Regine Deleu is an All-of-Government Enterprise Architect who reports to Government Enterprise Architect James Collier at the Department of Internal Affairs. Their work supports the work programme of the ICT Functional Leader across government, Government Chief Information Officer Colin MacDonald, who is also the Chief Executive of the Department of Internal Affairs.

She presented to an IT and Enterprise Architecture conference in June in 2014.
Government expectations

Delivering an effective, efficient and fiscally responsible Public Sector
• NZ government has to do more with less

Public Service to be more innovative, enterprising, driven and focused on outcomes
• clients demand robust, scalable, flexible ICT services that meet their needs

A strengthened system of assurance
• to better manage risk and quality, to enhance trust and confidence

Functional leaders lead this change: “aimed at securing economies or efficiencies across departments, improving services or service delivery, developing expertise and capability across the Public Service, and ensuring business continuity”.
[CAB Min (12) 16/10]

Current Functional Leaders:
ICT – Colin MacDonald (as GCIO)
Property – Brendan Boyle (MSD)
Procurement – David Smol (MBIE)
ICT Strategy and Action Plan

Unlocking the value of government information and harnessing technology to deliver better, trusted public services
Services are digital by default

*Government information and services must be joined up and easy to access through common customer-centric digital channels.*
**Information is managed as an asset**

*Information and data is at the core of all government services, and government is the guardian of this asset on behalf of the New Zealand public. Exercising this responsibility while making more effective use of this critical resource is at the heart of transforming government services for citizens and businesses.*

- Information hubs provide a secure platform for innovation and growth
- Information assets generate new economic and social benefits
- Step-change in valuing and managing information assets
- Unlock the value of information
- Embed trust and security
- Build information governance and capability
Investment and capability are shared

Government’s investment in information and technology must be integrated, leveraging common capabilities to deliver effective and efficient public services.

- Build workforce capability
- Accelerate the uptake of common capabilities
- Integrate ICT planning
- Capability is built and assets are consolidated
- New sourcing models and capabilities are embedded
- Capabilities and services are optimised

Systemic behaviour change

Time
Leadership and culture deliver change

Leadership and culture change are needed to give effect to this strategy, through developing active leadership at all levels. Change needs to be delivered collaboratively, with delegated decision rights and clear accountabilities that connect at a system level.

- Collaboration pervades service and information leadership
- Co-creation of services and capabilities is standard practice
- ICT leadership is aligned to the Action Plan
- Reorganise capability
- Develop leadership
- Enhance governance and decision making
- Collaborate, communicate and engage
ICT Assurance

- ICT Assurance Frameworks
- Cloud Computing Risk and Assurance Framework
There are some key focus areas an Enterprise Architect needs to keep in mind when dealing with All-of-Government projects, government transformation or any merger of agencies. The key challenges for a successful transformation are:

- Keep the focus on delivering better public services outcomes.
- Control the scope.
- Don’t do ICT for the sake of ICT.

Another focus area is the needs and expectations of the customer, which will change overtime.

Then we have the impact on the Government enterprise architecture and how it will be delivered.

Lean Enterprise Architecture is all about delivering the architecture in an agile way, by partitioning the architecture, having architecture sprints, close collaboration with the customer and system-wide integration.

To transform government or any other organisation, we need to know the baseline architecture which is done in a bottom-up approach, and the target architecture which is done in a top-down approach.
• In an All-of-Government project, the scope can be difficult to define and with so many participants it changes over time. The requirements can be difficult to baseline and budget pressure can destabilise the scope. That is why there needs to be strong governance in place to control the scope changes.

• The change initiatives need to come from the business, with a strong engagement with ICT to get the best outcome.

• Selection of solutions should be avoided before the requirements are defined.

• But the main thing is to keep the focus on delivering better services for citizens and not to get distracted by new technology trends and vendor’s expectations.

Key Challenges to Government Transformation

- Focus on delivering better public services outcomes
  • Transformation requirements should be citizen focused and not be influenced by technology trends and vendors.
  • The needs and capabilities of citizens should be foremost in the design.

- Control the scope
  • Avoid too many scope changes
  • Transformation scope can be difficult to define and changes over time.
  • Requirements are sometimes fluid and difficult to baseline.

- Don’t do ICT for the sake of ICT
  • Technologists shouldn’t drive change initiatives without an overview of the impact on business.
  • Business must engage with ICT to deliver the best outcomes.
  • Business requirements must be defined before solutions are selected.
• How to keep up with the constant change in expectations and needs of the citizens?
• We need to have a service delivery system in place which is flexible and agile enough to deliver new services.
• People want to see their money well spent and want to see constant improvement in public services. Those services are easier and better in a digital environment and will be available via any channel.
• Citizens should be empowered to control and manage their information and transactions with the government.
What we also need to keep in mind when doing All-of-Government projects, government transformation, or mergers is the impact on the Enterprise Architecture itself.

When creating an All-of-Government Eco System there are a lot of things to consider:

- Across different agencies there are a mix of technology landscapes:
  - In-house ICT
  - Public and private clouds
  - Software as a Service
  - Platform as a Service
- If we want to bring agencies closer together in an effective way we need a heterogeneous system, not a monolithic architecture.
- There is an increased focus on agile to deliver incremental changes quicker. That way people see a constant improvement of the public services.
- Existing systems are gradually modified to fit the AoG Eco System.
- Service-oriented architecture and message-oriented middleware are used to increase reuse of new and existing services and systems.
- With cloud and multi-agency sharing of information we need to make sure that citizens’ privacy and control of their information is in place.
We are developing an Accelerated Delivery Model (ADM) to improve the speed in which services are developed and delivered by agencies. The ADM has five phases:

- **Discovery**: Rapid Requirement Design. We run different streams or scenarios of initiatives. There are workshops with subject matter experts from every agency involved, third party experts if needed, and also citizens to define the requirements of those scenarios. Then the business analysts/architects and the enterprise and solution architects work together to design the business processes, common business services and high level solution. This is done in an iterative way with a show and tell at the end of every iteration where stakeholders can sign-off the artefacts or give comments and feedback for the next iteration.

- **Alpha**: Agile delivery process with the collaborative agencies and with extensive feedback and testing from citizens.

- **Beta**: Stabilise phase where the integration will be done with other scenarios, business cases and the overall enterprise environment. Additional overall performance tests, scale up the solution to make it more fit-for-purpose and extend the users who can test the solution.

- **Live**: This is the deployment of the solution into production. Deployment tests are executed and there is a handover to BAU.

- **BAU**: Maintenance of the service. Making sure monitoring and controls are in place to check the performance and fit-for-purpose measurements. Customer service is involved to improve the service and identify issues customers have with the service. Customers are able to report issues and suggest improvements.
The baseline or ‘as-is’ architecture is done with a bottom-up approach to identify candidate services for consolidation and sharing.

The target or ‘to-be’ architecture is done with the top-down approach to develop cross-agency governance, policies, procedures, tools and guidelines to help with decision-making and delivery. It is also to get insight into each agency’s compositional sub-systems.
To help agencies to develop their enterprise architecture, the GCIO’s Enterprise Architecture team has created a Government Enterprise Architecture reference model (GEA-NZ). This single framework guides agencies in describing common capabilities and optimising their delivery of All-of-Government goals.

Its primary purpose is to inform and guide the development of government agencies’ standards, business processes, data and security architecture and ICT services and infrastructure so that they can more effectively deliver government’s goals.

GEA-NZ is NOT designed to replace existing agency business and ICT development plans or architecture.

GEA-NZ facilitates:
- Defining the measurement of results
- Comparing proposals for capability development
- Identifying and reducing duplicated effort
- Identifying oversights
- Identifying opportunities for re-use and reducing the prevalence of ‘point’ solutions

GEA-NZ outcomes:
- Reducing the risks of fragmented ICT development
- Reducing the costs of duplicated effort
- Improving the quality of deployed solutions
- Improving the sustainability of deployed solutions
- Improving the ability to share information between government agencies
- Improving the ability for information held by government agencies to be accessed and used by external users.
GEA-NZ version 3.00 will have the standard four main reference models: Business, Data, Application and Infrastructure.

The Business Reference Model (BRM) covers customers (individuals and organisations), channels, business functions, business processes, products and services.

The Data Reference Model (DRM) covers data definitions, data structures, data governance, and information management.

In the Application Reference Model (ARM) you will have ICT services, SOA services, COTS and customised applications. And the Infrastructure Reference Model will categorise facilities, networks, platforms and devices.

Around those four Reference Models we have:

• Performance Reference Model (PRM) which will have performance measurements for agencies
• Security Reference Model (SecRM)
• And Standards to be used (StdRM)

Around all of this we have the Strategy Reference Model (StrRM)
• NZ citizens and organisations interact with the government through government services. Those services are built on the business capability which uses data assets which are implemented on IT Assets.

• The BRM categorises the business capabilities into business areas, lines of business and business functions. The BRM will guide the agencies and government through their transformation, analysis, design and reengineering activities.

• The data is categorised in domains, subjects and topics. The DRM is a guide for data governance, data quality assurance, re-use of data and information-sharing.

• Data is hosted on applications and ICT services. These applications and ICT services - the soft IT assets - are categorised in domains, areas and categories. The ARM guides the agencies in their application portfolio management and will result in cost benefits by sharing applications and ICT services and decreasing redundancies and duplicated applications.

• Applications and ICT services are hosted on infrastructure. The IRM categorises the infrastructure - the hard IT assets - into platforms, facilities and networks. The IRM is used as a guide for asset management. This will also result in cost benefits by sharing infrastructure and removing redundant infrastructure.

• All these domains will be guided by standards: International standards, NZ standards, local standards, policies, guidelines, and even best practices. This improves the interoperability between agencies, ensure common use and understanding.

• Besides the standards, we have security. Every function, process, area and platform will have its purpose, risks and security control that needs to be in place. This is to protect the citizens’ privacy and secure the business and technology environment.

• On the other side we need to have measurements in place to improve agency’s performance, governance and costs.
• All those domains are influenced by the strategy: the goals, objectives and roadmaps.
One of the maturity assessments we have created is an Information and Data Governance Maturity Assessment to raise the maturity of data governance within agencies.

This Information and Data Governance Maturity Assessment tool gives agencies guidelines to help them with data governance.

The data governance focuses on five key areas:

- The completeness and control of the data landscape
- The responsibilities and accountabilities towards data and information
- Creating a common data landscape to have better communication and collaboration between agencies and within agency’s departments.
- Data quality assurance
- And reporting and knowledge management.

After the assessment we provide agencies with the typical steps they need to perform to improve their level of maturity in specific areas.

This assessment will be performed annually to see the progress.