Western Rock Lobster

Industry Digital Strategy







2017-140 Digitising the Western Rock Lobster Industry is supported by funding from the FRDC on behalf of the Australian Government.

Contents

Envision phase

Strategic Intent
Current Context
An Aspirational Digital Future4
Key Challenges6
Key Objectives7
Outline Phase
Capabilities
Skills and Technology Platforms
Plan Phase
Roadmap23
Industry Implications
Next Steps
Appendix

Strategic Intent

Vision: By 2023, WRL will have the full confidence of Members, government and the community as a *well-resourced, self-funded peak body* engaged in *advocacy and co-management for improved resource security.*

"Integrated Strategy for Security, Independence and Community Connection for the western rock lobster industry"

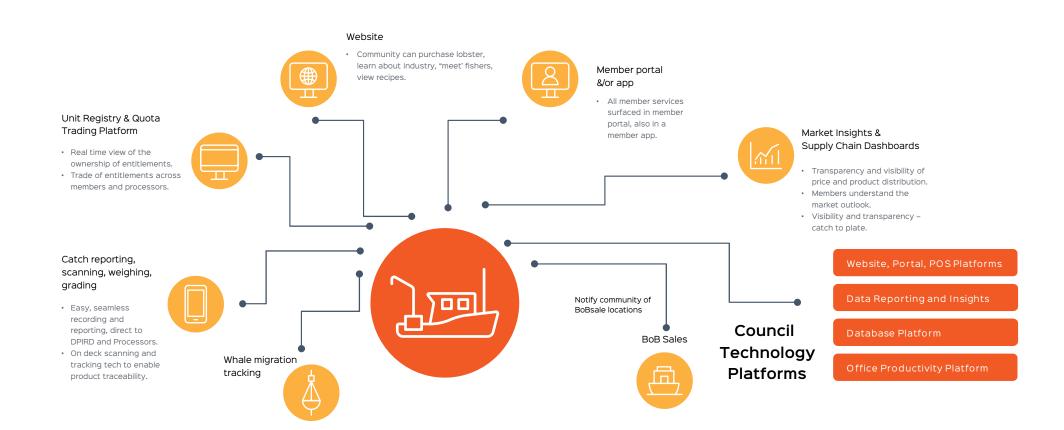


Current Context

WRL as a business can be represented by:

WRL has limited control over resource management. WRL undertakes complex processes of	WRL has limited visibility of entitlement ownership, leasing arrangements, and real-time market distribution.	Generational business with family-based ownership, no new entrants and high	6 Processors operate with limited information sharing. COVID-19 and China trade	Limited adoption of 'back of boat' sales by a number of members, who find the process onerous and unreliable.	
research, lobbying and consultation to drive an economic and sustainable Management Plan.	WRL has no influence or oversight over the processors responsible for sales/ distribution.	financial barriers to entry. Any change will need to be incremental, small and targeted.	dispute has adversely impacted the members. Previously 95% of catch was exported to China to maximise profits.	Since the introduction of the Quota system, the cost of compliance has increased significantly, impacting operational costs and posing a risk to the industry.	
There is resistance to change as members are hesitant to adopt digital ways of working. Concerns around the cost of digital	WRL The industry peak body that	Members	Members' business models and operational set-ups vary widely across the industry.		
transformation. WRL undertakes advocacy and lobbying work to protect and represent the interest of the industry.	advocates and represents the interests of Members to all stakeholders including State and Federal governments and the community.	Members of WRL are Managed Fishery Licence (MFL) holders.	Members experience financial and operational uncertainty due to the lack of visibility and transparency of the Management Plan.	Since the introduction of the 'Quota system', members could only sell to registered receivers, and not the local community.	
6 Years ago, the government introduced the Fisheye system to track and verify lobster catch. The industry contributed 50% of the cost, however the system has provided a clunky and unstable Member experience.	Government The regulatory bodies governing vessel, employment and fishing legislation that MFL holders operate under.	Community The communities of our Members and consumers of our premium product.	The community have a perception of this industry being discreet and not visible in the community.		
Government has introduced pot restrictions to mitigate whale entanglement risks.	Mutual trust of Members in the government has been eroded due to the 'Dave Kelly Nationalisation policy'.	There is a community perception that this	Community perception	Limited community support and sympathy during tough times.	
	Governments have been allocating access rights to create marine	industry comprises wealthy fisherman who send all their	that lobsters are not available or accessible to the local market and		

Bringing Industry, Community and Council together





EXTENDING OUR INFLUENCE AND CONTROL ACROSS THE FISHING VALUE CHAIN AND IMPROVING OPERATIONAL EFFICIENCY AND THE MEMBER EXPERIENCE

- Members provide input and feedback to Council online, through portal.
- Council owns/ manages license and unit registry.
- Enables self regulation, co-management.
- Members can access/be notified of requirements and submit online.
- Online training in member portal, and digitised SMS.
- Members can easily trade, buy or sell their entitlements in real-time.
- Improved and optimized catch reporting and recording app to replace FIshEye.
- Instant reporting to DPIRD, and processors.
- Industry owns the data, supplies to DPIRD.
- Catch Application enables full product traceability and optimizes grading and weighing.
- Sales and ordering for BoB lobster via simple online system. • Visibility of
- Linked to new catch reporting, lets community order in real-time.
- BoB sales weighted, • reported on deck.

- Real-time reporting • to processors.
- processor data, supply chain and market outlook.



Operating environment uncertainty and government control of resource management

Lengthy engagement/ negotiation periods, lack of visibility, and complicated processes surrounding the Management Plan creates uncertainty for the fishers and hinders their ability to plan. DPIRD imposes requirements and controls that specify how the industry operates which impacts business efficiency and cost. This is exacerbated by current market conditions.

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Inconsistent compliance which is unclear and difficult to interpret

> Multiple layers of compliance and reporting are required (vessel, on board, catch) and are managed by different entities (DoT, AMSA, DPIRD). Processes are unclear, difficult to interpret, inconsistently applied and the systems are unstable and poorly designed. This leads to difficulty to consistently meet requirements and operating pressure for the fishers.



Engagement and communication within the industry and community

Engaging and getting input from members is time consuming and inefficient for the WRL. This is caused by poor/ duplicate data, inefficient communication mechanisms and low uptake of modern communication methods by Members. Confidence in, and reputation of industry is fractured and there is little understanding of the industry within the community.



Inefficient technology, processes and knowledge to support local sales

The 'back of boat' initiative enabling public to purchase direct from fishers creates retail challenges for fishers who are seeking to service the local market effectively and efficiently.



Technology maturity & industry culture

There is no ongoing research into fishing technology to ensure the industry remains abreast of developments and responds accordingly. Additionally, this is a generational industry perceived to be reluctant to adopt new ways of working.

6 Western Rock Lobster • Industry Digital Strategy

Operating environment uncertainty and government control of resource management

Lengthy engagement/negotiation periods, lack of visibility, and complicated processes surrounding the Management Plan creates uncertainty for the fishers and hinders their ability to plan. This is exacerbated by current market conditions. DPIRD impose input controls that specify how the industry operates which impacts business efficiencies and costs.

Linked Objectives

Improved self-regulation driven by data and technology

Collect, own and manage license, entitlement, quota, catch scanning and grading data to create independence and demonstrate effective industry self-management. Improve member experience and operating efficiency by reducing reliance on inefficient and clunky government systems.

Increase visibility of market and trade environment

Develop a deeper understanding of the market outlook and provide insight and visibility that will enable effective two-way communication between WRL and processors to identify new markets and product innovations.

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Inconsistent compliance which is unclear and difficult to interpret

Multiple layers of compliance and reporting are required and are each managed by different entities. Processes are unclear, difficult to interpret, inconsistently applied and the systems are unstable and poorly designed. This leads to difficulty meeting requirements and operating pressure for the fishers.

Linked Objectives

3

Improved compliance clarity, accessibility and ease of application

Industry compliance requirements (DoT, AMSA, DPIRD) are presented clearly, succinctly and in one accessible location.

Members can access/be notified of changes to compliance requirements and submit online.

Engagement and communication within the industry and community

Engaging and getting input from members is time consuming and inefficient for the WRL. This is caused by poor/duplicate data, inefficient communication mechanisms and low uptake of modern communication methods by Members. Confidence in, and reputation of industry is fractured and there is little understanding of the industry within the community.

Linked Objectives

4

5

Improve community engagement enabled by technology

Communicate and amplify the good work the industry and WRL undertake across digital and social networks strengthening the industry's connection to the community, enhancing the social license to operate.

Streamline and digitise member consultation and communication

Members can be contacted and consulted easily via their channel of choice, and are digitally connected to all key tasks and services. WRL can track status of consultation and input, segment members and deliver personalised and impactful member communication.



Inefficient technology, processes and knowledge to support local sales

The 'back of boat' initiative enabling public to purchase direct from fishers creates retail challenges for fishers who are seeking to service the local market effectively and efficiently.

Linked Objectives

6

Improve distribution channel to local market enabled by technology

Create sales, ordering and payment mechanisms to enable efficient and easy direct sales via 'Back of the Boat'.

کیے Key Challenge

Technology maturity & industry culture

There is no ongoing research into fishing technology to ensure the industry remains abreast of developments and responds accordingly. Additionally, this is a generational industry perceived to be reluctant to adopt new ways of working.

Linked Objectives

7

Create and grow a community of technology change champions

Develop a cultural change management strategy leveraging technology and industry change advocates who are role modelling new ways of working. Focus efforts on visionaries to move pragmatists and sceptics along the adoption curve.

8

Explore landscape for the latest technology development and innovation in commercial fisheries

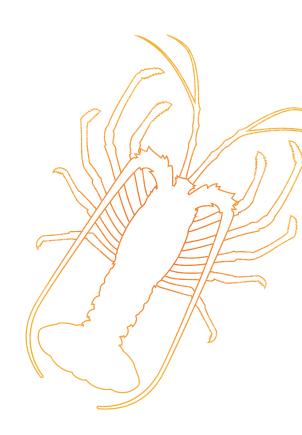
Undertake ongoing focussed research to understand how the industry can apply technology and innovations in fisheries to deliver member value and strengthen industry position.

Outline Phase



Capabilities requiring change and that deliver to identified objectives

This capability map identifies key building blocks which define what the WRLC does as a business to enable the Digital Strategy. To meet the current vision, mission and aspirational future, different capabilities will require varying levels of change and investment. The required level of change has been identified by heat mapping the capabilities and assigning them to an objective which needs to be met.



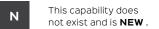
Strategic Capabilities: Capabilities which enable a business to strategically position itself to obtain competitive advantage now and in the future



Linked Objectives

- 1. Improved self-regulation driven by data and technology.
- 2. Increase visibility of market and trade environment.
- 3. Improved compliance clarity, accessibility and ease of application.
- 4. Improve community engagement enabled by technology.
- 5. Streamline and digitise member consultation and communication.
- 6. Improve distribution channel to local market enabled by technology.
- 7. Create and grow a community of technology change champions.
- 8. Explore landscape for the latest technology development and innovation in commercial fisheries.

This capability exists currently and **NO** change is required.



This capability exists currently but a **HIGH** level of change is required.

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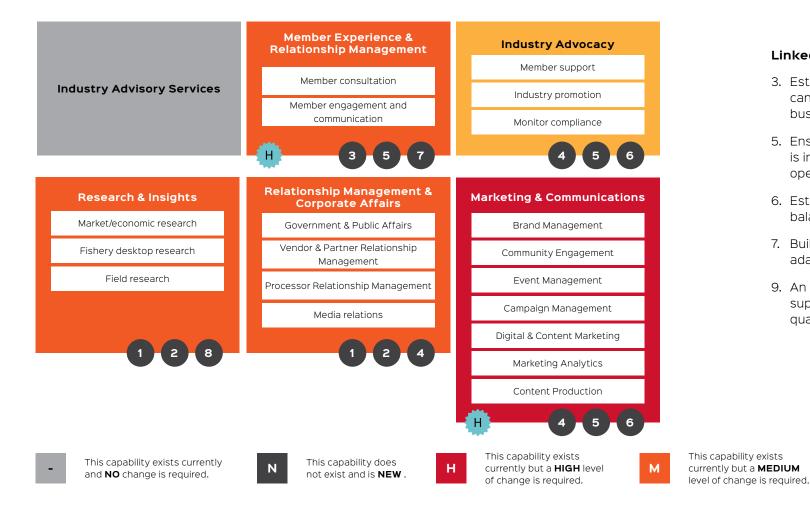


This capability exists currently but a **MEDIUM** level of change is required.



This capability exists currently but a **LOW** level of change is required.

Core Capabilities: Capabilities which enable a business to deliver its fundamental services



Linked Objectives

- Established core system(s) that can evolve and scale to meet business needs.
- 5. Ensure an organisational structure is in place to deliver strategic and operational goals.
- 6. Established clear process balanced KPIs - Sales vs Services.
- 7. Built an organisational culture that adaptable and resilient to change.
- 9. An established practice which supports data acquisition, review, quality and governance control.

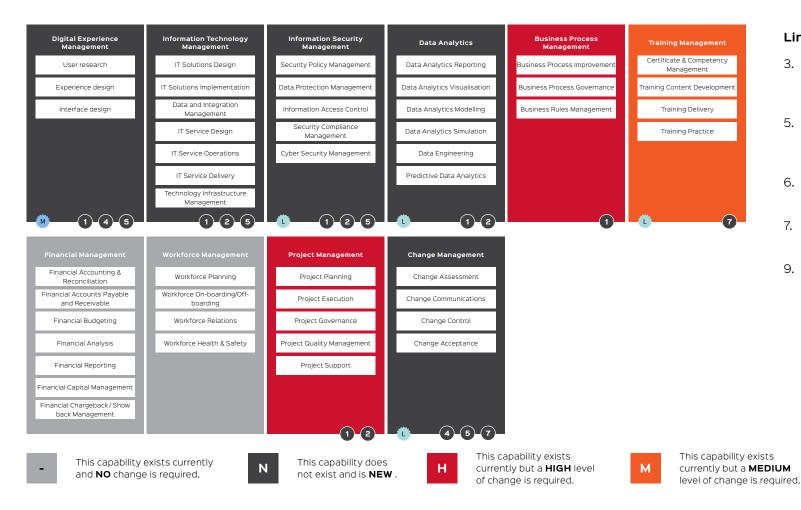
This capability exists

of change is required.

currently but a LOW level

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Enabling Capabilities: Capabilities which support the delivery of a business to fundamental services



Linked Objectives

- Established core system(s) that can evolve and scale to meet business needs.
- 5. Ensure an organisational structure is in place to deliver strategic and operational goals.
- 6. Established clear process balanced KPIs Sales vs Services.
- 7. Built an organisational culture that adaptable and resilient to change.
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This capability exists

of change is required.

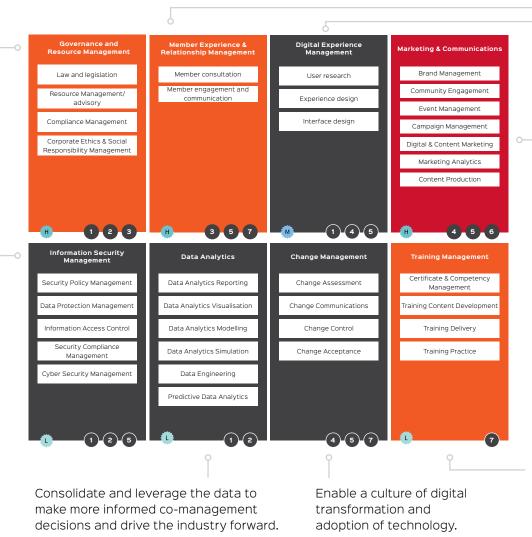
currently but a LOW level

Capability Focus Areas

By leveraging digital technology, WRL fosters capability for greater co-management as a mature industry.

Gives government confidence in industry's ability to self-manage.

The digital transformation will provide security and confidentiality of data and protect data sources.



Fosters greater efficiency and effectiveness across council/members in dealing with crisis and risks facing industry.

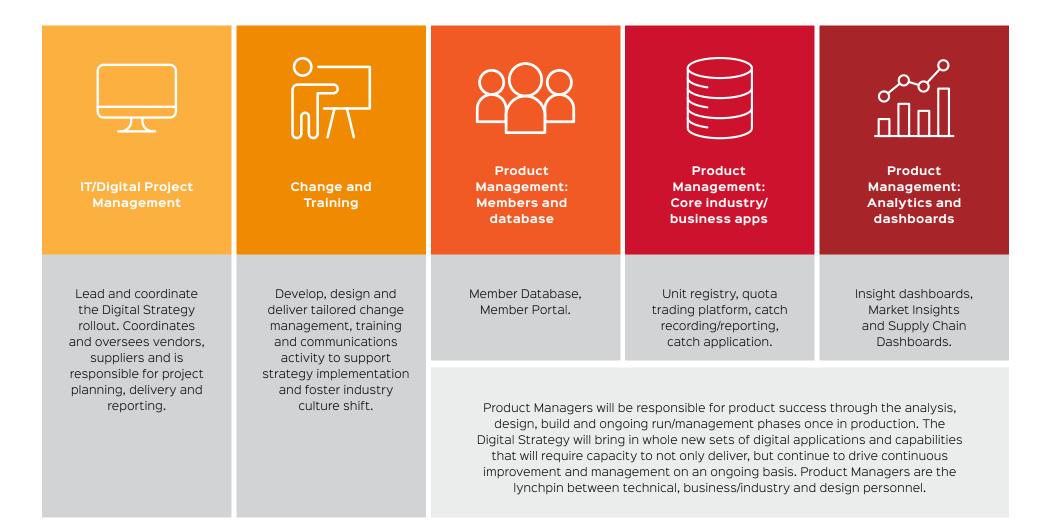
Drive greater adoption of digital technology by delivering remarkable user experience.

Increases the industry's capacity to enhance its social license to operate.

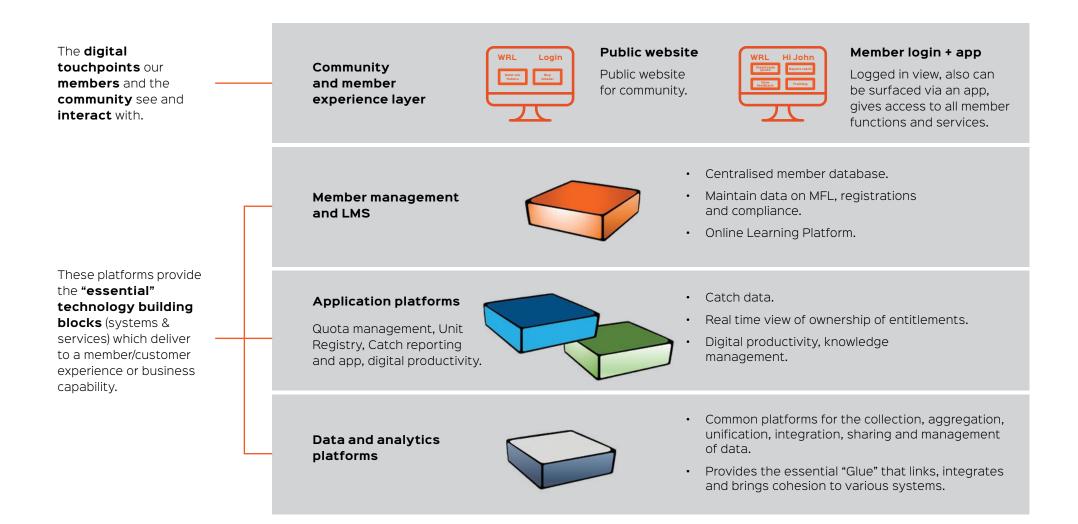
Increases industry involvement with the community and local support.

Provide personalised and tailored training solution from the new digital technology, preferably more faceto-face interactions.

Core Skill Focus Areas



Technology Platforms



Plan Phase - Roadmap

Digital Horizons

Foundational

Tactically resolving operational challenges and **laying the core foundations** for technology change.

Key Highlights

- Unified member & licence information.
- Productivity improvements through digital tools and workflow automation.
- Technology optimised BoB sales improves public access to lobster.
- Marketing driven community engagement.
- Training and Digital culture change.

2 Engaged

Members

Progressively building out foundations that enable resource security, **deliver member service excellence** and modernisation technology.

Key Highlights

- Digital member portal, member services and self-service.
- Modernised Unit Registry.
- Quota Trading platform established.
- Member and industry analytics providing insights to assist members and council.
- Modernised WRL website and supporting content.

(3

Digital Transformation

Strategic technology platforms improve member services, community and government engagement.

Key Highlights

- Digital eLearning services now available to Members.
- Market dashboard and insights available via portal.
- Integrated website providing seamless access and interactions with WRL.
- Seamless catch recording and reporting with automated DPIRD reporting.
- New culture of community and member engagement.



Digital Growth

Growing digitally, innovating and providing new digital services through WRL technology platforms.

Key Highlights

- Real time operations delivered through Catch-application.
- Visualisation and tracking for complete supply chain visibility.
- Data analytics providing insights to assist Industry and members with buying and trading insights.
- Extensive use of IoT devices to provide real-time data to assist in catch management.
- Technology platforms and automation reducing labour intensive compliance for members.

Introducing the Digital Strategy Roadmap Streams



Member

experience and

engagement







Council operations

Community engagement



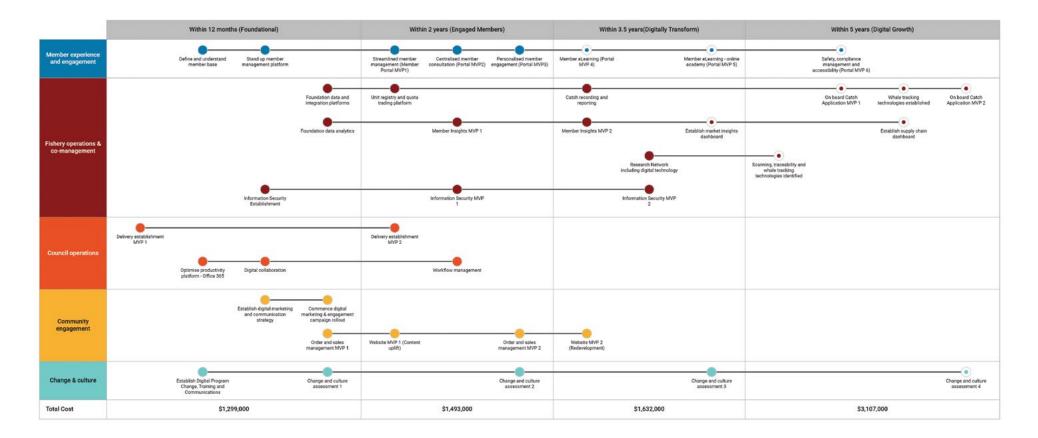
Change and culture

22 Western Rock Lobster • Industry Digital Strategy

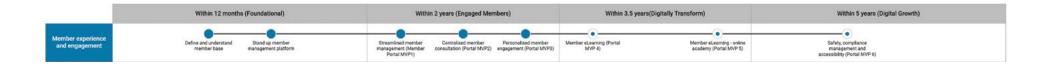
Western Rock Lobster Council Digital Roadmap

Time Horizon 5 Years

Prioritised initiatives have been sequenced over a time horizon to form a roadmap



Member Experience & Engagement





At the heart of the **Member Experience and Engagement** stream is defining and delivering seamless digital member experiences that enable streamlined communication, consultation and engagement between members and Council.

The goals of **Member Experience and Engagement** is to digitally connect members to all key tasks and services, using a 'human centred' approach whereby the member context, environment, needs and challenges are central to the design and build of solutions.

Similarly it will enable efficiency and effectiveness for the council in communicating, consulting and engaging with members.

The outcome of the initiatives in this stream will be to:

1) Design

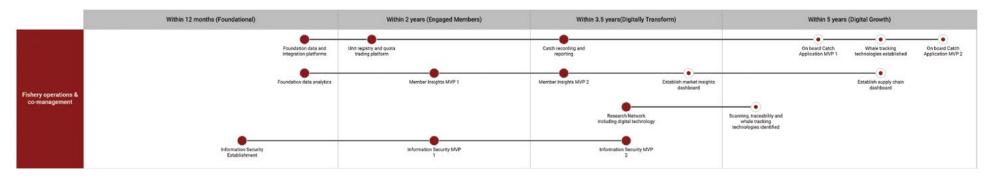
• Our future state member experience, including defining and segmenting our members.

2) Build

- Roll out a centralized member database for the Council.
- Enable online member consultation and personalized communication/engagement.
- Roll out a member portal with the capabilities for members:
 - View, manage and update their details.
 - View updates from council, submit and track their feedback.
 - Receive tailored updates and communications.
 - Complete online learning and digital safety management system.
 - View and track compliance in one spot.

Accessing the unit registry, quota trading platform, BoB sales and market dashboards will also be enabled in the portal.

Fishery Operations and Co-management





Roadmap Explained

The 'Fishery Operations and co-management'

stream will leverage technology to increase the efficiency, productivity and maturity of the industry – ultimately leading to self regulation and co-management.

The Unit Registry, Quota Trading Platform and the Catch Application provide transparency, visibility and operational technology to make it easier for members to run their **fishing operations.**

Having data and insights will allow the council to make key decisions for the Management Plan, thus gain **greater ownership of the operational process** as well.

The outcome of the initiatives in this stream will be to:

Design and Build:

- Roll out of the Unit Registry.
- Roll out Catch recording and reporting.
- Roll out of the Catch Application leveraging on deck technology.
- Roll out of the Quota trading platform.
- Roll out of the Data analytics platform.
- Establish Market insights dashboard.
- Establish Supply Chain Dashboard.

Establish Digital Technology Innovation Board as part of Research Network Initiative 1: Whale entanglement research and tracking.

Council Operations





Establishing delivery foundations, including project resources and governance, as well as standing up or optimizing our digital tools and workplace are key to enabling and delivering transformation.

Dedicated project resources, alongside existing Council staff, will be responsible for driving and delivering roadmap initiatives and managing the change and vendor, stakeholder, industry relationships.

An uplift of our workplace tools will support internal productivity, collaboration and knowledge sharing.

The outcome of the initiatives in this stream will be to:

Establish project resourcing

- IT/Digital Program Lead.
- Change Management.
- Product Management for Business Applications, Member and Community Platforms, Data and Insights.

Stand up

- Optimization of the Office 365, Share point, MS Teams.
- Automation of workflows for internal operations.

Community Engagement





The Community engagement stream will build the profile of the Industry brand, **strengthening the industry's connection to the community** and create an ongoing mechanism for public to purchase direct from fishers.

In the first six months the focus is on establishing a strategy, acquiring tools and and rolling out digital campaigns that **promote and raise awareness** of the industry.

A **website uplift**, followed by a later **redevelopment** will deliver an overhauled experience, strengthening the industry's primary digital touchpoint to community. The outcome of the initiatives in this stream will be to:

- **Define a digital marketing and communication strategy** that outlines digital engagement objectives, target audiences, key messages, channels and KPIs.
- Acquire digital marketing tools.
- Roll out community digital campaigns that **raise awareness of the industry** and help **build social license**.
- Complete a **website uplift**.
- Redevelop our website, integrating with a member login (portal) for a seamless experience.
- Enable public to order and purchase lobster online direct from fishers (BoB).

Change and Culture





Critical to the success of our digital strategy are strong, cohesive and **industry tailored change management** initiatives which engage industry and encourages a **mindset of change**.

A shared responsibility for change is pivotal and our change management will focus on **leveraging our change advocates** who are modelling new ways of working. Dedicated training and communication plans will be established, aligned to key initiatives, and regular **change and culture assessment checkpoints** will measure change and provide insight into take up and remediation actions.

The outcome of the initiatives in this stream will be to:

- Prepare industry with tailored communication and training.
- Shift mindset of industry to one of future thinking and adaptive to new ways of working.
- Demonstrate the value and efficiency that digital transformation will create for industry.
- Support and enable the successful implementation and adoption of roadmap initiatives.

Estimates

Estimating has been completed at a mix of both Action and Initiative level. The following macro assumptions provide the guiding framework for how each action or initiative has been estimated.

Very Low	Low	Medium	Medium Large	
<\$50K	\$50K - \$100K	\$100K - \$300K	\$300K - \$600K	\$600K - \$900K
20Days*2ppl*\$1,200pd	40Days*2ppl*\$1,200pd	120Days*2ppl*\$1,200pd	240Days*2ppl*\$1,200pd	240Days*3ppl*\$1,200pd
Design, config, deploy				
Not factored OPEX cost				
Specialty capability not priced				
Excludes internal resource cost				
50% VARIANCE				

Note: These are macro assumptions to support the Digital Strategy. Further implementation planning, business case analysis and vendor selection needs to be undertaken to get accurate cost funding.

Financial Summary

	Within 12 months (Foundational)	Within 2 years (Engaged Members)	Within 3.5 years (Digital Transform)	Within 5 years (Digital Growth)	TOTAL
Member experience and engagement	\$347,000	\$444,000	\$276,000	\$501,000	\$1,568,000
Fishing operations and co-management	\$447,000	\$869,000	\$1,056,000	\$2,581,000	\$4,953,000
Council operations	\$220,000	\$50,000	\$0	\$0	\$270,000
Community engagement	\$165,000	\$130,000	\$300,000	\$0	\$595,000
Change and culture	\$120,000	\$0	\$0	\$0	\$120,000
Total	\$1,299,000	\$1,493,000	\$1,632,000	\$3,082,000	\$7,506,000



Industry Implications



Why should we act now?

Doing Nothing

Progressing With Strategy



Government Control

Control and policy risk remains at current levels with federal and state governments.

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Increase Control

Increase control over our own operations.

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Reduce Influence & Compliance

Reduce influence and regulatory compliance that the government will introduce.



Fishery Ownership

Ownership of quota entitlement remains unknown and risks unforeseen foreign ownership issues.



Community Support & Advocacy

Bring about community support and advocacy to support the lobster fishing industry.

Reporting Efficiency

Reduce the effort and labour involved in reporting and recording via modern tech designed with and for industry.

Restricted Community Connection

Community connection and industry promotion is limited by traditional and delayed communication and engagement methods.



Quota Trading

Flexibility to trade quotas in real time.



Make Compliance Easier

Reduce effort to comply - make it easier to locate, submit and maintain compliance.





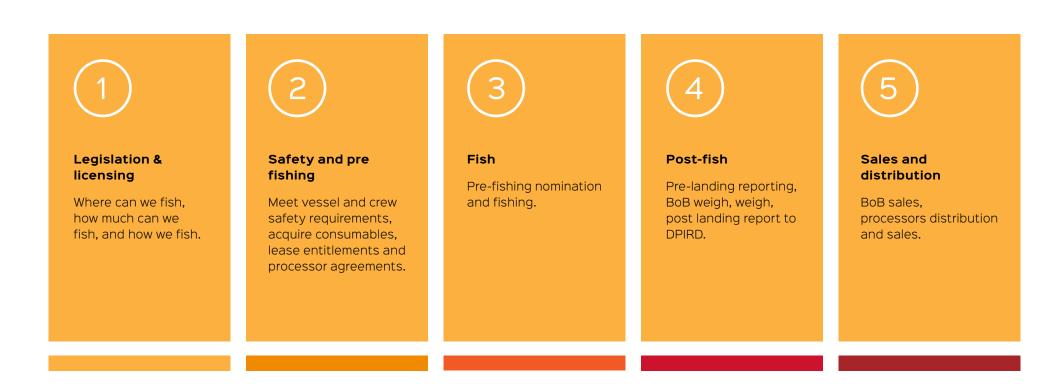
WRL Digital Strategy: Next Steps



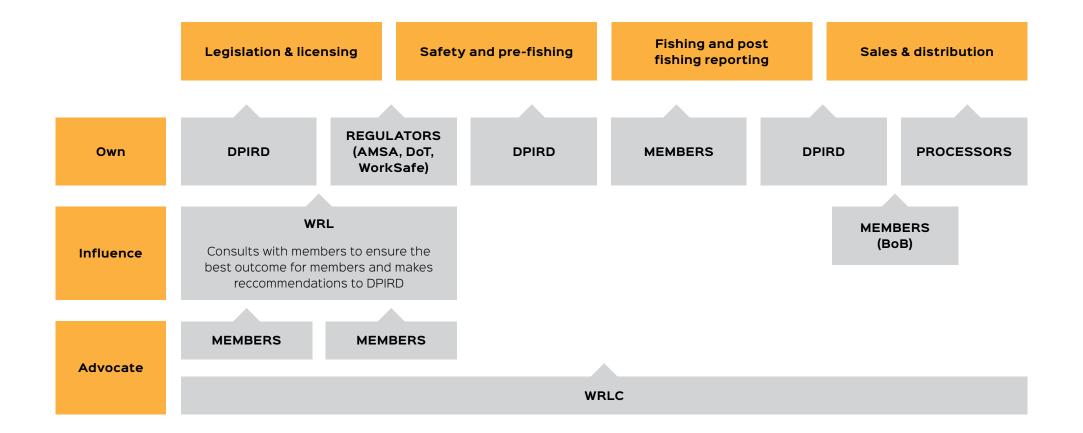
Appendix



Appendix 1 Western Rock Lobster Fishery Current Value Stream



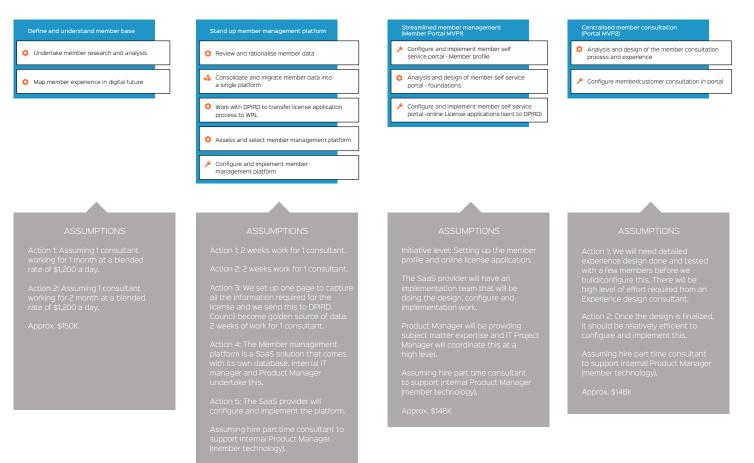
Appendix 1 Western Rock Lobster Fishery Current Value Stream



WRL undertakes **advocacy and lobbying work** to protect and represent the interest of Industry. There is a clear influence role in negotiating legislation and licensing on behalf of industry, and an advocacy role across the rest of the value chain. In order to address our challenges and achieve the WRL vision, we need to extend our influence across the value chain.

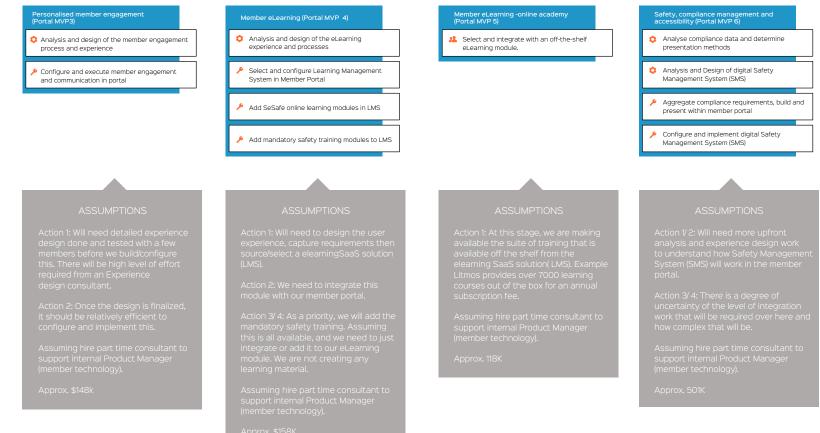


Member experience and engagement: 1



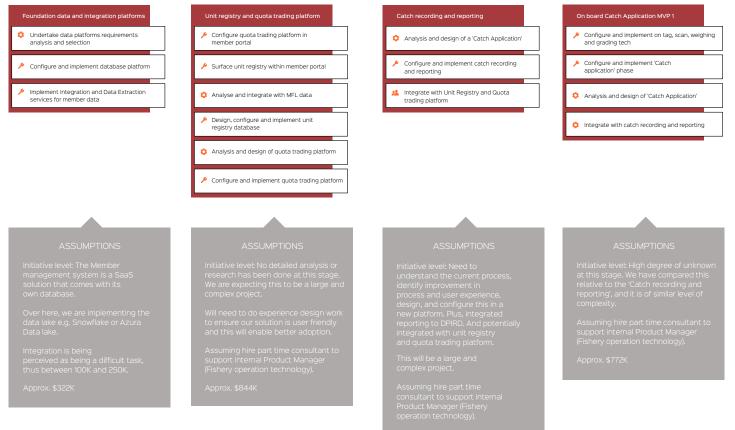


Member experience and engagement: 2





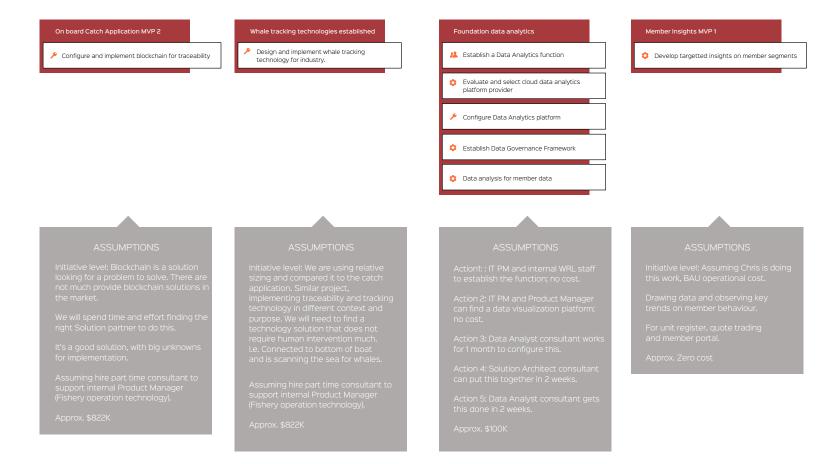
Fishery Operations and Co-management: 1



Approx. \$916K

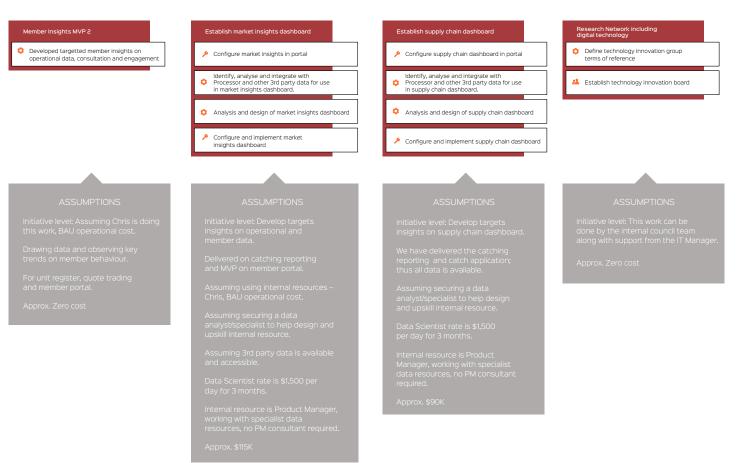


Fishery Operations and Co-management: 2



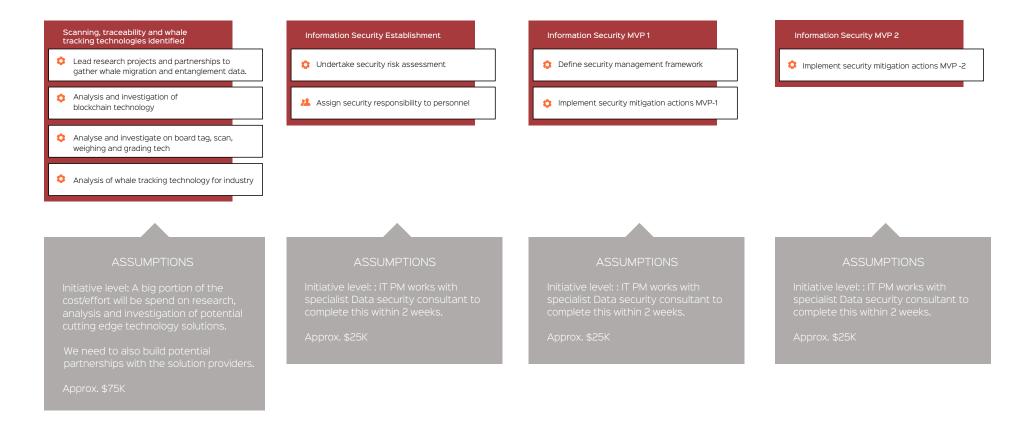


Fishery Operations and Co-management: 3



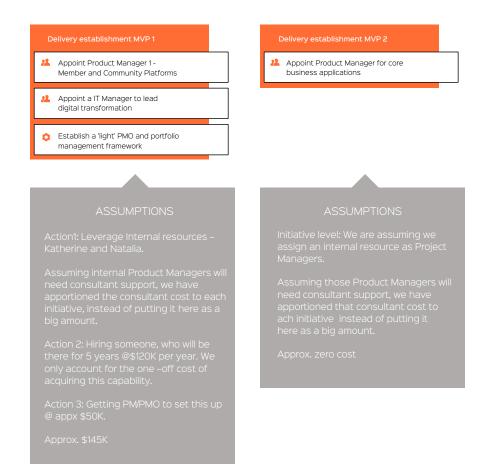


Fishery Operations and Co-management: 4



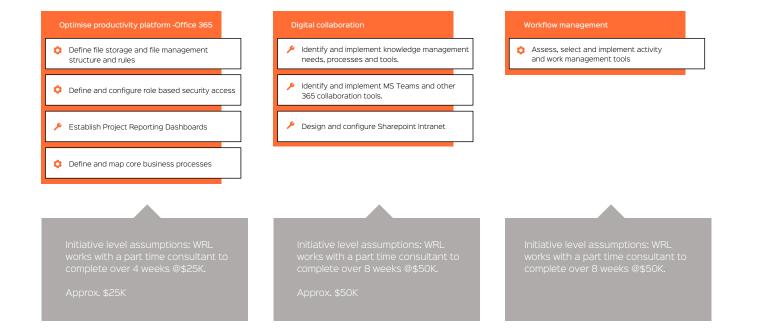


Council Operations



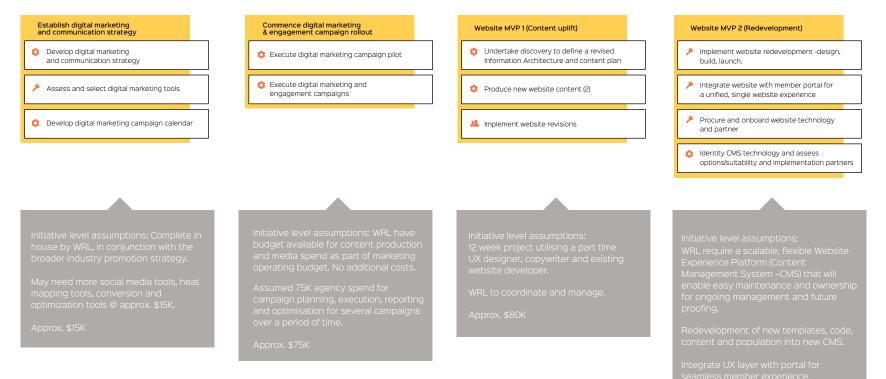


Council Operations



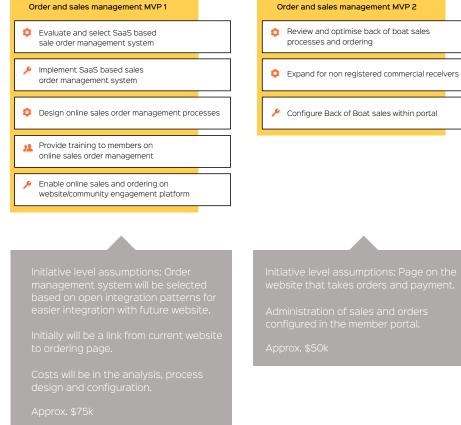


Community Engagement



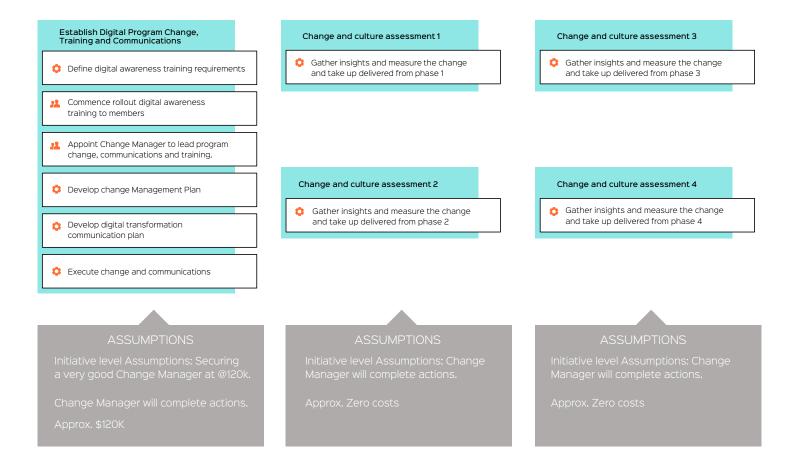


Community Engagement





Change and Culture



Appendix 3 Financial Summary - Detailed

	Within 12 months (Foundational)		Within 2 years (Engaged Members)		Within 3.5 years(Digitally Transform)		Within 5 years (Digital Growth)		Total
	Initiative	Costs	Initiative	Costs	Initiative	Costs	Initiative	Costs	Costs
Member experience and engagement	Define and understand member base	\$150,000	Streamlined member management (Member Portal MVP1)	\$148,000	Member eLearning (Portal MVP 4)	\$158,000	Safety, compliance management and accessibility (Portal MVP 6)	\$501,000	\$1,568,000
	Stand up member management platform	\$197,000	Centralised member consultation (Portal MVP2)	\$148,000	Member eLearning - online academy (Portal MVP 5)	\$118,000			
			Personalised member engagement (Portal MVP3)	\$148,000					
Fishery operations & co-management	Foundation data and integration platforms	\$322,000	Unit registry and quota trading platform	\$844,000	Catch recording and reporting	\$916,000	On board Catch Application MVP 1	\$772,000	\$4,978,000
	Foundation data analytics	\$100,000	Information Security MVP 1	\$25,000	Establish market insights dashboard	\$115,000	Whale tracking technologies established	\$822,000	
	Information Security Establishment	\$25,000			Information Security MVP 2	\$25,000	On board Catch Application MVP 2	\$822,000	
							Establish supply chain dashboard	\$115,000	
							Scanning, traceability and whale tracking technologies identified	\$75,000	
Council operations	Delivery establishment MVP 1	\$145,000	Workflow management	\$50,000					\$270,000
	Optimise productivity platform - Office 365	\$25,000							
	Digital collaboration	\$50,000							
Community engagement	Establish digital marketing and communication strategy	\$15,000	Website MVP 1 (Content uplift)	\$80,000	Website MVP 2 (Redevelopment)	\$300,000			\$595,000
	Commence digital marketing & engagement campaign rollout	\$75,000	Order and sales management MVP 2	\$50,000					
	Order and sales management MVP 1	\$75,000							
Change & culture	Establish Digital Program Change, Training and Communications	\$120,000							\$120,000
Totals		\$1,299,000		\$1,493,000		\$1,632,000		\$3,107,000	\$7,531,000

Appendix 4 Technology Platforms and Reference Architecture

Platforms provide the "essential" technology building blocks (systems & services) on which business capabilities can be based. They provide core technologies to manage information (membership, entitlements, catch, knowledge), integration of data and services, data visualisation, and provide common ways for engineering of end-to-end solutions.

E-Commerce & POS Platforms

- Centralised online purchasing function for customers to place order for "Back of boat" sales.
- Order taking and notification.
- Payment processing.

Membership Management Platform

- Centralised members database.
- · Maintain data on MFL, registrations and compliance.
- · Maintain member licenses information.
- (Optional) Member catch information and history.

Online Learning Platform

- Provides self-paced learning for members.
- · Ability to manage targeted learning content.
- Track learning progresses.

Catch Management Platform

- Leveraging the on-deck technology scanning, weighting, grading, location.
- Real time reporting to government and processors.
- · Catch data extracted for data analytics.
- Access via both Online and mobile

Website / Community Engagement 🔶 Platforms

- Public facing website, present content and experiences for general public.
- Members become brand ambassadors leveraging Digital Social Networks & fostering community connection

Member Self-Service Platform

- Maintain data on MFL, registrations and compliance. · Maintain member licenses information.
- Self-service portal for members to update their details via web and mobile.
- Member engagements with the councils.

Data Analytics & Bi Platform

Supports for stock assessment.

· Supports for data sampling.

Provides BI Dashboard, Visualisation toolset.

· (Optional) Member catch information and history.

Quota Management and Trading Platform

- Real time view of the ownership of entitlements.
- Enable the trade of entitlements across members and processors.

Digital Productivity Platform

- Knowledge management to capture and centralise information - processes, procedures, projects.
- · Tools to digitally manage and track work.
- Collaboration toolset to enable better collaboration between members and WRL

Data Platforms

- · Common platforms for the collection, aggregation, unification, integration, sharing and management of data.
- Enable the management of structured and unstructured data.
- 51 Western Rock Lobster • Industry Digital Strategy

Data And Service Integration Platform

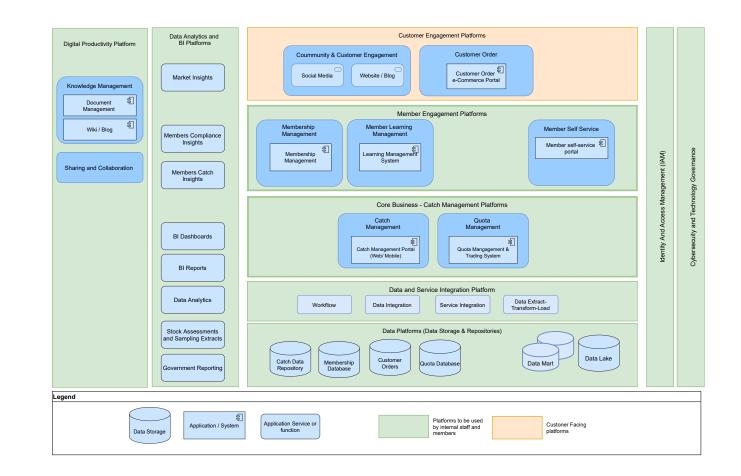
- Provides the essential "Glue" that links, integrates and brings cohesion to various systems (both internal and external facing).
- Provides data integration through Export-Transform-Load (ETL) processes.
- Provides data integration through micro APIs and data access interfaces.

- - Provision of data repositories (Data Marts) / Data Lake / Operational Data, Store), for Data Analytics and BI reporting.

Appendix 4 Technology Platforms and Reference Architecture

Which will deliver:

- Improve member and community Engagement.
- Provide customers a channel to place order.
- Provide an easier and consistent manner to manage membership.
- Provide members ability to self-service and manage their information and licensing details.
- Improve member engagement.
- Provide self-learning and industrial related information to members.
- Improve capability to record catches more rapidly, easily and reliably.
- Enable a scalable, robust and easier way for system integration and data exchanges.
- Provide the ability to store catch information and perform stock assessments.
- Provide capabilities for data analytics, insights, BI reporting and Dashboarding.



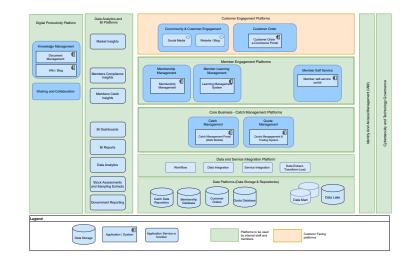
Appendix 4 Technology Platforms and Reference Architecture

Purpose of the Reference Model:

- Provides an architecture guide as a reference to consider when implementing technology solutions for the WRLC.
- Provides a layered view of IT architecture and functional domains.
- Provides a high-level viewpoint of platform to application/system mapping.
- Provides architecture best practices and good design principles ideas and principles.
- To be used as a template or pattern in which solutions are developed at WRLC.
- Not to be used as a hard and fast rule, but to be used as a reference and a guide.

This Technology Reference Model promotes the following Key Architecture Principles:

- **Loose coupling of systems –** Enabling WRLC systems to be loosely coupled to promote easier scaling and less change impact.
- **Centralised Membership Management** Enabling a centralised membership database / repository in order to have consistency in maintaining membership information and a central location where membership information can be viewed and updated.
- **Consistent Member and User Experience –** Enabling a common Member Engagement Platform (Portal) will enable a consistent and improved member engagement experience.
- Integration Platform as a "glue" Enabling integration of systems through both service calls, or data exchanges. This will enable better exchanging of data and information between systems and reduce manual processes.





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