

Traceability - Primal to Steak/Steak to Primal (Stage 2)

Project Code

Prepared by

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#### **Project Description**

The process demonstrated how the primal information is transferred from the primal to the steak.

Hence the process of generating codes (if a ledger solution) or surface application approach or hardware approach. For this part it is expected that two to five primals will be demonstrated on, ideally different primals. During this process demonstration the provider is to articulate and demonstrate how the third party cutting room will use the process and what equipment (and fail safes) need to be in place to ensure robustness/reliable/bullet proof solution.

Trace forward and trace back

Demonstration of a simple interface that shows which steak each primal has been sourced from.

# **Project Content**

#### Technology Approach

- Use the FreshChain cloud based platform for traceability, provenance, authenticity and meat count reconciliation system based on an individual carton
- Use a blockchain enabled, encrypted, serialised and unique GS1 Digital Link QR code data carrier for traceability and provenance providing in one code, retail scanning at the POS with embedded data and consumer connection using any smartphone.
- Integrate a blockchain enabled weight scale system with our FreshChain cloud based traceability software solution and secondary thermal printing hardware to transfer primal information to steaks.

# Methodology

- Develop a primal to cut data interface for integration with existing meat B2B traceability
- Enable protections to allow only the primal to be split into a finite weight determined by the primal
- A system of scanner, scale and printer to transfer trace data from primal to cut providing counterfeit protection, allowing for closed and open supply chains.

#### **Project Outcome**

Sucessfully demonstrated all of the objectives outlined in addition to consumer UI opportunities for provenance and digital storytelling.

# **Benefit for Industry**

- 1. Digitisation, via acquiring product, supply chain and consumer information and leveraging data for insights (Adv. Mft.)
- Sustainability, via underpinning Communities, Energy, Water, Waste and Packaging claim
- 3. Marketing & Promotion, via offering a new premium value add to premium markets.
- 4. Products, via understanding additional purchasing behavior (and enabling direct connection with consumers). New direct connection with domestic and global consumers could lead to leveraging new product ideas (e.g. Dairy Industry Oak direct consumer engagement - https://oakflavourgenerator.com.au/)
- 5. Market access, via increased granular traceability systems
- 6. International Competitiveness, via ideally reducing manual compliance regulations.
- 7. Traceability and Integrity Systems
- 8. Animal Welfare, via communicating animal welfare practices to consumers that the relevant supply chain adheres to
- 9. Food Safety, via demonstration that forward and backward recalls are now possible to steak level.

# System Flow



# 7









#### Primal

Box or vac with previous trace label (FreshChain QR) containing weight

out of scope of this

#### Scan on open

Wireless scanner at point of unpack which then releases and locks the primal to a processing facility and verifies the supply chain using defined rules

#### Cut/Slice

The transformation takes place

# Package

The product is packaged

Options are provided for the cut. The meat is

Weight

weighted and deducted from the available primal weight

#### tly via FreshChain's API Label/Apply

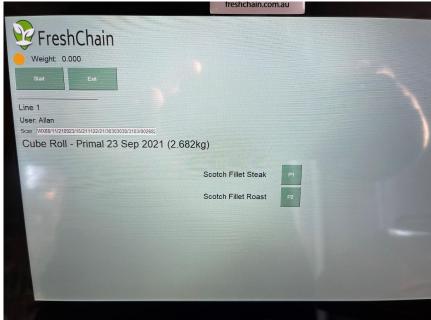
A trace label is produced to apply to/accompany the product

#### Sell

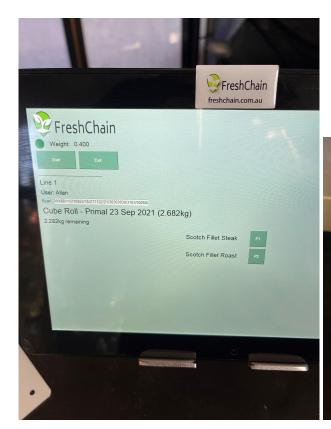
The consumer can scan the QR to verify the origin of the product and other marketing collateral

# Sample of images from the demonstration

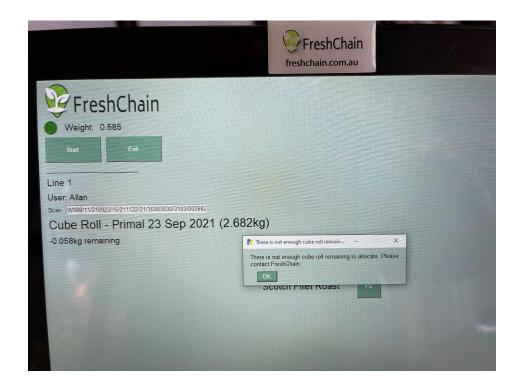




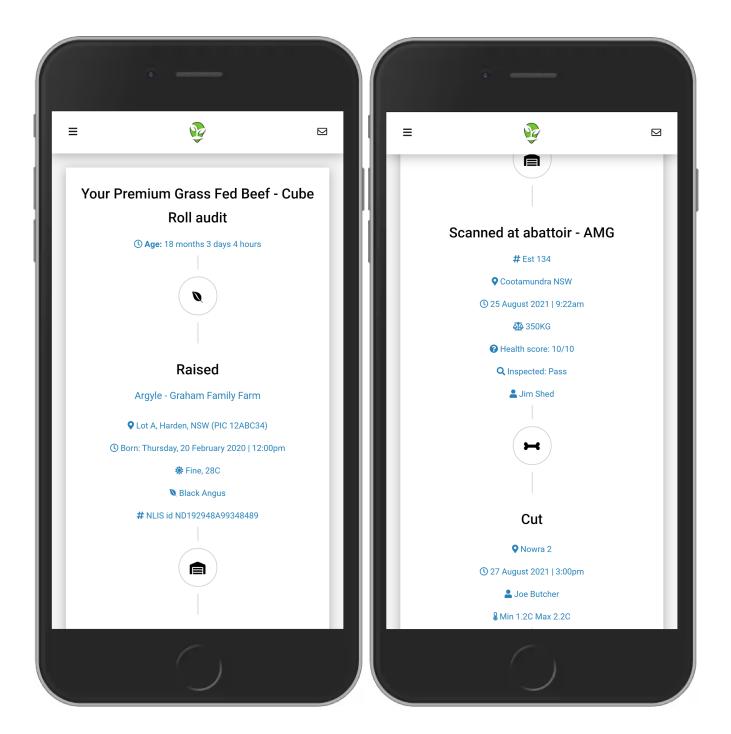


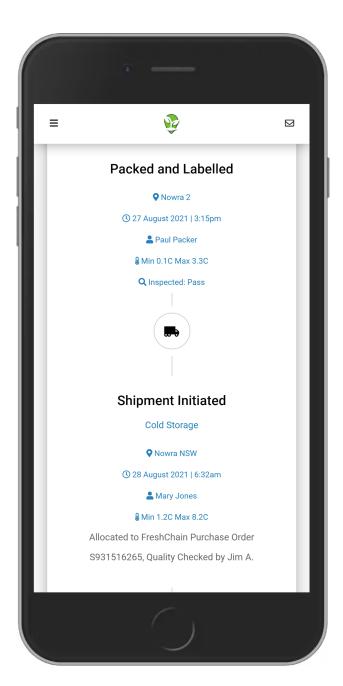




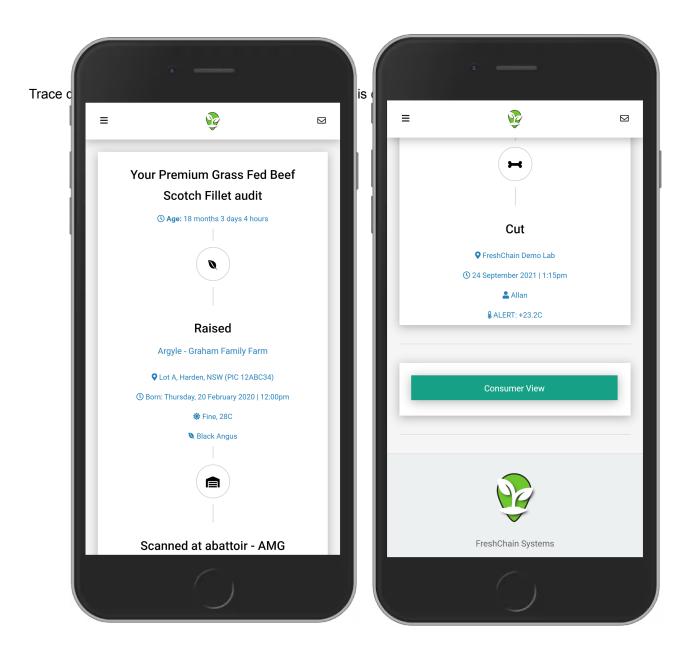


# Primal Trace Data from Farmer/Processor (authorised supply chain view)



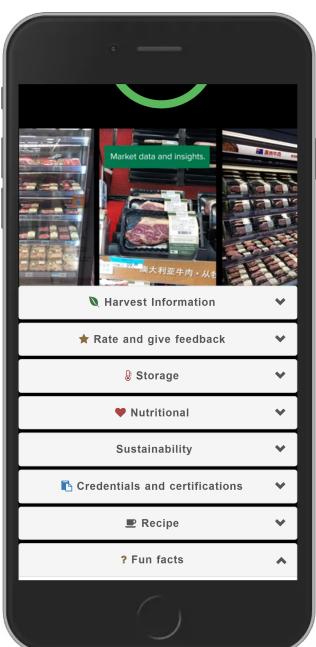


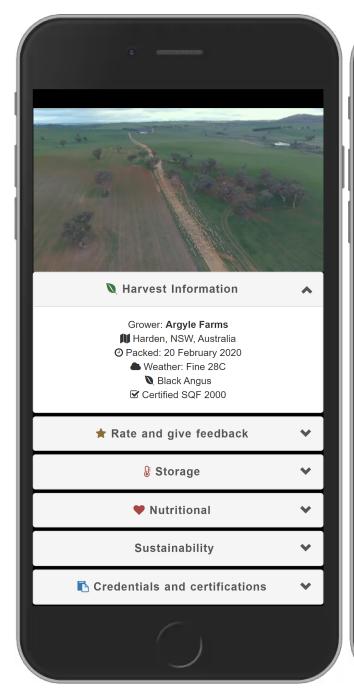
# **Cut Trace Data (authorised supply chain view)**

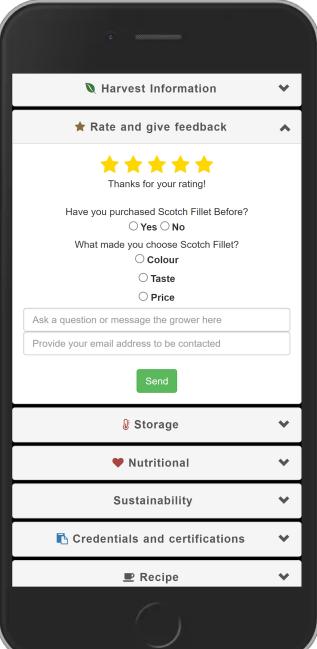


# **Consumer view**









Animal protein is usually of high quality, containing all nine essential amino acids needed for the growth and maintenance of your body.

As the building blocks of proteins, amino acids are very important from a health perspective. Their composition in proteins varies widely, depending on the dietary source.

Meat is one of the most complete dietary sources of protein, its amino acid profile being almost identical to that of your own muscles.

also helps maintain and build muscle mass.

The following vitamins and minerals are abundant in beef:

For this reason, eating meat — or other sources of animal protein — may be of particular benefit after surgery and for

recovering athletes. In combination with strength exercise, it

- Vitamin B12. Animal-derived foods, such as meat, are the only good dietary sources of vitamin B12, an essential nutrient that is important for blood formation and your brain and nervous system.
- Zinc. Beef is very rich in zinc, a mineral that is important for body growth and maintenance.
- Selenium. Meat is generally a rich source of selenium, an essential trace element that serves a variety of functions in your body.
- Iron. Found in high amounts in beef, meat iron is mostly in the heme form, which is absorbed very efficiently.
- Niacin. One of the B vitamins, niacin (vitamin B3) has various important functions in your body. Low niacin intake has been associated with an increased risk of heart disease.
  - Vitamin D6 A family of Divitamina vitamin D6 is

