



**Multinet  
Gas Networks**

**Attachment 9.9**

## **IT Investment Plan**

**Final Plan 2023/24 – 2027/28**

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July 2022

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## Executive summary

As a gas network service provider, we must understand and meet rapidly changing customer needs. This means building a flexible and responsive business that seeks to improve productivity and enhance the way we manage the vital community assets we own. To do this, we must invest in information technology (IT) that allows us manage and monitor our assets, meet our obligations and provide consistent and responsive customer service.

This plan outlines the key IT investments proposed for the next access arrangement (AA) period (July 2023 to June 2028). The plan covers traditional IT such as enterprise applications, IT hardware, corporate data and managed infrastructure, as well as the operational technology (OT) systems for our Supervisory Control and Data Acquisition (SCADA).

Our IT and OT systems provide the following functionality:

- managing market transactions;
- issuing and controlling field work;
- monitoring and recording gas deliveries to customer sites;
- facilitating emergency response services;
- monitoring network condition;
- analysing network capacity;
- recording the configuration and location of assets;
- providing information to our customers and the community; and
- interacting with our customers.

Combined, these functions allow us to provide a safe, reliable and affordable gas supply to our customers.

Like many utilities globally, we are responding to the challenges brought about by climate change and the need to reduce carbon emissions, changes in customer preferences, new technology, rising cyber threats, energy efficiency and the price competitiveness of energy resources. These challenges are changing the way gas is used across our network.

In 2017, Australian Gas Networks (AGN), Multinet Gas Networks (MGN) and Dampier Bunbury Pipeline (DBP) came together to form Australian Gas Infrastructure Group (AGIG). AGIG operates across multiple Australian jurisdictions, bringing together a wealth of expertise and experience that allows its various businesses to share knowledge, information and resources for the benefit of customers.

AGIG's scale and breadth of resources presents opportunity to deliver benefits for MGN's customers in Victoria. Not least, it allows us to review and rationalise our IT systems and infrastructure across the group, moving to shared platforms where practicable. During the current AA period (January 2018 to December 2022) we have completed a program to separate MGN's IT from United Energy. We have also started a program to rationalise our IT systems and infrastructure across AGIG where possible.

Under our AGIG IT Strategy, launched in 2019, we will consolidate several IT solutions, including for example moving all AGIG businesses on to a single enterprise resource planning (ERP) system. The 'One ERP' initiative is expected to be completed by 2026 and will achieve an aligned finance and procurement environment across AGIG, which will provide supporting tools and standardised processes in line with good industry practice.

Our aim is to develop a stable and aligned IT environment which will leverage economies of scale across all of our entities. Further we will enhance collaboration with customers and across the business, improve utilisation of data and reporting, and appropriately manage cyber risks.

By the end of the current AA period, we will have invested \$46<sup>1</sup> million in capital expenditure on our IT systems, including:

- separation of MGN's IT from United Energy;
- a consolidated AGIG data centre;
- in housed and co-located MGN's Network Control Centre with DBP's Control Centre;
- works planning and scheduling;
- updates to a number of our critical applications in line with accepted industry practice and manufacturer requirements;
- system enhancements to meet new regulatory requirements, with the most significant being those for life support customers;
- major upgrades to our geographical information;
- Phase 1 of our "One ERP" project;
- website enhancements; and
- cyber security capability improvements.

In the next AA period, we propose to invest \$67 million in our IT systems, which is an uplift of \$21 million compared to the current AA period.

The uplift is driven by a significant program of works required to upgrade our obsolete SAP ECC6 systems which have reached end of life and will become end of vendor support during the period. It includes a significant upgrade of our customer billing, asset management and ERP systems, which will also enable alignment with our AGIG IT Strategy for One ERP (\$32 million). Further, we will invest in Data Architecture, Reporting and Governance across AGIG to improve capture, quality, management and use of standardised data across the group (\$2 million).

We will invest \$29 million over the period to maintain currency and deliver ongoing system improvements for our existing IT systems, further uplift our cyber security capabilities and to replace end-of-life IT devices and infrastructure.

We are also proposing to invest \$4 million to:

- support a remote metering solution (\$1 million); and
- provide a better and more accessible digital customer experience (\$3 million).

Table 0.1 provides a summary of projects we will undertake in the next AA period.

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<sup>1</sup> Unless otherwise stated, all costs in this document are expressed in real 2021 dollars and excludes overheads and real cost escalation.

Table 0.1: Summary of next AA period IT projects

Project	Recurrent/ non-recurrent	2023/24	2024/25	2025/26	2026/27	2027/28	Total
Application Renewals	Recurrent	2,287	4,426	2,986	3,850	3,658	<b>17,208</b>
Infrastructure Renewals	Recurrent	3,222	1,014	816	582	3,851	<b>9,485</b>
Digital Customer Experience	Non-recurrent	869	1,095	1,001	-	-	<b>2,965</b>
AGIG Strategy & Roadmap - Applications	Non-recurrent	8,564	19,426	6,091	-	-	<b>34,081</b>
AGIG Strategy & Roadmap - Cyber	Recurrent	605	825	582	226	246	<b>2,484</b>
Remote meter reading solution	Non-recurrent	1,251	-	-	-	-	<b>1,251</b>
<b>Total</b>		<b>16,798</b>	<b>26,786</b>	<b>11,476</b>	<b>4,658</b>	<b>7,755</b>	<b>67,474</b>

The following table shows the split of recurrent and non-recurrent IT investment forecast for the next AA period, compared with the total investment expected to be undertaken by the end of the current AA period (January 2018 to December 2022).

Proposed IT investment \$'000 2021

IT program of work	2023/24	2024/25	2025/26	2026/27	2027/28	Total next AA period	Total current AA period
Maintain current levels of IT services (recurrent)	6,114	6,266	4,384	4,658	7,756	29,177	24,869
Efficient and effective service delivery (non-recurrent)	10,684	20,520	7,092	-	-	38,297	21,122
<b>Total</b>	<b>16,799</b>	<b>26,486</b>	<b>11,476</b>	<b>4,658</b>	<b>7,756</b>	<b>67,474</b>	<b>45,991</b>

Tables may not sum due to rounding

The IT investments in this plan are designed to maintain the existing IT environment and services, reduce a range of IT safety and security risks, improve the service experience of our customers and transition a number of core systems in line with our AGIG IT Strategy and other key business strategies. We will renew our critical applications and IT infrastructure in line with good industry practice, and implement a number of system improvements that will further us on our journey to transform the AGIG-wide IT environment.

The investment proposed in this plan will build on our digital customer service capabilities by providing targeted digital customer experience improvements tested through our customer engagement program. This will ensure we can continue to meet the customer service expectations of our customers and stakeholders, by investing in the digital services they value and prioritise.

These outcomes align with our vision objectives to deliver quality services that our customers value, to be recognised as a good employer and to remain sustainably cost efficient. More significantly, our proposed investments are informed by and are aligned with what our customers have told us. They expect us to get the basics right, with their top three priorities being price/affordability, reliability of supply, and maintaining public safety. They also want affordable and accessible services.

The end-to-end program of work was developed and will be delivered using a formal governance framework consistent with the industry standard business and technology project management methodology. The overall program of work is larger than that undertaken over the current AA period, and has been staged to balance the resource profile and allow for the most efficient and successful delivery.

This IT Investment Plan sets out the context for our IT investment (Section 1), our plan for the next AA period (Section 2) and consistency with the National Gas Rules (Section 3).

# 1. Context

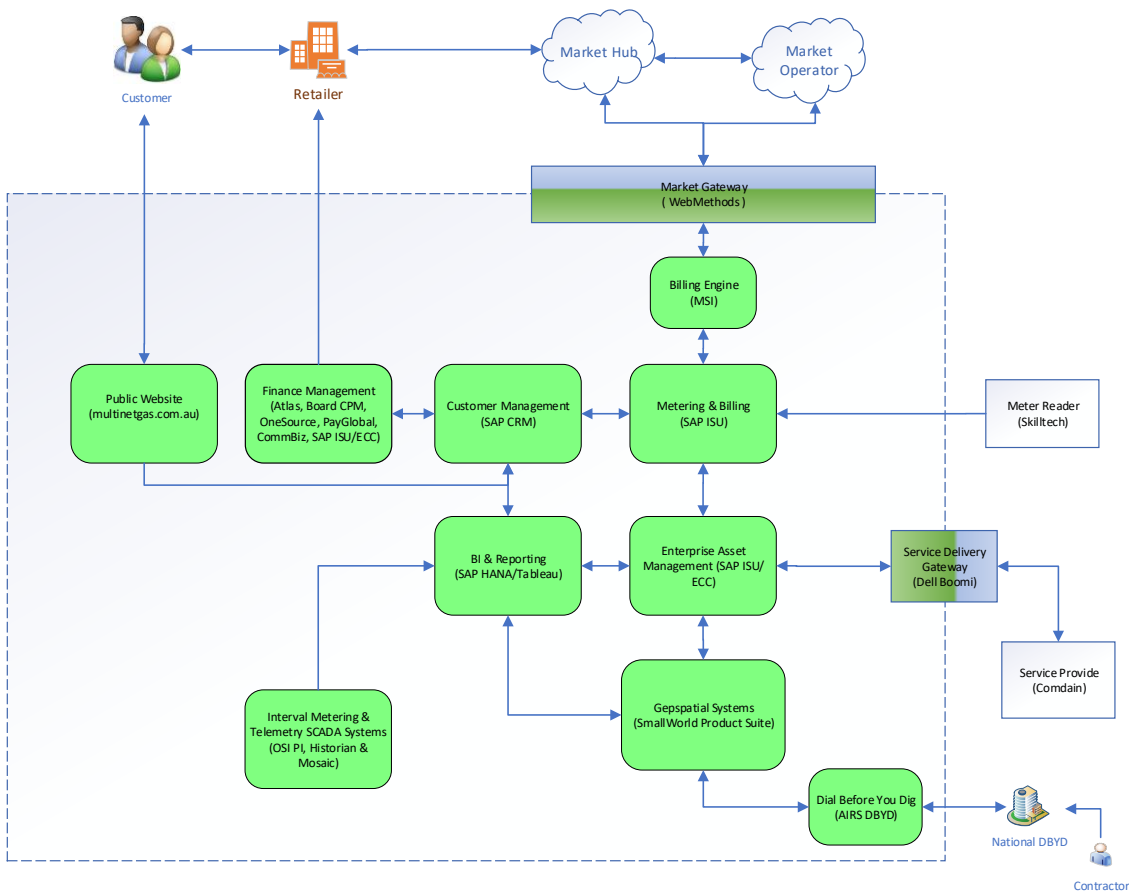
## 1.1. Core IT architecture

Our IT systems provide the following functionality to allow us to deliver a safe and reliable supply gas to our customers:

- managing market transactions;
- issuing and controlling field work;
- monitoring and recording gas deliveries to customer sites;
- facilitating emergency response services;
- monitoring network condition;
- analysing network capacity;
- recording the configuration and location of assets;
- providing information to our customers and the community; and
- interacting with our customers.

We operate and maintain a highly integrated IT architecture as shown in Figure 1.1.

Figure 1.1: MGN IT infrastructure



Our key business systems are outlined in Table 1.1.

Table 1.1: Overview of key IT and OT business systems

System	Functionality
Geospatial Information System (GE Smallworld)	Provides management of map-based (Cadastre), delivery point lifecycles, network configuration and connectivity, emergency response and mains extension and replacement planning
Networks Interval Metering Data System (Historian OsiPi)	Provides historical storage of real-time telemetry and SCADA data
MSI - CATS/B2B (until replaced by OneERP Phase 2)	Market System Interface for Retailer and AEMO B2B transactions
Dial Before You Dig (AIRS DBYD)	Provides management of national Dial Before You Dig enquiries and asset location notifications
Mobile maps (Network Viewer, Spookfish)	Provides the capability to view GIS maps on mobile devices, enabling a geospatial understanding of asset locations in the field
Metering & billing system (SAP ISU)	Provides transaction workflows, meter readings and delivery point billing
Enterprise asset management (SAP ISU/ECC)	Provides planning, dispatching work, job completion details, delivery point status management, preventative maintenance, contractor payment and meter management services
Application Integration (Web Methods)	Transfers data between MGN applications and market interactions
Telemetry system (MOSAIC)	Provides real time data and alarms to enable effective remote monitoring of critical assets
Business intelligence platform (SAP S/4 HANA/Tableau)	Provide the technology platform to combine multiple sources of data to facilitate analysis, reporting and inform business management decisions
Enterprise Document Management System (EDMS) (Meridian)	Drawings management system integrated with GE Smallworld and DBYD
Service Delivery Gateway (Dell Boomi)	Provides data integration between MGN's Enterprise Asset Management system (SAP ISU/ECC) and its service provider for work orders, service orders and trouble orders.
Website/web	Public facing websites
Enterprise resource planning (SAP ECC6)	Provides the platform for all accounting, budgeting and planning and tax functionality
Employee Self Service (PayGlobal, SAP LMS)	Provides the platform for all employee information, performance management, payroll, and learning & development
Customer Relationship Management (CRM) (SAP CRM)	Customer Relationship Management tool used for customer interactions (complaints, compliments, and enquiries)

Major projects initiated during the current AA period include MGN separation (including establishing an AGIG data centre platform and WebMethods upgrade), NCC separation (including upgrade of core Operating Technology applications) upgrade of our EDMS and geospatial information systems (GIS) as well as numerous system enhancements to core business applications.



In 2017 AGN, Multinet Gas Networks (MGN) and Dampier to Bunbury (DBP) came together as a group, to form Australian Gas Infrastructure Group (AGIG). AGIG inherited a portfolio of disparate systems across each of these entities at varying stages of their lifecycle. In late 2019, following MGN's successful IT separation from United Energy, we developed the AGIG IT Strategy and Roadmap. The Roadmap sets out a two-phased approach to stabilise and consolidate the technology environment across AGIG's businesses aimed at leveraging economies of scale and standardising and simplifying processes across the group. The program commenced in 2020 and continues through to the end of the next AA period.

We coordinate many of our programs, such as infrastructure renewal and cyber security uplift, across AGIG entities. Our application renewal program seeks to maintain our existing suite of IT applications at an acceptable industry standard by scheduling updates so that the ongoing IT renewal program is delivered in an efficient and seamless manner.

## 1.2. Vision objectives

Our vision is to be the leading gas infrastructure business in Australia. To help achieve this vision we have a set of vision objectives, which are to deliver for customers in terms of safety, reliability and customer service, be a good employer, and sustainably cost efficient.

Having fit for purpose and efficient IT systems plays a big part in achieving these vision objectives. IT systems support the day-to-day running of the business and allow us to operate the gas network safely and reliably. The running costs of IT are also a direct contributor to our efficiency. Rapid growth in the IT landscape requires a vigilant, continuous improvement approach to ensure IT systems performance is 'fit-for-purpose', robust, resilient to external threats and delivered at the lowest possible cost.

This IT investment plan is designed to support our vision objectives. In particular our IT investments over the next AA period will:

- Deliver for customers:
  - We will maintain and update our critical business systems in line with manufacturer requirements and further uplift our cyber capabilities to mitigate the substantial risks associated with IT failure or security breaches of our critical business systems. This in turn minimises safety risks to customers and employees, as well as unplanned outages and disruption of supply for customers.
  - We will improve data capture, collation and analysis to ensure the visibility and mitigation of safety and reliability risks and better enable our business to manage assets in line with our agreed risk profile (e.g. more real time information on asset components identified as showing signs of deteriorating reliability will allow this information to be integrated into the maintenance/replacement prioritisation and scheduling processes).
  - We will improve digital customer services to meet the expectations of our customers, allowing them to interact with us in more ways and get timely access to information about their service and any network activities that might impact them.
  - We will provide a remote meter reading solution to help us reduce estimated reads due to lack of access, which we know are a key pain point for our customers.
- Help us be a good employer:
  - Continued alignment of our IT systems and infrastructure across AGIG will ensure our employees have access to the right tools and systems to undertake their work. This allows employees to effectively communicate and collaborate across the group, reduces employee frustration and the potential for errors and supports employee engagement and skills development.

- The remote meter reading solution will help us to meet our obligations for obtaining actual meter reads while also mitigating a number of health and safety risks for our meter reading personnel.
- Keep us sustainably cost efficient:
  - By maintaining and updating our critical business systems in line with manufacturer requirements we will avoid significantly higher overall lifecycle costs (e.g. needing to hire expensive IT specialists for urgent work to correct system issues) and reduce the potential for compliance breaches and the associated financial penalties and costs (e.g. related to compromised staff and customer data).
  - By maintaining and updating our critical business systems as part of a nationally coordinated program we will achieve economies of scale and scope.
  - By investing in new systems and automated processes, we will provide tangible economic benefits to customers including, for example, through process efficiencies (reducing time and effort) and increasing project optimisation.
  - By uplifting our cyber security risk management capabilities in line with good industry practice and to meet our legislative and other regulatory obligations.

### 1.3. Customer and stakeholder engagement

We are committed to operating our networks in a manner consistent with the long-term interests of our customers. To facilitate this, we conduct regular engagement to understand and respond to the priorities of our customers and stakeholders. Feedback from customers and stakeholders is built into our asset management considerations, and is an important input when developing and reviewing our expenditure programs.

Customer preferences and expectations have been explored and assessed through a series of independently facilitated workshops and documented in KPMG's Customer Engagement Report provided in Attachment 5.3 of our Final Plan.

Across all three of the Victorian gas distribution networks, we found customers' key priorities are affordability, safety and reliability, customer service and preparing for the future.

This plan, and the proposed IT projects outlined in it, are designed primarily to maintain the existing IT environment and services, while mitigating a range of IT safety and security risks. This in turn allows us to operate the network consistent with technical specifications, safety standards and compliance requirements, thereby helping maintain a safe and reliable service to customers.

Customers value and feel empowered by access to digital communication options. While customers prefer phone for priority services like a gas leak, digital communications (SMS) (which are not currently available) were preferred for updates on outages and new connections. SMS for communications and customer service appealed to many customers for its convenience and the ability to receive instant notifications. It is also a high valued communication tool by CALD customers and senior Australians. 90% of customers supported the proposed digital services package in our Draft Plan, inclusive of SMS, at an additional price of \$1 per annum. We have developed a digital customer experience program (discussed at section 2.3.1.1 below) for the next AA period to deliver on customer needs for more online and SMS functionality for interacting with us.

There was some interest from customers in new digital ways to manage their gas usage and reduce their bills. We discussed potential digital metering options with customers (technologies and likely costs) and asked what benefits they would see from more digital metering. Making gas usage more efficient is most important to customers. In fact, customers' top three priorities with respect to smart metering and their usage are to make usage more efficient (50%), to get notified when usage has

changed (42%) and not to have estimated bills (41%). Many customers cited the ease by which they can monitor their electricity usage, and wanted the same opportunity with their gas supply.

Customers were supportive of our proposal to install remote read meters for hard to read meters, and introduce new options for self reads and fact sheets on typical appliance usage and running costs. A small part of our IT plans will support the introduction of remote metering (see section 2.3.1.2 below and our Metering Strategy in Attachment 9.8 to our Final Plan).

Knowing affordability is a top priority, we will endeavour to deliver the IT projects outlined by this plan for the lowest sustainable cost, thereby minimising impact on distribution network tariffs.

Further information on our stakeholder engagement program is available in Chapter 5 of our Final Plan.

## **1.4. Basis of cost estimates**

Cost forecasts for IT programs have been developed using a bottom-up methodology utilising a combination of tenders, historical costs for similar programs of work delivered, vendor cost estimates or advice from independent expert consultants.

All costs presented in this plan are direct unescalated dollars of June 2021 (i.e. excluding overheads and escalation) unless otherwise labelled.

## 2. Our IT investment plan

### 2.1. Overview

The program of work planned for the next AA period is designed to:

- 1 maintain the current levels of IT services; and
- 2 enable efficient and effective delivery of services in line with our customers’ expectations.

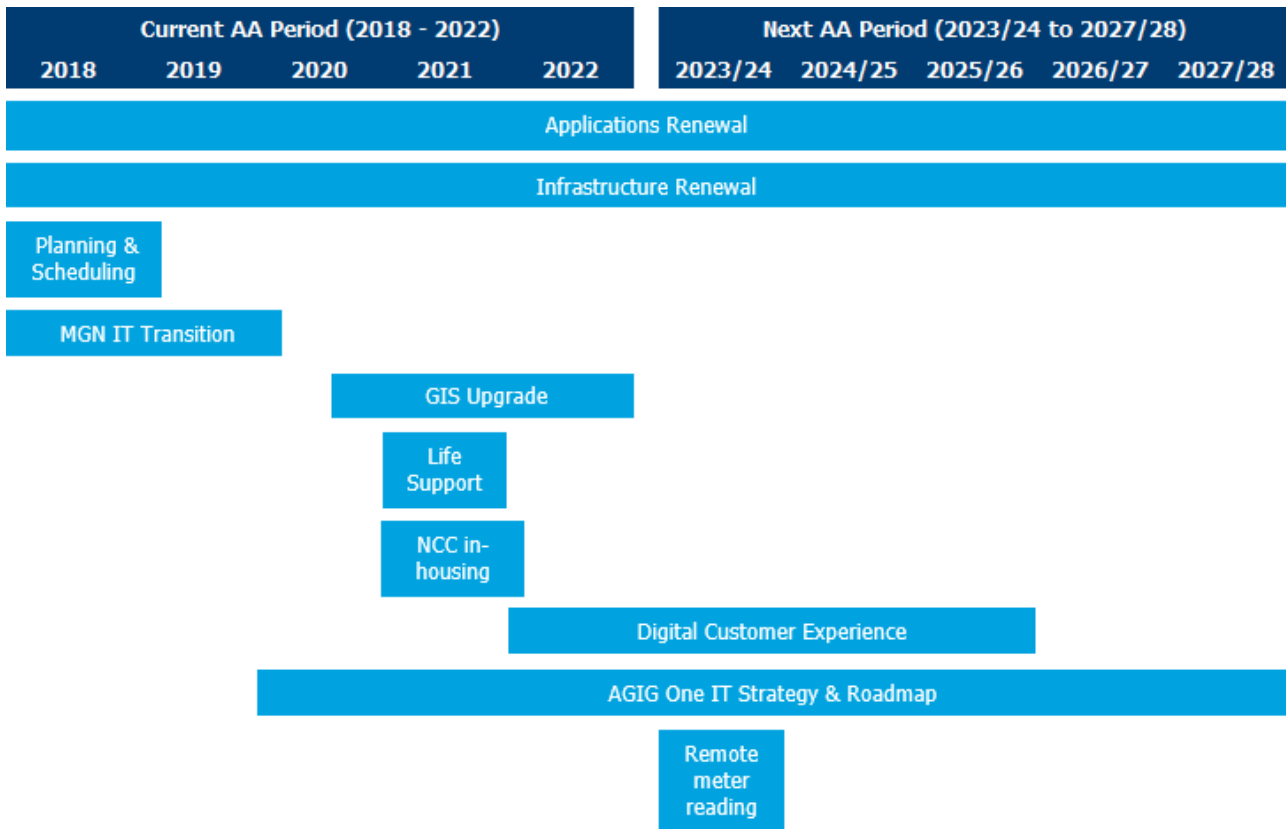
Much of our expenditure to maintain the current levels of IT services is recurrent in nature. This is because it involves updating/renewing existing software applications that retain substantially the same services, functionalities, capabilities and market benefits as existed prior to the updates.

Other IT expenditure to enable efficient and effective delivery of services to customers, including offering new digital services in line with their expectations, is non-recurrent. This is because it involves one-off investment in new systems to allow us to operate the network and the broader business. From time to time, large investment to replace or transition a core system/s is required. In the next AA period, we have a significant program of work to upgrade MGN’s core enterprise resource planning, enterprise asset management, customer and billing to a new SAP platform.

We will also continue alignment of our IT systems and infrastructure across AGIG, including the coordinated and ongoing uplift of our cyber security risk management capabilities in line with legislative and regulatory requirements and good practice risk management.

Figure 2.1 shows the timeline of the full program of work, showing the projects being completed in the current period, as well as those planned for the next AA period.

Figure 2.1: Timeline of the IT program work planned for the next 5 year period



### 2.1.1. Key themes

The projects and programs planned for the next five year period are interconnected and together target six key overarching themes or outcomes. Figure 2.2 describes each of the six themes and Figure 2.3 shows how the program is connected and targeted at the six key themes and outcomes. Further to this, Appendix A explains how each program contributes to achieving each theme or outcome.

Figure 2.2: Overarching themes

## Overarching themes of our IT Investment



### Single Source of Truth

Encapsulates a central position for data and reduces the complexity of the current technology environment.  
 Helps manage risk of data quality issues impacting business decisions.  
 The consolidation of multiple integration touch points and applications simplifies the complexity previously encountered, and reduces the data integrity risks within regulatory, customer and business reporting.



### Standard Business Processes

Standardised process model can be implemented to enable efficiency across the group including the management and use of applications, systems and communication platforms.  
 Rationalisation of applications across the group will lay the foundations for the ease of future service integrations whose implementations will yield economies of scale, improved customer service, efficiency, and reduced costs.



### Compliance and Risk Management

Compliance with regulatory bodies and standards is of high priority to ensure duty of care for business, employees, and customers.  
 Such initiatives closely align with strong risk management delivery to ensure any risks to business success and efficiency, customer service or platform delivery are mitigated.  
 Of particular importance is the recent critical infrastructure/ cyber security legislation.



### Shared Resource Efficiencies

Technology and business resources consolidated into one central location allows for reduced system complexity and enables efficiencies of scale to be achieved across the Group.  
 Sharing business and system resources enables sharing the fixed cost so reducing the overall costs to servicing our customers across the Group.  
 Rationalisation of applications across the group yields access to efficient resource utilisation, in turn providing improved customer delivery.



### Strategic Imperative

By supporting and being part of a cohesive Group wide business and technology strategy, the initiatives in turn support the achievement of broader benefits to customers.  
 By establishing a link between the initiatives and the overall strategy we accentuate the need for the projects to work collectively to achieve the strategic goals.

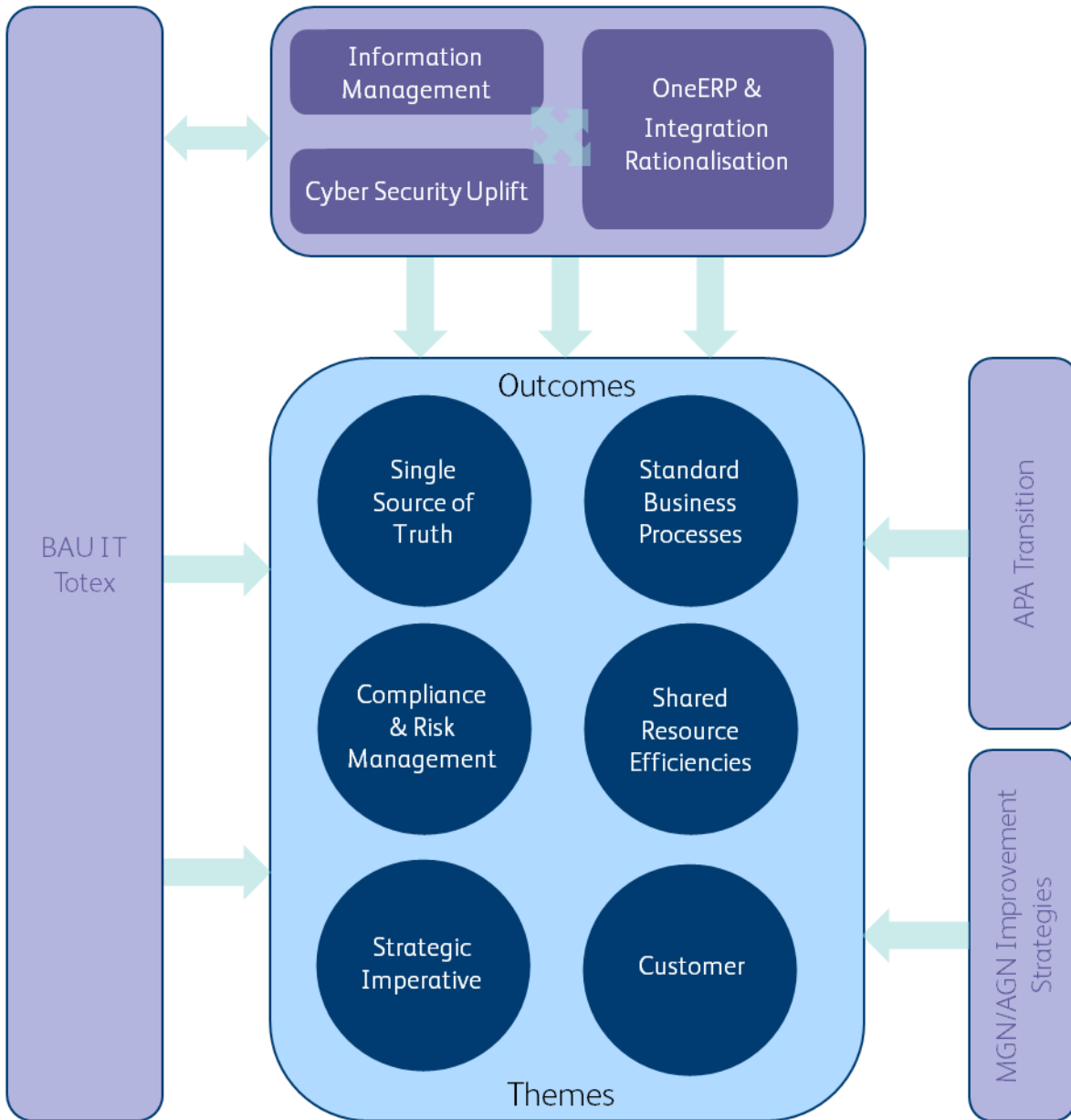


### Customer

The initiatives contribute to the overall risk management position of the Group, as well as enabling the provision of more timely and accurate information to customers and potential reduction in prices from efficiencies within the business.  
 With customers sustaining a top priority position in the Group's operations, it is imperative to reflect customer and stakeholder needs throughout the IT landscape.

Figure 2.3: Summary of program and themes

**How our IT program interacts with the overarching themes**



**2.1.2. Summary of spend**

IT capex in the next AA period is projected to be \$67 million. This is \$21 million more than the \$46 million forecast for the current AA period. This is largely driven by a significant program of works required to upgrade a number of our core IT systems which currently operate on an obsolete

platform. The forecast spend of \$67 million includes a significant upgrade of our ERP, EAM, customer and billing systems in line with our AGIG One IT Strategy.

Table 2.1 shows the split of recurrent and non-recurrent IT investment forecast for the next AA period, and a comparison of the total investment expected to be undertaken by the end of the current AA period (January 2018 to December 2022).

Table 2.1: Proposed IT investment \$'000 2021

IT program of work	2023/24	2024/25	2025/26	2026/27	2027/28	Total next AA period	Total current AA period
Maintain current levels of IT services (recurrent)	6,114	6,266	4,384	4,658	7,756	29,177	24,869
Efficient and effective service delivery (non-recurrent)	10,684	20,520	7,092	-	-	38,297	21,122
<b>Total</b>	<b>16,799</b>	<b>26,486</b>	<b>11,476</b>	<b>4,658</b>	<b>7,756</b>	<b>67,474</b>	<b>45,991</b>

Tables may not sum due to rounding

These categories of recurrent and non-recurrent investment, and the projects included in each, are discussed in the following sections.

## 2.2. Maintaining current levels of service

IT traditionally supports the operation of our gas networks by procuring and maintaining hardware and software systems used to collect, organise and store business and network information. Recurrent 'stay in business' investment is required to ensure we maintain the current levels of IT services and mitigate the security and integrity risks associated with our core business systems. This helps mitigate any network risk that could arise from an IT system failure.

Maintaining current levels of services is largely achieved via our national, recurrent IT applications and infrastructure renewal programs. These applications and infrastructure renewal programs deliver a prudent cycle of major and minor system upgrades and infrastructure replacements as required.

Our cyber security activities support the mitigation of security risks. We will continue our program to uplift our cyber capabilities. This is critically important given the ever changing nature of cyber threats we face and the importance of ensuring that critical infrastructure in Australia, such as the networks and pipelines we own and operate, are resilient to cyber attacks.

### 2.2.1. Forecast recurrent IT capex overview

Over the next AA period we propose to invest \$29 million on recurrent initiatives. This is slightly above the \$25 million we expect to invest in the current AA period, and accounts for 43% of the total IT capex forecast.

Table 2.2 profiles the forecast recurrent IT investment over the next AA period and includes a comparison with the total recurrent IT investment we expect to make by the end of the current AA period.



Table 2.2: Proposed recurrent IT investment \$'000 2021

Recurrent expenditure	2023/24	2024/25	2025/26	2026/27	2027/28	Total next AA period	Total current AA period
Applications renewal	2,287	4,427	2,986	3,850	3,658	17,208	14,160
Infrastructure renewal	3,222	1,014	816	582	3,851	9,485	9,382*
AGIG Strategy & Roadmap - Cybersecurity	605	825	582	226	246	2,484	1,328
<b>Total</b>	<b>6,114</b>	<b>6,265</b>	<b>4,384</b>	<b>4,658</b>	<b>7,756</b>	<b>29,176</b>	<b>24,869</b>

\*Includes NCC relocation and AGIG IT Strategy infrastructure

The following sections provide an overview of the applications and infrastructure renewal programs.

### 2.2.1.1. Applications renewal (V.22.IT)

The applications renewal program is recurrent 'stay in business' expenditure that involves periodic updates to critical business software applications, in particular, vendor version updates. The updates ensure we have reliable, resilient, compliant and efficient business processes and systems, which preserves the ongoing integrity of our services. It includes ensuring any known issues, including security vulnerabilities, can be addressed.

Benefits of the applications renewal program include increased scalability, flexibility and reliability, while also ensuring we continue to meet our regulatory and customer obligations. These updates are recurrent in nature as they result in the software retaining substantially the same services, functionalities, capabilities and market benefits.

Applications renewal delivers major and minor system upgrades, replacements and minor enhancements as required for the following IT and OT applications:

- GIS
- Networks interval metering data system
- Dial Before You Dig
- Mobile maps
- Metering & billing system
- Enterprise asset management
- Market Gateway - MSI
- Telemetry system
- Business intelligence platform
- Integration – WebMethods
- ERP system
- Employee Self Service

In the current AA period we have incurred lower costs on the applications renewal program than anticipated. This is due to a reprioritisation of resources to focus on the MGN IT Separation (Transition) project. In summary, during the current AA period we have:

- Upgraded our GIS system;
- Contributed to the configuration of the AGIG One ERP SAP S/4 HANA system we will move onto in the next AA period;
- Completed upgrades to core applications including EDMS, Network Viewer, DBYD, MOSAIC, WebMethods, SAP Enhancements;

- Undertaken a program of system enhancements to support ongoing business needs; and
- a number of other small application refreshes.

As a result, our expenditure during the current AA period is expected to be around \$14 million, compared to the \$24 million originally forecast.

In the next AA period, we will continue the good practice of updating our critical IT systems on an ongoing basis via our applications renewal program. The applications renewal expenditure forecast for the next AA period is \$17 million.

This is a small increase compared with the \$14 million current period actuals. The key reason for this is the upgrade of some application upgrades (e.g. WebMethods) in the last period were allocated to the MGN IT Transition project. This was because various programs were on the critical path of the transition and therefore had to be updated to ensure the version was up to date and therefore supported through the move. Table 2.3 shows the expenditure profile by application.

Table 2.3: Proposed applications renewal program investment \$'000 2021

Applications renewal	2023/24	2024/25	2025/26	2026/27	2027/28	Total
GIS Upgrade	-	462	-	651	2,733	3,845
EDMS Upgrade	438	-	-	-	-	438
Service Now consolidation	107	-	-	-	-	107
Network Viewer Upgrade	-	281	-	-	281	562
S/4 HANA (MGN Allocation)	-	-	-	1,521	-	1,521
Integration (WebMethods)	1,097	-	-	-	-	1,097
MSI Replacement	-	2,074	1,300	-	-	3,375
OSI Pi Upgrade	45	360	45	45	45	539
Public Websites Upgrade	-	-	-	308	-	308
System Enhancements	600	600	1,200	1,200	600	4,200
HCM refresh	-	649	441	125	-	1,215
<b>Total</b>	<b>2,287</b>	<b>4,427</b>	<b>2,986</b>	<b>3,850</b>	<b>3,658</b>	<b>17,208</b>

Totals may not sum due to rounding

The applications renewal program proposed for the next AA period delivers a number of benefits. In summary the investment program will:

- substantially reduce the risk of system(s) failing or the integration between systems not operating as intended;
- ensure upgraded applications continue to provide required integrated functionality to support business processes;
- manage alignment with other co-existing applications;
- maintain systems security, protecting information assets from confidentiality, integrity and availability risks;

- improve software performance and efficiency and stability of IT systems over time;
- provide for the continuation of technology vendor support (this requires movement to a recent version of the software);
- improve the security and integrity of business information as vendors place greater emphasis on these solutions; and
- enable compliance with updated market requirements.

This applications renewal program has been designed using an industry-standard application lifecycle management methodology and a practical framework to determine upgrade timelines and priorities. Estimation assumes version upgrades are applied every three to five years. This encompasses a combination of major and minor upgrades, and reflects vendor technology roadmaps.

The applications renewal program is also heavily influenced by the One ERP Phase 2 program of work. The One ERP Phase 2 work program will subsume a number of minor and major system upgrades falling due across 2023/24 to 2026/27.

Further detail on application renewals is available in the Applications Renewals Business Case (V.22.IT) provided in Attachment 9.19 to our Final Plan.

#### **2.2.1.2. Infrastructure renewal (V.23.IT)**

The infrastructure renewal program is a 'stay in business' program that involves periodic renewal of OT, network and end-user devices such as SCADA, laptops, audio/visual equipment, telephony, internet links and servers that support critical business functions. The updates ensure we continue to maintain reliable, resilient, compliant and efficient network and end-user devices, and preserve the ongoing integrity of our services. It includes ensuring that any known issues, including security vulnerabilities, can be addressed. In the current AA period, end-user equipment management has been centralised across AGIG realising benefits of consistent device management and more competitive pricing on higher volume orders.

An important change in the current AA period is the implementation of a shared AGIG data centre. The shared data centre was first built during the separation of MGN IT from United Energy. This platform has since been utilised to support all of AGIG's corporate IT (which was previously spread across a number of third party data centres). This is a key foundational initiative under the AGIG IT Strategy and has supported the creation of a stable and aligned IT environment across AGIG's entities.

The forecast cost of infrastructure renewal over the next AA period is \$9 million. This investment provides for MGN's allocation of shared infrastructure and direct costs of MGN OT and office end user equipment. Table 2.4 shows the expenditure profile by infrastructure.

Table 2.4: Proposed infrastructure renewal program investment \$'000 2021

Infrastructure renewal	2023/24	2024/25	2025/26	2026/27	2027/28	Total
OS Currency	429	-	215	157	157	959
Active Directory Consolidation and functional uplift	153	-	-	-	132	285
Data Centre Strategy/ Upgrade/Replacement and Cloud Migration	429	-	215	157	157	959
Standard Operating Environment (SOE) image upgrade & deployment	330	-	-	-	330	660
SLQ Currency	-	234	-	-	-	234
Oracle Decommission	-	249	-	-	-	249
Collaboration (sharepoint platform, teams)	-	124	-	-	-	124
Nutanix Platform	892	-	200	-	414	1,506
Core network strategy and carrier upgrade/replacement	289	-	-	-	-	289
Citrix Farm (incl. netscalers)	264	-	-	-	-	264
Infrastructure Tools	180	87	55	-	-	321
MGN OT	-	-	-	-	2,356	2,356
MGN Office End User Equipment (incl. laptops, monitors, printers etc.)	257	319	130	267	304	1,277
<b>Total</b>	<b>3,222</b>	<b>1,014</b>	<b>816</b>	<b>582</b>	<b>3,851</b>	<b>9,485</b>

### 2.2.1.3. AGIG One IT – Cyber Security Uplift (V.24.IT)

The cyber security program is a continuation of activities underway to uplift our cyber capabilities across AGIG to ultimately achieve and maintain MIL 3 maturity as measured against the Australian Energy Sector Cyber Security Framework (AESCSF) which sets out good practice in cyber security management for our industry.

In particular, the capex activities in the next AA period involve:

- Establishing technology and processes to ensure secure access to and data security cloud based applications is appropriately managed. (e.g., Cloud Access Security Broker (CASB))
- Technology refresh of existing and newly established cyber security technology.
- Implementation of technology and process uplift for a specific Threat and Vulnerability Management solution in AGIG (OT) environments.
- Establishing processes to ensure critical application risk is assessed and remediation activities undertaken on a regular basis.

- Establishing and maintaining an Enterprise Security Reference Architecture.
- Uplift and maintenance of critical asset registers and security baselines with appropriate integration and automation to ensure ongoing accuracy and completeness.
- Specific risk management tools for Third Party Security Risk Management practices, Cyber Operational Risk Management practices and identification and management of vulnerabilities and threats in the field based Industrial Control System (ICS) environments
- Enhanced and automated approach to mitigation and response to detected threats and vulnerabilities, utilising the various platforms established in both the IT and OT environments.
- Enhanced processes and capabilities for management of identity and privileged accounts in both IT and OT environments.
- Implementation of Data security management controls, Data Leakage Protection (DLP) and Data Classification (Information Classification)
- Ongoing updates to Cyber Risk Management Strategy, Threat Profiles and Program Strategy to ensure ongoing management of cyber risk.
- Consolidation of OT Cyber technologies and capabilities across the three entities.
- Establishment of ongoing review and updates of Cyber Security Strategy, threat profile, and program strategy to ensure ongoing Cyber Risk Management is appropriately managed.
- Ongoing background checking of critical employees.

These improvements will mitigate cyber and productivity impact risks across AGIG, in particular they will:

- Uplift AGIG cyber security risk management capabilities to MIL-3 standard. This capability uplift will meet the initial requirements of the Security Legislation Amendment (Critical Infrastructure) 2022 and extend to MIL-3 (Security Profile 3) capabilities to ensure appropriate cyber risk mitigation for AGIG.
- Implement cyber security capabilities designed to mitigate additional key cyber security risks as assessed by AGIG, particularly with respect to data security.
- Optimise the AGIG cyber security environment by consolidating capabilities, technologies and processes in use across three entities.
- Refresh, maintain and optimise the existing and to be implemented suite of cyber security technology solutions.

This program will be delivered through a number of capex and opex initiatives, which are further outlined in the AGIG One IT Business Case. Table 2.5 below summarises MGN’s share of the Uplift in Cyber Security capex investment in the next AA period.

Table 2.5: Proposed cyber security uplift program investment \$'000 2021

Cyber security uplift	2023/24	2024/25	2025/26	2026/27	2027/28	Total
AGIG One IT Strategy - Cyber	605	825	582	226	246	2,484

## 2.3. Enabling effective and efficient delivery of services to customers

Fundamental to our vision objective of remaining sustainably cost efficient is our ability to identify ways of delivering services at a lower cost or in a more efficient manner. IT investments play a major role in this, as technological developments can often help us manage the network or provide customer service more efficiently.

We therefore adopt a continuous improvement approach in our technology environment, seeking to invest in IT improvements where practicable. Typically these investments involve developing new IT systems undertaking large scale overhauls of existing systems, meaning the expenditure is non-recurrent.

Our IT improvement investments aim to:

- utilise current platforms and technology – we will move a number of our core systems on to the most current platforms and technology in line with vendor roadmaps, and the needs of our business;
- improve our analytical capability – we will build our analytical capability to better connect operational data and information with core business data by improving the collation, integration and organisation of data and information from multiple systems and developing tools to facilitate data and information access and interpretation for forecasting and operational insights; and
- meet changing customer expectations – we will upgrade our systems to enable us to deliver a greater number of customer services digitally in line with customer expectations of a modern utility and insights gained through our recent customer workshops.

In the current AA period, we transitioned our systems out of United Energy and into our own environment, have undertaken a GIS upgrade to current technology and started the work for our upcoming One ERP program of works that will move our billing, asset management and ERP from the obsolete SAP ECC6 to the AGIG SAP S/4 HANA (including One ERP configuration and CRM foundations). We have also implemented standalone IT projects to improve our field work planning and scheduling and to meet new regulatory requirements for Life Support customers.

We will continue to leverage, develop and build on much of these capabilities over subsequent AA periods.

### 2.3.1. Forecast non-recurrent IT capex overview

Over the next AA period we propose to spend \$38 million on non-recurrent initiatives. The new IT initiatives planned for the next AA period are:

- new customer digital services to deliver more of our customer services digitally;
- system enhancements to support remote meter reading;
- improved Data Architecture, Reporting and Governance to ensure we can continue to meet our internal and external information and reporting requirements in an efficient way; and
- One ERP Phase 2 which is a significant upgrade of our end-of-life core SAP IT systems in line with our AGIG IT Strategy and staged One ERP program.

Table 2.6 profiles the forecast non-recurrent IT investment over the next AA period and includes a comparison with the total non-recurrent IT investment we expect to make by the end of the current AA period.

Table 2.6: Proposed non-recurrent IT investment \$'000 2021

Non-recurrent expenditure	2023/24	2024/25	2025/26	2026/27	2027/28	Total next AA period	Total current AA period
New Customer Digital Services	869	1,095	1,002	-	-	2,965	509
Remote metering	1,251	-	-	-	-	1,251	*n/a
AGIG One IT Strategy – Applications	8,564	19,426	6,091	-	-	34,081	2,776
MGN Separation	-	-	-	-	-	-	15,014
Life support	-	-	-	-	-	-	1,186
Work Planning & Scheduling	-	-	-	-	-	-	1,637
<b>Total</b>	<b>10,684</b>	<b>20,520</b>	<b>7,092</b>	<b>-</b>	<b>-</b>	<b>38,297</b>	<b>21,122</b>

\*Note these non-recurrent initiatives are new for the next AA period, therefore a line-by-line comparison of projects between periods is not applicable.

Totals may not sum due to rounding

The following sections provide an overview of the non-recurrent IT investment initiatives.

### 2.3.1.1. New digital customer services (V.21.CS)

This project involves responding to customer needs to enhance the scope of digital communication with our customers. We will develop a flexible customer relationship management (CRM) solution with some SMS and self-service capability. In particular, this includes:

- catering for tailored responsive support, confidentiality and proactive reporting for life support and vulnerable customer segments. This is driven by increased customer needs as well as an increasing regulatory expectation of communication with vulnerable customers (accelerated in more recent times due to COVID-19); and
- updating customer communications and notification from the predominantly one-way, highly manual and paper-based processes, to digital communication. This is consistent with regulatory and customer expectations. The new digital services will increase the likelihood customers are aware of information relating to works at their premises or in their community, enable our customers to engage with us as and when they want, and ensure contemporary data security and privacy standards are met.

The investment in new digital customer services will cost approximately \$3 million in capex<sup>2</sup> and will be fully delivered in the next access arrangement period.

For more detail on the new digital customer services, refer to our Digital Customer Experience business case in Attachment 9.19 IT Business Cases.

<sup>2</sup> This project also requires around \$0.2 million pa in ongoing additional opex.

### 2.3.1.2. Remote-read metering

This project involves system enhancements required to support the collection, storage and integration of meter data from the remote-read meters we plan to install in the next AA period. It assumes IT integration into SAP ISU from a vendor head-end system of meter index reads of the same format and frequency currently collected via manual, on foot meter reading (i.e. no interval data to be integrated into ISU).

For more detail on remote meter reading, refer to our Metering Strategy provided in Attachment 9.8 to our Final Plan.

### 2.3.1.3. AGIG One IT Strategy – Applications (V.24.IT)

Developed in 2019, AGIG One IT is a program that will deliver develop a stable and aligned Information Technology (IT) environment across all AGIG entities. This will enable all AGIG businesses to conduct its work more effectively, reduce inefficiencies, inconsistency and duplication between IT systems and processes, and provide a better overall service to gas customers. The program objectives are to:

- better deliver the AGIG corporate strategy and individual business unit operating strategies and plans;
- act on feedback from our stakeholders, regulators and customers that they value reliable and safe delivery of energy to our customers backed up by timely support when they need help;
- address specific issues and risks common to all AGIG businesses, including cyber security, likelihood of errors and poor management decisions based on the incorrect or untimely information, and employee frustration due to lack of access to data and ability to collaborate effectively; and
- achieve economies of scale in purchasing and support costs.

The program is split into two stages. Stage 1, which started in 2020, is delivering a foundational program to ensure effective collaboration, appropriate management of cyber risks and leveraging economies of scale across the AGIG businesses. It includes initial components of the larger transformational programs (being delivered in Stage 2) to improve financial reporting capabilities, empowering management with more accurate and timely information.

Stage 2 builds on the foundational program by delivering several transformational initiatives. For MGN, this transformational program involves the 'One ERP' project – development of a standardised enterprise resource planning (ERP) system across the AGIG group and advancing the Data Architecture, Reporting and Governance initiative established in the AA current period. Having a standard ERP system will allow us to remove the heavy customisation, and therefore the substantial risks, associated with local finance systems. Work to implement that standard ERP system (SAP S4/HANA) has already commenced with configuration complete and testing underway for the roll out to AGN and Dampier to Bunbury Pipeline (DBP).

The majority of Stage 1 work is being completed in the current AA period. The remainder of Stage 1, along with Stage 2, is planned for the next AA period. To facilitate delivery and better align with external timelines such as system end-of-life and contractual arrangements, some of the Stage 2 initiatives, as well as extension of the transformational initiatives, will continue past 2025/26.

The AGIG One IT Strategy – Transformational will cost \$34 million in the next AA period and is expected to be completed in 2026. Table 2.7 outlines the total project costs.



Table 2.7: Capital cost AGIG One IT Strategy – Transformational, \$'000 Jun 2021

	2023/24	2024/25	2025/26	2026/27	2027/28	Total
One ERP	6,966	18,810	6,090	-	-	31,867
Data Architecture, Reporting & Governance	1,598	615	-	-	-	2,213
<b>Total AGIG One IT Strategy - Transformational</b>	<b>8,564</b>	<b>19,425</b>	<b>6,090</b>	<b>-</b>	<b>-</b>	<b>34,081</b>

For more detail on the AGIG One IT Strategy – Transformational initiatives, refer to the AGIG One IT Business Case (V.24.IT) provided in Attachment 9.19 (IT Business Cases) to our Final Plan.

## 2.4. Deliverability of the IT plan

The end-to-end program of work was developed, and will be delivered using a formal governance framework consistent with our industry standard business and technology project management methodology (summarised in Appendix B). The portfolio and project governance for technology services projects provides a decision making framework that is logical, robust and repeatable. This not only increases the opportunity for success, but also allows us to prioritise (and reprioritise if necessary) projects to ensure prudent and efficient use of IT resources.

Project delivery will utilise a combination of internal and external resources. We have a successful track record of delivering large IT transformation projects during the current access arrangement period, such as the MGN Separation, NCC relocation and GIS upgrade projects. The project management methodology provides a consistent, standard and quality assured project implementation framework, ensuring that the work is carried out in a prudent and efficient manner.

While the overall program of work is larger to that undertaken over the current AA period, we have put in place key relationships with external vendors through our AGIG One IT Strategy and Roadmap project to date that will continue to support the delivery of AGIG's IT Strategy and works have been staged to ensure we have a well-balanced resource profile of internal resources to allow for the most efficient and successful delivery. We have robust controls and vendor arrangements in place to ensure successful delivery of the planned program in its entirety, including:

- executive management support and strong program/project governance;
- a sound project management methodology including robust risk analysis which is revisited regularly throughout the life of all projects;
- stakeholder engagement in planning phases; and
- internal and external capacity with the appropriate skills and experience.

During the current AA period, the Technology Services team has been restructured and expanded to align more closely with the business and improve technology services delivery.

## 2.5. Summary of the current AA period

In the current AA period we forecast we will invest \$46 million in IT. This is around \$2 million (5%) above our approved allowance of \$44 million. As discussed in section 2.2.1.1 (and below), this higher-than-forecast expenditure is largely due to the MGN IT separation from United Energy, offset by deferral and reprioritisation of other system upgrades.

Though the focus of the program significantly shifted, by the end of the current period we will have:

- separated MGN IT from United Energy and relocated the MGN Network Control Centre;
- completed major upgrades to our geographical information systems, EDMS, WebMethods, and Operational Technology applications as well as minor updates and enhancements to several other critical applications;
- completed a work planning and scheduling project to integrate, and automate the transfer of work orders, service orders and trouble orders to our contracted partner to improve the planning and scheduling of field works;
- improved/rebuilt our intranet and public websites;
- completed system upgrades to ensure we can comply with new life support regulatory obligations;
- completed many of the foundational initiatives of our AGIG IT Strategy, such as consolidating our data centres, implementing collaboration tools, enhancing cyber security and delivering Phase 1 of our One ERP project.

Our IT investment in the current AA period, by project, is summarised in Table 2.8.

Table 2.8: Summary of IT investment in the current AA period, \$'000 2021

Project	Approved	Actual 2018	Actual 2019	Actual 2020	Actual 2021	Forecast 2022	Total
Apps Renewals	19,142	1,353	931	1,779	2,349	3,844	<b>9,756</b>
Infrastructure Renewals	8,383	86	101	178	2,005	366	<b>2,735</b>
Work Planning & Scheduling	2,766	1,671	-34	-	-	-	<b>1,637</b>
MGN IT Separation	-	8,594	5,954	466	-	-	<b>15,014</b>
GIS upgrade	4,318	-	-	359	579	3,466	<b>4,404</b>
Life Support	-	-	-	-	1,186	-	<b>1,186</b>
NCC Relocation & SCADA Refresh	3,100	-	-	-	4,303	260	<b>4,563</b>
Digital Customer Experience	1,448	-	-	-	-	509	<b>509</b>
AGIG IT Strategy - Applications	-	-	-	1,438	1,015	322	<b>2,776</b>
AGIG IT Strategy - Cyber Security	4,629	-61	432	39	177	740	<b>1,328</b>
AGIG IT Strategy - Infrastructure	-	-	2,084	-	-	-	<b>2,084</b>
<b>Total</b>	<b>43,785</b>	<b>11,643</b>	<b>9,468</b>	<b>4,259</b>	<b>11,614</b>	<b>9,007</b>	<b>45,991</b>

The higher-than-expected investment during the current AA period is largely driven by the MGN IT separation and NCC relocation, along with the AGIG IT Strategy, with some offsetting reductions across other areas of forecast works.

### 3. Consistency with the NGL and NGR

Our networks are operated in accordance with the National Gas Law (NGL) and NGR. The overarching objective of the NGL is set out in the National Gas Objective (NGO), which states that the objective of the NGL is to “*promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply*”.

Our proposed investment in the next AA period is consistent with this objective because it will enable us to maintain and prudently extend our IT systems and business processes in a manner that will ensure the ongoing safety, reliability and security of supply is managed in a cost effective way, which is in the long-term interests of consumers.

The proposed expenditure also complies with the NGR.

It is compliant with the new capex criteria in rule 79 of the NGR because it is:

- such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice to achieve the lowest sustainable cost of providing services (rule 79(1)(a)); and
- Justifiable under rule 79(1)(b) and 79(2), because:
  - the Asset Investment & Planning Management project is justifiable under rule 79(2)(a) because it yields a positive economic value.
  - the other proposed projects are necessary to maintain and improve the safety of services, maintain the integrity of services or to comply with a regulatory obligation or requirement (rule 79(2)(c)(i)-(iv)) as described in the table below.

Table 3.1: Consistency of the proposed IT program with rule 79(2)(c) of the NGR

#	NGR criteria	Justification of the proposed expenditure
<b>79(2)(c) The capital expenditure is necessary:</b>		
(i)	to maintain and improve the safety of services	<p>Applications Renewal Program – Ongoing updates to key operational IT systems reduces their risk of failure or security breaches. For many of these systems, failure could result in significant risk to safety for both employees and the general public.</p> <p>New digital customer services – Developing digital methods of customer communication, including critical tailored and confidential support for life support and vulnerable customer segments, will ensure that services are able to be provided efficiently in a safe manner.</p>

#	NGR criteria	Justification of the proposed expenditure
<b>79(2)(c) The capital expenditure is necessary:</b>		
(ii)	to maintain the integrity of services	<p>Applications Renewal Program - Ongoing updates to key operational IT systems reduces their risk of failure or security breaches. Failure of any of these systems will risk the integrity of our pipeline services</p> <p>Cyber Security Uplift - Addressing cyber risks will reduce the likelihood and impact of a cyber incident. A major cyber incident could result in a loss of operational control and an inability for AGN to recover on its own.</p> <p>Infrastructure Renewal – Renewing basic IT services allows employees to effectively perform their duties, thereby ensuring that core operational functions continue to be performed in a timely manner.</p> <p>One ERP Phase 2 – MGN currently operates on SAP ECC6 and, due to its ending support in the near future, requires a structured plan to replace it to ensure core operational functions can be undertaken. Our One ERP initiative will introduce more automated, accurate, dynamic and timely reporting across a number of business needs, improving management’s access to information when making decisions. The medium to long term costs and risks associated with disparate finance processes and systems across AGIG are likely to be material in terms of extra staffing costs, re-work, additional training and errors (which could lead to less optimal decisions that impact the integrity of other network assets).</p>
(iii)	to comply with a regulatory obligation or requirement	<p>Applications Renewal Program - Ongoing updates to key operational IT systems reduces their risk of failure or security breaches. This therefore ensures that regulatory obligations (e.g. Retail Market Procedure requirements for processing timeframes) are not breached due to system unavailability.</p> <p>New digital customer services - The planned CRM solution is necessary to allow us to comply with our regulatory obligations, particularly with regard to communicating with vulnerable customers in line with the AER Statement of Expectations of energy businesses: Protecting consumers and the energy market during COVID-19 (and an anticipated continuation of these expectations going forward).</p> <p>Infrastructure Renewal – enables compliance with regulatory obligations, particularly data provision requirements under the RMP.</p> <p>One ERP Phase 2, Data Architecture, Reporting and Governance – enables compliance with regulatory and privacy obligations, particularly customer billing, asset management and accurate data provision and reporting, as well as controlled access and storage of sensitive data and information.</p>
(iv)	to maintain the capacity to meet existing levels of demand for services	<p>New digital customer services - Improved CRM is necessary to enable us to service existing levels of customer demand.</p>

Forecast costs are based on the latest market rate testing and reflect the lifecycle management and estimation approach described in the following sections. The estimate has therefore been arrived at on a reasonable basis and represents the best estimate possible in the circumstances.

### 3.1. Project management and application lifecycle methodologies

We utilise an industry standard technology services project management methodology, which is managed through formal governance. The project methodology divides the projects into key stages – initiate, analysis & design, build, deploy and close. Each stage consists of key tasks and activities to ensure consistency and standardisation across projects. The project methodology

provides a consistent, standard and quality assured project implementation framework, ensuring that the work is carried out in a prudent and efficient manner.

The technology services project management methodology is provided in Appendix B.

We also follow an industry standard application lifecycle framework to manage applications through the implementation, operations, optimisation and retirement phases of their lifecycle. This framework provides an efficient and effective approach to maintaining the security and stability of the applications while optimising lifecycle stages. This framework includes the project management methodologies to implement the applications, and ongoing lifecycle activities to operate and optimise the applications - including upgrade cycles.

The application lifecycle management framework is provided in Appendix C.

### 3.2. Estimation approach and cost allocation

MGN has used the standard Technology Services (TS) project management methodology approach to carrying out the work in this investment plan and to estimate efficient project costs. A summary of the project methodology is provided in Appendix B.

To ensure project estimates are developed in a consistent manner, MGN utilises an estimation methodology, which is aligned with the project methodology. This estimation process has been used to forecast the work and cost estimates for each of the IT applications and infrastructure projects and replacement programs.

We have utilised historic actuals from the current AA period for resource work effort (hours) estimates. All historic figures are sanity checked to ensure any changes to the way historical projects were carried out were taken into account. The work effort estimates are based on a complexity matrix assessment, which uses a series of questions to categorise projects into simple, medium and complex, along with an assessment of magnitude.

The material and direct labour costs, and applicable planning, design and commissioning charges, are based on historic actual costs of similar projects and on vendor quotes subject to a competitive tendering process in accordance with the MGN Procurement Policy and Procedure<sup>3</sup>. Resource Unit Costs (both internal and external) are based on research, where actual placement costs have been used based on historical project resources and current resourcing rates.

The historic figures and work effort estimates are used as inputs into the final estimates. The work effort, cost and timing of projects are monitored throughout the project lifecycle to ensure on time and on budget delivery, with appropriate governance and approval mechanisms to manage any overruns.

For AGIG wide projects, the total forecast costs are allocated to the AGIG businesses that use each system on the most appropriate basis available. We consider the most appropriate basis for the majority of shared costs is the proportion of revenue (representing size of business) for MGN across all of AGIG's operations. This is the same method adopted in our AGN South Australia and DBP regulatory submissions and has previously been endorsed by the AER<sup>4</sup> and the ERA<sup>5</sup>. Wherever possible, allocation of direct costs have also been made.

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<sup>3</sup> See Attachment 9.4 to this Final Plan.

<sup>4</sup> For example in approving the AGIG IT Strategy for AGN SA (AER Final Decision AGN(SA) access arrangement 2021-2026, April 2021)




<sup>5</sup> For example in approving the IT Security program of works for DBP in ERA Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline access arrangement 2021 to 2025, April 2021.

As at 31 December 2021, MGN accounted for 18.2% of AGIG's total revenue. As such, forecasts in this plan generally include 18.2% of AGIG's total costs of each project<sup>6</sup>.



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<sup>6</sup> There are two exceptions to this. 1) the Cyber Security IT costs are shared equally between the AGIG businesses, with a separate portion of AGN only costs, directly allocated to AGN. 2) The Cyber Security OT costs are shared between MGN and DBP only (as AGN's OT is currently managed outside of AGIG), with MGN representing 20% of AGIG Cyber Security OT costs (and DBP 80%).

## Appendix A: Overarching themes by project

	OneERP	Cyber Security Uplift	Information Management	BAU IT Totex
<p><b>Single Source of Truth</b></p> 	<p>An enterprise wide ERP solution captures core business information necessary for decision making and smooth running of the business.</p> <p>Enables simpler, cheaper integration by simplifying the technology landscape and streamlines the consolidations of applications.</p>	<p>Allows identity management of personnel and control of access rights to data and information. This also enables availability, confidentiality, and integrity.</p>	<p>Enterprise Data Model (EDM) supports a common data language and ensures data is captured and consumed consistently.</p>	<p>Ensures data exists in the most efficient central location, on premises or cloud. Ongoing grade and rationalisation of applications will reduce replication of data.</p>
<p><b>Standard Business Processes</b></p> 	<p>Enables the consolidation of resources and the transferability of skills across the Group.</p> <p>Enables simpler, cheaper integration by transforming inefficient adhoc processes for efficient ones and allows simpler, more cost effective integration.</p>	<p>Enables consistent Business Continuity Planning and Disaster Recovery for Cyber events across the three entities.</p>	<p>Standardised governance and information and document management practices enabled by group wide policy and processes.</p>	<p>Rationalisation of applications across the Group enables for standardised and consistent business processes.</p>
<p><b>Compliance &amp; Risk Management</b></p> 	<p>Permits the abidance of standard regulatory requirements under AER and ASD.</p> <p>Facilitates adherence to regulatory requirements and optimisation of cyber security risk profiles. Reduces the risk of multiple data</p>	<p>Ensures alignment with regulations set by the Australian Energy Sector Cyber Security Framework (AESCSF), Australian Energy Market Operator (AEMO) and the Security of Critical Infrastructure (SOCI) Act.</p>	<p>Enables document and data security categorisation and retention. Facilitates secure access to information and reduces risk of poor data quality.</p>	<p>Business continuity aided by use of cloud and on premise structures. Ongoing upgrade and maintenance of applications aligns with changing regulations.</p>



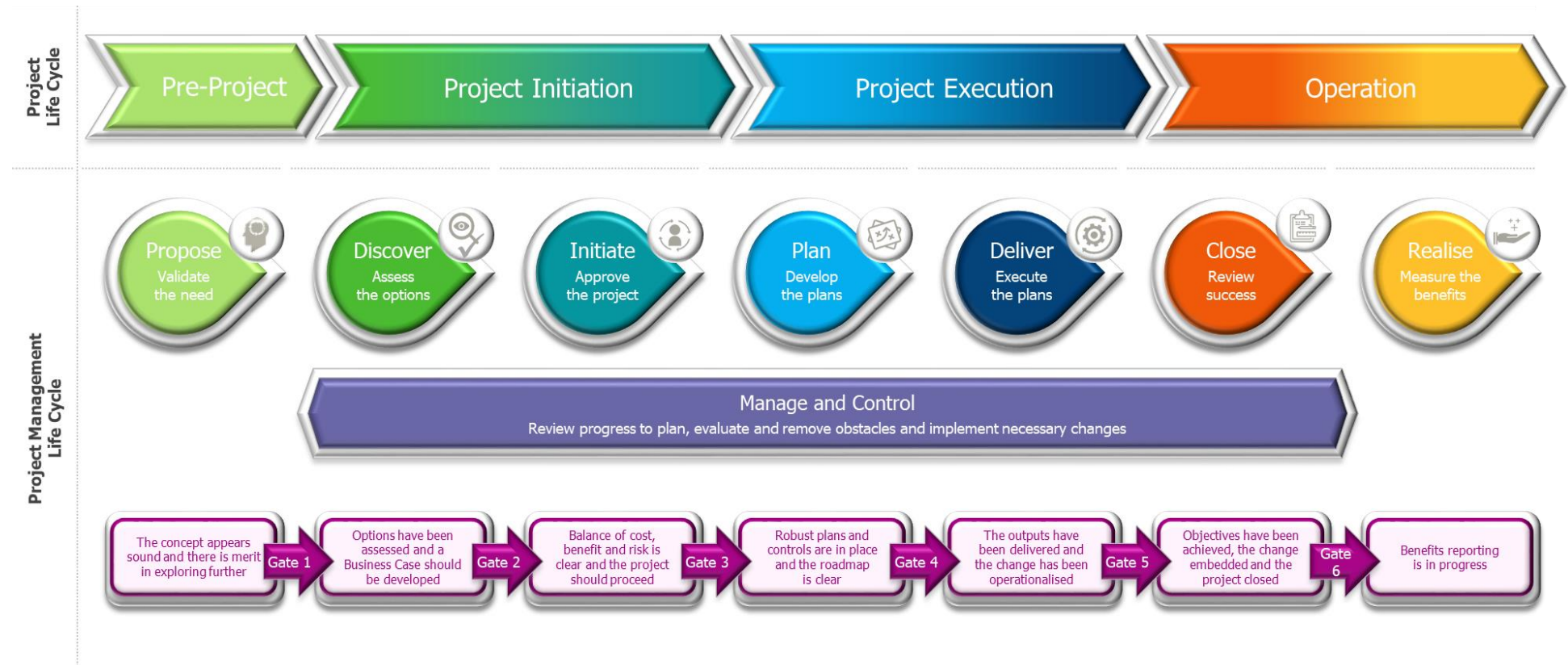
	OneERP	Cyber Security Uplift	Information Management	BAU IT Totex
	conversion and transformation processes.			
<b>Shared Resource Efficiencies</b> 	<p>Limits resource discrepancies across the Group, maintaining a central hub for all users. Sharing of fixed costs granting access to high end functionality not otherwise available.</p> <p>All entities receive access to resources in a consolidated space. Reduced complexity delivers lower operating and maintenance costs.</p>	<p>A single consistent approach to cyber security reduces replication of infrastructure and processes across the group.</p>	<p>Single point of document management enables easier access to information across the Group. Centralised data warehouse for shared data access.</p>	<p>Consolidation of applications in cloud environment reduces recurrent Capex costs.</p> <p>Ongoing consolidation of applications increases opportunity for sharing resources.</p>
<b>Strategic Imperative</b> 	<p>OneERP central to the group wide IT strategy of consolidating and sharing IT resources.</p> <p>Implementation of SAP PO is an integral part of the OneERP project so enabling the overall Group strategy.</p>	<p>Compliance with new critical infrastructure legislation and ongoing mitigation of the cyber threat landscape.</p>	<p>Strategic need to securely manage and share information within and across the Group businesses.</p>	<p>Group cloud strategy is a requirement to facilitate ongoing efficiency benefits from the other business case.</p>

	OneERP	Cyber Security Uplift	Information Management	BAU IT Totex
<b>Customer</b> 	<p>Quicker access to consolidated information enables provision of timely information to customers.</p>	<p>Maintains integrity and security of the gas pipe network.</p>	<p>Easier access to timely and accurate information in response to customer requests and feedback.</p>	<p>Efficiencies from the cloud strategy supports lower prices and ongoing maintenance of applications manages the risk of systems availability impacting customer service.</p>

# Appendix B: Technology Services project management methodology

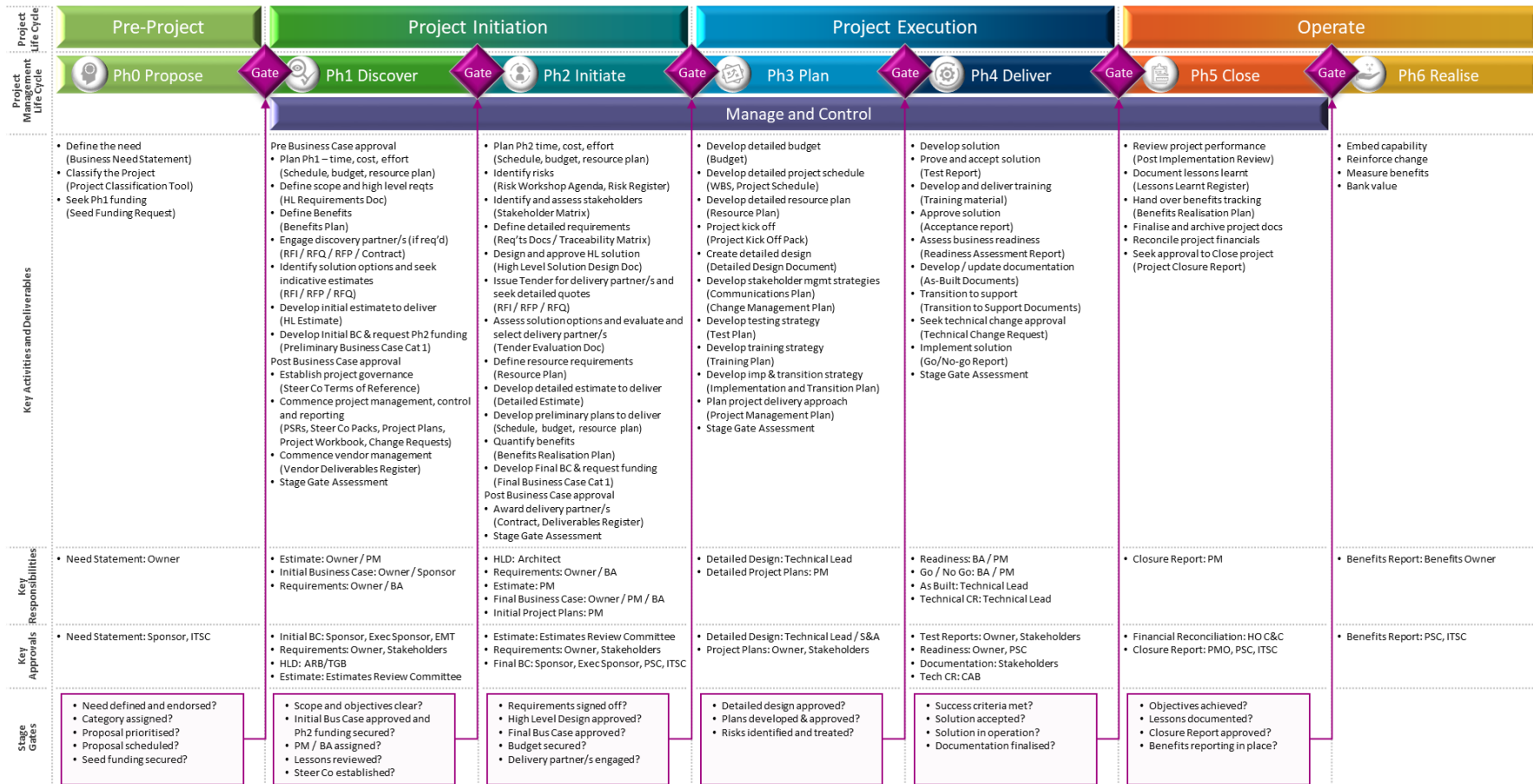
## B1: Project methodology

To manage all its IT projects, AGIG utilises an industry standard business and technology project management methodology, which is managed through formal governance. The project management methodology covers the full project lifecycle. The interaction between the project and project management lifecycle is illustrated in the figure below.



The key aspects of the project management methodology are outlined in the diagrams below. Projects are classified as Category 1, 2 or 3, depending on size, risk and complexity to ensure the project management methodology applied to the project is fit for purpose (i.e. complex, risky and expensive projects should use strong levels of discipline and rigour to ensure project success, whereas less complex projects can scale back the level of process to align to their the size, complexity and risk).

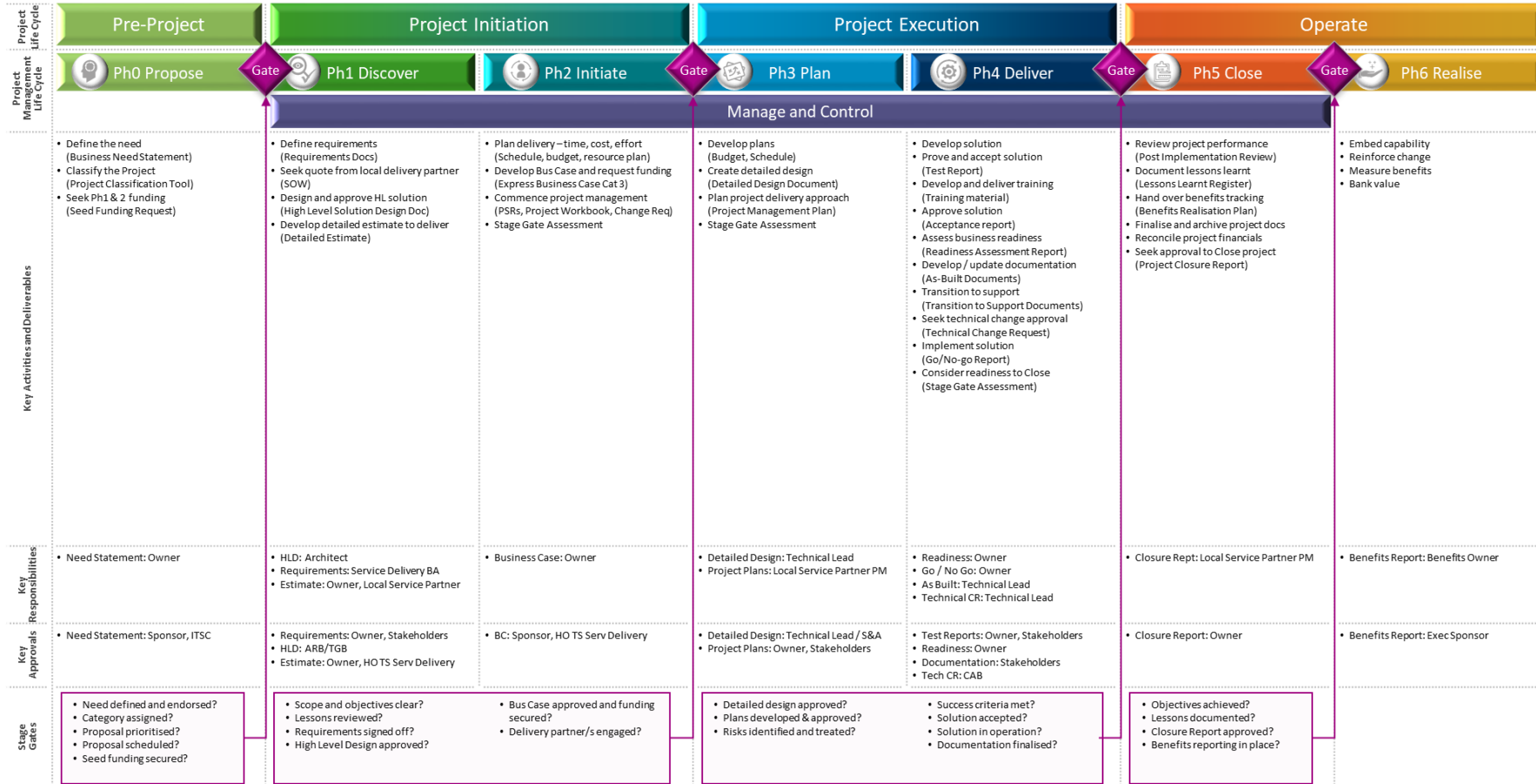
## Project Management Methodology Cat 1 Projects (Complex)



# Project Management Methodology Cat 2 Projects (Standard)

Project Management Life Cycle	Pre-Project	Project Initiation	Project Execution	Operate			
Project Management Life Cycle	Ph0 Propose	Gate Ph1 Discover	Ph2 Initiate	Gate Ph3 Plan	Gate Ph4 Deliver	Gate Ph5 Close	Gate Ph6 Realise
Key Activities and Deliverables	<ul style="list-style-type: none"> <li>Define the need (Business Need Statement)</li> <li>Classify the Project (Project Classification Tool)</li> <li>Seek Ph1 &amp; Ph2 funding (Seed Funding Request)</li> </ul>	<ul style="list-style-type: none"> <li>Plan Ph1 and Ph2 – time, cost, effort (Schedule, budget, resource plan)</li> <li>Identify risks (Risk Workshop Agenda, Risk Register)</li> <li>Identify and assess stakeholders (Stakeholder Matrix)</li> <li>Define detailed requirements (Req'ts Docs / Traceability Matrix)</li> <li>Design and approve HL solution (High Level Solution Design Doc)</li> <li>Delivery partner Tender and quotes (RFI/ RFP / RFQ)</li> <li>Vendor evaluation and selection (Tender Evaluation Doc)</li> <li>Define resource requirements (Resource Plan)</li> <li>Develop detailed estimate to deliver (Detailed Estimate)</li> <li>Quantify benefits (Benefits Realisation Plan)</li> </ul>	<ul style="list-style-type: none"> <li>Develop Bus Case and request funding (Lite Business Case Cat 2)</li> <li>Award delivery partner/s (Contract, Deliverables Register)</li> <li>Establish project governance (Steer Co Terms of Reference)</li> <li>Commence project management (PSRs, Steer Co Packs, Project Plans, Project Workbook, Change Requests)</li> <li>Commence vendor management (Vendor Deliverables Register)</li> <li>Stage Gate Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Develop detailed budget (Budget)</li> <li>Develop detailed project schedule (WBS, Project Schedule)</li> <li>Develop detailed resource plan (Resource Plan)</li> <li>Project kick off (Project Kick Off Pack)</li> <li>Create detailed design (Detailed Design Document)</li> <li>Plan project delivery approach (Project Management Plan)</li> <li>Stage Gate Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Develop solution</li> <li>Prove and accept solution (Test Report)</li> <li>Develop and deliver training (Training material)</li> <li>Approve solution (Acceptance report)</li> <li>Assess business readiness (Readiness Assessment Report)</li> <li>Develop / update documentation (As-Built Documents)</li> <li>Transition to support (Transition to Support Documents)</li> <li>Seek technical change approval (Technical Change Request)</li> <li>Implement solution (Go/No-go Report)</li> <li>Stage Gate Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Review project performance (Post Implementation Review)</li> <li>Document lessons learnt (Lessons Learnt Register)</li> <li>Hand over benefits tracking (Benefits Realisation Plan)</li> <li>Finalise and archive project docs</li> <li>Reconcile project financials</li> <li>Seek approval to Close project (Project Closure Report)</li> </ul>	<ul style="list-style-type: none"> <li>Embed capability</li> <li>Reinforce change</li> <li>Measure benefits</li> <li>Bank value</li> </ul>
Key Responsibilities	<ul style="list-style-type: none"> <li>Need Statement: Owner</li> </ul>	<ul style="list-style-type: none"> <li>HLD: Architect</li> <li>Requirements: Owner / BA</li> <li>Estimate: Owner / PM</li> </ul>	<ul style="list-style-type: none"> <li>Business Case: Owner / PM / BA</li> </ul>	<ul style="list-style-type: none"> <li>Detailed Design: Technical Lead</li> <li>Detailed Project Plans: PM</li> </ul>	<ul style="list-style-type: none"> <li>Readiness: BA / PM</li> <li>Go / No Go: BA / PM</li> <li>As Built: Technical Lead</li> <li>Technical CR: Technical Lead</li> </ul>	<ul style="list-style-type: none"> <li>Closure Report: PM</li> </ul>	<ul style="list-style-type: none"> <li>Benefits Report: Benefits Owner</li> </ul>
Key Approvals	<ul style="list-style-type: none"> <li>Need Statement: Sponsor, ITSC</li> </ul>	<ul style="list-style-type: none"> <li>Requirements: Owner, Stakeholders</li> <li>HLD: ARB/TGB</li> <li>Estimate: Estimates Review Committee</li> </ul>	<ul style="list-style-type: none"> <li>BC: Sponsor, Exec Sponsor, ITSC</li> </ul>	<ul style="list-style-type: none"> <li>Detailed Design: Technical Lead / S&amp;A</li> <li>Project Plans: Owner, Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Test Reports: Owner, Stakeholders</li> <li>Readiness: Owner, PSC</li> <li>Documentation: Stakeholders</li> <li>Tech CR: CAB</li> </ul>	<ul style="list-style-type: none"> <li>Financial Reconciliation: HO C&amp;C</li> <li>Closure Report: PMO, PSC, ITSC</li> </ul>	<ul style="list-style-type: none"> <li>Benefits Report: PSC, ITSC</li> </ul>
Stage Gates	<ul style="list-style-type: none"> <li>Need defined and endorsed?</li> <li>Category assigned?</li> <li>Proposal prioritised?</li> <li>Proposal scheduled?</li> <li>Seed funding secured?</li> </ul>	<ul style="list-style-type: none"> <li>Scope and objectives clear?</li> <li>PM / BA assigned?</li> <li>Lessons reviewed?</li> <li>Requirements signed off?</li> <li>High Level Design approved?</li> </ul>	<ul style="list-style-type: none"> <li>Bus Case approved and funding secured?</li> <li>Delivery partner/s engaged?</li> <li>Steer Co established?</li> </ul>	<ul style="list-style-type: none"> <li>Detailed design approved?</li> <li>Plans developed &amp; approved?</li> <li>Risks identified and treated?</li> </ul>	<ul style="list-style-type: none"> <li>Success criteria met?</li> <li>Solution accepted?</li> <li>Solution in operation?</li> <li>Documentation finalised?</li> </ul>	<ul style="list-style-type: none"> <li>Objectives achieved?</li> <li>Lessons documented?</li> <li>Closure Report approved?</li> <li>Benefits reporting in place?</li> </ul>	

# Project Management Methodology Cat 3 Projects (Simple)



## B2: Project approvals

### Executive management support and program and project governance

As will be seen from the composition of the various governance forums below, the most senior people in MGN, from Board members to the CEO to Executive Management Team members, are involved in approving and monitoring Technology Services projects.

The following mandatory review and assessment points exist within the governance framework:

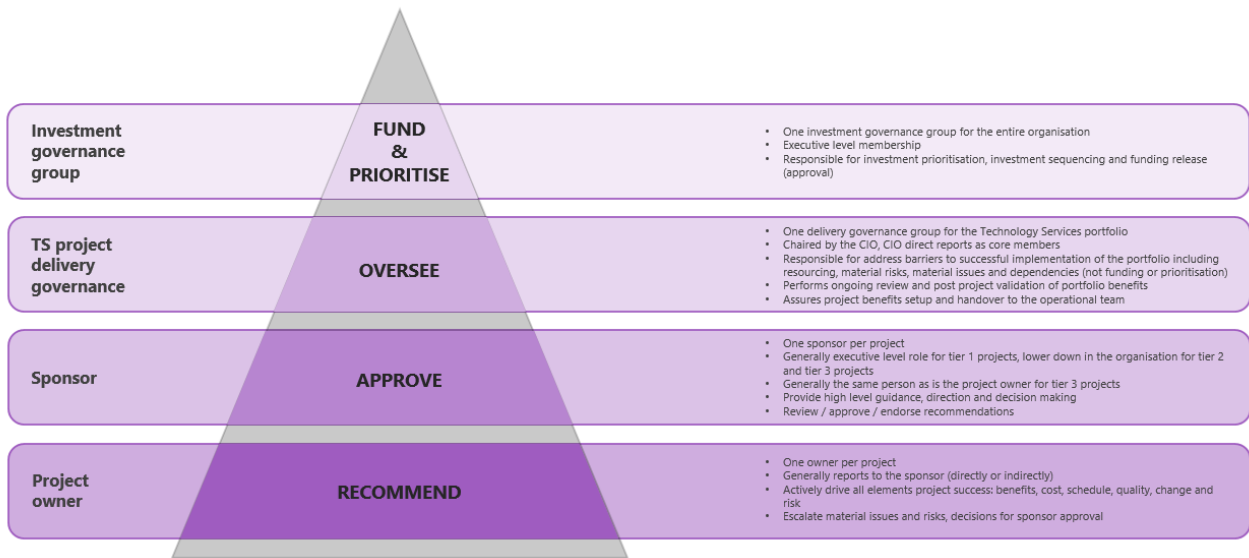
- 1 Formal approval by an independent governance forum, e.g. the full MGN Board or the Executive Management Team, depending of the size of the project.
- 2 Stage gate assessment of key deliverables, schedules and processes.
- 3 Risk assessment in each stage.
- 4 Progress review by Project Steering Committee (at least monthly).
- 5 Review of business case, to ensure benefits are still attainable.
- 6 Spot-check assessments.
- 7 Formal user acceptance testing and sign-off.
- 8 Post implementation reviews identifying lessons learned and enhancing the corporate methodology.
- 9 Closure reports.

### Technology Services project governance structure

The Technology Services project governance structure ensures the projects undertaken are the most appropriate, support the Network business and IT strategy and provide business benefits and risk mitigation.

The governance structure is scaled to ensure approvals occur at the right level of the organisation, and smaller projects are not unnecessarily burdened with onerous governance processes.

Project governance structure



### B3: Project governance

Our project governance structure provides a project with what it needs to ensure it is supported, controlled and set up to succeed, including:

- Reporting hierarchy
- Defined processes
- Accountability for decision-making
- Tools for managing the project

Our project governance framework guides project success by:

- Applying the areas of Organisational governance that specifically relate to project activities
- Creating transparency to enable informed decision making
- Providing a clear structure of accountability for the project
- Providing clearly defined project roles and responsibilities

The following forums are required to support the effective operation of IT governance and help facilitate the IT decision making process for all technology services projects.



### Board

Any projects that have an expected end-to-end budget of over a policy-agreed amount must be approved at MGN Board level.



## Executive Management Team

The Executive Management Team consists of the executives and the chief executive officer. The EMT provides strategic direction and facilitates decision making around IT. All Technology Services projects must be approved by the EMT, which is essentially the investment committee for Technology Services projects.

The Committee:

- prioritises business and technology projects;
- approves funding;
- verifies project alignment with strategic objectives; and
- has authority to start and stop projects/initiatives.

## IT Steering Committee

The IT Steering Committee acts as the progress review committee for technology services projects approved to be delivered in the current budget period and are responsible for:

- endorsing all new projects;
- endorsing all requests to the Executive Management Team;
- ensuring project alignment with strategic objectives;
- the governance of all projects and initiatives; monitoring overall spend/savings, benefits, project health and dependencies;
- monitoring overall risks;
- starting and stopping projects/initiatives; and
- identifying productivity and business improvement opportunities, including the leverage of initiatives across the business, and drives out best practice initiatives

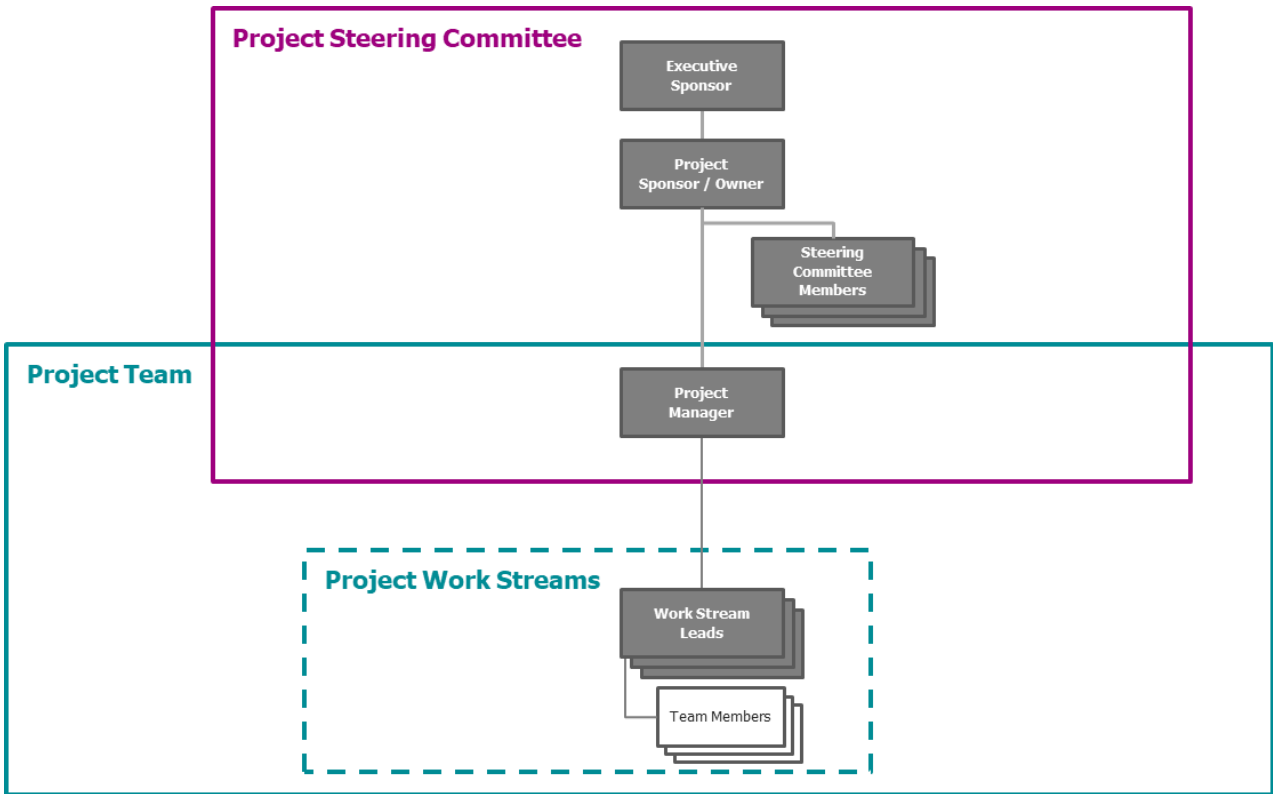
## Project Steering Committee

The Project Steering Committee comprises relevant senior stakeholders from MGN who oversee delivery of a single, specific project. The PSC track the project's progress and guide its direction, to ensure it is in line with strategic objectives and is delivering according to agreed business need, priority, objectives, benefits and success criteria.

The Committee:

- Provide steerage, consider alternatives and make recommendations as appropriate on behalf of their business
- Approve recommendations that impact project implementation, obtaining approval from portfolio delivery Governance (if required)
- Provide strategic guidance on all key project deliverables
- Resolve key risks and issues escalated by the project working group
- Ensure lessons learned from previous relevant programs are applied to scoping of current program any new lessons are shared at the end of program
- Provide regular updates on the project to their respective Leadership Team member
- Support updates to Portfolio Delivery Governance as necessary

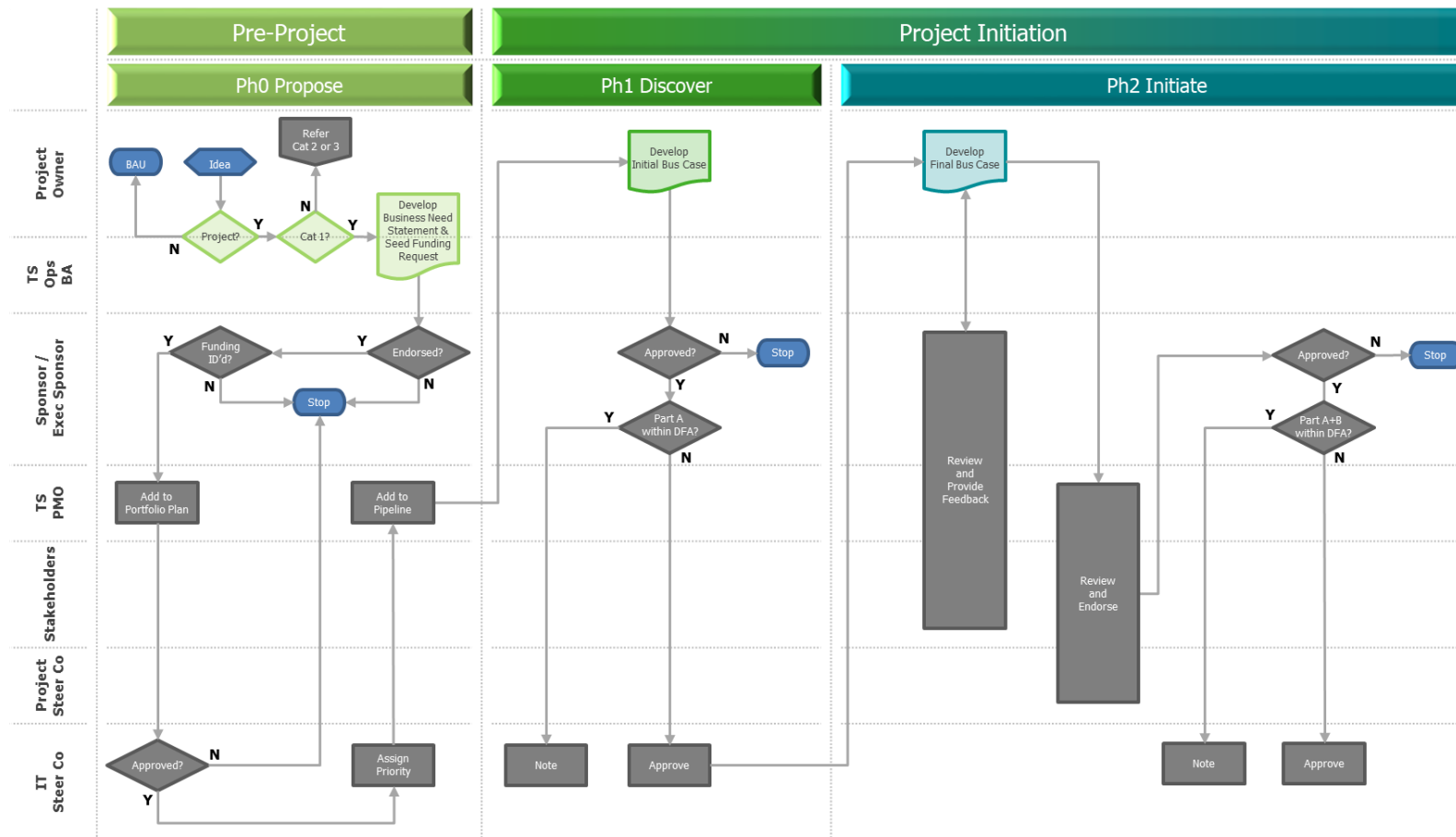
The relationship between the Project Steering Committee and the Project Team is depicted below:



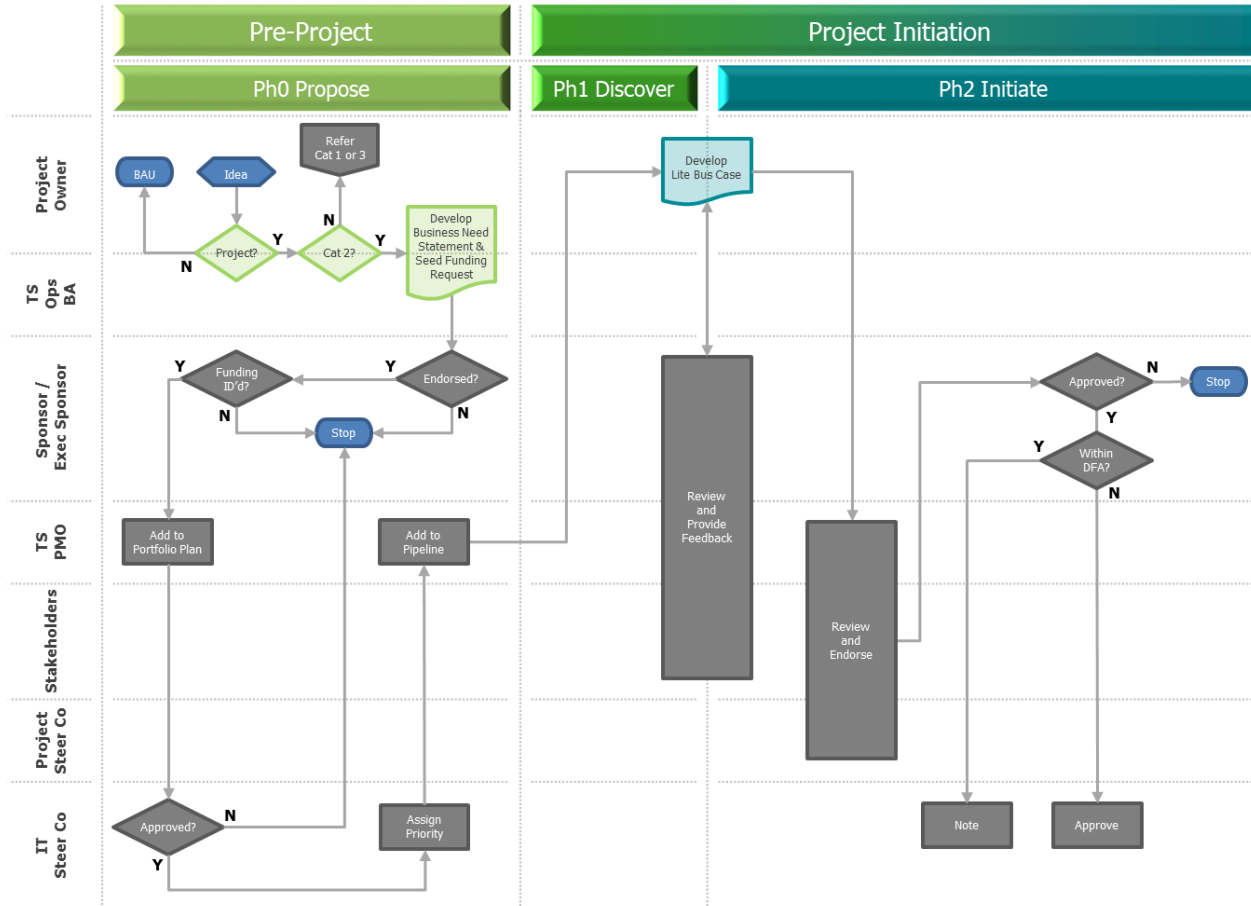
## Project initiation and approval

The following diagrams illustrate the project initiation and approval across the governance forums for each of the project categories.

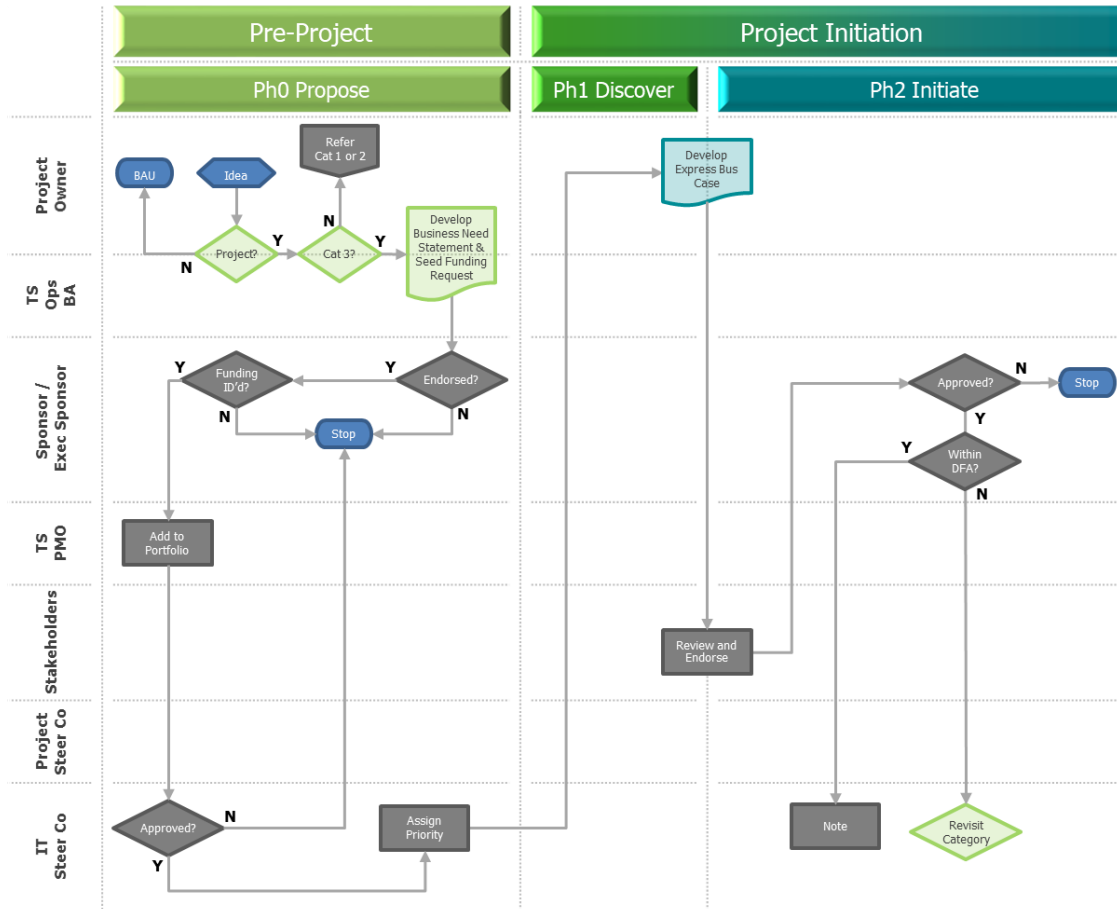
### Project Initiation and Approval Cat 1 Projects (Complex)



## Project Initiation and Approval Cat 2 Projects (Standard)



## Project Initiation and Approval Cat 3 Projects (Simple)



## B4: Good industry practice project management methodology

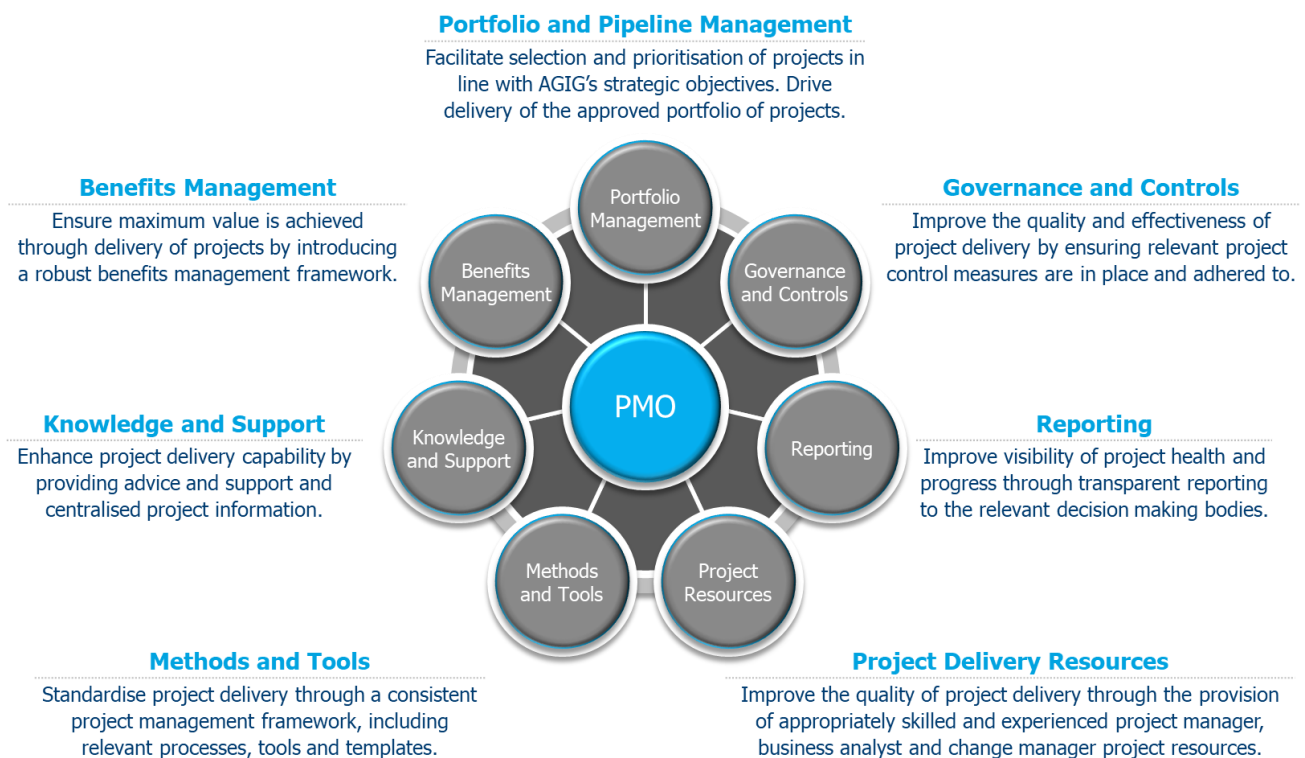
An organisational-wide project management framework underpins the program delivery. Risk assessments are required as part of the business case development, and are revisited at each stage of the project to ensure changes in the project, the business operating environment and/or the regulatory environment are always considered and addressed. This overall approach is supported by three core frameworks:

- The Project Management Framework (PMF) - providing a consistent and scalable approach to project management including artefacts and processes.
- The Change Management Framework (CMF) – providing guidance for the activities and artefacts required for change at each stage of the project lifecycle.
- The Project Assurance Framework (PAF) - providing guidance for health checks, stage gate reviews and post implementations reviews.
- The Portfolio Management Office (PMO) – facilitating delivery of the right projects with material technology impact, at the right time, in the right way.
- The Project team roles and responsibilities -

### Portfolio Management Office

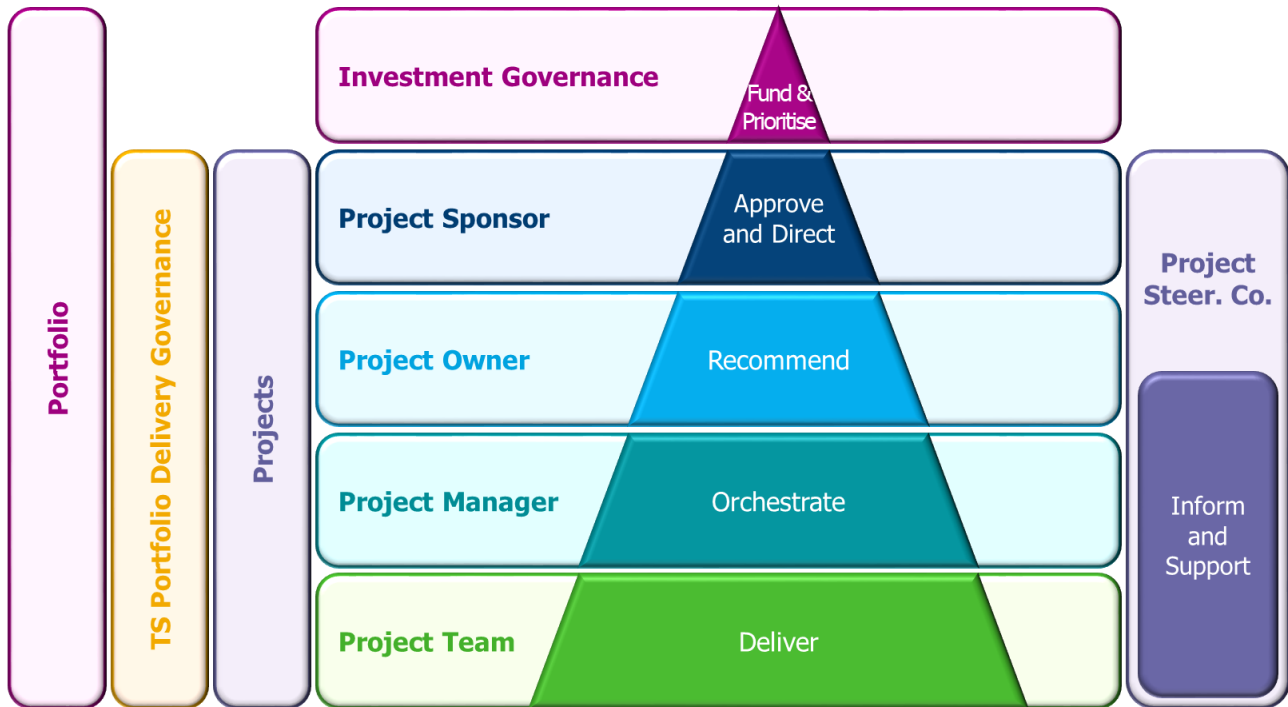
The PMO exists to enable MGN to achieve its strategic vision to be the leading gas infrastructure business in Australia, achieving top quartile performance on our targets. It does this by facilitating delivery of the right projects with material technology impact, at the right time, in the right way.

A summary of the PMO’s functions and responsibilities is provided in the diagram below:



## Project team roles and responsibilities

The project team roles and responsibilities are clearly defined and can be summarised as follows:



Role	Purpose	Key responsibilities
Project Sponsor	Accountability for, and senior leadership of, the project	<ul style="list-style-type: none"> <li>• One and one only per project</li> <li>• Accountable for project success</li> <li>• Creates the vision</li> <li>• Defines success</li> <li>• Owns the Business Case</li> <li>• Advocates the change</li> <li>• Makes strategic decisions*</li> <li>• Provides strategic direction</li> <li>• Removes escalated obstacles</li> <li>• Reviews progress</li> <li>• Sells the idea</li> <li>• Enforces project management principles and methodologies</li> <li>• Owns project performance</li> </ul>

Role	Purpose	Key responsibilities
Project Owner	Prime responsibility for project success	<ul style="list-style-type: none"> <li>• One per project</li> <li>• Responsible for benefits delivery</li> <li>• Defines the business objectives</li> <li>• Defines the business outcomes</li> <li>• Owns the outcomes and benefits</li> <li>• Leads the change</li> <li>• Makes tactical decisions*</li> <li>• Drives project success</li> <li>• Escalates items for Sponsor decision</li> <li>• Monitors progress</li> <li>• Engages stakeholders</li> <li>• Reinforces project management principles and methodologies</li> <li>• Communicates project performance</li> </ul>
Project Manager	Orchestrates all aspects of end to end project delivery	<ul style="list-style-type: none"> <li>• One per project</li> <li>• Orchestrates project delivery</li> <li>• Translates objectives into deliverables</li> <li>• Defines the deliverables</li> <li>• Orchestrates outcomes delivery</li> <li>• Plans the change</li> <li>• Actions Sponsor and Owner decisions</li> <li>• Coordinates the project team</li> <li>• Identifies, tracks, reports threats</li> <li>• Tracks delivery and reports progress</li> <li>• Facilitates stakeholder engagement</li> <li>• Applies project management principles and methodologies</li> <li>• Reports project performance</li> </ul>

### Project Management Framework (PMF)

The PMF is made up of five project management stages following proposal for a new project:





Each stage has distinct areas of focus and key artefacts for completion. To exit each stage, stage gate criteria must be met to ensure key deliverables and processes within a stage are completed satisfactorily before the next stage can commence, and to ensure the project is still viable.

There are also a number of time-based controls which embed routine tracking of project progress and performance, and to manage and control deviations from approved plans:



### Change Management Framework (CMF)

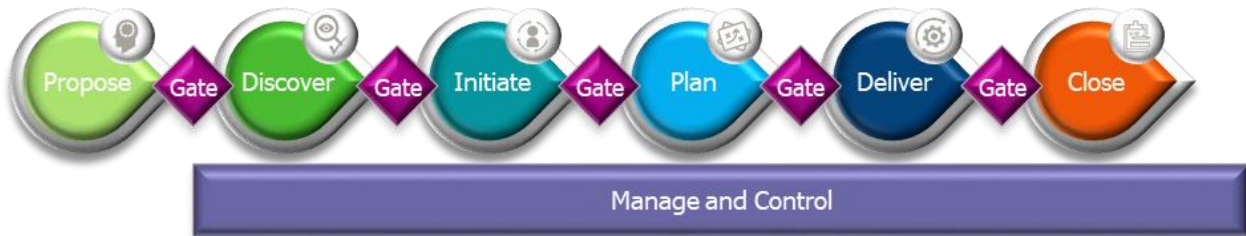
The CMF is a structured approach to transitioning individuals, teams and the organisation from the current state to the desired future state and aims to maximise the value and likelihood of achieving business outcomes and minimising disruption for our people and customers.

Similar to the PMF, it is a disciplined methodology and follows a staged approach as per the diagram below:

	Define	Design	Deploy	Sustain	Measure
Objective	Define the case for change	Prepare for the change by designing the approach, and developing the change plans	Ready the business for the change	Embed the change in the business	Measure actual vs expected results
Activities	<ul style="list-style-type: none"> <li>Identify the change complexity and high level impacts</li> <li>Define change success measures</li> <li>Identify key stakeholders and the sponsorship model</li> <li>Engage the sponsor</li> <li>Develop the Change Canvas</li> </ul>	<ul style="list-style-type: none"> <li>Assess change readiness</li> <li>Develop the change plans</li> <li>Engage the business</li> </ul>	<ul style="list-style-type: none"> <li>Execute the change plans</li> <li>Gain business approval for go-live</li> </ul>	<ul style="list-style-type: none"> <li>Execute embed activities from change plans</li> <li>Transfer ownership to the business</li> <li>Input to lessons learnt</li> </ul>	<ul style="list-style-type: none"> <li>Gather stakeholder feedback</li> <li>Measure identified success factors</li> <li>Input into Benefits Report</li> </ul>
Deliverables	<ul style="list-style-type: none"> <li>Change Canvas</li> <li>Stakeholder Analysis</li> </ul>	<ul style="list-style-type: none"> <li>Impact Assessment</li> <li>Change Risk Assessment</li> <li>Training Needs Analysis</li> <li>Change Strategy and Approach</li> <li>Change and comms plan</li> <li>Training Plan</li> </ul>	<ul style="list-style-type: none"> <li>Communication artefacts</li> <li>Training and training artefacts</li> <li>Change activities</li> <li>Change readiness assessment</li> </ul>	<ul style="list-style-type: none"> <li>BAU handover</li> <li>Lessons learnt</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to Benefits Report</li> <li>Change review document</li> </ul>

## The Project Assurance Framework (PAF)

The PAF ensures consistent application of the project management governance, artefacts and methodologies required to progress a project from stage to stage.



In addition to providing the basis for progression of a project, the Project Assurance Framework will guide

- Stage-gate assessments between each phase
- Quality Assurance assessments mid-phase, for all post-Propose phases
- Internal and external audits
- Post implementation reviews.

# Appendix C: Application lifecycle management

We utilise an industry-standard application lifecycle management methodology and a practical framework to determine upgrade timelines and priorities. The diagram below outlines the key aspects of this framework.

## Application Lifecycle Management Framework

