KPMG

Going Dutch:

Opportunities for the Australian agri-food sector

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Foreword

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Innovative technology, collaboration, and values driven ecosystem, form the competitive pillars of a country 185th the size of Australia. The Netherlands produce 810 times more export earnings per hectare and nearly three times more agri-food export earnings than Australia.

Whilst strategically positioned on the doorstep of major markets it is geographically slight. Their output is powerful, being the second largest food exporter on the planet. All of this achieved within a much greater population density, having approximately 411 people occupying every square kilometre of land, compared to Australia having three people per square kilometre.

The Netherlands is a modern world agri-food vision.

From LED laboratories, to milking robots and greenhouses heated by excess data centre server heat and reusing carbon dioxide captured from the natural gas heaters, there is a considerable amount to be learnt from this innovative nation. KPMG designed an Agri Food Tech Traction Tour program and took Australian and Malaysian agri-food leaders for a behind the scenes tour of what makes the Netherlands stand out as an agri-food leader.

Exporting $158 billion, three times the $48.7 billion Australia exports, the Dutch not only focus on commodity products, it's their innovative technology and intellectual property (IP) that is the single largest segment of Dutch agri-food export earnings.

The Agri Food Traction Tour was calibrated by KPMG Australia, Agfunder Inc and in cooperation with Netherlands Embassy diplomatic missions in Australia and the NL Enterprise Agency in The Hague with two main goals; to demonstrate to executives of Australian agri-food organisations how the Netherlands has developed the disruptive technologies that have driven it to the top of global agri-food production; and to establish a coalition of willing Australian leaders to drive different thinking and initiatives to accelerate collaboration and technology adoption across the sector.

A clear insight from the Netherlands tour was the need to continue to encourage a new and inspiring environment for agri-food in Australia.

The question for the Australian agri-food industry is what changes do we need to make to grasp the opportunity to create a thriving and successful industry that is just as focused on creating value from IP and technology as it is on producing commodities?

In Australia we innately focus on food production and exports. For the Netherlands, the sheer investment into leading edge technology development is what sets it apart. Their focus is not on production, it's on the technology.

Of the many lessons we took from the Dutch, the most useful and relevant is the power of collaboration. It is well-known that collaboration is the key to unlocking innovation across a range of sectors, including agriculture. Whether it is co-investing in geothermal wells to heat greenhouses, creating food processing and logistics precincts or industry led investment in research facilities; there is an apparent default mindset in the Netherlands to do things faster, with greater scale and impact. This mindset has resulted in the establishment of technical and production clusters and centres of excellence across the Netherlands.

But what was particularly inspiring was the matter-of-fact Dutch attitude to the practice. When we asked leaders what Australia needed to do to replicate Dutch collaboration the advice was simple: just do it.

No secrets are core to unlocking success. It's just a matter of relevant people connecting in the right spirit and the government getting behind the entrepreneurial businesses that are willing to take a lead.

Our sheer scale in Australia provides us with unique opportunities to capture the benefits of emerging tech in automation and artificial intelligence. We have no problem creating start-ups with world-leading technology. Our challenge is to successfully build the partnerships that will allow the entire ecosystem to flourish and capture the value our technology creates.

The quality and diversity of Australia's emerging talent is a core strength, but we must focus on how to better network tomorrow's leaders and encourage them to engage with and challenge our agri-food producers to create new value through technology.

As the Traction Tour went on it became obvious that a tight bond was forming amongst the delegation. "What if" and "how might we" conversations on the bus or canal boat were seeding early partnerships to foster back on home soil to create more circular economies and co-investment opportunities in core infrastructure.

We hope this paper serves as inspiration, and not intimidation.

We can learn much from the Dutch. But Australia also has every reason to be buoyant with our leading technology and undoubted capability. The only thing preventing us from taking a seat alongside the global leaders in agri-food exports is our mindset to collaborate and take risk together.

Motivation continues, as we start to plan our next KPMG and Agfunder Agri Food Traction Tour back to the Netherlands and to other instructive nations down the track. We look forward to opening more doors and minds for our clients across our global agri-food networks and invite you to register your interest in learning about our future tours.

Acknowledgements

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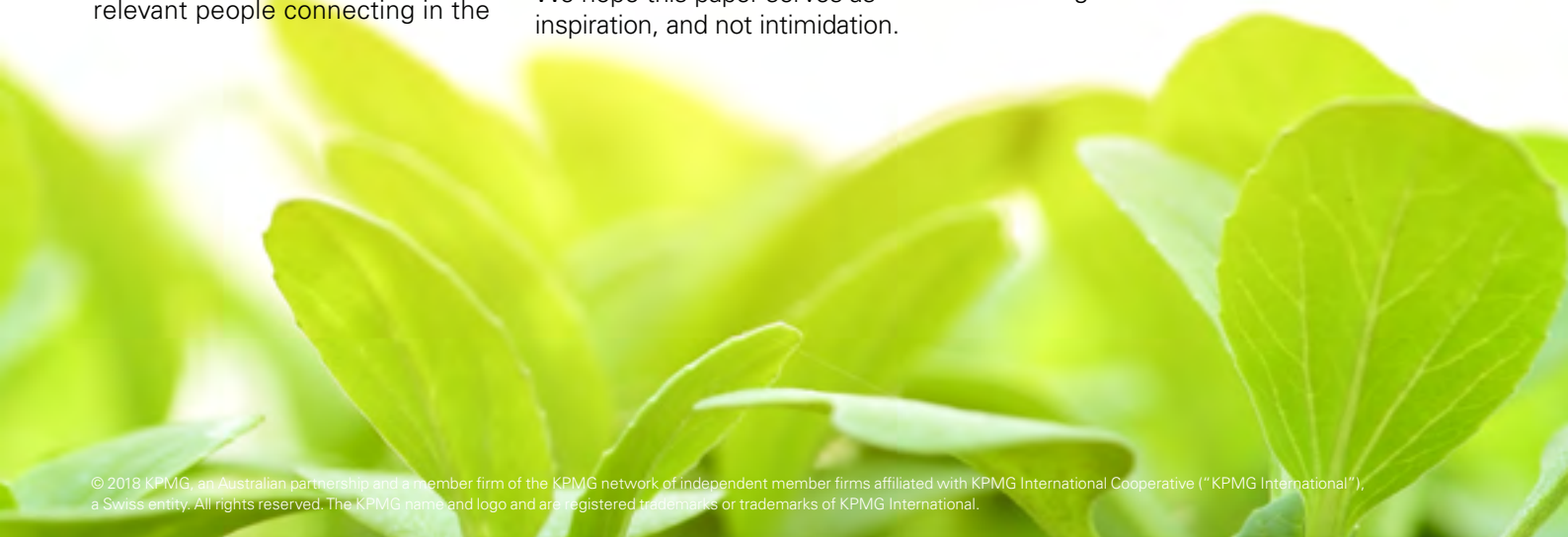


Introduction

Overview of the Dutch situation

Even by European standards, the Netherlands is a small country. A population of 17 million occupies the 41,000 square kilometre nation. The Netherlands could fit into Australia 185 times.

Putting aside the USA – which is 270 times larger than the Netherlands– there is no nation on the planet that produces more food exports. With a global market share of 6.4 per cent, the total value of Dutch agri-food exports was some $144.3 billion from 2016-2017. The 135,600 companies that are involved in agri-food sector support 641,000 direct and indirect jobs. Three out of the world's top-25 food and beverage companies are from the Netherlands.

Despite these impressive statistics, the Dutch are not resting on their laurels. They are just getting started.

At the turn of the century, the Dutch made a national commitment to sustainable agriculture, under the **national motto of 'twice the food using half the resources.'** In the relatively brief time since, Dutch farmers have reduced dependence on water for key crops by as much as 90 per cent. An incredible 56 square kilometres of greenhouses scatter the country, using world's best practice techniques to grow with remarkable efficiency.

Today, energy and momentum pervades a forward-looking Dutch agriculture sector. **A culture of open collaboration and clever innovation** attracts some of the best in global talent, both established and emerging.

The government supports the industry enthusiastically, but without looking to hop in the driver's seat.

A focus on sustainability and **social licence** positions most Dutch agri-food companies to thrive in a climate of tightening regional and global standards.

So what has been driving this remarkable culture?

A sense of globalism has long been a feature of Dutch national life. As Australians, this should be a factor we are familiar with given it was Abel Tasman who first chartered the western part of Australia on behalf of the Dutch East Indies Company, the first publicly listed company in the world. He then went on to name the continent 'New Holland.' (When he accidentally found New Zealand he named that as well – Zeeland is a province of the Netherlands). The Dutch have a real international and pro-business outlook, with 50 per cent of the Netherlands GDP derived internationally.

The zealousness with which the Dutch pursue their mission to 'feed the world' is also likely underpinned by their own national trauma: the Netherlands was the last Western country to suffer a serious famine during the final years of World War II, and the very real fact that much of the country is below sea level. Innovative farming and water management systems have long been critical necessities.

Australia, of course, is a very different country with a very different culture. Unlike the Dutch, we boast the third largest agricultural area in the world, after China and before the USA. The focus of Australian agribusiness has traditionally been more about broadacre production and not about the most food per hectare. Unlike the Dutch who have for centuries been pumping excess water out of the country, Australia has the opposite challenge of not having enough water where it is needed.

Yet there is certainly the beginnings of an evolution underway. There are now some 300 Agri-Food Tech companies operating in Australia, with an influx of players supporting the innovation ecosystem as Agriculture 4.0 becomes the growth focus for Australian agriculture.

In the recent 'Talking 2030' paper, compiled by KPMG and the National Farmers Federation, a bold vision was laid down for $100 billion in Australian farmgate output by 2030. The 2017 figure of $63 billion seems close, but the drought of 2018 is going to see Australia's Gross Value Produce slip, not grow.

The report found that if the ambitious goal was to be reached, meeting the ethical, environmental and nutritional requirements that increasingly drive consumer behaviour would be key.

Australia can undoubtedly look to the Dutch for inspiration on this front.

'New Holland,' unlike the original, is blessed with abundant agricultural advantage and different topographic and climatic challenges to overcome. **If Australia adopts the Dutch tradition of collaboration and open innovation, the possibilities are staggering.**

Adopting a more collaborative innovation platform (national thinking, not state or sub sector silo innovation focus) and new digital solutions, energy efficiencies and fresh thinking about what, where and how we produce food is what is needed to accelerate Australian agri-food to its real potential.

Having seen what the Netherlands are capable of with a country 1/185th the size of Australia, the $100 billion target by 2030 for Australia agri-food farm gate value seems almost modest.

Delegation at Keijzer Dairy Farm enabled by Lely robotics

The pillars of Dutch Agri-Food success

The power of collaboration: open innovation, co-investment, and clustering

The Netherlands has a strong culture of collaboration, cooperation and being business friendly.

The government plays a significant role here, but typically not in the interventionist sense familiar in other nations.

The Dutch government is cautious about 'picking winners' and the national ethos of the Netherlands is that industry should lead and the government should enable.

But while the government does not see its role as a strategist, it does play a prominent supporting role. A lot of the innovation funding the tour noticed was coming from government sources, at the regional, national, and EU levels.

It is not just cooperation between the public and private sectors that is strong. B2B collaboration is also obvious and crucial.

A culture of open innovation in the Netherlands, dating back to the Dutch East Indies Company, is prominent. There is a fundamental appreciation that no one knows all the answers on their own. Perhaps this is an advantage of relatively small size, living cheek by jowl with your competition leaves little room to be strangers.

Collaboration between academics and entrepreneurs is also a key driver of Dutch innovation.

Like Israel, and other leading agtech nations, the key here is facilitating a melding between science-based and market-based activity. In fact, only five per cent of Wageningen University's, a highly acclaimed research University in the Netherlands, revenue comes from student fees.

The Dutch actively cluster complementary businesses and institutions. This is vital to creating the kind of strong brands that attract the cream of global talent, both established and emerging.

An example is Wageningen University & Research (WUR), widely regarded as the world's top agricultural research institution. WUR takes prime position amidst a cluster of agricultural technology start-ups and experimental farms known as Food Valley – a deliberate nod to Silicon Valley.

Major agri-food companies such as Unilever and FrieslandCampina have built their corporate innovation centers at WUR, alongside the founders of agri-food tech start-ups in the Start-Life Accelerator. WUR is a destination that attracts capital and capability, and enables collaborative innovation.

World Horti Centre

Beyond commodities: an obsession with solution-focused scaling

For most operators around the globe creating a profitable commodity and identifying markets with demand for their product, is a satisfactory goal. For many Dutch producers this point is perceived as the beginning.

Despite being extremely successful commodity exporters, the Dutch tend to prioritise the 'how' over the 'what.'

The gold standard is seen as developing a scalable model to take into other geographies. Selling the system and associated advice is the prize sought. 9.4 per cent of Dutch agri-food exports today is **Technology and Materials - the single largest element of their agri-food sector**.

The Netherlands achieve a staggering **810 times more export earnings per hectare** of agri food productive land than Australia - due to exports of knowledge, technology and the value added to imported products passing through the Netherlands.

Dutch industry produces 80 per cent of the world's poultry processing machinery, and a substantial amount of cheese production machinery.

Kipster, a booming new chicken farm, has blossomed through selling eggs and meat, but the ultimate focus of the board is to internationalise their carbon neutral and animal welfare endorsed way of farming.

Wageningen University

Another example of a solution led model is Signify, formally Philips Lighting, a global leader in the sale of LED lights. Philips began looking at neon lighting for horticulture in 1936, but in 2007 turned their sights on to LED use in horticulture, recognising that plants react uniquely to specific parts of the light spectrum.

The LEDs that are effective in this regard, however, are expensive – prohibitively so for many agri-food businesses around the globe. So part of Signify's focus for the future is in financing models for LED solutions – fixed-term leasing based on the number of micromoles required, for example. In this "everything-as-a-service" era lighting as a service is likely to be coming to a greenhouse near you soon.

The development of medium-tech solutions is another important area. An example being the relatively inexpensive plastic greenhouses that have tripled some crop yields compared with those of open fields, where crops are more susceptible to pests and drought.

The far horizon: Family-owned businesses taking the long-term view

If you want to pioneer and sell your ideas globally, the way the Dutch do, there is no magic shortcut. You have to invest heavily in R&D, which is exactly what many agri-food operations in the Netherlands do.

Leading vegetable breeding and seed production company, **Rijk Zwaan, spends 30 per cent of turnover on R&D**, involving around 40 per cent of the company's total staff. Over the past seven years the company has doubled in size, without making a single acquisition. The reluctance of agribusinesses to make acquisitions is not unique to Rijk Zwaan. The preservation of a family business culture and family legacy is a motivating factor that often trumps an opportunity for immediate windfall gains.

Dutch Flower Group (DFG), a family business of over 30 specialised trading companies in fresh flowers, bouquets and plants, has increased by 60 per cent in size over the past seven years to a turnover of € 1.5 billion. For DFG, the challenge is looking down the track and seeing the need to **disrupt themselves and accelerate digital innovation** in the flower supply chain, where it is of added value to their growers and their clients.

The traditional model is that most of the world's flowers and plants pass through the Netherlands, and it's been that way for half a century. Around half the world's flowers and plants pass through one of the 11 cooperatively-run regional flower auctions in Holland. The DFG however can see disruption - will it always be seen as necessary for flowers grown in Kenya and destined for Tokyo to pass through the Netherlands? In a digital economy where consumers increasingly expect customised products, the DFG is investing heavily in digitalisation, platforms, as well as technologies like Virtual Reality where you might design your own bouquet online and have it shipped direct to you.

There is strong link between family-owned businesses and intense R&D focus. Of course there are listed businesses – as well as co-ops – making their mark in the Netherlands. But the Traction Tour group was particularly impressed with many of the privately-owned businesses, like Koppert Cress, DFG and Kipster, which adopt a long-term view on strategy.

The same spirit that fuels Dutch collaboration and cooperation seems also to permeate through strategy.

The Australian delegation was forced to stifle a chuckle when one of the leaders we visited mentioned that he was annoyed with his primary competitor (but frequent collaborator), because "they keep changing their CEO, so their strategy keeps changing!" The competitor has only had three CEOs in the past decade.

So the concept of the 'constant pivot,' familiar in Australia, seems fairly foreign in the Netherlands where stability enables confidence to take a longer term strategic perspective.

Sustainability and social license as core principles

Applying attention to sustainability and social licence is hardly a revolutionary concept to any agri-food operation in Australia, but the intensity of focus on these areas in the Netherlands is nevertheless striking.

There are a range of contributing factors driving this. One, is the tight environmental regulatory regime the European Union imposes on member states on issues such as nitrate application. Another is the long time-horizon focus of a lot of privately owned Dutch agri-food businesses.

But there is also the simple fact that when you have this much agriculture on a relatively small body of land with a tight densification of population, you need to be engaging in constant and honest discussions with the public about your farming practice.

The Netherlands is home to a fragmented patchwork of intensely cultivated fields, most of them tiny by Australian agribusiness standards. The nation's principal farming regions are well within sight of skyscrapers and factories.

Dutch Flower Group CEO Marco Van Zijverden discussing global logistics

Signify Headquarters, Eindhoven High Tech Campus

So Dutch agriculture takes place not out of sight and out of mind, but in close proximity to population centers. This tight patchwork of residential, commercial, and agricultural activity is fairly alien to the Australian mindset. But with 411 inhabitants per square kilometre (Australia has 3.1) the pressures are not hard to understand.

As a result, the urban Dutch public is much more mindful of agriculture, and Dutch agri-food producers are more mindful of social licence requirements.

Most of the companies the group visited have **a purpose statement with sustainability at the core**. Unlike elsewhere in the world, this is not window dressing – Dutch organisations are *actually* asking fundamental questions about how a focus on sustainability changes the way business is done.

Businesses like poultry farm, Kipster (see 'Industry Profiles' on pg12), has built its entire business model around securing a social licence through sustainability and animal welfare, without compromising on profitability. Piggy's Palace, openly source ideas from the public via the company Facebook page for how they could improve the welfare of their pigs, and livestreams pigs enjoying their conditions (e.g. a mudslide for the pigs) on their website.

Dutch firms such as Rijk Zwaan are among the world leaders in the seed business, with close to €1.7 billion worth of exports, including high-yield seeds that are resistant to major global pests. Yet they market no GMO products, giving thanks to the fact the planet is hugely bio-diverse, believing there are more than enough opportunities to work in a natural manner.

There is also a pronounced and obvious focus in the Netherlands on the **circular economy**. 'Who can turn my waste into value?' is a perennial question.

One noticeable example is a large new data center that Microsoft has established in Noord Holland *AgriPort A7 Business Park*. Microsoft's servers produce heat and carbon dioxide, both of which are gratefully received by the 450 hectares of nearby greenhouses.

Australia has 185 times more land mass than the Netherlands, and 249 times more productive agricultural land.

Australia had five of the top 50 global Agriculture Universities.

Trade

Imports value (2016-2017)

A$17.9 bn	A$98.8 bn
Australia	Netherlands

Landmass

7,692,000 km^2	41,543 km^2
Australia	Netherlands

Demographics

The Netherlands have 127 times more people per square km than Australia.

Population (2017)

25 million	17 million
Australia	Netherlands

People per sq km

3	411
Australia	Netherlands

A little bit of Dutch

Productivity

The Netherlands achieve approximately three times more agri-food export earnings than Australia.

Top three agri food export sectors

24%	18.8%	7.4%
Meat	**Grains**	**Wool**

Australia

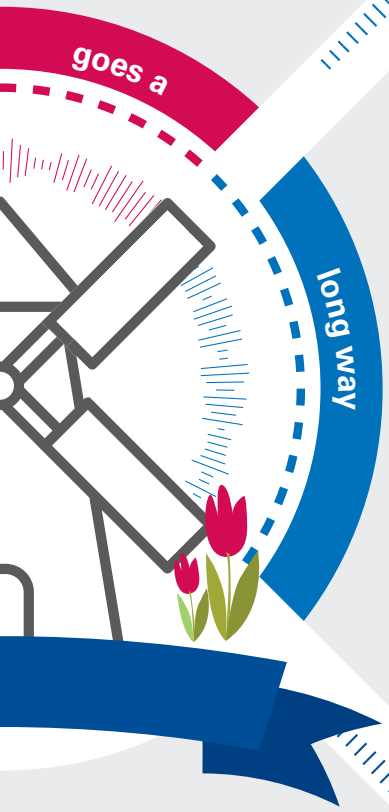
Exports value (2016-2017)

A$48.7 bn	A$158 bn
Australia	Netherlands

The Netherlands is the second largest food exporter in the world.

Food Valley NL
8,000 Scientists
70 science companies
20 Research Institutes.

The two countries exchange $6.07 billion of food and agricultural trade.



Ecosystems

Netherlands has the world's leading agri-food university, embedded with industry in R&D hub.

Area used for agriculture production

58%	43%
4,461,360km2	17,901km2
Australia	Netherlands

Number of agricultural companies

123,000	135,600
Australia	Netherlands

Number of greenhouse vegetable producers (2016)

103	355
Australia	Netherlands

Intellectual property and farming systems are key export earners for the Netherlands.

Agri-food export earnings per ha: Australia $109, Netherlands $83,300 (810 times more than Australia).

9.4%	9.3%	8.3%
Materials and Technology	**Horticulture**	**Meat**

Netherlands

Industry profiles

Kipster

The Revolutionary Farm

To sustain the social licence to operate, Kipster believes agri-food leaders need to be constantly asking:

- "How will we feed the growing world population in a fair way, and what's the role of animals in it?"
- "What could I have done with that hectare to produce food for people?"
- "How many people can I feed with the land I have?"

Kipster boldy bills itself as "the most animal-friendly and environmentally-friendly poultry farm in the world." The more you learn, the harder it becomes to disagree.

Kipster co-founder Ruud Zanders comes from a long line of Dutch poultry farmers. His family's business was one of the largest caged bird farmers in Netherlands until crisis hit and he went bankrupt.

In starting again, Zanders decided to approach everything he knew about poultry farming from scratch. Kipster's co-founders come from deliberately diverse backgrounds and most had no past poultry experience, meaning their thinking was not influenced by traditional poultry farming methods.

Kipster reached out to representatives from multiple animal welfare groups, supermarkets and local farmers to seek honest views about achieving a genuine social licence.

With a belief that more transparency with the market will define future practice, Kipster set out to create environmental and animal welfare standards of which they could be proud. This includes indoor and outdoor play area for the birds, dust air filters, and reduced antibiotics. Rather than gas day old roosters, Kipster rear them with the hens and use them for meat instead of disposing of them when they hatch.

This process of establishing best practice was not a question of blind adherence to existing standards, however. EU free range guidance was that a flock of 24,000 birds should have 10 hectares of space. Ruud's view, supported by other poultry farmers with whom he consulted, was that the flock does not use nine of those ten hectares. Furthermore, wide outdoor spaces expose the birds to greater risk of avian bird flu reaching the farm via wild bird droppings.

Kipster engaged Wageningen University to review the bird behaviour and how much outdoor space the birds needed to have for quality of life. By trialing different methods and objects to create an environment for natural behaviour they found the birds preferred to play indoors.

Wageningen University concluded five square metres of ranging space along the outside the barn was appropriate; considerably less than the 10 hectares per free range standards. Kipster felt 5m^2 was too small so voluntarily opted for 10m^2 of ranging space off the barn. Using land space far more efficiently than conventional free range. What's more, Kipster are achieving a mortality rate one per cent lower than industry standards. Happier, healthier birds with less antibiotics and land use.

Kipster encourages consumer engagement through various modern marketing and PR practices. 'Het kippenhok'- Kipster welcomes members of the public to come onto the farm to the 'Centrum Future Food' (a glass bunker in the middle of the eco barn for 24,000 birds) between 10am and 5pm every day. This communicates a message of transparency and engagement with the public and neighbouring community. Dutch animal welfare groups have awarded Kipster three stars for their efforts to create a healthy, transparent and playful environment for the layer birds.

Kipster's explicit aim is to **produce carbon neutral eggs** and it has a range of initiatives aimed at achieving this including:

- 1,000 roof mounted solar panels generating 300 megawatts, twice the power needs of the farm
- Sourcing feed from waste food, residues, and proteins including utilising unsold bakery products as feed input (every day the Dutch throw away 400,000 loaves of bread)
- Using egg cartons made from potato starch instead of cardboard
- Using white birds as they have the most efficient feed to egg conversion ratio, making them a more sustainable flock to farm

Kipster is also a great example of how proximity to population centers drives environmental best practice. A common problem with chicken farming around the world is the fine dust generated. Kipster have a policy of no emissions of fine dust, which they achieve using ASPRA ionisation units in the barn. The dust caught in cylindrical filtration units drops onto the manure belt for removal.

What particularly impressed the Traction Tour was how Kipster was able to achieve these environmental and animal welfare outcomes without compromising on profitability.

Kipster achieved a lay rate of 23,000 eggs per day from a flock of 24,000 birds (95.8 per cent lay rate). It sells its eggs at a premium to barn and free range eggs. The solar panels are also able to generate around 150 megawatts to sell back to the grid.

In October 2016 supermarket firm Lidl signed a five-year supply contract, at which point Kipster did not have the farm built or any birds. Lidl bought into the revolutionary way of farming layer birds, and contracted Kipster for the supply of 37.5 million eggs over the contract period.

All of this is leading to interest in the Kipster farming model beyond the Netherlands, and Kipster are receiving visits from MNCs such as Unilever and Ikea who are interested in the Kipster story. A second Kipster farm in West of the Netherlands was announced in July 2018 and the Kipster board is actively pursuing expansion of the Kipster farming system into international markets.

	Cents per egg (Euro)
Barn	15-18
Free Range	22-25
Kipster	**23-24**
Organic	28-32

Kipster public viewing area - "Centrum Future Food"

Other case studies

Rijk Zwaan

Rijk Zwaan is one of the world's top vegetable breeding companies, focusing on variety of vegetable seeds.

Notably, Rijk Zwaan does not use GMO, which is not permitted by the European Union. However, the company has innovated strongly in the centuries-old practice of crossing parent plants, with new techniques making the breeding process more efficient.

Established in 1924, three families own approximately 90 per cent of Rijk Zwaan. The remaining 10 per cent is owned by a large group of employees through the employee share scheme.

This structure allows the company to pursue long-term objectives, and expansive initiatives. Today Rijk Zwaan has 1,600 of its 3,000 staff working outside of the Netherlands in 30 other countries.

The company's R&D spend equates to 30 per cent of turnover and involves the effort of around 40 per cent of staff.

Like many Dutch companies Rijk Zwaan sees itself not just as a seed seller, but as a company that deals in technology and knowledge.

This is reiterated in its strong focus on attracting and retaining the best people – a flat organisational structure supports staff who are all on long-term contracts. Temporary employment contracts are not used.

Dutch Flower Group

The Netherlands has long historical connection with the flower trade, and it remains the dominant global supplier of flowers and plants, and floral related products like mixed bouquets, with 44 per cent of the worldwide trade in floricultural products. Some 77 per cent of all flower bulbs traded worldwide come from the Netherlands, the majority of which are tulips.

Dutch Flower Group (DFG) is a family-owned conglomerate of companies involved in connecting flower growers with retailers. The business was established in 1999 when two Dutch family businesses – OZ Group and Van Duijn Groep – merged.

DFG is not a grower nor a retailer. Rather the company trades in flowers and plants, assembles mixed bouquet and plays a key role in working with retailers to select the best growers.

Every week 10 million bouquets, 75 million stems of fresh cut flowers and five million plants find their way to consumers in 60 countries through the DFG companies. The current market share of DFG is 26 per cent, and its core aspiration is "by 2025 to be the floral partner, globally".

The focus of DFG is now on e-fulfillment, which will disrupt the Royal Flora Holland auction trading house, traditionally the hub of the global trade.

Its turnover is now €1.475 billion, having doubled business over the last seven years.

Koppert Cress

Established in 2002, Koppert Cress specialises in micro-vegetables. By using high-tech glasshouses that enable incredibly specific and finely-adjusted growing conditions, Koppert Cress is able to produce micro-vegetables with unique and powerful flavour profiles.

The end users of the products are mainly high-end chefs and restaurants. A reliable supply of fresh and extremely flavourful cresses is highly prized by Michelin-rated chefs looking for new ways to be creative and surprise their guests.

Koppert Cress's limited but growing collection is presented as 'Architecture Aromatique'. Every day, more than 160 staff of Koppert Cress supply Dutch traders and wholesalers, who in turn distribute the micro-vegetables all over Europe and beyond.

Koppert Cress has an ethos of creating tight and authentic bonds with its customers. 'Cressperience' is a meeting room with demonstration kitchen, where chefs are introduced to the products and can experiment with them.

Since January 2007, Koppert Cress has offered its products to the USA. In October 2017, the company established greenhouses on Long Island to generate a reliable supply of fresh produce. Co-operation and partnership with fruit and vegetable wholesalers guarantees the distribution over the entire US.

Koppert Cress uses geothermal heat, pumping the cooled water back down into the aquifer to replenish thermal hot water source for warming the glasshouses.

World Horti Centre

The World Horti Centre is a leading centre where business, education and research institutions inspire, create and connect together. This Westland based facility is an outstanding example of the Dutch ethos of leveraging capacity into skills and knowledge instead of just relying on product.

The Dutch lead the world in greenhouse horticulture, but seven years ago leading companies felt the research for the sector was not practical enough.

The World Horti Center offers something of an international window into the greenhouse space, with educational, research and presentation services for anyone active in greenhouse horticulture.

Forming part of Greenport Horti Campus Westland, the World Horti Center began in 2016 with the new building completed in August 2017.

As a result of the knowledge exchange and collaboration that is happening there, the sector is able to innovate even faster than it already does. Continuous and accelerating innovation is key to the Dutch maintaining the leading position in the world of horticulture.

World Horti Center has emerged from close cooperation between business (investments by leading Dutch companies also mentioned in this publication), education and government, in which openness and transparency take precedence.

Today 107 companies have demonstration facilities at center, with 25,000 visitors per annum.

It has 1,200 students on site on a daily basis, undertaking four-year degree programs in growing and robotics. The education curriculum was re-written by the alliance business and education partners. Students are provided with projects in the partnering companies. News of today is immediately integrated into the lesson plan of the day and CEOs from the horticulture companies come in and give guest lectures to the students on relevant topics, like responding to biosecurity issues of the moment.

Individual perspective breakouts

Grant Statton

CEO Digital Innovation and Energy
FKG Group

"Technology and digitalisation creates an opportunity to grow the agri-food sector with confidence. The overarching element is demand – and the demand for safe food and high quality food is not going to go away.

My role at FKG means I get to make a step change through digitisation of the sector in Australia. Having the ability to establish a collaborative ecosystem of talent, with a common view to optimise the digital capabilities of the agri-food industry, means we can deliver sustainable products and services to a growing world.

The demand for food - especially the Asian market - is going to be a significant opportunity. The amount of produce that is going into Asia from the Netherlands was surprising. With our proximity to Asia there isn't a reason we can't be supplying fresh produce going into Asian market.

Success is through collaboration and leadership, as we saw firsthand in the Netherlands. At FKG we are leading by example and working with KPMG to create a precinct in Queensland like no other in the world. In essence creating a borderless precinct where we can clear goods through customs onshore.

Barriers to commercialisation shouldn't be a limiting factor. There has to be that collaborative point between industry and universities and funding should be directed at initiatives that open up the international market.

In the Netherlands, innovation is enabled by government given their significant contribution in terms of funding; government deeply values the agri-food sector. This naturally pushes significant value into the sector. They fund, and then they step out of the way for industry to take lead.

Many Australian organisations limit their full capacity by only looking domestically. When you can de-risk the entrance on the global stage, the world is your oyster.

Looking at collaboration from a cultural standpoint, it's not a naturally entrenched theme in Australia. We have a small market domestically – equating to a highly competitive culture, rather than a collaborative one. We don't partner for success.

Purpose and alignment is critical, something the Dutch excel at. We have some of the smartest facilities and minds in the world, specifically with regards to technology. There's an opportunity to not only do what the Dutch do but do it better. In the area of automation, AI and IoT the Dutch aren't as mature as us.

In Australia we take what we do for granted. If we understand our capability, growth is on our doorstep.

We are small, so we need to be unified with our approach."

Professor Bronwyn Harch

Deputy Vice Chancellor Research
University of Queensland

"Extracting research from between university walls is challenging. In my new role I have a focus area of translating research into practice in which I want to path a new direction for the sector. Educating people with the right kind of knowledge and connecting this into industry will increase the breadth of diversification we have access to. The more diversification we can encompass, the more benefits we will derive.

How the Dutch share infrastructure was a clear contrast of note on the Traction Tour. In the Netherlands there are precincts where the universities, start-ups and industry are all on the same campuses. They also share research infrastructure. They can then co-invest and essentially buy the best of the best and share it.

The mix of capabilities within shared spaces cultivates a collaborative environment. This is a lot more than purely physically moving people into a building space. There is a connective tissue that forms the basis for common goals so they can work on shared projects, setting an environment for success. It's very network-centric.

Another collaborative effort is the way in which they develop goals – they look to find solutions for society, over their individual interests. They are developed for something of national significance with international reach. They co-develop goals instead of just saying "here's our mission, get on board".

Their approach is core in that industry are in the driver's seat; the government is present as enabling partner, rather than a controlling partner. That's very healthy. The tour validated for me that government's place in the enabling role is the most powerful approach to take. At the moment Australians expect the government to run the dialogue – a smarter approach is for government to incentivise and industry to lead.

On our last visit we travelled to Agriport A7 in Noord Holland and met with the founder of Barendse-DC. They were constructing greenhouses and they saw an opportunity in capsicums. Their first thought was who we are going to partner with to do this. I reflected back that this was a common thread – forefront of organisations in the Netherlands strategy is who I can partner with that has the expertise required to succeed. It's not the first thing you think about in Australia, it's not naturally engrained in our nature.

I'm confident that with the right, collaborative approach, Australia can make a change. What I see through the university sector is that the diverse mix within our student population. Innovation is people, it's not the product or the service."

Patrick Duffy

CEO eAgri

"Deeply embedding commitment to innovative technology, the Traction Tour exposed us to how the Netherlands preserves its values and cultural difference. By cultivating a values-driven collaborative ecosystem, the Dutch dedicate themselves to mitigating global problems across the agri-food industry.

They utilise niche expertise to set a global agri-food benchmark. It was crystal clear culture and values, with a mindset beyond the company and local supply, are the backbone of success. In Australia we innately focus on food production and exports. The sheer investment into leading edge technology development sets the Netherlands apart. Their focus is not in production, it's in the technology.

At eAgri we already nurture our networks into the Netherlands and utilise their technology. There are incredible examples in the Netherlands that we pull inspiration from. They develop their key niche markets while utilising the fact they have trading in their DNA. They grow complimentary equipment and services in addition to just growing and distributing food.

Simplicity surrounding stakeholder roles enables a collaborative approach in which a competitive advantage is gained as an industry. Here in Australia we can embrace our key industries that excel us forward. We can lean on the Netherlands to understand and develop technologies to make us more efficient and look beyond our local markets to export tech, not just products.

They grow systems and services in their key niche markets and then craft complementary equipment and service industries keep them ahead of the game. As a consequence, being at the forefront of the industry enables them to put an immense time and effort into their marketing and the positioning of their products.

The incidental contact nurtured through the tour was invaluable. eAgri gained exposure and interaction not only from contact with companies in the Netherlands, but the micro-ecosystem that swept across sectors within the delegation. The combination we had on the tour, was the replication we need to make in the market in terms of collaboration."

Warren Jennings

GM Emerging Technologies
Telstra

"The future of the agri-food industry will be underpinned by digitalisation and data-driven optimisation. As part of my role at Telstra, we pursue innovation and state of the art technology to unleash the competitiveness in Australians agri-food industry.

Collaboration is a natural trait in the Netherlands, they recognise it as an inherent strength. As a consequence they build structures, policies and regulations around collaborative ecosystems to leverage their natural strengths.

The Dutch are also very matter of fact. We asked a number of organisations as to how we can create a similar ecosystem in Australia and the response was "just do it, sit down and do it". In Australia we are more internally competitive and less collaborative. This is the difference. We need to stop competing at a local level, and instead find aligned partners and look with more breadth.

We have an abundance of great technology here in Australia. It is not a case of needing to develop more, it is a matter of establishing commercial value for the technology. For example looking to full indoor agriculture - as opposed to greenhouses. While the cost-base is not economic for most crops, for some high-value crops it might be. We need to put this into Australian context and do small scale trials to see the feasibility.

With regards to connectivity, the Dutch government sponsored a nationwide network (Lora) which automatically gives them an advantage. Connectivity will always be a challenge. Here in Australia we have unique challenges around connectivity and if we want to provide solutions, we first need to identify problems, and then look to innovation and disruption to make responses.

Core to the success of the responses is collaboration.

The opportunity is there for partnerships and clusters – this also ensures less pressure to regularly change strategy, and it means clusters can adopt a wide view. The opportunity is there for Telstra / KPMG to partner with clusters of privately held, partnerships.

Looking to the Dutch for inspiration, the Traction Tour enabled connections and the ability to dive deeply into what factors have driven such success in the region. For us specifically, we gained powerful insights into how we can invest and respond with our technology and product roadmaps.

The key to cultivating the winning formula is getting the right mix of connectivity the approach to dealing with intermittent or poor connectivity, which is a critical issue in Australia."

Concluding

Having witnessed first-hand what the Netherlands is capable of with only 185th the landmass of our continent, a target of $100 billion agri-food farm gate value by 2030 seems almost modest for Australia.

Through a combination of collaboration, open innovation, co-investment, and clustering, the opportunity to embed a thriving ecosystem for the Australian agri-food industry is clear.

No one organisation need invest alone, we can achieve more by 'going Dutch' and co-investing. Regardless of if we are looking at infrastructure, IP, or skills, a collaborative effort will lessen the burden and spread inspiration. Those who will succeed fastest will have a 'partnering first' mindset to their business growth strategy.

Applying new digital solutions, energy efficient technology, and fresh thinking with regards to what and how we produce food and fibre can create competitive advantages for Australia. To drive more efficient use of raw materials, infrastructure and land there is a need to shift our thinking from a standalone entity mindset to a circular economy mindset. Thinking more about how to turn what one organisation sees as waste in its processes into a valuable input for another in the ecosystem will help improve profitability and reduce the environmental impact of our production methods. A simple first step for Australian organisations is to critically review their organisational alignment to the seventeen UN Sustainable Development Goals – and ask how your organisation is making a meaningful and sustainable impact and how can value be created from our byproducts.

Investment in agriculture and technological innovations will power productivity and enable a change for our food system. We must remind ourselves that the real value gain for Australia is to evolve from our commodity production capability and mindset to focusing more on how we best create export earnings through selling our know-how. Commercialising IP and solutions is not giving away our competitive advantage to be used against Australian producers. The world expects more from Australia in terms of its contribution to the global agri-food production. Imagine if our largest export earner in agri-food sector was agri-food technology and services – these are drought and biosecurity immune sectors that would help diversify our dependency from shipments of beef, grains, cotton and wool and reduce our economic variability brought about by climatic volatility.

We have the foundations for a strong agri-food tech industry, and are ahead of the Netherlands when it comes to coordinated support for start-ups. If Australia seizes upon the opportunities Industry 4.0 presents, and makes it an export industry imperative, Australia could definitely become a leader in Agriculture 4.0.

The KPMG Agri-Food Tech Traction Tour to the Netherlands revealed real world examples of what this best practice collaboration looks like. KPMG and AgFunder Inc are buoyed by the traction that has already occurred from the connections made between Australian and Dutch organisations and are committed to using our global networks to connect to stakeholders around the world on future tours. We hope you will take something from this paper that helps you drive traction in your organisation, and that you can join us on the next agri-food traction tour.

2018 Agri-Food Tech Delegation at Rijk Zwaan

Register to join our next tour at www.KPMG.com/au/agrifoodtechtours

Delegates from the 2018 Netherlands Agri-Food Tech Traction Tour were unanimous in their assessment that the tour exceeded their expectations. This is just some of the feedback we have received to date:

"Accelerated my understanding of best practice Agri tech, implications and practical applications for our organisation. It also helped me build a new international network."

"The KPMG Netherlands team were great - flexible and responsive. KPMG Australia team were very professional and supportive of team and individual learning."

"I valued the tour because of the perspectives I received from the scale of operations in Holland and the use of agritech (or non agritech) in achieving that scale."

"The tour program overall was very well targeted and thought through for benefits"

The Agri Food Tech Traction Tour program is designed for senior agri-food executives. Register your interest to join future tours on our website.

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