



● I+E CONNECT

Fast tracking the future of the Australian Red Meat Industry through Insight, **Innovation** and **Entrepreneurship**

I+E CONECT THIRD PARTY CAPITAL INVESTMENT ATTRACTION RESEARCH



Table of Contents

1. EXECUTIVE SUMMARY	5
2. RED MEAT INDUSTRY OVERVIEW	7
2.1 OVERVIEW	7
2.2 INTERNATIONAL SUPPLY & DEMAND	8
2.3 AUSTRALIAN RED MEAT INDUSTRY - KEY TRENDS	9
2.4 AUSTRALIAN RED MEAT INDUSTRY - KEY RISKS	9
2.5 SUPPLY CHAIN	11
3. AGRIFOOD TECH & INNOVATION ECOSYSTEM	14
3.1 AGRIFOOD TECH AND INNOVATION	14
3.2 AGTECH	14
3.3 FOODTECH	15
3.3.1 DRIVERS OF M&A IN THE FOODTECH SECTOR	16
3.3.2 ALTERNATIVE PROTEIN SOURCES	17
3.4 FOOD INNOVATION	17
3.5 INNOVATION FOCUS OF THE AGRIFOOD INNOVATION ECOSYSTEM	19
3.6 GLOBAL AGTECH STARTUPS	20
3.7 AUSTRALIAN AGRIFOOD STARTUPS	21
4. AUSTRALIAN ECOSYSTEM PARTICIPANTS	22
4.1 THE RED MEAT INDUSTRY INNOVATION ECOSYSTEM	22
4.2 GOVERNMENT	22
4.2.1 THE DEPARTMENT OF AGRICULTURE AND WATER RESOURCES	23
4.2.2 THE DEPARTMENT OF INDUSTRY, INNOVATION AND SCIENCE	23
4.2.3 KEY FEDERAL GOVERNMENT AGENCIES AND WEBSITES	23
4.2.4 KEY STATE GOVERNMENT AGENCIES	23
4.2.5 RED MEAT INDUSTRY	24
4.3 INDUSTRY ORGANIZATIONS	24
4.3.1 KEY AGRICULTURE & FOOD INDUSTRY BODIES	24
4.3.2 INDUSTRY PEAK COUNCILS AND SERVICE COMPANIES	24
4.3.3 RED MEAT SUPPLY CHAIN COMMITTEE	25
4.4 PEOPLE	25
4.5 UNIVERSITIES & RESEARCH INSTITUTES	26
4.5.1 NATIONAL PRIMARY INDUSTRIES RURAL DEVELOPMENT & EXTENSION (RD&E) FRAMEWORK	26
4.5.2 RURAL R&D CORPORATIONS (RDCs)	26
4.5.3 UNIVERSITIES - AGRICULTURE	27
4.5.4 UNIVERSITIES - FOODTECH AND FOOD INNOVATION	28
4.5.5 CSIRO	29
4.5.6 COOPERATIVE RESEARCH CENTRE PROGRAM	29
4.6 AGRIFOOD STARTUPS & AGILE SMES	32
4.7 PRE-ACCELERATOR PROGRAMS	32
4.8 ACCELERATORS & INCUBATORS	33
4.9 INVESTORS	34
4.10 CORPORATES	35

5.	ASIA ECOSYSTEM PARTICIPANTS	37
5.1	INDIA	37
5.2	CHINA	38
5.3	SOUTH EAST ASIA	39
6.	ECOSYSTEM GAPS & CHALLENGES	41
6.1	CURRENT GAPS IN THE INNOVATION PIPELINE	41
6.2	KEY CHALLENGES FOR I+E CONNECT PLATFORM	42
7.	CREATING AN INTERCONNECTED & INVESTABLE AGRIFOOD INNOVATION PIPELINE	44
7.1	REVIEW OF KEY GAPS AND RELATED RECOMMENDATIONS/SOLUTIONS	44
7.2	INTERCONNECTED & INVESTABLE INNOVATION PIPELINE	53
8.	MAPPING & TRACKING THE ECOSYSTEM	54
8.1	BENEFITS OF MAPPING & TRACKING THE ECOSYSTEM	54
8.2	A STRUCTURE FOR ECOSYSTEM MAPPING & TRACKING	54
8.3	RED MEAT INDUSTRY ECOSYSTEM MAPPING	55
8.3.1	HOME PAGE FOR RED MEAT INDUSTRY ECOSYSTEM MAP & ANALYTICS	55
8.3.2	INVESTOR ECOSYSTEM ANALYSIS PAGE	56
8.3.3	STARTUPS & AGILE SMES ECOSYSTEM ANALYSIS PAGE	57
9.	CREATING CRITICAL MASS AT THE BASE OF THE PIPELINE	58
9.1	BENEFITS OF A SIDECAR FUND TO MDC & AGRIFOOD STARTUP PIPELINE	58
9.2	EXTERNAL PRE-ACCELERATOR & ACCELERATOR MODELS WITH ECOSYSTEM PARTNERS	60
9.2.1	MEETUPS	60
9.2.2	HACKATHONS	60
9.2.3	INDUSTRY EVENTS	60
9.2.4	ACCELERATORS	61
9.3	ARTESIAN ACCELERATOR MODEL FOR MDC & MLA CORPORATE CLIENTS	61
9.3.1	ARTESIAN'S VISION FOR BEST-OF-BREED CORPORATE ACCELERATORS:	61
9.3.2	TRADITIONAL CORPORATE ACCELERATOR:	62
9.3.3	'INTRAPRENEUR' INCUBATION:	62
9.3.4	OUTSOURCED ACCELERATOR PROVIDER VS. INTERNAL EXPERTISE	63
9.3.5	BENEFITS OF A CORPORATE TAKING CONTROL OF THEIR ACCELERATOR PROGRAM	63
9.3.6	ARTESIAN RECOMMENDATION FOR CORPORATE ACCELERATOR OPERATION	63
9.3.7	CORPORATE ACCELERATOR COMPONENTS	64
9.3.8	CORPORATE ACCELERATOR PROGRAM	65
9.3.9	PROGRAM STRUCTURE & DELIVERY	65
9.4	SUPPORT & STRATEGY FOR MLA CORPORATE CLIENTS	67
9.5	SUPPORT & STRATEGY FOR PORTFOLIO COMPANIES	67
9.6	PRE-ACCELERATOR SUPPORT FOR MLA MEMBERS & ENTREPRENEURS	68
10.	ECOSYSTEM CONNECTIVITY & COLLABORATION	69
10.1	ESTABLISHING AN AGRIFOOD ECOSYSTEM HUB	69
10.2	EXAMPLES OF SUCCESSFUL INNOVATION HUBS	70

11.	CO-INVESTMENT STRATEGIES	72
11.1	RANGE OF INSTRUMENTS FOR STARTUP INVESTMENTS	72
11.1.1	EQUITY	72
11.1.2	DEBT	72
11.1.3	CONVERTIBLE NOTES	73
11.1.4	CONVERTIBLE EQUITY (SAFES)	73
11.1.5	ROYALTY/LICENSE AGREEMENTS	74
11.1.6	VC FUNDS	74
11.2	INCREASING CORPORATE CO-INVESTMENT	74
11.2.1	STRATEGIC BENEFITS OF CORPORATE CO-INVESTMENT	75
11.2.2	MODELS FOR CORPORATE CO-INVESTMENT	77
11.3	ARTESIAN AGRIFOOD SIDECAR FUND	79
11.3.1	CREATING A SUSTAINABLE AGRIFOOD INNOVATION ECOSYSTEM	79
11.3.2	INVESTMENT STRATEGY/PROCESS	79
11.4	ACCESSING CO-INVESTMENT VIA EQUITY CROWDFUNDING PLATFORMS	82
12.	ARTESIAN SERVICES	83
12.1	DUE DILIGENCE	83
12.2	FUND ADMINISTRATION, DEAL COORDINATION & FUNDS MANAGEMENT	84
12.2.1	ARTESIAN'S BACK OFFICE CAPABILITY	84
12.2.2	DEAL FLOW MANAGEMENT	84
12.2.3	PORTFOLIO MANAGEMENT	84
12.2.4	HOSTING AND BACKUP OF FRONTINVEST	85
12.2.5	FUND ADMINISTRATION	85

1. EXECUTIVE SUMMARY

Artesian Venture Partners (AVP) is a specialized investment manager with a unique, highly scalable, diversified portfolio approach to early stage venture capital investments, targeting both financial and strategic returns for HNWI, corporates and institutional investors.

AVP’s approach provides investors with a pipeline of pre-screened and de-risked startup investment opportunities in which to make larger, late-stage investments. AVP provides a white-label platform solution to enable investors to become their own VC.

AVP’s early stage VC funds include the Sydney Angels Sidecar Funds 1 & 2, BlueChilli Venture Fund, Slingshot Venture Fund, Clean Energy Seed Fund (with the CEFC as cornerstone investor), the UoW iAccelerate Seed Fund, the Sproutx AgTech Venture Fund and the Australian Venture Capital Fund of Funds.

AVP also founded VentureCrowd, Australia’s leading equity crowdfunding platform, to provide access to AVP’s pre-screened, curated late-stage deals (on a fractional basis) to wholesale, and eventually, retail investors.

MLA Donor Company Limited (MDC) is a fully-owned subsidiary of Meat & Livestock Australia.

MDC attracts commercial investment from individual enterprises and others that share a mutual interest with MLA to co-invest in innovation that will benefit the Australian red meat and livestock industry.

Since it began in 1999, MDC has attracted investment from every part of the red meat and livestock value chain, including processors, value-adders, breed societies, large pastoral companies, international collaborators and technology providers.

The Australian Government matches voluntary partner contributions in projects that address industry and government priorities and benefit the Australian community.

The value of MDC

MDC fast-tracks commercial innovations across the value chain so the Australian red meat and livestock industry can remain competitive on the world stage.

				
Every \$1 invested in MDC has generated \$4 in current and future benefits*	MDC increases the level and speed of innovation in the Australian red meat and livestock industry, making new products, new technologies and new ideas commercially available sooner	MDC encourages enterprises along the Australian red meat supply chain to invest more in innovation	MDC assists industry to build its capability to innovate	MDC attracts new investment to the Australian red meat and livestock industry from entrepreneurs and investors

*Sourced from the *Impact Assessment of MLA Expenditure 2010-11 to 2014-15 – Economic quantification of benefits* by the Centre for International Economics, ISJ Investments and AgStrat. The full report is available at: www.mla.com.au/performanceview

The **MDC Innovation & Entrepreneurship (I+E) Connect Platform** was conceived to fast track the delivery of commercially viable solutions that create unique and defensible competitive positions through the creation

strategic relationships across the global entrepreneurial community to attract and support high growth disruptive entrepreneurial activity within the Australian red meat sector through achieving the following:

- Developing future technology opportunities
- Fast tracking the next generation of “big ideas”
- Becoming a “magnet for the ag tech, food tech and food industries
- Creating a new innovation marketplace for agile SMEs and start ups
- Attracting new capital and new investors

A critical design component of the I + E Connect platform is the attraction of high quality third party capital through new financial instruments to enable greater co-invest across the innovation and new venture development continuum from early stage to commercialization. AVP will conduct research on different capital investment attraction instruments specifically within Australia and Asia with the objective of generating potential matched investment opportunities and identify possible co-investment partners.

AVP will propose model(s) to increase co-investment activity into relevant Ag/Food startups that may attract matched funding from MDC. The research will identify and map all potential ecosystem partners that can optimise the goals of the I+E Connect Platform and create the highest quality flow of co-investment deal flow. This will include proposed models for ongoing acceleration and support of start-ups - either not part of an existing accelerator program or at later or scale-up stage of growth. This may be through an MDC controlled initiative, an outsourced solution, or some combination of both.

2. RED MEAT INDUSTRY OVERVIEW

This section looks at the current competitive risks, challenges and opportunities facing the Australian red meat industry, as well as the supply chain from farm to plate.

2.1 Overview

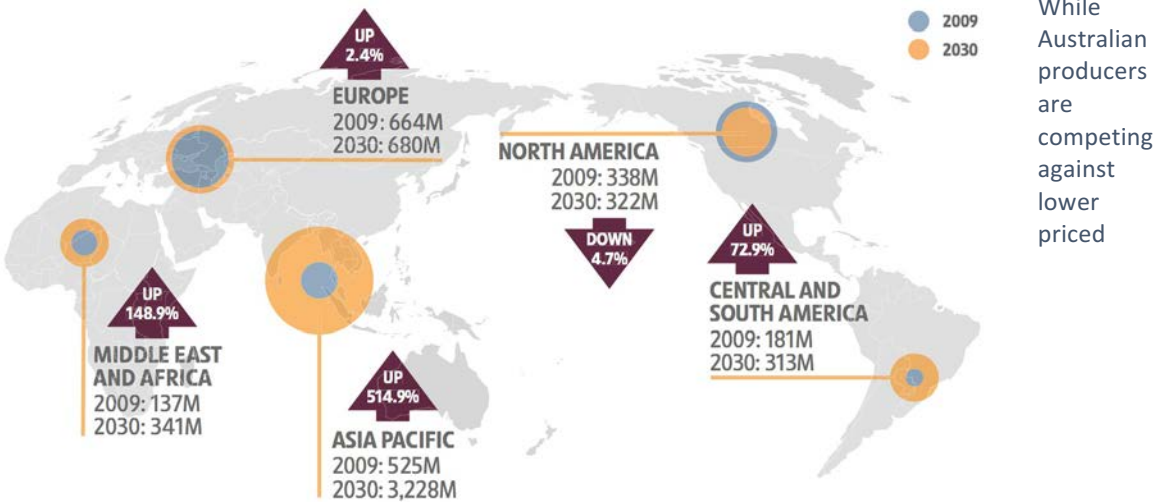
The red meat industry in Australia is a major contributor to GDP, exporting over \$16 billion worth of red meat products and having domestic sales approaching \$8 billion. This industry supports approximately 200,000 jobs on farms, at processing facilities, and in distribution and sales channels.

Australia’s herd size has grown to 29.1 million cattle and 72.6 million sheep and produces 2.6 million tonnes of beef and veal and 0.8 million tonnes of sheep and goat meat. The industry includes approximately 100 processing and 140 export hubs around the country.

Australia’s processing facilities are dominated by four groups, controlling approximately 20% of the market. Processing primarily occurs on the east coast, with the majority of facilities located in Queensland, and to a lesser extent in New South Wales and Victoria. As demand for live cattle exports has increased over the years, key export hubs have emerged in Perth, the north of Western Australia, the Northern Territory and Queensland.

Asia, the world’s fastest growing market for protein, provides many opportunities for the Australian export of red meat products. Although the Asian region is primarily a commodity segment, its rapid economic development, and the emergence of an increasingly aspirational middle class (see diagram below), will result in it quickly moving into high-quality red meat products which the Australian red meat industry is positioning itself to provide.

Growth of the Middle Class (2009 vs forecast 2030)



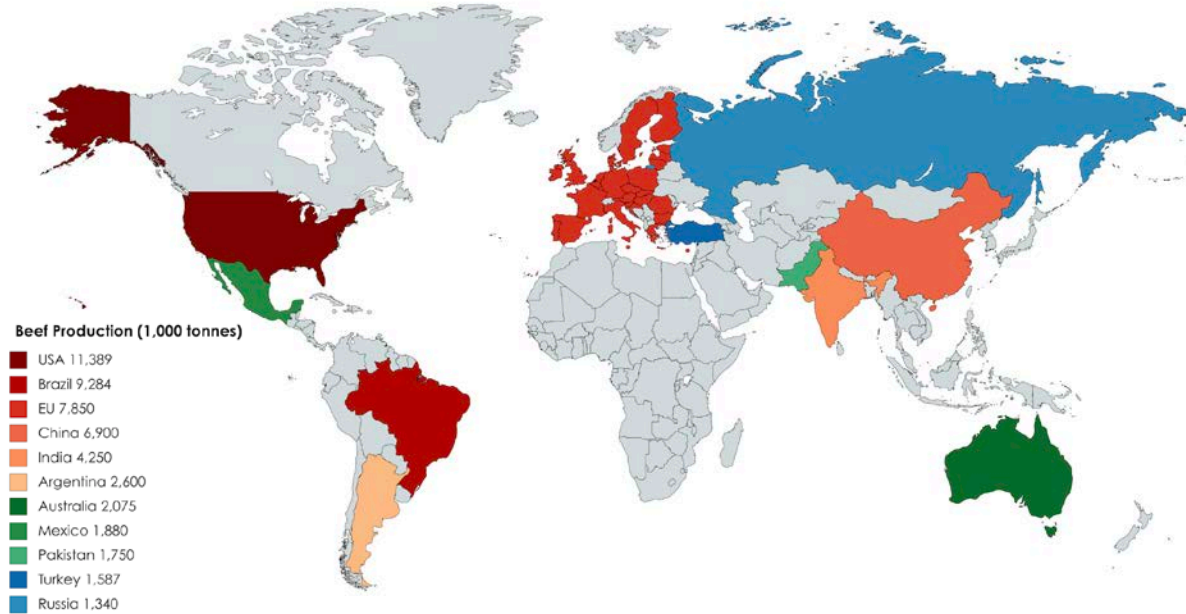
Source: Kharas, H. 2010, Working Paper No 285: The emerging middle class in developing countries, OECD Development Centre.

competitors for the supply of red meat, the Australian red meat industry is recognised internationally for producing disease free and ‘clean and green’ red meat. Australian meat is of superior quality, livestock are raised on green pastures and agricultural crop residues, whereas most of the international competitors continue to generate grain finished product.

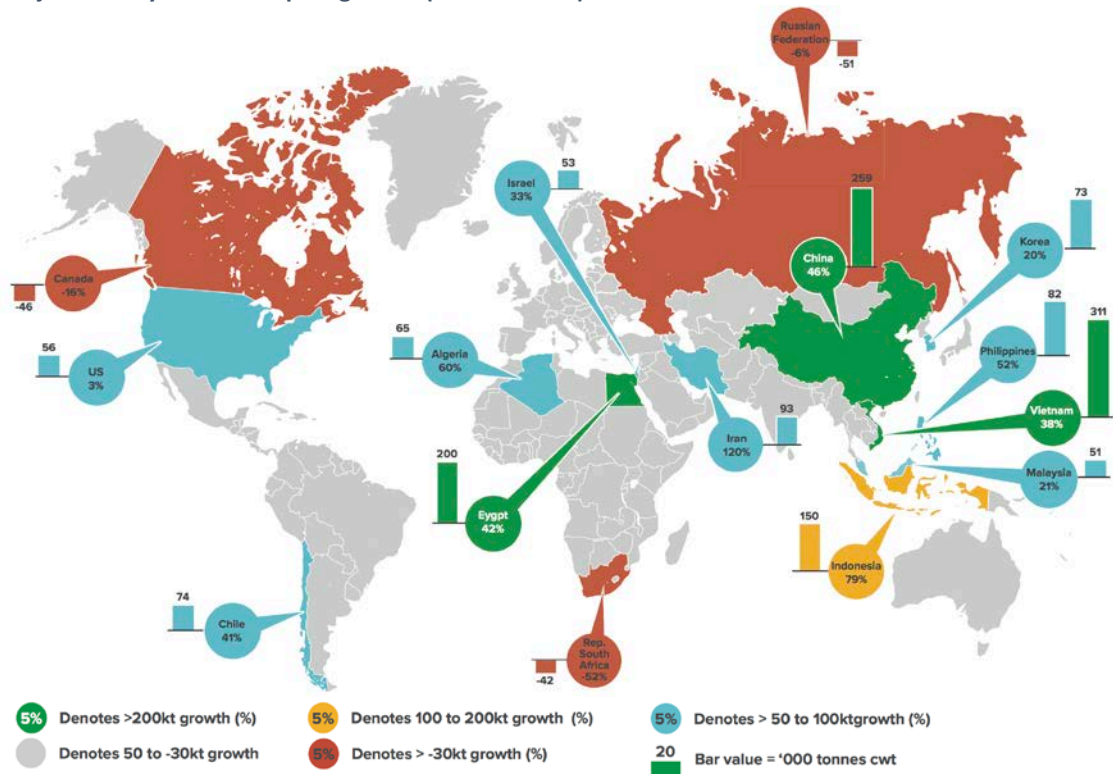
2.2 International Supply & Demand

Australia's live and chilled/ frozen exports are largely to the US, Japan, China, South Korea, Taiwan and Indonesia. While Australia is the seventh largest global exporter of red meat, the industry faces increasing competition, especially on price, from Brazil and India. The US remains the largest producer and competes with Australia on both price and quality. Europe, although the second largest beef producer, mainly supplies local demand.

Top 10 Global Beef Producers 2016



Projected 10-year beef import growth (2015 to 2025)



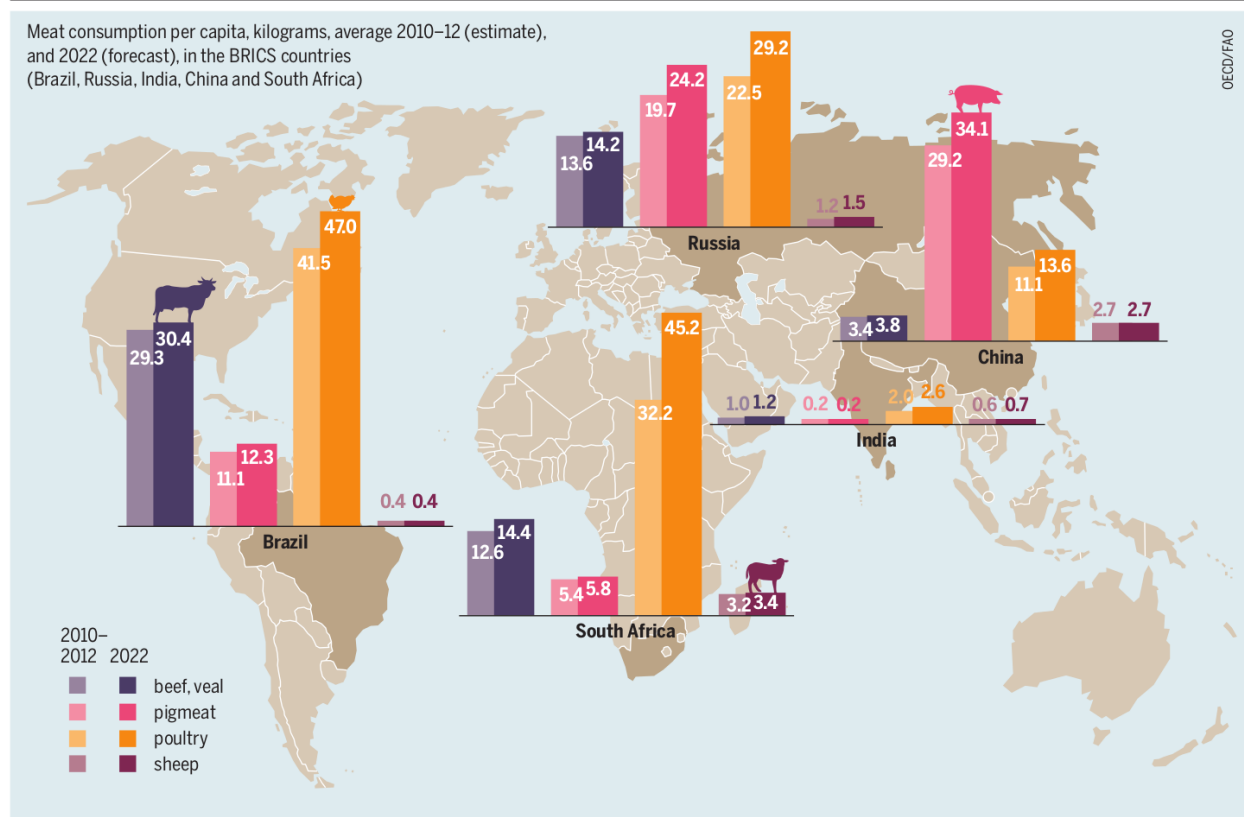
2.3 Australian Red Meat Industry - Key Trends

The Australian Meat Processor Corporation completed a report titled “Strategic Risks Facing the Australian Red Meat Industry” (August 2016).

The report identified the key trends impacting the industry. These included:

- Majority of the world’s economic growth occurring in the emerging markets of Asia
- Australia’s red meat industry becoming increasingly reliant on exports
- Other nations increasingly gaining export market access via free and bi-lateral trade agreements
- Changing protein consumption patterns that in developed nations, have negatively impacted red meat consumption since the 1970s
- Increasing consumer focus on food safety and quality, particularly in developing nations
- A changing global climate
- An increasingly challenging global resource environment
- Increasing global standards of environmental protection, food safety and animal welfare

Demand in the developing world is rising steeply



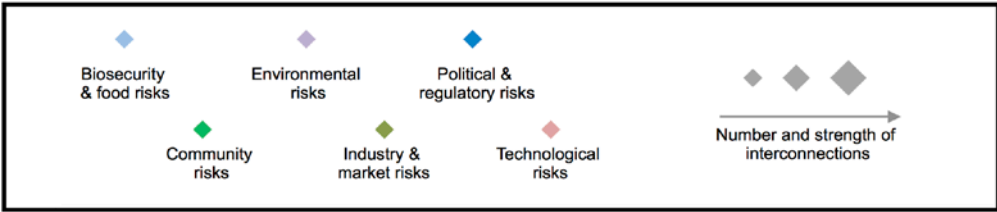
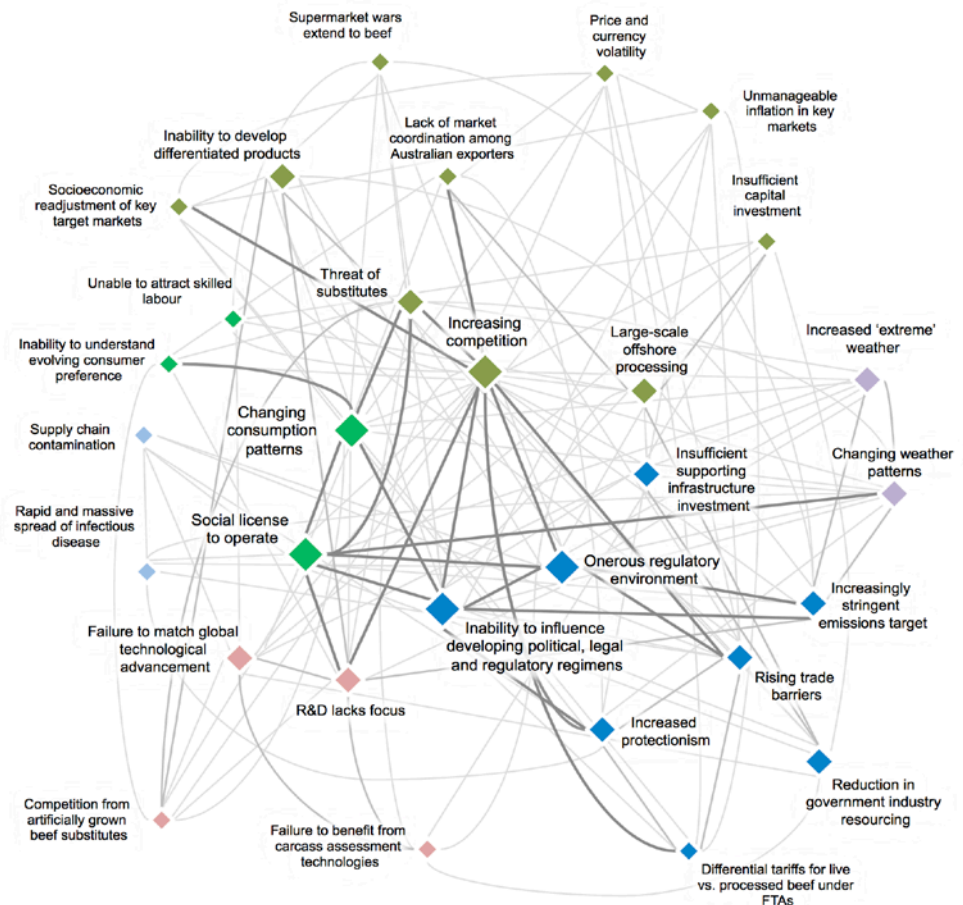
Source: OECD/ UN Food & Agriculture Organisation (FAO)

2.4 Australian Red Meat Industry - Key Risks

While Australia’s red meat industry faces real strategic risks, putting in place policies, processes and measures to enable effective responses can be a difficult. When considering strategic risks, the key requirement of an industry and organisation is to be able to manage, adapt and overcome the risks. By understanding the risks, Australia’s red meat industry will be well positioned to respond as and when required.

TOP SIX RISKS 2016

- 1. Competition and market access** – the sleeping giants wake
- 2. Changing consumption patterns** – red meat on the outer?
- 3. Climate change** – impacting the industry today
- 4. Social licence to operate** – higher standard for business
- 5. Regulatory environment** – clouds on the horizon
- 6. Value chain integration** – growth through cooperation



Source: AMPC Strategic Risks Facing the Australian Red Meat Industry

To become capable of responding to the strategic risks at an industry level, the Australian Meat Processor Corporation recommended that Australia’s meat industry will need to:

- Establish structures that facilitate sharing and collaboration within the industry
- Coordinate as an industry to prepare for, and respond to, risks
- Build the capability to understand and adapt to meet domestic and international market needs
- Expand and maintain relationships to benefit trade agreements and work with the Australian Government to reduce technical barriers to trade
- Collaborate with government to effectively respond to strategic risks

- Identify, understand and capitalize on leading global knowledge in all aspects of the red meat value chain
- Where appropriate, explore value add and premium strategies targeted at key market opportunities
- Establish a strong and effective advocacy presence at a national and international level to promote the value of the industry in Australia, to Australians, and the quality of Australian red meat in international markets
- Improve productivity throughout the value chain while reducing the industry’s environmental and social impacts
- Identify and address priority technical barriers to trade
- Define and develop a competition response plan to the live export market and to other protein segments

2.5 Supply Chain

The Red Meat supply chain covers inputs, production, processing, distribution (wholesale & retail) and the end customer. AgTech, FoodTech and Food Innovation can target innovative solutions throughout the supply chain.

The supply chain has relied on a production cycle that hasn’t changed for nearly a decade. The lack of vertical integration from the producer to the processors has a significant cost effect, which results in an estimated additional cost of \$100 a head for beef cattle.

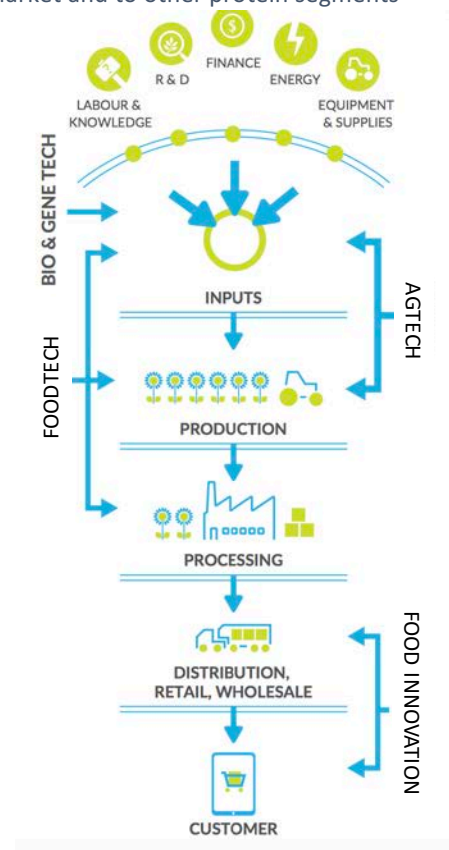
Additional costs are also incurred due to the absence of data analytics that could be performed along the supply chain. Another factor identified to be causing inefficiencies and preventing greater industry collaboration is a lack of loyalty and trust between producers and processors.

1. Pre-production

- **Service providers** - Cattle producers mainly rely on third parties for technical help and advice. Their tasks vary from purchasing stock, providing marketing advice to assisting in the implementation of specific strategies.
- **Genetics** - Although Australia lacks optimal scale of integrated stud stock producers, their role is crucial as they provide favourable genetics to producers, enabling them to maintain quality and profitability. Techniques such as artificial insemination and embryo transfer enhance the quality of the meat.

2. Cattle production

Australian cattle production includes both small and large producers. Smaller herds are mainly concentrated in the southern regions of Australia including key production companies such as Minnamurra Pastoral Company, Watervalley and Sundown Pastoral Company. Larger, corporate style cattle businesses operate in the northern regions, including major industry players such as Australian Agricultural Company, Consolidated Pastoral Company, North Australian Pastoral Company and Paraway Pastoral Company. The key advantage these major companies enjoy is a reduction in climatic risk derived from the ownership of an environmentally diverse cattle area.



3. Feedlots

Feedlots have gained popularity over the past decades as they have the capacity to feed a large herd numbers (> 1M) at any one time. Given the multiple diet trends, fads and an increase in the options available to consumers, the prevalence of feedlots in Australia is expected to increase as demand for grain-fed meat increases. Concentration of feedlots and processing companies is quite significant compared to cattle production. For instance, Cargill, the world's largest agricultural commodities company, has acquired various feedlots and processing plants throughout Australia.

4. Live transportation

Live transportation is progressively becoming more significant as rapidly growing international markets such as Egypt, Iran and Indonesia have increased demand for live cattle.

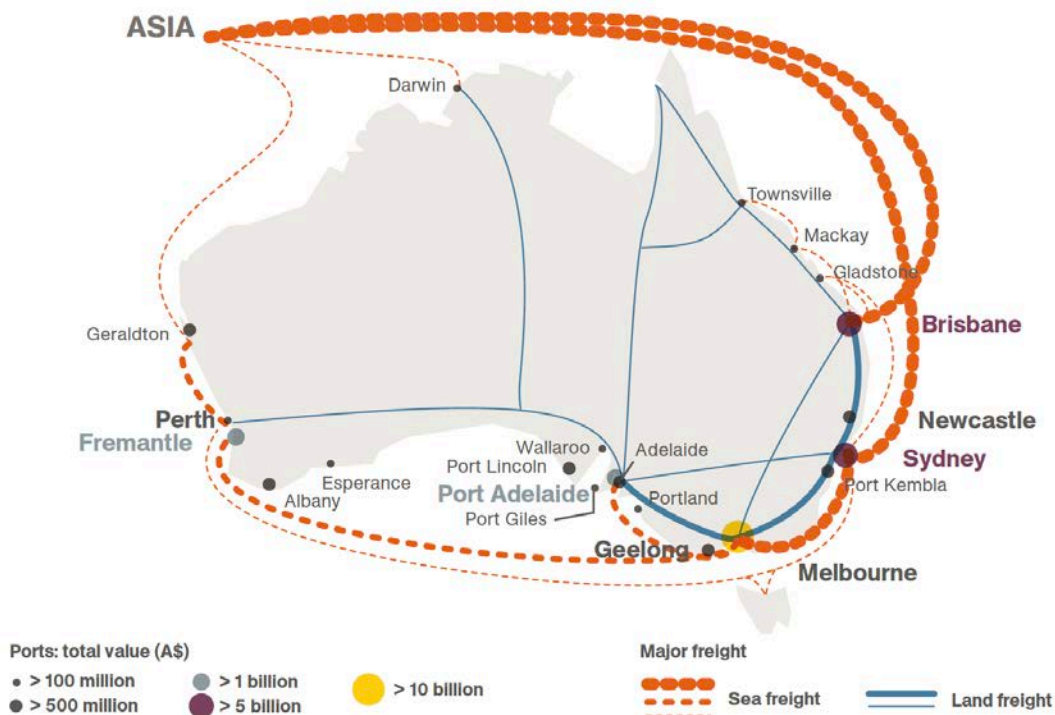
5. Processors

Consolidation in the processing industry has occurred over the past years, resulting in market concentration. Four key processors controlling about 20% of the total market dominate Australia's processing facilities. While most processing facilities are located on the east coast, new hubs have emerged in WA and NT to meet increasing demand for live cattle.

6. Cold Transportation

Another key element of the supply chain is cold transportation. Meat products must be refrigerated/chilled or frozen after processing, and before shipment, to prevent spoilage and growth of pathogens. The challenge lies in guaranteeing a proper refrigeration temperature till product delivery.

Australia's AgriFood Sea & Land Freight Network



7. Marketing & Distribution

Australia's clean natural image and reputation as a reliable supplier of high quality, safe and nutritious red meat, underpinned by strict traceability and quality, underpins the red meat industry's international marketing activities. Australia exports red meat to more than 100 countries.

8. Retailer

The last bit of the supply chain consists of either final processed products being shipped nationally/internationally or being sold to the domestic market. Branding, packaging and marketing all play an important role in gaining the attention of customers with myriad choices of meat products and competing protein rich food sources. As tastes and social acceptability changes, and as new challenges arise (including alternate protein sources and lab produced meat) the sustainability of the red meat industry may depend upon its ability to identify new product extensions and to market them successfully.

3. AGRIFOOD TECH & INNOVATION ECOSYSTEM

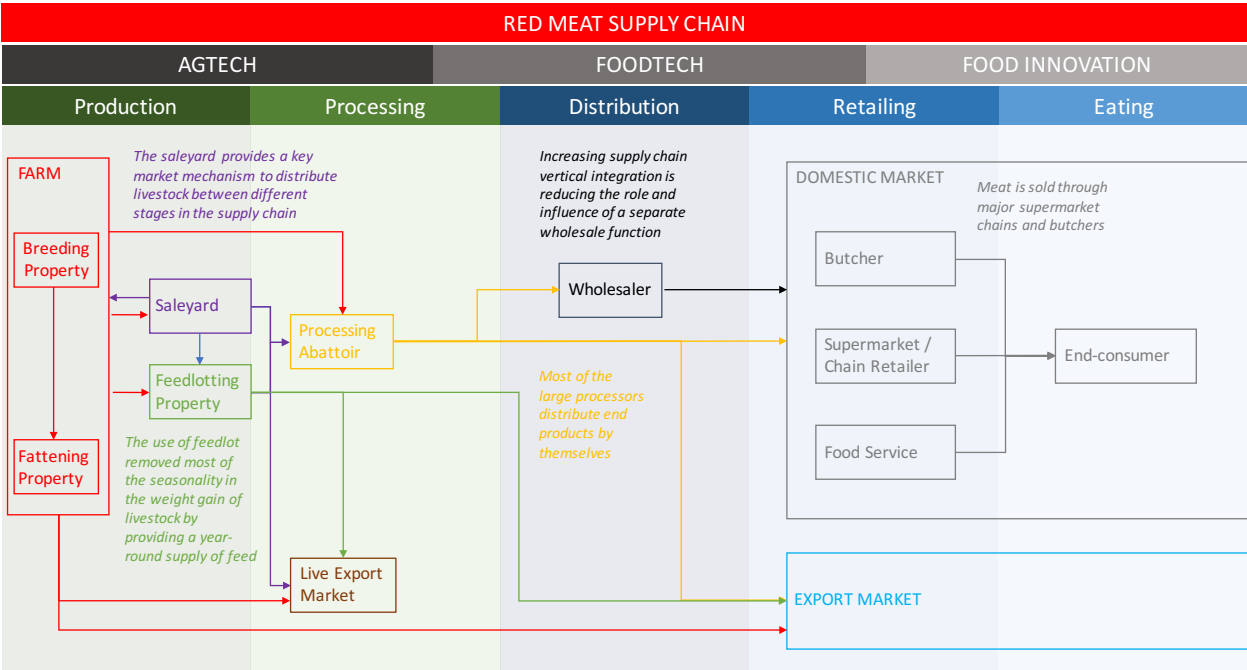
This section looks at the three key verticals that constitute the overall agriculture and food innovation ecosystem including their inter-connections, participants and stakeholders

3.1 AgriFood Tech and Innovation

AgriFood Tech startups and innovations can be divided into 3 overlapping sub categories:

1. **AgTech:** is the use of technology in agriculture with the aim of improving yield, efficiency, and profitability. AgTech can be products, services or applications derived from agriculture that improve various input/output processes.
2. **Food Tech:** the application and use of technology to improve food production, the supply chain, the distribution channels and ultimately consumption.
3. **Food Innovation:** Food innovation involves the design and development of new food products, the improvement or combination of existing food products, research into food trends and food management.

The diagram below shows the key components of the Red Meat supply chain and their relation to AgTech, FoodTech and Food Innovation categories.



3.2 AgTech

More than \$800M has been invested in the ag tech space between 2012 and 2016. Probably not coincidentally, that activity picked up significantly in 2014 after The Climate Corporation acquisition, with a spike in Q1'14. Seed-stage ag tech companies accounted for most deals through 2014, but since then we've started seeing more Series A financings. There have been a handful of Series B and later-stage rounds in recent years as well.



Corporates are becoming more active players in the ag tech ecosystem with many setting up their own venture arms to invest in startups. Corporates took 3 of the top 10 spots for most active investors, with Monsanto and Syngenta being the most active through their investment arms. Corporates now participate in nearly a quarter of all deals, up from as few as 3% of deals in 2013. Some of the agribusiness corporates are confronting industry shifts head on, while others are acquiring companies and consolidating. (The space is seeing mega consolidations at the top, including Bayer-Monsanto and Dupont-Dow.)

It's useful to think about ag tech companies using a few different frameworks to figure out who they're targeting and what value they're adding.

- The first is to look at whether they're targeting the operating costs of a farm or if they're more involved with the overhead costs, which tend to cover the physical assets on a farm.
- It's useful to also think about where in the actual supply chain these companies are targeting. Are they trying to help farmers get their materials, connect consumers to farmers, or improve the distribution of goods?
- And finally, are these companies replacing processes that already existed in farming, making those processes more efficient, or creating entirely new processes that may not have existed before?

3.3 FoodTech

The food tech landscape in 2016 saw 377 companies emerge, with funding activity dipping by 28% and number of funding rounds declining by 22% from previous year. Average ticket size in early stage showed the sharpest uptick for Series B (29%) with funding amounts falling for both seed (33%) and Series A (20%). Ele.me scooped the largest funding (\$1.3B) from Chinese giants Alibaba and Ant Financial, followed by Deliveroo (\$275M, Series E). 500Startups and SOSV were the most active investors. The year saw 16 acquisitions of which deal values of only four were disclosed among which Anova Culinary's acquisition by electroluxgroup.com for \$250M closed at the highest.

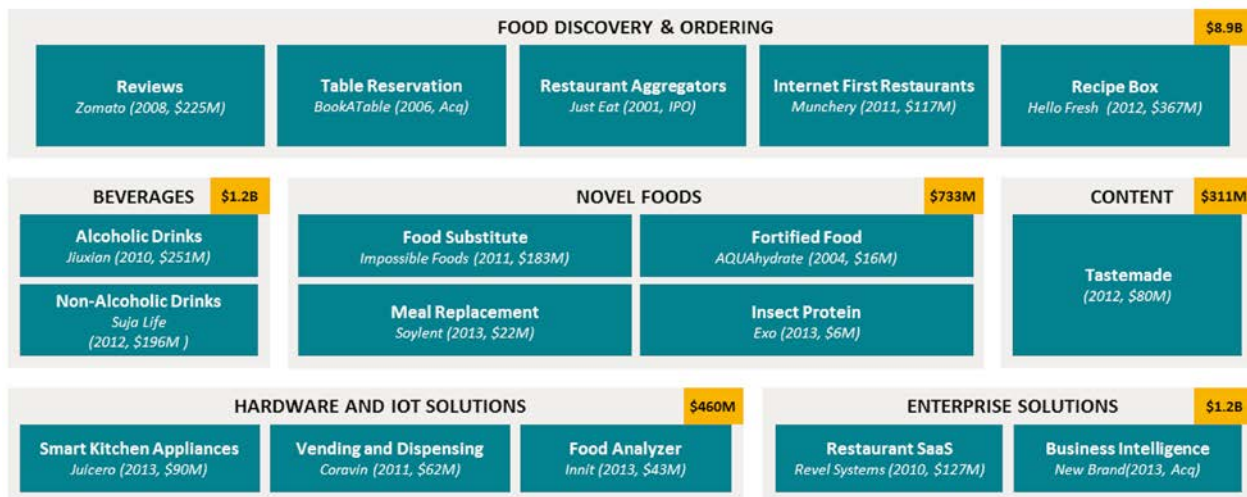
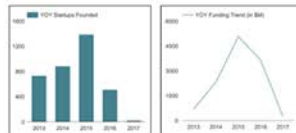


Tracxn BlueBox : Food Tech

May 2017

5500+ companies in the sector, 1041 funded in the last 5 years. \$3.9B invested in 2016/17

Most Active Investors: 500 Startups, SOSV, Y Combinator, Techstars, Kima Venture, Khosla ventures, Sequoia Capital

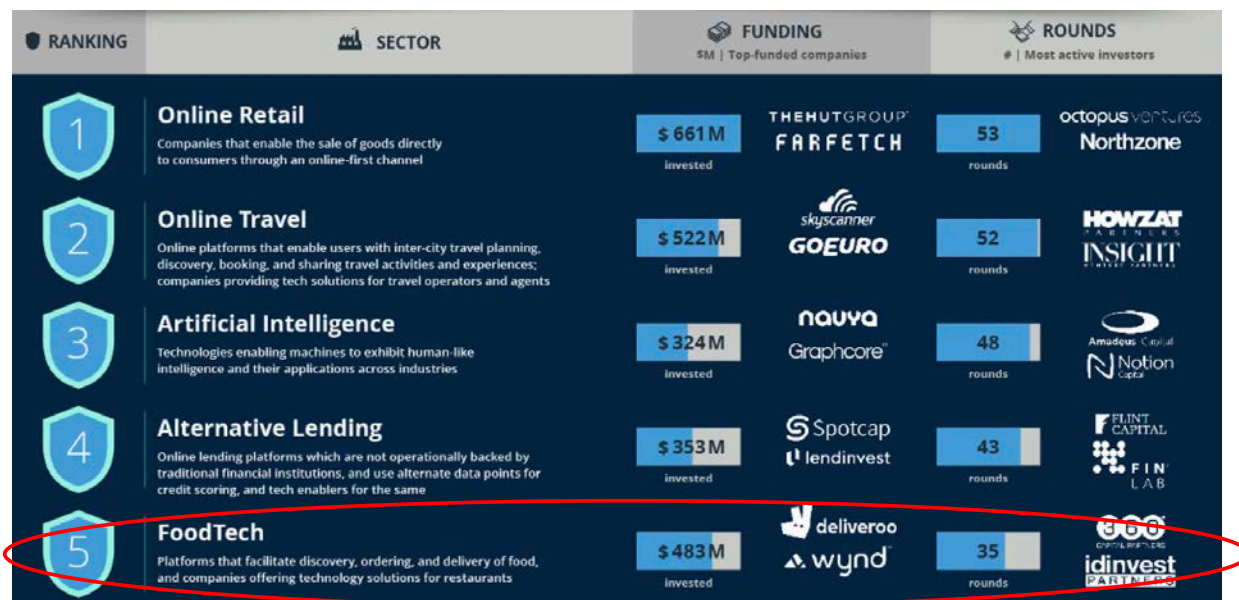


Practice Area - Consumer | Analysts: @Pushpesh

Cumulative funding in the sector



2016's Hottest Tech Sectors in Europe (Source: Tracxn)



3.3.1 Drivers of M&A in the FoodTech Sector

Drivers of investment and acquisition in the FoodTech sector:

- New sales & distribution channels
- Integration with databases and APIs
- Access to younger population
- Access to mobile & social layers
- Geographical expansion

- Expansion to new product categories
- Content acquisition
- Talent acquisition

3.3.2 Alternative Protein Sources

FoodTech Startups are looking at alternative sources of protein that will complement or replace meat based protein. Examples include both alternative sources as well as lab-grown foods:

Insect protein: has recently seen more media attention as a less resource intensive protein source than traditional meats. While insect-eating (also known as “entomophagy”) has historically been frowned upon in many Western cultures, a 2013 report from the United Nations suggested that the consumption of wasps, beetles, and crickets could help alleviate world hunger due to their high protein and mineral content, and the relatively low environmental costs of production, including lower water and feed needs. Indeed, the report found that crickets require 12 times less feed than livestock to produce the same amount of protein. Startups operating in this space include Chapul, Exo, Entomo Farms, Tiny Farms, Six Foods, Crik Nutrition, Aspire Food Group, Bitty Foods, Flying spark, Livin Farms and Critter Bitters.

Lab-grown Meat: it’s possible we skip the farm altogether. The cost of lab-grown foods has dropped dramatically, with some companies creating animal products in labs and meals in a bottle (Soylent, Ample). These methods theoretically can produce foods more efficiently without all the inputs that farms require and in a much shorter time span. Startups operating in this space include Modern Meadow

Patent for Lab-grown Meat

Title: Dried food products formed from cultured muscle cells

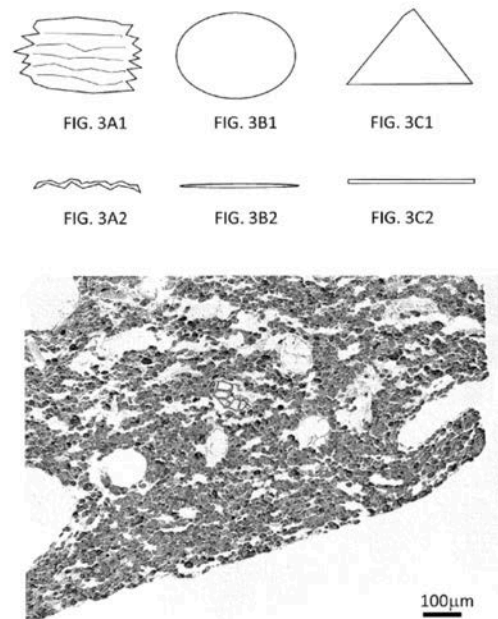
Company: Modern Meadow

Date granted: May 9, 2016

Date filed: February 5, 2015

Modern Meadow aims to use biotechnology to create synthetic animal products. Currently, they are using DNA editing to biofabricate collagen to create animal-free leather. In May 2016 they were granted a patent for synthetic animal-free food products, titled “Dried food products formed from cultured muscle cells.

“The process in the patent uses cultured animal muscle cells, combined with a plant-based hydrogel to nurture the cells, and added flavoring. The food product is then dehydrated, and the patent says it could be shaped into any dry food product, including chips, bars, or jerky. The food will be high-protein, gluten-free, and low in fat, according to the patent. Unlike some other meat substitute startups, which try to make tofu or plant products taste like meat, Modern Meadow actually uses animal cells, though the food would come from a lab rather than directly from an animal. See top and side views of the dehydrated chip below.



3.4 Food Innovation

In the food industry, just as any other industry, product and process development is considered a vital part, indeed the lifeblood, of smart business strategy. Failure to develop new and improved products relegates firms to competing solely on price which favours the players with access to the lowest cost inputs (land, labour etc).

Food innovation is primarily focused on product development. There are essentially four basic stages in these models for every product development process. These are:

- product strategy development;
- product design and development;
- product commercialization;
- product launch and post-launch.

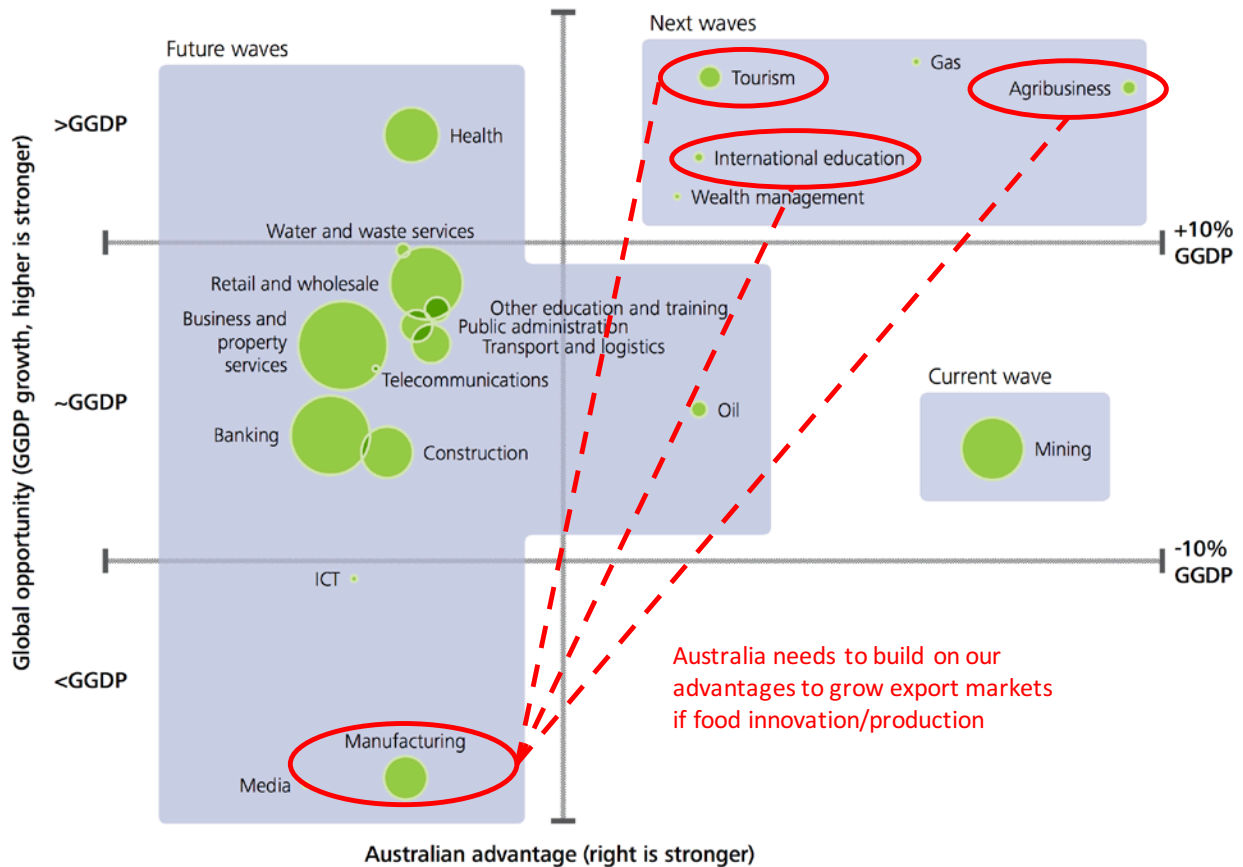
There are many ways to classify the degree of newness of a product. Generally this can be divided into seven categories:

- creative products;
- innovative products;
- new packaging of existing products;
- reformulation of existing products;
- new forms of existing products;
- repositioned existing products;
- line extensions.

Supermarkets in Australia and New Zealand have around 12,000 to 25,000 food and beverage stock keeping units (SKUs) on their shelves.

Typically, in Australia and New Zealand, there are between 5,000 and 10,000 “new” products offered to these supermarkets each year (about 18,000 a year in the USA) and about 10% are chosen to be displayed on the shelves.

Australia's current, next and future waves of growth, 2013–33



Source: Deloitte Access Economics

In Food Innovation, Australia needs to exploit advantages to build export markets including:

1. Safeguarding & reinforcing clean/green
 - continual development of improved systems
 - pro-active combatting of threats
 - credibility through technical leadership
2. Provenance, tourism, uniquely Australian
 - linking eating quality to food origins (“terroir”)
 - leveraging tourism to build “Australian cuisine”
 - foods with uniquely Australian attributes
3. Adding value to high quality agriculture
 - from commodities to specialties
 - enhancement of nutritional attributes
 - “fork to farm” not “farm to fork”
 - international students as future trading partners

3.5 Innovation Focus of the AgriFood Innovation Ecosystem

The diagram below summarizes the current key focus areas of the AgTech, FoodTech and Food innovation sectors.

AGRI FOOD INNOVATION ECOSYSTEM				
AGTECH		FOODTECH		FOOD INNOVATION
Production	Processing	Distribution	Retailing	Eating
<ul style="list-style-type: none"> Robotics/Automated Farms/UTVs Guidance Precision Agriculture Equipment/Asset Tracking Nutrient/Fertilizer Variable Rate Tech Irrigation Soil Climate Imagery Systems UAV Platforms/Systems Satellite Imagery Systems Data/Analytics Field Monitoring Traceability/Safety Farm Management Livestock Management Enterprise Resource Planning (ERP) Trading Market Information Collaboration Technology Lab Grown Foods 	<ul style="list-style-type: none"> ERP Packing/Processing Supply Chain/Logistics Quality Management Packaging 	<ul style="list-style-type: none"> Supply Chain/Logistics Marketing Farm-to-table Perishability Marketplaces 	<ul style="list-style-type: none"> Marketing Grocery/CPG Mobile Solutions Product Guides & Discovery Online Grocery Ordering & Delivering Marketplaces 	<ul style="list-style-type: none"> Recipes & Cooking Communities Recipe Box & Search Publishers Digital Content Brand Advertising & Marketing Platforms Nutrition/Wellness Delivery: Ready to Cook Meals Delivery: Prepared Meals & Catering Culinary/Experiential Marketplaces Food 3D Printing Next-gen food/Meal replacement

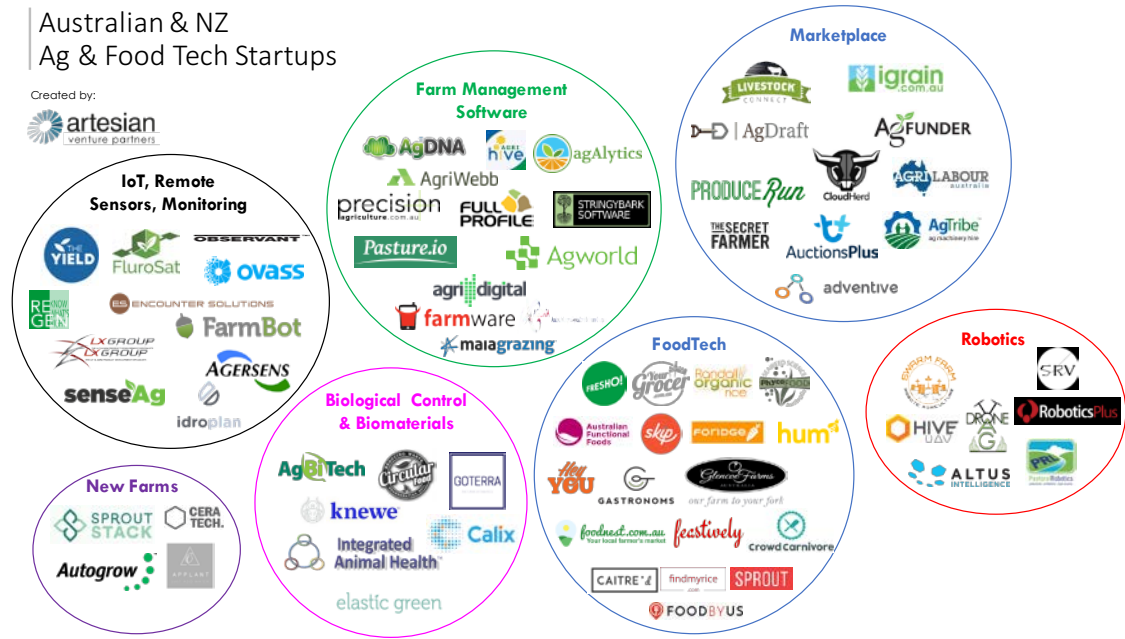
3.6 Global AgTech Startups

The diagram below shows 100 of the leading global AgTech startups



3.7 Australian AgriFood Startups

The diagram below shows 71 of the leading Australian and New Zealand AgriFood startups

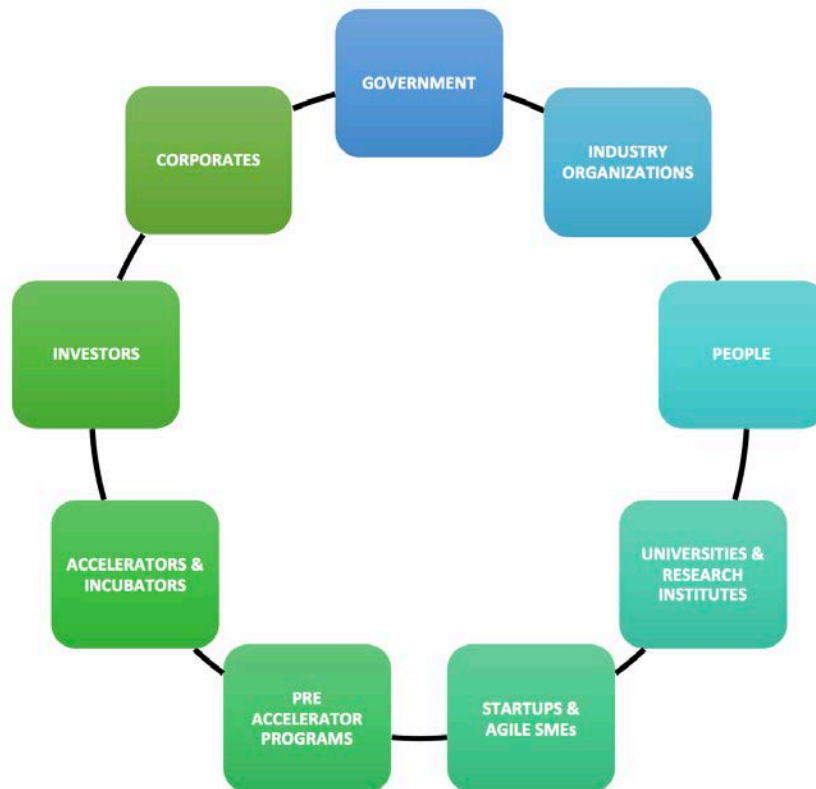


4. AUSTRALIAN ECOSYSTEM PARTICIPANTS

This section looks at the key participants in the Red Meat Innovation Ecosystem

4.1 The Red Meat Industry Innovation Ecosystem

The Red Meat Industry innovation ecosystem can be divided into 9 key components:



4.2 Government

The Food and Agribusiness sector is an important part of the Australian economy and makes a significant contribution to the economies of regional areas through employment, business and service opportunities.

The Australian Government's Industry Innovation and Competitiveness Agenda identifies Food and Agribusiness as an area of competitive strength for Australia and prioritises it as a growth sector through the Food and Agribusiness Industry Growth Centre.

The Australian Government is committed to creating the right conditions for Australian businesses to invest and grow, by:

- Lifting competitiveness and productivity of the Food and Agribusiness sector
- Providing advice and support to small and medium businesses
- Providing tax incentives to encourage businesses to invest
- Helping business to develop the workplace skills they need

- Building Australia’s capabilities in trade and innovation

4.2.1 The Department of Agriculture and Water Resources

The Department of Agriculture and Water Resources is responsible for policy and programs that support a globally competitive and sustainable Australian food industry. Key areas of focus include the development of competitive agricultural policy, food value chain policy and food regulation reform.

The department works with other Australian Government agencies such as the Department of Health and Food Standards Australia New Zealand (FSANZ), as well as state and territory governments, to simplify and streamline food regulation and labelling. The aim is to ensure a more efficient and effective domestic food regulatory system that protects public health and safety while recognising the need for an internationally competitive food industry.

The Department of Agriculture and Water Resources works with the Department of Industry and Science, which has a focus on the food processing and manufacturing sectors.

The Department also works with industry to address potential gaps or vulnerabilities in the food chain safety and security system, and are committed to ensuring that Australian interests are considered in the development of international food standards.

4.2.2 The Department of Industry, Innovation and Science

The Department of Industry, Innovation and Science is a focal point for the development and analysis of Food and Agribusiness industry policy issues within the Australian Government.

In addition to providing policy advice and support to portfolio Ministers on Food and Agribusiness industry matters, the department is also responsible for promoting and maintaining links across Australian Government departments and agencies involved in implementing elements of the Government's Food and Agribusiness policies.

4.2.3 Key Federal Government Agencies and Websites

The key federal government agencies and websites relevant to the agriculture industry include:

- Department of Agriculture and Water Resources
- Department of Infrastructure and Regional Development
- Department of the Environment
- Australian Competition & Consumer Commission (ACCC)
- Department of Industry, Innovation and Science
- Australian Pesticides and Veterinary Medicines Authority (APVMA)
- National pests & disease outbreaks website
- National Water Commission
- Murray-Darling Basin Authority
- Clean Energy Regulator
- Climate Change Authority
- National Water Market website

4.2.4 Key State Government Agencies

The key state government agencies relevant to the agriculture industry include:

- ACT Territory and Municipal Services

- NSW Department of Primary Industries
- NT Department of Primary Industry and Fisheries
- QLD Department of Agriculture, Fisheries and Forestry
- SA Department of Primary Industries and Regions
- TAS Department of Primary Industries, Parks, Water and Environment
- VIC Department of Environment and Primary Industries
- WA Department of Agriculture and Food

4.2.5 Red Meat Industry

The red meat industry has primary responsibility for its own affairs and strategic future direction. The Australian Government provides matching research and development funding, collects and disperses levy monies and facilitates the management of issues of national importance.

Government works closely with the industry on market access and development opportunities and in furthering the interests of the industry in dealing with overseas governments and in multilateral negotiations.

The industry's structural arrangements are set out under the Australian Meat and Live-stock Industry Act 1997. The Red Meat Memorandum of Understanding (MOU) underpins these arrangements.

4.3 Industry Organizations

4.3.1 Key Agriculture & Food Industry Bodies

The Red Meat MOU is an industry

4.3.2 Industry Peak Councils and Service Companies

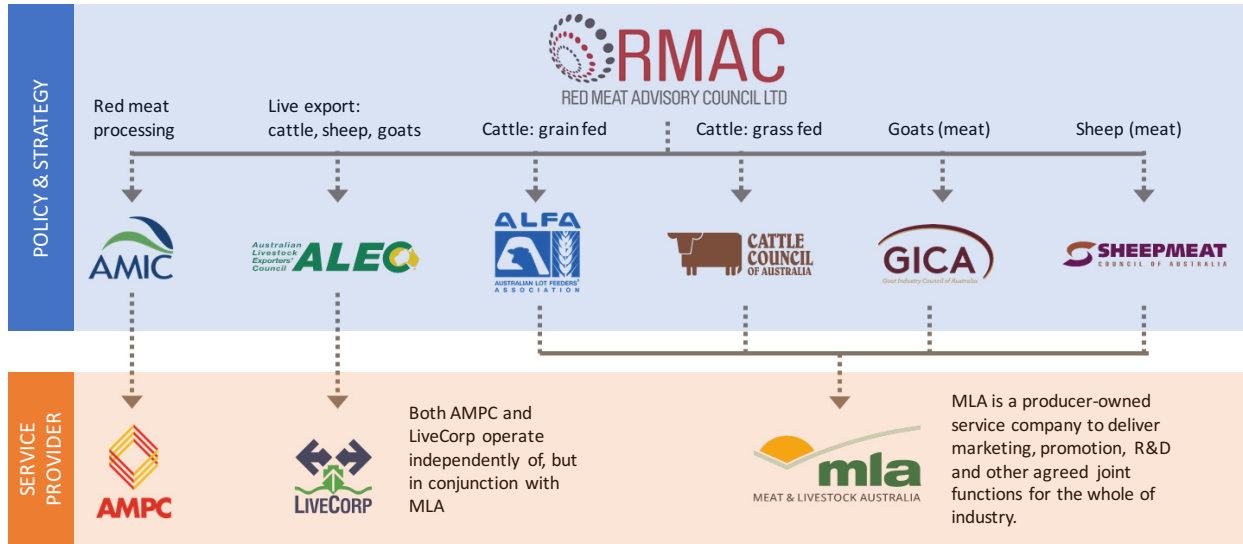
The Red Meat MOU is an industry-government partnership document between the Red Meat Advisory Council (RMAC) Members & RMAC Stakeholders.

RMAC is the custodian of the Red Meat MOU.

The Red Meat Memorandum of Understanding (MOU) sets out the agreed industry arrangements for:

- Policy development & advocacy
- Crisis management
- Industry engagement
- Research and marketing activities
- Engagement framework between RMAC Members and Stakeholders
- Governance arrangements for the Red Meat Industry Fund

RMAC is the peak industry body sitting above the Industry Peak Councils and Industry Service Bodies.



4.3.3 Red Meat Supply Chain Committee

The role of the Red Meat Supply Chain Committee (RMSCC) is to provide coordination and direction for the development and adoption of supply chain information standards and guidelines.

The committee focuses on identification and information technologies and systems, from livestock production through to domestic retailers and international markets.



4.4 People

When mapping an innovation ecosystem, it is important to track not only all the organizations but also the key people across each of the ecosystem sectors. Key sector categories include:

- Boards
- Management
- Researchers/Inventors

- Entrepreneurs/Founders
- Professionals
- Investors
- Regulators
- Advisors
- Operators

4.5 Universities & Research Institutes

4.5.1 National Primary Industries Rural Development & Extension (RD&E) Framework

The Rural R&D Corporations (RDCs), along with the Australian, State and Territory governments, CSIRO, Bureau of Meteorology and universities are jointly implementing the National Primary Industries RD&E Framework to encourage greater collaboration and promote continuous improvement in the investment of RD&E resources nationally.

Under the Framework, primary industries RD&E is now more coordinated and collaborative. National research capability is better focused and used efficiently and effectively to achieve the best outcome and uptake by primary industries.

4.5.2 Rural R&D Corporations (RDCs)

RDCs invest in agricultural R&D on a competitive basis and partner with public and private providers using funds from levies on production which are matched by the Commonwealth.

The model has given rural industry the vehicle to negotiate new standards for investment, focussed on triple bottom line outcomes.

RDCs can fund R&D into production (on-farm) and processing (off-farm) issues, and are expected to fund portfolios of projects that have a mix of both public good and industry good components given the taxpayer contributions. The RDCs engage with a diversity of stakeholders in a shared vision of what the future can be for rural industries, updated in multi-year strategic plans and reinforced with each annual operating plan.

The RDC model allows for a targeted approach to R&D fund allocation by industry, where those funds are a mixture of government and industry contributions. Further, the model encourages accountability, allowing levy payers to contribute to RDC strategies including the amount of the levy collected.

The 15 RDCs are:

- Australian Egg Corporation Limited
- Australian Meat Processor Corporation
- Australian Pork Limited
- Australian Wool Innovation
- Cotton Research and Development Corporation
- Dairy Australia
- Fisheries Research and Development Corporation
- Forest and Wood Products Australia Limited
- Grains Research and Development Corporation
- Grape & Wine Research & Development Corporation
- Horticulture Australia Limited
- LiveCorp






- Meat & Livestock Australia
- Rural Industries Research & Development Corporation
- Sugar Research Australia Limited

4.5.3 Universities - Agriculture

Australian universities are internationally recognized for their agriculture degrees and research.

The 2017 QS World University Top 50 Rankings (by subject) includes The University of Queensland (19), the Australian National University (21), the University of Melbourne and the University of Western Australia (=31), and the University of Sydney (42).

The 2016 NTU Performance Rankings of Scientific Research Papers for world universities (agriculture) includes the University of Queensland (7), the University of Western Australia (29), the University of Melbourne (35), James Cook University (42), the Australian National University (47) and the University of Sydney (50).

	<p>Charles Sturt University has a collaborative research centre known as the 'Graham Centre'. The centre is run in connection with the NSW Department of Primary Industry and concentrates on innovation in grain and red meat production and value adding.</p>
	<p>Queensland Alliance for Agriculture and Food Innovation (QAAFI) is a UQ research institute and a partner to the Queensland Government's Department of Agriculture and Fisheries.</p>
	<p>The ANU-CSIRO Centre for Genomics, Metabolomics and Bioinformatics (CGMB) combines the strengths of two of Australia's best research institutions and aims to make discoveries in plant biological science that will benefit environmental management and crop deployment.</p>
	<p>University of Southern Queensland has research programs (supported by industry funding) focused on precision agriculture, smart technologies, spatial analysis, remote sensing and monitoring.</p>
	<p>The University of Sydney has performed a decade of research into autonomous, remote sensing and developing robotics and intelligent software for horticulture and livestock industries.</p>
	<p>The University of Tasmania are involved in 'Sense-T' and other AgTech related projects. Sense-T uses data, sensing technology and data analytics to improve decision-making and yields for farmers</p>
	<p>The University of Western Australia conducts research on food systems and agribusiness, including adoption of new farming technologies.</p>
	<p>QUT is involved in several AgTech projects, including AgBot, Harvey, Digital Homestead and the IntelliSensing research program.</p>
	<p>University of New England has a 2900-hectare Smart Farm and Innovation Centre located in Armidale, NSW. This is a demonstrator site for various agricultural technologies.</p>
	<p>James Cook University is a collaborating partner for the Digital Homestead located in Townsville, QLD. JCU leads the Digital Homestead project which has included research initiatives such as the 'Digital Dashboard' and the 'Walk over Weighing' system for animals.</p>

 Curtin University	<p>Up to 80 scientists will study crop genetics, fungicide resistance, agronomy, and farming systems at the new \$43 million national research centre for Crop & Disease Management located at Curtin University</p>
	<p>La Trobe University has unveiled a new agribusiness degree for its regional campuses designed to allow rural students the opportunity to study in the country. The new Bachelor of Business in Agribusiness course has been developed in response to needs from industry and will be offered at Bendigo, Shepparton, Wodonga and Mildura.</p>
	<p>As well as its Melbourne based facilities, the University of Melbourne operates the Dookie campus, a 2440-hectare agricultural education and research hub in the Goulburn Valley.</p>
	<p>Western Sydney University conducts research in areas including plant health & biosecurity, postharvest, water, environment & sustainability, crop physiology & biotechnology and food security</p>
	<p>Murdoch University has indicated an interest in a new food, agribusiness and technology-focused precinct proposed at Nambelup, near Mandurah in Western Australia. The Peel Business Park concept aims to create a strategic commercial hub around the rapid growth of technology in all aspects of horticulture, agriculture and food production.</p>
	<p>The School of Agriculture, Food and Wine represents a world-class concentration of scientific research, education and product conferring capability, with infrastructure and resources at the Waite Campus of the University of Adelaide with a number of research partners.</p>

4.5.4 Universities - FoodTech and Food Innovation

	<p>The ARC Training Centre for Food and Beverage Supply Chain Optimisation is training the next generation of multi-disciplinary researchers capable of designing, building, and managing safe, sustainable, and cost effective food supply chains which are vital for growing Australia's food industry and for increasing Australia's food exports. Projects at the ITTC cover topics including Post-harvest Science and Technology, Sustainable Food Supply Chains and Cold Food Supply Chains.</p>
	<p>UQ is serving up a smorgasbord of opportunity for the food industry with the opening of the new Food Science Innovation Precinct at the St Lucia campus. The University of Queensland's Bhash Bhandari, is researching 3D food. In the future, they could use synthesised meat from manufactured proteins, but they are currently only looking at using real food in the printers. He said consumer acceptance was an issue with synthetic food.</p>
	<p>The RMIT Food Research and Innovation Centre is a world-class facility that helps Australian businesses develop and market innovative, high value products for the global marketplace. It provides teaching and research training with the latest technologies, hands-on experience in product development, food safety, quality assurance, nutrition and industry placements.</p>
	<p>The UoW Smart Foods Centre was originally established in 1999 as an ARC Key Centre for Teaching and Research, and from 2007 has continued to be a University of Wollongong research initiative within the Faculty of Science, Medicine and Health. The Centre also supports its research funding through commercially funded research projects for companies within the Australian food and beverage industry.</p>

 UNIVERSITY of TASMANIA	The University of Tasmania launched its new Centre for Food Innovation (CFI) in April 2017. CFI is a partnership that aims to help diversify Tasmania’s economic base by growing exports of high-quality, nutritious, value-added food products
 MONASH University	The Food Innovation Centre at Monash University is an industry shared world class facility operated by industry & innovation practitioners to provide accessible expertise, capabilities and facilities at to grow businesses for local Australian and export markets.
 UNSW AUSTRALIA	The UNSW ARC Training Centre for Advanced Technologies in Food Manufacture was established in 2013 to provide an environment and opportunity for emerging scientists and technologists to develop manufacturing solutions for the Australian food industries.
 THE UNIVERSITY of ADELAIDE	The South Australian Food Innovation Centre has been established to maximise future opportunities for South Australia’s food and beverage industry by supporting innovation and encouraging commercialisation of new ideas and products. The University of Adelaide and the University of South Australia are partners in the Centre along with the SA Government

4.5.5 CSIRO

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia’s largest scientific research organisation, and one of the largest and most diverse scientific organisations in the World.

Working from sites across Australia and around the globe, CSIRO seeks to provide new ways to improve the quality of life for all Australians, as well as the economic and social performance of Australian industries. CSIRO’s research and development has delivered technology solutions that meet the needs of businesses across the economy, including the mining, agriculture, manufacturing, and services sectors. This has enabled those industries to innovate and improve their competitiveness and helped them to prosper and grow.

Agriculture and Food is one of the CSIRO’s 9 key national business research units.

The CSIRO’s diverse food and farming research ranges from studying the make-up of crops and animals to the methods and food processing technologies that may be developed to produce healthier, safer and more sustainable food.

CSIRO’s food innovation centre makes it easy for food, ingredient and equipment manufacturing companies to access our extensive expertise, technologies and support in innovation. From adopting innovative technologies and improving process efficiency to creating high value products for new markets, we partner with industry every day. The CSIRO have world-class laboratories and expertise in most states and food manufacturing research and development pilot plants in Melbourne, at Werribee in Victoria, and in Brisbane, at Coopers Plains.

4.5.6 Cooperative Research Centre Program

The Cooperative Research Centres (CRC) Program is a competitive, merit based grant program that supports industry-led and outcome-focused collaborative research partnerships between industry, researchers and the community.

It aims to:

- improve the competitiveness, productivity and sustainability of Australian industries, especially where Australia has a competitive strength
- deliver outcomes in line with government priorities
- encourage and enable small and medium enterprise (SME) participation in collaborative research

- foster high quality research to help solve industry specific problems through collaborative research partnerships between industry entities and research organisations.

There are currently over 30 CRCs covering sectors including Mining and Infrastructure, Agriculture, Manufacturing, Environmental Services, Medical Services and Social & Economic Development.

Two CRCs relevant to the Red Meat Industry are:

Sheep Cooperative Research Centre

The Sheep CRC, based at UNE in Armidale, is an independent organisation that performs research and develops technologies to enhance the Australian sheep industry. The CRC receives grant funding from the Australian Government and its Participants contribute cash and in-kind resources.

Over forty organisations, from all sectors of the sheep supply chain, are working together with the Sheep CRC to make the possible practical. The three programs of research are:

- Enhanced sheep wellbeing and productivity
- Quality based sheep meat value chains
- Faster affordable genetic gain



Program 1 - Enhanced sheep wellbeing and productivity. New ways of predicting risks to sheep wellbeing will be developed based on big data applications that draw on weather data, analysis of the Information Nucleus database and regular monitoring to identify management factors that influence risk to wellbeing and productivity. This analysis will be used to build web-based apps that use past and current data to inform management decisions involving culling, nutrition and animal health treatment.



Program 2 - Quality-based sheepmeat value chains. Improved efficiency of the sheepmeat value chain will be achieved through application of new knowledge and technologies that provide accurate prediction of eating quality and saleable yield of retail cuts most suitable for consumers and retailers. The same research solutions developed for lamb supply chains will be used to create opportunities for currently undervalued heavier lean lamb and yearling Merino carcasses.



Program 3 - Faster affordable genetic gain. The development of more accurate and affordable DNA tests will bring genomic technology into the mainstream of Australian sheep breeding practices. Next-generation DNA sequencing of samples in the Information Nucleus bio-bank will be used to both boost the accuracy of genomic selection tools and develop significantly cheaper DNA tests for ram breeding programs. Faster rates of genetic improvement and more flexible breeding objectives set the scene for future growth and increased productivity.

Food Agility Cooperative Research Centre

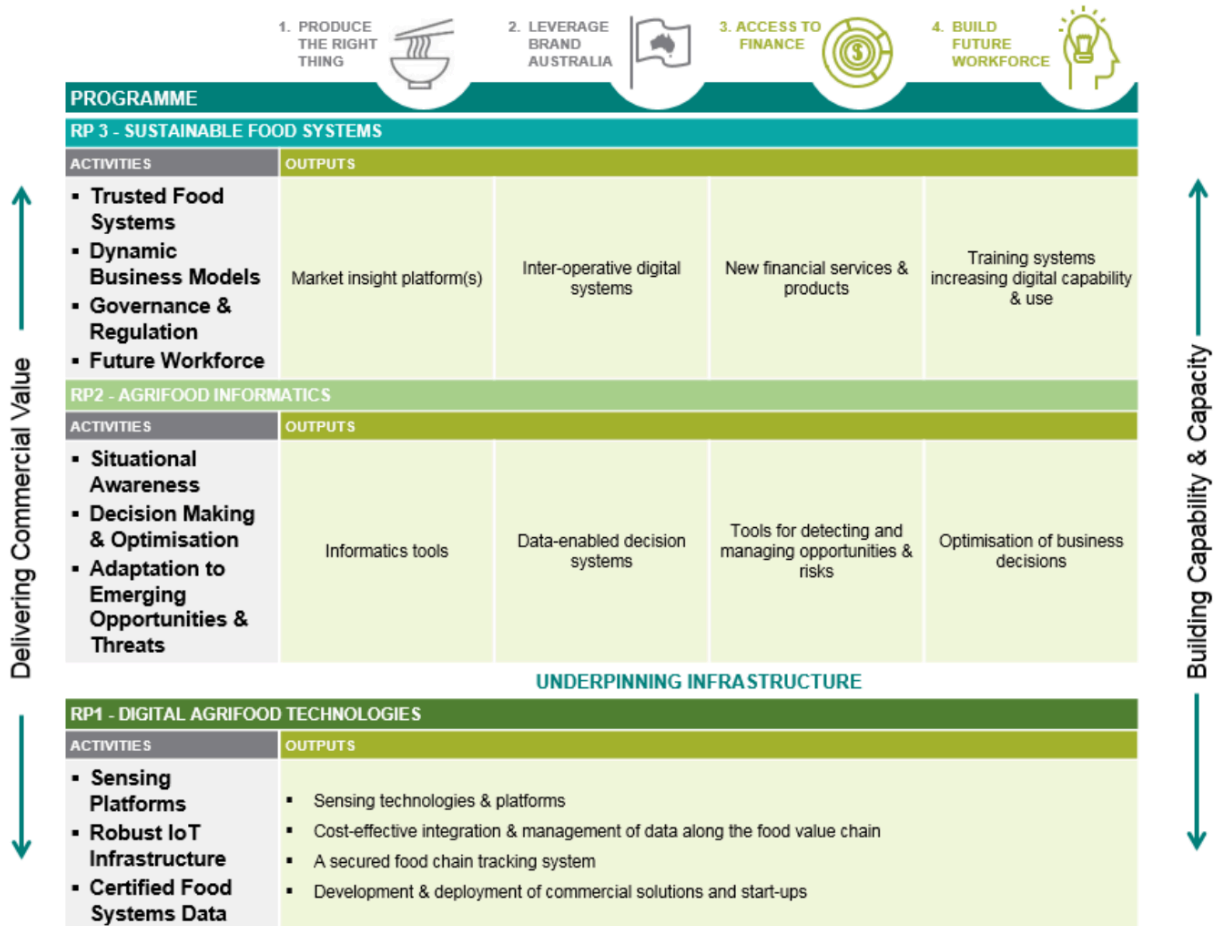
In March 2017, the Federal Government announced \$50 million for a new Food Agility Cooperative Research Centre (CRC) to help producers with innovation and technology.

With an additional \$160 million committed by 54 partners in private business and universities, including the University of Technology Sydney, Queensland University of Technology, Brisbane, and Curtin University in Perth - the whole fund is \$210 million over 10 years.

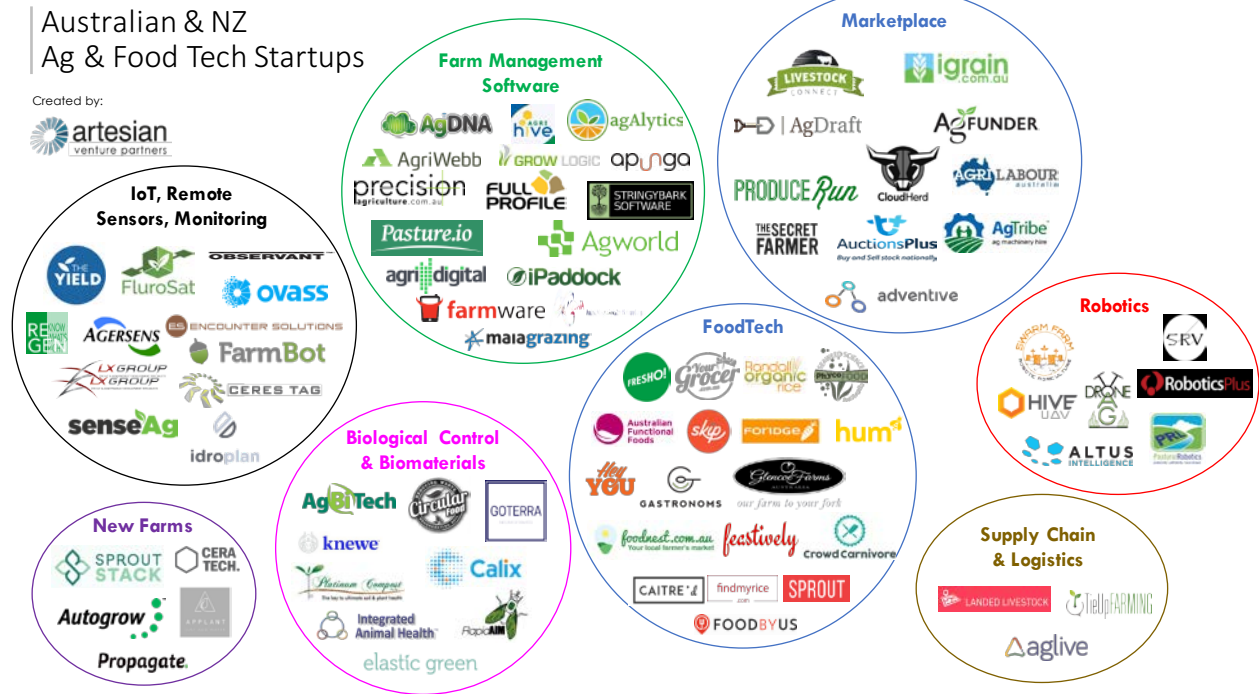
As consumer preferences change rapidly, the CRC aims to help producers adapt and develop food that will have good safety records, high quality, and ensure production is environmentally and socially sustainable.

Consultation across industry and researchers has focussed three research programmes to ensure delivery to those four industry-specified imperatives outlined above.

In the graphic below, the imperatives run across the horizontal axis, and the research programmes up the vertical axis.



4.6 AgriFood Startups & Agile SMEs



4.7 Pre-Accelerator Programs

Australia & NZ Pre-Accelerator & Grass-Roots Ecosystem Activities

Pitching Events

FoodVenture

Industry Events

food
TECHNOLOGY
QUEENSLAND

400
m
AgTech
Investment
Forum 2017

EVERYTHING
IoT

GROW
AG
CULTIVATING EXCELLENCE IN
FOR OUR FARMING FUTURE

Hackathons

IoT CUP
Internet of Things
Australia and New Zealand

UNI HACK

agrihack

DESIGNATHON

**Telstra Innovation
Challenge
2017**
Build the future of agriculture

AgCatalyst
Creating opportunities for agriculture and food

**SUPPLYCHAIN
HACKATHON**

HACKATHON MANAWATU

SproutX
Agritech

4.8 Accelerators & Incubators

<p>AccelFoods AgLaunch Agri N.E.S.T</p> <p>Agri-Business Incubation AgroInnovation Lab Alltech Pearse Lyons Amius Startup Prgm. Bigbang Angels Bits x Bites Canopy San Diego CaoHeJing Innovation Incubator CIIE - Centre for Innovation Incubation and Entrepreneurship Climate Ventures 2.0</p> <p>Cradle Dig Eat All Food Future</p> <p>Food Hatch Food System 6 Food-x Goa-based accelerator Center for Incubation and Business Acceleration</p>	<p>Good Food Business Accelerator H-FARM Food Accelerator Incubator for Agribusiness and Agroindustry Indie Bio Iowa Ag Startup Engine Just Eat FoodTech Accelerator Kitchen Sync. Kolaborasi NXTP Labs AgroTech Program Pearse Lyons Accelerator Prometheus QIAO LAB</p> <p>Radicle</p> <p>RevTech Labs RuralHub Shanghai Yangpu Technology Business Incubator Center Simplot Ignite SKU Skywalker Accelerator Small World Group</p>	<p>Sprout Agritech SproutX Square Roots</p> <p>Startup Bootcamp- FoodTech Startup Next by Land O'Lakes TechStars Connection (ABInBev) Terra The Hatchery The Yield Lab Thrive Accelerator Unframed Vietnam Silicon Valley</p> <p>Village Capital Agricultural Accelerator Villgro Incubator Vitagora's Accelerise</p>
--	---	---

4.9 Investors

1823 Ventures	DBL Partners	New Crop Capital	Sands Capital
500 Startups	DNS Capital	New Ground Ventures	Seeders venture capital
Accel Partners	East Ventures	Oak Investment Partners	SeedPlus
Acre Venture Partners	Enterprise Angels	Obvious Ventures	Sequoia Capital
Acre Venture Partners	Fall Line Capital	Omnivore Partners	Somerset Capital
Advantage Capital Partners	Fall Line Capital	Paine Schwatrz Partners	SOSV
Ag Ventures Alliance	Fenox Venture Capital	Paradice Investment Management	Stonyfield
Agfunder	Finistere Ventures	PCGInvestors	Stripes Group
AgriAngels	Finistere Ventures	Prelude Ventures	SVG Partners
Alacrity Capital	First Round Capital	Just Eat Ventures	SVG Partners
AME Cloud Ventures	Forerunner Ventures	Khosla Ventures	Tao Capital Partners
Andreessen Horowitz	Fortune Ventures	Kleiner Perkins Caufield & Byers	Temasek
AquaAgro Fund	Fresco Capital	Lerer Hippeau Ventures	The Yield Lab
ARCH Venture Partners	Golden Gate Ventures	Lowercase Capital	Thrive Capital
Artesian Venture Partners	Google Venture	Macdoch Ventures	TPG Capital
Ascent Capital	Greenmont Capital Partners	Meridian Capital China	True Ventures
Avrio Capital	Greensoil Investment	Middleland Capital	Tsing
Barn Raiser	Horizon Ventures	MIG Angels	Tsing Capital
Bessemer Venture Partners	IMJ Investment Partners	Monk's Hill Ventures	Tyson New Venture
Bio Pacific Parnters	Index Ventures	Monsanto Growth Ventures	Union Grove Venture Partners
Blueberry Ventures	Initialized Capital	New Crop Capital	UTIMCO
BlueHill Asset Management	INNOVA Memphis	New Ground Ventures	Venturra
Blume Ventures	Investment Group	Oak Investment Partners	Verlinvest
Catamount Ventures	JJ Venture Capital	Obvious Ventures	Viking Global Investors
CircleUp	Just Eat Ventures	Omnivore Partners	Vortex Ventures
Coca-Cola Alliance	Khosla Ventures	Paine Schwatrz Partners	Willow Hill Ventures
Collaborative Fund	Kleiner Perkins Caufield & Byers	Paradice Investment Management	WNT Ventures
Consumer Growth	Lerer Hippeau Ventures	PCGInvestors	Yuuwa Capital
Convergence Ventures	Lowercase Capital	Prelude Ventures	Zodius Capital
Copia-Agro	Macdoch Ventures	Primorus Investments	
Corigin Ventures	Meridian Capital China	QIC	
Cultivian Sandbox	Middleland Capital	Radar Partners	
Cultivian Sandbox Ventures	MIG Angels	RRE Ventures	
CyberAgent Ventures	Monk's Hill Ventures	Rustic Canyon/Fontis Partners	
Danone Manifesto Ventures	Monsanto Growth Ventures	S2G Ventures	

4.10 Corporates

Top 25 Agribusiness and Food Companies in Australia

	Company name	Annual revenue (A\$b)	Ownership	Details
1.	Lion	5.1	Japan	Kirin-owned Lion employs almost 6,750 people in Australia and New Zealand and operates in the beer, spirits, wine, milk, fresh dairy, juice and soy beverages segments.
2.	Coca-Cola Amatil	5	Australia	Coca-Cola Amatil is one of the largest bottlers of soft drinks in the Asia-Pacific region and one of the world's top five Coca-Cola bottlers. It also produces packaged fruit and vegetable snacks and related products.
3.	GrainCorp	4.1	Australia	GrainCorp provides services to the grain industry, including bulk commodity storage and handling, marketing, merchandising and logistics across operations in Australia, New Zealand, Asia, Europe and North America. The company is part owned by US food processing and commodities trader Archer Daniels Midland.
4.	CBH Group	4.1	Australia	CBH Group is a cooperative deriving revenue from grain storage, handling and marketing for its members. The company has also invested in flour processing facilities and bulk shipping operations.
5.	JBS Australia	3.6	Brazil	JBS Australia is a division of JBS, Brazil's largest food multinational, and the world's largest meat company. In Australia, it has 10 meat processing plants and five feedlots. It acquired Primo smallgoods in 2014.
6.	Olam Investments Australia	3.6	Singapore	Olam is the local subsidiary of Singapore-based trader Olam International. The company operates integrated supply chains for five key products in Australia (cotton, almonds, pulses, grains and wool) to deliver these worldwide.
7.	Glencore Grain	3.6	Switzerland	Glencore Grain, a subsidiary of Swiss-based Glencore AG, operates in all Australian states and originates, handles, stores, transports and markets wheat, barley, oilseeds, pulses, meals, and cotton. It owns Viterra Australia's storage and handling services.
8.	Incitec Pivot	3.4	Australia	Incitec Pivot manufactures, distributes and sells fertilisers, explosives and chemicals throughout Australia, Asia and North and South America.
9.	Devondale Murray Goulburn	3	Australia	Devondale Murray Goulburn processes, manufactures and distributes whole milk and dairy products from processing sites in Victoria, New South Wales and Tasmania. It is investing A\$200 million over three years to almost double its dairy processing capacity.
10.	Teys Australia	2.9	Australia	Teys Australia is Australia's second largest meat processor and exporter, operating three feedlots and six beef processing plants across Queensland, New South Wales, Victoria and South Australia. Teys Australia is 50 per cent owned by US-based Cargill Inc, a global producer and marketer of food and farm commodities and services.
11.	Cargill Australia	2.8	United States	Cargill Australia is the local subsidiary of the US-based food and agricultural product supplier, operating in oilseed processing, flour milling and beef processing, and grain and oilseed storage.

Company name	Annual revenue (A\$b)	Ownership	Details
12. Nufarm	2.8	Australia	Nufarm is the largest manufacturer of crop protection products in Australia and supplies domestic and international markets. Nufarm also has a growing seeds platform encompassing canola, sorghum and sunflower seeds.
13. Inghams	2.4	United States	Inghams, owned by investment firm TPG, is the largest poultry processor in Australia. Its operations extend across fully integrated farming, primary and further processing operations.
14. Agrium SP	2.3	Canada	Agrium SP is the local subsidiary of Canada's Agrium, providing rural services and commodity management.
15. Food Investments	2.2	United Kingdom	Food Investments is part of the UK-based Associated British Foods and generates the majority of its Australian revenue through subsidiary George Weston Foods. Its products include bread, baking products, small goods, cakes and ingredients.
16. Nestlé	2.1	Switzerland	Nestlé Australia is a wholly owned subsidiary of the Swiss-based giant Nestlé S.A. It employs more than 6,000 people in 70 offices, with factories and distribution centres located across the region.
17. Goodman Fielder	2.1	Singapore	Goodman Fielder produces packaged food ingredients, consumer branded food, beverages and related products. Its five core divisions are bakery, dairy, flour and cake mix, spreads and dressings, and mayonnaise. Goodman Fielder was acquired by Singapore's Wilmar International and Hong Kong's First Pacific in March 2015.
18. Carlton & United Breweries	2	United Kingdom	Carlton & United Breweries is Australia's second largest brewer and is owned by SABMiller, the world's largest brewer.
19. Treasury Wine Estates	2	Australia	Treasury Wine Estates has over 11,000 hectares of vineyards, sales totalling over 30 million cases of wine annually and over 3,000 employees.
20. Queensland Sugar	1.9	Australia	Queensland Sugar is involved in the marketing, export and supply of bulk raw sugar. The Brisbane-based company is joint-owned by the state's sugar growers and millers.
21. Wilmar Sugar	1.8	Singapore	Wilmar Sugar Australia, owned by Singaporean agribusiness Wilmar International, operates sugar refineries to produce cane products, sweeteners and bioethanol. It is the largest raw sugar producer and refiner in Australia and eighth largest producer globally.
22. Asahi Holdings	1.8	Japan	Asahi, the Australian subsidiary of Japan's largest brewer, encompasses Schweppes Australia and water bottler Mountain H2O.
23. Mondelez Australia	1.7	United States	Mondelez Australia, formerly Kraft Australia, is a subsidiary of the world's second largest food company, Mondelez International. Mondelez opened the first stage of Australia's largest food R&D facility in 2013. It will invest A\$20 million to transform its chocolate factory in Claremont, Tasmania in 2015.
24. Unilever Australia	1.6	England	Unilever Australia's portfolio of brands includes Flora, Continental, Bertolli, Streets, Lipton and Bushells, as well as a number of personal care and homecare brands. It acquired T2, an Australian tea retailer in 2013.
25. Parmalat Australia	1.5	France	Parmalat Australia, a subsidiary of the global Parmalat Group with majority shareholding by French multinational Lactalis, processes and distributes milk, cream, dairy products and fruit juices for the domestic and export markets. Headquartered in south Brisbane, Parmalat Australia employs approximately 1,800 people.

5. ASIA ECOSYSTEM PARTICIPANTS

5.1 India

Several factors that include younger and more educated individuals, hundreds and thousands of successful new entrepreneurs and a steadily improving “seed and angel to private equity” funding ecosystem will contribute to an incredibly entrepreneurial India in the coming few years.

India’s startup ecosystem is indeed expanding at a high pace as a lot more capital is flooding into the scene. The attractive markets opportunities, together with India’s ability to produce startups with unicorn valuations, have mainly driven global interest. The startups most likely to survive and succeed are those that tailor their offerings specifically for the Indian market.

Major overseas VCs made India among their top destinations for their foreign direct investment. In 2016, Sequoia Capital has raised an additional \$920 million, after closing a \$720 million fund back in 2015. Similarly, Norwest Venture Partners has raised a \$1.2 billion fund, to be invested across different regions, including India. Also, China’s large tech corporates don’t want to miss out. Indian mobile payment and e-commerce firm Paytm has recently raised about \$680 million in a round led by Alibaba’s affiliate, Ant Financial.

With the strong international interest and financing, India is now able to welcome more and more unicorns: as of May 2017, India could count nine unicorns, with restaurant search and discovery service Zomato valued at \$1B being the last one to the “unicorn club.”

While Zomato falls within the food innovation space, the AgTech and FoodTech landscape are not as booming as other industries. This can be related to the fact that technology sector, together with healthcare are supported by the largest number of incubators. The number of incubators backing up the other sectors is very limited, as it is also in the case of accelerators. As a result, incubation/acceleration is not always seen as the preferred approach in commercializing innovations.

Within the Indian ecosystem, what it is interesting to point out is the pivotal role of universities. About 56% of the incubators are in universities, indicating the important role played by universities in supporting entrepreneurship and startups. In addition to the traditional teaching, research, and industrial collaborations, universities are increasingly playing a very important role in creating ventures. This can be shown by the steadily growing amount and size of angel investments and venture funding. However, funding is not evenly spread across the country, as it is mostly concentrated in Tier1 cities.

To improve the odds of funding, investors are now considering developing a proprietary deal flow network. Regarding the importance of references, The Chennai Angels case study provides an interesting perspective. 92% of the investments made by the group were sourced through or had a reference from angel investors or members of the angel network. None of the deals that were directly sourced were successful in getting funding.

Finally, also the Indian Government contributed to building the startup ecosystem. The Startup India initiative focused on relaxing the norms for tax benefits and including employment generation potential to give a big push to job creation and entrepreneurship. These changes are part of a plan to promote the creation of new businesses and jobs, while boosting the startup ecosystem.

But things are not all plain sailing, especially for those investing in the online grocery business in India. According to local media reports, online retailer Flipkart shut down its grocery delivery business in February. Grocery delivery app PepperTap stopped operating in 10 locations early this year. On-demand delivery service Growers also halted operations in nine cities in early 2016. Thin margins, high marketing costs, and fickle customers have all been blamed for the hiccups.

5.2 China

According to a research study by UHY, many countries are experiencing a boom in new business creation. That is especially true of China, where more than 4,000 startups are launching daily. Initial funding is relatively cheaper compared to other areas, as the average budget of Chinese startup founders to establish a company is ¥113,000 CNY vs. \$16,508 USD in the U.S.

Currently, the most active entrepreneurial sector in China is customer service (B2C). Success stories are dominated by online-to-offline (O2O) companies like Ele.me (B2C food delivery with a \$4.5 billion valuation) and Meicai (grocery delivery with a \$2 billion valuation). Food startups make up a small fraction of the overall pool.

However, new food brands riding the wave of Chinese consumption thrives and, as China is shifting consumption habits, rising demand for safe, healthy products, are drawing investors' interest. Other startups are building technology solutions to tackle food safety and food waste issues, from urban farming kits to food waste converters and water purifying technology to face the imminent threats posed by resource scarcity and overpopulation.

This community of purpose-driven startups has captured the attention of a growing pool of capitalists and business leaders. Fortune Ventures is one of the first private investors active in Chinese AgriFood projects (early investments include poultry suppliers Fujian Sunner Development); Sequoia joined agribusiness New Hope to finalize a Series An investment in ACSM [Agriculture Consultant and Smart Management], a Beijing company that has built a digital platform for agricultural management.

However, China's AgriFood investment is not yet picking up the same pace as elsewhere in the world. For China to represent a healthy and integrated startup ecosystem, funding should be evenly spread across various growth stages: while the majority the deals fall in the expansion stages, AgriFood capital in seed and development stages needs to be encouraged and facilitated.

The reality is that China hasn't yet produced cutting-edge AgriFood tech startups that are taking the world by storm. Entrepreneurs and students need to adopt a demand-driven approach to technology innovation, to be proactive to market demands and be ready to take visionary risks. Therefore, the Chinese government has taken steps to nurture technology development to boost agricultural innovation.

Across the China, more than 260 national agriculture and science technology parks are built to serve as part-technology showcase, part R&D pilot farms. Top agricultural universities also allocate subsidies and co-working space for student and alumni startup teams. One good example of this is Cyb-Bot, robotics and automation company that received funding from a China Agricultural University Fund.

Overall, the major gap to fill within the Chinese ecosystem goes then down to a significant lack of sector-related accelerators/incubators. China counts overall only four incubators/accelerators that focus exclusively on Food and AgTech. In proportion to other big markets, China is relatively disadvantaged when it comes to food-related accelerator/incubator.

Other examples:

One example is Womai, an online retailer of fresh food set up in 2008 by state-owned food conglomerate China National Cereals, Oils and Foodstuffs Corporation, better known as COFCO. Womai has raised \$330 million over three rounds of funding, according to online database CrunchBase, with part of the cash going toward increasing food imports. Its latest round of funding in October 2015 raised \$220 million from investors including internet services company Baidu. Benlai Life, an online retailer of fresh fruit and vegetables, is another popular startup. It raised \$117 million in May 2016.

A similar trend is also visible in India, where the Bangalore-based bigbasket.com raised \$150 million in a follow-up round of funding. With its massive population, the growth opportunities for online grocers are immense. Bigbasket's late-round funding was led by the UAE's Abraaj Group.

5.3 South East Asia

Out of the ten ASEAN countries, Lao, Cambodia, and Vietnam have more than 50 per cent population employed in agriculture and allied sectors, while Indonesia, Philippines and Thailand have more than 35 per cent of the population dependent on the sector for their livelihood. Cumulatively, this amounts to nearly 150 million people directly or indirectly involved with the agriculture sector in the region.

Most farmers in Southeast Asia region are most susceptible to climate and weather change information asymmetry due to the non-availability of technical knowledge centers. Thus, technology innovations can play in improving across the entire agro value chain.

While AgTech solution may minimize the lack of market linkages, it also comes with a challenge as IT infrastructures and availability of tech products are low in emerging countries. India and China are the most advanced regarding AgTech and accounted for most the deal activity in the developing economies; nevertheless, the Southeast Asian region is showing signs of being ripe for AgTech start-ups.

For instance, over the past years, there were a few significant investments in the AgTech sector in Indonesia. Local AgTech and aggregator start-ups have captured the interest from various investors, technological companies, and other stakeholders.

Enterprises such as Vasham, iGrow have attracted investments from global PE/VCs. The business model and operations of these enterprises have the potential to assist and help smaller local farmers improve their livelihoods and source of income.

For instance, iGrow is a marketplace that helps farmers with under-utilized land, to produce high-quality organic food and sustainable incomes with cloud-based agricultural management software. Vasham instead assists small holder farmers in Indonesia by optimizing the food supply chain to guarantee them above-wholesale market prices as well as provide them with financial support as required.

The various governments across the SEA area get involved in ecosystem building at different degrees. Singapore's Temasek Life Sciences Laboratory, funded by Temasek Trust - the philanthropic arm of sovereign wealth fund Temasek Holdings. TLL, spent several years developing Temasek Rice, a resilient breed capable of withstanding extreme weather conditions. Since land is limited in Singapore, TLL's rice is being grown in Indonesia, exploiting the country's potential.

Another example involves the Vietnamese state telecom company VinaPhone, which started a mobile service set to assist farmers through weather forecasts, prices, plant disease alerts, guidelines on relevant state policies, advisories on abnormal conditions affecting agriculture and so on.

Together with an expected slowdown of venture builders and a rise of accelerators/incubators (both local and foreign), it is worth noting an interesting rise of corporate venture capital (CVC) in the region, which went from virtually non-existent to 14 of them over the past year. Foreign CVCs are attracted to the SEA for potential business expansion, while local conglomerates and large cap companies are increasingly aware of the disruption of tech startups to their traditional business.

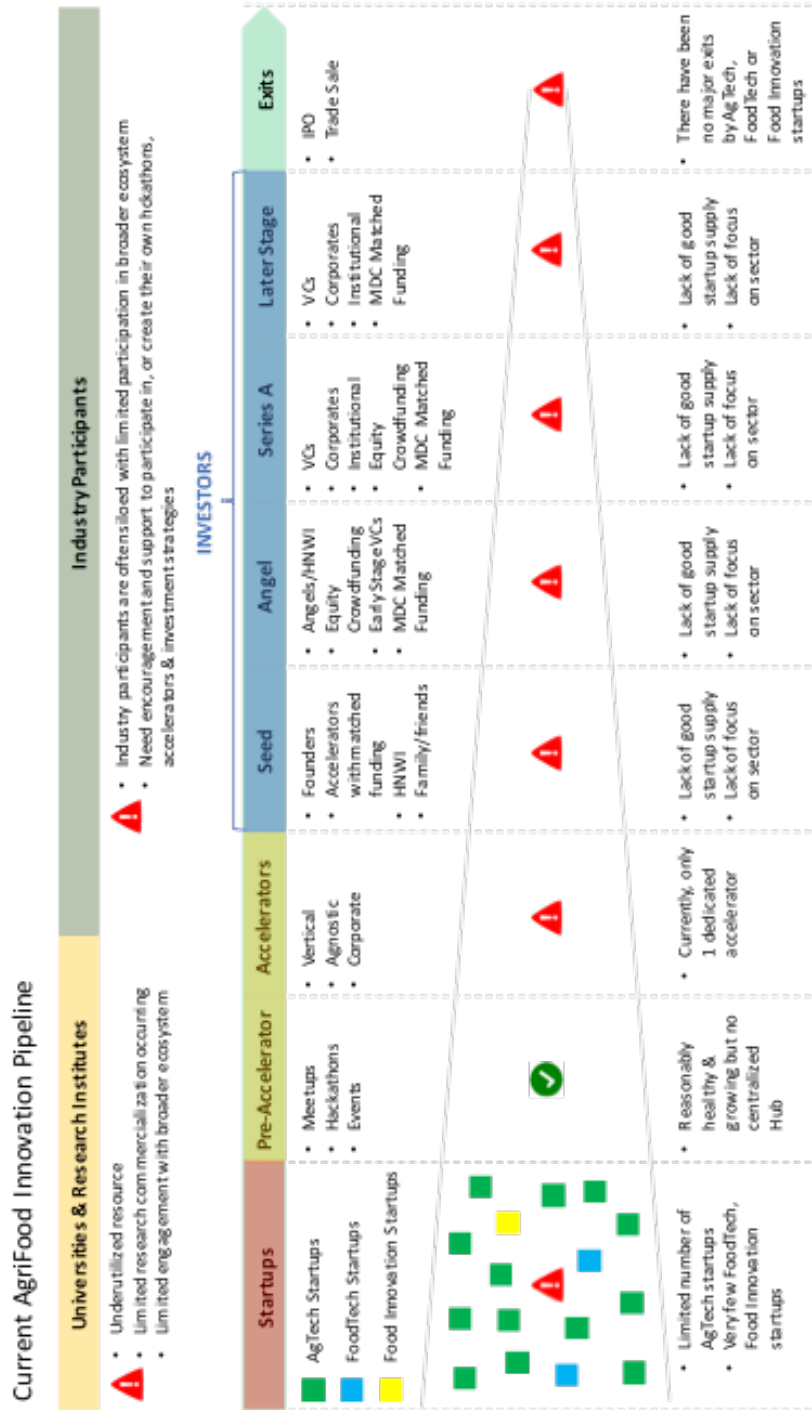
Marketplace/Platform is leading regarding several deals, but it is closely followed by E-Commerce, SaaS and FinTech. Once again, these results emphasize the remarkable lack of domain-specific AgTech/Food and investors. Similarly, it is apparent that the role of Universities has not yet been fully valued (Is it a coincidence that Silicon

Valley developed around Stanford?). Ultimately, low presence of funded Southeast Asian AgTech businesses at global events and validated in AgFunder's reports indicates that startups in the region may lack exposure at the global level.

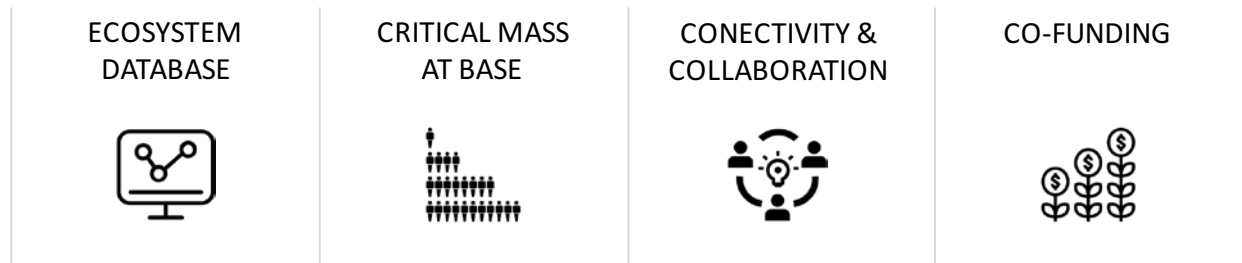
6. ECOSYSTEM GAPS & CHALLENGES

This section looks at the current Red Meat Innovation Ecosystem and identifies gaps and deficiencies, as well as highlighting the key challenges to executing the I+E Connect platform

6.1 Current Gaps in the Innovation Pipeline



KEY ECOSYSTEM GAPS



The 4 key gaps in the AgriFood Innovation Ecosystem include:

1. **Comprehensive ecosystem data base** allowing objective tracking, measurement, analysis and policy making
2. **Critical mass at the base of the startup pipeline**
 - a. Number of entrepreneurs, startups & agile SMEs focused on the AgriFood sector
 - b. Pre-accelerator activity
 - c. Accelerators focused on AgTech, FoodTech & Food Innovation
3. **Ecosystem connectivity and collaboration**
 - a. University activity, engagement and commercialization
 - b. A central/physical hub acting as the collaborative focal point of the ecosystem
4. **Co-Funding**
 - a. Lack of awareness regarding potential for MDC co-investment
 - b. Ad-hoc nature of MDC pipeline - lacking process
 - c. Scalability of MDC pipeline/investments
 - d. MDC directed, arms-length investment vehicle taking diversified early stage startup exposure to help establish and grow ecosystem deal flow
 - e. MDC needs to employ broader range variety of investment models/instruments

The following chapter (Chapter 8) expands on these gaps in the ecosystem and identifies potential solutions and recommendations.

6.2 Key Challenges for I+E Connect Platform

The key gaps in the AgriFood innovation ecosystem need to be addressed, to successfully implement the I+E Connect platform.

The following diagram summarises the challenges for optimal implementation of the I+E Connect platform.

Key Challenges

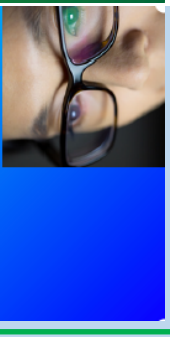
HECONNECT

- I+E Connect in model form and needs to be implemented
- No central hub that allows critical mass of industry participants to collaborate

- Insufficient supply of AgTech, FoodTech & Food Innovation entrepreneurs, agile SME's, startups to ensure optimal late-stage pipeline
- Current focus more on late stage and no model for early stage
- Current focus more on technology less on business models, software
- Randomness of applications as opposed to a pre-screened and de-risked deal flow

- Lack of dedicated accelerator programs
- Food Tech & Food Innovation are especially under represented
- Lack of successful solution for pull-model VC
- Lack of pre-accelerator support for members and aspiring entrepreneurs/founders

Entrepreneurs, Agile SME's & Start Ups



Accelerator Programs



Australian Red Meat Industry



Scouting Partners




- Current scouting model neither scalable nor extensive
- Require increased engagement with all parts of the ecosystem and in particular universities & research institutes
- No dynamic ecosystem mapping and tagging

Investors



- Insufficient co-investment to optimize matched funding
- Lack of dedicated funding leads to long lead time to close deals and potential adverse selection (use it or lose it)
- Lack of awareness regarding potential of MDC co-investment
- No venture equity model means lack of alignment with co-investors

Corporate Accelerators & Venture Funds



- Lack of resources/solutions available for corporates to instigate own accelerator and VC capability
- Generally random engagement between corporates and broader ecosystem rather than a bespoke or platform approach

7. CREATING AN INTERCONNECTED & INVESTABLE AGRIFOOD INNOVATION PIPELINE

This section looks at the existing gaps in the Australian AgriFood Ecosystem and proposes solutions to create an interconnected and investable AgriFood innovation pipeline

7.1 Review of Key Gaps and Related Recommendations/Solutions

The following table summarizes the key gaps in the AgriFood Innovation Ecosystem and potential solutions and recommendations.

CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
1	Ecosystem Mapping & Data	1.1	Data <ul style="list-style-type: none"> • Artesian, via its subsidiary VCAAlphaBeta (VCAB) collects and maintains data relevant to the AgriFood innovation ecosystem in Australia/Asia and globally. • The VCAB database will be offered to industry participants, university & research institutes, investors and startups on a freemium model. • Artesian/MDC can partner to collect data from ecosystem participants
		1.2	Mapping <ul style="list-style-type: none"> • VCAB data will be used to map the interconnectivity of the ecosystem, key performance data, trends and statistics • The mapping capability can be used as the basis for analysis, research and to promote the industry • Would provide an ability to visualize networks and connect talent, clusters & processes
		1.3	Analysis <ul style="list-style-type: none"> • Artesian and/or MDC can produce AgriFood innovation analysis, research and white papers • The broader research, government, education and media industries can access the data on a subscription basis for their own analysis, research and content production • Could be used to build a job/talent marketplace for the AgriFood innovation ecosystem
		1.4	Performance <ul style="list-style-type: none"> • Rather than relying on anecdotal evidence to measure the effectiveness of innovation strategies and programs, whether they are industry or government initiatives, it will be possible to measure using data driven analysis • Performance data can be used to audit & measure progress, for industry promotion, for benchmarking and provide accountability

	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
2	Number of Entrepreneurs, Startups & Agile SMEs	2.1	Education	<ul style="list-style-type: none"> • MDC could establish an AgriFood Tech program that qualified for degree course points with partner universities. This could be a part of the MC accelerator model • This course could: <ul style="list-style-type: none"> ○ promote AgTech as a potential focus for graduating students ○ increase ecosystem awareness ○ act as a talent hiring market for MLA corporate partners ○ be offered to foreign students to build up international networks • MDC could offer continuing education courses and/or on-line webinars for financial planners and other investor groups e.g. angel groups on key themes, technology, opportunities and startups in the AgriFood Tech ecosystem
		2.2	Pre-Accelerator Activity	<ul style="list-style-type: none"> • See sections 3.1 - 3.3 of this table
		2.3	Establish AgriFood Innovation Hub	<ul style="list-style-type: none"> • See section 6.1 of this table • The Hub could include a co-working space, community events, hackathons, meetups and other networking/mentoring opportunities
		2.4	MDC/Artesian could publish research and analysis on the AgriFood Tech ecosystem based on mapping & data analysis	<ul style="list-style-type: none"> • See sections 1.1 – 1.4 of this table • This research could be done in partnership with industry participants, universities & research institutes, and MLA corporate partners
3	Pre-Accelerator Activity	3.1	Support industry participation in hackathons, meetups, events	<ul style="list-style-type: none"> • This would be a key function of the AgriFood Innovation Hub (see section 6.1 of this table) • Artesian's broad network of accelerators, incubators, angel groups and university programs, as well as the broader accelerator ecosystem can be leveraged with the support of MDC and MLA corporate partners and industry participants to promote interest and activity in the AgriFood tech sector
		3.2	External pre-accelerator program	<ul style="list-style-type: none"> • SproutX provides a pre-accelerator program for startups considering applying to their accelerator
		3.3	Provide pre-accelerator program at MDC in-house accelerator	<ul style="list-style-type: none"> • The MDC accelerator program could include a 2-4 week pre-accelerator program for university students, MLA members, other founders/entrepreneurs, corporate intrapreneurs
4	Number/variety of Accelerators	4.1	Support SproutX national roll-out	<ul style="list-style-type: none"> • See section 73 of this table
		4.2	Create MDC Accelerator	<ul style="list-style-type: none"> • An MDC in-house accelerator would be used for the following purposes:

CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
			<ul style="list-style-type: none"> ○ For specific red meat industry-focused startup cohorts that could be sponsored by large MLA corporate partners or a group of smaller corporate partners ○ To execute pull-model programs designed to solve specific industry problems for MLA members or partner corporates ○ To provide support for portfolio startups following the completion of external accelerator programs, ○ To attract international startups looking to expand into the Australian market ○ To help Australian startups looking to expand into international markets (with the assistance of Artesian in Asian markets and alternative partners in other international markets) ○ To provide support to MDC portfolio companies at the scale-up/growth stage of their development <ul style="list-style-type: none"> ● See Appendix 1 of this report for details of the proposed MDC accelerator model
		4.3	<p>Artesian/MDC to help MLA Corporate Partners connect with external corporate accelerators</p> <ul style="list-style-type: none"> ● Corporate accelerators such as Slingshot and BlueChilli can facilitate one-off or multi-cohort accelerator programs ● SproutX can also facilitate corporate programs or include specific corporate sponsored startups in their AgTech accelerator program
		4.3	<p>Artesian/MDC to help MLA Corporate Partners establish proprietary accelerators</p> <ul style="list-style-type: none"> ● See section 9.3 of this report for a detailed analysis of the Artesian corporate proprietary accelerator model ● This model is for larger more sophisticated corporates who wish to build their own holistic approach to open innovation and distributed R&D and keep more of this IP in-house
		4.4	<p>International Accelerators</p> <ul style="list-style-type: none"> ● MDC to build relationships with international accelerators via their regional partners e.g. Artesian in Asia. ● This will allow MDC to: <ul style="list-style-type: none"> ○ Source investments in early stage startups from international markets ○ Provide landing pads for Australian startups looking to network/expand in international markets ○ Provide MLA Corporate Partners with access to international startups and networks
5	Improve connectivity with University & Research Institute	5.1	<p>Data Mapping & Tracking</p> <ul style="list-style-type: none"> ● Map and track all university and research institute's research/IP capabilities (see section 1 of this table)

	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
	Research & IP, and encourage Commercialization	5.2	Connectivity & Accelerator Programs	<ul style="list-style-type: none"> • MDC must re-engage with all universities and research institutes. • Promote and support programs such as the Cicada Innovations GrowLab to access and commercialize deep science opportunities and prepare researchers for entrepreneurial company formation • Offer participation in MDC Accelerator Programs and/or external accelerators • Inform researchers of the possible paths for commercializing research
		5.3	AgriFood Innovation Hub	<ul style="list-style-type: none"> • Universities & Research Institutes should play a key role in the AFIH (see section 6 of this table)
6	Ecosystem Connectivity	6.1	Establish AgriFood Innovation Hub (AFIH)	<ul style="list-style-type: none"> • A technology hub can provide a physical space, offering events, mentoring, networking and collaboration opportunities as well as work spaces for individuals, startups and agile SMEs • The hub would be established as a focal point for the AgriFood innovation ecosystem • It would be: <ul style="list-style-type: none"> ○ communal ○ self-organizing & adaptive ○ enable innovators ○ bring together a range of technical, professional, industry and design experience ○ a local focal point linked to global hubs and innovation labs • Attract government, corporate and industry sponsorships and lift the profile of the industry • Existing examples include: <ul style="list-style-type: none"> ○ Farm491: AgTech Innovation & Incubation (UK) ○ Stone & Chalk: FinTech innovation hub (Sydney)
		6.2	Provide freemium access to ecosystem mapping & analysis tools	<ul style="list-style-type: none"> • See Sections 1.1-1.4 of this table • The VCAB database will be offered to industry participants, university & research institutes, investors and startups on a freemium model. • The broader research, government, education and media industries can access the data on a subscription basis for their own analysis, research and content production • Could be used to build a job/talent marketplace for the AgriFood innovation ecosystem • Performance data can be used to audit & measure progress, for industry promotion, for benchmarking and provide accountability

	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
		6.3	Encourage partnerships & collaborations	<ul style="list-style-type: none"> • MDC, via the I+E Connect Platform should build an online and offline capability to encourage partnerships and collaborations including: <ul style="list-style-type: none"> ○ matching startups with talent, mentors, investors, distribution partners, researchers, acquirers. ○ matching corporates with other corporates for accelerator cohorts, investments • Encourage participation/membership in the AgriFood Innovation Hub
7	Lack of Co-Funding	7.1	Lack of awareness of MDC matched funding model	<ul style="list-style-type: none"> • MDC needs to increase awareness of the availability of matched funding across the broader startup ecosystem
		7.1	MDC investment structure	<ul style="list-style-type: none"> • There is potential for lack of alignment & conflicts of interest with co-investors if MDC not participating in similar instruments/structure • The current MDC investment process, use of royalty share, lack of program awareness and startup supply shortage means that MDC deal flow is often ad hoc lacking a process driven, pre-screened and de-risked pipeline • The current MDC investment structure (with its focus on royalty share) should be complemented with other investment models that may be managed by MDC or by external investment managers including: <ul style="list-style-type: none"> ○ Direct Equity ○ Venture Debt ○ VC Funds ○ Equity Crowdfunding • A review of current policies should be undertaken and processes, documentation agreed for new instruments/strategies completed • See section 11.1 of this report for range of alternative instruments
		7.2	Increase number of early stage AgriFood startups receiving seed/angel funding	<ul style="list-style-type: none"> • Currently MDC's matched funding model is challenged due to lack of co-investment and time taken to complete deals • MDC focus is generally on later stage companies where more traditional due diligence can be performed • Risk of Adverse selection - companies that can successfully raise external capital are not necessarily the most innovative or providing the greatest industry upside for MLA members • To ensure a healthy AgriFood ecosystem it is necessary to ensure broad, diversified pipeline of early stage deals • Due to asymmetrical risk profile of startups (90% of returns come from the top 10% of companies)

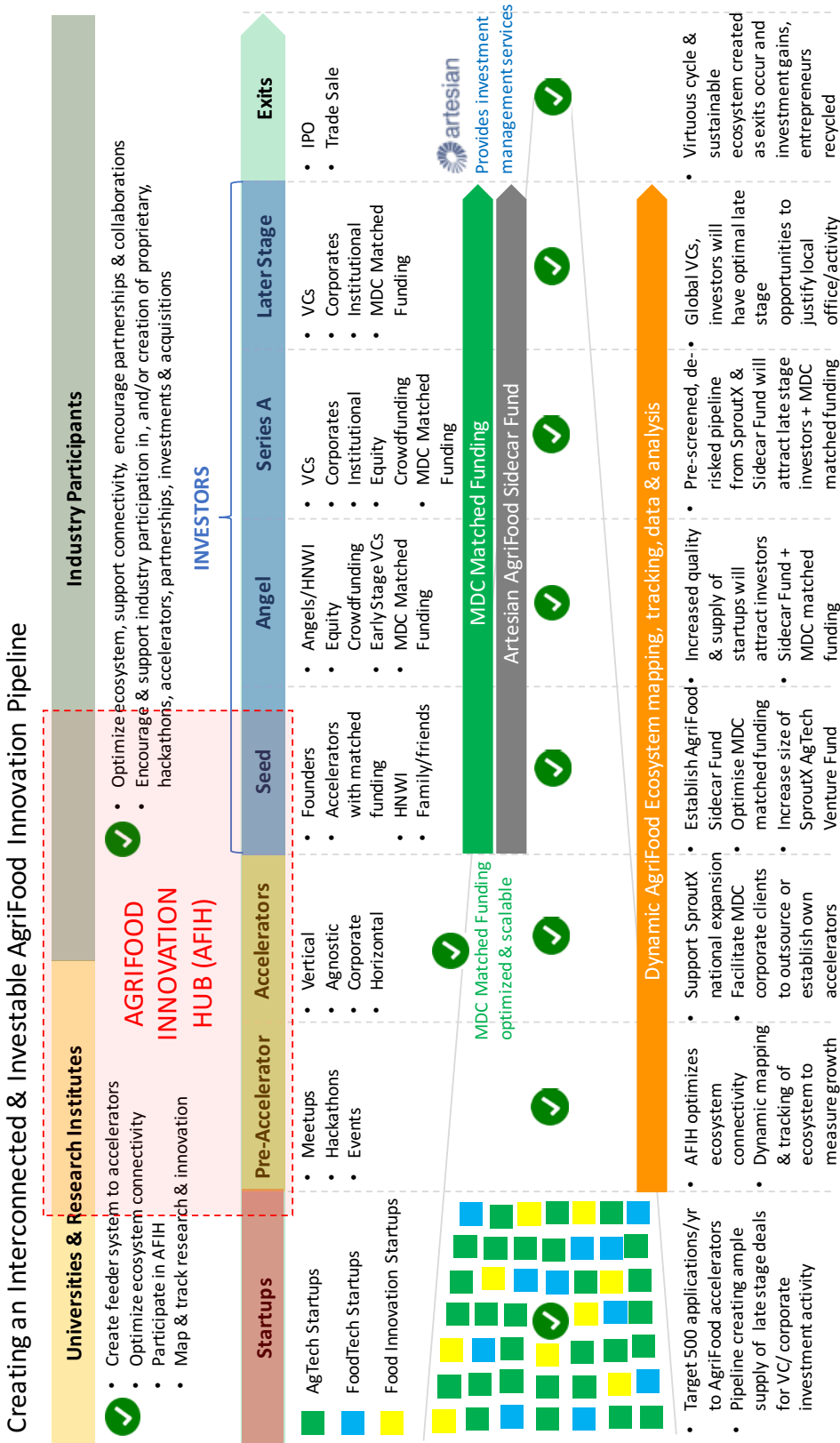
	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
				<p>need to use a diversified portfolio strategy with option to follow-on into best deals</p> <ul style="list-style-type: none"> • Recommend creating an AgriFood Sidecar Fund (AFSF) which will invest in 50-100 seed to angel stage AgTech, FoodTech & Food Innovation startups over a 5-year period • The fund will be managed by an external manager to create arm’s length vehicle for MDC. The fund will take equity stakes in the startups • The Fund will have commitments of ~\$50-60M, investing ~\$10-12M per year • 50% of the capital (\$25-30M) will be raised from institutional investors, HNWI and corporates. The other 50% will be committed matching capital from MDC. • The external investment manager will be responsible for: <ul style="list-style-type: none"> ○ Structuring/building the fund ○ Preparing information memorandum, investment documents ○ Raising \$25-30M from investors ○ Liaising with accelerators, incubators, universities, angel groups to generate deal flow ○ Identifying deals that comply with a pre-agreed MDC mandate ○ Completing due diligence, term sheets ○ Monitoring deals, investor relations/reporting, legal, regulatory and compliance management ○ Completing follow-on rounds ○ Identifying and completing trade sale exits, IPOs ○ MDC would have a seat on the investment committee or observer rights as required • The investment mandate may include international deals at MDC’s direction
		7.3	Support SproutX national roll-out	<ul style="list-style-type: none"> • Artesian is the investment manager, and is providing the funding, for the SproutX Venture Fund • With dedicated capital, this fund can move quickly to provide early stage AgTech startups with co-investment that may be matched by MDC • Artesian can act as the eyes and ears for MDC to provide matched funding in deals sourced from SproutX • MDC is already sponsoring/supporting several startups going through SproutX (4 startups in the initial accelerator cohort) • The SproutX Venture Fund will be a complementary pipeline of pre-screened and de-risked startups for the AgriFood Sidecar Fund

CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
			<ul style="list-style-type: none"> The SproutX Venture Fund may be a suitable vehicle for MLA Corporate partners to take early stage diversified AgTech startup exposure As investors in the SproutX Venture Fund the corporate partners will be aligned/incentivized to make larger, later-stage investments into the best startups which would also be candidates for MDC matched funding
		7.4 Encourage more AgTech, FoodTech and Food Innovation startups via agnostic, corporate & horizontal focused accelerators	<ul style="list-style-type: none"> Artesian has existing relationships with a range of top accelerators, incubators, university programs and angel groups This network can be leveraged to attract more AgTech, FoodTech and Food Innovation startups Slingshot and BlueChilli which focus on running corporate accelerators are suitable partners for MLA corporate partners to run outsourced accelerator programs As Artesian is the investment manager for these funds, and as each has dedicated funding, this would be another efficient way to have co-funding immediately available for matched investment by MDC
		7.5 SE Asia	<ul style="list-style-type: none"> Artesian has recently signed an MOU with Brinc, a hardware/IoT accelerator based in HK. Artesian will establish a dedicated venture fund to invest in all the Brinc hardware/IoT startups Artesian is establishing further accelerator agreements and funds across SE Asia with plans for accelerator partners in HK, Malaysia, Vietnam, Thailand, Indonesia, Singapore and the Philippines This will provide a broad network and pipeline of opportunities for investments
8	Current scouting model neither scalable nor extensive	8.1 Optimize existing network	<ul style="list-style-type: none"> Connections with peers, investors, accelerators, and startup networks offer an excellent (and natural) way to learn about the most promising projects. Having a central role in the relevant ecosystems boosts this natural deal flow, and communicating MLA's challenges and strategic objectives increases the value of your position.
		8.2 Startup challenges	<ul style="list-style-type: none"> Organized competitions run by MDC and/or partners to target specific themes, topics, types of startup. This is an effective way to identify and encourage tech entrepreneurs to tackle industry challenges Large independent competitions will often attract many more startups, since they can connect startups with many stakeholders and can bring additional benefits such as cash and visibility for the winners. MDC can partner, sponsor, participate and/or help organize
		8.3 Events	<ul style="list-style-type: none"> These may comprise deep-tech summits, research conferences, meetups, and various training and

	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
				<p>private events. Every opportunity has its own unique mix of features. MDC can organise, participate, sponsor</p> <ul style="list-style-type: none"> • Deep-tech summits: These gatherings have the advantage of bringing together a wide range of participants. They facilitate opportunistic encounters for startups/corporates interested in reflecting on the future of their industry, and in widening their perspectives by identifying emerging trends. • Smaller and more personal events: Events with fewer than 100 participants tend to be more focused, which makes them more accessible to early-stage companies that are ready to share their ideas with a limited set of people.
		8.4	Crowdsourced solutions	<ul style="list-style-type: none"> • Increasingly popular to crowdsource solutions for specific problems via online platforms. MDC could develop an industry focused platform
		8.5	Exploiting ecosystem mapping & tracking capabilities	<ul style="list-style-type: none"> • See section 1.1-1.4 of this table
		8.6	Scouting services	<ul style="list-style-type: none"> • Some organized competitions or events offer scouting services as well, leveraging their knowledge of their ecosystem to match corporate needs to the most relevant startups
9	I+E Connect Platform not implemented		I+E Connect Program currently mainly in model form and must be implemented	<ul style="list-style-type: none"> • The I+E Connect Platform is the centerpiece of MDC’s innovation strategy. The design and scope needs to be completed and the platform needs to be implemented. • The platform should capture all of the gaps/recommendations as outlined in this report • The success of a platform strategy is determined by three factors: <ul style="list-style-type: none"> ○ Connection: how easily others can plug into the platform to share and transact ○ Gravity: how well the platform attracts participants from all parts of the ecosystem including startups, research institutes, corporates, industry participants and investors ○ Flow: how well the platform fosters the exchange and co-creation of value
10	On-going support of startups in MDC portfolio		MDC portfolio startups need support from pre-launch to exit	<ul style="list-style-type: none"> • MDC portfolio startups will be able to access mentoring and funding support via pre-accelerator programs, internal/external accelerator programs, scale-up programs and co-investment at seed, angel, Series A & later stage rounds (See sections 3,4,6,7 of this table) • MDC, via the I+E Connect Platform should build an online and offline capability to match startups

	CATEGORY		SUBCATEGORY	RECOMMENDATION/SOLUTION
				<p>with talent, mentors, investors, distribution partners, researchers, acquirers.</p> <ul style="list-style-type: none"> • MDC portfolio startups would also benefit from the establishment of the AgriFood Innovation Hub (see section 6 of this table)

7.2 Interconnected & Investable Innovation Pipeline



8. MAPPING & TRACKING THE ECOSYSTEM

This section looks at the imperatives to map and track all the participants in an innovation ecosystem to understand its dynamics, provide data and analysis and benchmark its performance and sustainability.

8.1 Benefits of Mapping & Tracking the Ecosystem

An innovation ecosystem can be defined as the network of people and institutions in the public and private sectors whose activities and interactions create, store and transfer the knowledge, skills, products and services which define new technologies and business models.

Before embarking on a program to grow a sustainable AgriFood Innovation ecosystem, especially focused on the somewhat opaque early stage startups and agile SME sector, it is critical to fully map the existing ecosystem and interconnections between the participants.

Following the baseline mapping effort, it is equally important to dynamically update the Innovation ecosystem map so that performance and sustainability can be measured and analysed.

The mapping exercise creates a database that can be exploited by existing and new ecosystem participants, to improve:

- Connectivity
- Transparency
- Network speed and efficiency
- Partnerships
- Commercialization of research
- Investment and Co-investment
- M&A activity
- Accountability

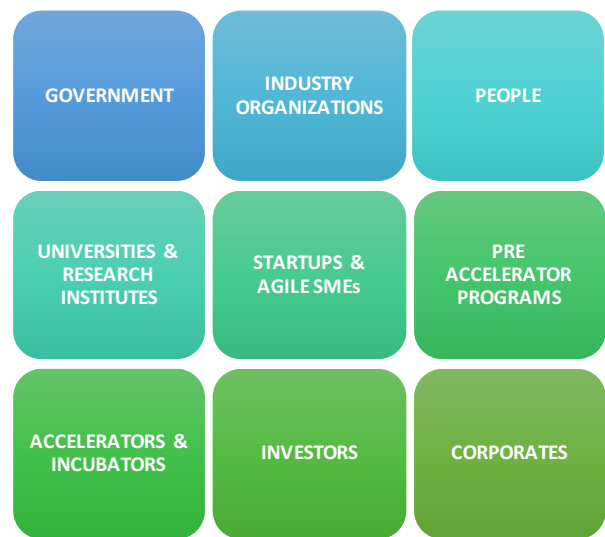
8.2 A Structure for Ecosystem Mapping & Tracking

Artesian collects data into 9 key sectors of the industry innovation ecosystem. Data is tagged so it is sortable and so that connectivity can be mapped by a variety of filters and relationships.

The mapping and analysis functions can be offered to the whole ecosystem on a freemium model. The free offering provides high level information that provides high level mapping capability, strategic insights and analysis.

Subscription members will gain far greater access to data, analysis and research.

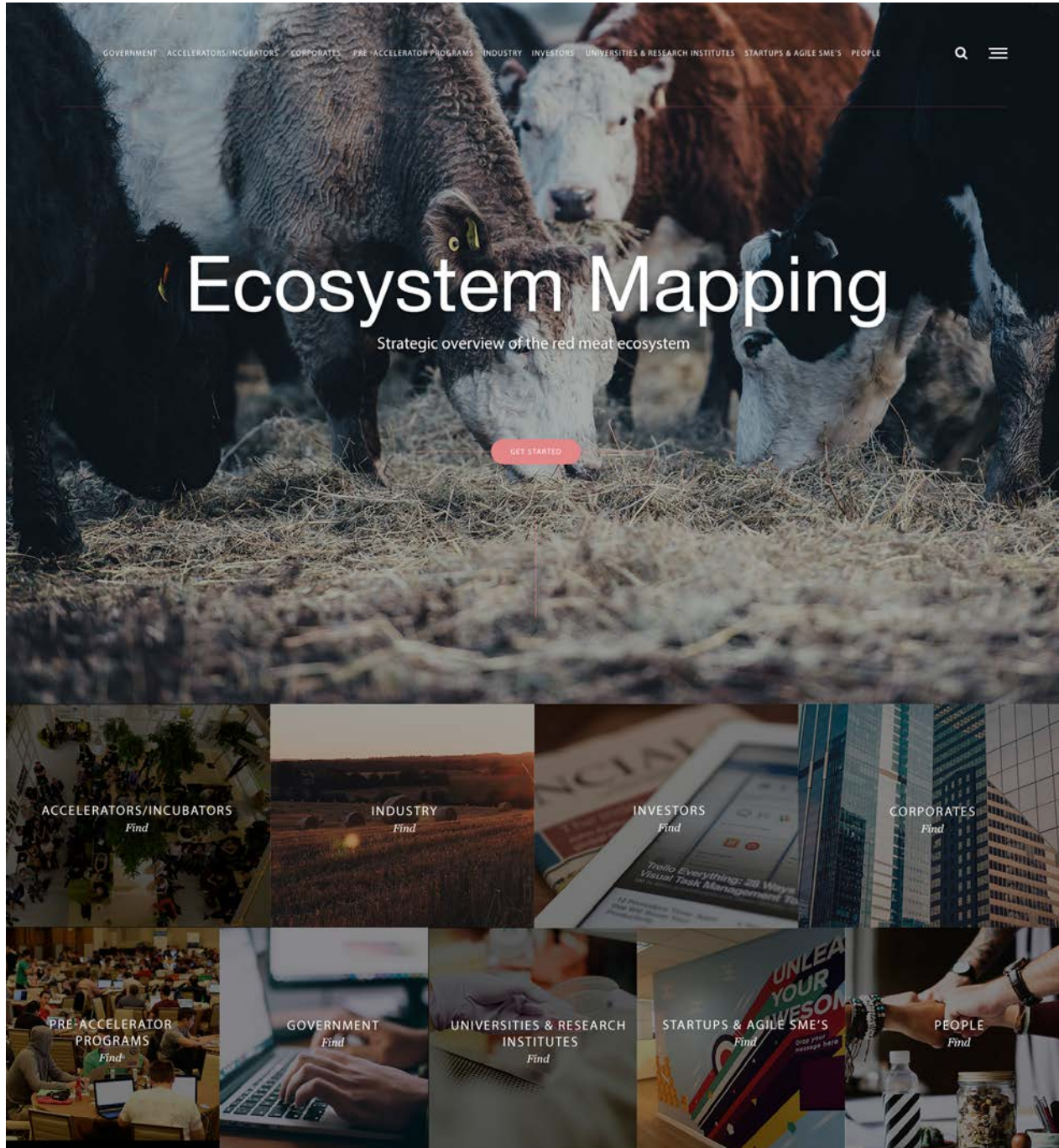
It is expected that users will include industry participants, investors, government, universities and the media.



8.3 Red Meat Industry Ecosystem Mapping

Artesian prepares bespoke industry ecosystem databases and mapping analytics which provide a SaaS subscription model solution for ecosystem participants.

8.3.1 Home Page for Red Meat Industry Ecosystem Map & Analytics



8.3.2 Investor Ecosystem Analysis Page

Investor Main No Dropdown
8/6/2019 10:27 pm

- Dashboard
- Account Info
- Add Users
- Users
- Chat Groups
- Pincode
- Email
- Print Report
- Settings
- Notes

INVESTORS

Annual
15

Quarter
5

Month
1

FUND SIZE

TICKET SIZE

- SEED (\$0-\$1,000,000)
- SERIES A (\$1,000,001-\$5,000,000)
- SERIES B (\$5,000,001-\$25,000,000)
- GROWTH (\$25,000,001-\$50,000,000)
- PRE-IPO (\$50,000,001+)

Progress

Total Invested	Total Funding	Deal Volume	Growth
139,760 \$	940,760 \$	112,760 \$	19,760 \$

INVESTOR ACTIVITY

Total: 29

COMPANY	INVESTOR
A Artesian	SIR
S Somerset	SIR
F Finster	
M Mavdoch	SIR

Type	Company Name	Type	Headquarters Location	Notes
<input type="checkbox"/>	Artesian Venture Partners	Venture Capital	Sydney NSW	Active and operating
<input type="checkbox"/>	Yuwoa Capital	Venture Capital	Perth-based venture co	
<input type="checkbox"/>	Somerset Capital	Investment Firm	Melbourne VIC	A boutique investor
<input type="checkbox"/>	Finistere Ventures	Venture Capital	San Diego USA	An AgTech investor
<input type="checkbox"/>	QIC	Alternative Investment	Brisbane QLD	A global c in Agribus
<input type="checkbox"/>	Bio Pacific Partners	Venture Capital	Auckland NZ	Connects Zealand e
<input type="checkbox"/>	Mavdoch Ventures	Venture Capital	Sydney NSW	The Verts Mavdoch
<input type="checkbox"/>	Paine Schwartz Partners	Private Equity	New York USA	Private eq sustainab
<input type="checkbox"/>	Pimirus Investments	Investment Firm	London UK	Sourcing and sale r

<https://projects.invisionapp.com/share/CX028198>

8.3.3 Startups & Agile SMEs Ecosystem Analysis Page

Startups & SMEs
9/6/17, 2:05 pm

- [Dashboard](#)
- [Account Info](#)
- [Add Users](#)
- [Users](#)
- [Chat Groups](#)
- [Financials](#)
- [Email](#)
- [Print Report](#)
- [Settings](#)
- [Notes](#)

RETURN HOME CLICK HERE

STARTUPS & AGILE SME'S

Annual

1500


Quarter

50+

Month

15+

BY STAGE



BY INDUSTRY

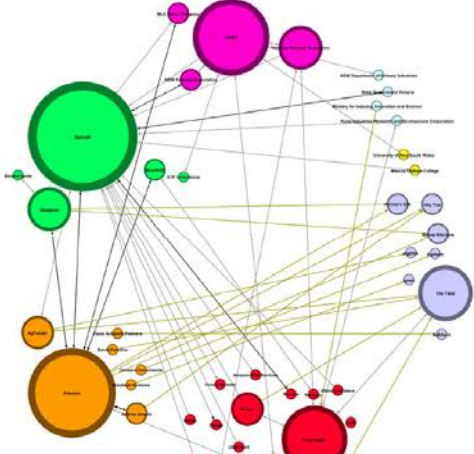
ACTIVITY

Total 29

AG TECH	FOOD TECH	FOOD INH
12	23	18

Select Tech Tag | Select Industry | Select Subindustry

<input type="checkbox"/>	Company Name	Tech Tag	Headquarters Location	
<input type="checkbox"/>	The Yield	AgTech	Sydney NSW	Microclim
<input type="checkbox"/>	AgriWebb	AgTech	Sydney NSW	Easy to u farm man
<input type="checkbox"/>	AgBiTech	AgTech	Glenvale QLD	Giving far with insen
<input type="checkbox"/>	Ovass	AgTech	Perth WA	Spatial al intelligen
<input type="checkbox"/>	Fresho	Food Innovation	Melbourne VIC	Ordering; customer
<input type="checkbox"/>	Goterra	AgTech	Canberra ACT	Sustainable solutions
<input type="checkbox"/>	Circular Food	FoodTech	Somerton VIC	Solution 1 organic b
<input type="checkbox"/>	FluroSat	AgTech	0 0	Crop heal
<input type="checkbox"/>	Observant	AgTech	Melbourne VIC	Farm info platform



<https://projects.invisionapp.com/share/CKC084YBC>

9. CREATING CRITICAL MASS AT THE BASE OF THE PIPELINE

This section looks at the benefits of a Sidecar fund and the range of accelerator models and other strategies available to MDC and MLA Corporate clients & startups to invigorate, grow and support the base of the AgriFood Innovation pipeline

9.1 Benefits of a Sidecar Fund to MDC & AgriFood Startup Pipeline

The Australian early stage venture capital ecosystem has developed greater sophistication over the last 5 years with the emergence of accelerators, incubators, university programs and more recently equity crowdfunding platforms.

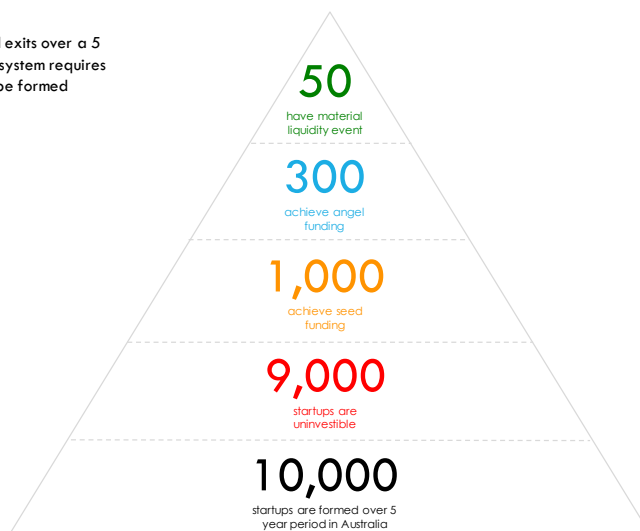
Although still perhaps 5-10 years away from having a large enough early stage startup pipeline to properly support a full scale late-stage VC industry, the foundations required to generate sufficient investable late stage ventures is well underway.

Previous attempts by the government to kick start the late stage VC industry have failed because of a top-down approach. Schemes such as the Innovation Investment Fund, where late stage VCs were allocated capital from the government, were initiated before there was a large enough base of early stage startups being created to generate sufficient quality late stage deal flow. Subsequently, too much money had to be invested in sub-optimal opportunities and returns were sub-optimal as a result.

AVP believes that a bottom-up approach, where hundreds of small investments are made across a very broad range of early stage ventures, will in time create a greater deal flow of successful ventures that will support a sustainable late stage VC industry in Australia. By supporting a range of accelerators/incubators, universities and angel groups AVP has created a privately funded solution for the Government's innovation dilemma.

STARTUP ECOSYSTEM PYRAMID

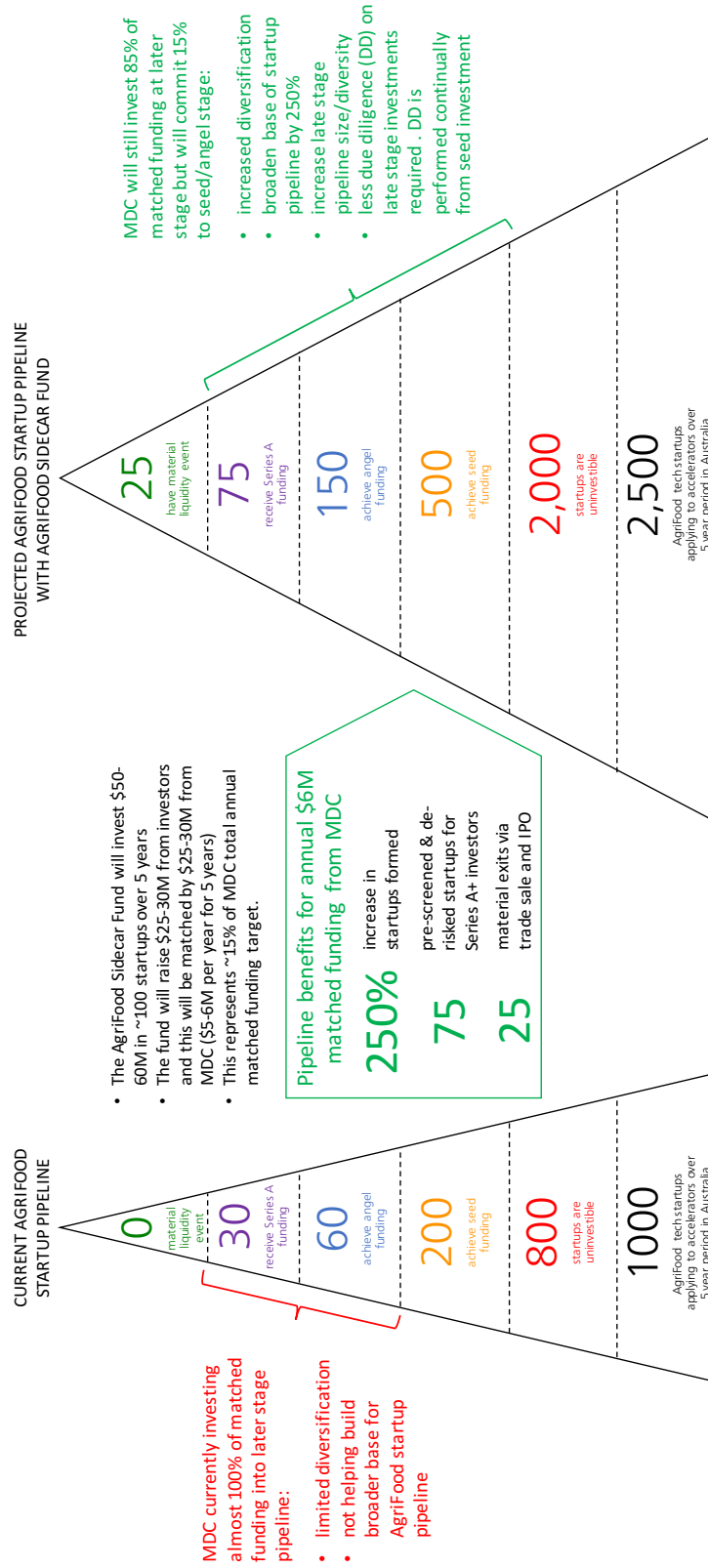
To have 50 material exits over a 5 year period the ecosystem requires 10,000 startups to be formed



This same ecosystem building methodology is applicable to MDC's aim of creating a broad and sustainable critical mass of early and late stage AgriFood Tech startups.

The benefits of a AgriFood Sidecar Fund are illustrated in the diagram below.

Benefits to MDC & AgriFood Startup Pipeline with 15% Allocation of Matched Funding to Early Stage Startups



9.2 External Pre-Accelerator & Accelerator Models with Ecosystem Partners

MDC and MLA Corporate Clients and startups can partner with a range of external ecosystem partners in the AgriFood innovation ecosystem. These include:

- **Pre-accelerator Programs:** Agnostic and AgriFood focused hackathons, meet-ups and events
- **Accelerator Programs:** Agnostic and AgriFood focused accelerators & incubators

9.2.1 Meetups

Building an ecosystem starts with connecting the people. Meetups are a key forum for like-minded people, keen to learn about the AgriFood innovation ecosystem, to connect and potentially learn about what it takes to launch their first startup. Meetups are also an excellent, and relatively cheap, forum for sponsors to be seen supporting and participating in the grass roots level of the innovation ecosystem.

An example of an AgriFood meetup is the NSW AgTech Meetup is a monthly event with over 300 members. It is sponsored by SproutX, AgThentic, Crowe Howarth, AgFunder and AgriDigital. The monthly meeting generally has several speakers as well as a social/networking element.

9.2.2 Hackathons

A hackathon is a design sprint-like event in which developers, designers and business people collaborate intensively on software/hardware projects. Hackathons typically last between a day and a week. Some hackathons are intended simply for educational or social purposes, although in many cases the goal is to create usable software. Hackathons tend to have a specific focus, theme or problem to be solved.

An example of an AgriFood hackathon is the Agrihack Event held in Wagga Wagga in April 2017. This hackathon was sponsored by Commonwealth Bank, and Charles Sturt University and was designed to bring innovation to regional Australia and further connect the entrepreneurial ecosystem of metro areas to rural developers and disruptors.

The event focused on 4 key areas:

- Wool
- Data informed decision making
- Operational efficiency
- Dairy

9.2.3 Industry Events

Industry events include conferences, expos and other functions designed to promote and educate a broad audience on key themes and issues within the industry. They are another useful networking event for entrepreneurs, startups, investors and corporates to attend/sponsor.

An example of an AgriFood industry event is the 400M AgTech Investment Forum held in Toowoomba in May 2017. This event was designed as a ‘fire-starter’ for the convergence of diverse technology solutions and investment to drive the next level of productivity and sustainability for agriculture.

9.2.4 Accelerators

Startup accelerators, also known as seed accelerators, are fixed-term, cohort-based programs, that include mentorship and educational components and culminate in a public pitch event or demo day. Australian startup accelerators are consolidating into 4 types: agnostic, corporate, vertical & horizontal. The best of breed solve cohort funding post-program with dedicated funding for seed, angel and late/growth stage

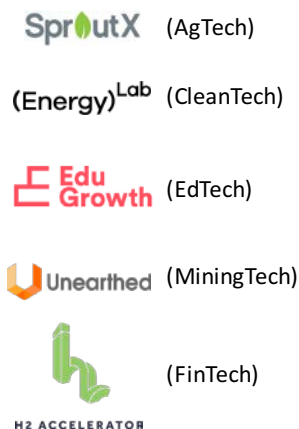
AGNOSTIC TECH ACCELERATORS



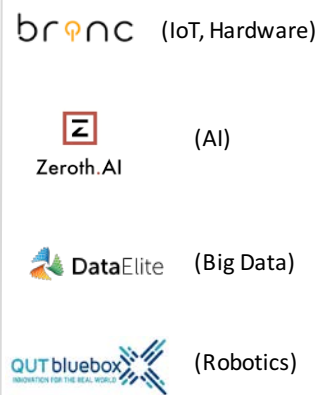
CORPORATE ACCELERATORS



VERTICAL ACCELERATORS



HORIZONTAL ACCELERATORS



9.3 Artesian Accelerator Model for MDC & MLA Corporate Clients

9.3.1 Artesian’s Vision for Best-of-Breed Corporate Accelerators:

A best-of-breed corporate accelerator will:

- target scalable early stage ventures and gain access to new exponential technologies
- target external entrepreneurs (and their high growth-potential startups) while also providing opportunities for ‘intrepreneurs’ (internal Corporate candidates)
- provide strategic access to early stage innovation in a cheaper, faster and more flexible way than R&D, creating numerous advantageous outcomes
- look beyond a Corporate’s core business and establish a new growth strategy of business building moving out to incremental business and all the way to the edge to build and develop exponential and disruptive businesses
- be established to achieve economic benefit, in contrast to many corporate accelerators which are established for non-financial utility (which is also the reason they fail). In any healthy organization there is a culture of

profitability and if the corporate accelerator does not pursue this culture as well, it will not survive within the organization

- encourage an entrepreneurial spirit and culture throughout the broader organization
- establish close ties with, and encourage/support, the broader Australian startup ecosystem as well as international corporate accelerators

To best service both types of accelerator participants (entrepreneurs and ‘intrapreneurs’), it is recommended that Corporate Accelerators adopt a hybrid model with key features taken from the following accelerator models.

9.3.2 Traditional Corporate Accelerator:

Model:

The incubator/accelerator works with both ‘intrapreneurs’ and entrepreneurs that propose disruptive solutions to existing problems, or work on potential disruptions that a Corporate cannot otherwise pursue. The best teams are given the opportunity to continue developing their innovation by being:

- invited to join the Corporate (spin in),
- fenced off for some additional period during which the Corporate makes an additional investment to keep them going,
- asked to continue working outside the Corporate (spin out) and are offered an investment by a dedicated Corporate Seed Fund and, potentially, business units of the Corporate (with or without additional investments from angel investors, other corporations and institutional VCs).

Other Corporate Accelerator Examples:

Samsung, Telefonica.

When to use the model:

When the corporation:

- wants access to early stage innovations
- is ready to commit resources to work closely with very early stage startup teams, see them through their ups and downs, and tolerate their risk-taking and failures

Benefits to the Corporate:

- ability to attract entrepreneurs who can build scalable ventures that achieve lucrative financial exits via trade sale or IPO or be acquired by the Corporate
- ‘intrapreneurs’ get to work side by side with these entrepreneurs and learn from one another
- the Corporate Accelerator and dedicated Corporate Seed Fund collaborate around these teams
- the Accelerator enables the corporation to connect with the broader startup ecosystem

9.3.3 ‘Intrapreneur’ Incubation:

Model:

Teams of entrepreneurial employees use the Corporate Accelerator to create innovative solutions and test business models that cannot normally be pursued by the business units.

Examples:

LinkedIn, Google, Starbucks.

When to use the model:

When the corporation has a strong innovation culture and long-term commitment to disruptive innovation.

Benefits to the Corporate:

- Promote and strengthen intrapreneurship, risk-taking, and out of the box thinking.
- Rapidly develop new products and business models.
- Reward and retain high performance employees

9.3.4 Outsourced Accelerator Provider vs. Internal Expertise

There is an entire ecosystem of accelerators, entrepreneurs and experts. Forming ties and partnerships allows the accelerator to learn from the ecosystem and to operate in a network from day one.

However, just as there are low barriers of entry for startups, there are also low barriers of entry to startup 'experts', so the vetting of key staff and service providers is critical to the longevity and success of the Corporate Accelerator program.

Building an Accelerator Program can be done with a partner, in collaboration with other accelerators, or can be built using internal expertise.

Artesian proposes that it provides a 'shadow' team to establish and operate the Corporate Accelerator for an initial 12 to 24-month period. The Artesian team will run the accelerator program and, in parallel, train assigned staff of the Corporate to subsequently take full responsibility for the program.

9.3.5 Benefits of a Corporate taking control of their Accelerator Program

The benefits of a Corporate taking control of their Accelerator program include:

- Ensuring the sustainability of the accelerator program through changes in management and external economic cycles. In time Innovation should be embedded across the organization just like the finance, HR or technology functions and it is therefore imperative to insource and not outsource such critical functions
- Learning to navigate the fine line between an existing corporate culture that often leans towards secrecy and efficiency and creating a culture of innovation where these behaviors are the norm. These lessons can be communicated to the broader organization to encourage a more open and collaborative innovation culture
- Helping retain and reward entrepreneurial staff members and optimizing the potential for cultural change
- Using the Corporate Accelerator and Corporate Seed Fund as building blocks to establish later stage VC capabilities integrated with broader group strategic M&A activities

9.3.6 Artesian Recommendation for Corporate Accelerator Operation

Artesian recommends that a Corporate utilizes internal resources to run its accelerator program. This will ensure program sustainability, retain intellectual property, build an innovation culture and provide opportunity and reward for the Corporate's staff.

To this end Artesian will:

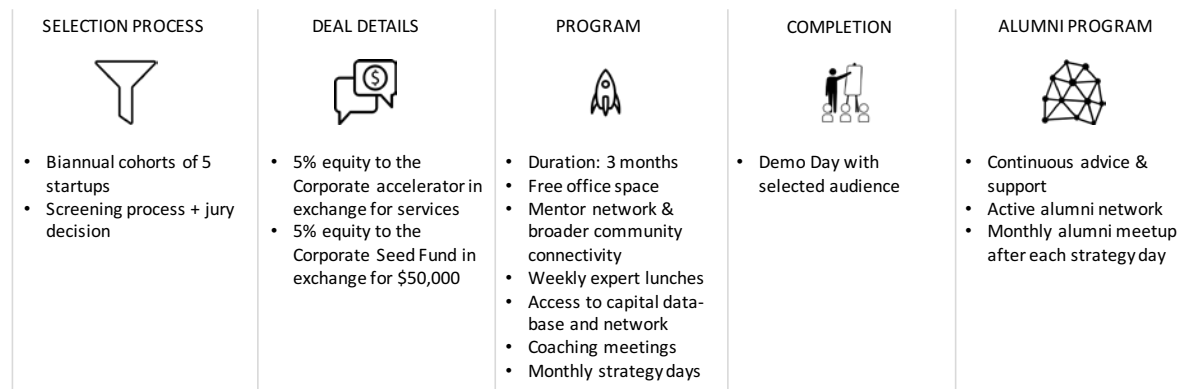
- provide the team to operate the initial Corporate accelerator program(s) for initial 12-24 months; and in parallel
- train selected Corporate staff to take over the operation of the accelerator in subsequent cohorts.

9.3.7 Corporate Accelerator Components

The general features of a best of breed accelerator are:

- An application and selection process that is open yet highly competitive
- Startups supported in cohort batches or ‘classes’
- A deal that delivers accelerator services and seed capital in exchange for equity
- An acceleration program focused on small teams not individuals, time-limited support comprising programmed events and intensive mentoring from a network of domain experts
- Accountability with regular feedback, metrics and peer/external review
- A final demo day with broad community and industry engagement
- Alumni programs and post-accelerator support and networking
- A dedicated follow-on co-investment fund for angel and early-stage VC rounds

ACCELERATOR COMPONENTS



The MBA dissertation *Copying Y Combinator* by Jed D. Christiansen (2009)¹, focused on specific features of the accelerator. It investigated which aspects of the accelerator program matter the most to the startups. The study concluded that the single most important aspect to long-term success turned out to be connections to future capital. For most of the startups, it is vital to raise more capital after the accelerator program to further develop their product. This makes the network and connections to investors an important issue for the accelerator.

The paper *Do Startup Accelerators Deliver Value? The Economics of Creating Companies* (Wu, 2012)² defined what value an accelerator provides for its startups. It concludes that there are 4 principal elements:

- human capital (education),
- signaling (credibility),
- search costs (networking),
- cost of capital (seed, follow-on investments).

¹Christiansen, J. D., (2009) *Copying Y Combinator: A Framework for developing Seed Accelerator Programs*. Cambridge: University of Cambridge.

²Wu, A. (2011) *Do Startup Accelerators Deliver Value? The Economics of Creating Companies*, MIT Entrepreneurship Review, August 14th & 22nd

The Corporate Program will be designed to optimize these 4 factors for the participating entrepreneurs/founders and startups.

9.3.8 Corporate Accelerator Program

The Corporate Accelerator will include a co-working space for entrepreneurs with first stage ideas to work alongside each other to grow their concepts into early stage scalable businesses. Co-working allows for dynamic interaction between the accelerator program participant companies and provides a more social experience, optimizing opportunities for collective support and input from mentors and management. Participants will be offered entry level business development support and mentoring that is essential for taking technology startups from ideas to forming minimum viable products or services.

All startups accepted into the Corporate Accelerator program will be eligible to apply for funding. Selected companies will be seed funded by the Corporate Seed Fund for up to \$50,000 in exchange for up to 5% equity. Up to 40% of committed funds may be paid to startups upfront to defer initial setup costs. The balance will be made available in tranches, based on achievement of pre-determined milestones and on progress against agreed targets.

The primary intentions of the Corporate Accelerator program will be to provide a dynamic and supportive environment that assists participant startups to:

- ensure their governance documents are in order (shareholder agreements, constitution, employment agreement, IP assignment)
- conduct customer discovery and validation
- obtain business model validation
- produce demo/minimum viable products
- engage with early beta customers
- create a package of all due diligence docs ready for angel or other follow on investment
- develop a polished pitch deck and pitch video.

Support provided by the Corporate Accelerator will generally include:

- co-working space in a premium location
- introduction to the fundamentals of the Lean Startup model, the business model canvass, and the concept of pivoting
- entry-level business development support using the business model canvass framework and use of various supports tools such as for example NSW's small business toolkit and the federal government's business planning tools
- mentorship provided by its volunteer mentor network
- skill building lectures
- skill building workshops
- facilitating access to networking channel,
- provision of key pro-forma documents needed to get the company investment-ready
- access to available support and networks from the Corporate & Artesian.

9.3.9 Program Structure & Delivery

The Corporate Accelerator program will be structured to cater for startups and scaleups with participation from both external and internal teams.

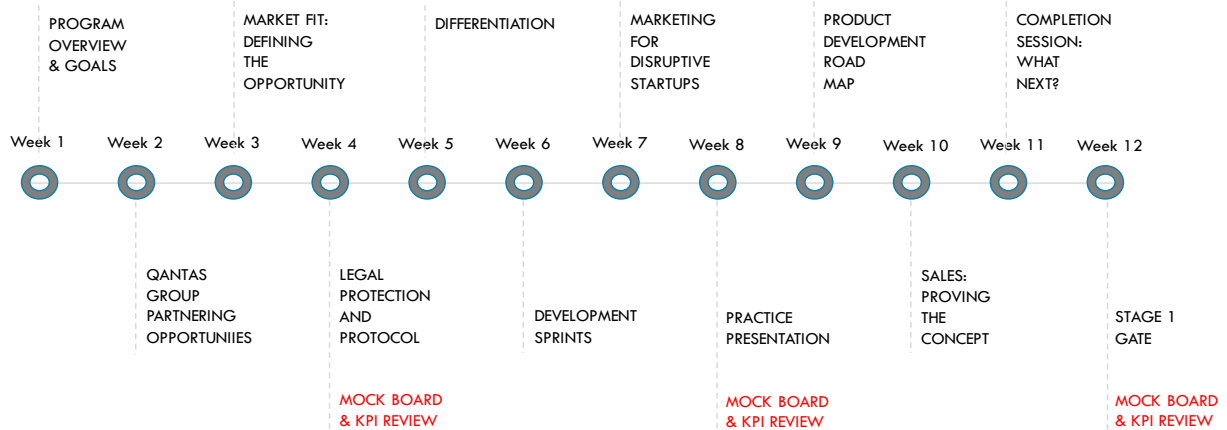
The program will be flexible to cater for all categories of ventures in an inclusive environment. This will ensure that there is a strong culture of sharing and collaboration between ventures, that are at different stages of growth, while providing appropriate levels of mentorship depending on the stage and sophistication of the ventures.

Pairing the most suitable mentors to match the specific requirements of the startups and scaleups will be a critical part of the program execution. KPI setting, monitoring and measurement, along with regular ‘mock’ board meetings, will ensure the startups and scaleups are receiving the optimal support from the program and determine whether the startups and scaleups are meeting the programs expected high standards of performance.

Gates at the end of the 12-week stage and the 24-week stage will provide more formal KPI reports to the participating teams and will determine whether funding tranches are received and whether the startups/scaleups will continue to be program participants. The gate assessments will also determine opportunities to partner with the Corporate’s divisions and/or external partnerships.

ACCELERATOR PROGRAM - STAGE 1

Stage 1 Program



ACCELERATOR PROGRAM - STAGE 2

Stage 2 Program



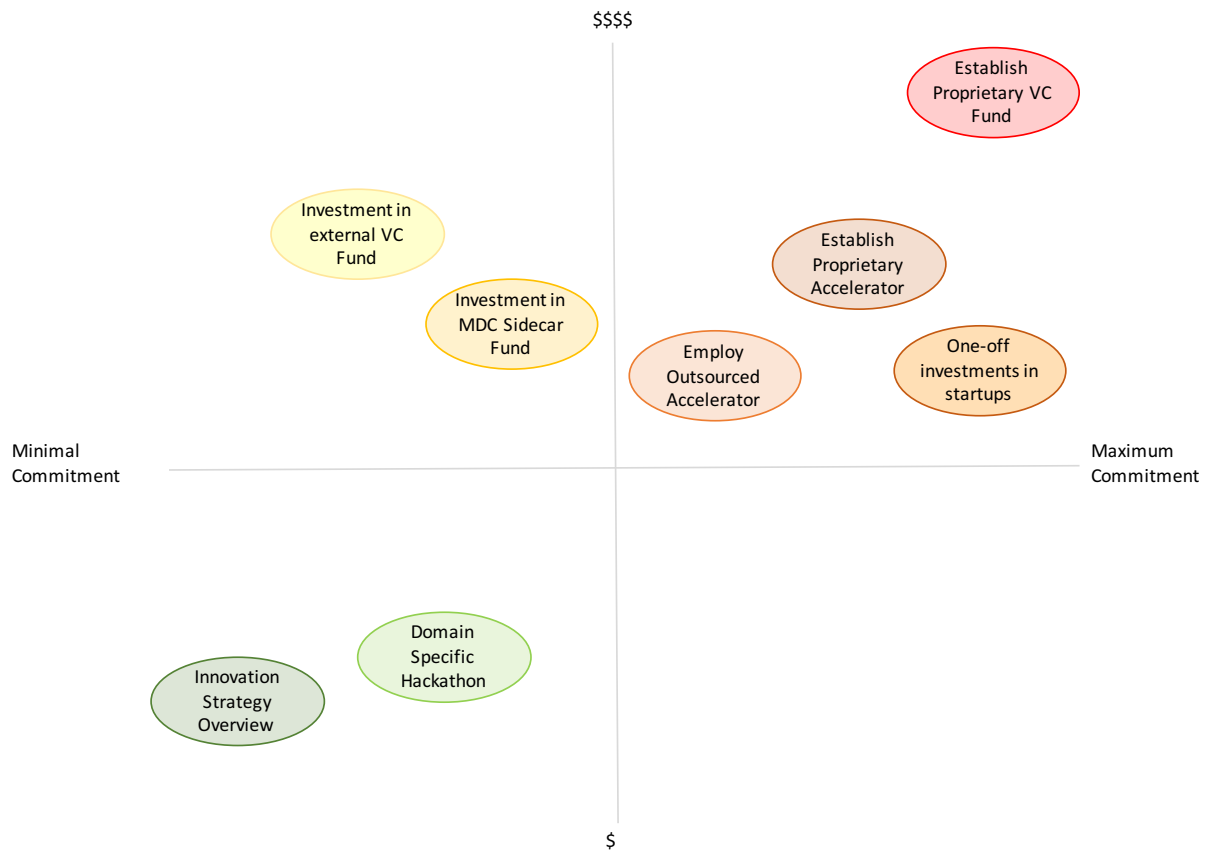
9.4 Support & Strategy for MLA Corporate Clients

MLA Corporate clients can be provided with a range of alternatives to ignite their innovation strategy:

These alternatives may include:

- Employing MDC/Artesian for a tactical overview of their innovation strategy
- Creating a domain specific hackathon
- Investing in the MDC Sidecar Fund
- Participation in a third-party corporate accelerator
- Establishing a proprietary accelerator program
- Establishing a proprietary VC Fund

MDC Corporate Clients Innovation Participation Matrix



9.5 Support & Strategy for Portfolio Companies

Support for MDC portfolio companies will include:

- Participation in the MDC accelerator and/or Corporate Partner programs
- Access/Membership to the AgriFood Innovation Hub
- Ongoing funding from the AgriFood Sidecar Fund
- Access to Artesian VC resources and networks

9.6 Pre-Accelerator Support for MLA Members & Entrepreneurs

Support for MLA Members & Entrepreneurs will include:

- Participation in the MDC pre-accelerator and/or Corporate Partner programs
- Access/Membership to the AgriFood Innovation Hub, including co-working space, networking events, hackathons and meet-ups
- Online education and resources

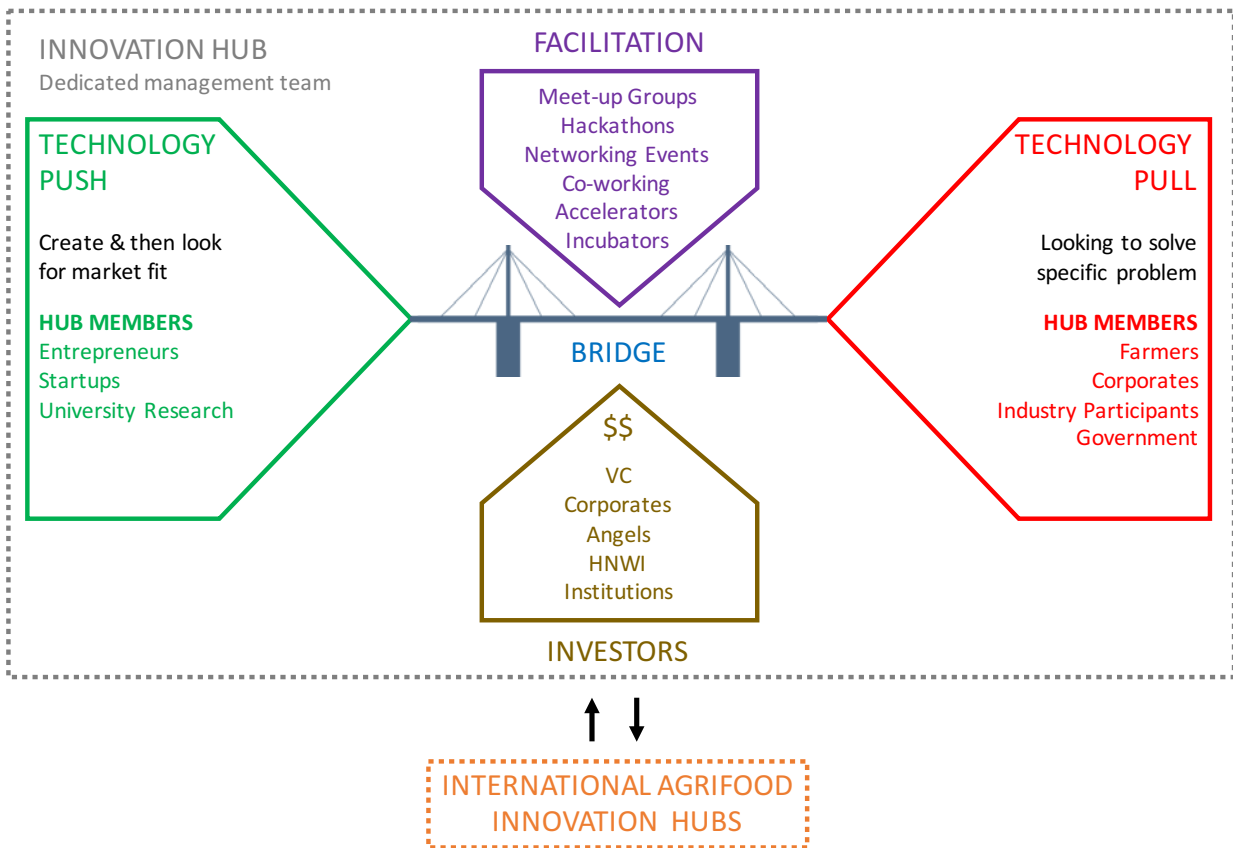
10. ECOSYSTEM CONNECTIVITY & COLLABORATION

This section looks at strategies to increase AgriFood ecosystem connectivity & collaboration

10.1 Establishing an AgriFood Ecosystem Hub

- A technology hub can provide a physical space, offering events, mentoring, networking and collaboration opportunities as well as work spaces for individuals, startups and agile SMEs
- The hub would be established as a focal point for the AgriFood innovation ecosystem
- It would be:
 - communal
 - self-organizing & adaptive
 - enable innovators
 - bring together a range of technical, professional, industry and design experience
 - a local focal point linked to global hubs and innovation labs
- Attract government, corporate and industry sponsorships and lift the profile of the industry

AgriFood Ecosystem Hub



10.2 Examples of Successful Innovation Hubs

Innovation Hub	Key Features
STONE & CHALK	<ul style="list-style-type: none"> Stone & Chalk (S&C), based in Sydney, is the largest FinTech hub in Asia and is already the centre of gravity for FinTech in Australia. As a not-for-profit organisation, Stone & Chalk takes no equity in the startups it supports and is therefore a truly independent and trusted partner for all stakeholders. Grounded on a give first philosophy, Stone & Chalk has attracted corporate membership from 24 large Australian and global corporates and government S&C now houses over 300 entrepreneurs working in over 60 FinTech startups that have already collectively raised over AU\$101 million in funding and employed an additional 50 people. The S&C proposition is focused on helping startups to commercialise and to scale through collaboration with large organisations around the world. Corporate partners include ASX, EY, Optus, American Express, KPMG, ANZ, IBM, IAG, Suncorp Bank, Gemworth, AMP, Macquarie Bank, Westpac, Oracle, Thomson Reuters, HSBC As well as providing co-working space, S&C organizes frequent industry, investor, educational and networking events. The space is one of the first stop off points for visiting FinTech delegations from international marks and is often used for government policy announcements related to the industry.
FARM491	<ul style="list-style-type: none"> Farm491 is a space for innovators to grow their businesses by applying technology to growing environments. Farm491 provides high-spec facilities created to foster entrepreneurship, ideas generation, and collaboration – it includes 491 hectares of farmland for research and testing. Farm491 is offering start up space on-site at the Royal Agricultural University’s main campus in Cirencester (UK) and at the farm-based workshops at Harnhill: affordable and flexible working environments where AgTech innovators can run and grow their businesses. Farm491 members have access to the business support and a knowledge network that includes farmers, investors and expert advisers, as well as open access to farming data. Members can test, refine and grow their propositions. This pioneering new initiative will create a vibrant incubation environment with the potential to influence and benefit the wider AgTech and food production industries. We plan to assist over 55 new AgTech companies and help them create over 200 new jobs over the next 5 years.
RISE	<ul style="list-style-type: none"> Barclays is a global physical and virtual FinTech open innovation hub, comprising, co-working spaces, hackathons and accelerators. The product innovations and industry developments that used to come from large corporations and institutions are now being created by entrepreneurial individuals around the world who are working with increased speed to disrupt the business models of the past. To work with these entrepreneurs in a mutually beneficial way, Barclays established Rise. Through its global network of connected sites in seven of the world’s top FinTech ecosystems (London, Manchester, New York, Vilnius, Cape Town, Tel Aviv, Mumbai) Rise delivers numerous programmes that facilitate rapid engagement between Barclays and the Rise community to solve some of the biggest challenges facing financial services. These programmes foster long-term mutually beneficial relationships, designed to scale early prototypes and new business models into live products and services. By collaborating

	<p>with Barclays, our members receive advice and mentorship from some of the world’s leading experts in financial services, as well as having access to a new global customer.</p> <ul style="list-style-type: none"> • With a global network of talent, world-class innovation programmes and workspaces, Rise is a curated community where the best and brightest can develop, collaborate, and scale together.
SOSA	<ul style="list-style-type: none"> • Tel Aviv-based startup hub SOSA (South of Salame Street). SOSA, also known as the Global Network of Tech Innovation, will be leading the effort to transform Israel into a “ConstrucTech Hub” in partnership with the Economy Ministry, the Construction Ministry and the Israel Builders Association. • Much like the efforts the Israeli government took to spark the auto-tech industry with grants and positive regulatory environment, the partnership will help to lay the groundwork for the fundamental disruption of the multitrillion-dollar global construction and real-estate development industry • Melding together SOSA’s global network of corporations and start-ups with the ability of government bodies to expedite the use of new technologies, the partners aim to bring global corporations access to innovation that will redefine the construction and real-estate sectors • SOSA brings together startups, innovators, corporate partners and government bodies under one roof, team members have begun identifying promising technologies from the construction sector and from other verticals (chains of supply and services) that could be pivoted into the building industry • The Construction Innovation Zone will have a physical home at SOSA, with a dedicated manager and team, including a structured yearly program with mentoring sessions for start-ups. The goal is to attract all the relevant players to this under-explored vertical, such as those people involved in planning, construction, regulation and inspection, as well as academics, entrepreneurs from other verticals and investors who have experience in supporting start-ups.

11. CO-INVESTMENT STRATEGIES

This section looks at a range of strategies for increasing co-investment alongside MDC in early stage ventures and the vehicles employed to execute these investments.

11.1 Range of Instruments for Startup Investments

11.1.1 Equity

Issuing equity in a company is the route most entrepreneurs pursue, especially for growth companies where cash flow is difficult to predict, hence making it tough to forecast repaying debts. Equity is typically secured from angel investors or venture capital firms.

A typical Series A (first institutional round) investor is looking for 25% to 35% of the company, in exchange for its investment. So, for example, if a startup's valuation is \$4M pre-money, an investor would provide \$2M for a 33% stake, as an example. Most professional investors will be seeking equity in the form of preferred stock, not common stock, where they get a 6% to 8% interest and a liquidation preference of at least one times their money back before the common shareholders begin to participate in any sale proceeds for the business.

There are several types of preferred equity, including:

- **Participating Preferred** - investors "double dip" on their interest and liquidation preference and get their equity upside pro rata with common, however, if this structure is used there is frequently a limit of two to four times the liquidation preference before the participating feature goes away.
- **Convertible Preferred** - investors will get their 6% to 8% interest rate plus money back or they can convert and get the equity upside of their stock pro rata with common.

11.1.2 Debt

There are a range of debt instruments that can be used for growth stage startups. These include:

- **Secured Debt** - is debt that takes priority over other unsecured or otherwise more "junior" debt owed by the issuer. Senior debt has greater seniority in the issuer's capital structure than subordinated debt.
- **Subordinated Debt** - unsecured loans or bonds in which the lender agrees that senior or secured creditors will be fully paid before any interest or principal is paid
- **Participating Loans** - loans whose remuneration is contingent upon the results of the debtor firm, rather than being fixed. The remuneration can be linked to the firm's sales or turnover, profits or share price. Participating loans do not share losses.
- **Silent Participation** - closer in legal form to an equity investment than subordinated or participating loans. In this form of financing one or more persons take an equity stake in a company, but without assuming any liability to the company's creditors. The silent partner is a "limited partner", since their liability is usually limited to the amount invested in the company. Usually the silent partner participates in the losses up to their invested capital amount.
- **Convertible Debt & Warrants** - a debt instrument with a maturity date and stated repayment terms, which includes an option to convert the debt into another financial instrument, such as other forms of debt, derivatives, or stock. Detachable warrants, which give the holder the right to purchase a specific number of shares at a predetermined price, differ from convertible debt in that they can be traded separately from the securities to which they are related.
- **Mezzanine Finance** - generally intended as a technique that combines two or more of the above investment instruments (tranches) within a facility that is sold as a single entity to a investors. A simple mezzanine facility contains (1) one or more categories of subordinated debt (2) a tranche in which the investor receives a

“success” fee i.e. a share of the firm’s earnings or profits and/or (3) an equity related tranche (“equity kicker”) in which an investor receives a payment whose value is contingent upon a rise in the value of the company, usually reflected in the company’s share price.

- **Venture Debt** - a type of debt financing provided to fund working capital or capital expenses, such as purchasing equipment. Venture debt can complement venture capital and provide value to fast growing companies and their investors. Unlike traditional bank lending, venture debt is available to startups and growth companies that do not have positive cash flows or significant assets to use as collateral. Venture debt providers combine their loans with warrants, or rights to purchase equity, to compensate for the higher risk of default. As a complement to equity financing, venture debt provides growth capital to extend the cash runway of a startup company to achieve the next milestone while minimizing equity dilution for both employees and investors.

11.1.3 Convertible Notes

Convertible notes are loans that convert into equity upon specified future events. Some seed investors and many startups prefer convertible notes to an equity round, as a convertible note round does not require negotiation of preferred stock terms, multiple documents, and the necessity of a charter amendment. This may lead to faster closings and reduced transaction costs.

The most common debt-to-equity conversion event is a future round of equity financing with a minimum threshold of at least \$500,000. Each convertible note converts to the same series of stock a startup issues at the subsequent equity financing (say, a Series A funding round).

To compensate the convertible note investor for their earlier investment and therefore increased risk relative to later stage investors, convertible notes offer a “Discount” to the subsequent Series A price per share paid by investors. The typical Discount is 20%. For example, if Series A investors purchase Series A shares at \$1.00 per share, the convertible note holders would convert their debt into Series A shares at \$0.80 per share.

A “Price Cap” is the maximum pre-money valuation upon which the note will convert into equity. Thus, if a Series A pre-money valuation is \$12.5 million and the note’s Price Cap is \$5 million, the convertible note converts into equity at the \$5 million valuation.

Most convertible notes contain both a Price Cap and a Discount, and the investor applies either the Price Cap or the Discount when converting their debt into Series A shares. The investor uses the calculation that results in a greater number of Series A shares.

11.1.4 Convertible Equity (SAFEs)

Convertible equity is essentially a convertible note without the debt features, i.e. no interest and no maturity date. But, the economic terms of conversion (Price Cap and Discount) typically still apply. Convertible equity alleviates a primary concern of convertible notes - repayment if a future round of financing or a sale of the startup does not occur prior to the maturity date. Additionally, a couple of famous incubators (Y Combinator - SAFE and 500 Startups - KISS) have started to use convertible equity as a partial way to finance their portfolio companies.

The Y Combinator (YC) SAFE instrument is convertible equity, and YC has provided 4 different document sets:
Range of instruments for startup investments

- (1) **Price Cap and Discount:** This version of SAFE is convertible equity with a Price Cap and Discount.
- (2) **Discount:** This version of SAFE is convertible equity with only a Discount. (Note that this version has no threshold amount that the startup must raise to trigger the conversion.)
- (3) **Price Cap:** This version of SAFE is convertible equity with only a Price Cap. (Note that this version has no threshold amount that the startup must raise to trigger the conversion.)

(4) **Most Favored Nation (MFN) Provision:** This version of SAFE is a convertible equity with no Price Cap or Discount. But if the startup subsequently issues SAFE with provisions that are more advantageous relative to current SAFE investors, this version of SAFE can be amended to reflect the terms of such subsequent issued SAFEs. (Note that this version does not automatically convert into shares unless the amount of Series A raised is at least \$250,000).

11.1.5 Royalty/License Agreements

An investor may choose to receive a share of royalties/license fees rather than holding equity or debt securities. Typically, this will be a percentage of gross profit from sales of the product or services or a fixed dollar amount per unit sold. Gross profit is the company's 'factory gate' price per unit minus the cost of production and selling, multiplied by the number of units sold per year.

Royalty agreements generally differ from venture debt in that a royalty agreement may have no defined end. Venture debt/loans will have a specific value, a known repayment schedule, and a finite life.

11.1.6 VC Funds

Venture capital funds are investment funds that manage the money of investors who seek private equity stakes in startup and small to medium sized enterprises with high growth potential. These investments are generally characterized as high risk, high return opportunities. In the past, venture capital investments were only accessible to professional venture capitalists, although now accredited investors have a greater ability to take part in venture capital investments.

Venture capital investments are considered either seed capital, early-stage capital or expansion-stage financing depending on the maturity of the business at the time of the investment. However, regardless of the investment stage, all venture capital funds operate in much the same way.

Like all funds, venture capital funds must raise money prior to making any investments. An investment memorandum (IM) is given to potential investors of the fund who then commit money to that fund. The investors are Limited Partners (LPs) in the fund and the manager is the General Partner (GP).

Once closed, the venture capital fund seeks private equity investments that have the potential of generating positive returns for its investors. This normally means the fund's manager or managers review hundreds of ventures in search the best, potentially high-growth opportunities. The fund manager makes investment decisions based on the IM and the expectations of the fund's investors. After an investment is made, the fund charges an annual management fee of around 2%.

Investors of a venture capital fund make returns when a portfolio company exits, either in an IPO or a merger and acquisition. If a profit is made off the exit, the fund also keeps a percentage of the profits in addition to the annual management fee. This is known as the performance fee or carry and is generally 20% of the profits after the LPs have been made whole on their original commitment, any fund costs and their management fees.

11.2 Increasing Corporate Co-Investment

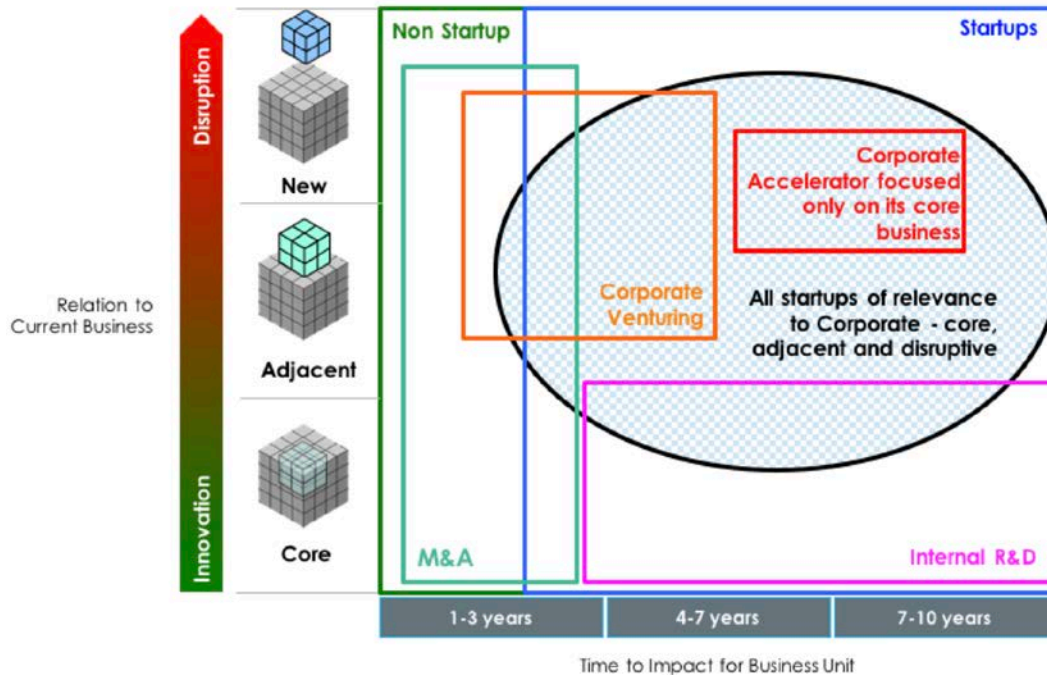
Artesian can develop innovation plans, proprietary accelerator programs and investment strategies for MDC's corporate partners. This section outlines Artesian's approach to communicating the opportunities and risks for a corporate to participate in open innovation, distributed R&D and startup investment.

Collaborations between big companies and startups are the business world’s odd couples - two entities, which at an operational level have little in common, trying to work together. Successful companies develop innovation models and systems that are suited to their circumstances and reflect their corporate strategies.

Successful companies also define a mandate for their innovation programs, ensuring that their organizations know what the goals, focus, and parameters of these efforts are. The mandate need not be long or complicated, but it should cover the following points:

- **The Company’s Innovation Objectives.** These may focus on strengthening the core business, expanding into adjacent areas, or exploring and preparing for future entry into currently unrelated business areas. The role of deep tech—compared with the application of digital technologies to existing products, services, processes, and functions—should be highlighted.
- **R&D Focus.** The topics on which the company wants to focus its R&D efforts should be defined.
- **Preferred Partner Profile.** An approximate profile of the kind of startups the company wants to partner with should include, for example, whether they are in early-stage, intermediate-stage, or late-stage development.
- **Resources.** A description of the required resources should specify, for example, the budget, people, and facilities that will be needed to meet the mandate.

A Holistic Strategic Approach to Corporate Innovation



11.2.1 Strategic Benefits of Corporate Co-Investment

It is important to promote the broad range of benefits that corporate co-investment in startups can bring to an organization. These include:

- **Distributed R&D/Deal Sourcing**
 - » an early stage venturing strategy can facilitate ‘eyes and ears’ for the corporate, identifying and establishing relationships with startups, identifying commercial partnerships, deal flow for later stage investment and/or strategic M&A opportunities
 - » allows recognition of, and timely response to, the risks of disruption to a corporate’s core business and to existing and developing revenue streams

- **New Services for the Corporate's Customers**
 - » leverage the information/data from the innovation ecosystem to instruct and advise the corporate's own customers regarding innovative and disruptive technology, new business efficiencies, threats and opportunities, partnerships and M&A opportunities
 - » extend the corporate's lead as a thought leader in business and technology innovation and create new offerings and opportunities to increase share of market.

- **Information Exchange**
 - » by engaging broadly with the innovation ecosystem, a corporate can provide their board, management and strategy teams, division heads, staff and/or customers with the opportunity to gain strategic insights into innovative and disruptive technology (hardware and software) and business models shaping their industry
 - » educate and up-skill management and staff.
 - » help attract, retain and develop best industry talent - including opportunities for graduate recruitment and acqui-hires.
 - » transfer of knowledge from lean startup execution to improve efficiency and innovation within the corporate

- **Influence Supply (Pull-Model)**
 - » gain access to universities, accelerators and incubators to facilitate discussions on sectors, problems-to-be-solved or specific technology that is of most interest in partnership and/or potential M&A activity
 - » by promoting a close tie with accelerators, incubators and startup entrepreneurs, the corporate can create deal flow in specific areas of interest.
 - » through this dialogue, the corporate will influence a "pull" rather than "push" based funnel that will potentially increase the efficacy and relevance of the pipeline

- **Direct Problem Solving**
 - » can facilitate, via accelerators, incubators and universities, open innovation hackathons and competitions that can tackle specific problems and challenges specific to the corporate
 - » through this process, the corporate will be able to identify targeted solutions to specific technology and other problems faced within its business

- **Customer Acquisition & Business Development**
 - » the corporate will have the opportunity to market its products and services to a large pipeline of scalable high growth businesses, the founders, employees and customers of those businesses

- **Branding & Marketing**
 - » reinforce the corporates brand position of innovation and commitment to technology
 - » link the corporate's brand to a national network of innovative, cutting edge businesses, founders and research institutes
 - » secure the corporates position as industry leader and go-to partner for the startup sector

- **Corporate Social Responsibility**
 - » The corporate can demonstrate its commitment to building a national startup ecosystem, promoting entrepreneurship, innovation and helping create jobs and reinvigorate regional centres.

- **Innovation Culture**
 - » the associated benefits of working directly with start-ups, incubators, accelerators and other investors will assist in building an innovation culture within the corporate
- **Collaboration with other Vertical Corporate Partners**
 - » there will be opportunities for the corporate to work in collaboration with other corporates in startups that span several verticals and/or to form partnerships to accelerate the growth of portfolio companies

11.2.2 Models for Corporate Co-Investment

Models for Corporate Co-investment:

- **Participate in Third Party Venture Fund(s)**
 - » The corporate invests in a fund run by an external manager
 - » Artesian SproutX AgTech Venture Fund, Finistere Ventures (US), Acre Venture Partners (US)

Benefits:

 - ✓ Leverage the managers contacts, expertise, deal flow
 - ✓ Minimize headline risk and signaling risk
 - ✓ Limited resource requirement from corporate
 - ✓ Receive financial return (performance of fund) & strategic return (information, data, analysis from manager)
 - ✓ Easy first step into early stage innovation ecosystem
- **Partner with Third Party Accelerator**
 - » The corporate partners with a third-party accelerator to run ad hoc or regular accelerator programs
 - » Examples: SproutX (National Farmers Federation, MDC), Slingshot (Simplot, Lion Nathan)

Benefits:

 - ✓ Relatively lower headline risk than a proprietary accelerator
 - ✓ Facilitates pull-model pipeline to accelerate startups that solve key corporate problems
 - ✓ Some exposure to early stage ecosystem
 - ✓ Limited halo-effect and corporate innovation reputation
 - ✓ Reward and incentivize some key staff
 - ✓ Create deal flow
- **Establish Proprietary Corporate Accelerator**
 - » The corporate establishes its own proprietary corporate accelerator
 - » Examples: Muru-D (Telstra), Bosch India Accelerator - Discover, Nurture and Accelerate (DNA)

Benefits:

 - ✓ Build own intellectual property

- ✓ Optimize pull-model pipeline to accelerate startups that solve key corporate problems
- ✓ Deeply immersed in early stage ecosystem
- ✓ Import agile innovation culture
- ✓ Maximize halo-effect and corporate innovation reputation
- ✓ Reward and incentivize key staff
- ✓ Create proprietary deal flow

- **Establish Proprietary Early Stage Venture Capital Fund**

- » The corporate establishes its own early stage Venture Capital Fund
- » Examples: Tyson New Ventures (Tyson Foods Inc. \$150M VC fund), Rabobank Food & Agri Innovation Fund

Benefits:

- ✓ Relatively lower headline risk than a proprietary accelerator
- ✓ Facilitates pull-model pipeline to accelerate startups that solve key corporate problems
- ✓ Some exposure to early stage ecosystem
- ✓ Limited halo-effect and corporate innovation reputation
- ✓ Reward and incentivize some key staff
- ✓ Create deal flow

- **Invest Directly/Opportunistically in individual Startups**

- » The corporate selects startups from a range of accelerators and other sources
- » The corporate takes direct equity in each company

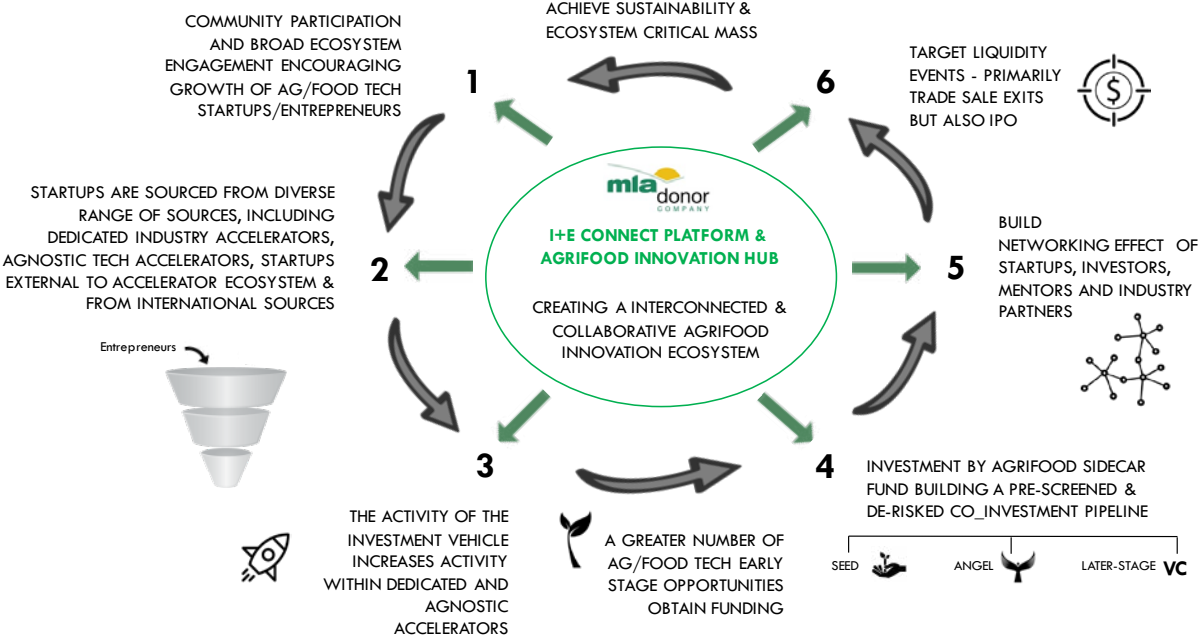
Benefits:

- ✓ Relatively lower headline risk than a proprietary accelerator
- ✓ Facilitates pull-model pipeline to accelerate startups that solve key corporate problems
- ✓ Some exposure to early stage ecosystem
- ✓ Limited halo-effect and corporate innovation reputation
- ✓ Reward and incentivize some key staff
- ✓ Create deal flow

11.3 Artesian AgriFood Sidecar Fund

11.3.1 Creating a Sustainable AgriFood Innovation Ecosystem

AGRIFOOD SIDECAR FUND - VIRTUOUS CIRCLE TO ECOSYSTEM CRITICAL MASS



11.3.2 Investment Strategy/Process

The Artesian AgriFood Sidecar Fund will invest in ~100 seed to angel stage AgTech, FoodTech & Food Innovation startups over a 5-year period.

The fund will be managed by Artesian Venture Partners to create an arm’s length vehicle for MDC. The fund will take equity stakes in each of the startups.

The Fund will be a 10-year duration fund, raising commitments of ~\$50-60M and investing ~\$10-12M per year, over its 5-year investment period. Half of the capital (\$25-30M) will be raised from institutional investors, HNWI and corporates. The other half will be committed matching capital from MDC.

Artesian will be responsible for:

- Structuring/building the fund
- Preparing information memorandum, investment documents
- Raising \$25-30M from investors
- Liaising with accelerators, incubators, universities, angel groups to generate deal flow
- Identifying deals that comply with a pre-agreed MDC mandate
- Completing due diligence, term sheets
- Monitoring deals, investor relations/reporting, legal, regulatory and compliance management
- Completing follow-on rounds
- Identifying and completing trade sale exits, IPOs
- MDC would have a seat on the investment committee or observer rights as required
- The investment mandate may include international deals at MDC’s direction

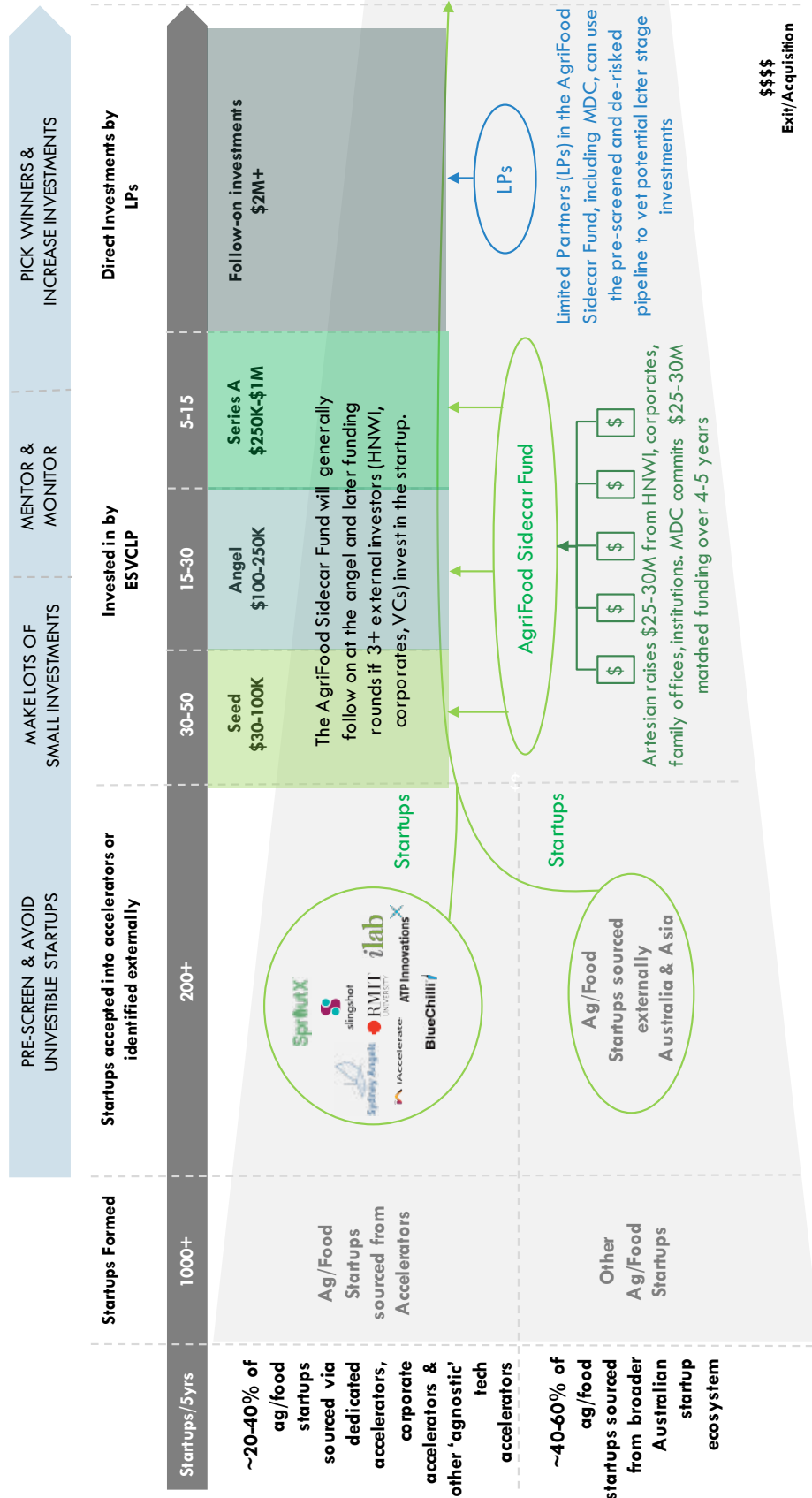
INVESTMENT STRATEGY/PROCESS

There are 3 primary stages in the investment strategy/process:

STAGE 1: PARTNER SCREENING	STAGE 2: SEED & ANGEL INVESTMENTS	STAGE 3: LATER STAGE INVESTMENTS	EXIT \$\$
<p>SCREEN/REJECT/SELECT</p> <p>Identifying and partnering with high quality Incubator, Accelerator and Angel groups.</p> <p>As well as existing AgTech, FoodTech & Food Innovation accelerators this will include startups participating in the MDC Accelerator and MDC Corporate Partners' accelerators</p>	<p>SEED</p> <p>Invest \$50-100K in ~100 startups (over 5 years) selected to participate in our partners' accelerator programs. Receive pro rata rights to invest in subsequent rounds.</p> <p>ANGEL</p> <p>Co-invest with individual angels, angel groups who provide external validation via investment, domain knowledge, board participation. Artesian reviews the syndicates due diligence</p> <p>ALSO</p> <p>The Sidecar Fund can also invest directly into startups not sourced from partner accelerators at completion of due diligence</p>	<p>LATER STAGE</p> <p>Stock picking. Identification and investment in specific investee companies identified through Stage 2.</p> <p>A portfolio of 15-20 companies are selected by the team at Artesian to allocate larger amounts of capital.</p> <p>LP DIRECT INVESTMENTS</p> <p>LPs including MDC can leverage Artesian's investment process and due diligence to make larger, late stage investments</p>	

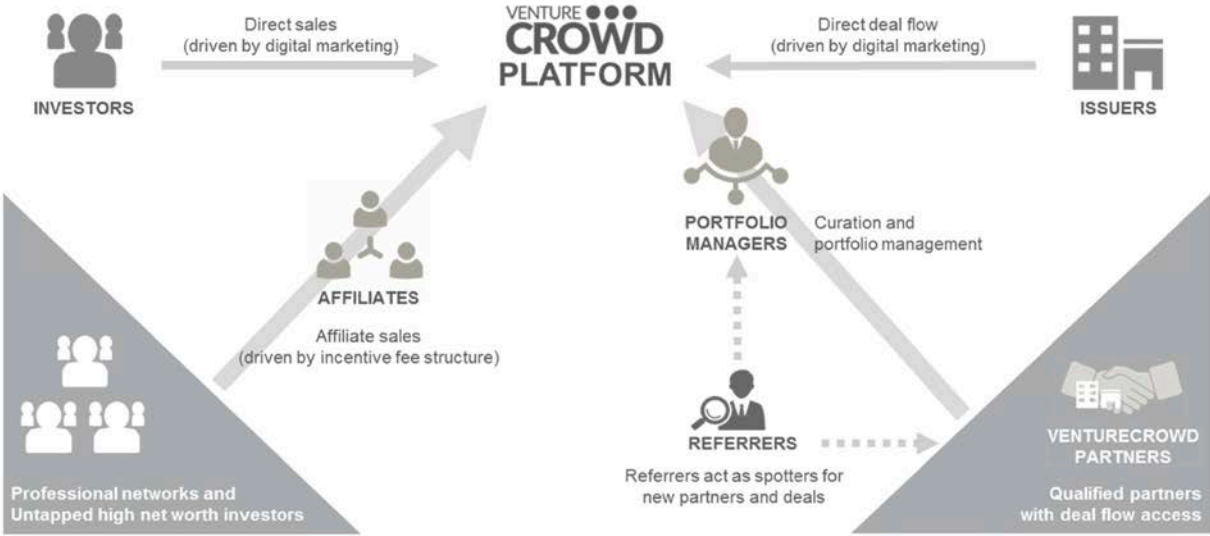
- AFOF INVESTS AT STAGES 1, 2 & 3 BUT IS CAPITALLY CONSTRAINED AT LATER STAGE ROUNDS
- THE ARTESIAN/HOSTPLUS LATE STAGE VC FUND WILL PARTICIPATE IN LATE STAGE 2 & STAGE 3 OPPORTUNITIES
- HOSTPLUS MAY MAKE OPPORTUNISTIC INVESTMENTS AT STAGE 3 LEVERAGING THE ANALYSIS GENERATED BY ARTESIAN

AGRIFOOD SIDECAR FUND



11.4 Accessing Co-Investment via Equity Crowdfunding Platforms

The emerging Equity Crowdfunding industry may be another source of co-investment. Artesian is the owner of VentureCrowd, Australia’s leading equity crowdfunding platform.



The AgriFood Sidecar Fund, and MDC directly in later stage deals, could partner with VentureCrowd to create another distribution channel for co-investment.



- ✓ Proven technology platform with exciting roadmap
- ✓ 1.5 million lines of code and 30,000 hours development
- ✓ 30+ deals completed incl. two property developments
- ✓ 518 individual investments processed
- ✓ Offshore deals originated including US, Israel, Singapore
- ✓ Readiness for crowdfunding legislation evolution

FAST-GROWING PORTFOLIO OF INVESTMENT COMPANIES AND PROJECTS



12. ARTESIAN SERVICES

This section outlines key services that are performed by AVP including funds management, due diligence and data, research & advisory

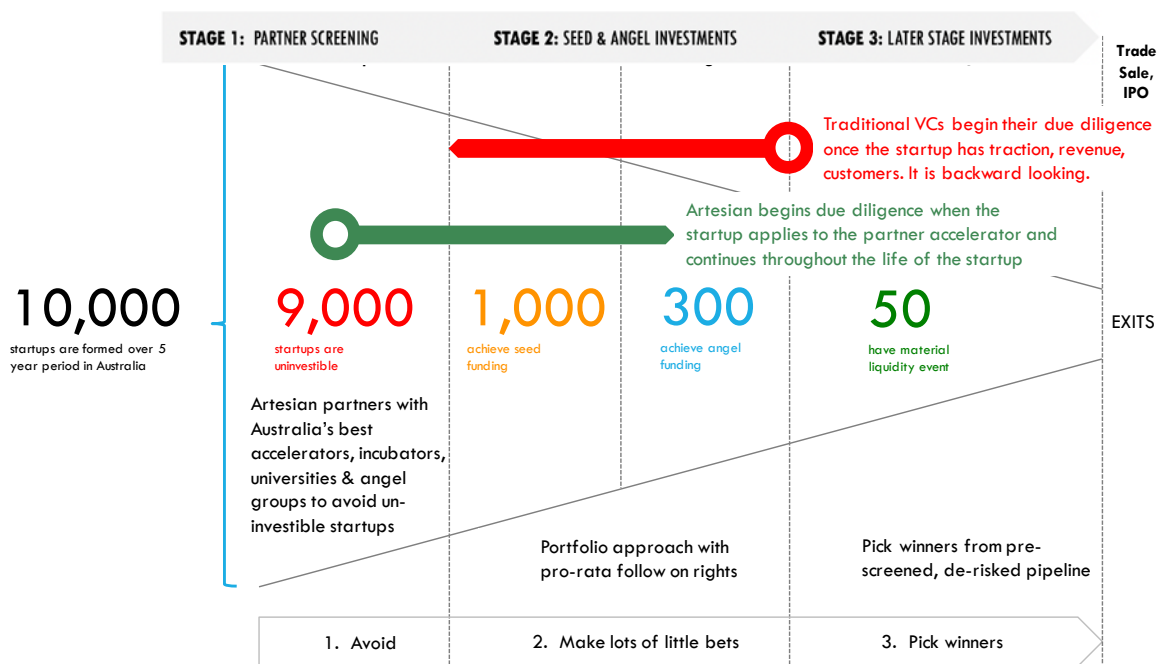
12.1 Due Diligence

Artesian has developed a scalable due diligence process that materially reduces the time and resources required.

The startups accepted into the AgriFood Sidecar Fund can be followed holistically from seed, angel and on to Series A investment rounds. Whereas traditional due diligence processes begin as the company engages to raise a Series A round, Artesian’s scalable process continues throughout the life of the startup.

The sidecar Fund will provide MDC with pre-screened and de-risked investment opportunities that will not require relatively expensive external due diligence to be performed.

ARTESIAN’S APPROACH TO DUE DILIGENCE



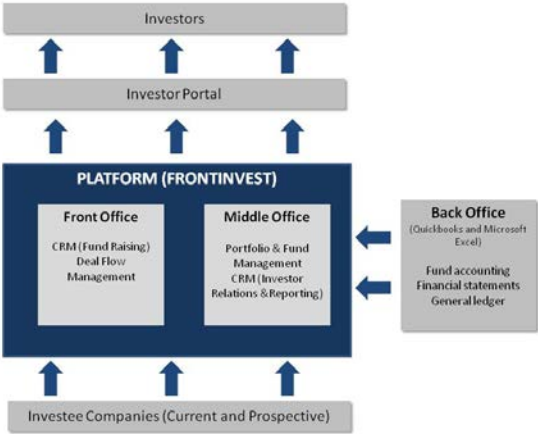
Artesian will provide bespoke due diligence for MDC as required, on a fee for service basis, leveraging the industry relative value analysis and information flowing from the AgriFood Sidecar Fund.

12.2 Fund Administration, Deal Coordination & Funds Management

12.2.1 Artesian’s Back Office Capability

Artesian Venture Partners (AVP) employs FrontInvest, a private equity software developed by eFront to manage its daily operations. FrontInvest provides an end-to-end solution via a Web-based platform with a range of functionalities to cover multiple investments and funds in an integrated manner.

FRONTINVEST CAPABILITIES



12.2.2 Deal Flow Management

AVP Front Office will send information for each investment deal to AVP Operations upon the confirmation of investment by the Investment Committee. AVP Operations will create individual records for each investment on FrontInvest to track and maintain information on each deal. Relevant documents such as shareholders deed, share certificate, capital table and terms of investment will be uploaded in FrontInvest for each investment deal.

FrontInvest further classifies each investment deal in the deal-flow pipeline as it progresses through the due diligence process (based on criteria set up by AVP). Additionally, FrontInvest provides customisable reports by sectors, geography, and currency for the deals in the pipeline. This allows AVP Operations to streamline the deal flow management process through a complete view of deals over time.

A checklist is maintained to ensure a standardized due diligence process is followed across the entire investment team. Follow-up reminders can be set-up to track any outstanding document required for a particular deal to allow AVP Operations to efficiently manage the stages of the investment review over time.

12.2.3 Portfolio Management

AVP Operations receives quarterly and yearly updates from investee companies pertaining to business development and distribution, market traction and growth, R&D, marketing, capital raising and changes in key personnel. These updates are qualitative in nature and are documented in Microsoft Word. AVP Operations then upload the entire update document to FrontInvest for each portfolio companies. These update documents on FrontInvest will also be posted to the Investor Portal for investors’ reference.

Along with its quarterly and yearly update, AVP Operations requests the investee companies to send through financial information such as income statement, balance sheet and cash flow statement in Microsoft Excel format. The spreadsheet will be uploaded onto FrontInvest and AVP Operations can directly view and amend the financial information via the Excel application embedded within the platform. FrontInvest further assists management of the portfolio companies by providing graphs and charts to track the financial information for each investment. For example, FrontInvest enables instant creation of bar chart depicting the comparable revenue and expenses for two investment companies over a specified period.

As the historical and current information for each investment is maintained in a centralized location on FrontInvest since the initial stage during the management of the deal pipeline, AVP Operations can quickly track, analyse and report portfolio company information efficiently and in real-time manner throughout the investment process. Additionally, a check-list is maintained and automatic reminders are set-up within FrontInvest to assist AVP Operations in ensuring the yearly compliance requirements are adhered to by the investee companies.

12.2.4 Hosting and Backup of FrontInvest

FrontInvest is currently managed by eFront on secure servers hosted by the Amazon Web Services (AWS).

12.2.5 Fund Administration

AVP will act as the fund administrator for the Fund supervising 4 broad functional areas:

- **Fund establishment/construction** - building fund.
- **Financial services licensing and compliance** - ongoing compliance and regulatory functions.
- **Fund accounting functions** - the accounting, valuation, registration, reporting and related functions.
- **Investment management functions** - the legal and documentation requirements of investing the fund’s capital in startups.

Functional Area	Sub Function	Details
Fund Establishment Functions	Fund Documents	<ul style="list-style-type: none"> • Information Memorandum – prepare and finalize • Carry Trust Deeds (for carry distributions) – prepare and finalize.
	Fund Manager Establishment and Documents	<ul style="list-style-type: none"> • Fund administration agreement between MDC and Artesian - prepare and finalize; • Investment Committee constitution and rules - prepare and finalize;
Financial Services Licensing and Compliance	Preparation of Compliance Policy and Procedures	<ul style="list-style-type: none"> • Establish appropriate compliance policy and procedures
	Compliance	<ul style="list-style-type: none"> • Undertake ASIC compliance and reporting requirements in respect of the fund. • Undertake mandate compliance on the fund.
Fund Accounting Functions	Fund Accounting	<ul style="list-style-type: none"> • Prepare annual audited financial statements; • Prepare half-yearly statement of financial position and statement of financial performance (unaudited); • Prepare annual statement (including tax information) for limited partners; • Calculate management and performance fee; and • Calculate accruals (including Fund establishment costs) and expenses.

	Valuation	<ul style="list-style-type: none"> Conduct half-yearly and annual valuations of the Fund investments in accordance with the Client Fund’s valuation policy and the requirements of relevant legislation; Report valuation information to investors as required; and Prepare and assist with valuation policy.
	Taxation	<ul style="list-style-type: none"> Prepare and lodge Fund’s tax returns; Calculate the tax components of any distributed amounts (in case of interest or non-exempt) income; and Liaise with external tax advisers.
	Investor Registry	<ul style="list-style-type: none"> Receive and process applications; Administer capital calls; Maintain investor records; and Administer return of capital and earnings.
	Investor Communication	<ul style="list-style-type: none"> Prepare and issue performance and financial statement updates (quarterly and annual); Prepare and issue newsletters; Pay returns; Administer general investor enquiries; and Make annual capital calls on investors.
	Custody	<ul style="list-style-type: none"> Secure Fund assets; Maintain records of Fund assets; Administer cash movements; Pay fees and other expenses; Make payments to investors; and Receive income and asset realizations.
	Cash Forecasting	<ul style="list-style-type: none"> Forecast to ensure Fund can make all payments as they fall due.
	Coordinating Audit	<ul style="list-style-type: none"> Liaise with external auditors for the Fund audit; Liaise with external auditors for the audit of the investment manager; and Arrange initial and ongoing audits of each investee company
	Investment Committee Representation	<ul style="list-style-type: none"> Artesian will have seats on the Fund investment committee to ensure compliance with its AFSL. This provides a benefit to MDC by providing VC experience
Investment Management Functions	Standard Documents	<p>Prepare standardized investment documents for use by the Fund including:</p> <ul style="list-style-type: none"> Term sheet (first round investments); Subscription Agreement (first round investments); Shareholders Agreement (first round investments); Term sheet (later round investments); Subscription Agreement (later round investments); and Shareholders Agreement (later round investments).
	Making Investments	<p>Make investments on Fund’s behalf including prepare, negotiate and sign:</p> <ul style="list-style-type: none"> term sheets; subscription documents; shareholder agreements; and other required documents for Client Fund investments.
	Correspondence	<ul style="list-style-type: none"> Attend to all correspondence with the investee companies.

	Follow-on Investment	<ul style="list-style-type: none">• Make second and additional investments on Fund's behalf.
	Corporate Actions	<ul style="list-style-type: none">• Attend to corporate actions (e.g., Delaware flip-ups), divestments, exits, IPOs, etc.