Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

MISSION Lifting the Understanding and Delivery of Asset Management across the Organisation

PROGRAMME UPDATE

NOVEMBER 2021

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INTRODUCTION

Asset Management is integral to the function of local government as many of the services provided by Council rely on assets to support their delivery. Also, assets represent a significant investment by the communities that Council has a fiduciary duty to protect. Moreover, the failure of critical assets could have severe social, cultural, environmental, and economic impacts on our communities.

Strategically, asset management plays an integral role in delivering on the Long-term Planning of the Far North District Council (FNDC). Not only does it control how we execute on the District's infrastructure strategy, but it also plays a significant role in financial planning. For assets to influence the budget, rather than being constrained by it, planning needs to be conducted at a time that allows completed financial forecasts to be readily available to underpin the budget. In this way, those making decisions on budgets can be better informed and able to consider the effect of their decisions on the assets and levels of service that particular assets support.

In many districts across New Zealand assets are increasingly stressed from over-use, under-funding, and aging. While District Councils have been managing assets for decades it has become increasingly evident that the way we did things in the past will not be sufficient to address the growing and increasingly complex challenges that lie ahead. Practical, advanced techniques that enable enhanced management of physical assets have been developed and refined over the past several years around the world. In line with these developments, the FNDC has resolved to invest in a transformational programme of work to enhance its technology, processes and people capabilities around modern asset management tools, techniques, practices, and skills.

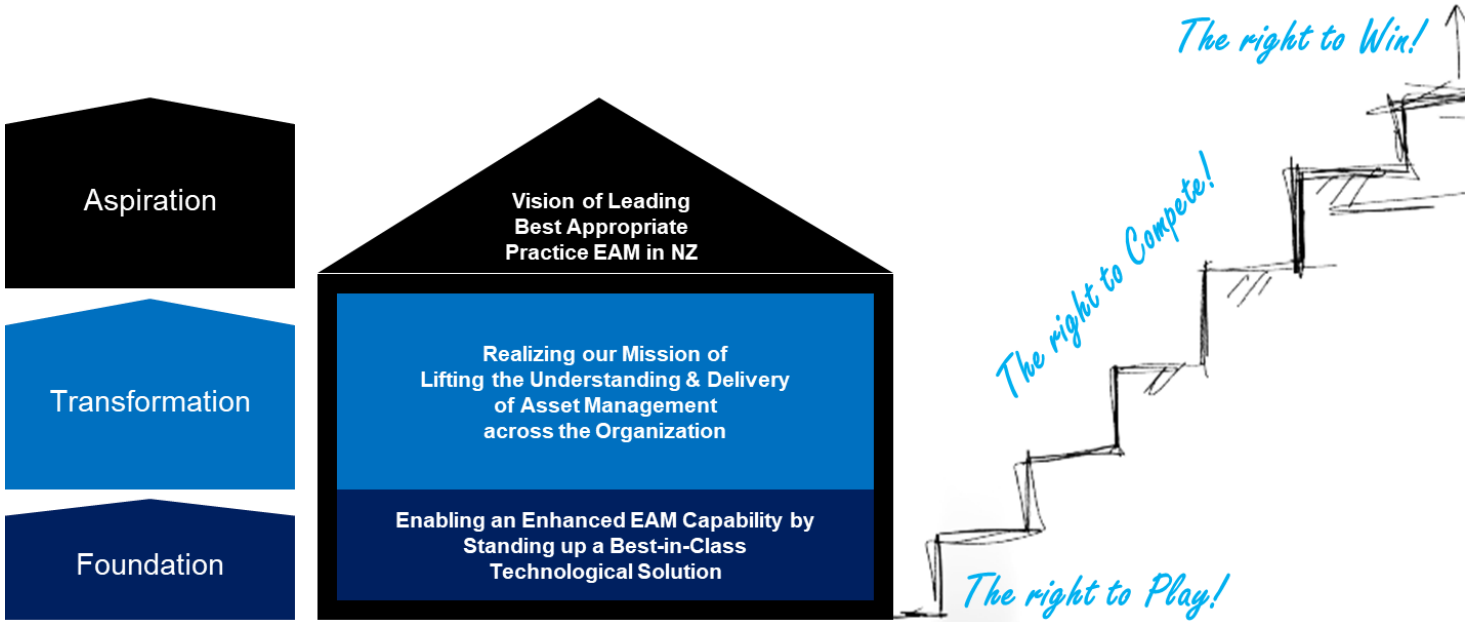
PROBLEM STATEMENT

The Far North District Council could not easily report on the financial operating position (particularly profit and loss) and the balance sheet for each community asset (halls, parks, playgrounds, sewage, water, and wastewater schemes) residing within the district, wards, communities, and towns, without expending significant manual data extraction and manipulation work that introduced inconsistencies resulting in a lack of trust in the information presented. A business case was drafted in 2017 to address the challenges that were being experienced by the Asset Management team at the time. Specific challenges included:

- While the information required for informed financial asset management decision making existed, it was not held in a joined-up way in FNDC systems and contractor systems. Depreciation and budgeted expenses were held in the FNDC Finance System. Service levels were defined in tenders, and the actual costs were held by the Contractors that had the contracts to maintain the assets.
- The General Ledger was required to provide an overall view of asset finances, and it employed the Financial Fixed Asset Register to depreciate categories of assets and draw on the maintenance budgets.
- The absence of an Asset Management System with the granularity to accurately capture maintenance, capital, and operational costs at the asset component level rather than for the fixed asset, and then automatically match this data with the budgeted view for the asset.
- The need to capture condition and performance data, at the operational asset level, to enable the accurate calculation of the total cost of ownership of existing assets.

The intention was to implement and Integrated Asset Management System that would fill the above identified gaps. In time additional requirements were identified and what started in 2017 as a project to implement an asset management system, evolved during 2019 into a programme of work to deliver a comprehensive enhanced asset management capability within Council. To meet these challenges a case for change was captured in three evolutionary stages described and depicted below:

- The Right to Play: Council set out to build a high-tech vehicle that will allow us to take our stakeholders on a journey toward an enhanced Enterprise Asset Management (EAM) capability.
- The Right to Compete: Building on the foundation of our new digital solution, we will shift our focus towards relentlessly integrating, automating, rationalizing, standardizing, and simplifying all the processes and people competences required to move us ever upwards along the EAM capability maturity levels.
- The Right to Win: While this stage symbolizes an aspirational level of EAM capability, we will relentlessly strive to move ever closer toward our target-state goal of being recognized by our people, communities, and peers as a de facto leader in EAM.



The Evolution of Asset Management at FNDC

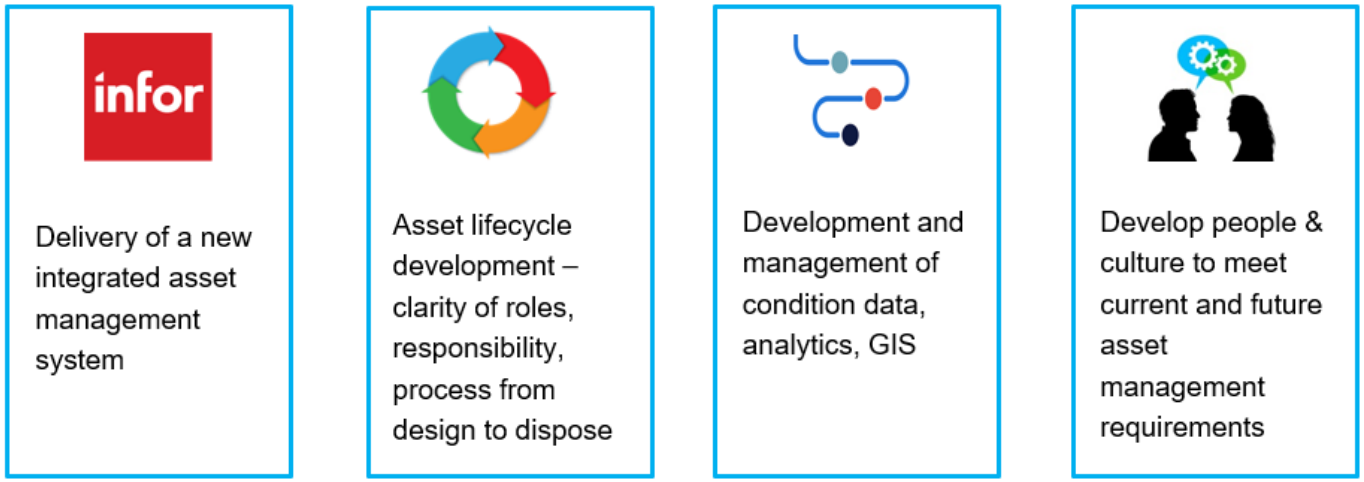
BACKGROUND

As an organisation, our strategic initiatives all find their origin in our mission imperative of –

Creating Great Places, Supporting Our People!

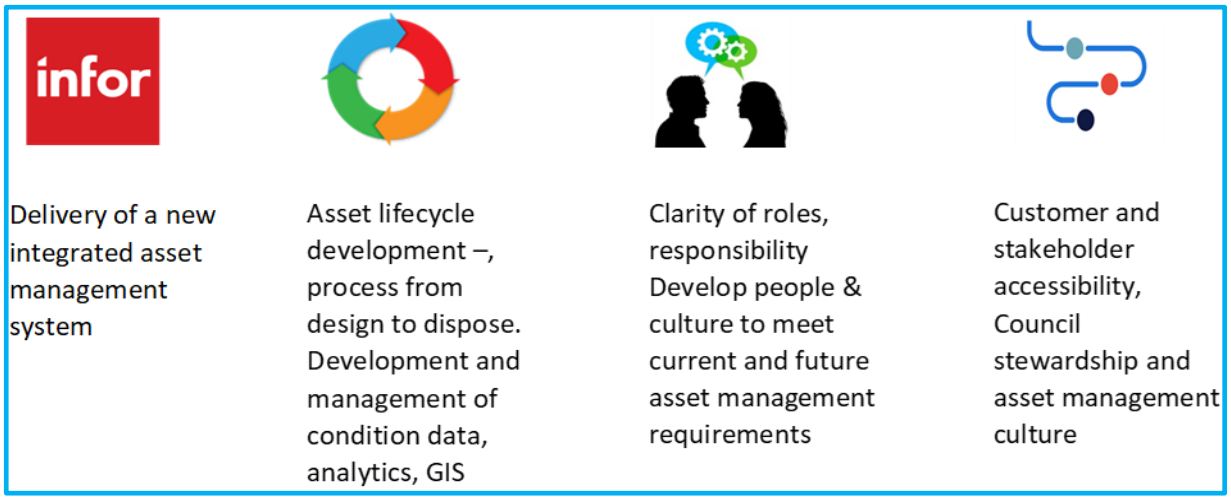
In 2019 the FNDC set out on an ambitious journey of asset management transformation to enable its strategy of delivering on its mission. Programme Darwin, and its partner transformation programmes were set to provide the basis for FNDC to steadily improve our performance towards realising our mission.

The key transformational programmes at the time were targeted towards (1) improving our customers' experiences, (2) enabling online services, and (3) evolving asset management maturity. The latter of these programmes shaped what became known as Programme Darwin, conceptualised within four initial workstreams, that were updated in 2020 as depicted in the figures below:



Structure of Initial Darwin Workstreams (2019)

Following an October 2020 review of these workstreams, to ensure alignment with the benefits categories, the programme team opted to refine the core outcome area for each. While the initial workstream around system development remained unchanged the other three were merged into two streams and a new Customer/Stakeholder stream was established. This was thought to better represent the natural programme cycle and dependencies and to lift the user focus area to a more prominent level. It also made aids with improved accountability for each workstream ensuring more direct function alignment of resourcing. The adjusted workstreams are presented below.



Structure of Revised Darwin Workstreams (2020)

The November 2020 report to Elected Members indicated that, supported by these projects/workstreams, Programme Darwin was positioned to, in time, achieve:

- Control over our asset data and reducing our reliance on contractors to manage the data and our lifecycle asset management processes
- A 360° view of assets, i.e., a complete view of any asset, its cost, its condition, and its planned renewal details.
- Enhanced reporting functionality on assets and the true cost of asset maintenance and replacement, as input to decision making by Infrastructure & Asset Management teams, Governance Groups, the Strategic Leadership Team (SLT) and Elected Members.
- Control over our work management processes relating to reactive and preventative maintenance.
- Complete and accurate information on which to base 5-year through 20-year renewals plans for the Long-Term Plan (LTP) and Asset Delivery teams – published through an annual Living Asset Management Plan (LAMP) and to be ready to support the LTP review in 2024[1].

STRATEGIC ALIGNMENT

It is essential that all asset management activities be firmly linked to the organization's key objectives. Moreover, it is vital to ensure alignment between the Programme objectives & goals and the asset management vision while ensuring clear linkages between:

- Business drivers / goals of the organization (see Life Cycle Processes and Practices - Strategic Planning)
- Lifecycle asset management functions
- Individual actions associated with them, and how these key linkages impact on the business's value chain

[1] *Refer to updated timelines in Programme Roadmap section.*

Long Term Plan
FNDC and the governance arm set an ambitious programme to realise the District Vision, articulated through 6 focus areas in the LTP:

Darwin remains aligned to the updated Council Strategic Priorities listed below:

2018 Priorities	**2021 Priorities**
1. Civic leadership and advocacy (SA1)	1. Better asset management (P1)
2. Address affordability (SA2)	2. Address affordability (P2)
3. Better data and information (SA3)	3. Enable sustainable economic development (P3)
4. Affordable core infrastructure (SA4)	4. Adapt to climate change (P4)
5. Improved Council capabilities and performance (SA5)	5. Protect our water supply (P5)
6. Empowering communities (SA6)	6. Deepen or sense of place and connection (P6)

The Programme was established to stand-up a system to analyze and manage FNDC's asset information within a single source, configured to support a dynamic planning, operating, and reporting environment. Fundamentally it set out to provide the information infrastructure to capture, store and interrogate the attribute, condition and performance data needed as the basis for all investment planning and operating activities.

Building off FNDC's objectives, Programme Darwin developed a supporting set of program benefits in 2019 to demonstrate its influence on the corporate goals as well as guide and recognize delivery achievement. The benefit realization categories, defined during 2019, through consultation with staff, stakeholders, and elected members were aligned as follows alongside their links to the Councils strategic focus areas (SA):

- Accurate, timely and robust system and data to develop infrastructure investment and service optimization; (SA3)
- Demonstrating value for money in both current and future asset management decisions; (SA2, SA4)
- Improved capabilities and performance to optimize Council and data supply chain resourcing; (SA5)
- Industry leading thought leadership and community advocacy in asset management through accessible data and scheme representation: (SA1, SA6)

The strategic alignment of Programme Darwin against the six LTP priorities updated in 2021, was reviewed with particular focus on the first three priority areas.

- Accurate, timely and robust system and data to develop infrastructure investment and service optimization; (P1, P2)
- Demonstrating value for money in both current and future asset management decisions; (P2, P3, P4, P5)
- Improved capabilities and performance to optimize Council and data supply chain resourcing; (P1, P2)
- Industry leading thought leadership and community advocacy in asset management through accessible data and scheme representation: (P1, P6)

CouncilMARK[2]
'**Service Delivery and Asset Management'** is one of 4 priority areas referenced in **CouncilMARK** and received a rating of '***Competent***' during 2020. Darwin related 'Areas of Improvement' referenced in the report include:

- Council vision and strategy lacks clarity and coherence and are not explicitly aligned with asset management plans and service delivery strategies.
- Management of three waters assets is weak, with Council struggling to consistently achieve regulatory standards and community expectations.

[2] *CouncilMARK is a measure for better community value and is New Zealand's local government excellence programme, which FNDC participate in.*

The success of the 'Service Delivery and Asset Management' workstream is largely dependent on the successful delivery of Programme Darwin. As noted above, Darwin along with other transformational programmes, will deliver change across the organisation that will enable us to deliver on FNDC's mission.

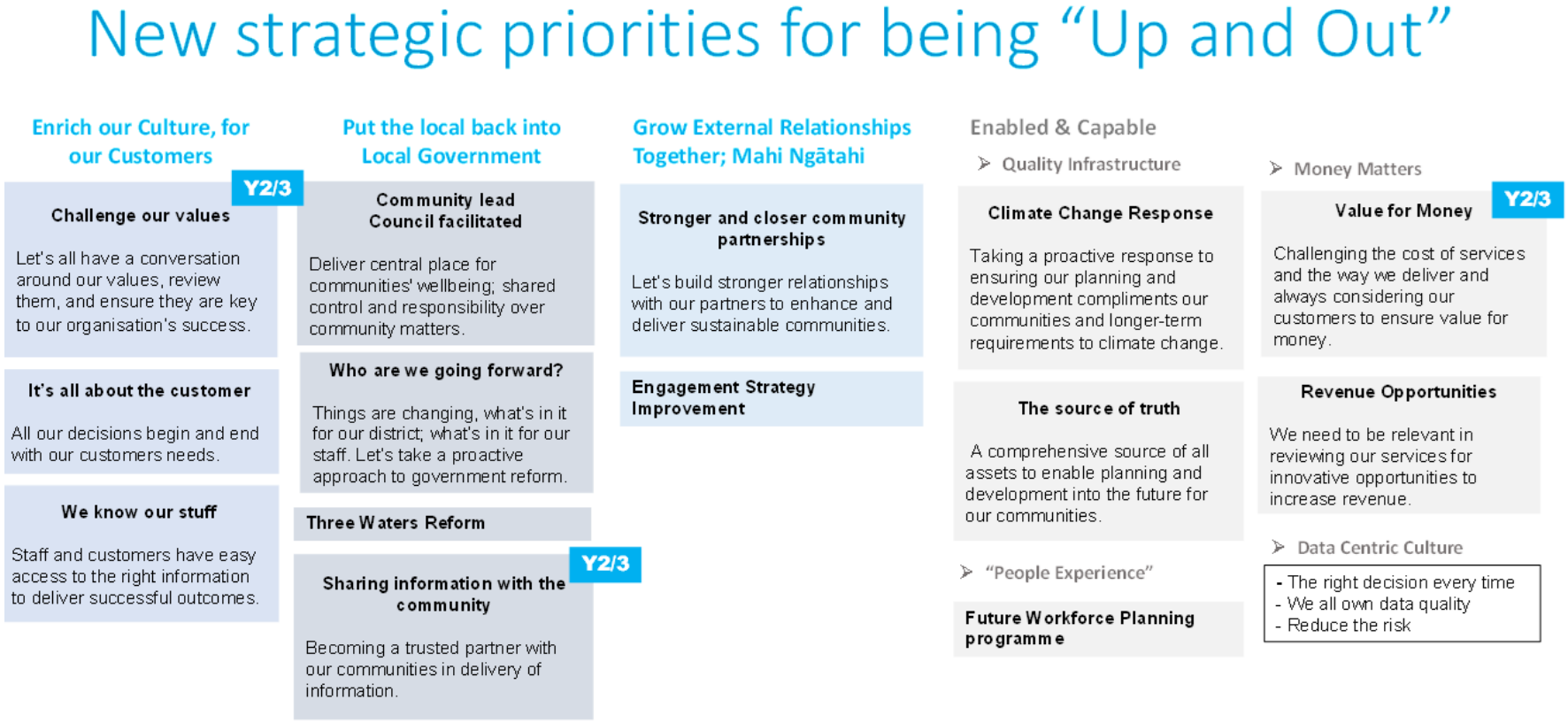
Organisation Strategy 2021

Over the past three years Council has focused inwards working on our systems and processes to build our capability so as to create great places and support our people. However, much has changed during this time, some events which emerged outside of our sphere of control lead us to realise that we needed to be responsive to our rapidly changing world. We want to position ourselves to be at the ready to find our new place and this has led us to shift our strategy toward a path where we remain focused to –

Look up and outwards!

…to our people, our communities, and our future. This is the Far North District Council's new three-year organisation strategy. It focuses on what matters most, i.e.:

- Enriching our culture for our customers
- Putting the local back into local government
- Building strong external relationships | Mahi ngātahi



New strategic architecture with the prioritized 'big moves' to deliver on the three-plus-one priorities[3]

Again, Programme Darwin is well positioned to address particularly the first two priorities i.e.:

- Programme Darwin will help to enrich our culture for our customers by providing and equipping our staff with the relevant asset management tools, processes, techniques, and skills to deliver outstanding customer outcomes, every time.
- Programme Darwin will help put the local back into local government by enabling us to gain an enhanced understanding of the changes that may impact on our communities and thereby ensuring that the future trajectory of asset management is ever more focused on integrated and sustainable outcomes that improve the wellbeing of our society.

[3] *Work around the "Up and Out" strategy to be consolidated towards the end of 2021.*

BENEFITS REALISATION

Towards the end of the Programme Darwin journey, our strategic intend is for FNDC to hold:

- Accurate, complete asset data that is controlled and maintained by FNDC
- A robust analysis on this data that enables better long-term infrastructure decisions and delivers better value for money
- An articulated asset management hierarchy, with links between strategic and operational asset management clearly defined
- Commitment horizontally – Planning, engineering, finance, strategy, project management
- Commitment vertically – SLT, Tier 3 Managers, relevant staff (Partnering with us to continue in developing our inhouse capability, capacity, and commitment to our vision of continuous improvement in the discipline of asset management)
- An accurate data set allowing trade-offs to be made with confidence so that the best value whole-of-life strategies can be developed, using real-time data
- The IPS Suite fully integrated with all other FNDC and Alliance Partner systems enabling easy information sharing, analysis, and ultimately better information to support decision making
- A higher level of asset management competence within existing staff, and growing a pipeline of asset management talent
- An embedded culture of continuous improvement providing the space to be agile enough to rapidly flex to changing asset management requirements

GOVERNANCE

The Governance of Programme Darwin is controlled via a Programme Steering Group (PSG). PSGs are decision making bodies that ensure the right activities are taking place, undertaken correctly and are in alignment with strategic goals. The PSG further provides a forum for senior management to better understand the scope, benefits, financial and contractual status of a group of related projects (managed in a coordinated way to obtain benefits not obtainable from managing the projects individually), enabling informed decisions to be made and ensuring a high level of communication with stakeholders.

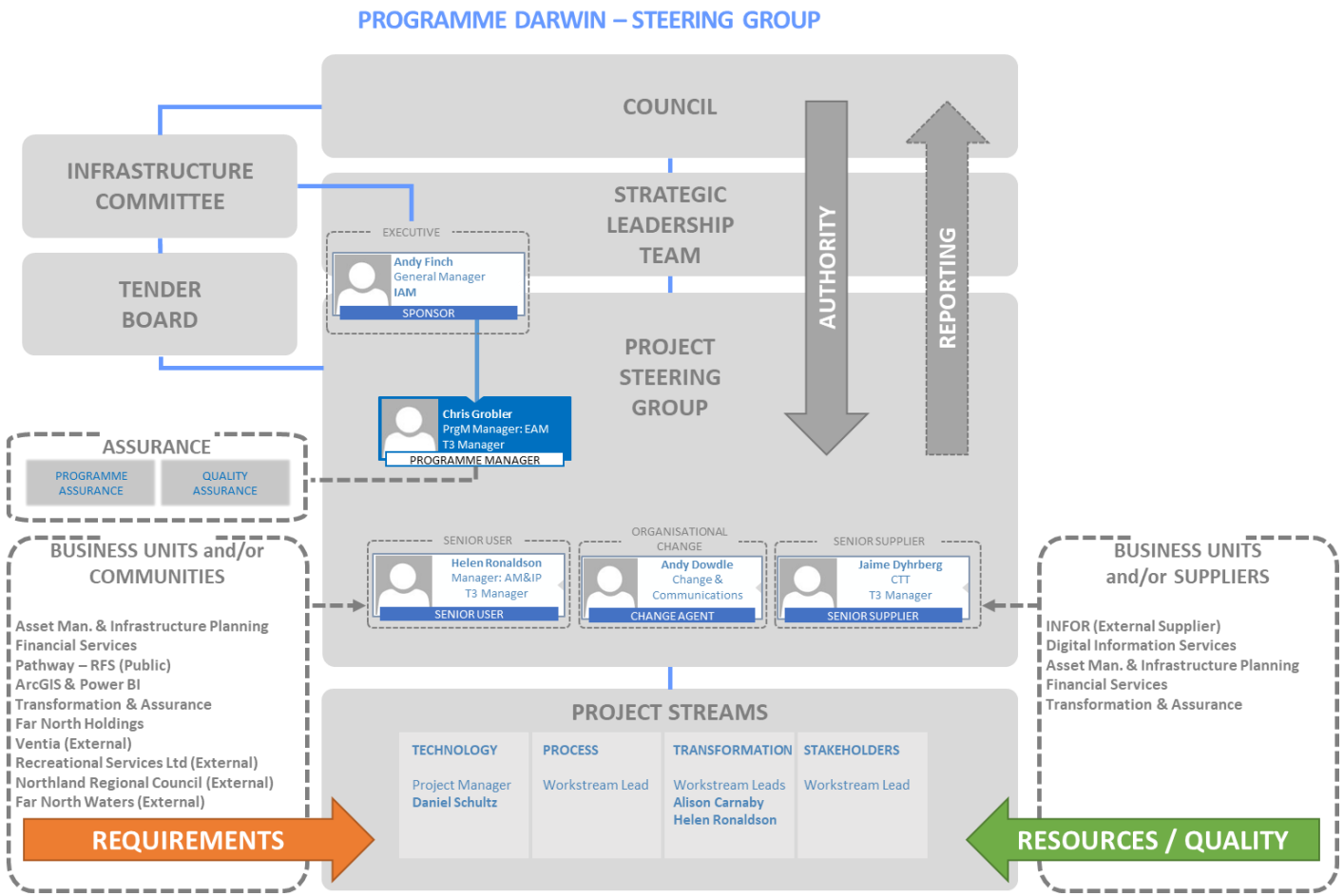
Reports on the programme's progress, finances, timelines, changes, issues, and risks are submitted to the PSG on a monthly basis. The PSG deliberates on key issues or potential delivery risks that may have adverse implications for FNDC in terms of time and cost; or being of a high public profile / politically sensitive nature whilst ensuring a zero-harm focus on programme delivery is maintained. Any approvals or endorsements required, that are outside of the PSG's authority, will be referred to the Strategic Leadership Team (SLT) who in turn will escalate items, as appropriate, to either the FNDC Council via the Chief Executive Officer, or Infrastructure Committee via the General Manager – IAM.

The PSG is not involved in the day-to-day management of the programme but rather sets the broad direction to be taken by the programme team responsible for the delivery and administration of the programme and related projects. With a key focus on Stakeholder Needs, the PSG's objective of Value Creation is driven by balancing three interrelated constructs, namely:

- Benefits realisation
- Risk Optimization
- Resource Optimization

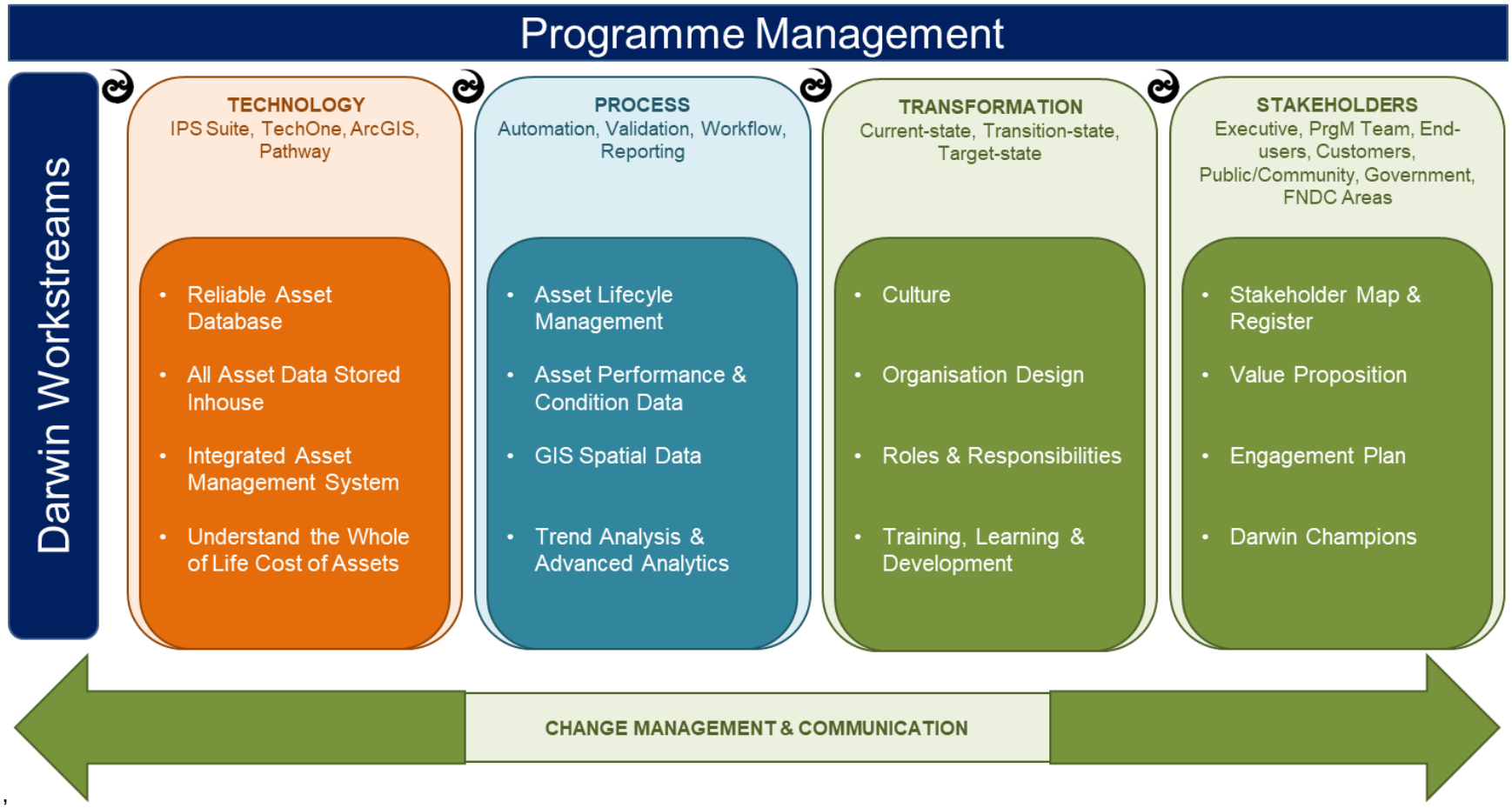
The membership of the Programme Darwin PSG is listed in the table below:

Role	Name	Job Title
Sponsor	Andy Finch	General Manager: IAM
Programme Manager / Chair	Chris Grobler	Programme Manager: EAM
Senior User & Joint Workstream Lead – Transformation	Helen Ronaldson	Manager: AM & IP
Senior Supplier (Technology)	Jaime Dyhrberg	Chief Digital Officer
Senior Supplier (P&C) & Joint Workstream Lead - Transformation	Alison Carnaby	Business Partner: P&C
Subject Matter Expert (Finance)	Janice Smith	Chief Financial Officer
By Invitation		
Subject Matter Expert (Asset Management)	Kirsty Farrow	Team Leader: AM
Subject Matter Expert (Change)	Andy Dowdle	Project Change Specialist
Subject Matter Expert (Risk)	Tanya Reid	Business Improvement Specialist
Workstream Lead - Technology	Daniel Shultz	IT Project Manager
Workstream Lead - Process	Vacant	
Workstream Lead - Stakeholders	Vacant	



Structure of the Programme Steering Group

The programme is mandated to provide monthly reports to the Infrastructure Committee and quarterly report updates to the Assurance, Risk and Finance (ARF) Committee. Also, the programme has a regular slot to provide feedback at the SLT Performance Meeting ensuring the executive leadership are kept informed on the programme's state of play.



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Structure of project / workstream delivery work under Programme Darwin

PROGRAMME MANAGEMENT

Programme Darwin is a transformational programme supporting asset management capability maturity through the utilization of technology, processes, and people. At its core is the asset management system (IPS Suite) that will collect, filter, store, collate, analyze, and disseminate enriched asset data and management information. Once operational, the asset data, analysis and performance functionality will provide a platform for incremental improvement towards optimizing our business processes around whole of life asset management. In addition, the new asset management system will serve as a catalyst for the development of new lifecycle asset management skills, competencies and organizational arrangements that collectively will support FNDC's vision of leading best appropriate asset management practice.

One of Council's overarching goals is to be an industry leader and intelligent asset data owner and manager in order to demonstrate sound investment decisions and deliver great asset stewardship. The AMS Project is built on a robust and detailed implementation roadmap that supports the development of the system engine, and a healthy commitment from staff and stakeholders to make it happen.

During 2020 the Programme Manager recommended that a renewed focus be placed on the monitoring and reporting of the benefit realization framework and greater project/programme integration so as to reinvigorate stakeholder and general council staff awareness, assuring renewed confidence in the programme. He proposed that a revised programme timeline was needed to reset expectations and identify constraining and/or dependent processes and system requirements. While it is evident that a strong and viable implementation strategy and supporting roadmap was established for the AMS Project, alignment with broader programme outcomes, the asset management ecosystem, and the interdependencies with other FNDC business strategy's (beyond IAM) all needed to be revisited. Changing operational demands and programme delays predominantly contributed to this need to reset the deliverables along the roadmap.

TECHNOLOGY

The Asset Management System (AMS) Project drives the delivery of the technology stream. The AMS Project will be delivered in two distinct successive phases. Phase 1 comprise:

- Setting up the new asset management system (IPS Suite).
- Developing an asset hierarchy for FNDC and configuring this in the IPS system.
- Setting up the INFOR operating system (IOS) and installing the integration engine (ION).
- Integrating ArcGIS, TechOne and Pathway into the IPS system.
- Training relevant staff on the use of the new system.
- Data cleansing and migration from the interim database (IDB) into IPS.
- Analysis of FNDC financial fixed asset register.
- System go-live with relevant asset data groups migrated into IPS.

Go-live will be followed by incremental enhancement of the IPS system. Phase 2 will comprise:

- Enabling organizational design by crafting a structure and roles to support new value chains, driving customer centric asset planning and services delivery.
- Driving process improvement within IAM through a transition from manual, administrative and reactive tasks to automated, dynamic and value driven work tasks.
- Enabling the transition from aged-based towards condition-based asset lifecycle management.
- Developing IPS asset acquisition processes controlled via build sheets.
- Developing IPS\ION automated workflows.
- Developing advanced analytical reporting on IPS assets as defined by FNDC.
- Aligning stakeholders around the new IPS system.

The project team comprise the following members:

Daniel Schultz
IT Project Manager (Darwin)
Programme Delivery
Available

Sarah Harwood
Technical Business Analyst - Project ...
Programme Delivery
Available

Phillip Shum
Data & Systems Specialist
Asset Management
Available

Peter Juranovich
Asset GIS Specialist
Asset Management
Yesterday

Mary Woolley
Asset Data Analyst
Asset Management
Available

Polly Morrow
Fixed Asset Accountant
Accounting Services
Available

PROCESS

The process component contains a number of sub-projects, including embedding and systematizing lifecycle asset management, building discipline around continued process improvement practices, executing on a programme of work to capture our asset condition data into a repository, configuring our advanced analytics module to improve decision making and reporting, and integrating our asset management system to ArcGIS to enable enhanced spatial planning.

1-Lifecycle Asset Management

As an asset owner, it is vital for FNDC and more particularly the IAM Area, to be able to paint a clear picture of our asset management performance. We need to be able to identify what we can produce and at what cost. This approach requires the consideration of the entire lifecycle process. From the initial concept or identification of a demand for service through the creation phase, into operations, maintenance, and renewal and through to disposal - all elements need to be considered. This is relatively easy for a single asset, but as with the case of FNDC where we own a mature network and portfolio that consists of tens-of-thousands of individual assets, the task becomes complicated. It is therefore important to understand where assets are in their lifecycle and how we can reduce their cost while enhancing performance.

2-Process Improvement

While Programme Darwin is founded on a solid and reliable technology platform there are (discovered) configuration and system management issues arising from the viability of datasets, the competency of related system/processes and the management of system inputs. A review of the configuration and data integration pathways (Systems Map) and improved control framework for data, as well as the information supply chain and system management, will identify any current gaps in coverage and/or performance requirements and develop a more sustainable long-term data/information environment.

3-Asset Condition Data Programme

Having accurate and current Three Waters (3W) asset condition and attribute (dimensional) data is a key dependency for Programme Darwin to deliver on its objective of providing a 360° view of assets, i.e., a complete view of any asset, its cost, its condition, and its planned renewal details. Quality asset condition and attribute data provides the necessary input material for this system, which in turn will allow for development of robust information on which to base investment, renewal, and maintenance decisions. In the past, Council ran a number of small-scale *ad hoc* condition assessment projects, but the disjointed approach and lack of a standardized assessment framework has meant that this work was not optimized for Programme Darwin. FNDC has identified a managed programme of six respective asset condition assessment areas that will contribute to a comprehensive condition & attribute data capture programme, which will ultimately improve asset decision making and community confidence.

The Three Waters Condition Assessment Programme Procurement Plan set out a procurement approach to spending $990,000 of budgeted OPEX funds to deliver on six packages of work with the objective of increasing the accuracy of FNDC's asset condition data and allow improved decision making in renewals investments. The programme of works was designed to support the following business objectives (benefits):

- Enable better, more informed asset management decisions that maintain and/or enhance appropriate levels of network service.
- Enable better planning for the long, medium, short terms focusing on the performance, full lifecycle, and the dependencies between lifecycle activities of our assets.
- Ensure closer, more accurate financial management of FNDC's assets regarding financial processes. e.g., cost, revenue, capitalization, forecast, budget etc., to give a more accurate and up to date perspective of the asset's value at any given time during a financial year.
- Ensure that asset information is accurate and fit for purpose to meet FNDC's asset management objectives particularly relating to renewals, augmentation, and new capital.
- Reduce total cost of ownership of assets by reducing the time taken to complete reactive maintenance and release staff time to focus on more planned work.
- Improve the responsiveness and efficiency of all asset functions so that customers and stakeholders are better informed.
- Ensure that FNDC is agile and continues to meet changing customer business needs.

The specific aspects of the programme of work were scoped out under five themes as detailed below:

Water Valve – Location and Testing

- Confirm condition, function, type (including controller details), size and location of valves.

CCTV Pipeline – Inspection

- Confirm condition of gravity pipelines via CCTV pipeline inspection.
- Confirm structural and serviceability status.
- Contractor will complete a light flush and CCTV onsite. The video will be reviewed for relevant asset information.
- Contractor will provide marked up plans to detail any variations between asset register data and onsite findings.

Potholing – Non-Destructive Visual Inspection

- Confirm condition and location of pressurized water mains.
- Contractor will uncover the water main and visually inspect the external condition of the pipe.
- Contactor will provide marked up plans to detail any variations between asset register data and onsite findings.

Flood Gate – Assessments

- Inspection of approximately 66 floodgates to assign a 1 to 5 condition grade to the flap-gate mechanism, head/wing wall structure and spillway structure, collect attribute data and identify remedial works.

Pipe Bridge – Assessments

- Visual inspection of approximately 87 wastewater and 37 water supply pipe bridges.
- Assign condition rating, collect attribute data, and identify remedial works.
- Poor condition assets may be referred to a structural engineer for further inspection and risk assessment.

4-Advanced Analytics & Trend Analysis

Best appropriate practice in the management of asset data to ensure clear and accurate analysis of relevant data sets, requires a detailed asset register policy that includes connectivity and hierarchical depth (varied to suit the complexity and needs of IPS). The asset register record should hold:

- Basic asset information
- Special physical attributes
- Manufacturer details
- Condition assessment
- Performance data
- Utilization in terms of capacity or quantity
- Predictive outputs e.g., condition decay
- Hierarchical Structure and maintenance managed items (MMIs)
- Minimum Attributes
- Location and Dimensional Plans
- Operational Data
- Roles and responsibilities for data acquisition
- The QA system that is employed to verify these standards

5-ArcGIS Integrated Spatial Data

The functional benefits of integrating a spatial system to our new IPS Suite are listed below:

- IPS integration with ArcGIS will support the objective of a seamless and robust single spatial ‘record of truth’.
- FNDC staff and external users will be able to visually locate and identify assets using the ArcGIS interface.
- The user will be able to access underlying attribute data stored in the asset register component of IPS.
- The ArcGIS interface with IPS will permit asset creation, editing, viewing, and querying capabilities.
- Integration with ArcGIS will enable reuse across the FNDC's environment to allow viewing of visual documents e.g., as-builts (in the network folder) via URLs/Hyperlinks.
- Creation and maintenance of linear features (e.g., pipes), point features (e.g., manholes) and polygon features (e.g., parks or building outlines). Functionality will also allow point features to be added by entering relevant X & Y coordinates.
- In conjunction with the IPS asset register, users will be supported by the automated generation of unique asset identifiers.
- Manually imported assets will have the option to either apply a predetermined unique identifier or have this system derived. This process will be supported by an active error identification process (e.g., duplicate record alerts).
- The system will also provide for the execution of editing functions such as: Joining linear or polygon feature assets, splitting linear or polygon feature assets, adjusting the location of assets, deleting/disposing/abandoning assets. A feature to un-dispose an asset, if disposed in error, maintaining its original Asset ID and all attributes is also desired.
- The solution will provide validation checks to ensure data integrity (synchronization) between the ArcGIS and the IPS asset register is maintained and include tools to help correct any errors. Security rules will limit users to the minimum required access needed to perform their work in IPS.
- If a user selected an asset in the ArcGIS system the associated attribute data, stored in the IPS asset register, will be displayed.
- A query, selection and display of an asset or group of assets within the IPS Suite, e.g., asset register or maintenance management programme etc., could then be passed to the GIS to spatially view the selected assets.
- Query, select and display an asset or group of assets spatially with ArcGIS by address, work order type, condition ratings or other nominated asset attributes such as age, size, material etc.

- Query, select and display an asset or group of assets spatially with ArcGIS and pass the selection set (link) to IPS functionality, e.g., asset register or maintenance management etc.

PEOPLE

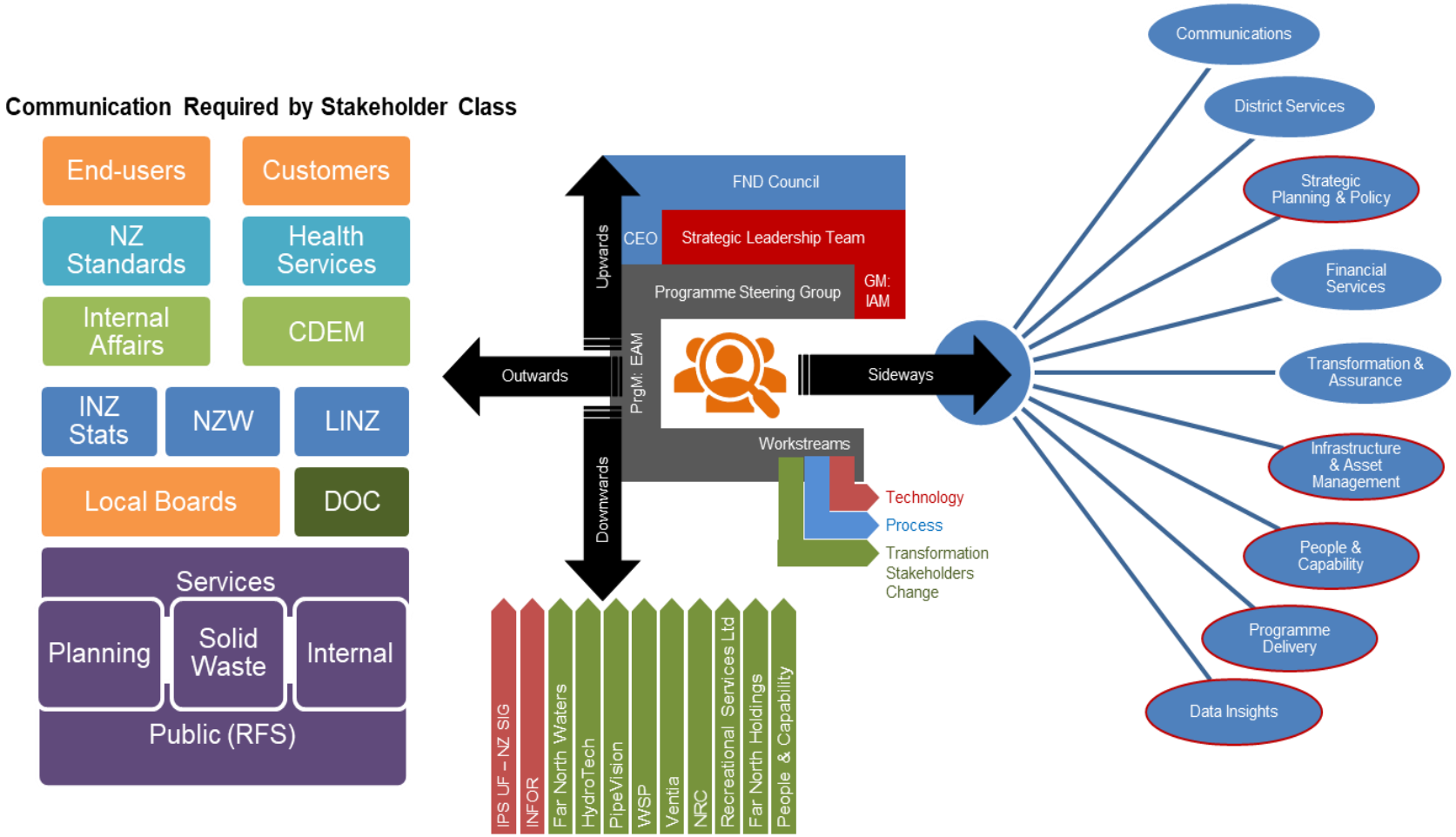
The people construct is split into three interrelated sub-streams comprising transformation, stakeholders, and change management & communications.

1-Transformation

The Transformation sub-stream will work in concert with the Stakeholders and Change Management sub-streams to ensure a structured evolutionary People transition process is established that will move our stakeholders along a journey from a pre-Darwin state towards a target aspirational state, fulfilling our vision of leading best appropriate practice EAM in New Zealand. The programme's past has seen a bias towards a technical and process intensive delivery with less focus on programme outcomes. To address this, and as an adjunct to the strengthened programme leadership, the asset management and planning leader was appointed in mid-2020. This leadership role will both support Programme Darwin through the articulation of the broader organizational direction and build team confidence through greater emphasis on stewardship through prioritized work plans and associated performance targets. The leadership team is also now better positioned to focus on interfacing with the executive, council and key stakeholders on changing programme and asset management outcomes.

2-Stakeholders

A stakeholder register was collated to capture details on stakeholders' interests and expectations from Darwin to help the programme team understand their communication requirements. The register provides a list of the stakeholders' names against their designation, role in the programme, interests, expectations, influence, etc. It is a dynamic catalogue and will be updated and maintained throughout the particular project lifecycles. Role defines each stakeholder's role in a project (e.g., Sponsor, Project Lead, Tester, Product Manager).



Programme Stakeholder Map – Depicting Communication Required by Stakeholder Class

- **Upward**, is related to the parent organization: Executives, investors, and project sponsors. These stakeholders have business and financial interests in the project.
- **Downward**, are stakeholders who are underneath the project hierarchy: Suppliers, contractors, service providers, and so forth. The project teams themself also counts as downward.
- **Outward**, are stakeholders who have a 'stake' in the project, such as government regulators, adjacent landowners, end users, customers, communities, and even the general public.
- **Sideways**, are stakeholders who are in competition with the project for scarce resources, such as other project managers and organizational departments.

Interests denotes the interest of every stakeholder involved in the programme. Each stakeholder has a different level of interest (High/Medium/Low) in a particular project under the programme. Influence or Power defines the level of influence of a stakeholder on the programme. Some stakeholders, for example the Sponsor, have High power as they can influence the decisions on what the programme should deliver. However, in an agile environment, the developers will have a High influence on the decisions being made about how project deliverables are executed.

There are five levels of support into which stakeholders fall:

- **Unaware**: The stakeholder is unaware of the programme and its potential consequences to them.
- **Resistant**: The stakeholder is aware of the programme but opposed to it.
- **Neutral**: The stakeholder is neither supportive nor opposed to the programme.
- **Supportive**: The stakeholder is in favour of the programme and wants it to succeed.
- **Leading**: The stakeholder is actively engaged in programme's success, and willing to aid the programme and various project management teams.

Communication requirements describes the mode of communication a stakeholder expects. Stakeholders expect regular communication regarding the status of the programme, and they may prefer differing types and modes of communication delivery. Frequency field mentions the frequency at which the stakeholder expects to receive the communication.

3-Change Management & Communications

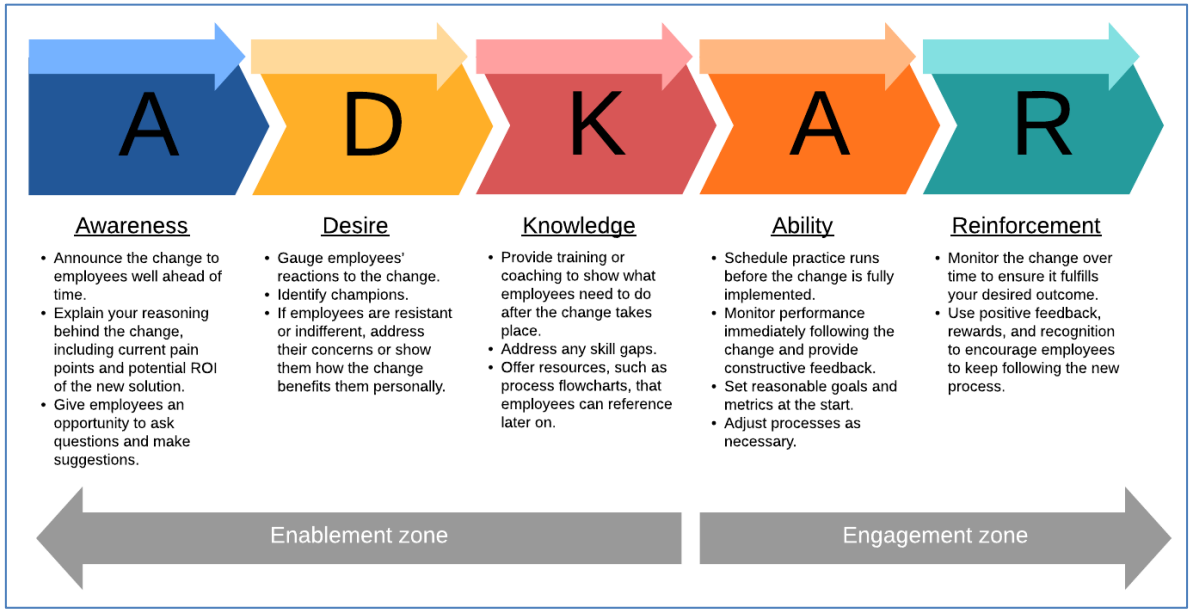
To overcome any loss of focus a reinvigorated approach is required built off a reset/reinterpretation of user needs, benefit realization and the resulting programme value proposition. The resulting alignment of strategy's and coordinated goals can then be refined under a common communication environment that continually refreshes awareness and achievement across the whole organization.

Change Management (CM) focuses on the people side of Programme Darwin. Specifically Change Management looks at the **Current State** (the processes and practices currently being undertaken by Asset Management at FNDC) and the **Future State** (what changes when Darwin delivers the 'technical' changes). The impact of changes will be detailed in an **Impact Assessment** for each workstream.

Using the findings outlined in the Impact Assessments, CM is able to prepare a **Change Management Plan** outlining the planned Change Activities. Typically Change Activities fall into three categories

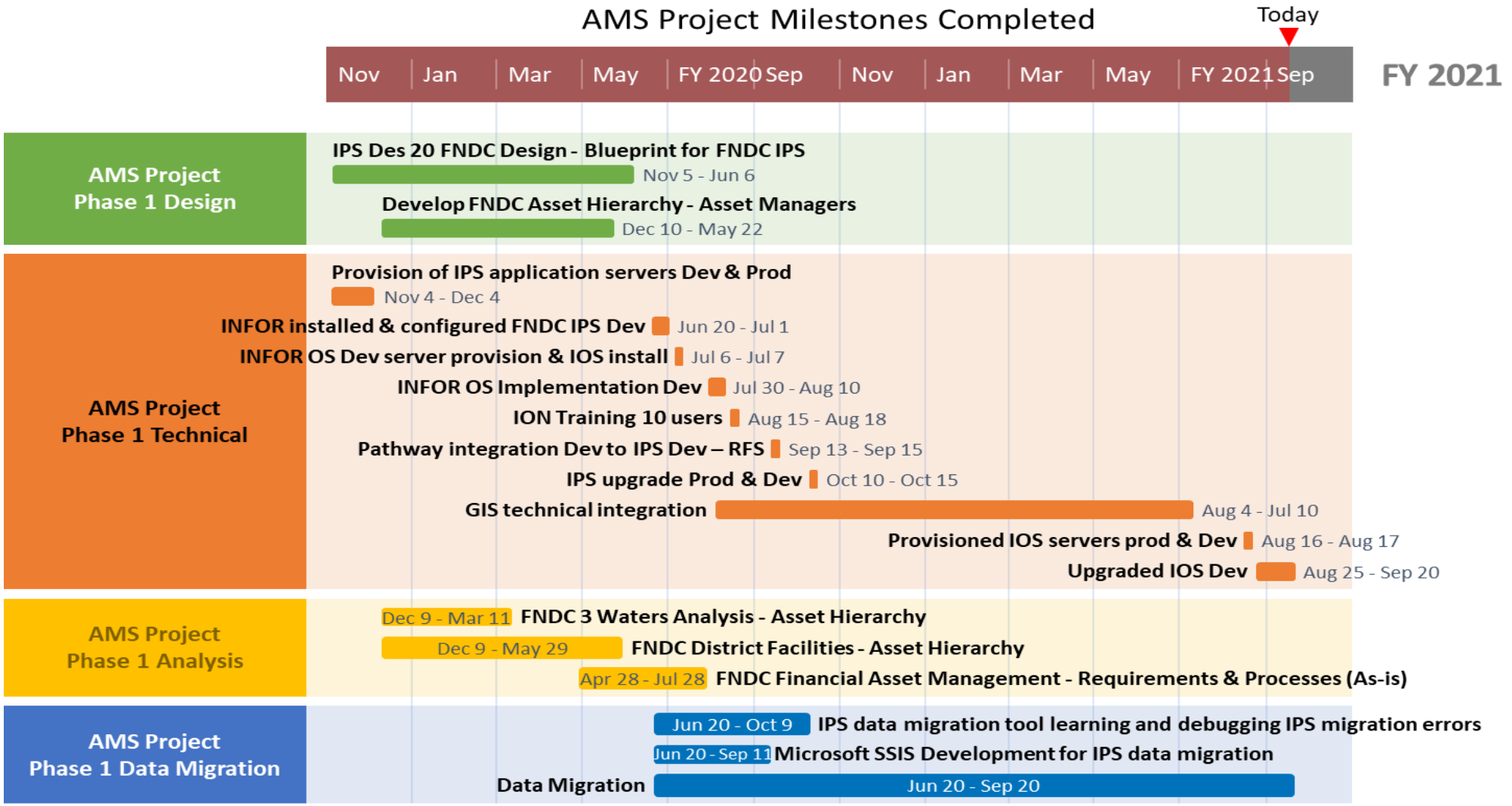
- Communications (TK3 updates, targeted emails, team presentations, newsletters, etc.)
- Training (classroom, one-on-one coaching, online material, inline system help, etc.)
- Process (updating Work Instructions, developing Promapp workflow, procedural changes, etc.)

The underpinning Change Management 'methodology' adopted by FNDC leverages the ADKAR model



ADKAR is 'brought to life' at FNDC through the Project Management Framework, many of the steps a project (or programme) goes through, in planning and delivering projects, reflect sound Change Management principles.

The graphic below delineates the extend of the execution delivery work that was accomplished by the AMS Project since November 2019:



DESIGN (Green)

- The first piece of work required the drafting of the IPS Des 20, which is the system design document, based on our technical requirements specifications provided to INFOR.
- In order for INFOR to build the system we were required to provide them with our asset hierarchy, which took six months to be completed. The work required close involvement from the asset managers and was delivered in June 2020.

TECHNICAL (Orange)

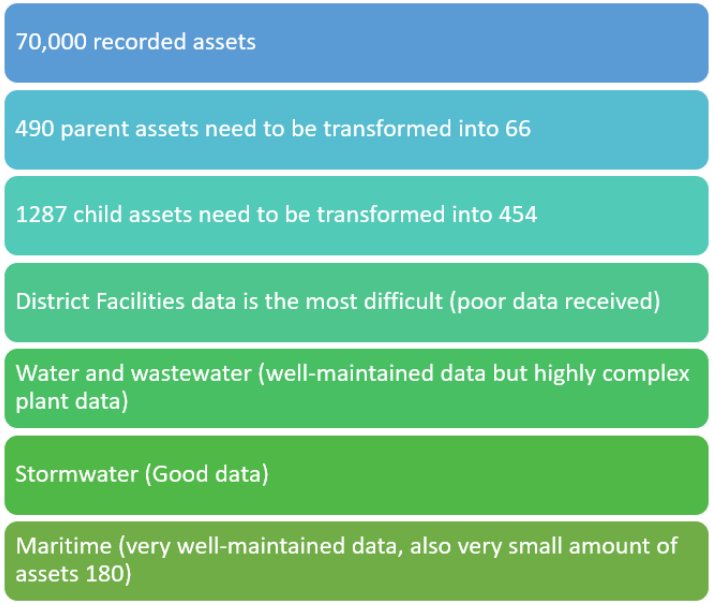
- Provisioning simply means the technical work performed by IT to setup the infrastructure on particular servers within specific Endpoint Management Environments, in our case a DEVELOPMENT (Dev) and PRODUCTION (Prod) environment. (Provisioning can also be described as the steps in the process to manage access to data and resources and make these available to end-users and systems).
- Just a note on the core application within the INFOR stable that we purchased, i.e., the version of the INFOR PUBLIC SECTOR SUITE or IPS Suite, was not compatible with the INFOR OPERATING SYSTEM, i.e., IOS (IPS lags behind the other products in the stable).
- The ION is the INFOR Middleware (sitting between the IOS and Applications) solution that allows seamless integration from back-office systems to both INFOR and third-party applications, whether they are on-premise, in the Cloud, or both.
- Ten Digital Information Services staff have attended the technical ION training. One take-away for the attendees from the training was the realization that the ION was technically intricate and that a dedicated resource would be required sometime in the future to care-take the support and maintenance of the ION and IOS.
- With the training completed, the integration (linked) to amongst others, Pathway and ArcGIS could be finalized. This does not include configuration at this point in time, e.g., we have not decided which fields from IPS need to be brought into the ArcGIS spatial layer.
- As noted above, the upgrades were needed to ensure alignment or compatibility to the IOS.

ANALYSIS (Amber)

- Particular Asset Hierarchies were crafted for respectively 3-Waters and District Facilities.
- Also, on the third line is depicted the time that was spent with the Fixed Asset Accountant to gain alignment in terms of her requirements and what she was doing around the Financial Fixed Asset Register function. This will be revisited in time when the to-be processes, as they will be executed via IPS, will be investigated, and implemented.

ASSET DATA CLEANSING & MIGRATION (Blue)

Asset groups were formed by reviewing existing asset types and grouping ‘like’ assets together. Plant and network assets posed high levels of complexity in setting these up in the IPS system. Since it was easier to develop and refine the migration process against non-network, standalone assets, the cleansing, and migration of District Facilities assets were given preference. The groups were initially defined to run in order; however, a number of adjustments were made based on new learnings and insights gained by the team and changing business requirements. An example of this was the taking on of differing asset type groups at the same time, allowing the team to continue with one group should delays be experienced in the other. The team is able to pivot as required based on stakeholder needs and directives from the PSG. The data cleansing and migration steps follow the below sequence:



FNDC Asset Data - Summary

DATA CLEAN-UP STEPS

1. Select type of Asset to work on
2. Analyze today's asset data
3. Evaluate Infor IPS setup for asset type
4. Workshop problem points (project team)
5. Prepare proposal to take to stakeholder group
6. Take proposal to stakeholder resolve group (iterative)
7. Agree final outcome
8. Map today's data fields to Infor IPS
9. Clean today's data

1. *Manholes*
2. *Minimal information being captured*
3. *Many fields available*
4. *Asset hierarchy, shape, construction method*
5. *List of Infor IPS manhole fields plus known FNDC requirements*
6. *Reviewed Infor IPS manhole fields and captured additional requirements*
7. *Agreed final list of fields*
8. *Mapped fields, documented additions*
9. *Reviewed today's data values for consistency*

The complexity of the data cleansing, and migration from the Interim Database into IPS, was not estimated upfront as this would have created a significant delay in the initial stages of the process. The team relied on the principle of Progressive Elaboration to guide them towards a realistic duration and execution effort estimate, based on empirical evidence. With the benefit of 12-months of hindsight, the team ran a deep-dive analysis of the pace of execution and extrapolated their existing progress towards estimating the duration to completion.

The results from the analysis showed the most probable completion date for Phase 1 to be towards the end of 2024. Although the benefits realization to FNDC is not as evident in Phase 1 as in Phase 2, the first phase will nonetheless add a great deal of value to the Three Waters and District Facilities asset management teams as well as to the Financial Fixed Assets Register related work done by Fixed Asset Accountant, and it will form the foundation from which the IPS advanced analytics will be set up.

Some of the complexities and built-in value activities that constrain the pace of delivery, are listed below, followed by a view of the current status of the asset data groups.

WHY IS IT COMPLEX?

- Inconsistent data structure (today)
- Small project team
- Implementing packaged software properly opens up big questions to be answered
- Need to address information required across all asset types

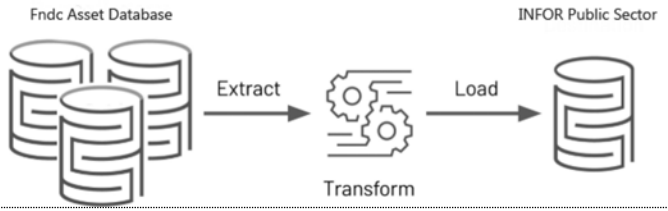
IMPROVEMENTS BEING DRIVEN

- Asset data structure and governance
- Alignment of business processes
- Agreement of business rules
- Setting asset register foundation to build future processes upon
- Alignment of Asset Data Specialists and wider stakeholder team

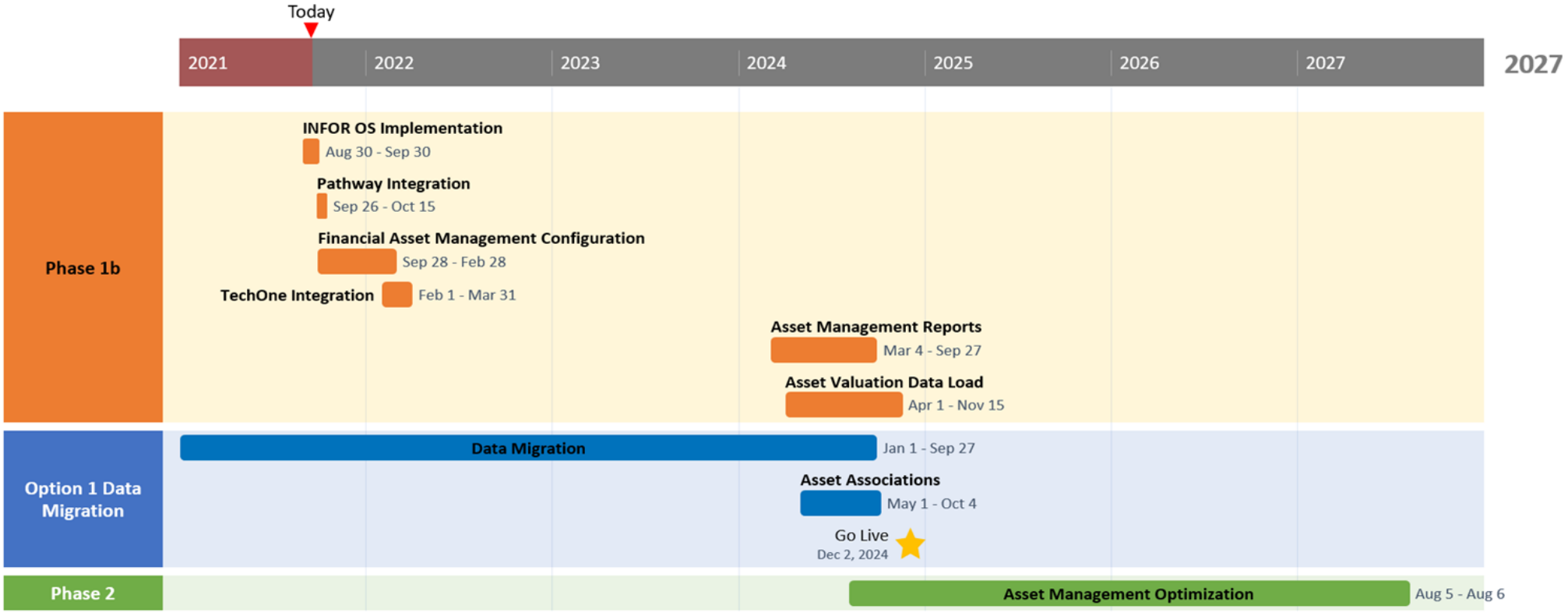
Backlog		On hold		WIP		Done	
Group 3	N/A, added to other groups	Group 2	DF – Street furniture, Parks, Landscape, Lights, Paths, Recreation area, Recreation equipment	Group 11	Non-plant structure, Civil works, Signage, Berms (cemetery), Rubbish Bins	Group 1	DF – Monuments, Artwork, Barriers, Land, Playing surfaces
Group 7	DF – Cemeteries, Airports, Rural fire stations, Campgrounds, Carparks, Commercial buildings	Group 4	Maritime	Group 12	3W - Valves, includes Floodgates (SW), Boundary kits (WW), Backflow preventers	Group 5	Reference points – 'parent' assets for both DF and 3W assets e.g., Community Centres, Public Toilets, Treatment Plants, Reservoirs
Group 8	DF – Solid Waste, Civil Defence, Animal Shelter, Swimming pools.	Group 6	DF Building components - Public toilets, Halls, HFTE, Community Centres e.g., Library			Group 10	Reference point for Bulk water filling stations and Intakes. Anchor Blocks, Reducers, Water meters
Group 13	3W – Chambers, Inlets/Outlets, Lower Pressure Sewer pumps, Inspection points, Bores, Septic tanks, Soak holes	Group 9	Hydrants (WS), Catchpits (SW), Manholes (SW & WW)				
Group 14	3W Plant – Meters, Electrical, Pumps, Tanks, Structures, Wet wells, Signage, Screens, Filter Units						
Group 15	3W Plant – Telemetry/ Communications/ Monitoring, Instruments, Pipework, Ponds, Reservoirs, Tanks, Emergency storage tanks, Blowers, Dams, Marshes						
Group 16	3W Plant – Equipment, UV banks, Generators, Weir, Control panels						
Group 17	3W – Service lines, Nodes						
Group 18	3W – Network lines; SW Main, SW Channel, WS Main, WW Main, Overland flow paths						
Group 19	To be assigned list and gap analysis outcome						
Group 20	Assets that are in TechOne but are not in the asset Interim Database. Assets to be loaded directly from Tech-one to IPS						

Conceptual Data Cleansing

Extract – Select & Analyse Data	Transform – Data Transformation	Load – Import Data to IPS
1. Square peg selected, which hole does this peg need to fit (□❍◆△)? 2. Or does this square peg need to be split into many peg types (□❍◆△)? 3. Does this need to be agreed upon by stakeholders?	1. Transform square peg to fit required hole 2. If required, split square peg into many peg types.	1. Load pegs into correct hole 2. Check data loaded is correct 3. If errors occurs fix or clean and repeat transformation process on errors only.

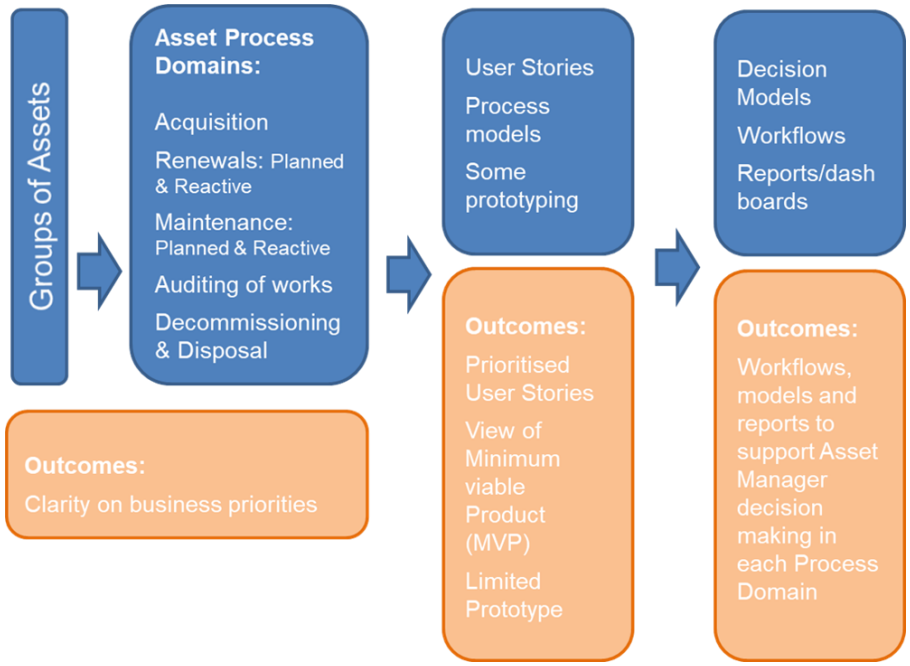


The roadmap below provides a high-level view of the current AMS Project delivery plan. From the delivery schedule it is evident that Phase 1 is expected to be completed towards the end of 2024 with Phase 2, the enhancement and optimization of the new Asset Management System (IPS), to continue for at least three years after this date.



Updated Roadmap for Phases 1 and 2

An Agile execution approach for this phase will ensure the delivery of incremental value at an early stage.



Conceptual Approach to Enhancement of IPS Suite (Phase 2)

FINANCIAL MANAGEMENT

The tables below provide details on respectively the cost spent on the programme up to 30 June 2021, and the current 2021/22 Financial Year's budget with spending year-to-date.

PROGRAMME COSTS – SPEND LIFE TO DATE (LTD) 30 JUNE 2021

LTD (30 Jun 2021)	
101103 - IT Financial Asset Management System New Works ($ CAPEX)	Total Actuals LTD
PROGRAMME DARWIN	
4919 - CAPEX New Works Professional Fees	49,900
4922 - CAPEX Renewal Works Contract Services	64,200
4928 - CAPEX Salaries	297,317
AMS Project	
4917 - CAPEX New Works Contract Services	424,204
TOTAL	**835,621**

LTD (30 Jun 2021)	
Asset Condition Assessment Programme ($ OPEX)	Total Actuals LTD
1485 - Infrastructure asset management - facilities	112,127
2410 - Drainage and Stormwater Administration	89,117
2485 - Infrastructure asset management - stormwater	112,012
4210 - Infrastructure & Asset Management Operations	319,757
4289 - Asset Condition Assessment	0
5585 - Infrastructure asset management - wastewater	500,000
5785 - Infrastructure asset management - water	24,918
TOTAL	**1,157,931**

PROGRAMME BUDGETS 2021/22 – SPEND YEAR TO DATE (YTD) 31 OCTOBER 2021

FYTD (2021/2022)				
101103 - IT Financial Asset Management System New Works ($ CAPEX)	PR22A - PR Actuals	PR22B - PR Budget	PR22BF - PR Brought Fwd	PR22F - PR Forecast
PROGRAMME DARWIN				
4919 - CAPEX New Works Professional Fees	0			
4922 - CAPEX Renewal Works Contract Services	775			
4928 - CAPEX Salaries	88,818	0	274,531	274,531
AMS Project				
4917 - CAPEX New Works Contract Services	12,566	0	611,401	611,401
TOTAL	**102,159**	**0**	**885,932**	**885,932**

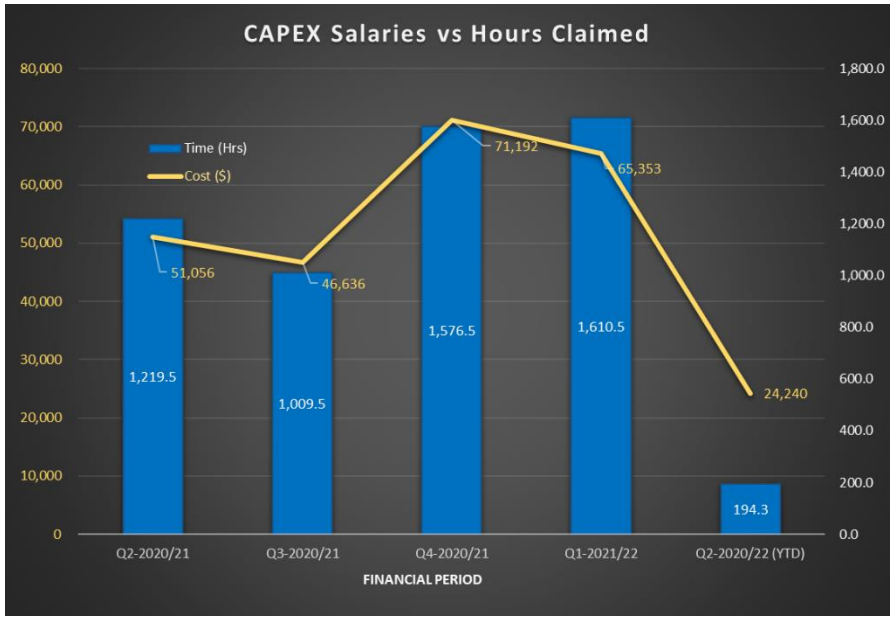
FYTD (2021/2022)				
Asset Condition Assessment Programme ($ OPEX)	GL22A - GL Actuals	Commitments	Total Actual + Commitments	GL22F - GL Forecast
1485 - Infrastructure asset management - facilities	0	24,240	24,240	0
2410 - Drainage and Stormwater Administration	0	0	0	0
2485 - Infrastructure asset management - stormwater	10,828	55,666	66,495	0
4210 - Infrastructure & Asset Management Operations	-13,030	12,175	-856	0
4289 - Asset Condition Assessment	5,169	274,971	280,140	1,600,000
5585 - Infrastructure asset management - wastewater	43,458	0	43,458	0
5785 - Infrastructure asset management - water	1,007	43,758	44,765	0
TOTAL	**47,432**	**410,810**	**458,242**	**1,600,000**

The tables below provide particulars on respectively the cost spent on development and salaries LTD, and the staff time claimed against the programme over the past 12 months and current quarter.

PROGRAMME CAPEX SPEND

4919/22/28 - CAPEX Salaries				
Month	**2018/2019**	**2019/2020**	**2020/2021**	**2021/22**
Jul			15,073.49	18,790.87
Aug			16,261.66	24,987.80
Sep		762.56	10,536.36	21,573.90
Oct		1,593.52	11,267.30	24,239.92
Nov		2,609.25	25,585.03	
Dec		3,132.69	14,203.67	
Jan		9,612.98	6,076.91	
Feb		8,373.93	12,159.54	
Mar		7,846.50	28,399.28	
Apr		8,477.15	17,949.75	
May	280.22	22,787.21	32,315.67	
Jun	10,509.00	10,576.98	20,926.10	
TOTAL	**10,789**	**75,773**	**210,755**	**89,592**
CUM TOT	10,789	86,562	297,317	386,909
AVE (Month)	5,395	7,577	17,563	22,398

4917 - CAPEX New Works				
Month	**2018/2019**	**2019/2020**	**2020/2021**	**2021/22**
Jul	0.00	269,389.66	10,905.00	-901.01
Aug			17,790.00	5,239.83
Sep			3,790.00	2,137.50
Oct			23,170.00	6,090.00
Nov		14,302.04	22,085.00	
Dec			14,765.00	
Jan		22,207.50	807.50	
Feb		12,447.77	2,185.00	
Mar		26,857.96	4,170.00	
Apr		58,836.60	6,720.00	
May		8,625.00		
Jun		11,945.00	7,305.00	
TOTAL	**0**	**424,612**	**113,693**	**12,566**
CUM TOT	0	424,612	538,304	550,870
AVE (Month)	0	53,076	10,336	3,142



PROGRAMME COST VS TIME

RISK MANAGEMENT

Three Programme Darwin risks were identified at the June 2021 risk workshop. One of the risks was recognized as an emerging risk. This top risk was presented to the Assurance Risk & Finance Committee (ARF) on 8 September 2021, and subsequently adopted into the Organizational Top Risk Dashboard. The addition of this emerging risk on to the Dashboard will enable improved governance focus. The programme will provide the ARF with an update on the status of the risk on a quarterly basis.

The Programme Darwin risk statement is defined as follows:

- Because of the Programme Darwin complexity - long timeline, partially defined programme scope; and the need to be agile, to respond to our changing environment (i.e., physical, technological, regulatory, economic) there is a chance that the programme will not be successfully delivered, leading to poor community outcomes.

It is worth noting that Programme Darwin also impacts the management and treatment of a number of organisational risks, namely ARF001 Climate Change, ARF004 Asset Management, ARF005 Affordability, ARF010 Data Governance and ARF013 Drinking Water Resilience. The District Plan Team is also reliant on asset management information to inform district planning decisions.

Existing Treatments

The Programme Darwin Steering Group (PSG) have been informed of the salient detractors to the Programme's success and have recommended a way forward to reduce the delivery timeline. A report to this effect will be presented to the SLT during November in anticipation of a submission to Elected Members on 16 December 2021, describing the risk impact of the time, scope and cost trade-off decisions that need to be made, to reduce the delivery risk.

HIGH LEVEL TREATMENT PLAN AND PROGRESS UP-DATE

High level treatment plan:	Progress update:
Identify the gaps in the programme resourcing, processes (e.g., Business Requirements Specification), Scoping, Impact Analysis, Costing, Scheduling, etc., for the various programme workstreams.	A number of gaps have been identified and further analysis will be resumed subject to the paper presented to (and subsequent decisions made by) the SLT and EMs.
A SharePoint communications platform will be developed for the Programme. The stakeholder register will serve as a point of reference to channel relevant communications to particular stakeholder groups.	The Programme Manager is working with the PMO Project & Change Specialist and P&C Business Partner to develop a SharePoint communications platform that will articulate to stakeholders the value that the Programme will unlock within the organisation.
A SharePoint communications platform will be developed for the Programme. The platform will serve as the de facto source of Programme information.	The communications platform that is been developed will serve as the official information source for stakeholders, describing the Programme's objectives, progress, and delivery roadmap.

Where are the gaps? / what more could we be doing?

Inherent Risk	Trend	Residual Risk	Accountable:	CEO	Date raised:	08/09/2021	Report frequency:
	Stable		Responsible:	Programme Manager - EAM	Date accepted:	08/09/2021	Three-monthly

RESOURCING

The table below provides an indication of the Programme resourcing requirements, subject to the particular funding option approved by Council.

Resources	Cost ($)			
	Opt 1	Opt 2	Opt 3	Opt 4
IT Senior Data Analyst External Resource - Team 1	0	693,720	372,240	200,000
IT Senior Data Analyst External Resource - Team 2	0	693,720	372,240	200,000
IT Senior Data Analyst External Resource - Team 3	0	693,720	372,240	0
Business Analyst (Additional)	0	91,535	91,535	91,535
Asset Data Analyst (100%)	0	150,000	150,000	150,000
Asset GIS Specialist (100%)	0	150,000	150,000	150,000
INFOR Consultant - IPS Association of Assets	0	43,240	43,240	43,240
Asset Manager - Resolve data migration issues (20%)	0	24,043	23,457	0
INFOR Senior Consultant 720 x 235	160,120	160,120	160,120	160,120
INFOR GDS Consultant Offshore 224 x 130	29,120	29,120	29,120	29,120
INFOR Proj Manager 76 x 260	19,760	19,760	19,760	19,760
Data & Business Intelligence Analyst	36,338	23,913	16,092	19,533
IT Project Manager (Darwin)	181,691	119,565	80,460	97,664
Senior Business Intelligence Developer	36,338	23,913	16,092	19,533
Data & Business Intelligence Analyst	36,338	23,913	16,092	19,533
Asset Data Analyst	64,619	13,431	13,431	13,431
Asset GIS Specialist	76,025	15,802	15,802	15,802
Data & Systems Specialist	304,101	200,118	134,668	163,462
Technical Business Analyst - Project Darwin	715,365	611,148	527,102	564,456
Fixed Asset Accountant	0	0	0	0
Project & Change Specialist	0	0	0	0
Programme Manager - EAM	495,958	423,705	365,436	391,334
Darwin Process Improvement Lead	108,787	105,443	105,598	105,598
Darwin Stakeholder Engagement Lead	0	0	0	0
Business Analyst	47,451	0	0	0
TOTAL	2,312,014	4,309,929	3,074,725	2,454,120