

Securing traditional industries, powering new opportunities

# DECARBONISATION ACCELERATED

## BLUEPRINT



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## EXECUTIVE SUMMARY

The Greater Whitsunday region has long been associated with the resources sector. While it remains the dominant sector, there is far more to the Greater Whitsunday region story. The region has been at the forefront of ‘over the horizon’ thinking to ensure that market changes (both up and downturns) are a regional opportunity and not a threat.

► *Greater Whitsunday Alliance (GW3) and Resources Centre of Excellence (RCOE), along with other key regional partners including the Local Buying Foundation (LBF), are working together to pursue economic opportunities in a low-carbon world.*

Decarbonisation and the resulting diversification opportunities are significant regional economic priorities. As the resource sector adapts, industry transformation will power economic growth prospects.

Decarbonisation of the region’s industry sectors, and new diversification prospects present an opening to innovate and transform current business models. Organisations with a significant regional investment, like many mining companies, have already taken a leadership position on decarbonisation<sup>1</sup>. The changes within the mining industry provide substantial potential to secure new investment streams within existing and emerging markets, something the Greater Whitsunday region is already embracing.

With domestic<sup>2</sup> and international<sup>3</sup> appetite for net zero mandates increasing, GW3 and RCOE are proactively supporting transformational change for this thriving regional economy. This Blueprint document outlines the Decarbonisation

Accelerated program. It provides an overview of how the region will secure traditional industries, power new opportunities and how decarbonisation and diversification will be supported whilst growing the economy.

The creation of this Blueprint has been delivered through an economic development lens. While some of the activities delivered within the Decarbonisation Accelerated project will result in improved social and environmental outcomes for the Greater Whitsunday region, we acknowledge that the region will benefit from additional targeted efforts to progress social and environmental outcomes through linkages into these sectors. However, this document primarily focuses on the decarbonisation of businesses within key supply chains.

► *Across four dimensions, this program will be a catalytic regional transformation opportunity towards a low-carbon future while supporting resilient economic expansion.* The diagram on page 4 outlines the end state supported by the ways and means to achieve this. The Greater Whitsunday region is powering the potential of a low carbon world and this document outlines the pathway for success.

<sup>1</sup> <https://www.bhp.com/sustainability/climate-change>

<sup>2</sup> <https://www.pm.gov.au/media/australia-legislates-emissions-reduction-targets>

<sup>3</sup> <https://www.un.org/en/climatechange/net-zero-coalition>

# END STATE OVERVIEW

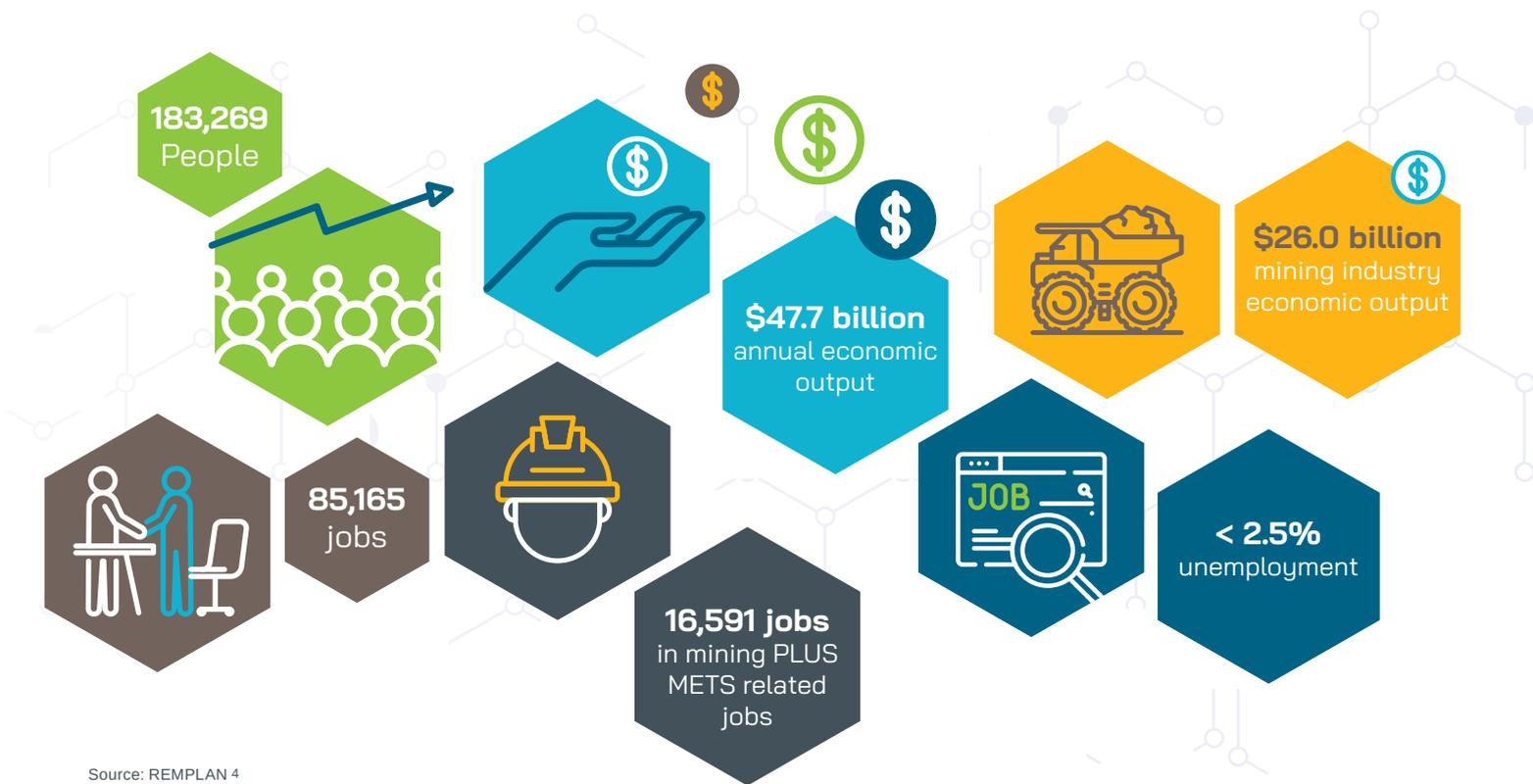
	ENDS	WAYS	MEANS
 <b>PEOPLE</b>	<b>CAPABLE &amp; RESPONSIVE</b> Workforces that remain dynamic, responsive and capable in the successful transition towards decarbonisation and diversification.	Delivering strategic workforce development initiatives that meet the needs of changes influenced by decarbonisation and diversification.	Contribute to existing strategies to ensure a coordinated, regional approach for skill development, change management and workforce transferability pathways.
 <b>INDUSTRY</b>	<b>DIVERSIFIED REVENUE</b> Continued growth of the mining equipment, technology and services in the region through diversified revenue.	Enhancing the capability of the METS sector to understand and secure new market opportunities.	Strategy development, education and delivery of activities, including through collaboration with existing networks and industry bodies, that build the capability of METS sector to diversify.
 <b>ENVIRONMENT</b>	<b>LOWER CARBON FOOTPRINT</b> Reduced carbon production demonstrated through an accredited scheme.	Developing a regionally recognised scheme that demonstrates businesses are making measurable reductions in carbon production.	Education and incentives to support regional businesses to reduce carbon output through a manageable step by step accreditation process.
 <b>OPPORTUNITY</b>	<b>REGIONAL GROWTH</b> New economic opportunities for the region.	Identifying opportunities that will drive new economic growth for the region and building regional capability to pursue these opportunities.	Fostering connections and collaboration with existing regional activities and delivering education and support to METS businesses to secure opportunities in emerging sectors.

# GREATER WHITSUNDAY REGION

The Australian resources sector has been the backbone for global and domestic energy production for many decades. With a long and proud history of innovation, the Queensland resource sector has continually embraced change to meet social and economic needs.

The Greater Whitsunday region in Northern Queensland, some 1000km from Brisbane and 1800km from Canberra, includes a large portion of the Bowen Basin, home to Australia’s largest metallurgical coal reserves. It is a region that punches above its weight when it comes to the Mining Equipment, Technology, and Services (METS) sector and has a long history of demonstrating resilience and delivering on its commitments.

The story is best told through data:



Source: REMPLAN 4

Through strong collaboration, the Greater Whitsunday region is on the ‘front foot’ as the global economy moves towards a lower carbon world. Whilst not without challenges, early planning and a regionally coordinated response will ensure that the region continues to benefit from sustained economic growth.

Change is never easy, but history has shown that economies can adapt. New jobs, opportunities and sectors will emerge in the coming years and the region will embrace these changes. This document is a Blueprint for the activity required to start the journey of change. There is much data that points to decarbonisation being a prospect for regional growth; bringing an opportunity to create a robust economy through diversified opportunities.

## CURRENT STATE

The following statements outline the current economic state of the Greater Whitsunday region in the context of decarbonisation and diversification:

► *The mining industry and METS sector are a primary economic base for the Greater Whitsunday region<sup>5</sup>. The outlook for coal has remained strong for many years; jobs in the sector are available and offer outstanding remuneration with progressive working conditions and many personal growth opportunities<sup>6</sup>.*

► *Families regularly migrate to the region due to the high demand for skilled workers. This domestic workforce is supported by a significant FIFO (fly-in, fly-out) workforce base. The region's wider METS<sup>7</sup> sector is globally renowned for its skill, knowledge and innovation.*

► *Mining will be a feature of the Australian economy for many years to come:*

*“Mining has been the largest contributor to Australia’s economy prosperity over the last decade – the largest source of GDP growth, the largest source of export revenue and significant source of government revenue with \$255 billion generated in company taxes and royalties.*

*In 2021-22, the mining industry invested \$3.9 billion on exploration across Australia to discover and measure the mineral deposits that will support the mines of the future and jobs for thousands of people across the country.*

*This has included new investment records for commodities essential to modern technologies, including gold (\$1.6 billion), copper (\$586 million) and other deposits such as lithium and rare earth elements (\$364 million).”*

Source: Minerals Council of Australia <sup>8</sup>

Growing social consciousness, combined with strong science, has seen many global companies, including mining companies, take a leadership position to lower their own carbon emissions. Given the strong demand for natural resources and elevated coal prices, there is a need to accelerate the reduction in carbon from the traditional resource sector, whilst still meeting demand. Like any large industry, mining relies on a supply chain. That supply chain has an opportunity to be proactive in embracing the changes required to lower carbon outputs and secure new business opportunities being driven by decarbonisation.

<sup>5</sup> <https://static1.squarespace.com/static/5e4ce5c91e5a64752b65c169/t/6175fe2250695d0ef31f8e43/1635122733806/GW3+-+Economic+Profile+2021+%5B1184%5D+-+Final+Low+Res+Spreads.pdf>

<sup>6</sup> <https://publications.industry.gov.au/publications/resourcesandenergyquarterlyjune2022/index.html>

<sup>7</sup> <https://metsignited.org/australian-mets-sector/>

<sup>8</sup> <https://www.minerals.org.au/news/boosting-mineral-exploration-unlock-future-prosperity>

# FUTURE STATE

**This future state describes a long-term macro picture of the region that will require the investment and delivery of activities that extend far beyond the limited timeline of the initial Decarbonisation Accelerated project.** The Decarbonisation Accelerated project is a starting point for ongoing regional activity to secure traditional industries and power new opportunities.

The following statements outline the future state of the Greater Whitsunday region upon the successful implementation of a strategic and coordinated approach to decarbonisation and diversification:

- ▶ The Greater Whitsunday region is renowned for its biomanufacturing, modern manufacturing, and agriculture industries. Mining continues with the development of a critical minerals sector; metallurgical coal remains an integral part of the mining system to produce primary materials but with increased adoption of technology, including automation.
- ▶ The Greater Whitsunday region is known for its diverse education, employment, and social opportunities. Quality of life is a significant factor for many who call the region home.
- ▶ Businesses within the region proudly demonstrate their low-carbon credentials from the accredited scheme. Business opportunities have increased for those who can demonstrate their low-carbon activity. New business models have started within traditional METS businesses still serving domestic and international customers with increased adoption of modern technologies resulting in a lower carbon output.
- ▶ Mining activities have introduced automation and other technologies to reduce risk and carbon output, and the Gross Regional Product and total economic output have continued to climb through diversification. The region is now on its way to a significant financial diversification that can absorb the rise and fall in economic conditions.
- ▶ The Greater Whitsunday region is now renowned within Oceania as a place to live, work and prosper. The region is recognized for the opportunities that it offers in a cleaner greener future, including providing access to renewable energy; enabling the production of lower carbon steel; and delivering on jobs that make people feel like they are making a positive contribution to the greater good of the world.
- ▶ A new generation of biomanufacturing organisations feature prominently in the industrial areas while traditional businesses continue to thrive with increased technology adoption.
- ▶ Mine site rehabilitation is now more than just ‘filling in the hole’, it is a sophisticated undertaking that is supporting growth across a range of economic opportunities such as: closed cropping agriculture; water as an economic resource; renewable energy opportunities; carbon sequestration; and new adventure tourism ventures.
- ▶ The region is more robust, more diversified, and measurably produces less carbon.

## USER CASE

There are businesses within the Greater Whitsunday region who recognise the influence that decarbonisation will have on the future economy and are being proactive in pursuing diversification opportunities aligned to decarbonisation. The user case below demonstrates how regional company Coalroc is an early adopter in diversifying its business to respond to the changes being influenced by decarbonisation. The future state analysis provides an insight into how a business such as Coalroc might evolve their business model as they progress through the decarbonisation journey.

### ► EARLY ADOPTER



Glenn Cunningham isn't afraid to be a lone ranger in today's current climate. With more than 40 years in the mining and Mining Equipment, Technology and Services (METS) sector, the Coalroc managing director can see where the future is heading when it comes to decarbonisation and diversification, and he won't be left behind.

► *Coalroc is the parent company of Electric Machinery Sales. Electric Machinery Sales are the distributor of the world's first battery-powered skid steer loaders – the Elise 900 and MiniZ from FIRSTGREEN Industries.*

The first two demonstration machines were delivered in 2021 and have been tested in the Australian environment with great success. Glenn

is the type of business leader who calls a spade a spade and when it comes to diversification of his business, the move to decarbonisation is a bonus, but not the main driver.

“Green is a hard word for me to say, it is more about the fact that these machines are a new technology. They are bit more to buy but the operating costs are really low compared to any diesel equipment. To me, the advantage is the operating cost of these machines are really low and their payback on investment is fast.

“You can put the green tinge to it, that's all good.

“It is the efficiency of them, the big machine we have, has bigger capacities than the diesel. Diesel designs have been around forever and

not had many changes to them. There are some design characteristics that have been put into these new ones that make them a little bit easier to use.”

Glenn said the biggest benefit of the skid loaders is the operating costs.

“An equivalent diesel machine will cost \$16 per hour to operate over their life cycle, whereas the electric skids are under \$2 to operate.”

Glenn has been leading the Electric Machinery Sales part of the business.

“It is a fair learning curve to get out of one industry you are comfortable with and all the little parts that come with it.

“But it is going to be a legal or statutory requirement for all businesses, eventually. I don’t think you will get a job if you don’t run this type of equipment eventually.”

▶ ***“I am looking to the future I guess and where people are heading. You don’t have to agree with it, but it needs to be part of your business decision,” Glenn said.***

## ▶ FUTURE EVOLUTION

This future evolution demonstrates how businesses within the Greater Whitsunday METS sector may evolve as they pursue decarbonisation and diversification ambitions. Coalroc has agreed to be used as a case example to demonstrate this journey, however their own business ambitions and actions may differ from the example presented.

▶ ***In the future, Greater Whitsunday METS businesses, such as Coalroc, will continue to evolve through being financially motivated to capitalise on the opportunities that decarbonisation presents.*** The business will also recognise that there are increasing mandates to decarbonise and will also be motivated to be ahead of the curve to minimise any disruptions to business.

Businesses such as Coalroc will be well on the way to achieving net zero within their scope 1 and 2 emissions through taking steps such as transitioning vehicle fleets to zero emissions vehicles; minimising and repurposing waste; and accessing renewable energy for their operations. They will also be monitoring their supply chains and taking steps to encourage decarbonisation to reduce scope 3 impacts.

As Coalroc moves towards the future they will

continue to provide products and services to the mining industry, but their key product focus will transition from diesel to electric machinery to support mining operations. Their workforce will upskill to be able to support the delivery of these products and services.

Coalroc will have also diversified their customer base to now be supplying essential electric machinery to sectors including local government, renewable energy projects, mine site rehabilitation projects and other key industries, including agriculture and construction.

Local METS businesses, like Coalroc, will be participating in the regional carbon reduction scheme to achieve step by step accreditation and demonstrate steps towards carbon reduction, which means that they are able to continue to participate in the supply chain that delivers major mining contracts, as well as service other major sectors and companies.

▶ ***There will be ongoing growth for Coalroc, based on their decision to diversify early.***

Their recognition of the business opportunities associated with decarbonisation, along with their pursuit of servicing new sectors and the proactive steps they have taken to ensure they stay ahead of the curve, will support them as they evolve.

# DECARBONISATION ACCELERATED BLUEPRINT

**The Decarbonisation Accelerated Blueprint defines the decarbonisation vision for the Greater Whitsunday region and the four key dimensions –**



**– within which initiatives need to be delivered to achieve the identified future state.**

The Blueprint is the starting point for scopes of work that will support regional industry to understand decarbonisation and the steps that they need to take to prepare for this. The scopes of work will also identify diversification opportunities aligned to the region’s industries and deliver strategies to support industries to pursue these opportunities.

This Blueprint and the identified initiatives have been developed from an economic development lens. While some of the activities delivered within the Decarbonisation Accelerated project will also result in improved social and environmental

outcomes for the Greater Whitsunday region, we acknowledge that there will be additional targeted effort required to progress effective social and environmental outcomes related to decarbonisation. This work will be best developed and delivered by organisations who are specifically resourced to deliver impactful social and environmental outcomes.

The Blueprint provides a starting point, focused on the METS sector, that will adapt over time and be expanded to other key sectors, as our understanding of decarbonisation and the opportunities that it brings to the region evolves and matures.

**The Decarbonisation Accelerated Blueprint consists of four key elements –**

- ▶ **Vision**
- ▶ **Blueprint Dimensions**
- ▶ **Ends, Ways, Means**
- ▶ **Blueprint Roadmap**

## VISION

The region’s vision for decarbonisation is rightly aspirational and somewhat audacious. This captures the desire to be an early adopter of the changes within the global economy.

The vision is:

**By 2025, the Greater Whitsunday region, through reducing carbon output, will have continued to diversify its economic base, ensuring long-term social and economic prosperity.**

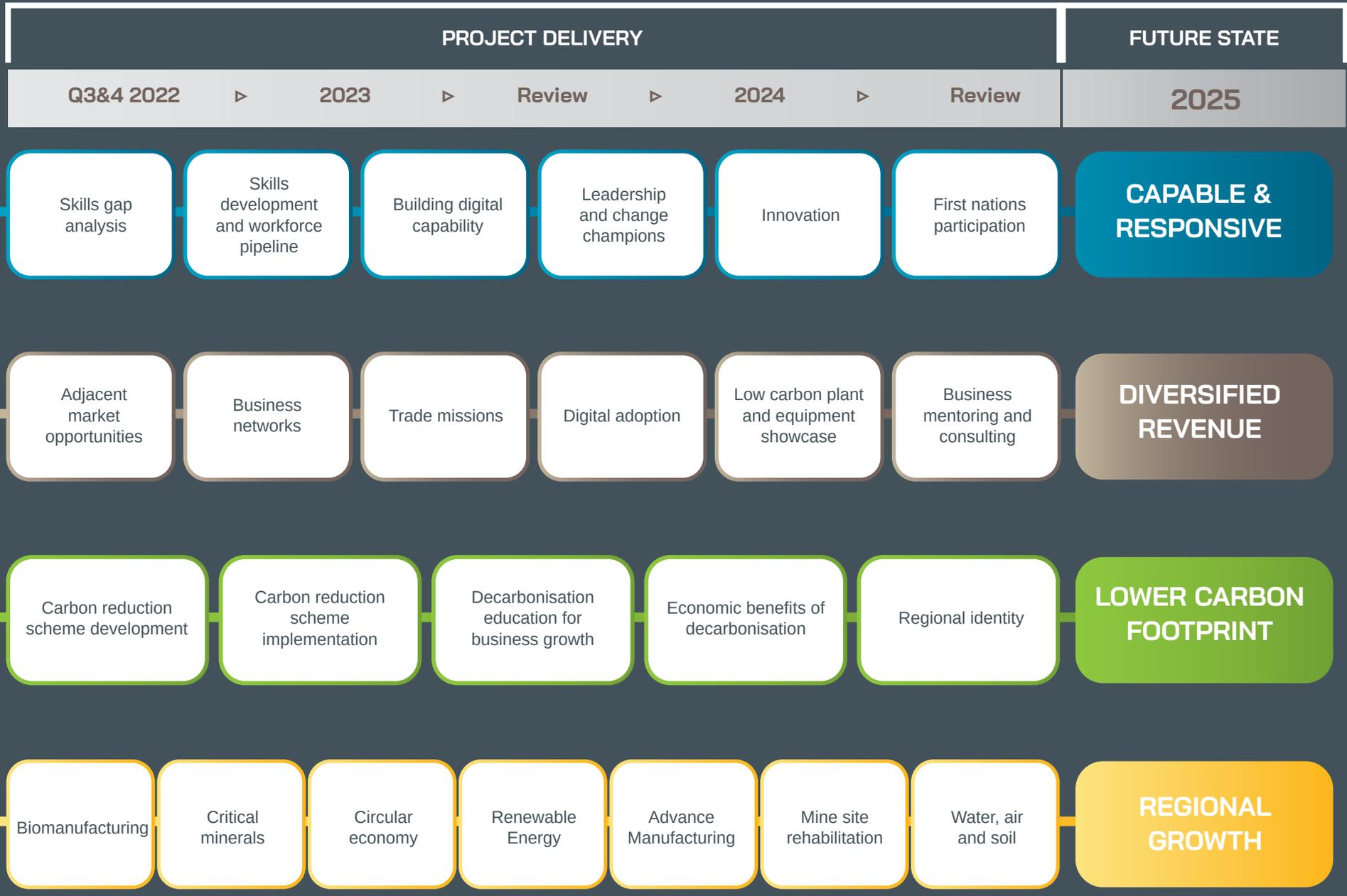


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By 2025, the Greater Whitsunday region, through reducing carbon output, will have continued to diversify its economic base, ensuring long-term social and economic prosperity.

	ENDS	WAYS	MEANS
 <p><b>PEOPLE</b></p>	<p><b>CAPABLE &amp; RESPONSIVE</b> Workforces that remain dynamic, responsive and capable in the successful transition towards decarbonisation and diversification.</p>	<p>Delivering strategic workforce development initiatives that meet the needs of changes influenced by decarbonisation and diversification.</p>	<p>Contribute to existing strategies to ensure a coordinated, regional approach for skill development, change management and workforce transferability pathways.</p>
 <p><b>INDUSTRY</b></p>	<p><b>DIVERSIFIED REVENUE</b> Continued growth of the mining equipment, technology and services in the region through diversified revenue.</p>	<p>Enhancing the capability of the METS sector to understand and secure new market opportunities.</p>	<p>Strategy development, education and delivery of activities, including through collaboration with existing networks and industry bodies, that build the capability of METS sector to diversify.</p>
 <p><b>ENVIRONMENT</b></p>	<p><b>LOWER CARBON FOOTPRINT</b> Reduced carbon production demonstrated through an accredited scheme.</p>	<p>Developing a regionally recognised scheme that demonstrates businesses are making measurable reductions in carbon production.</p>	<p>Education and incentives to support regional businesses to reduce carbon output through a manageable step by step accreditation process.</p>
 <p><b>OPPORTUNITY</b></p>	<p><b>REGIONAL GROWTH</b> New economic opportunities for the region.</p>	<p>Identifying opportunities that will drive new economic growth for the region and building regional capability to pursue these opportunities.</p>	<p>Fostering connections and collaboration with existing regional activities and delivering education and support to METS businesses to secure opportunities in emerging sectors.</p>



# BLUEPRINT DIMENSIONS

This Blueprint has been designed across four distinct dimensions. Each of these areas represents a crucial element of the Decarbonisation Accelerated program.

These dimensions are designed to integrate as a program to support supplementary activity occurring at all levels of government and within the region. This program is not about duplication, but merely a focus point for decarbonisation and should complement the range of existing strategic work underway within the region. **The Blueprint dimensions are:**



This dimension is focused upon preparing workforces that remain dynamic, responsive and capable in the changing workforce conditions influenced by decarbonisation and diversification. It builds capability within the region to lead this shift, as workforces change and new sectors connected to decarbonisation are created. This dimension focuses on strategies to upskill, harness and redirect skills to maintain employment objectives and meet the demands for new skill sets and jobs roles. This dimension integrates into the wider strategic workforce and skilling initiatives already occurring within the region.



This dimension seeks to enable the region to diversify its revenue from resources and leverage the Mining Equipment, Technology, and Services (METS) to promote continued growth for the region. It seeks to educate and support the current METS sector to find new and diversified opportunities, through exploring the products and services that align to opportunities outside of their traditional sectors.



The final dimension seeks to capture new economic opportunities for the Greater Whitsunday region. Through creating an understanding around the trends that will drive new economic growth for the region and how the existing skills, infrastructure and capabilities of the region align to these emerging trends. This will be done through fostering strong connections and collaboration with existing work streams, as well as delivering education and support to equip local industry and businesses to pursue these opportunities.



This dimension is a vital ingredient for decarbonisation. This dimension is about educating and supporting industry and the wider supply chain (focussing initially on the METS supply chain) to make a measurable reduction in carbon production through a regionally recognised scheme. The scheme will be easy to use and will mature over time as public policy within this area is strengthened. Key features of the scheme are outlined in the **Initiatives** section.

# ENDS, WAYS, MEANS

The Decarbonisation Accelerated program seeks to deliver a defined end state across the four identified dimensions of -



The ends, ways and means model by Arthur Lykke provides a strategic framework, described as:

ENDS	WAYS	MEANS
The goals or objectives.	How the goals or objectives will be achieved.	The resources required to achieve the goals or objectives.

# BLUEPRINT ROADMAP

The initiative roadmap identifies a project timeline that commences with the development of this Blueprint and works towards the 2025 vision, along with a range of initiatives, separated into the four key dimensions, that will form the focus of activity delivery within the defined project period.

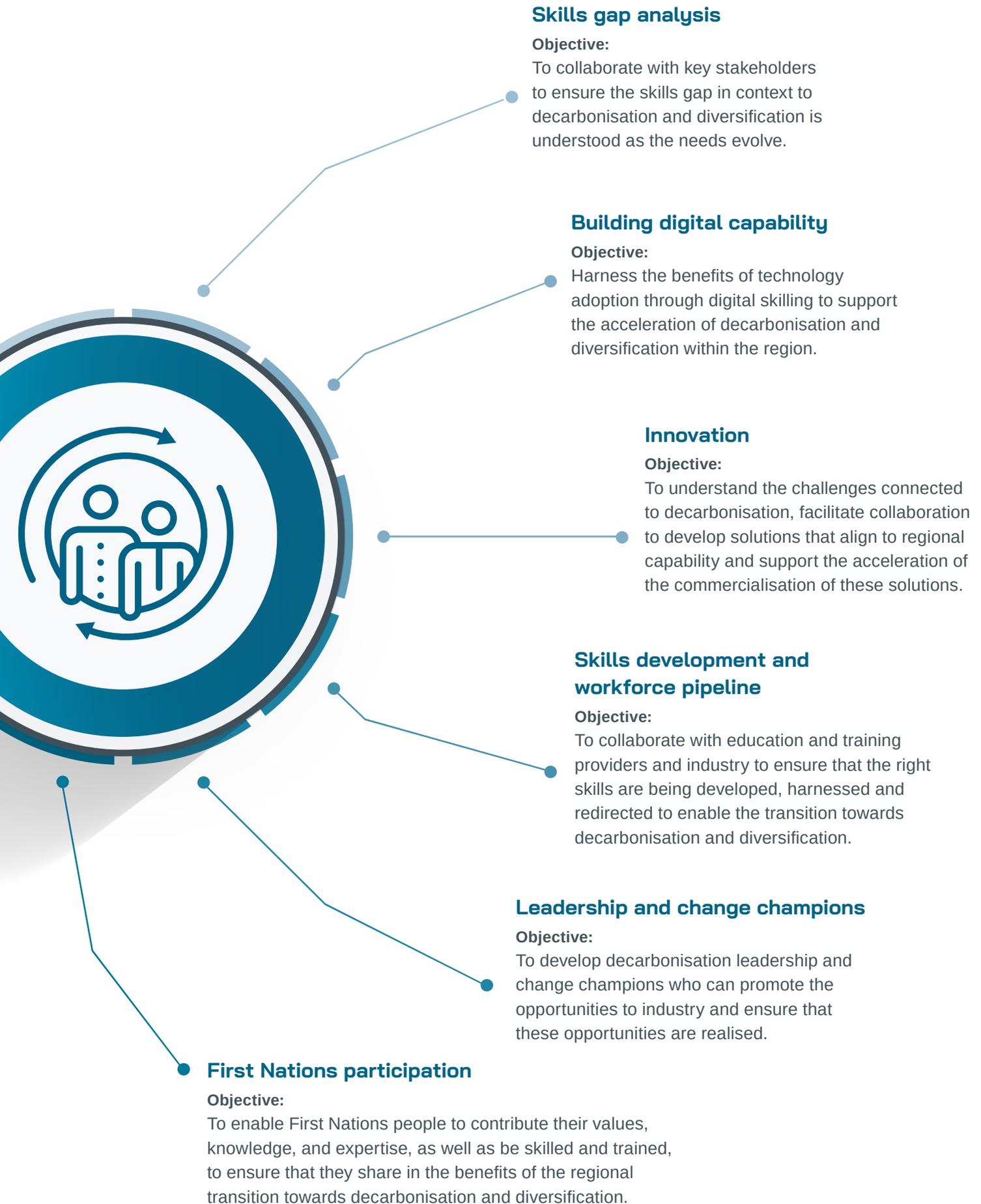
Given that decarbonisation is a relatively new concept to apply in practice, much will change very quickly in the coming years. In order to ensure flexibility for the project to respond to these changes, the initiatives have been kept broad and link in to known areas of alignment with decarbonisation and diversification but are also expected to evolve and change over time.

# INITIATIVES

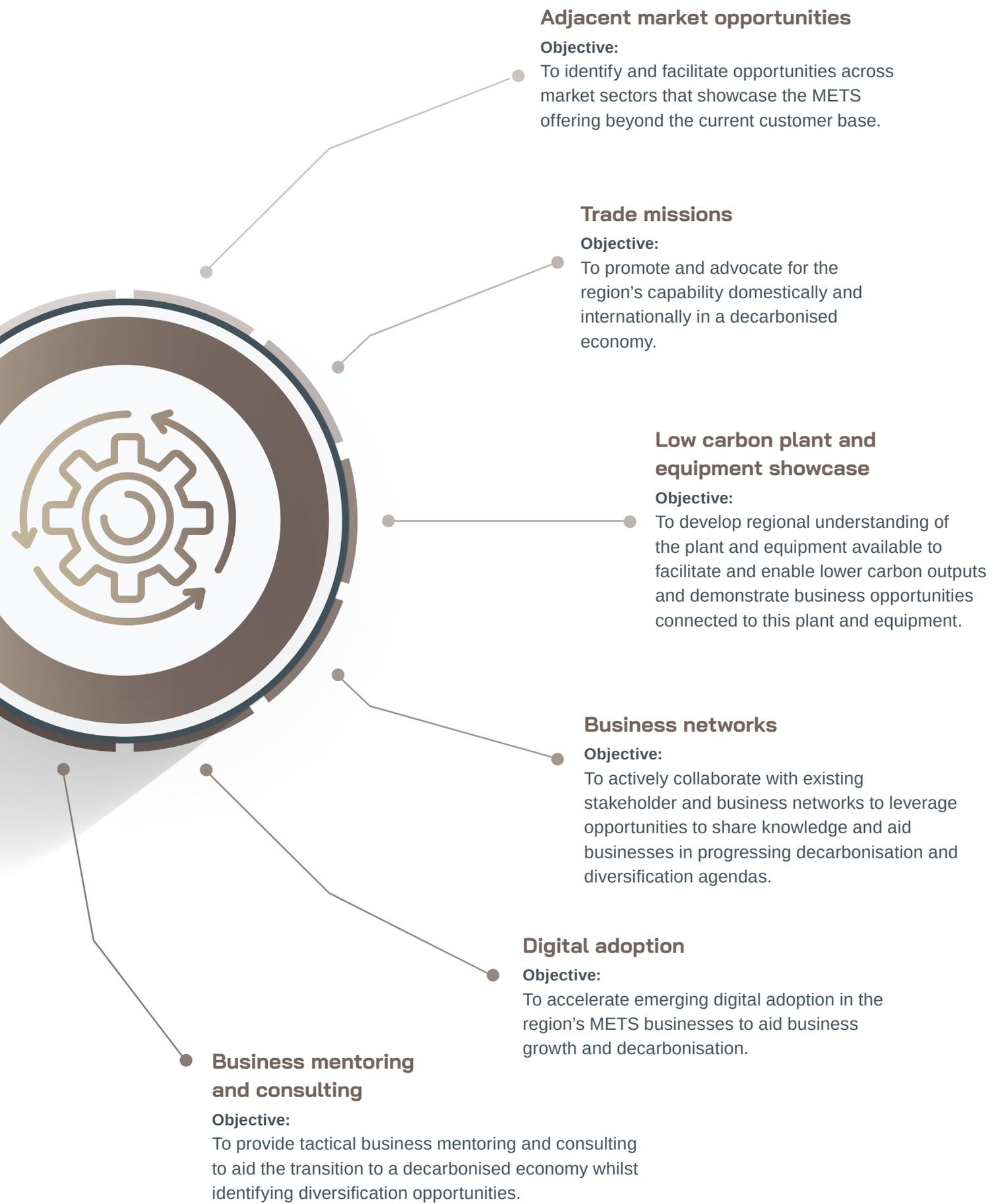
The initiatives provide a broad scope of focus for activities that will support decarbonisation and diversification across the region, especially within the METS sector.

The Decarbonisation Accelerated project will coordinate activities across some of these initiatives, whilst other initiatives will require linking and partnering to support existing work streams and to leverage new funding partnerships.

# PEOPLE



# INDUSTRY



# ENVIRONMENT

## Carbon reduction scheme development

**Objective:**

To develop a business model for delivering an industry agreed carbon reduction scheme that is accepted across the supply chain.

## Carbon reduction scheme implementation

**Objective:**

To implement an industry agreed carbon reduction scheme based on a simple star rating system of one through to six.

## Decarbonisation education for business growth

**Objective:**

To increase awareness within the METS sector about decarbonisation and diversification opportunities and how these can enable business growth.

## Decarbonisation campaign

**Objective:**

Deliver a decarbonisation campaign to create a regional identity for the Greater Whitsunday region that aligns to decarbonisation and recognises the critical role of the region in global decarbonisation.

## Economic benefits of decarbonisation

**Objective:**

To enhance the region's understanding of the economic benefits and return on investment (ROI) that taking steps towards decarbonisation can provide.





## Carbon Reduction Scheme

**A cornerstone of the Decarbonisation Accelerated program is a scheme to support businesses to demonstrate the carbon reduction steps that they are taking through a regionally recognised accreditation process.**

There are a number of carbon reduction schemes available in Australia, such as the Corporate Emissions Reduction Transparency Report (CERT), Climate Active certification and NoCO2 Carbon Neutral Program. However, these programs all focus on accrediting businesses who have reached net zero targets or support large companies to demonstrate their progress towards net zero goals. There seems to be a gap in user friendly, accessible programs that provide small and medium-sized enterprises the incentive and means to demonstrate and accredit the carbon reduction measures that they are taking along the journey towards larger net zero goals.

**► *The Greater Whitsunday region feels that it is both important and pressing that businesses are able to quantify how they are lowering their carbon footprint right from the start of their decarbonisation journey.***

Therefore, a regionally recognised accreditation scheme will be launched to quantify the progress businesses are making to reduce their carbon footprint. As the national decarbonisation agenda matures, this scheme will have the flexibility to merge into more sophisticated schemes that are recognised more broadly.

The scheme will be an accreditation scheme that matures with policy, science, and technology over the coming years. The scheme will be designed to minimise the administrative burden at all levels and clearly demonstrate the steps towards carbon reduction being taken by any given business.

The scheme will seek endorsement from major companies to be used as a mechanism to reduce scope 3 emissions within their regional supply chain, therefore incentivising the engagement of local businesses to take steps towards decarbonisation. The scheme will be phased into the supply chain over the years at an ever-increasing level of compliance.

# OPPORTUNITY

## Biomanufacturing

**Objective:**

To promote and define diversification opportunities for the METS sector within the emerging biomanufacturing sector.

## Circular economy

**Objective:**

To educate METS businesses about opportunities connected to circular economy and support them to be able to connect to these opportunities.

## Advanced manufacturing

**Objective:**

To enable diversification through identifying opportunities to unlock assets and expertise in advanced manufacturing that align to decarbonisation.

## Water, air and soil

**Objective:**

To educate METS businesses about opportunities connected to improving water, air and soil being driven by decarbonisation and support them to be able to connect to these opportunities.

## Critical minerals

**Objective:**

To educate METS businesses about opportunities in the critical minerals and support them to be able to connect to these opportunities.

## Renewable energy

**Objective:**

To identify and explore opportunities for regional METS sector to play a role within major renewable energy projects, such as the Pioneer-Burdekin Pumped Hydro Energy Storage project.

## Mine site rehabilitation

**Objective:**

To educate METS businesses about opportunities connected to mine site rehabilitation activities and support them to be able to connect to these opportunities.



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