BLOCKCHAIN IN FISHERIES

KENNETH KATAFONO
Founder & Managing Director
TraSeable Solutions

PACIFIC

EU says it has banned Fiji fish exports because processing is poorly monitored

7:47 pm on 9 June 2008

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The European Union says it has started an assistance programme to help Fiji improve the way it monitors its fish processing.

The EU imposed a ban on Fiji fish after finding that the agency meant to vet the production was incapable of doing this.

2008 - 2010

*"The competent authority at present **is not so competent**, to fulfill with EU standards, which are very high standards compared to other countries, like US or Japan. The main issue is to improve the body that they already have."*

Source: http://www.radionz.co.nz/international/pacific-news/177610/eu-says-it-has-banned-fiji-fish-exports-because-processing-is-poorly-monitored

The EU's move is expected to cause significant job losses in Fiji.

Why the need for blockchain?

- Immutable / Tamper-proof
- Decentralised / Redundant
- Transparent
- Verifiable / Auditable
- Secure
- Disintermediation
- Provenance / Proof of Origin

Traceability and Blockchain

- Facilitates transparency across the entire supply chain across borders
- Trust is inherent within the blockchain
- Cannot tamper with data
- Distributed ledger ideal for mass balance reconciliation
- Provides verifiability of a fish product through the supply chain
- CA’s can easily verify and trust traceability data

Fiji Tuna Traceability Project

WWF

Sea Quest (Fiji) Limited

CONSENSYS

VIANT

TRASEABLE SOLUTIONS

Fiji Tuna Traceability Project

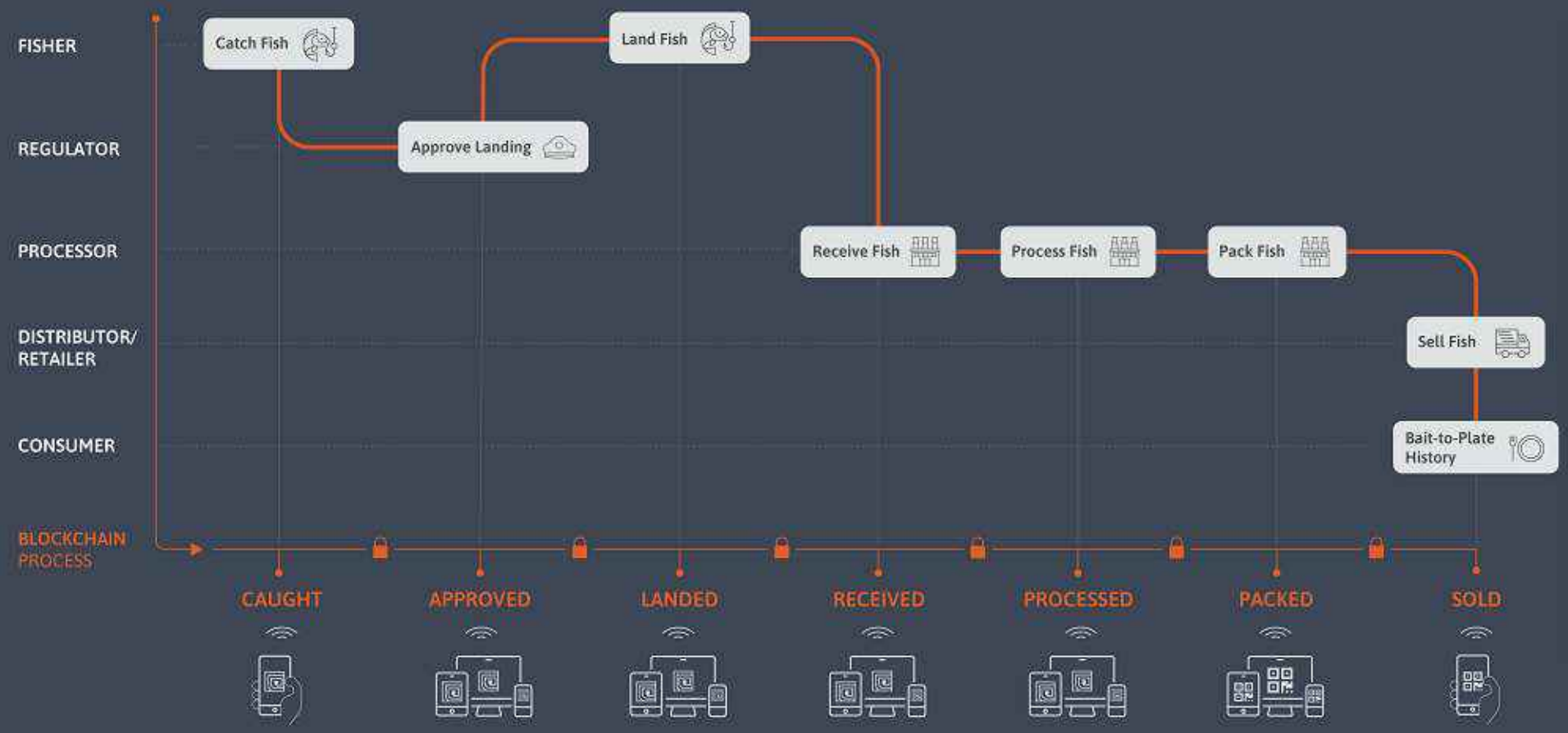
How Blockchain Technology Can End Slavery In the Fishing Industry | WWF-Australia

https://www.youtube.com/watch?v=oOywU_rXgFE

BETA CASE STUDY

Bait to Plate

Tuna traceability with the World Wide Fund for Nature (WWF)



The World Wildlife Fund for Nature participated in the Beta program to translate their Yellowfin tuna idea into a solution on Viant.

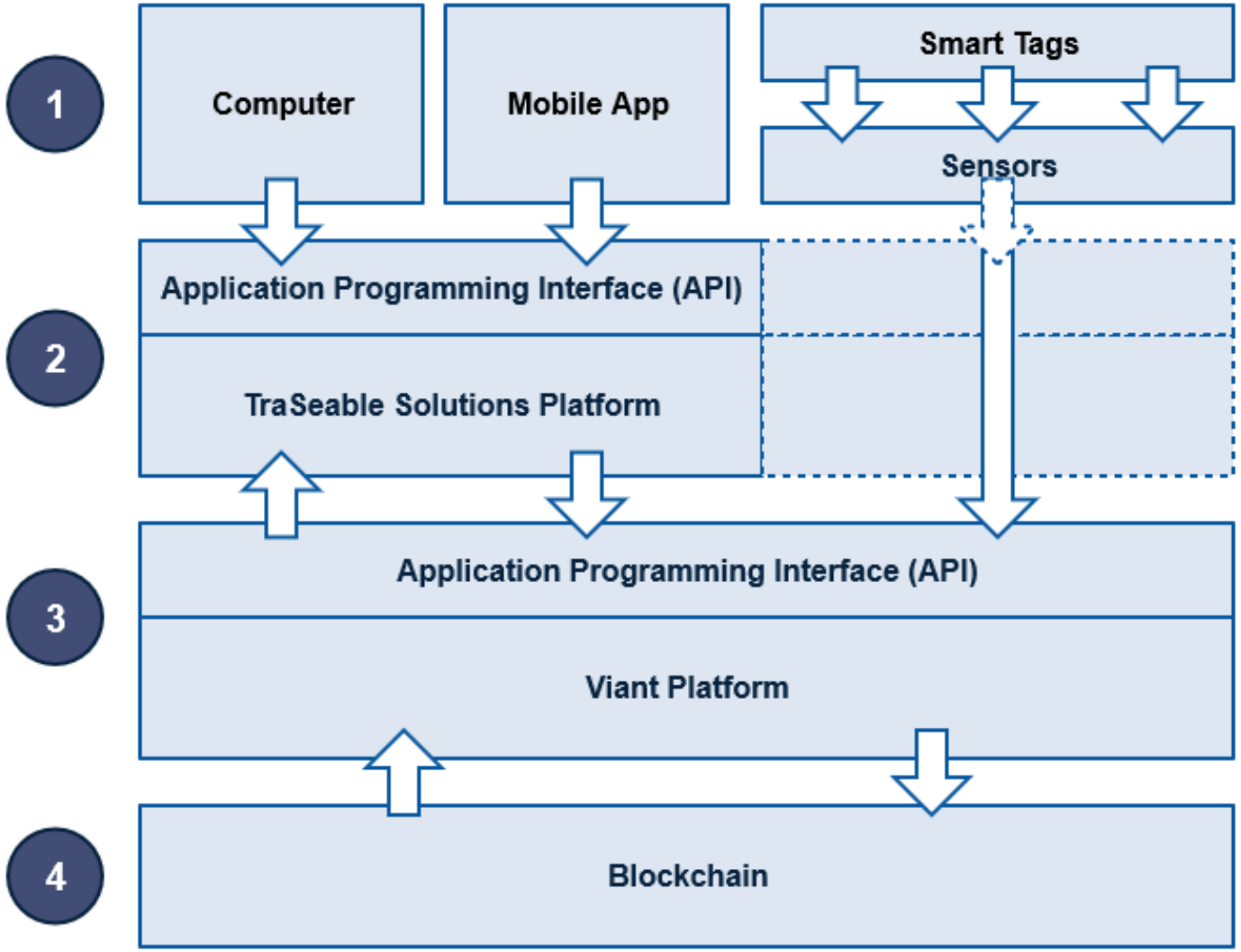
VIANT

WWF

Recipe for Implementation

- Identify resources and infrastructure available to support the technology/implementation
- Map physical processes and associated technologies
- Identify digital efficiencies and streamline processes
- Communicate effectively across stakeholders and people using the technology
- Trial -> Learn -> Improve -> Iterate
- Collaborate widely

Technology Stack



How It Works

Tagging

- Tag individual fish with Radio Frequency Identification (RFID) tags
- Each RFID tag is uniquely identified
- RFID tag IDs are automatically scanned as fish enter the hold
- Vessel tests
  - Trip 1 - 30 tags
  - Trip 2 - 50 tags
  - Trip 3 - 300 tags
  - Next trip – entire catch

Tagging

Processing

- RFID readers positioned at key points in processing factory
- Individual fish RFID tags automatically read at different stages of processing
- RFID tag removed before weighing and swapped with a product label that has a QR code

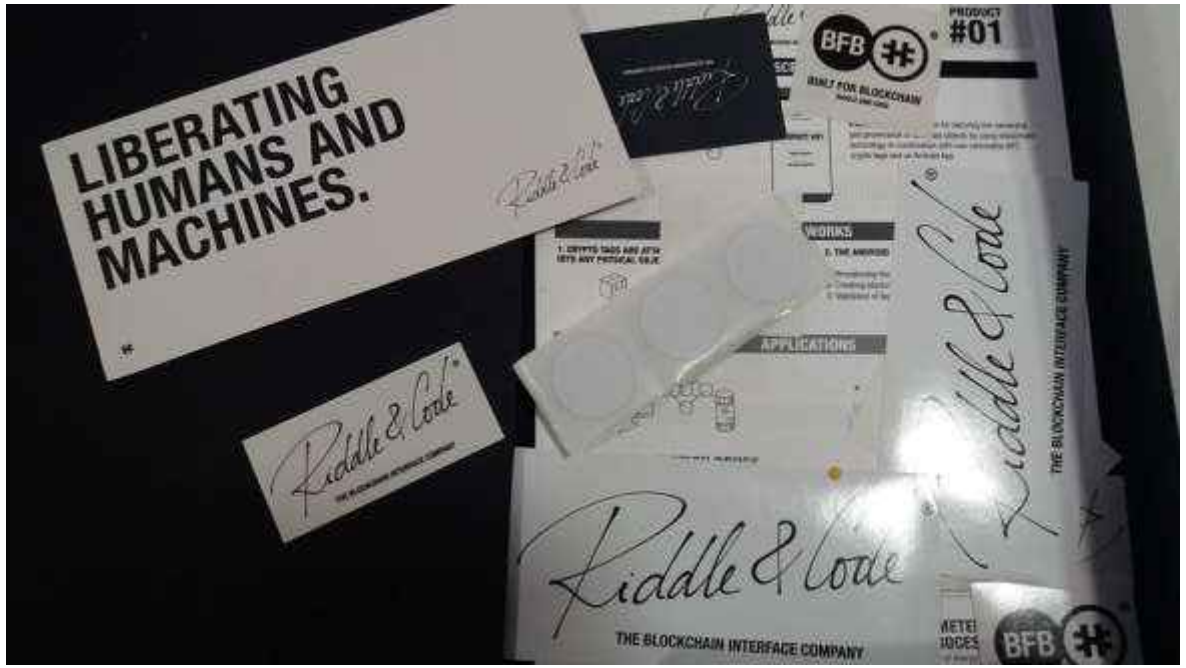
Processing

Labelling – QR Codes

- Individual fish labels with QR codes go to export
- Sourcing FDA-approved labels
- QR codes direct consumer to the story of the fish

Labelling – Next Generation Labels

- Trialling Blockchain tags from Riddle & Code
- Tag is tamper-proof
- Each tag uniquely identified on the blockchain
- Uses Near Field Communication (NFC) technology and an app
- Allows data to be written and read from the tag with a mobile app



Labelling – Next Generation Labels

19 Crimes Wine – Augmented Reality (AR) smart labels

www.19crimes.com

Lessons Learned

- Can be implemented cost-effectively
- Requires trial and error to suit specific requirements
- Not a replacement for a database
- Only put data on the blockchain that you want to track
- Best to work with established blockchain partners

What's Next?

- Addressing "the last mile"
- Scale-up and commercialise
- Partnerships
- Diversify – agriculture, logging, CITES-listed species, etc
- Transactions using smart contracts
- Greater automation through the supply chain

Any Questions?