

CLIMATE DATA INFRASTRUCTURE

Equipping New Zealanders to manage climate impacts, and support equitable, effective, and evidence-based climate decisions and policies, by harnessing the power of climate data

- ↑ BETTER CLIMATE DATA
- ↑ BETTER DECISION-MAKING
- ↑ BETTER CLIMATE ACTION



Climate data is often



a) inaccessible,



b) poorly managed, and



c) not easily understood by non-experts.

Which is a problem because it limits the ability to utilise climate data to inform and drive climate action.



WHO NEEDS BETTER CLIMATE DATA



CENTRAL GOVERNMENT

To provide an evidence base for policy development, and NAP and ERP reporting and monitoring.



LOCAL GOVERNMENT

To support climate change related workstreams, including risk assessments, adaptation plans and community action.



Iwi/Māori

Who require a trusted, coherent evidence base to understand climate policy implications and ensure Māori interests are protected.



PROPERTY OWNERS

To make decisions for risk management and investment.



PRIVATE SECTOR

For reporting and coordination to reporting system (e.g. Climate Related Fiscal Disclosures)



CLIMATE DATA INFRASTRUCTURE

LONG-TERM VISION



A range of climate data sources are **woven together into one location**



Users have access range of **comprehensive data tools and insights**



Climate data is **accessible to New Zealander users**



One government working together to empower New Zealand to take climate action

Data Information Guidance Context

This initiative will deliver a climate data infrastructure that empowers New Zealand to take climate action, support targeted climate mitigation and adaptation policies, and improve New Zealand's climate progress reporting.

It uses a phased approach to deliver data assets which delivers on, accelerates the government's climate change agenda, and strengthens links between government investment.

2023

AoG BAU
2028



PHASE 1

Develop climate data views
Delivering collated climate data tools which provide evidence for risks and impacts of climate change and reports progress towards New Zealand's climate obligations.



PHASE 2

Making climate data useful
Delivering an integrated climate data infrastructure which supports modelling, forecasting, and quantification of climate policy impacts and distributional impacts analysis.



FUTURE PHASES

Wider climate & environmental integration
Delivery of a single source of climate data, information, guidance for New Zealand to take climate action.
Exploring integrating climate data with wider environmental data





\$24.7m
Treasury CERF 2023 funding

\$TBC
Currently unfunded



AND
OTHERS



WORKSTREAM	 MITIGATION DATA	 ADAPTATION DATA	 DATA ACCESS AND TOOL DEVELOPMENT	 GOVERNANCE AND PARTNERSHIPS
GOAL	Build a comprehensive data view of the mitigation data system, standardise emissions reporting and modelling systems, enable tracking of emissions targets, and create a joint climate change evidence base for policy makers.	Build a comprehensive data view of the adaptation data system, including data to support NAP monitoring, and create a joint climate change evidence base for policy makers.	Tailored data access mechanisms are developed to allow easy access to climate change data for Local Government, Central Government, CFD Reporting Entities, and Māori. Property owners and the public have access to data tools which support them in taking climate action.	Ensuring the project takes an AoG approach, investments are linked, and our work programme maintains alignment with partner agencies
KEY OUTPUTS	<p><u>Phase 1: (In progress)</u></p> <ul style="list-style-type: none"> Mitigation data stocktake Data sharing arrangements Technical requirements for modelling and reporting system <p><u>Phase 2:</u></p> <ul style="list-style-type: none"> Aligned emissions reporting and modelling system, with standardised inputs, assumptions and methods developed and rolled out Integrated emissions-socioeconomic-private sector data Improved predictive modelling capability and guidance Migration of data to cloud infrastructure 	<p><u>Phase 1:</u></p> <ul style="list-style-type: none"> Adaptation data stocktake and linking of existing datasets to website. See here for example. (in progress) Data sharing arrangements Develop data collection and reporting indicators/guidance Release of NIWA projections data <p><u>Phase 2:</u></p> <ul style="list-style-type: none"> Geospatial data portal with national level datasets and download function. See here for local example Provide guidance / data standards for local data collection to integrate with geospatial map viewer / infrastructure via upload function. Integration of socioeconomic-climate risk-climate impacts-private sector data Integrating adaptation data with other environmental data 	<p><u>Phase 1:</u></p> <ul style="list-style-type: none"> Develop website with links to all existing datasets to support mitigation and adaptation workstreams Detailed data tool scoping and requirements Proof of concept tools created Continued user needs research <p><u>Phase 2:</u></p> <ul style="list-style-type: none"> Māori data access mechanism – in partnership with TPK Local Government risk assessment data view, risk assessment tool, and others based on user needs Central Government data views (both adaptation and mitigation) CFD Reporting Entities data access mechanism Property Owners risk assessment and treatment / funding access tool Emissions reporting/modelling tools Emissions projections tool and data portal 	<p><u>Phase 1:</u></p> <ul style="list-style-type: none"> Establish cross agency working group and governance Explore partnerships across innovation system / joint venture approach Climate data strategy development Data stewardship, privacy, and sharing arrangements established with core partners Establish AoG institutional arrangement <p><u>Phase 2:</u></p> <ul style="list-style-type: none"> All-of-Govt governance arrangement expanded Supporting climate narrative with climate data



SUPPORT FUNCTIONS

PROGRAMME MANAGEMENT AND OVERSIGHT

TECHNICAL DATA ANALYSIS, ENGINEERING, AND DELIVERY

EMBEDDING OUR TREATY PARTNERSHIP

PROCUREMENT AND CONTRACT MANAGEMENT

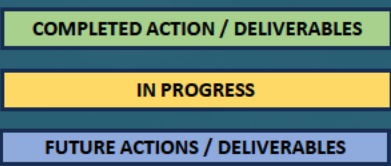
FINANCE

LEGAL

Programme specific (additional FTE)

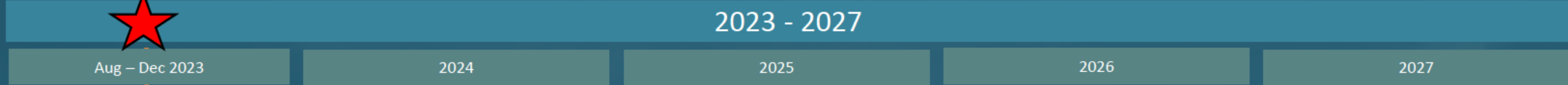
Utilising in-house (MfE) capability / FTE

<p>PHASE 1</p> <p>Develop climate data views</p>	<p>PHASE 2</p> <p>Standardising approaches and data access mechanism and tool development</p>	<p>PHASE 2</p> <p>Providing equitable, comprehensive, easily accessible wider environmental data to New Zealand</p>
<p>2023-2025</p>	<p>2024-2026</p>	<p>2025-2027</p>
<p>MITIGATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Data stocktake and initial integration of emissions reduction data • Development of standardised modelling and reporting system <p>ADAPTATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Data stocktake and initial build of climate impacts-risk assessment datalake • Engagement with CCC for NAP monitoring data needs • NIWA AR5 and national flood model data brokered <p>Cross Cutting Data Workstreams: Begin integration / build of data infrastructure</p> <p>DATA ACCESS TOOLS AND CAPABILITY</p> <ul style="list-style-type: none"> • Research to understand user needs of 4 priority groups • NIWA AR5 and AR6 data access mechanism developed • Identify, agree, and stand up ‘front door’ for data access • ERP reporting dashboard <p>GOVERNANCE AND PARTNERSHIPS</p> <ul style="list-style-type: none"> • Cross agency engagement to build view of data system and build buy in • Identification and partnerships with pockets of innovation / joint venture explored • Climate data strategy development • All-of-Govt institutional arrangement developed • Data stewardship, privacy, and sharing arrangements established with core partners 	<p>MITIGATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Integration of economic-emissions data • Standardisation of emissions reporting and modelling system complete • Development of predictive emissions modelling guidance <p>ADAPTATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Build of geospatial data portal underway with download function • Data standards for local collection and upload developed, implementation begins. • Integration of adaptation data (climate impacts-climate risks-socioeconomic data) <p>DATA ACCESS TOOLS AND CAPABILITY</p> <ul style="list-style-type: none"> • Build of emissions reporting/monitoring tools (for all user groups) • Build of emissions projections tool and portal • Proof of concept / tools developed for Local Govt/property owners, namely historical hazard trackers, climate projections and risk assessment tool • In partnership with TPK – data/Mātauranga access mechanism for Māori • Release adaptation data lake for all user groups • Other LG and property owner data tools developed • CFD reporting data tool development • NAP reporting dashboard • Data purchasing/investment to fill data gaps <p>GOVERNANCE AND PARTNERSHIPS</p> <ul style="list-style-type: none"> • Review and widening of AoG approach <p>CROSS CUTTING</p> <ul style="list-style-type: none"> • Wider environmental data integration explored • Continued build of infrastructure 	<p>MITIGATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Integration of socio-economic and private sector emissions data • Ongoing data stewardship and review of modelling and reporting system • Standardisation of predictive emissions modelling guidance complete • Migration of reporting and modelling tools to cloud infrastructure <p>ADAPTATION DATA WORKSTREAM</p> <ul style="list-style-type: none"> • Local level data upload function operational • Integrating adaptation data with wider environmental data explored • Adaptation related analysis cloud tools scoped <p>DATA ACCESS TOOLS AND CAPABILITY</p> <ul style="list-style-type: none"> • Review of future user needs research and further tools and guidance developed • Integration of existing products and data access mechanisms into public entity • Data purchasing/investment to fill data gaps <p>GOVERNANCE AND PARTNERSHIPS</p> <ul style="list-style-type: none"> • Review and widening of AoG approach <p>CROSS CUTTING</p> <ul style="list-style-type: none"> • Review of approach and redevelopment of scope for out years

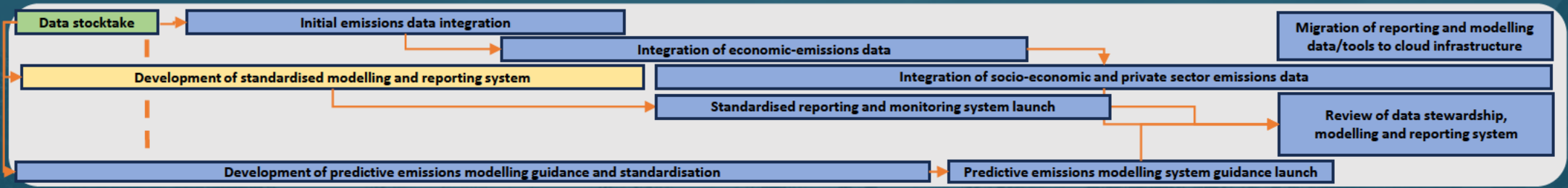


HIGH LEVEL IMPLEMENTATION PLAN 2023 - 2027

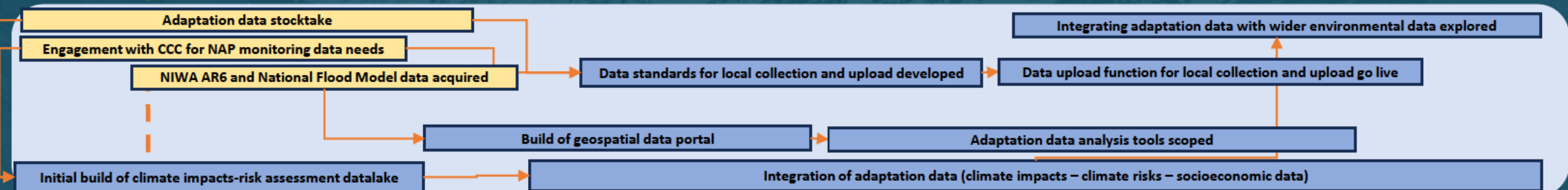
Data Infrastructure Sequencing '23 - '27



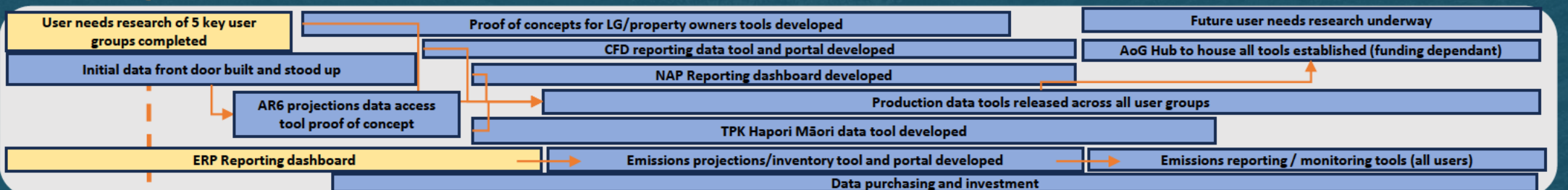
MITIGATION DATA WORKSTREAM



ADAPTATION DATA WORKSTREAM



DATA ACCESS TOOLS AND CAPABILITY



ALIGNMENT, PARTNERSHIPS, & GOVERNANCE

