

Smarter* Farming Business

*projects with business plans and technology

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The Global context

By 2050 we will need **70% more agricultural production on only 10% more land.**

To create a better working world we need to address this challenge. But how?



Largest Employer in the World: Agribusiness is the single largest employer in the world, **accounting for the livelihood of ~40% of the global population**



Provide 80% of the world's consumed food: 500 million farms worldwide provide 80% of the food consumed in the world, of which **less than 1% of farms (187,000 farms) provide 63% of all consumed food**



Becoming more efficient: **Farmers today produce 250%+ more food with ~5% less inputs than in 1950** – but is it enough? The Food and Agriculture Organization of the United Nations (FAO) estimates that 32 percent of all food produced in the world is lost or wasted

Global Megatrends

Can a 70% production increase be achieved in an increasingly complex environment?



Environmental

- **Limited natural resources**, namely water and arable land
- **Climate variability** changing agribusiness



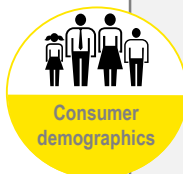
Technology & Innovation

- Tech advancements leads to **increased data and demand for data analytics**
- The opposing demand for more food to feed more people (**GMO**) and the demand for **organic food**
- **Regulatory agreements** like TPP and TTIP impacting the industry



Infrastructure & Trade

- Growing consumer desire for **traceability to the field**
- **Food safety concerns** due to the financial and reputational cost of product recalls
- **Constrained infrastructure** challenging growth

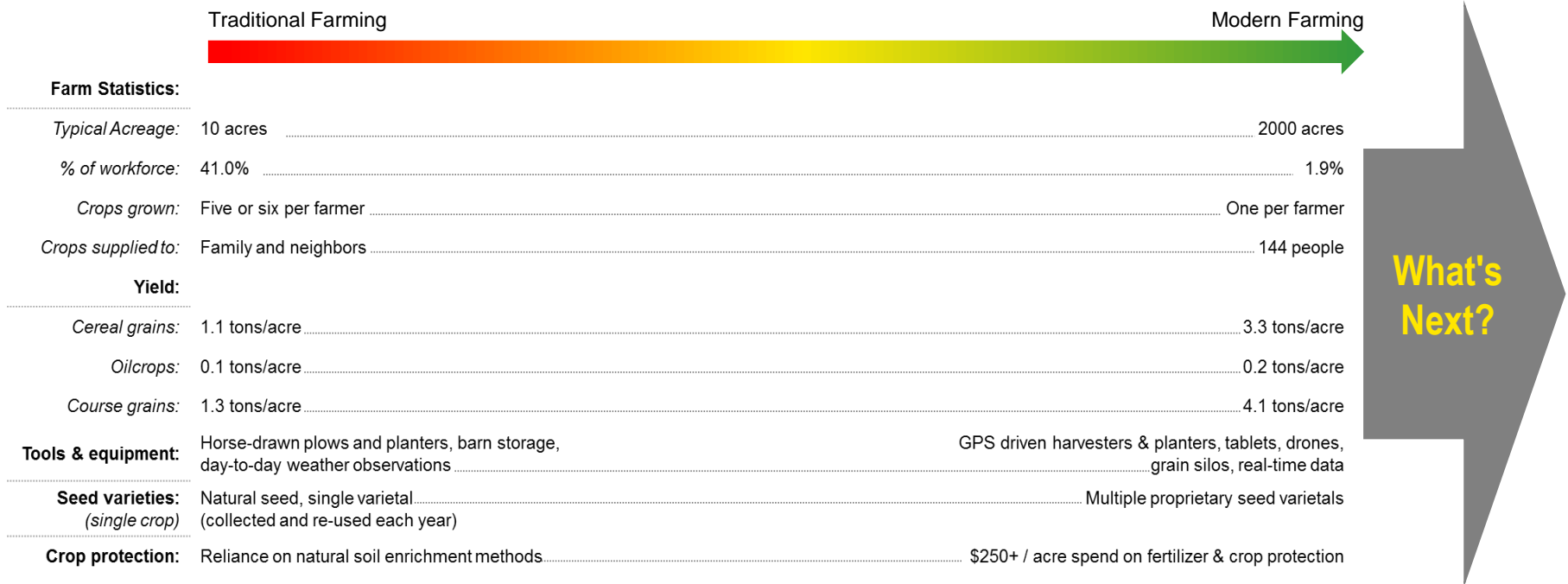


Shifting Market Importance and Consumer Preferences

- **Urbanisation**, expanding middle class and **population growth in emerging markets**
- The increasing focus on health and wellness and **corporate social responsibility**, especially in developed markets, results in higher demand for healthier foods with higher quality standards and traceability

Global Megatrends

What will be the next green revolution?



What's Next?

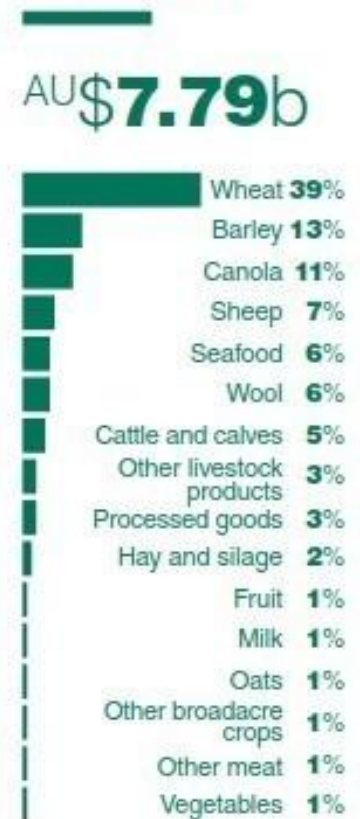
Building a network for a diverse group

Lots of sub-sector groups (>16!) with common challenges (DAFWA):

- ▶ Improving value chain infrastructure
- ▶ Improving research and development, and technology
- ▶ Increasing sustainable management of land and water resources
- ▶ Attracting and retaining skilled workers
- ▶ Attracting investment

Audience representation to reflect this

Figure 1: Western Australian agrifood exports 2014/15 – total and products



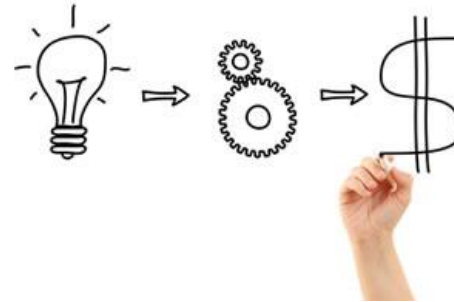
(ABS and DAFWA 2015)

Points of view for the sector

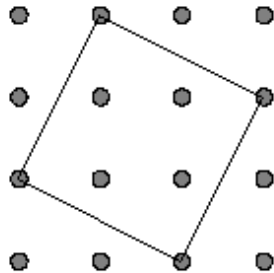
Good knowledge from other sectors is not being fully leveraged



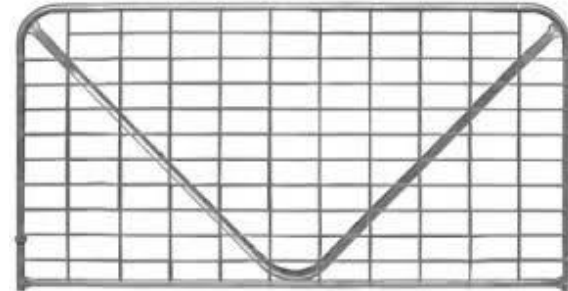
More commercialisation is needed... including innovation in corporate strategy – leader or early adaptor?



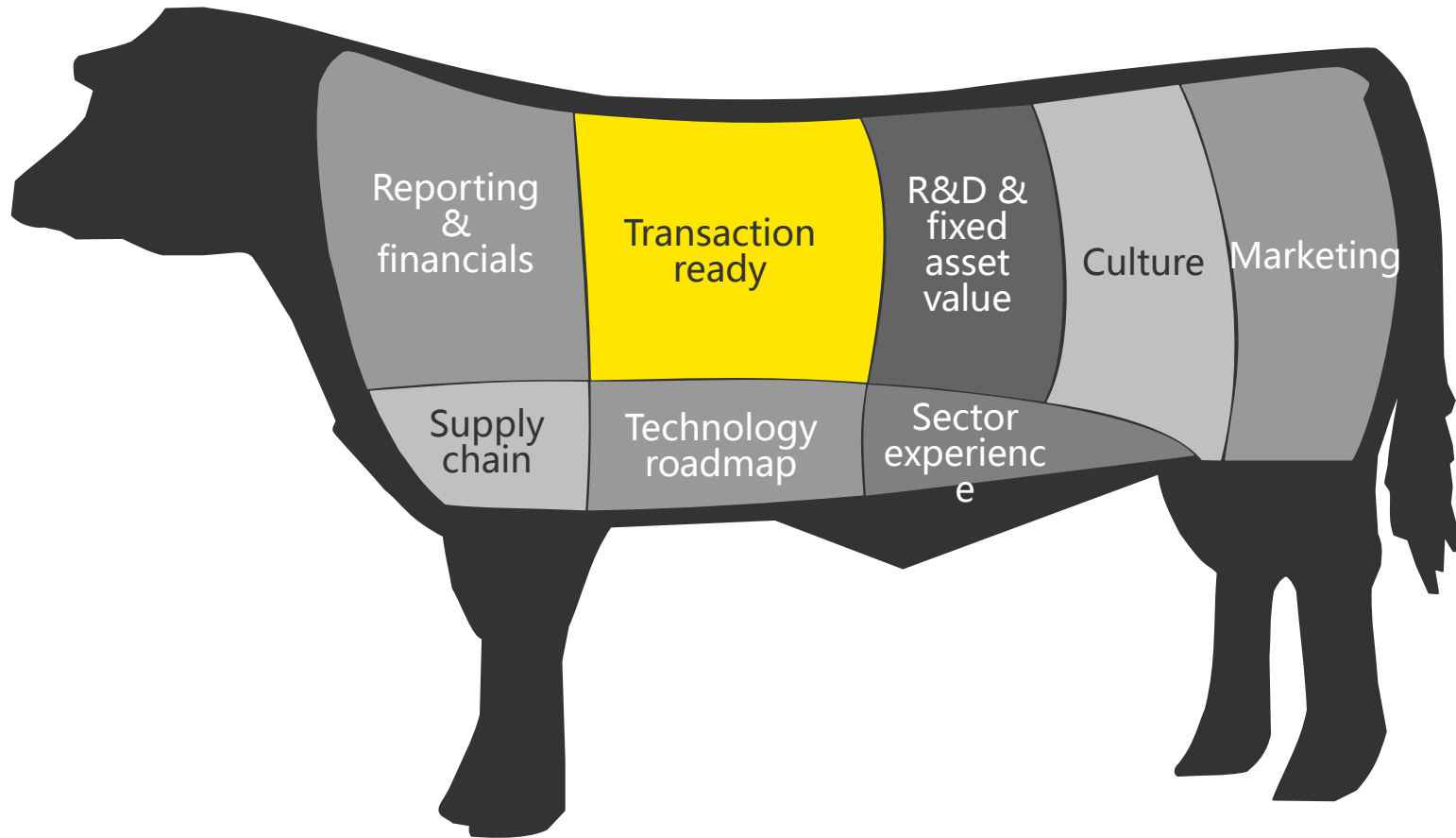
Joining the pieces of supply chain will create optimisation. Individual technology providers have a key roll.



Meaningful technology at the farm gate will create step change – what we don't know we don't know



What we are talking to the sector about...



Value from innovation



Refundable R&D Tax Offset

What is the benefit?

- ▶ 45% refundable tax offset for entities with a group turnover < \$20 million per annum, in tax loss for FY16 and 43.5% thereafter
- ▶ Equivalent to **45 c in each R&D \$** refunded

Who can claim?

- ▶ An eligible company that has:
 - Undertaken **experimental** activity, where the **outcome could not be known in advance** for the purpose of generating **new knowledge**
 - Defined & documented the R&D “experiments” – with respect to purpose, length of time and technical objective
 - Spent > \$20 K on eligible R&D in income year (unless incurred to RSP)
- ▶ Annual R&D Tax Registration process - due 10 months after the end of the tax year ***i.e. 30 April 2017 deadline for FY 16 claims***

Clever activities changing traditional practices

Horticulture

- ▶ Development of improved agronomics (water regimes/irrigation strategies/fertiliser experimentation) to increase yield or in an attempt to grow outside traditional crop windows
- ▶ Development of improved pest management solutions
- ▶ Improved harvesting and cropping methods
- ▶ Development of improved post-harvest processing / packaging equipment to improve productivity or extend shelf life

Plant breeding

- ▶ Development of hardier / pest resistant plant species
- ▶ Development of improved breeds to increase yields and productivity

Breeding

- ▶ Experimentation with animal husbandry techniques to improve birthing rates
- ▶ Breeding programs to achieve desirable animal traits and elimination of undesirable traits
- ▶ Experimentation with feeding methodologies to improve animal quality in harsh / arid environments

Feedlots

- ▶ Development of feeding regimes and feed formulations to increase weight gain and achieve desired animal characteristics (e.g. marbling, fat content, etc.)
- ▶ Experimentation with inoculation and treatment regimes to decrease mortality and morbidity
- ▶ Development of processes to improve animal conditions in feedlots during poor weather (e.g. high temperatures, low rainfall, etc.)

Processors

- ▶ Development of automated meat processing equipment to increase recoveries, yields and meat quality
- ▶ Development of improved processing techniques to recover non-traditional products to access new (export) markets
- ▶ Development of techniques to increase production capacity from existing processing equipment
- ▶ Investigation for the treatment and re-use of wastewater from production facilities
- ▶ Reduction of dark cutting through improved processing, reduced electrical inputs and de-stressing animals

Potential funding for agri-projects

Organisation	Program	Funding Limits/Known Funding thus far
Department of Regional Development (apply to relevant region)	Regional Grants Scheme - Royalties for Regions initiative	\$50,000 - \$300,000 - funding in 2H of calendar year
Department of Agriculture and Food	Grants for Asian Market Export Program	Between \$20,000 - \$200,000 requiring co-contribution of at least \$25,000
AusIndustry	Accelerating Commercialisation Grant	50% of the expenditure, to a max of \$1M
Australian Trade and Investment Commission	Export Market Development Grant	50% of eligible export promotional expenses up to \$150,000 [in two rounds, 1) \$40K, 2) from remaining funding pool]
Department of Agriculture and Food	Grower Group R&D Grants Program	Between \$20,000-\$500,000
Department of Water	Pastoral Water Grants Scheme	\$1,000 and \$20,000 per pastoral business, every ten years; up to 50% expenditure on water supply works
Meat & Livestock Australia	MLA Research, Development and Extension Funding	Project dependent
Regional Development Australia - Great Southern WA	National Stronger Regions Fund	Grants for projects between \$20,000 and \$10M on at least a dollar for dollar basis.
Department of Agriculture and Food	Northern Beef Futures Business Improvement Grant Program	Grants for projects between \$20,000 and \$10M on at least a dollar for dollar basis.
ATO	Early Stage Innovation Company	Carry forward offset of \$20% capped at \$200k or \$50k, and CGT relief

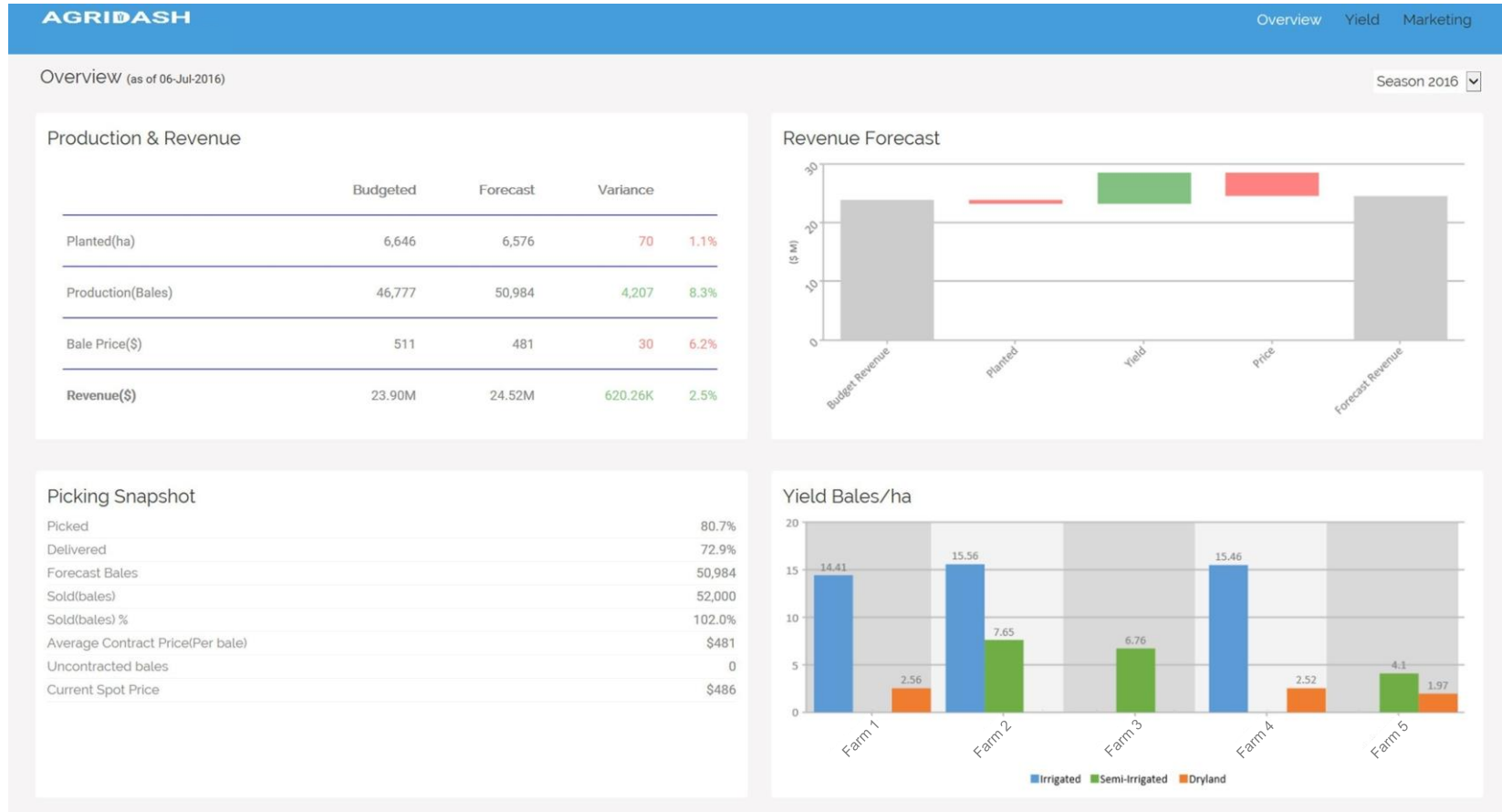
Technology in the hand



Proposition

“Sector is data rich and insight poor. Supply chain is not opaque or integrated”

Example 1: Agridash Digital Farm Reporting Dashboard – overview page



Example 1 EY's Agridash Digital Farm Reporting Dashboard - features and value

Features

Value

Marketing



The platform provides real time data on current commodity spot prices and marketing status in terms of contracted prices achieved and proportion of volume sold or committed to date.

The availability of enhanced marketing information allows for an increased level of responsiveness to market opportunities. It will also allow for increased marketing discipline due to enhanced transparency of volumes sold.

Supply Chain and Logistics



Volumes at each stage of the supply chain are recorded and reported via the Agridash in real time.

The increased transparency of inventory levels within the supply chain allow for enhanced inventory management and the mitigation of waste within the supply chain. It also allows for enhanced scheduling of processing to optimise operations and cash flow.

Operational Performance

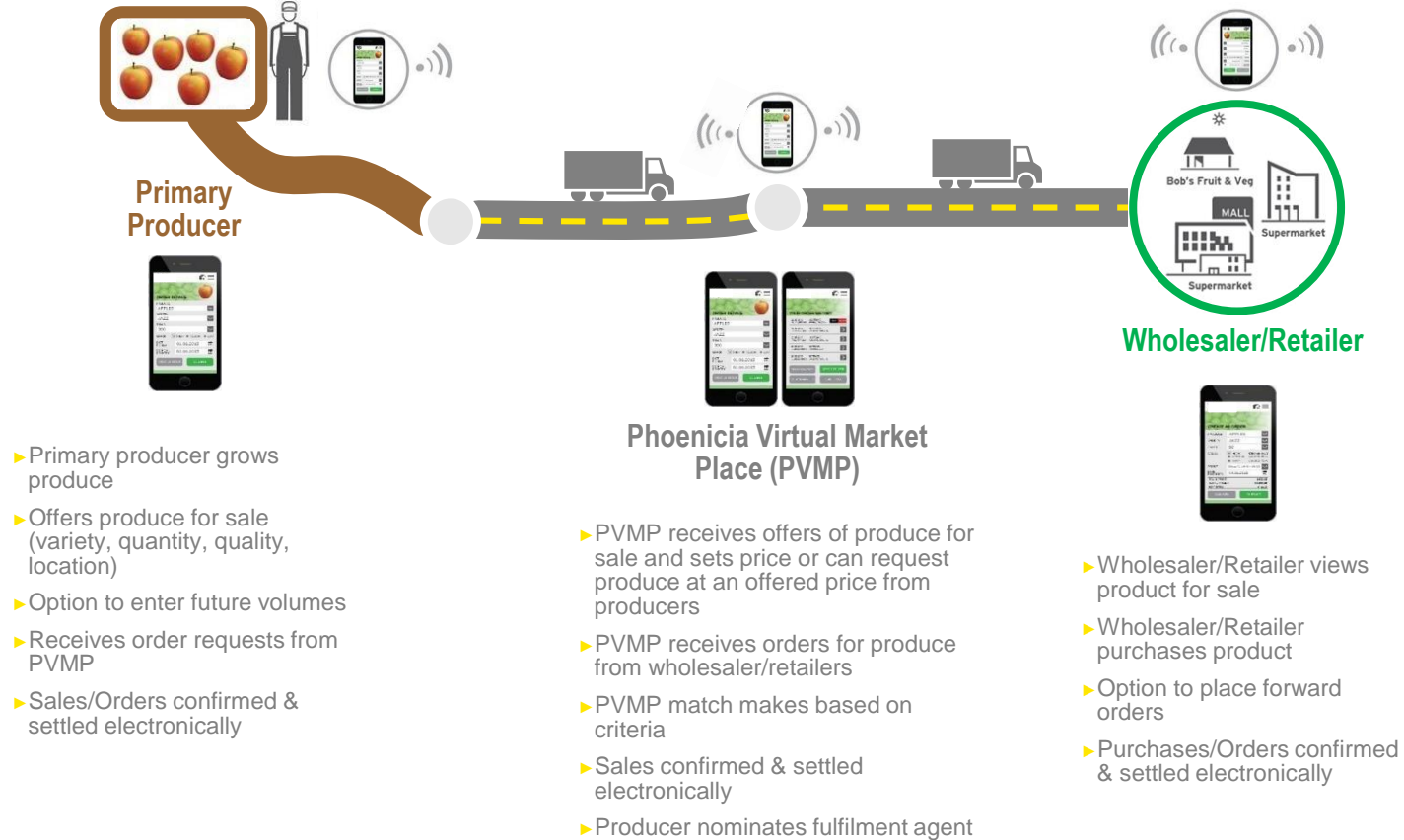


The platform automatically records crop performance and provides real time analytics and insights into crop performance in terms of its revenue impact against budget at the field level. It also automatically updates forecasts in season with actual data. The Agridash provides the platform to leverage predictive analytics of crop performance. It will provide a robust secure database of all crop data.

Real time data on crop performance allows for a heightened level of responsiveness to changes in performance against budget and forecast. It provides the opportunity for issues to be mitigated quickly and opportunities capitalised on at the earliest opportunity. Predictive analytics provides for enhanced operations and financial planning.

Example 2: Virtual Market Place

A virtual market place will enhance the efficiency and effectiveness of the market, delivering superior outcomes for all participants



Example 2: Virtual Market Place - features and value

1 Growers – increased transparency over:

- ✓ Prices - which will help them in pricing their products more appropriately
- ✓ Demand - which will help them plan their products
- ✓ Wholesalers and buyers who are interested in their products
- ✓ Enable growers to access more wholesalers and buyers who might be interested in their products

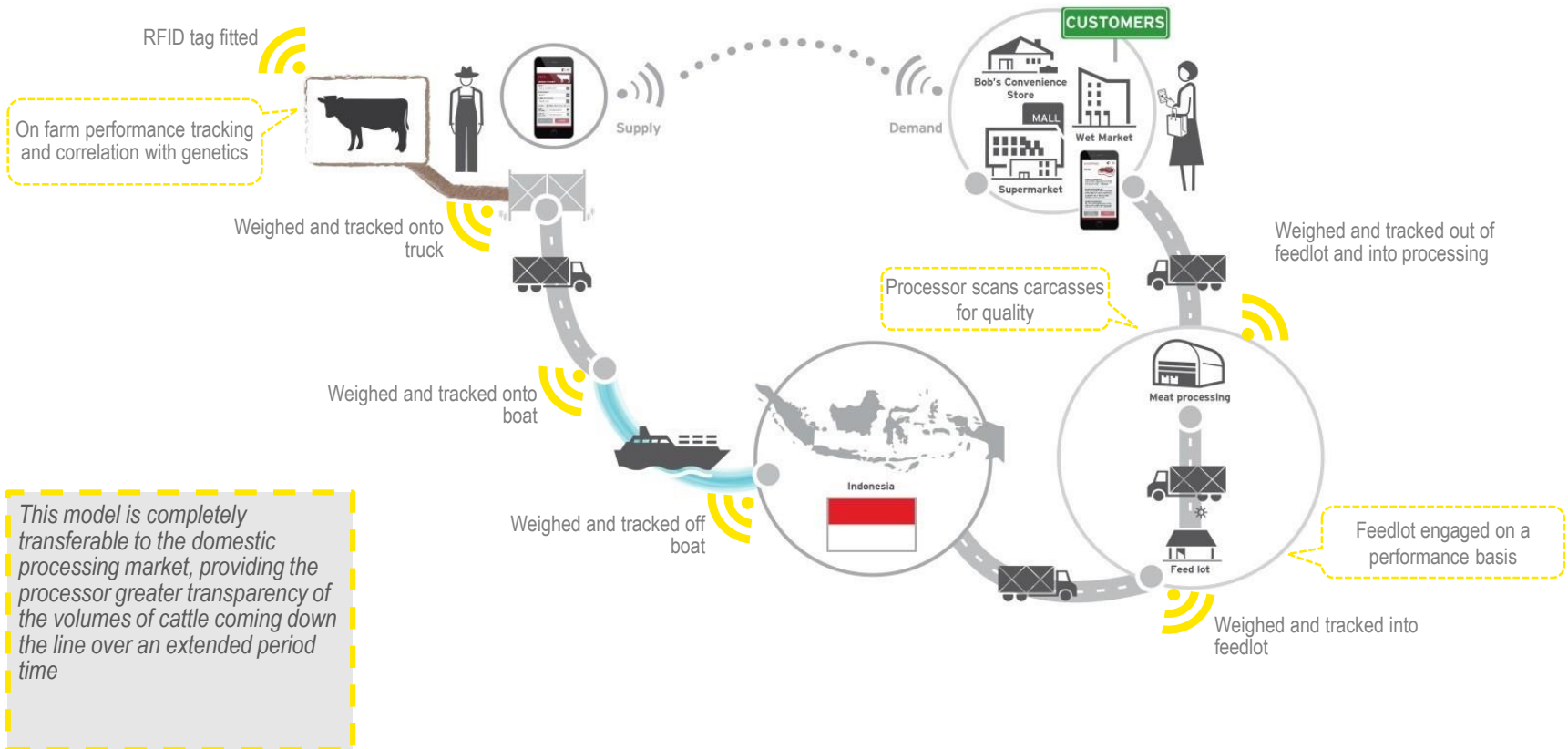
2 Wholesalers

- ✓ Better planning driven by increased visibility over the market
- ✓ Enable forecasting and future contracting
- ✓ Enable wholesalers to request products where there is a demand that is not currently met by growers

3 Overall market

- ✓ Limit market manipulation with the increased transparency
- ✓ Enable real time supply & demand analysis
- ✓ Enable future forecasting with increased visibility and historical data on supply and demand
- ✓ Enable better and new trade modes (such as hedging)

Example 3: Livestock Supply Chain Transformation



Example 3: Livestock Supply Chain Transformation - features and value

Features

Value

Marketing



The platform will allow supply chain participants transparency of volumes and types of animals at each stage of the chain. It will record the rate of through put and consumption of inventory at each stage. The platform will allow for the automation of transactions and provide full traceability and the illustration of provenance. A high level of communication along the supply chain will be facilitated by the platform.

Increased transparency of volumes of livestock coming down the chain will allow participants to engage in offtake agreements, providing greater certainty of demand and supply. An enhanced level of communication will increase the engagement between supply chain participants. Automation of transactions will drive administration efficiencies and expedite cash flow. Full traceability will allow price premiums to be achieved for proven provenance.

Supply Chain and Logistics



All animals will be scanned at each stage of the end to end supply chain with their weight performance and location recorded. This will inform an up to date real time reconciliation of inventory levels through out the supply chain.

The performance of the supply chain and logistics operations will be optimised due to full transparency of operations identifying issues. Movements of stock and product will be optimised due to improved transparency of volumes, movements, supply and demand.

Operational Performance



The platform will provide full transparency and traceability of the beef cattle supply chain, including inventory levels at each stage of the chain. It will also provide for a high level of communication up and down the supply chain.

Waste within in the supply chain will be quickly identified allowing for it to be mitigated. Increased communication will also allow for the quality of the product produced to be optimised, rather than maximised, driving efficiency. Transparency of inventory levels will provide the opportunity to optimise operations to ensure that capacity within the supply chain is fulfilled and bottle necks are managed.

Thank you

Comments

Questions

