Digital Transformation of the WRL industry to help resolve challenges and leverage opportunities to grow GVP and maintain competitiveness

David Pietersen

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FRDC Project No **2021-030**

Final Report: Digital Transformation of the WRL industry to help resolve challenges and leverage opportunities to grow GVP and maintain competitiveness

Project 2021-030

2025

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In submitting this report, the researcher has agreed to FRDC publishing this material in its edited form.

Contents

Acknowledgments

We would like to extend our sincere gratitude to several organisations and individuals whose support and contributions have been invaluable to the completion of this project.

Firstly, we appreciate the assistance and support provided by the Fisheries Research & Development Corporation (FRDC), whose contributions have significantly enhanced our programme.

We also acknowledge the Department of Primary Industries and Regional Development (DPIRD) for their active engagement and constructive feedback throughout every stage of the project. Their input has been instrumental in shaping the outcomes of our work.

Special thanks are due to JourneyOne for their expertise in assisting with the creation of the Industry Digital Strategy. Their guidance and support have been crucial in aligning our digital initiatives with industry needs.

We are deeply grateful to the fishers who generously gave their time to attend workshops and provide valuable feedback. Their insights and participation have enriched our understanding and ensured that our findings are relevant and practical.

Furthermore, we appreciate the support from Diversus in delivering the IT solutions, which have been essential to the project's success.

Lastly, we thank the Digital Steering Committee for their guidance and support. Their oversight and strategic direction have been pivotal in ensuring that our project aligns with broader digital objectives.

Abbreviations

BoB: Back of Boat sales, a program allowing consumers to purchase lobsters directly from fishers upon landing.

DSC: Digital Steering Committee, a group comprising fishers, DPIRD and FRDC representatives, with an independent chair, responsible for overseeing the project and making decisions.

DPIRD: Department of Primary Industries and Regional Development, responsible for managing fisheries and agriculture in Western Australia.

FRDC: Fisheries Research and Development Corporation, a statutory body that invests in research and development for fisheries and aquaculture.

IDS: Industry Digital Strategy, a document describing the goals and content of the project.

WRL: Western Rock Lobster Council, the peak industry body for the Western Rock Lobster commercial fishing industry.

WA: Western Australia, the region where the Western Rock Lobster industry operates.

MSC: Marine Stewardship Council, which certifies fisheries for sustainability

Executive Summary

FRDC Project No 2021-030 was delivered in accordance with the Industry Digital Strategy, as developed through FRDC project 2017-140: Digitising the Western Rock Lobster Industry.

The Industry Digital Strategy for the Western Rock Lobster Council represents a groundbreaking initiative to modernise and future-proof one of Western Australia's most valuable fisheries. Developed in partnership between the Western Rock Lobster industry and JourneyOne, a Perth-based digital transformation consultancy, this strategy sets a bold vision for leveraging technology to enhance efficiency, sustainability, and profitability across the sector. Supported by key stakeholders, including the Fisheries Research and Development Corporation (FRDC) and the Department of Primary Industries and Regional Development (DPIRD), the Industry Digital Strategy (IDS) provides a clear roadmap for digital innovation in areas such as supply chain optimisation, data-driven decision-making, and community engagement. The project was delivered by the Western Rock Lobster Council (WRL) in collaboration with Diversus, industry-recognised specialists in using technology to solve complex business challenges.

The Western Rock Lobster industry is a vital economic contributor, but it faces growing challenges, including fluctuating market demands, regulatory pressures, and the need for greater operational efficiency. Traditional methods of data collection, reporting, and supply chain management are no longer sufficient to keep the industry competitive in a rapidly evolving digital landscape. This strategy was developed to address these challenges by identifying key opportunities where digital solutions can drive productivity, improve sustainability, and enhance transparency across the entire value chain—from catch to consumer.

The Industry Digital Strategy was developed and delivered entirely within Western Australia under the guidance of a Digital Steering Committee (DSC), led by an independent chair to ensure impartial oversight and strategic direction. The committee played a pivotal role in reviewing progress, validating findings, and maintaining alignment with industry priorities.

The project engaged stakeholders across the Western Rock Lobster industry—including fishers, processors, exporters, and government agencies—through structured workshops, in-depth interviews, and comprehensive data analysis. This process identified critical challenges and opportunities for digital transformation. JourneyOne contributed strategic expertise, assessing current capabilities, benchmarking against global best practices, and designing a tailored implementation roadmap. Diversus then developed the technical solution and executed all implementation work. Throughout the project, the Steering Committee ensured the strategy remained focused, practical, and aligned with the industry's long-term goals.

Over the three-year project duration, the Western Rock Lobster Council achieved significant milestones in digital transformation and operational improvements:

Key Personnel & Governance:

- Appointed David Pietersen as Program Manager and Chris King as Data Analyst
- Established a Project Board, the Digital Steering Committee, chaired by independent expert Mr. Brad Wearn

Digital Platforms & Member Services:

- Separated the WRL website into two dedicated platforms:
    - Industry-focused: *westernrocklobster.org*
    - Community-focused: *backofboat.com*
- Developed and launched an e-commerce platform for direct lobster sales: *lobsters.backofboat.com*
- Created a comprehensive Member Portal serving as a single access point for member services and information management: *members.westernrocklobster.org*

Operational Systems Implementation:

- Deployed integrated enterprise systems covering:
    - Communications
    - Project management
    - Human Resources

Advanced Industry-Specific Solutions:

- Advanced the FishOps initiative through:
    - Stakeholder workshops
    - Scope definition
    - Vendor selection for a unified application that will provide:
        - Real-time sea weather conditions
        - Catch recording and analysis, and
        - Expense tracking.
- Advanced the Subsea Data Collection initiative through:
    - Scope definition
    - Vendor selection: IMOS Ships of Opportunity (SOOP) program

    The program will start with temperature and later, potentially, to be expanded to include ambient light, ambient sound and other sensors.

Key recommendations for Phase 2 include:

- Implement a centralised digital platform for real-time catch analysis / reporting and supply chain tracking.
- Invest in automation and Internet of Things technologies to implement automatic data collection and improve operational efficiency.
- Enhancing data analytics capabilities to support better decision-making and market responsiveness.
- Strengthening digital literacy and training programs to ensure industry-wide adoption.
- Fostering partnerships with technology providers and research institutions to drive continuous innovation.

By adopting these measures, the Western Rock Lobster industry can secure its position as a global leader in sustainable and digitally advanced fisheries.

Introduction

The Western Rock Lobster (WRL) industry is a vital contributor to Australia's seafood sector, specifically in Western Australia, where it supports regional economies, provides employment, and sustains coastal communities. However, like many primary industries, the WRL sector faces evolving challenges, including market fluctuations, regulatory changes, environmental pressures, and increasing competition in global markets.

Digital transformation has become a critical enabler for modern industries to enhance efficiency, sustainability, and competitiveness. While some segments of the WRL industry have adopted digital tools—such as electronic monitoring, data analytics, and online market platforms—there remains significant potential for a coordinated, industry-wide digital strategy.

WRL recognised the need to develop a comprehensive Industry Digital Strategy to guide stakeholders—including fishers, processors, exporters, and regulators—in adopting innovative technologies that improve productivity, traceability, and market access while ensuring environmental sustainability.

A formal Industry Digital Strategy is essential for the following reasons:

a) Enhancing Operational Efficiency

- Many fishing and supply chain processes still rely on manual or outdated systems, leading to inefficiencies in catch reporting, logistics, and inventory management.
- Digital tools such as IoT sensors, automated tracking, and AI-driven analytics can streamline operations, reduce costs, and improve decision-making.

b) Improving Market Access and Competitiveness

- Global seafood markets demand greater transparency in sustainability and provenance.
- A digital strategy can support blockchain-based traceability systems, ensuring compliance with international standards and enhancing consumer trust.

c) Strengthening Regulatory Compliance

- Fisheries management requires accurate, real-time data for quota monitoring and environmental sustainability.
- Digital reporting systems can improve compliance with government regulations while reducing administrative burdens.

d) Supporting Industry Resilience

- Climate change and market disruptions necessitate adaptive strategies.
- Data-driven insights can help the industry anticipate risks and optimise resource management.

e) Fostering Collaboration and Innovation

- A unified digital strategy aligns stakeholders (fishers, processors, researchers, and government) toward common goals.

Investment in digital infrastructure will future proof the industry.

In order to achieve these goals, all work delivered through this project was founded on the Industry Digital Strategy (IDS) of the Western Rock Lobster Council, a groundbreaking initiative designed to transform the western rock lobster industry through digital innovation: https://westernrocklobster.org/industry-digital-strategy/

WRL partnered with JourneyOne to develop the Industry Digital Strategy, a comprehensive roadmap that translates the outlined objectives into actionable project deliverables. This guiding document served as the foundation for project execution, with adaptive scheduling adjustments made to accommodate evolving priorities and operational conditions.

Throughout the project lifecycle, all activities remained rigorously aligned with the stated Objectives, ensuring consistency with strategic goals.

Background and Description

The IDS was developed in partnership with key stakeholders including fishers, the Fisheries Research and Development Corporation (FRDC) and the Department of Primary Industries and Regional Development (DPIRD). This comprehensive roadmap outlines a plan to integrate digital technologies across the industry, from catch to plate, and from fishers to processors and government.

Importance of the Development

This digital transformation is crucial for addressing industry challenges such as operational inefficiencies, inconsistent compliance, and limited market visibility. By leveraging digital technologies, the industry can improve resource management, enhance co-management practices, and foster community engagement.

Beneficiaries

The beneficiaries of this development include:

- Industry Members: Improved operational efficiencies and enhanced market access
- Government: Streamlined regulatory processes and better data management; and
- Consumers: Increased transparency and traceability of products, better access to product.

Key Outcomes

Key outcomes include:

- Improved Real-Time Data Management: Enhancing decision-making and operational efficiency
- Increased Access: Providing consumers with improved access to product at market value.
- Enhanced Community Engagement: Through digital platforms.

Recommendations for Stakeholders

To maximise the benefits of the project, stakeholders should:

- Adopt Interoperable Technologies: Ensure seamless data exchange across the supply chain.
- Invest in Digital Literacy: Support members in adapting to new digital tools.
- Foster Collaboration: Encourage partnerships between industry, government, and technology providers.

Outcomes

The outcomes include:

- GVP Growth: Enhanced market competitiveness.
- Operational Efficiencies: Reduced administrative burdens.
- Community Engagement: Increased awareness and support for the industry through digital platforms.

In conclusion, the project is a pivotal step forward for the western rock lobster industry, offering a blueprint for sustainable growth and innovation. We look forward to continued collaboration with stakeholders to realise the full potential of this initiative.

Objectives

Every industry has challenges and opportunities. Digital technology can help resolve challenges and leverage opportunities to grow GVP and maintain competitiveness as the world changes.

WRL's Vision is that WRL will have the full confidence of Members, government and community as a well-resourced and forward-thinking industry with co-management for improved resource security. The Vision is driven by:

- Co-management of the resource, with an increased role in compliance and management of operational costs
- Providing industry with greater operational certainty and financial security
- Building community engagement and trust of the lobster industry, and
- Leveraging data and digital technology to drive GVP growth and resource security.

WRL determined that the industry lacks the necessary breadth of data, information and digital platforms to support these drivers and so established Project 2017-140 to scope national and international data collection and analysis innovation and develop and extend a fully digitised database to support the industry and its key stakeholders.

A key deliverable of Project 2017-140 was the WRL Industry Digital Strategy which exists to ensure high interoperability and sustainability in rapidly developing technology scenarios. The Strategy aims to deliver digital data and information platforms that serve key stakeholders across the whole value chain, from catch to plate, including resource management, legislative compliance, research, sales and distribution. The IDS forms the core of this project and all work that was delivered is based on it.

The table below describes the agreed objectives of FRDC Project No 2021-030

Table 1: Agreed Objectives for FRDC Project No 2021-030

No.	Details
1	Resource co-management and improved control of compliance and operational costs
2	Provide members with greater financial and operational certainty
3	Leverage technology to drive GVP growth for future resource security
4	Traceability systems that tracks catch to plate allowing market diversification, increased confidence in the product and brand recognition
5	Increased sustainability through efficient precision fishing backed by robust data analytics platforms that provides insights from different data sources

Full details of the objectives can be found in the Industry Digital Strategy: https://westernrocklobster.org/industry-digital-strategy/

Method

The project aimed to deliver a comprehensive end-to-end solution that digitally transforms the entire process from harvesting through processing and sales to end user. It used a programmatic approach to deliver interconnected digital solutions that are able to provide value individually while the synergies, when interlinked, will provide even greater impact. Although the digital strategy has estimated costings and expected timeframes, the research and development portions of what will be funded through this project were governed by a dedicated steering committee.

The project built upon the work delivered under FRDC project 2017-140: Digitising the Western Rock Lobster Industry, which created the Industry Digital Strategy: https://westernrocklobster.org/industry-digital-strategy/

Governance was by way of a steering committee. The steering committee was made up of Matt Taylor (CEO WRL), multiple WRL Board members, David Pietersen (IT Program Manager), Nicola Hutchinson (WRL Program Officer), a JourneyOne representative, FRDC representatives, DPIRD representatives, an Independent Chair, and other stakeholders' representatives as required. The steering committee was responsible for budget, selection of contractors and service providers, being provided project updates and reviewing performance and providing advice on project steerage.

The first step was to engage the services of an IT project manager with extensive experience in delivering digital transformation projects using agile methodology. This was because while off-the-shelf components will be incorporated, and external solutions providers will deliver the required solutions, a significant amount of work is required to ensure all the components are integrated. The IT project manager was responsible for recommending technology and solutions to the steering committee, acted as a link between solutions providers and product owners, and working with subject matter experts to ensure the confidentiality and privacy of the data, security and availability of the systems that is supported by robust policies and procedures. This role was performed by Mr David Pietersen.

This project used frameworks and methodologies that are suited for complicated projects. The complexity arose from the need to future-proof the solutions and keeping the development costs low while ensuring solutions meet the current and future needs of the industry. Technology projects are more susceptible to quick-changing environments which then impacts identifying criterium need to make technology choices, hence for this project agile methodology was used. This ensured adaptive planning, evolutionary development, early delivery, continual improvement, and flexibility to change.

To ensure value was delivered early and to have the ability to adapt in a Volatile, Uncertain, Complex and Ambiguous (VUCA) operating environment Agile methodology combined with principles of:

1. Design systems/services with users at the centre to ensure it is the strategic use of technology as opposed to the implementation of technology

2. Leverage Commercial off the Shelf (COTS) software as modular systems that can be integrated but also easier to replace in the future

3. Preference for configuration over coding by using Low-code/no-code solutions

4. Guided by FAIR Data Principles (Findable, Accessible, Interoperable, Reusable), and

5. Cybersecurity: Secure by default, balanced by usability and functionality.

Each of the major elements that this project delivered was broken down into time bound sprints with a start/stop/continue retrospective at the end of each sprint. The iterative approach meant that each of the product's value was tested and validated through the life of the project. Moreover, the sprints lined up with steering committee's decision making process to ensure the start stop continue recommendations and decisions were used to inform investment stages and paths ahead.

Given the size and complexity of the project and WRL's goal for efficient leverage of people resources, there was a requirement for subcontracting. The evaluation and selection of subcontractors went through the steering committee to mirror FRDC's agreements.

1. Project Governance and Control

The Digital Steering Committee ('the Committee') provided the leadership and oversight critical to successfully delivering the WRL industry digital strategy and reducing the risks associated with a programmatic approach to managing 2021-030.

1.1 Membership

The Committee was a sub-committee of the WRL Board with a dotted line to the WRL IPA Committee and FRDC, with members appointed by WRL in consultation with Committee stakeholders.

Appointed members (and expertise) of the Committee were as follows:

- Independent Chair (technical and governance)
- Two WRL Board Directors (industry SMEs and governance).
- WRL CEO and other WRL staff as determined by the CEO (strategy and governance).
- Two appointees (technical and governance) of DPIRD.
- Two appointees (technical and governance) of FRDC.

Members had the appropriate delegated authority to ensure efficient and effective decision-making.

The Chairperson could invite guests to provide expert advice on specific initiatives.

1.2 Responsibilities:

The Committee had the authority to:

- Prioritise initiatives within the Digital Transformation Program.
- Review and approve funding for the initiatives within the Program.
- Approve requirements.
- Manage Program-level risks appropriately.
- Select vendors, agree contractual arrangements, and oversee vendor performance.
- Review progress of initiatives within the Digital Program, resolving escalated project issues appropriately when required.
- Influence work activities and projects external to the Program which impact the delivery of the Digital Program.
- Represent, promote, and lobby for the Digital Program to internal and external stakeholders.

WRL assembled relevant Program information to facilitate the Committee's decisions, support Committee meetings and ensure appropriate feedback to the WRL Board, WRL IPA Committee and FRDC, as appropriate.

Delivery of this project involved several methodologies and tools, including:

2. Delivery Governance & Structure

PRINCE2 was chosen as the program management framework.

Components: Business justification, defined roles, staged control, risk management.

Phases:

- **Initiation**: Business case, project brief.
- **Planning**: Product-based work breakdown.
- **Execution**: Managed in sprints (Agile).
- **Monitoring**: Exception-based reporting.
- **Closure**: Lessons learned, handover to operations (ITIL).

Tools: Azure DevOps for work tracking, Jira for Agile teams.

3. Agile Development

Agile (Scrum/Kanban) was chosen as the program delivery framework.

Iterative delivery: Sprints (2–4 weeks) with Azure DevOps/Jira backlogs.

Key practices:

- Daily standups (via Microsoft Teams).
- Sprint planning/review in Azure Boards.

Tool integration:

- **Jira**: Epic/feature breakdown, sprint management.
- **Azure DevOps**: CI/CD pipelines, test automation
- **GIT**: Code management.

4. Service Management

ITIL was chosen as the Service Management framework.

- **Tool:** Jira Service Management

5. Enterprise Architecture

TOGAF was chosen as the Enterprise Architecture framework.

Phases: Architecture Vision: Align project scope with business strategy.

Implementation: Azure DevOps for deployment governance.

Migration Planning: CI/CD pipelines for incremental delivery.

6. Tool Integration

Tool	**Role in Project Delivery**
Azure DevOps	End-to-end Agile tracking (Boards, Repos, Pipelines, Test Plans). Supports Scrum/Kanban.
Jira	Agile backlog management, sprint planning.
Microsoft Teams	Real-time collaboration, task sync with Azure DevOps/Project, document sharing.
Git	Version control, pull requests, and code reviews.

The integration of these methodologies and tools ensured efficient project execution, timely delivery, and high-quality outcomes while maintaining alignment with stakeholder expectations.

Results

Key Achievements & Strategic Implementation

Governance & Leadership

- Appointed David Pietersen as Program Manager and Chris King as Data Analyst to oversee execution.
- Formed a Digital Steering Committee, chaired by independent industry leader Mr. Brad Wearn, to provide strategic oversight.

Digital Platforms & Member Services

• Launched two dedicated websites to streamline stakeholder engagement:

- westernrocklobster.org: Industry-focused resource hub
- backofboat.com: Community engagement platform

• Introduced Back of Boat (lobsters.backofboat.com) an e-commerce solution for direct lobster sales.

• Developed the Member Portal (members.westernrocklobster.org) as a centralised access point for member services and data management.

Operational Modernisation

• Implemented integrated enterprise systems for:

- Communications
- Project management
- HR

Industry-Specific Innovations

Progressed the FishOps initiative through:

- Stakeholder workshops and scope refinement
- Vendor selection for a unified application featuring:
    - Real-time sea weather monitoring
    - Digital catch logging and analytics
    - Fisher expense tracking

Progressed the Subsea Data Collection initiative through:

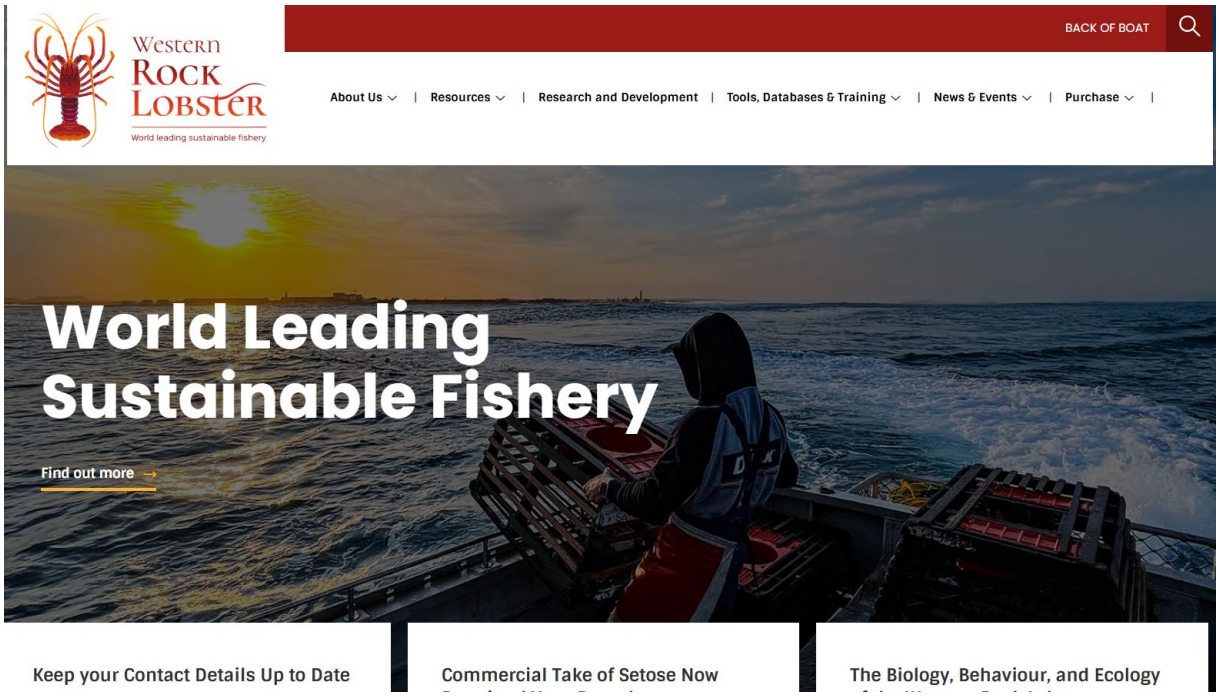
- Partnered with IMOS, to plan deployment of subsurface data collection tools (initially temperature sensors, with scalability for additional sensors).

Deliverables

Outcomes from the projects delivered

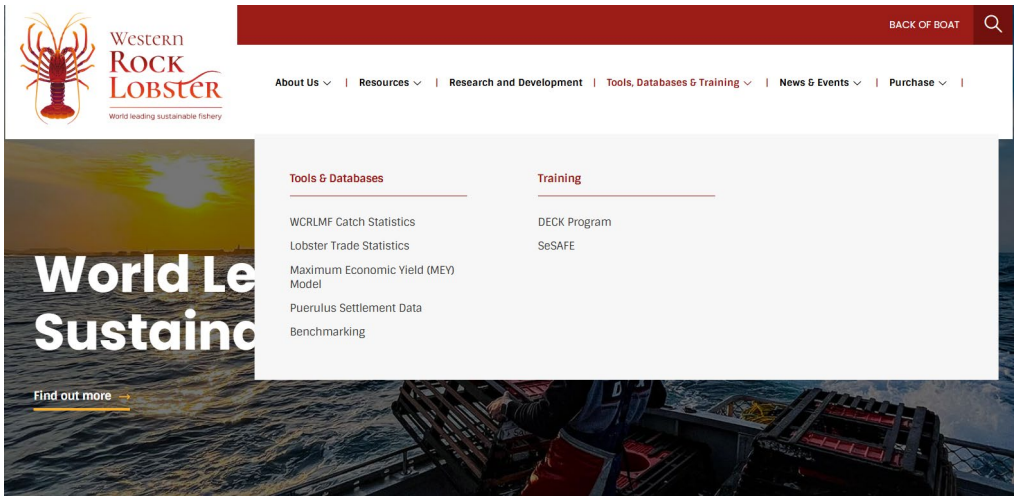
westernrocklobster.org

westernrocklobster.org is an Industry-focused resource hub that targets all members and industry participants.



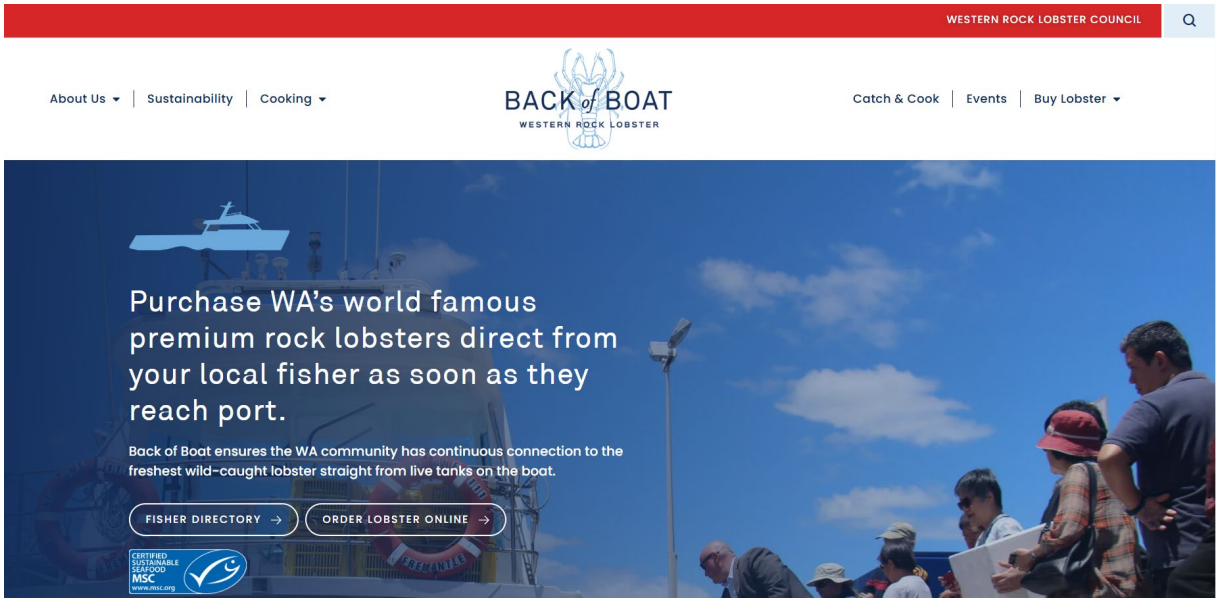
- This site contains all information and tools that are relevant to our key stakeholders
- The site was designed and built by Of Note - A Creative Studio
- The site is built in WordPress with the Elementor Pro plug-in and is hosted by WP Engine and served by Cloudflare
- The site has had 182 visitors on average every day
- This site will continue as is for the foreseeable future

In addition to the static content, the site also provides links to a number of Tools and Databases which are in constant development, including SeaSAFE:



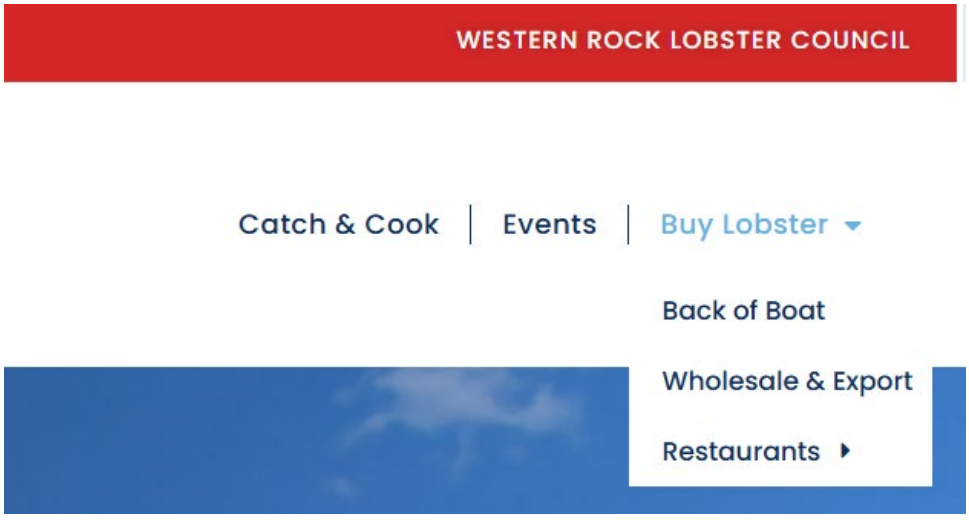
backofboat.com

https://backofboat.com/ is a community-focused resource hub that targets all Western Rock Lobster consumers.



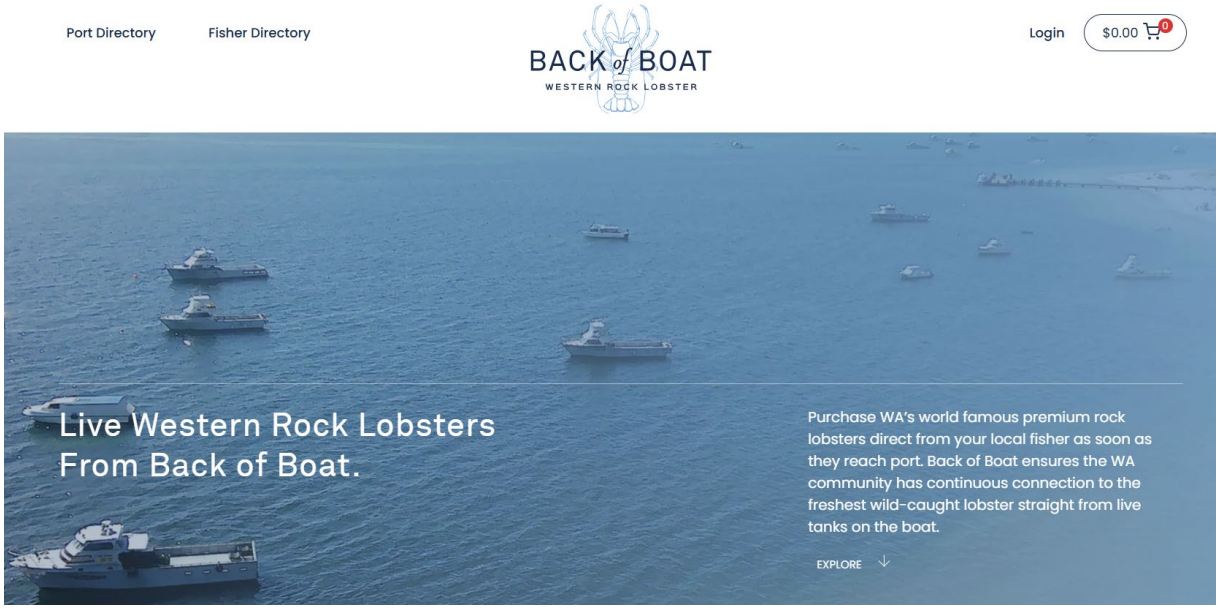
- This site contains all information that is relevant to Western Rock Lobster consumers
- This site also contains a link to lobsters.backofboat.com, where lobsters can be purchased Back of Boat
- The site was designed and built by Of Note - A Creative Studio
- The site is built in WordPress with the Elementor Pro plug-in and is hosted by WP Engine and served by Cloudflare
- The site has 244 visitors on average every day
- This site will continue as is for the foreseeable future

In addition to the static content, the site also provides links to the Western Rock Lobster Council, and to vendors of lobsters including Back of Boat, Wholesale & Export, and Restaurants.

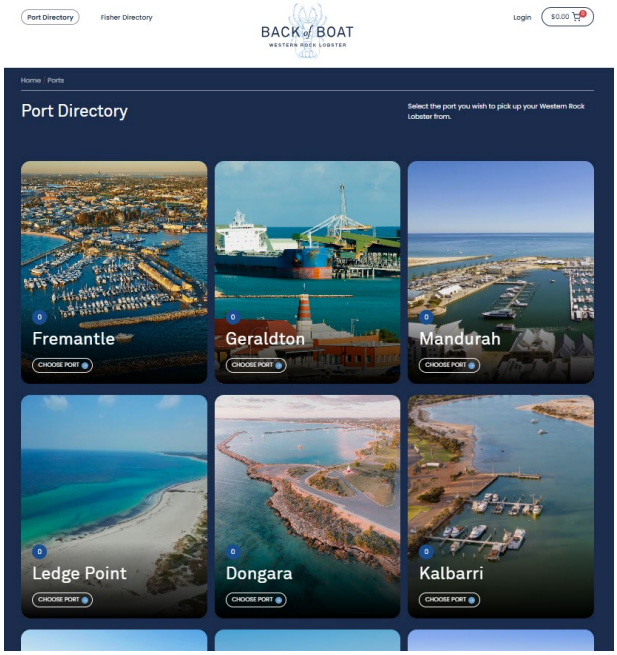


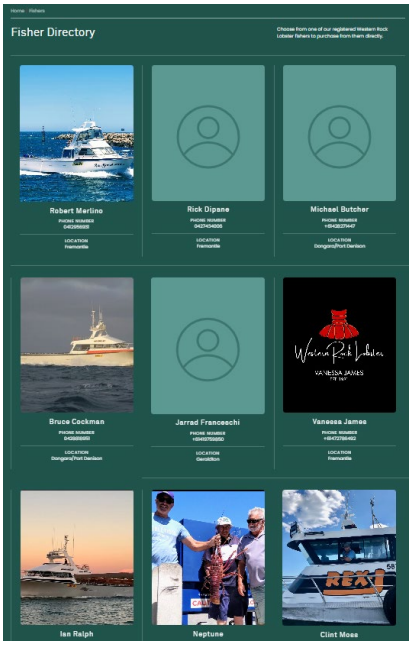
Back of Boat (lobsters.backofboat.com)

An e-commerce solution for direct lobster sales



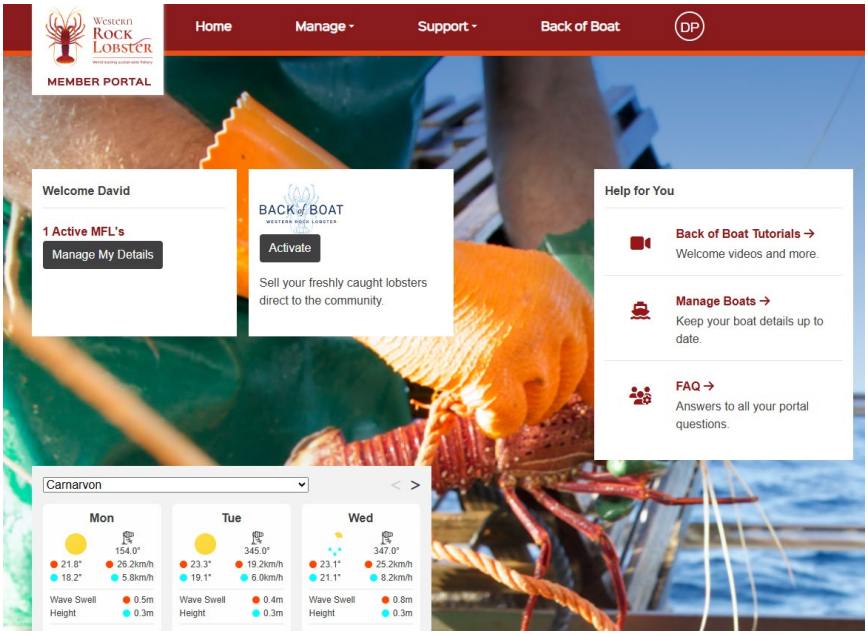
- This site allows consumers to find and purchase lobsters via a Port, or directly from a list of vendors
- The site was designed and built by Diversus
- The site is built in WordPress, with the WooCommerce plug-in and is hosted by WP Engine and served by Cloudflare
- The site uses the **WC Vendors** Multi-Vendor Plugin to deliver the store component
- The site offers payment by Cash, Credit Card and Buy Now Pay Later (BNPL) through Stripe
- Custom-built into the Members Portal is a console that allows the Fishers to create and modify their sales events
- All sales are stored and managed within the WooCommerce plug-in
- Since the site was activated there have been over 3000 sales totalling over 17,000 animals, with a value of over $530,000.
- This site will continue as is for the foreseeable future



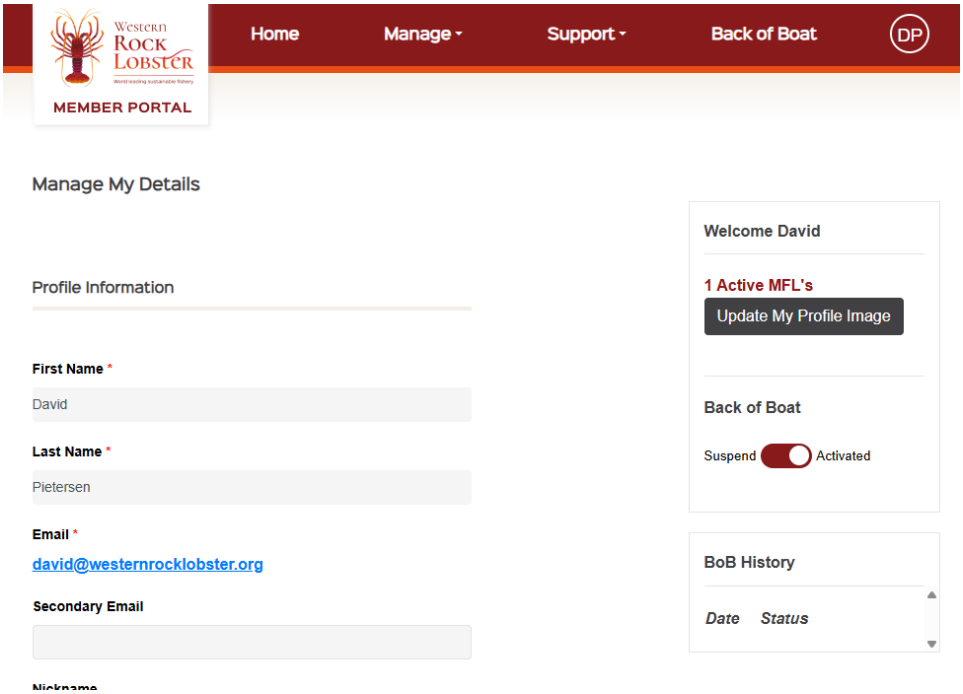


Member Portal (members.westernrocklobster.org)

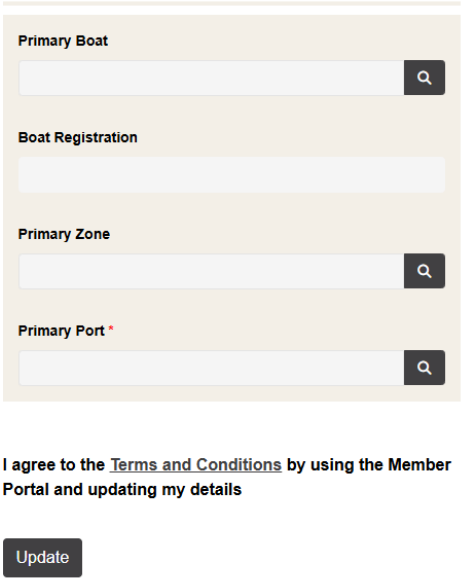
A single tool for members to manage their relationship with WRL



- This site allows members to create an account, manage their details as the single source of truth, manage their Back of Boat administration as well as additional apps as they come online
- The site was designed and built by Diversus
- The site is built in Microsoft Power Apps with a Dataverse back-end
- Custom-built into the Members Portal is a console that allows the Fishers to create and modify their Back of Boat sales events. It also provides them with a simple switch to enable or disable their participation in Back of Boat sales (their listing gets removed from the site when they turn it off, and can restored at any time)



- The site allows members to manage their boats, fishing zone and default port



- The site allows members to manage their MFL's and to delegate authority to act to up-to two additional people

Active MFL's

MFL Number	Issue Date	Renewal Date	MFL Status	Legally Responsible	Company	First Delegate Authority	Second Delegate Authority	Fishing Permitted Authority	Actions
DavidTest001	10/06/2025		Active	David Pietersen		*None Assigned*	*None Assigned*	No members. Manage Members Add Members	View details Manage Delegate

Archived MFL's

MFL Number	Issue Date	Renewal Date	MFL Status	Legally Responsible	Company	First Delegate Authority	Second Delegate Authority	Archived Date	Actions

There are no records to display.

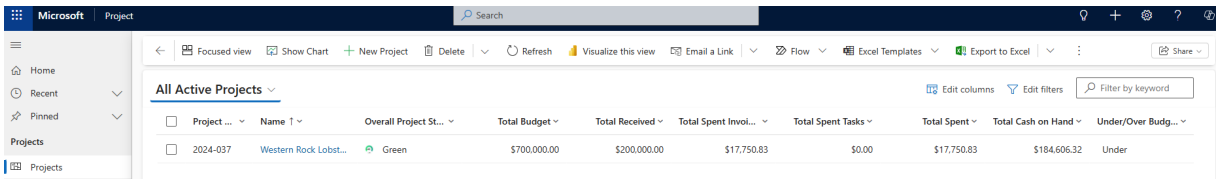
Legally Delegated MFL's

MFL Number	Issue Date	Renewal Date	MFL Status	Legally Responsible	First Delegate Authority	Second Delegate Authority

This site will continue to be expanded as new services and applications are brought online.

Project management

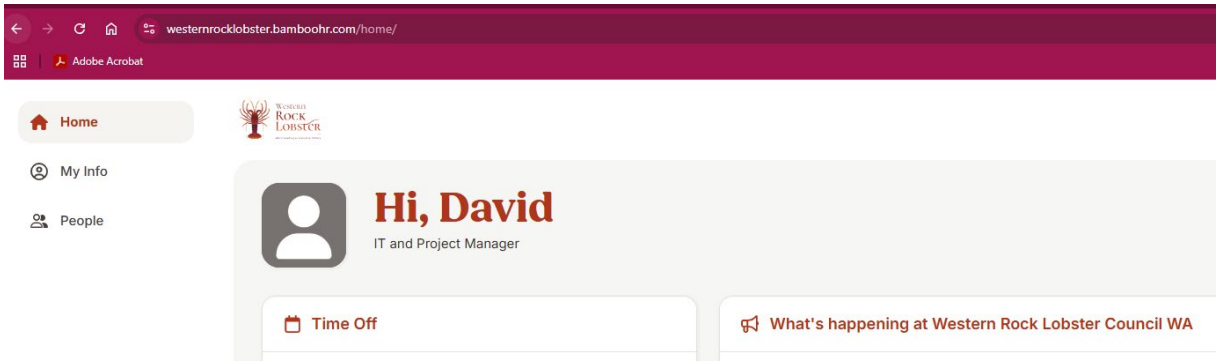
A tool to manage WRL projects



- This tool allows WRL Project Managers to manage their projects in an effective manner
- The implementation was done by Diversus
- The site is built in Microsoft Project
- A dashboard has been created for senior management to see a summary of each individual project, or a rollup of all projects being executed

HR

Migration to a new tool to manage HR



- This tool dramatically improves the HR experience across WRL
- This tool is integrated with Payroll and Xero
- The implementation was done by Diversus
- The tool is standard BambooHR

AgriFood Data Exchange Project (AAFDX)

"Deliver an interconnected data highway for Australia's AgriFood value chain"

In 2022 the Western Rock Lobster Council was a participant in the AgriFood Data Exchange Project (AAFDX).

"*The AgriFood Data Exchange (AAFDX) is an initiative aimed at improving data sharing and interoperability across the agricultural and food sectors. It seeks to create a standardised, secure, and efficient platform for exchanging data among stakeholders, including farmers, agribusinesses, researchers, and policymakers."*

Key Features of AAFDX:

- Data Standardisation – Establishes common data formats and protocols to ensure compatibility across different systems.
- Interoperability – Enables seamless communication between diverse agricultural technologies (e.g., farm management software, IoT devices, supply chain systems).
- Secure Data Sharing – Implements governance frameworks to protect sensitive information while allowing controlled access.
- Stakeholder Collaboration – Connects farmers, agri-food companies, researchers, and government agencies to improve decision-making.
- AI & Analytics Support – Facilitates data-driven insights for precision agriculture, supply chain optimisation, and sustainability efforts.

Potential Benefits:

- Improved traceability in food supply chains.
- Enhanced farm productivity through better data insights.
- Reduced inefficiencies in agri-food logistics.
- Support for sustainable farming practices via data transparency.

Western Rock Lobster Industry's Role:

Four experiments were developed to test the use cases and validate the establishment of the data exchange as a viable solution for the sector. The purpose of the experiments was to establish the data exchange as a reasonable potential solution to broad challenges across the agrifood sector and, as such, aimed to represent diverse and distinct problems, industries, geographies, and points along the value chain. The final experiments were:

1. Compliance - Addressing the cumulative burden of compliance for producers through to processors operating in the Victorian and New South Wales sheep sector (meat and wool);
2. Biosecurity - Strengthening biosecurity in the viticulture sector through standardised, accurate traceability data (Victoria and South Australia);
3. Benchmarking - Benchmarking to identify gaps and opportunities for improved performance pre harvest in Western Australia's grain sector; and
4. Traceability - Timely quota accounting and pre-fishing information exchange for western rock lobsters (Western Australia).

The Western Rock Lobster industry successfully participated in "Experiment 4: Telstra / IBM consortium - compliance and traceability for rock lobster quota in Western Australia."

Experiment	Objectives	Benefits	Outcomes
4 - Traceability	• Demonstrate the timely flow and exchange of pre-fishing information, quota and accounting data and product data • Demonstrate viability of end-to-end	• Improved logistics planning • Better capacity management • Better production planning	• Trust and transparency among stakeholders • Digital chain of custody • Meets business and consumer demand for information

	traceability Demonstrate viability of end-to-end traceability	• Transparency and trust amongst participants enable product differentiation • Enables further opportunities for automation and cost reduction	• Enables new operational insights • Improved planning, logistics and activation for all stakeholders

The AgriFood Data Exchange Project (AAFDX) experiments are considered a success, and the AAFDX is currently seeking funding to deliver the full program.

Conclusion

The digital transformation of the Western Rock Lobster (WRL) industry, as outlined in FRDC Project No. 2021-030, has successfully laid the foundation for a more efficient, transparent, and competitive sector. By implementing key digital initiatives—including dedicated industry and consumer platforms, an e-commerce solution for direct sales, and a comprehensive Member Portal—the project has enhanced operational efficiency, market access, and stakeholder engagement.

The project's success underscores the critical role of digital transformation in addressing industry challenges—from compliance burdens to market volatility—while unlocking new opportunities for growth. As Phase 1 concludes, the roadmap for Phase 2 prioritises further automation, expanded data analytics, and stakeholder training to maximise adoption.

By continuing to invest in digital solutions, the WRL industry can solidify its leadership in sustainable fisheries, ensuring long-term resilience and value for fishers, regulators, and consumers alike. This initiative not only benefits Western Australia's economy but also sets a benchmark for digital innovation in global seafood sectors.

Next Steps:

- Implement Phase 2 initiatives, including FishOps and advanced subsea monitoring.
- Expand digital literacy programs to drive industry-wide adoption.
- Strengthen partnerships with tech and research institutions to sustain innovation.

The WRL industry's commitment to digital advancement ensures it remains at the forefront of modern, responsible fisheries management.

This report reflects the collective effort of the Western Rock Lobster Council, FRDC, DPIRD, and industry stakeholders. Their collaboration has been instrumental in achieving these transformative outcomes.

Recommendations

To solidify the industry's digital leadership, we propose:

- Expanded Centralised Digital Platform: Real-time catch recording, cost tracking, and supply chain visibility.
- IoT & Automation: Enhance data accuracy and operational efficiency through smart technologies.
- Advanced Analytics: Empower decision-making with predictive insights and market intelligence.
- Digital Literacy Programs: Accelerate adoption through tailored training initiatives.
- Strategic Partnerships: Collaborate with tech providers and research institutions to drive innovation.

Further development

This initiative represents Phase One of a comprehensive three-phase program designed to develop and implement a complete Industry Digital Strategy. This phase focuses on establishing foundational elements, including preliminary research, stakeholder alignment, and initial framework development.

Additional work will be conducted in Phases Two and Three to fully complete the comprehensive Industry Digital Strategy.

The subsequent phases will build upon the groundwork established in Phase One to ensure a complete, cohesive strategy that addresses all critical aspects of digital transformation for the industry. Regular progress reviews and stakeholder engagement will continue throughout all phases to ensure alignment with organisational objectives and industry needs.

Extension and Adoption

This successful initiative will deliver lasting benefits to Western Australia's lobster fishing community and WRL through the following key developments:

Digital Platforms

- westernrocklobster.org and lobsters.backofboat.com will remain primary service channels for key stakeholders
- The Member Portal (members.westernrocklobster.org) will continue as the central hub for member data and content, with planned expansions in Phase 2

Technology Implementation

- Expanded adoption of Microsoft Dynamics across WRL operations as business needs justify
- Commencement of subsea data collection, beginning with temperature monitoring

Phase 2 Development Pipeline

- FishOps platform development (scheduled for completion by December 2025)
- Continued R&D into automated lobster sizing, weighing, grading and identification systems
- Development of real-time share/quota registry and transfer mechanism (contingent on DPIRD readiness)

Project coverage

The Back of Boat initiative received extensive news coverage upon launch, and also in both December 2023 and 2024 for Back of Boat Day through the WRL Communication, Education and Engagement Program (see FRDC project 2022-063).

Project materials developed

The primary material developed through this project is code.

Power Platform Azure Integration Back of Boat IoT Application	https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/Power%20Platform https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/Azure%20Integration https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/BoB%20Site https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/IoT%20App
Power Platform Azure Integration	https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/PM%20-%20Power%20Platform https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/PM%20-%20Azure%20Integration
WRL API NodeJS API Code	https://dev.azure.com/diversus/Western%20Rock%20Lobster/_git/WRL%20API

Appendices

- Industry Digital Strategy
- AgriFood Data Exchange Project (AAFDX) Final Report