



foodagility

ANNUAL REPORT 2018-19



Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Program

WE DISCOVER THE FUTURE

CONTENTS

Highlights	4
Chair's Report	5
CEO's Report	6
Executive Summary	7 - 9
Meet the Board	10
Meet the Strategic Investment Council	11
Strategic Partners	12
Partners	13
Research	14 - 15
Projects at a Glance	16 - 17
Projects in Focus	18 - 20
New Ventures	21 - 22
Financials	23
Appendix 1 – Full list of Food Agility Partners	24 - 27
Appendix 2 – Board Committees	28
Glossary of Terms	29

The background of the slide features two large, overlapping teal leaves. The leaves are covered in numerous clear water droplets of various sizes, giving them a fresh and vibrant appearance. The leaves are positioned diagonally, with one in the upper left and the other in the lower right. The overall color palette is a soft, monochromatic teal against a white background.

OUR MISSION IS TO **LEAD A DIGITAL** REVOLUTION
FOR A **SUSTAINABLE** FOOD FUTURE

HIGHLIGHTS



54
Partners
Financial Year 2019



\$5.64m
Invested
In Food Agility
Research Projects



11
Research Projects
Funded And Initiated In
The Food Agility Pipeline



18
PhD Students
Enrolled In The
Food Agility
Education Program



30
New Research
Projects
In Development



Agile Project
Delivery Process
Designed And
Implemented

CHAIR'S REPORT



“ In charting this new path, we are asking our stakeholders to re-think their usual ways of working. We are asking them to adjust their perspectives and refocus their objectives. ”

If 2017-2018 was our establishment year, 2018-2019 has been our emergent year. During these 12-months we have overseen the launch of an exciting portfolio of research projects. At the same time, we have built on the foundations for a new, more impactful way to deliver innovation that seeks to improve Australia's global ranking in industry-research collaboration.

In charting this new path, we are asking our stakeholders re-think their usual ways of working. We are asking them to adjust their perspectives and refocus their objectives. Empathy for the end-user is central to everything and we must constantly be asking ourselves: who am I trying to help and how will this work make their lives better? This is at the core of the design thinking approach we are bringing to the Australian innovation system.

During 2018-19, we've continued to build on the success of our Design Central practices to develop research projects that will truly make a difference in the lives of people working in the food and agribusiness sector. With nine active and two completed projects involving investments totalling more than \$5.7M, we now have a portfolio with an impressive breadth of projects spanning horizontal and vertical food supply chains.

We have also significantly invested in introducing an agile framework into project delivery. By recruiting an Agile Coach, we are helping to build the capacity of research teams in the application of agile principles: prototyping early, testing continuously with end users and pivoting early where necessary. It is exciting and rewarding to see the impact this is making, with a number of projects identifying pivot-points and adjusting their plans in order to deliver better outcomes for industry.

At Food Agility CRC, we don't just talk agile and design-led; we live it. We apply it to our strategy in the same way that we apply it to individual projects. In fact, it is this agile approach that has helped us to reframe our Food Agility CRC research strategy to give more flexibility and better integration by establishing constellations of projects more attuned with key emerging themes.

All of this incredible work has been delivered by a dedicated team led by CEO Dr Mike Briers whose vision and leadership continues to challenge traditional industry-research collaboration models. We are seeing the Food Agility CRC evolve from a project factory into an ecosystem builder. This includes the development of digital innovation infrastructure including AgTech Finder, as well as international education and training services in Ethiopia with International Livestock Research Institute and our work with the Bill and Melinda Gates Foundation.

This strategic approach is adeptly steered by an incredibly committed, knowledgeable and diverse board. I'm particularly proud to work with these leaders and I thank them for their important contributions.

I would also like to sincerely thank those in our partnership network who have embraced a new way of working. Doing things differently is rarely easy. I truly believe however, that together we are doing great things that have the potential to not only transform Australia's agrifood system, but more importantly Australia's innovation system.

Dr Anne Astin PSM, Chair

CEO'S REPORT



“ The work you will read about in this annual report is part of a 10-year strategic plan to develop Food Agility CRC as more than a ‘project factory’ and into an ‘ecosystem builder.’ ”

I'm immensely proud of the work delivered by the Food Agility team and its network of partners. Together we are building, not just research projects, but the momentum for system-wide innovation in agrifood.

And it's crucial that we pool our knowledge, resources and technology. When we first put together the bid for this CRC, there were relatively few organisations looking at digital transformation of the food system. Today, there are many more voices and many more dollars focussed on this area as being fundamentally important to ensuring a safe, prosperous, sustainable and healthy communities.

It is our mission to lead the digital revolution for a sustainable food future. By that, we mean we want to work with other organisations to drive innovation; generate conversations; move knowledge forward and be at the centre of this important societal movement. I believe that with our growing research portfolio and new approach to innovation, we are doing just that.

But true system-wide innovation will take more; it will require a system-wide approach. The work you will read about in this annual report is part of a 10-year strategic plan to develop Food Agility CRC as more than a ‘project factory’ and into an ‘ecosystem builder’.

The first two years has been about securing the people, projects and partners to deliver an exciting research agenda. It has also been about getting in place the frameworks for design-led project development and agile project delivery. This has not been easy and although it has often meant more time in the planning stages, it has ensured that the projects we have underway are truly designed to deliver for industry.

We will continue to grow our research portfolio, led by the needs of our industry partners. But we will also seek to affect broader change through education and training programs that go beyond research students and into the agrifood workforce, communities and school students. We are investing in system-level digital infrastructure like AgTech Finder, which is making it much easier for producers to find the right technology and for technology companies to develop what producers need. And we are consulting internationally, working in Ethiopia with the International Livestock Research Institute and the Bill and Melinda Gates Foundation to support global development. This reflects Australia's important place in the global food system and demonstrates that it's not just our amazing produce that we can export, but our value-added services and technology.

I would like to thank the Board for their sound oversight and advice during these start-up years. We are extremely fortunate to have such a diverse and skilled board. Thanks to our partners who are embracing a new way of working. And finally, thanks to my team who turn up each day because they genuinely care about the future of Australia's food industry.

Dr Mike Briers, AO

EXECUTIVE SUMMARY

Food Agility CRC's mission is to lead the digital revolution for a sustainable food future. In our second year of operation, we have become a leader in agrifood innovation and an important influencer in Australia's innovation system. We remain in a strong financial position with a net surplus of \$2.6 million in 2018 -19 from revenues totalling \$7.8m and working capital of \$7.7m.



INNOVATE

The Food Agility CRC research portfolio includes nine active projects and two completed projects involving more than \$5.64 million in investment. Our portfolio demonstrates considerable breadth working both horizontally and vertically across value chains.

Design-led and agile methodologies continue to be central to Food Agility's approach and our focus on industry impact. In 2018-19 we have continued to refine design-led project development through our unique Design Central processes, while also developing an agile framework and resources to support project delivery.

During this year, Food Agility also launched two 'constellations' – Agile Horticultural Supply Chains and Valuing Natural Capital in Climate Resilient Farming. These constellations reflect our agile strategy development, allowing us to build resource-sharing projects around themes as they emerge.

Food Agility is also looking beyond research projects to digital infrastructure to support system-wide innovation. This includes AgTech Finder, an online marketplace that makes it easier for farmers to search, sort and compare available technology, and a research data exchange platform.



INFLUENCE

Food Agility CRC's network of 54 partners spans a broad cross section of the Australian agrifood industry, but our influence extends much further. In 2018-19, Food Agility more than doubled our audience across our main communication channels. Via traditional, social, and online media, our team is leading conversations about digital innovation, natural capital, climate resilient farming, blockchain in agriculture, agile and design-led research and much more. We published seven blogs, 15 videos, 16 news stories, 9 eNewsletters and were involved in a number of industry events.

Food Agility CRC's influence also reaches into international markets. This year we secured revenue-generating work to support work in Ethiopia with the International Livestock Research Institute and the Gates Foundation.



EDUCATE

As of 30 June 2019, Food Agility CRC had welcomed 18 Higher Degree by Research students as part of our scholarship program. The program is supported by a dedicated Education Manager with a strong focus on delivering a world-class student experience with an adaptive and collaborative program that evolves and grows with the changing demands of the sector. This work will ultimately expand to include programs for workers in the agribusinesses sector as well as school students and the broader community.

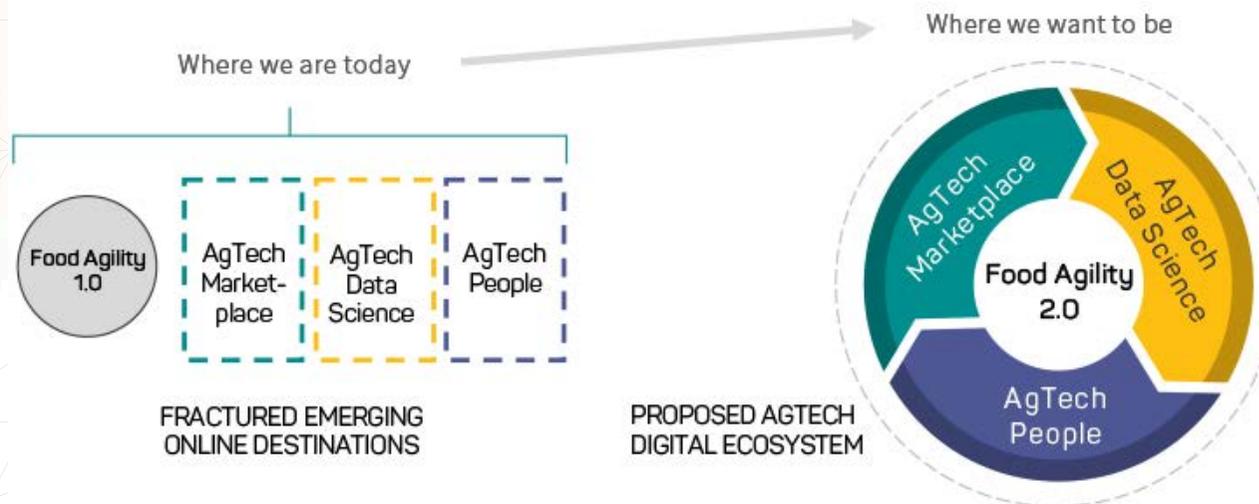
Education is also an important aspect of Food Agility's work to change the innovation system. By bringing on an Agile Coach, we are building the capacity of research teams to apply agile principles and generate maximum possible impact for industry.

STRATEGIC APPROACH

Shift from a 'Project Factory' to an impact driven 'Ecosystem Builder'

Food Agility CRC is now well established. We have the people, projects, and partners to deliver an exciting research agenda. Research and education will always be at Food Agility's core, but to lead the digital revolution for a sustainable food future we need to think beyond traditional CRC models.

The strategic vision is to transform Food Agility CRC from a project factory to an ecosystem builder, connecting people, ideas, data, technology, and platforms to maximise impact and accelerate innovation. Our ambition is for Australia to export not just amazing produce, but value-added services and technology, making it a world leader in food system innovation.



EXECUTIVE SUMMARY

STRATEGIC APPROACH

How will we accelerate our shift?

People and process: We aim to deepen our project design collaboration by broadening our project delivery lean start-up coaching tools.

We have established dedicated coaching and project delivery support teams dedicated to driving projects towards commercial outcomes. Our project delivery team has direct experience in the start-up and innovation ecosystems, bringing modern learnings from contemporary start-ups to the world of applied research.

Digital marketplace ecosystems: We are exploring technology infrastructure to validate and exchange data science to empower the market to confidently do their own market research and are building a network that extends well beyond our core partners a membership network to extend our reach beyond core partners.

Future workforce programs: Our HDR programs are being leveraged towards industry impact through experiential learning and embedded constellations. We are also exploring digital literacy, higher education and international programs.

MEET THE BOARD

This year the Food Agility CRC board expanded to 10, welcoming three new members and farewelling Dr Mirjana Prica and Prof Michael Eyles.

Food Agility is proud of the diverse skills and experience of its board and that it is comprised of equal numbers of men and women.



Dr Anne Astin PSM
Role: Chair of the Board
Key Skills: Governance, Food Safety, Strategy, Science, Government
Representing: Independent



Dr Rob Wilson PSM
Role: Director
Key Skills: AgriFood – commercial industry, R&D management, Strategy, Livestock
Representing: Independent



Ros Harvey
Role: Director
Key Skills: Innovation, Technology, Policy, Strategy, Governance, International development
Representing: Strategic Partner – The Yield



Phil Morle
Role: Director
Key Skills: Innovation, Strategy, Entrepreneurship
Representing: Independent



Ben Van Delden
Role: Director
Key Skills: Finance, Innovation, Accounting
Representing: Strategic Partner - KPMG



Mick Keogh OAM
Role: Director
Key Skills: Agriculture, R&D, Policy, Governance, Economic
Representing: Independent



Dr Michele Allan
Role: Director
Key Skills: Manufacturing, Strategic R&D, Innovation, Strategy, Risk, Commercialisation
Representing: Strategic Partner - FIAL



Philip Marcus Clark AO
Role: Director
Key Skills: Accounting standards, Capital markets, Corporate governance, Finance, Retail non-discretionary, Innovation, Marketing, Real Estate, Strategy
Representing: Independent



Prof Kate McGrath
Role: Director
Key Skills: Research, Science, Strategy, Education, Technology, Economics
Representing: Independent



Jacqui Wilson-Smith
Role: Director
Key Skills: Innovation, R&D, Strategy, Food science, Manufacturing
Representing: Independent

MEET THE STRATEGIC INVESTMENT COUNCIL

The Strategic Investment Council, comprised of both independent and representative members, meet monthly to consider projects for collaborative investment. Membership of the SIC is elected by the Board to bring an entrepreneurial lense to research endeavours. The SIC have Board delegated authority to approve investment in collaborative research projects up to \$500,000.



Phil Morle
Role: Chair & Director
Representing: Food Agility CRC Board



Dr Mike Briers AO
Role: CEO
Representing: Food Agility CRC



Prof David Lamb
Role: Chief Scientist
Representing: Food Agility CRC



Dr Deb Cousins
Role: Council Member
Representing: Independent



Dr Mary Retallack
Role: Council Member
Representing: Independent



Andrew Stead
Role: Council Member
Representing: IAG



Dr Sam Bucolo
Role: Council Member
Representing: MLA



Carolynne James
Role: Council Member
Representing: NSW DPI

STRATEGIC PARTNERS



PARTNERS



RESEARCH

We have seen a significant expansion of our research portfolio over the past year, increasing to nine invested and active projects and two completed projects involving more than \$5.64 million in-kind in cash investments. The project portfolio spans both horizontal and vertical supply chains. We are now on track to reach and surpass our targeted research outputs.



EDUCATION AND TRAINING

Food Agility CRC aims to inspire the next generation of digital agriculture and food agribusiness leaders by working with the best researchers in Australia, and through close engagement with our industry and government partners. We are on target to meet and exceed our education and training targets. Ten post-graduate students commenced in 2018-19 with either full or top-up scholarships, bringing the total cohort of active students to 18 as at 30 June 2019. See appendix X for a full list of HDR students.

CONSTELLATIONS

Through our new Constellation structure, Food Agility works with communities of partners to focus on a given challenge for an initial period of three years. During this time we will develop the capacity of partners to meet those challenges through deploying our higher degree by research (HDR) program and by designing targeted projects (demonstrator, applied and strategic).

We also keep a watchful eye on opportunities to springboard Constellations into higher endeavours, for example CRC-P bids. Two Constellations in advanced stages of development include 'Valuing Natural Capital in Climate Resilient Farming Systems' and 'Agile Horticulture Supply Chains'.



OUR RESEARCH STRUCTURE

4 challenges for impact



Research Programs

Research Program 1 – Digital Agrifood Technologies

Integration and delivery of backbone digital technologies, including sensor and communications technologies that underpin data sharing and collaboration.

Research Program 2 – Agrifood Informatics

Unlocking data assets and applied advanced analytics.

Research Program 3 – Sustainable Food Systems

New business model experimentation and development, connecting agrifood value systems and communities to improve long-term operational capability.

RESEARCH

Bringing Agile to Life

Food Agility's approach to agile delivery expands on the collaborative planning methods established in our Design Central workshops. We believe it is important that project teams have a unified vision of what their projects are trying to achieve. This means a clear alignment between the motivations of researchers to produce novel research, and the desires of industry partners to produce commercially viable outputs within an actionable timeframe.

OKRs: Objectives & Key Results (OKRs) are short, clear and inspirational statements about the projects purpose. These act as a 'north star' metric.

Quarterly showcases: Drawing on elements of Scrum and Lean Startup methodologies, teams present working product demonstrations. They also discuss what they've learned about riskiest assumptions and how this will impact their work next quarter.

Industry engagement: An important piece of

agile delivery, and a key reason Food Agility believes in the strength of this approach, is the frequent involvement of all parties in delivering the projects.

Customer-centric: Teams meet and check-in with end-users to better understand their needs and challenges. This increases the likelihood of projects delivering value, without compromising on the novel research creation all partners in the CRC are aiming to achieve.

Design-thinking and design-led: Design-thinking is a strategy and a process for problem solving, rooted in empathy. Design-led organisations combine a design mindset with supporting principles and process.

Agile: Agile is an iterative project management methodology that values communication and feedback, adapting to change, and producing working results. It does this by breaking projects down into short phases that deliver value to end-users and customers, early and often.



Introducing our in-house Agile Coach: John Westgarth

John is a certified Scrum Master with a background in design thinking and lean startup. John joins Food Agility after stints as Innovation Lead with Decoded, a UK based emerging tech training company. Prior to that John worked on innovation projects for UTS, NICTA (now CSIRO) and the NSW Government.

PROJECTS AT A GLANCE

Name	Partners	Overview	Duration	Total Project Value	Status
Valuing Nature in Viticulture	NAB, Australian Wine Research Institute, QUT	Collation and analysis of the Entwine data set (which tracks farm management and sustainability parameters) along with financial data to build a set of models to better understand the economic impact of sustainability practices and investments.	2 years	\$382,213	On track, undergoing a pivot
Food Safety in the NSW Oyster Industry	NSW DPI, The Yield, University of Technology Sydney	Industry leading research meets state-of-the-art sensing to develop real-time water quality testing for the NSW Oyster Industry. This project will improve the efficiency and transparency of food safety regulation, whilst empowering farmers to continue delivering safe, quality oysters that consumers love.	3 years	\$3,054,000	On track
On-Farm Experimentation	NGIS, CSBP, WA DPIRD	Future-proofing Western Australia's grains sector and demonstrating the power of digital agriculture through on-farm experimentation. By collaborating with producers to build systems which connect them to reliable data about the results of their input trials, this project empowers farmers to make informed management decisions.	2.5 years	\$3,357,000	On track
Seafood Tracking and Traceability	Sydney Fish Market, University of Technology Sydney, UDT	Tracking fish from bait to plate to support an online trading system and Fish Quality Index for the Sydney Fish Market. Using a range of technologies including image processing, an e-nose, and IoT packaging tags, consumers and suppliers will have access to verified, trustworthy information about the origin and condition of fish they buy online.	1.5 years	\$1,666,000	On track
Blockchain in Beef Exports	BeefLedger, QUT, Ultimo Digital Technologies	Combatting food fraud and 'fake steak' in international export markets by creating a blockchain record to track Australian beef from paddock to plate. The team are also building a digital system using 'smart contracts' to replace letters of credit, creating new anti-counterfeit packaging, and investigating how cryptocurrencies could be used to incentivise compliance throughout the supply chain.	3 months	\$5,392,400	On track, undergoing a pivot

PROJECTS AT A GLANCE

Name	Partners	Overview	Duration	Total Project Value	Status
Yarrabilba Circular Food Economy	Lendlease, QUT, KPMG	Developing a model for scalable, digitally integrated urban agriculture in Australia's first 'sustainable food city', the Lendlease Yarrabilba development in South-East QLD. Stage One includes a prototype compost bin with built-in sensors, credit-based incentivisation program, and a digital community dashboard. Stage Two will involve a local produce market where residents can spend their credits.	3 years	\$1,368,800	On track
Predicting Harvest Timing and Yield in Intensive Horticulture	The Yield, University of Technology Sydney, Costa, Treasury Wine Estate	Combining historical and real-time microclimate data to create models that predict yield and harvest dates for horticultural crops, enabling producers and processors to optimise their production planning and profitability.	2 years	\$2,496,700	On track
Critical Digital Supply Chain Intervention Points for Sensors & Predictive Algorithms	Mulgowie, QDAF, QUT	Analysis of Mulgowie supply chain performance to identify where digital solutions could add the most value. Using new sensing technology, algorithms, and digital decision-making tools, this project will improve the quality of Australian-grown vegetables, maximize efficiency, and enable producers to respond quickly to market and consumer needs.	6 months	\$140,000	On track
Co-Designed Scoping Study: Unlocking the Power of Digital for Poultry Meat	AgriFutures, University of New England	Leveraging networks, knowledge, and industry insight from AgriFutures Australia's Chicken Meat Program to explore the potential value of digital transformation in the poultry meat sector. The study aims to produce a detailed report outlining existing barriers and opportunities, and a roadmap for the potential roll-out of new systems, technologies, and platforms.	1 year	\$205,000	On track
Wine Industry Body Review	AWRI, Food Agility	Exploring the industry body structure of the wine sector to identify opportunities to create shared digital resources to support industry wide digital enhancement.	6 months	\$25,000	Complete
Data-Driven Regional Development: Gippsland	Agribusiness Gippsland, RMIT	A strategic project designed to create data-guided baselines to inform future regional development strategies in Gippsland for new and emerging high-value horticultural commodities such as olives, garlic, saffron and truffles.	3 months	\$25,000	Complete

PROJECT IN FOCUS



BEEF IN BLOCKCHAIN

Pairing Blockchain-IoT technologies with smart contracts and secure payment systems, this project aims to fight food fraud and prove to consumers in China that their meat is Australian, while prioritising community engagement and regional benefit for Australian producers.

THE CHALLENGE

Australian beef has a global reputation for quality, safety, animal welfare and environmental management. But a surge in demand in international markets like China, has driven a corresponding increase in food fraud.

Substituting products for something other than beef, substituting different cuts and labelling meat from other countries as Australian is becoming more common and is estimated to cost \$40billion a year globally. 'Fake steak' damages the reputation of Australian beef and puts the health of consumers at risk.

THE SOLUTION

This project is using blockchain and IoT to create an immutable record, credentialing the provenance of Australian beef by tracking it from paddock to plate. The data captured along the supply chain will drive apps for consumers and suppliers, giving them confidence that their meat is 100% Aussie.

The team is also building a digital system using 'smart contracts' to replace traditional letters of credit (which are vulnerable to fraud) and will create new packaging with a range of anti-counterfeiting measures embedded to prevent the substitution of fake products. This project includes an investigation into how cryptocurrencies could be used to incentivise compliance throughout the supply chain, as well as a community engagement program which will produce digital content about beef producing regions in Australia to give Chinese consumers a richer appreciation of the origin of their new favourite food.

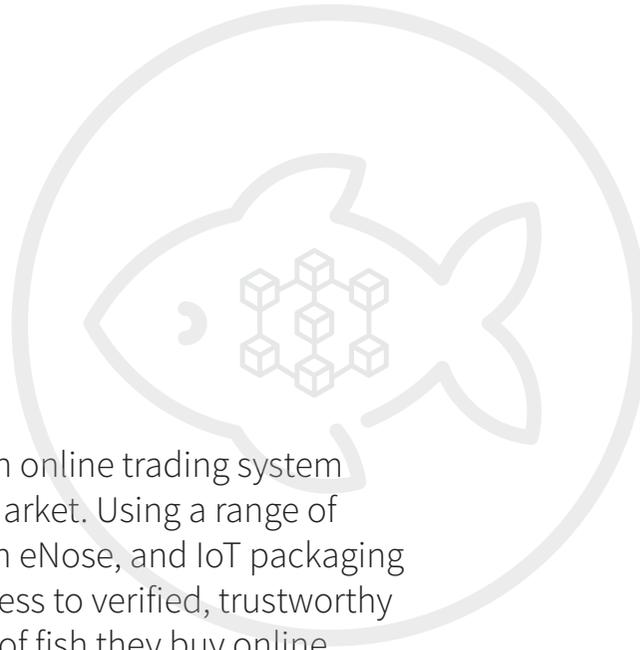


IMPACT

- Reduced food fraud, saving Australian beef producers millions annually
- Improvements in efficiency for the international supply chain
- Increased consumer confidence and safety
- Protection and improved trust for Brand Australia

PROJECT IN FOCUS

SEAFOOD TRACKING WITH BLOCKCHAIN



Tracking fish from bait to plate to support an online trading system and Fish Quality Index for the Sydney Fish Market. Using a range of technologies including image processing, an eNose, and IoT packaging tags, consumers and suppliers will have access to verified, trustworthy information about the origin and condition of fish they buy online.

THE CHALLENGE

Every weekday at 5:30am, the Sydney Fish Market seafood auction begins. Buyers ranging from chefs, local fishmongers, and wholesalers inspect produce in person before deciding what to buy. But in a digital marketplace, how can buyers be confident in their purchases if they can't touch and smell the fish?

This is the challenge for Sydney Fish Market as it moves towards an online trading system. Consumers and suppliers alike want verified, trusted information about where their fish was caught, the conditions of transportation, and the quality attributes of the product.

The oyster industry needs a faster, more accurate means of testing water quality and safety.

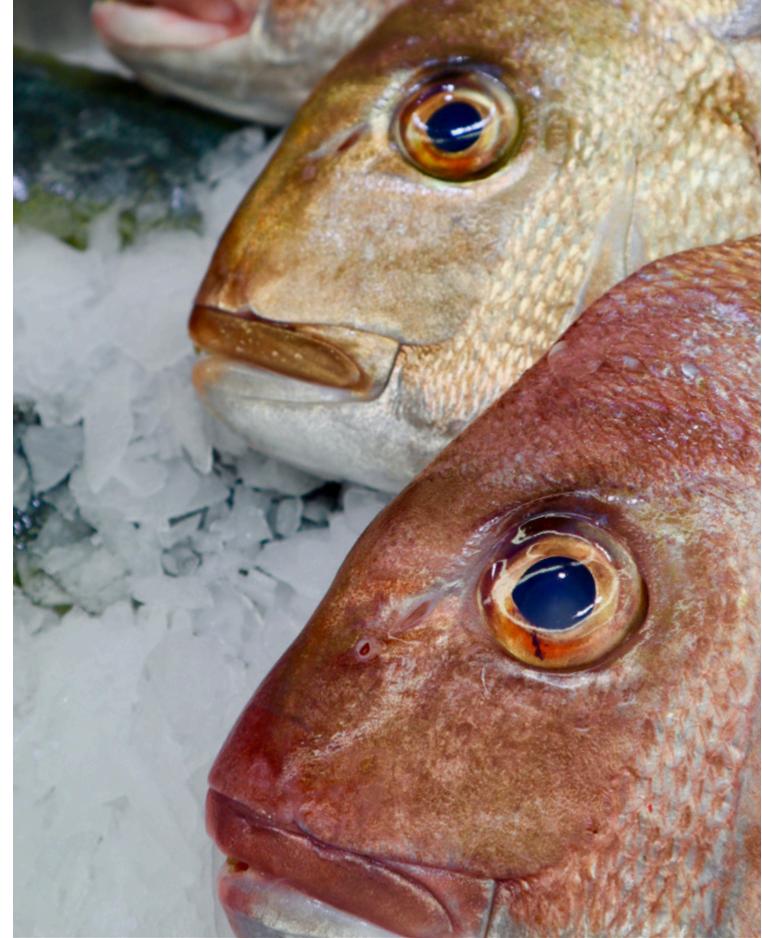
THE SOLUTION

This project will design a digital fish provenance and quality tracking system, using snapper as the test species.

Starting with the catch, the team will produce an app for fishers so they can upload information about how, when and where the fish was caught. Fishers can also upload a photo and verify the species using image processing technology.

Remote sensors then track the fish on its way to market. Data from IoT enabled packaging, temperature and location sensors and an eNose that measures fish freshness, is added to the blockchain.

All of this information informs the Fish Quality Index and the online auction trading, as well as potential integration to consumer Apps to assure customers about quality and provenance.



IMPACT

- Increased consumer trust in seafood provenance and freshness
- Greater efficiency in the seafood supply chain
- Increased revenue from new digital trading system.



ON FARM EXPERIMENTATION

Collaborating with WA grain producers to run on-farm input experiments and create reliable data analysis and farm management tools. This project aims to unlock the power of digital agriculture to future-proof Western Australia's grains sector.

THE CHALLENGE

Although Australia has a reputation for high-quality grains, the pressures of low rainfall and geographic spread can result in productivity and yield rates sitting below international competitors like the US and the EU.

Whilst farmers continuously run experiments on their own land to determine how input and land management choices affect their yield, these trials are often conducted on small plots which fail to capture the variability across a property, and there is a need for reliable tools to collect and analyse yield data.

THE SOLUTION

By integrating precision agriculture technologies such as Spatial Data Management and Variable Rate Technologies into the on-farm experimentation process, this project will accelerate grower learning and help develop better-informed management practices.

Building this system collaboratively and from the ground up will ensure that growers are empowered in their management of farm inputs and resources, resulting in improved economic and sustainability outcomes across the Western Australian grains sector. The rollout will mimic growers' own principles of continuous improvement by informing decisions progressively via our partnership with key stakeholders across the value chain.



IMPACT

- Development of better-informed management practices to fuel the adoption of data-driven agriculture
- New industry value for WA grains created by connecting under-used data, expertise, and skills
- Innovative research methods supported jointly by agronomic, data, and social sciences

AGTECH FINDER



In response to feedback from producers participating in our project design workshops, Food Agility proposed the development of an independent online AgTech marketplace called 'AgTech Finder'. Developed in partnership with KMPG, IAG, AgriFutures, National Farmers' Federation and MLA, www.agtechfinder.com enables producers to quickly and easily search, sort, and compare AgTech solutions.

A SOLUTION FOR PRODUCERS

Farmers reported feeling overwhelmed by the number of AgTech companies flooding the market, with their confidence further eroded by start-up marketing jargon and unvalidated sales pitches. There are currently more than 300 domestic AgTech companies offering on-farm solutions in Australia, and thousands more international brands looking to enter our growing agtech market.

AgTech Finder has been designed with and for producers. The Finder is searchable by sector or problem, and product listings include the vital information producers need to confidently match AgTech to their on-farm needs, such as pricing, installation and

maintenance requirements, number of units deployed commercially, compatibility with other products, data ownership, and privacy.

DEVELOPMENT

Site development began in January 2019, with public launch set for August 2019. We have undertaken an extensive process of user-centric design, which has included the development and testing of different website layouts, page structures and site content.

We have engaging AgTech vendors throughout the development process to ensure that these important stakeholders are confident in the value of the site to their businesses. Feedback has been extremely positive. Vendors see AgTech Finder as a significant opportunity to improve the visibility of their products, with the potential to become the go-to place for producers to browse AgTech solutions.

Once launched, we expect AgTech Finder to be both a significant asset for the industry and a useful data-gathering tool which will help us identify areas of interest, problems in need of AgTech solutions, and industry trends. This information will inform future projects, enhance our data-driven thought leadership, and deepen our understanding of the strengths, weaknesses and opportunities for Australian AgTech.

ILRI DESIGN WORKSHOPS



In February 2019, Food Agility CRC was engaged by International Livestock Research Institute (ILRI), in collaboration with the Bill & Melinda Gates Foundation, to assist with the delivery of Design Central collaboration-framing workshops in Ethiopia. ILRI's mission is to improve food and nutritional security and to reduce poverty in developing countries through research into the efficient, safe and sustainable use of livestock. However, the organisation was facing challenges translating their research into real-world impact. It was our shared belief that Food Agility's design thinking methods could help them achieve their goal of integrating researchers and diverse downstream partners.

ILRI is co-hosted by the governments of Ethiopia and Kenya. Food Agility CEO Mike Briers, Design Central Facilitator Dr Tim Parsons, Strategy Lead Mara Bun, and Project Officer Ashley Rootsey travelled to the Addis Ababa campus in Ethiopia in March 2019 and spent one week in the field, deeply immersed in the challenges of smallholder farmers across poultry, red meat, small ruminant and dairy value chains.

The team then led four Design Central workshops, which each attracted 50 -70

participants from local, domestic and international organisations. These groups included smallholder farmers, processing intermediaries, veterinarians, financiers, public health officials, government representatives, technology providers, academics from partnering research institutions, ILRI staff, donors and many more.

The convening power of the Bill and Melinda Gates Foundation and ILRI was extraordinary. Demand for workshop participation was inspiring, from innovative pig producers to digital start-ups to CEOs of global genetics companies: the appetite to support ILRI's impact roadmap is high.

Outcomes derived from these four workshops were analysed and packaged by the Food Agility team. These detailed the key thematic programs of work that emerged from workshop activities, all of which were received positively by ILRI which has developed a new Conceptual Framework that will drive a powerful transformation program which continues to unfold.

This is an exciting time for global agriculture research. Food Agility is delighted that our design methods and agile research tools are helping to catalyse a powerful vision for necessary change in order for smallholder farmers and pastoralists in the developing world to prosper while replenishing natural capital through the challenging decades ahead.

FINANCIALS

FINANCIAL MANAGEMENT

During the financial year ending 30 June 2019, Food Agility CRC generated a net surplus of \$2.6M from revenues (excluding in-kind contributions) totalling \$7.8m, calculated on an accrual's basis. Revenue was made up of \$5.3M from Government grants and \$2.5M cash contributions from partners. In-kind contributions for the period was \$5.3M.

Food Agility CRC stands in a favourable financial position, with working capital of \$7.7m, a current ratio of approximately 4.2, and net assets of \$7.7m.

Appendix 1

Full list of Food Agility Partners

No.	Participant Name	Participant Type	ABN/ACN	Organisation Type
1	Agribusiness Gippsland Inc	CRC participant	20 185 883 721	Organisation
2	Agrigenesis Pty Ltd	CRC participant	53 164 171 608	Individual SME
3	ASTA Solutions Pty Ltd	CRC participant	086 783 851	Individual SME
4	Australian Farm Institute Limited	CRC participant	29 107 483 661	Organisation
5	Avoka Technologies	CRC participant	N/A (International)	Individual SME
6	BeefLedger Ltd	CRC participant	622 620 875	Individual SME
7	Charles Sturt University	CRC participant	83 878 708 551	University
8	CSBP Limited	CRC participant	81 008 668 371	Individual SME
9	Curtin University of Technology	CRC participant	99 143 842 569	University
10	Dairy Australia Limited	Third party	60 105 227 987	Organisation
11	Department of Agriculture and Fisheries (DAF) (QLD GOV)	CRC participant	66 934 348 189	State Government
12	Department of Agriculture & Food (DPI WA)	CRC participant	18 951 343 745	State Government
13	Department of Economic Development Jobs Transport and Resources (VIC Gov)	CRC participant	69 981 208 782	State Government
14	Department of Environment and Science (DES) (QLD GOV)	CRC participant	46 640 294 485	State Government

Appendix 1

Full list of Food Agility Partners

No.	Participant Name	Participant Type	ABN/ACN	Organisation Type
15	Department of Industry Skills and Regional Development (DPI NSW)	CRC participant	72 189 919 072	State Government
16	Department of Primary Industries and Regions (SA)	CRC participant	53 763 159 658	State Government
17	Department of Science Information Technology (Qld)	Third party	41 841 375 926	State Government
18	Elders Rural Services Australia Limited	Third party	72 004 045 121	Large Industry
19	Federation University Australia	CRC participant	51 818 692 256	University
20	Food Innovation Australia Ltd	CRC participant	50 164 124 609	Organisation
21	Grains Research & Development Corporation	Third party	55 611 223 291	Organisation
22	Hivexchange Pty Ltd	CRC participant	74 608 448 246	Individual SME
23	Indicina Pty Ltd	CRC participant	13 612 726 333	Individual SME
24	Industrie IT Pty Ltd	Third party	64 125 306 658	Individual SME
25	Insurance Australia Group Limited	CRC participant	60 090 739 923	Large Industry
26	James Cook University	CRC participant	46 253 211 955	University
27	KPMG	CRC participant	51 194 660 183	Large Industry
28	Lendlease Communities (Yarrabilba) Pty Limited	CRC participant	69 103 578 436	Large Industry

Appendix 1

Full list of Food Agility Partners

No.	Participant Name	Participant Type	ABN/ACN	Organisation Type
29	Meshed Pty Ltd	CRC participant	49 605 631 758	Individual SME
30	Monash University	CRC participant	12 377 614 012	University
31	Mulgowie Fresh Pty Ltd	CRC participant	63 100 928 014	Large Industry
32	National Australia Bank Limited	CRC participant	12 004 044 937	Large Industry
33	National Farmers' Federation Limited	CRC participant	77 097 140 166	Organisation
34	NGIS Australia Pty Ltd	CRC participant	56 061 264 793	Individual SME
35	Ovass Pty Ltd	CRC participant	66 608 681 938	Individual SME
36	Precision Agronomics Australia Pty Ltd	CRC participant	37 112 600 807	Individual SME
37	Queensland University of Technology	CRC participant	83 791 724 622	University
38	Regional Development Australia – Central Coast NSW	Third party	49 731 314 890	Individual SME
39	Robert Bosch (Australia) Proprietary Limited	CRC participant	48 004 315 628	Large Industry
40	Royal Melbourne Institute of Technology	CRC participant	49 781 030 034	University
41	Rural Industries Research & Development Corporation	CRC participant	25 203 754 319	Organisation
42	Simplot Australia Pty Limited	CRC participant	98 070 579 609	Large Industry

Appendix 1

Full list of Food Agility Partners

No.	Participant Name	Participant Type	ABN/ACN	Organisation Type
43	Southern Forests Food Council	CRC participant	19 882 662 408	Individual SME
44	SST Software Australia Pty Ltd	Third party	83 149 102 929	Individual SME
45	SunRice	CRC participant	55 007 481 156	Large Industry
46	Sydney Fish Market Pty Ltd	CRC participant	24 064 254 306	Large Industry
47	Systems Edge Management Services Pty Ltd	CRC participant	92 082 966 998	Individual SME
48	Teys Australia Pty Ltd	CRC participant	38 009 872 600	Large Industry
49	The Australian Wine Research Institute	CRC participant	83 007 558 296	Organisation
50	The Trustee for Agrometerology Australia	CRC participant	32 340 209 262	Individual SME
51	The Yield Technology Solutions Pty Ltd	CRC participant	83 603 062 942	Individual SME
52	University of New England	Third party	75 792 454 315	University
53	University of Technology Sydney	CRC participant	77 257 696 961	University
54	Ultimo Digital Technologies (UDT) Pty Ltd	CRC participant	95 169 555 953	Individual SME

Appendix 2

Board Committees

FARMCo

FARMCo is our Finance, Audit and Risk Management Committee. FARMCo meet quarterly to review budgets and organisational risks.

Membership:

- Mick Keogh (Chair)
- Rob Wilson
- Ben van Delden

Meetings held this Year: 4

HRRCo

The HRRCo is our Human Resource and Remuneration Committee, who meet quarterly to review and provide feedback on our Organisation and salary structures.

Membership:

- Anne Astin (Chair)
- Michele Allan
- Jacqui Wilson-Smith

Meetings held this Year: 2

CIPCo

The CIPCo is our Commercialisation and Intellectual Property Committee, reviewing our IP strategy and consider opportunities for utilisation and commercialisation of Food Agility owned IP. This committee will be formally established in the 2020 financial year and will meet three times per year.

Membership:

- Michele Allan (Chair)
- Kate McGrath
- Ros Harvey

Glossary of Terms

Agile

A method of project management that is characterized by the division of tasks into short phases of work and frequent reassessment and adaptation of plans.

Applied projects

Projects focused on the direct industry application of new knowledge involving in-market testing and end-user feedback.

Blockchain

A digital distributed ledger system in which a record of transactions is maintained across multiple computers that are linked in a peer-to-peer network. Blockchains are of interest due to their high levels of encryption and autonomous trust between contracting parties.

Demonstrator Projects

Short cycle projects focused on rapidly building and testing Minimum Viable Products to demonstrate and market test new technologies.

Design Central

Food Agility's collaborative project design power-house using a range of bespoke facilitated workshop tools to help teams come together to review challenges, map opportunities and build frameworks for end-user driven research projects.

Design-thinking and Design-led

Design-thinking is a strategy and a process for problem solving, rooted in empathy. Design-led organizations combine a design mindset with supporting principles and process.

Natural Capital

Natural Capital refers to all aspects of the natural environment needed to support life and human activity,

including soil, water, plants and animals, minerals and energy resources. Projects in this space are looking at how financial institutions can quantitatively value the natural capital contained in our food production value chain as a means to encourage sustainable farming practices.

Scrum

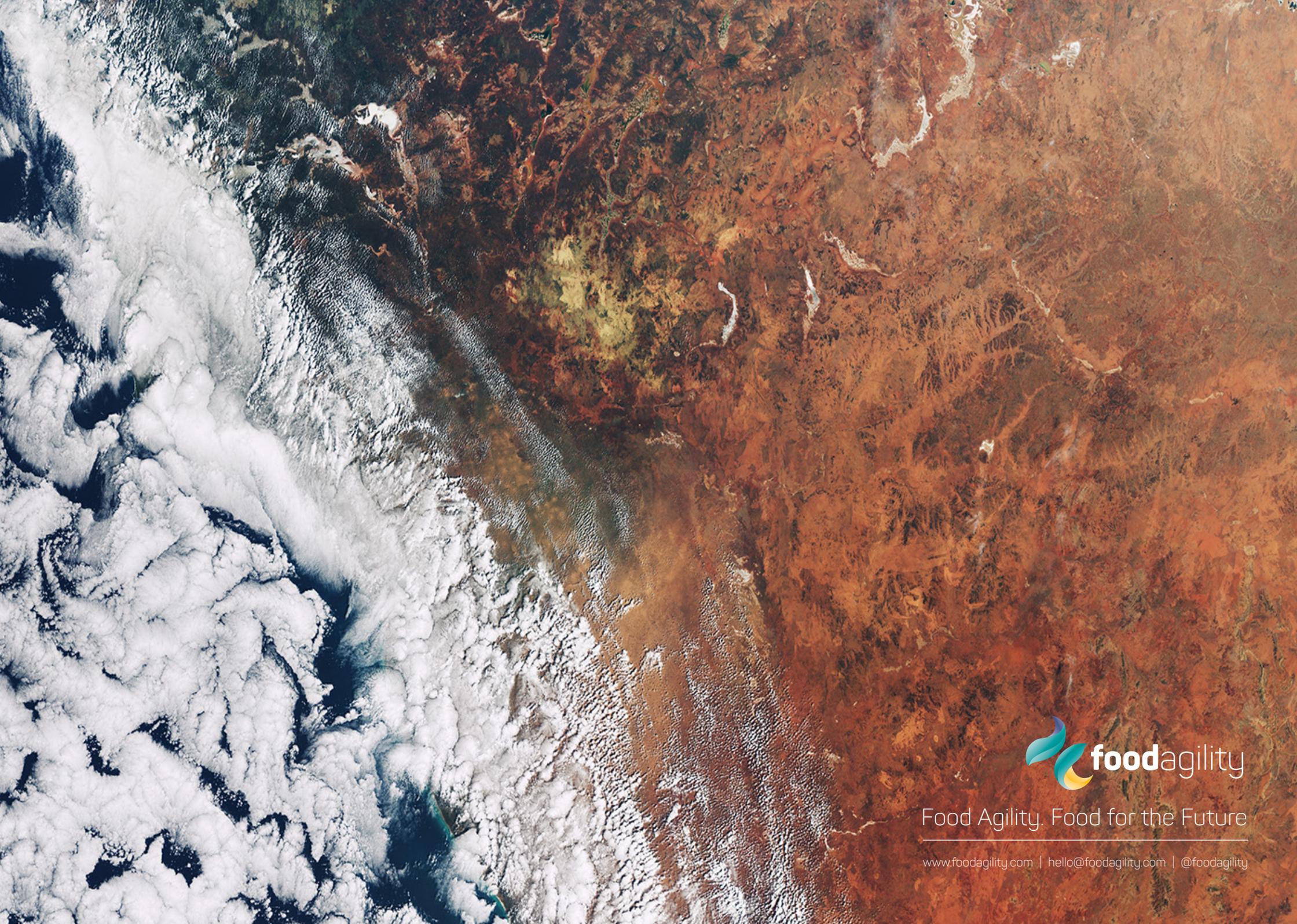
A set of practices used in agile project management that emphasise daily communication and the flexible reassessment of plans that are carried out in short, iterative phases of work, often culminating in a showcase of functioning outputs and deliverables.

Smart Contracts

A smart contract is a computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract. Smart contracts allow the performance of credible transactions without third parties. These transactions are largely built on blockchain technology, are trackable and irreversible.

Strategic projects

Projects focused on creating new knowledge in areas where strategic industry or sectoral opportunity is identified, however mechanisms for direct impact are unclear, but will be resolved as a result of the research.



Food Agility. Food for the Future

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