across coalition forces. This has proven to be a valid platform for sharing information across nations and across security domains.

The NZDF consists of three services: the Royal New Zealand Navy, the New Zealand Army and the Royal New Zealand Air Force. The nation's armed forces adhere to three defence policy targets:

- to defend the country against a range of different threats

- to play a role in the security of neighbouring nations, and

- to take part in the global security front

To fulfil the NZDF policy objectives the organisation conducts and participates in a number of exercises both at home and overseas. These exercises ensure the organisation is ready and prepared to respond to a number of different potential situations or crises.

The NZDF currently has over 11,000 active personnel and 2000 reserve personnel with small numbers deployed overseas on various tasks.

The Challenges

The NZDF encountered many challenges in order to fulfil the organisation's objectives. Most importantly is how information of a sensitive nature is securely distributed and shared around the organisation, especially to remote forces deployed in the field.

The NZDF overcame the specific hurdle of needing to share information from a secure network to a deployed location by employing one-way communication between two separated, air-gapped (physically not connected) networks. The process utilised by the NZDF to achieve the one-way communication was a manual operation that involved downloading the files, scanning them and re-uploading those scanned documents to the

1. There is the ability to describe business processes that are then injected as structured collaboration and content elements within the node.

2. Provisioning of nodes is automatic. Subsequent replication is via the diode/Turbine.

3. Security context and content is replicated across 'T' nodes to support collaboration and secure search for all content.

4. Nodes are provisioned and made 'aware' of each other to support secure collaboration content search across nodes.
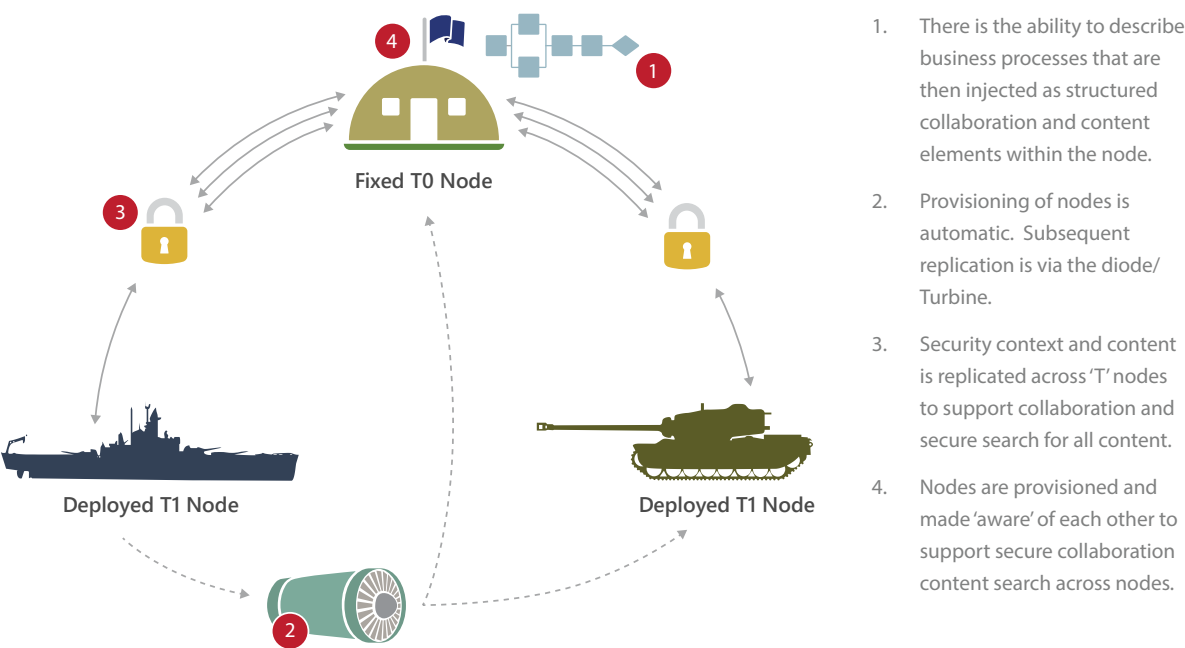
Figure 1: Conceptual diagram of the sharing of information within the network of fixed (T0) and deployed (T1) Nodes.

new network. To modernise these processes with streamlined automation would provide benefits to staff at all levels of the organisation, relieving them of time-consuming tasks that could otherwise be performed autonomously. Essentially, personnel would be allowed to focus on more intellectually-engaging duties.

While the NZDF's existing process met the organisational requirements around security, it was very time-consuming and inefficient. The people required to complete the work were often not available as it required individuals that had both a particular skill set and the necessary security clearance to handle the material. The brittleness of this business process directly impacted the organisation's ability to share information freely and effectively. Further, it reduced the organisation's capacity to make timely decisions based on the availability of accurate information.

The manual process described is antiquated in the commercial enterprise sector, but is still remarkably common in government organisations around the world that have specific security demands placed on their information.

Sharing information across the whole organisation presents a significant challenge and the solution implemented by Myriad Technologies is the first known technical solution to combine commercially off-the-shelf products to deploy a working solution in the field.

The Solution

Myriad Technologies, an Asia Pacific partner for iOra and a Microsoft Gold Partner specialising in content collaboration, was involved in the 'highly commended' original development and implementation of the Turbine through the Mission Secret Network. The work resulted in recognition at the Land Defence Australia Industry Innovation Awards, and for this reason, Myriad Technologies was asked to develop a solution, to assist in the implementation of, and to support the NZDF project.

The solution Myriad Technologies developed to overcome the challenge of needing secure communication between two separate domains involves three key components. These are:

The Turbine: The content replication challenge was overcome through a network appliance called the Turbine and a software package called Geo-Replicator. The Turbine sits between the two domains and forms a secure connection, allowing for one-way communication. At the centre of the Turbine is a data-diode that restricts the flow of traffic to a single direction, physically isolating the receiving domain from being able to communicate with the source domain.

Geo-Replicator: This is an industry-leading replication tool which is trusted by governments and defence organisations across the globe. Geo-Replicator provides guaranteed access to up-to-date business information, irrespective of connectivity and location. It works by collecting all the individual changes made in an environment and compressing them into a package called an 'amendment'.

Amendments are then transmitted, unpacked and deployed to the replicated environment. By only transmitting the individual changes rather than whole files and by using industry-leading file compression, amendment sizes are considerably smaller, ensuring they can be efficiently communicated across low bandwidth connections.

SharePoint: Developed by Microsoft, SharePoint is a content and collaboration platform already employed by the NZDF, as well as by many other governments and businesses across the globe. The organisation wished to continue using it while overcoming the challenge of replication of specific content across domains.
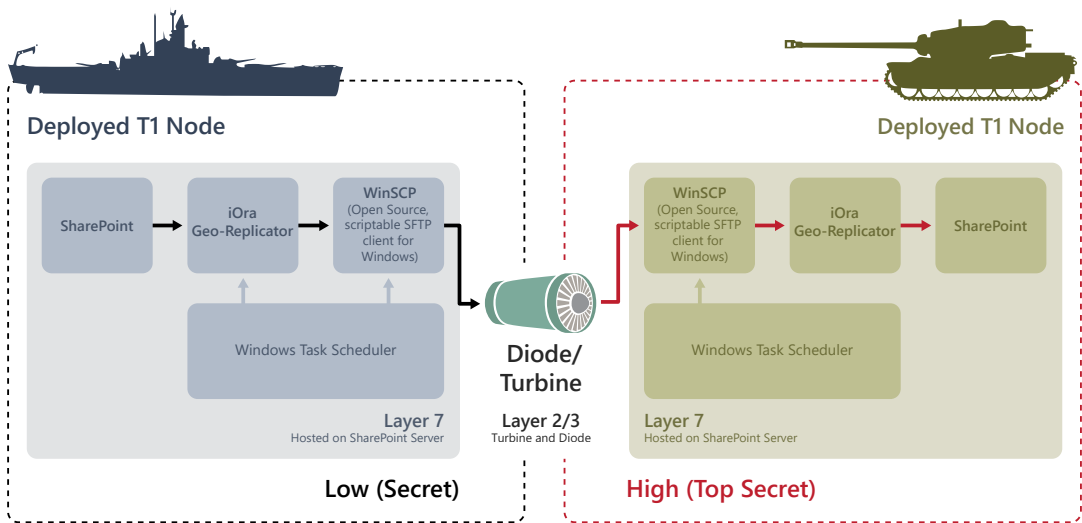

Figure 2: Conceptual diagram of the passing of information from one deployed T1 Node to another.

When combined, these three elements allow for secure one-way communication and replication of content from the secure to the deployed environment while ensuring the nonrepudiation of data.

Further information regarding the technical specifications and capabilities of the solution can be found in Myriad Technologies' cross-domain replication white paper.

The Implementation

The solution was designed for deployment across the entire NZDF organisation, with the original implementation created to be a test case; thus, it was deployed as a part of a live field exercise. Before the live exercise was conducted, a two-week rehearsal was held with one week of set-up prior, to test the system and ensure smooth operation during the live exercise.

Both the implementation and the solution's deployment were successful during the rehearsal, demonstrating that the process could be easily automated. The live exercise further enhanced the deployed solution by identifying key unforeseen operational challenges to further refine the final solution.

In summary, the primary project objective - to develop a solution that replaced the manual process of transferring content between domains - was a success, which ran on time and within budget.

The Benefits

The test case was successful in proving the potential for the organisation, for example by improving the transmittal of time-sensitive information and by freeing-up scarce and critical resources. These potential benefits could be further realised if the solution was to be implemented more expansively.

Moreover, the exercise formed a Proof of Concept, confirming that automating the information replication process across two disparate domains to streamline the sharing and disseminating of critical information is possible. This has helped illustrate various business benefits, including reducing the human error factor, leading to a better quality outcome overall, than the manual approach. Further, staff are freed from mandraulic tasks to focus on more intellectual work, for example information management, assessment or situational awareness.

The solution reduces the need for specialist personnel resources by removing the need to manually replicate content between domains, a tedious process which is extremely time-consuming and demanding of a specific skill set. In addition, decision-making and other activities can occur more effectively by providing defence personnel with their required information in a timelier manner.

The time-saving benefits of the solution translate into cost savings for the organisation in the long-run. The solution developed allows for government and defence organisations who are typically heavily restricted by information security to also enjoy the productivity-boosting benefits of collaboration and content management systems in a secure manner.

One company, Myriad solutions.

Myriad Technologies

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