

CREATING AND  
RETURNING VALUE  
TO GROWERS

# INNOVATION AT CBH



- Venture Capital
- Confluence of Innovation
  - Cloud computing – powerful computers are available to everyone, highly scalable
  - Big data – ability to collect, organise and process data is common
  - Machine Intelligence – collective term for a variety of artificial intelligence algorithms
  - Smart phone – you can access powerful systems from your connected device(s)
  - Blockchain – Imputable, secure, distributed ledger of transactions
  - Internet of Things (IoT) – sophisticated sensors, costs down, movement to the Edge
- Innovation at CBH - approach

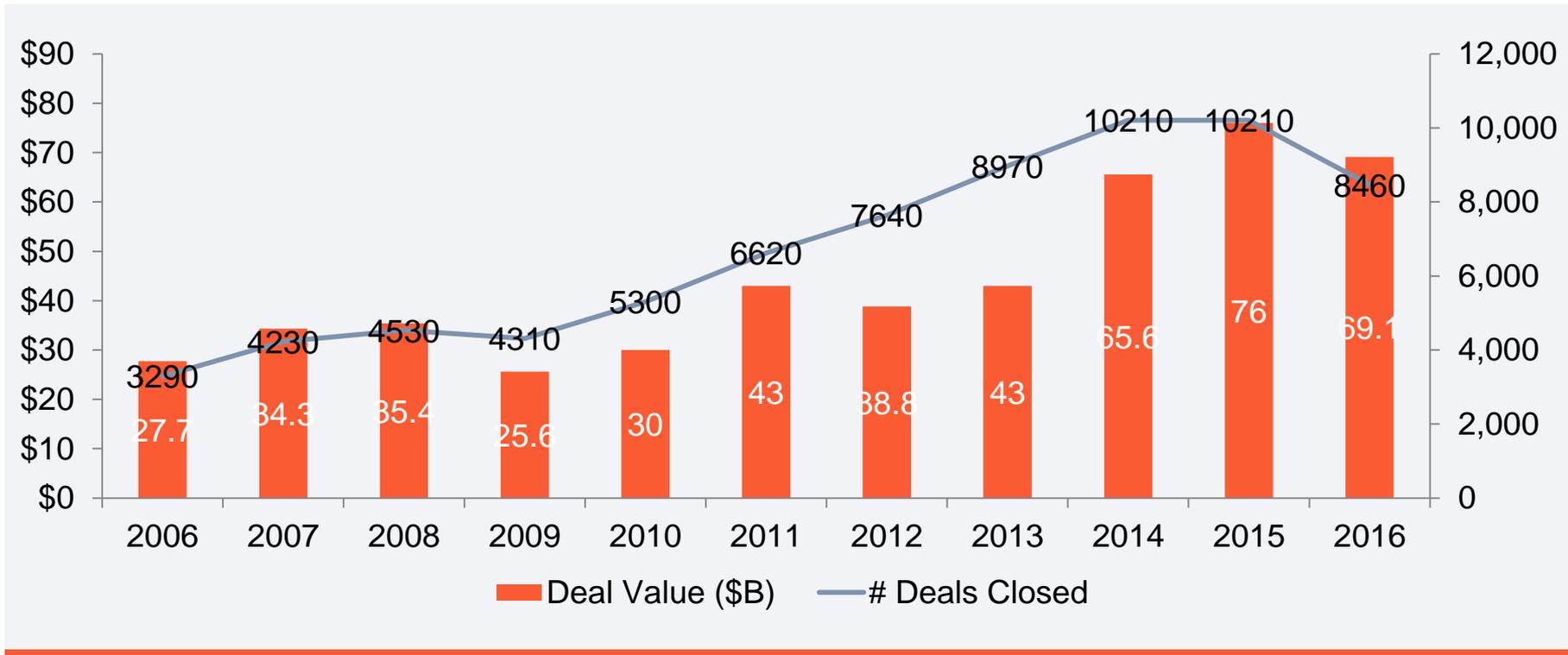
## AGTECH: 70+ TECHNOLOGY COMPANIES CHANGING THE FARM



## STARTUPS ARE CHANGING FARMING

Startups are changing all different aspects of the farm. How they're changing it and what parts they're applying technology to vary. This market map helps segment some of the different areas of ag tech.

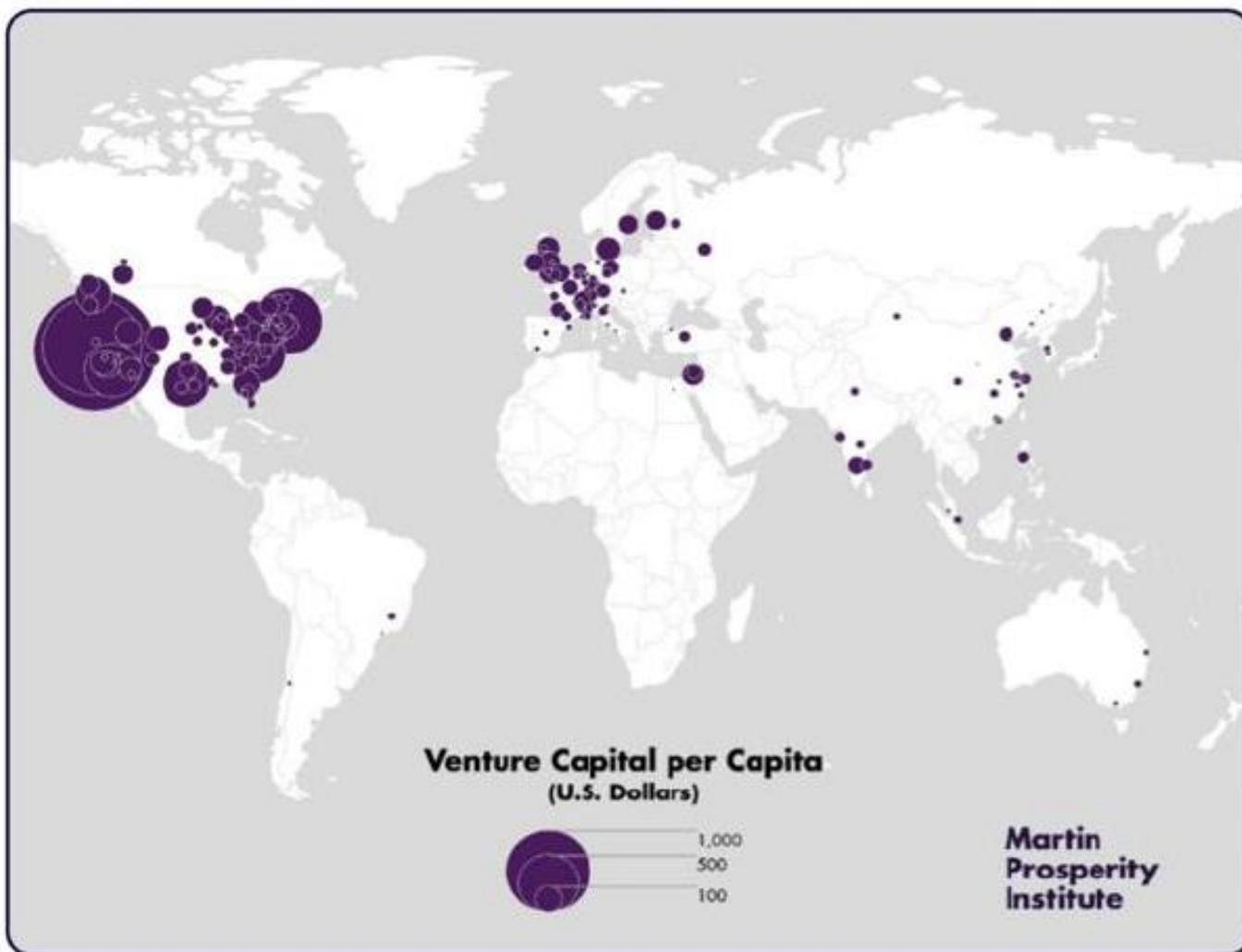
# The annual Venture Capital funding doubled over the last 10 years





# Venture Capital

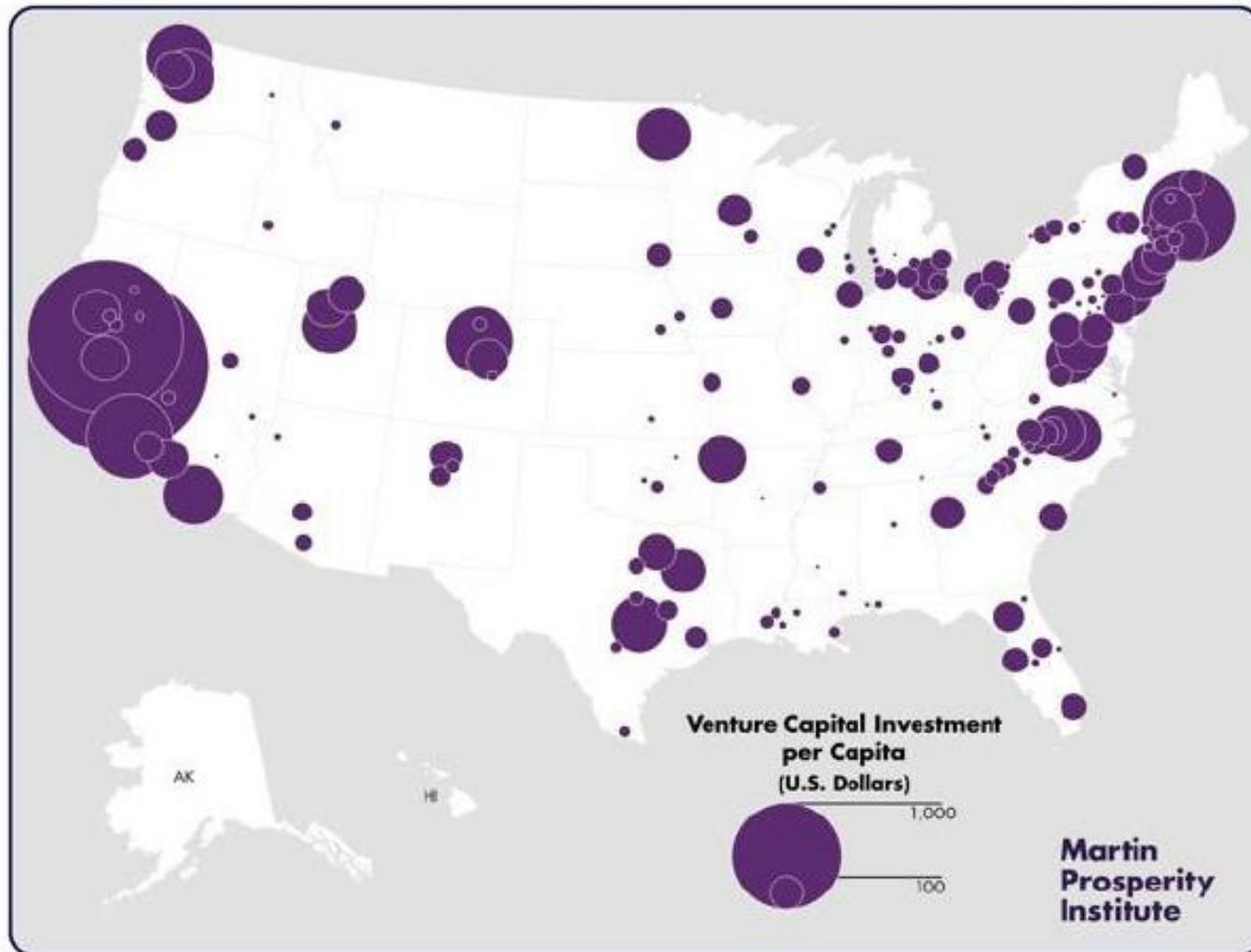
## Venture Capital per Capita





# Venture Capital

## Venture Capital per Capita



# Unicorns are disrupting established industries at increasing rate



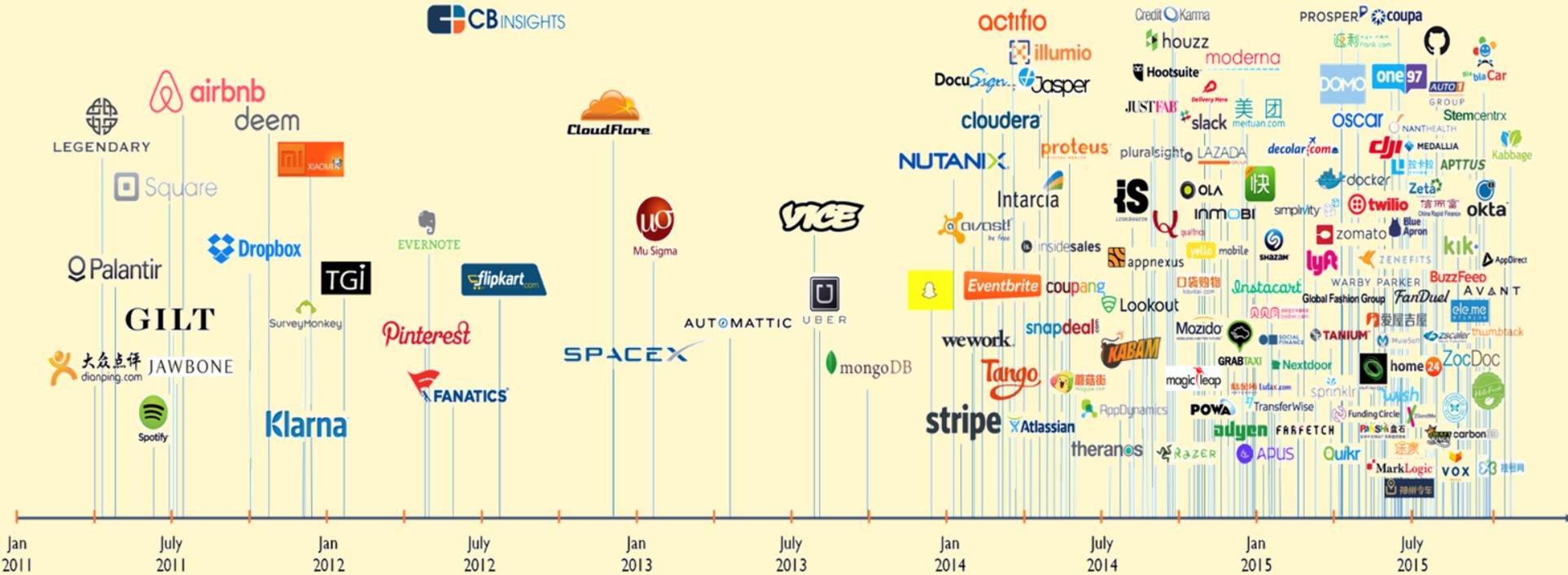
## EXPONENTIAL GROWTH OF UNICORNS

### Number of new Unicorns<sup>3</sup> per year

Created by:



Private Unicorns since 2011

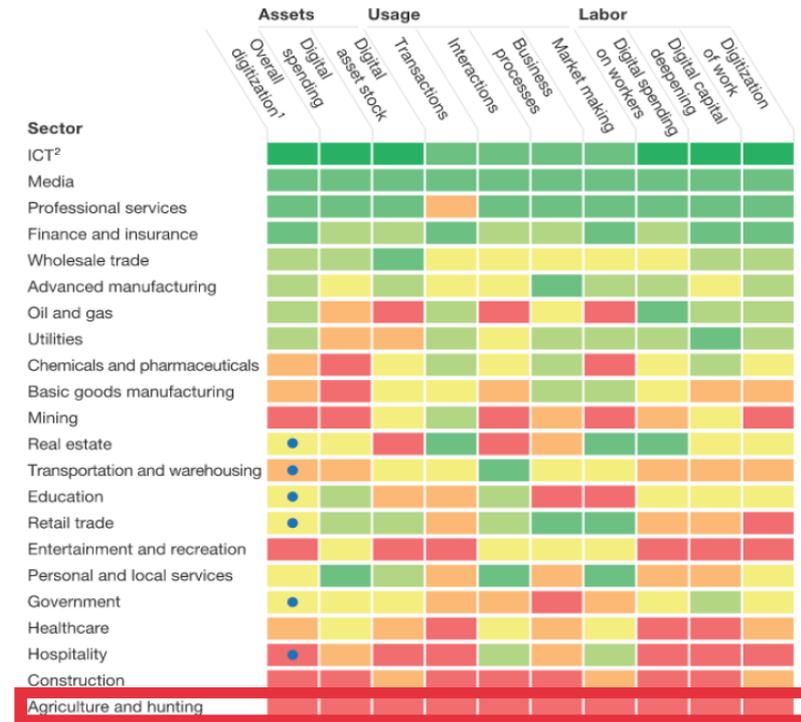


# Agriculture is the least digitized sector



- Lots of Room for Disruption

|                         |   |  |
|-------------------------|---|--|
|                         | <p style="text-align: center;"><b>Agriculture</b></p>     | <p style="text-align: center;"><b>Healthcare/<br/>Pharma</b></p>     |
| Gene Sequencing         |   |  |
| Data-Driven R&D         |   |  |
| Microbiome Manipulation |   |  |
| CRISPR (Gene-Editing)   |   |  |



Source: McKinsey Global Institute Industry digitization index

# Why is CBH looking at Innovation



Innovation in agriculture is a hot topic at the moment with **billions in funding** going into how will the world feed **9.6 billion** people.

CBH isn't an agtech company and we aren't a food manufacturer, so what are the **CBH drivers for innovation**

As a cooperative we feel well placed to help the Grains Industry throughout the whole supply chain from on farm through to first stage processors

## DRIVING NEXT WAVE OF PRODUCTIVITY & EFFICIENCY GAINS

- While CBH has generally succeeded in creating more efficient operations, **the law of diminishing returns is becoming increasingly evident** regarding additional efforts
- Innovation is the **path to greater productivity** as well as to long-term sustainability
- Contributes to BPI** through cost saving and cost avoidance across the business

## COUNTER SUPPLY CHAIN DISRUPTION

- Disruption**, particularly digital disruption was **identified as a potential threat to CBH**
- Indeed, it's now widely accepted that **exponential technologies** – big data, the Internet of Things, 3D printing, digitisation of activity, etc. – will **change the way the agriculture industry operates**.
- Focusing on innovation will allow CBH to stay in business and **ahead in a increasingly competitive market**

## MEET WA GROWER NEEDS

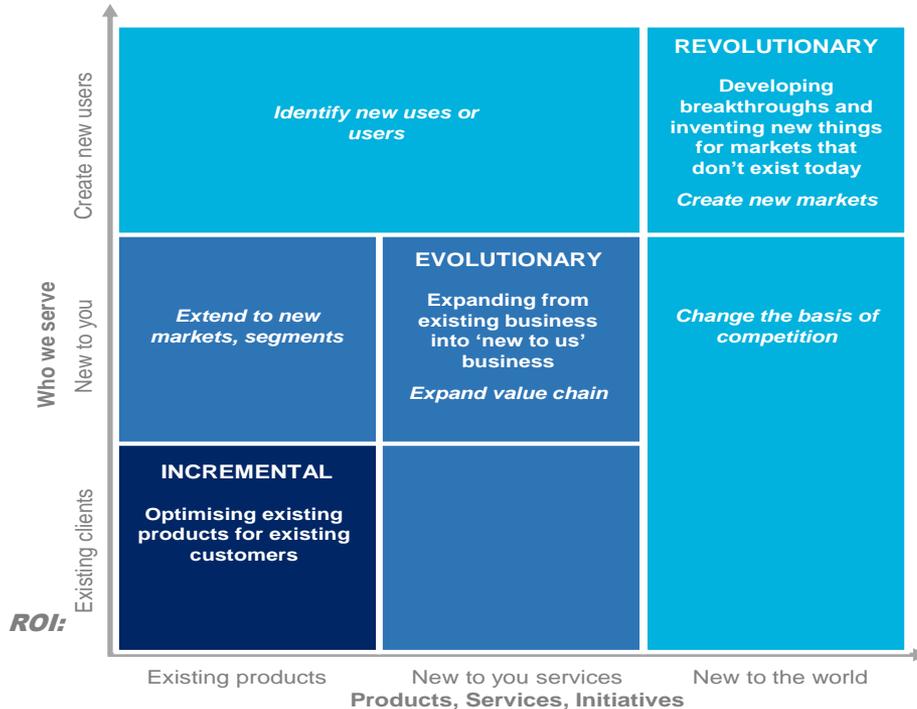
- Growers needs are becoming increasingly complex** and we need to continue to meet their needs
- CBH is at risk of being **perceived as a follower rather than leader** in innovation.
- Innovation will **meet the industry needs and expectations** and ultimately benefit growers
- Help **make WA an attractive location** for companies to bring new innovations.

# INNOVATION AMBITION

CBH aim to manage our innovation efforts and investments as a balanced portfolio of activities

## The most successful innovators<sup>1</sup>:

- Are explicit about their targeted activity and resources across the different ambition horizons outlined below
- Manage their innovation efforts and investments as a portfolio of activities to align with the goals and outcomes innovation aspires to achieve.



## CBH Innovation Ambition Targets



## Portfolio Management will enable us to:

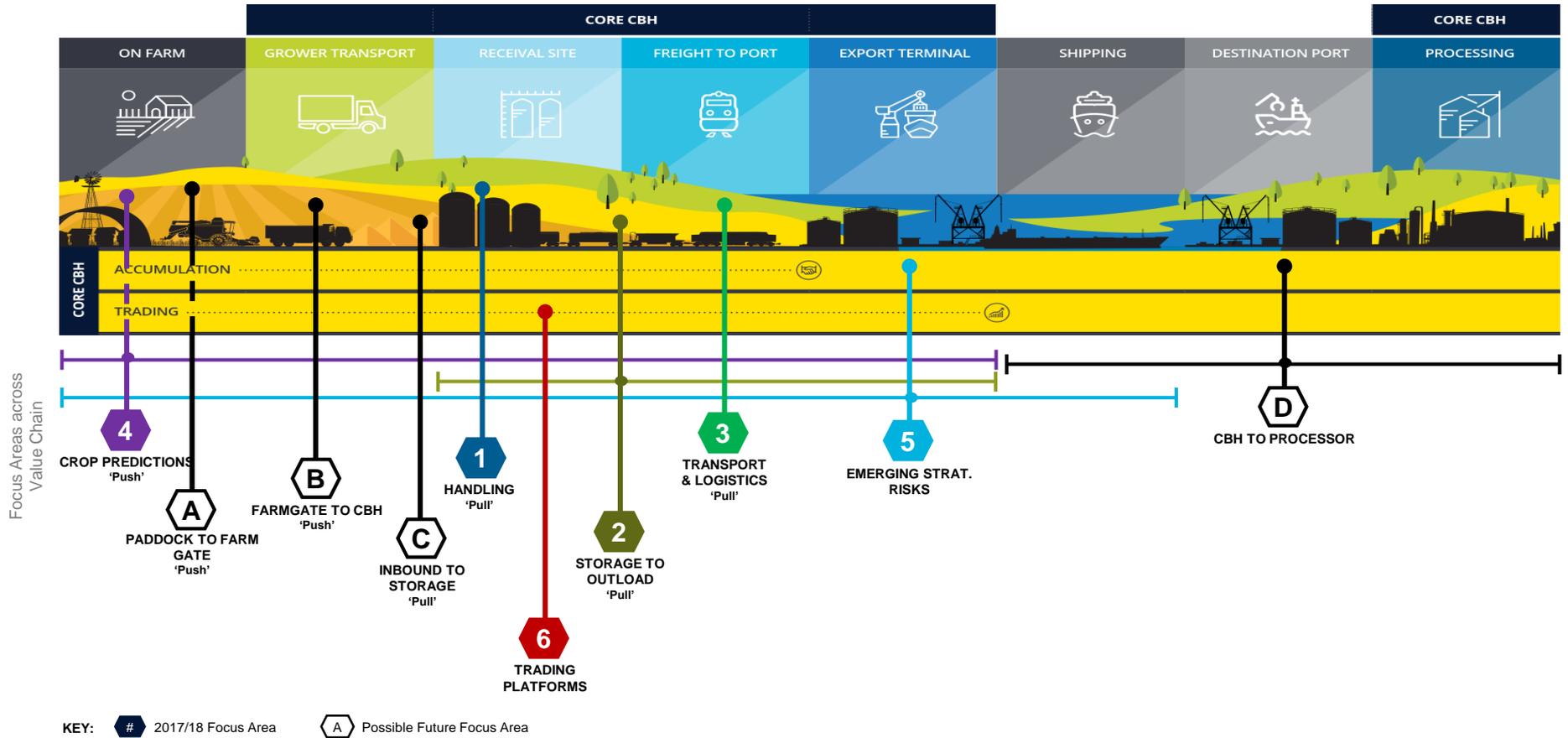
- Align to strategy
- Maximise the value of the portfolio
- Ensure the right mix of projects based on balancing between risk and reward, short and long term, growth and cost/reduction etc.
- Reprioritise projects as required

## We aim to achieve a balanced portfolio of innovation across:

- 3 ambition horizons (incremental, evolutionary, revolutionary)
- Strategic fit / focus
- Available capital
- Available resources
- Pipeline (awaiting approval and in execution)
- Short term and long term benefit realisations

# INNOVATION FOCUS AREAS

Initial Focus Areas have been limited to parts of the value chain in which CBH are strongest



## Key Metrics



# of Initiatives

22

Requested

###

Supply Chain

###

New Revenue

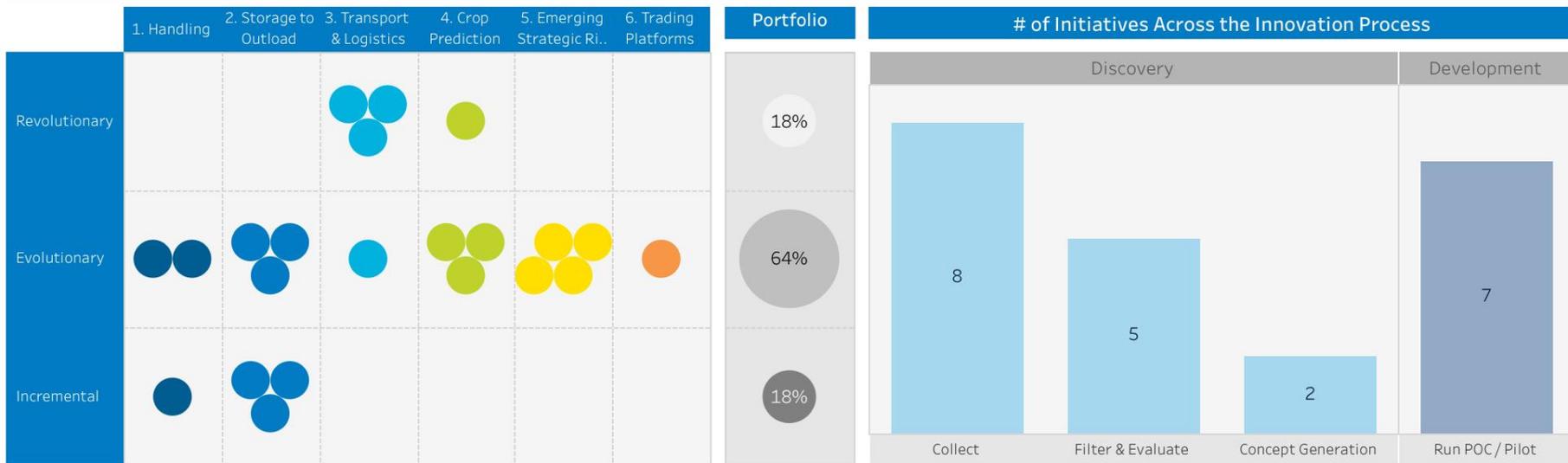
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Lead

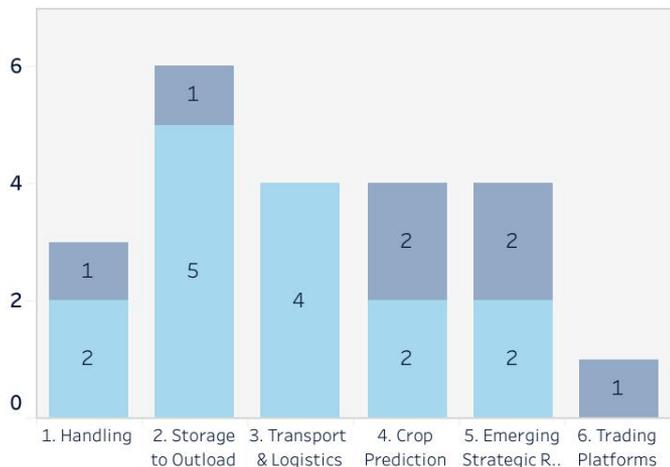
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## Innovation Outcomes

### Overview of Innovation Portfolio by # of Initiatives



### # of Initiatives by Focus Area and Value Chain



Development      Discovery

# What is Innovation at CBH



CBH has looked at other industries to see how they have a applied innovation but agriculture is unique so CBH has created a internal innovation program.

Some of the key design aspects of the CBH program are:

- The innovation team is a dedicated team of 4 who are partly based outside CBH
- The program has an initial existing supply chain focus with the team focusing on sourcing, trialling and testing new concepts/solutions
- Program takes a stage gate approach to moving initiatives though the portfolio

| Discovery |                  |  | Development     |                           | Execution |                      |                          |
|-----------|------------------|--|-----------------|---------------------------|-----------|----------------------|--------------------------|
| Collect   | Filter, evaluate | Concept Generation /<br>Prioritisation | Run POC / Pilot | Business Case Development | Launch    | Scale (12<br>months) | Improve (BAU)<br>(3 yrs) |

- Once a concept is proven via a successful Proof of Concept, this solution is scaled into execution but a separate project management team

# What is Innovation at CBH



The 5 key principals of the CBH program are:

-  **Alignment**
  - Ensure alignment of Innovation Strategy, program and supporting frameworks to group strategy and internal policies
  
-  **Import & Focus**
  - Leverage external networks by collaborating and partnering with necessary external capabilities in order to focus on core CBH strengths
  
  - Learn by learning how to fail small and frequently in a controlled way while taking appropriate risk
  
-  **“Flearning”**
  - Take a “double loop learning” approach - instead of just assessing error against an initiative, question the underlying strategy and approach
  
  - Need to balance the need to have a clear risk appetite for innovation with appropriate oversight across end-to-end innovation activities
  
-  **Speed to Market**
  - Minimise duplication (e.g. assessment process, initiatives)
  
  - Ensure there is clarity, consistency, and communication of end-to-end process
  
  - Achieve early wins where possible
  
-  **Consistency**
  - Across network, process, discipline and geography
  
  - Between internal and external innovation efforts and initiatives

# Gaps to WA Taking Full Advantage of Agricultural Innovation



Agtech needs to be available and adopted in order for WA to see the benefits

## Adoption of Tech

- USD3.2B in Agtech in 2016 but how much is relevant for WA conditions?
- Large amount of this investment in US, Europe and Israel where cropping is more intensive and/or mixed crops with high value and commoditised crops together on the farm
- Is the value proposition there for a crop worth \$500 per hectare versus \$5,000?
- What can WA do to attract investment into Ag tech that is focused on WA/ Australia and its environment so that tech is developed that is relevant

## Availability of Tech

- Lack of connectivity in some regional areas means new technologies cant be accessed
- Fragmentation can / will occur
- Data ownership will be fought over



CBH announced a blockchain trial in August – this is the first trial to be completed as part of CBH’s innovation program

## Methodology

- We have taken the fail fast, learn fast approach by running a Proof of Concept to understand the technology before scaling up
- Trial will be run concurrently with existing processes to ensure no interruption to business activities
- Funded and project managed by the innovation program
- BLM was chosen as a trial site so the pilot could be run with one entity across the whole trial
- CBH has chosen to work with partner, AgriDigital, for the trial to take advantage of their expert capability in blockchain development
- Results in the form of PoC report with insights and technical knowledge transfer
- No pass or fail – success is understanding the impact of using blockchain within a agricultural supply chain. If efficiencies can be gained immediately CBH will look to scale up into operation

## Value for CBH:

- Gain an understanding of the emerging strategic opportunities and risks associated with blockchain and distributed ledger
- Assess if CBH and the WA grower can build a competitive advantage using these technologies.
- Explore cost saving opportunities using blockchain technologies, through transactional efficiencies, automation provenance and digitalisation of supply chains and trade

## Next Steps:

- Results are expected in September
- Depending on results CBH may look to:
  - Implement a blockchain process for internal efficiencies,
  - Run further trials or
  - Decide that the technology needs further development before it is suitable for a agricultural supply chain