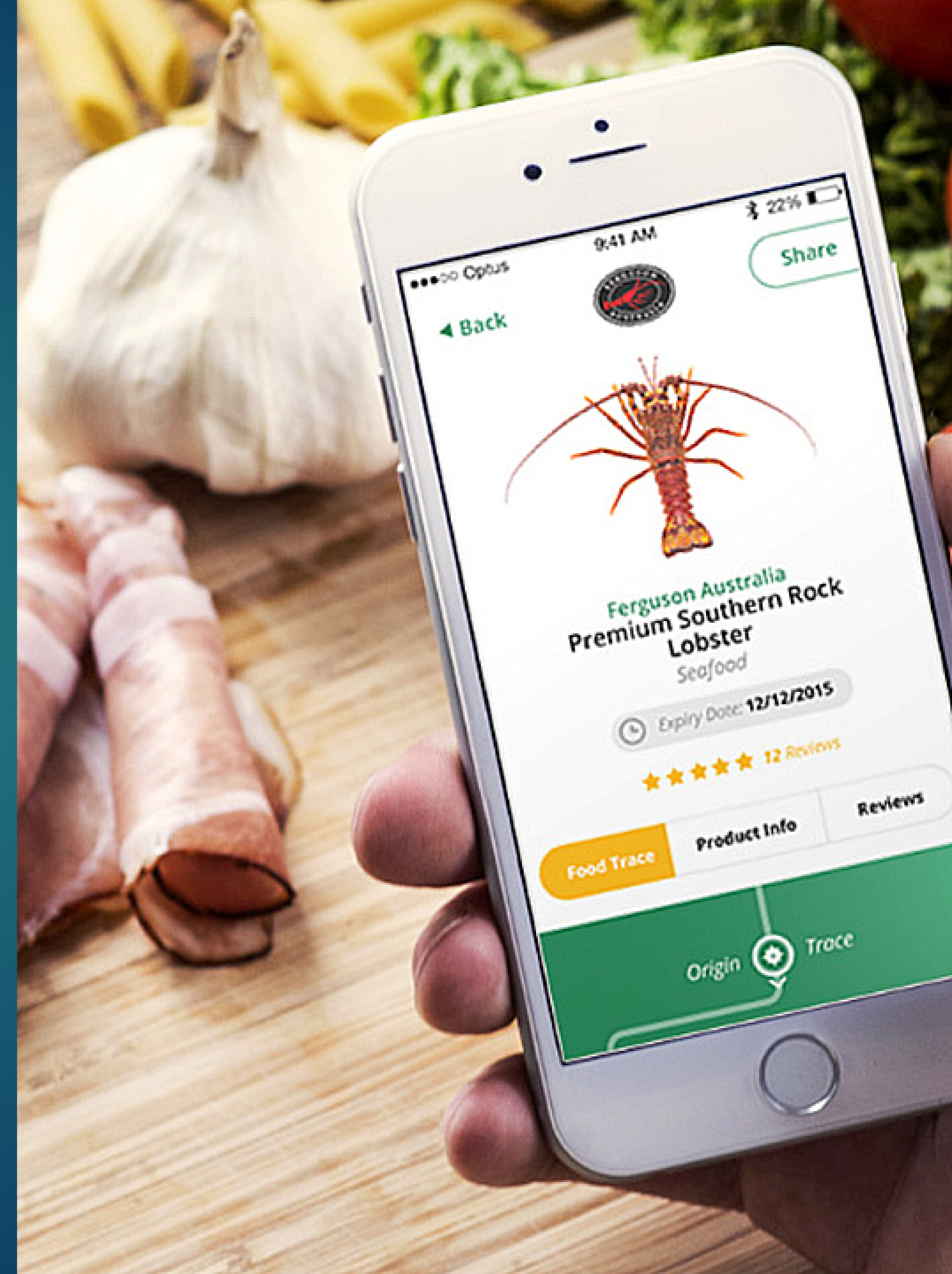


DATADOT TECHNOLOGY LTD

Food Fraud - Reduce Counterfeit Risk and Increase Customer Trust Using Data Aggregation



1

INTRODUCTION



ANDREW WINFIELD

MANAGING DIRECTOR DATADOT UK

Andrew Winfield has a broad background in a range of manufacturing industries with strong sales and marketing experience in all regions of the globe. He utilises his eye for detail and a collaborative approach to partner with customers to develop original and successful business solutions.



TEMOGEN HIELD

CEO DATADOT TECHNOLOGY GROUP

Temogen Hield is an innovative strategic thinker with a natural change and future focus. He is passionate about customer engagement and trust, and building lasting relationships that are mutually beneficial and uses a range of executive capabilities to lead and motivate teams to achieve by taking responsibility for results. He is a strong integrator with excellent stakeholder management skills.

FOOD FRAUD DEFINITION

Food Fraud is:

‘A collective term used to encompass the deliberate and intentional substitution, addition, tampering, or misrepresentation of food, food ingredients, or packaging; or false or misleading statements made about a product for economic gain.’

(Spink and Moyer, 2011)



Food Fraud - Reduce Counterfeit Risk and Increase Customer Trust Using Data Aggregation

> 1. INTRODUCTION

A summary of webinar topic and content

> 2. THE NEW IMPERATIVES

How awareness of provenance and trust are growing with consumers and affecting brand image

> 3. TRENDS TO COMBAT FOOD FRAUD

How these imperatives are being addressed

> 4. CASE STUDY

An example of what can be done to ensure growth in consumer trust with effective data aggregation and product authentication

> 5. Q&A SESSION

Free time to answer questions and provide further information

Food Fraud - Reduce Counterfeit Risk and Increase Customer Trust Using Data Aggregation

- Understand the growing threat of food fraud globally, and the increase in consumer provenance demands
- Review the technology trends for protection against food fraud and counterfeiting
- Learn about how to reduce counterfeit risk and increase customer trust using data aggregation



2

THE NEW IMPERATIVES

How awareness of provenance and trust are growing with consumers and affecting brand image

WHY THE CONSUMER TRUST EQUATION IS BROKEN

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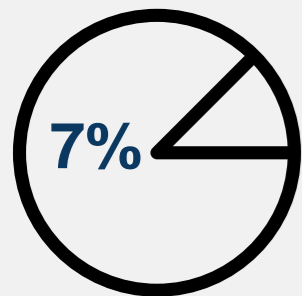
Counterfeiting is a significant global problem that is continually growing...

\$1.77
Trillion

Global impact of counterfeit goods in 2015, up from \$250 billion in 2009 (OECD Report)



The Global Counterfeit market is the size of Italy's GDP, the 9th largest economy (OECD)



Of all global trade is estimated to be in counterfeit goods (World Customs Organization)



5.4
million

Estimated number of legitimate global jobs at risk from counterfeit goods (OECD Report)



...And has permeated all industries, damaging company brands, reputations and profits...



10% of medicines worldwide are fake. 60% contain no active ingredients, 16% incorrect ingredients (World Health Organization WHO)



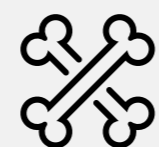
70% of all wine sold in China is estimated to be counterfeit (World Trademark Review)



~80% of all olive oil sold in the U.S. contains lower grade oils and impurities (Forbes)



33% of all fish sold in the U.S. is fraudulently labelled (Oceana)



5,300 product recalls of pet food products in the U.S. due to melamine contamination by Chinese manufacturer. Cost of recall and legal claims ~\$100m (US FDA and Wikipedia)



...Exposing consumers to toxic substances, resulting in dire consequences and mistrust...



650,000 deaths occur each year from counterfeit medicine containing toxic and ineffective substances (WHO)



54,000 babies were hospitalized and 6 died in China from counterfeit baby formula containing melamine (Wikipedia)



149 people died in the U.S. from counterfeit blood thinner Heparin in 2008 (US FDA)



74 people died in Russia from counterfeit vodka in 2016 (Wikipedia)



Consumers now rank product safety, experience and transparency as key drivers in purchase decisions (Deloitte US Consumer Trends 2016)

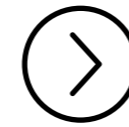


KEY POINT: Authenticity and Trust are the new imperatives for brands and provide a key opportunity for companies to differentiate and build brand value through product authentication and consumer engagement

A LOSS OF TRUST = LOSS IN SALES & PROFIT

9

The threat of counterfeiting is a significant risk for all companies globally and continues to grow in terms of size and probability...



...where the consequences of counterfeiting are often catastrophic and should not be ignored or underestimated

75%

of companies experience at least one major supply chain disruption a year ¹

48%

of companies experienced a loss from conducting business overseas in the past 3 years (2014 Chubb Multinational Risk Survey)

	Loss of sales revenue and profit
	Loss of consumer trust and loyalty
	Brand and reputation damage
	Lost market share and growth
	Overproduction and supply issues
	Product liability claims and legal costs

\$3.2bn

Average estimated loss in market cap of a Fortune 500 company from reported supply chain breach (World Economic Forum)

72%

Of consumers prioritise product purchases from brands they trust (Nielsen Research)

60%

Of companies reported a loss of 3% or higher loss of value from counterfeit breaches ¹

54%

Of companies have sales revenues negatively affected by supply chain breaches ¹

64%

Of companies suffer declines in customer service levels from supply chain disruption ¹

3-5%

Of revenue is estimated to be lost due to product warranty claims due to counterfeit product substitution ¹

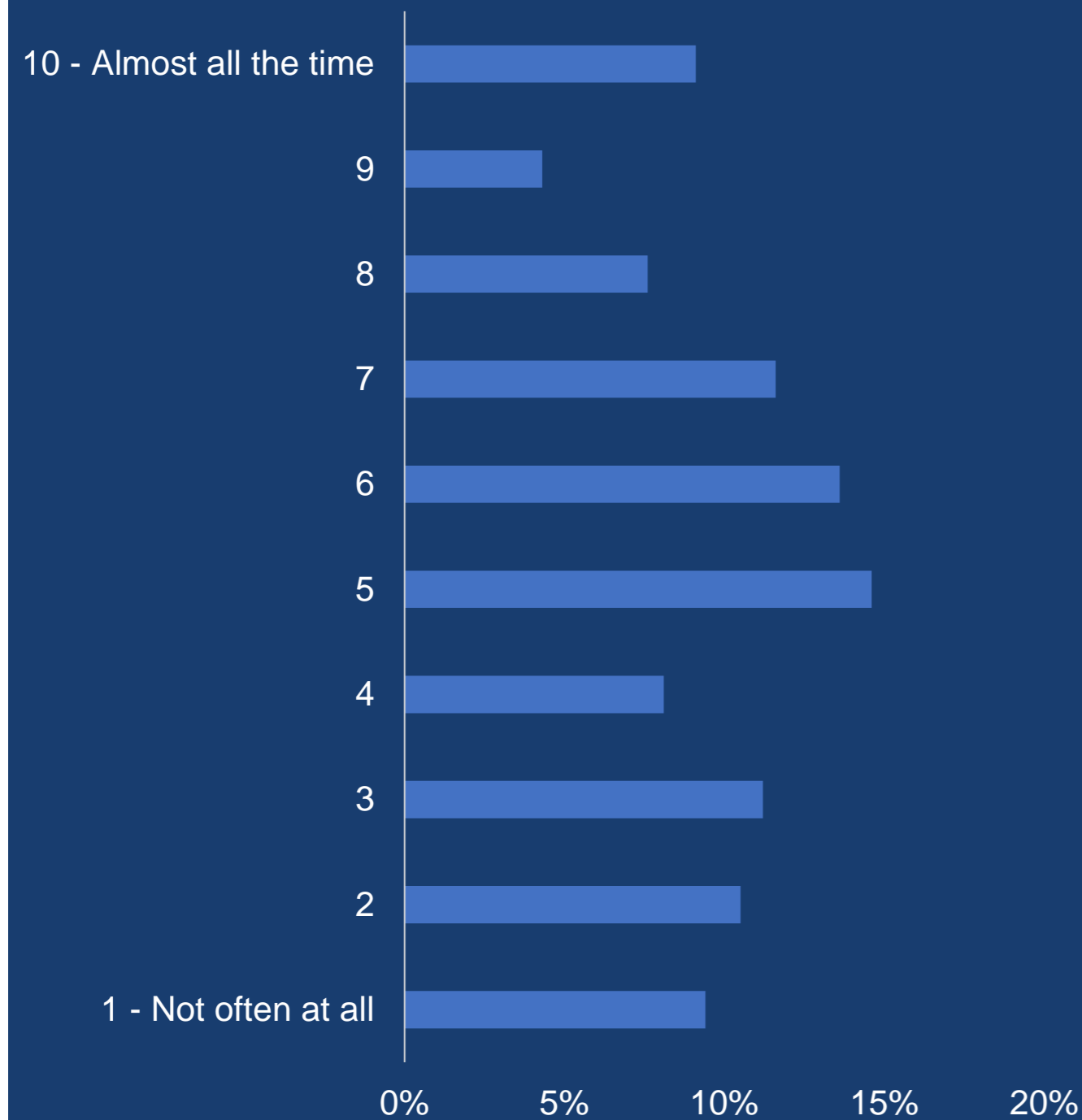


KEY POINT: Counterfeit has the potential to rival or exceed a major data breach in terms of the financial and reputational damage it can do to a brand

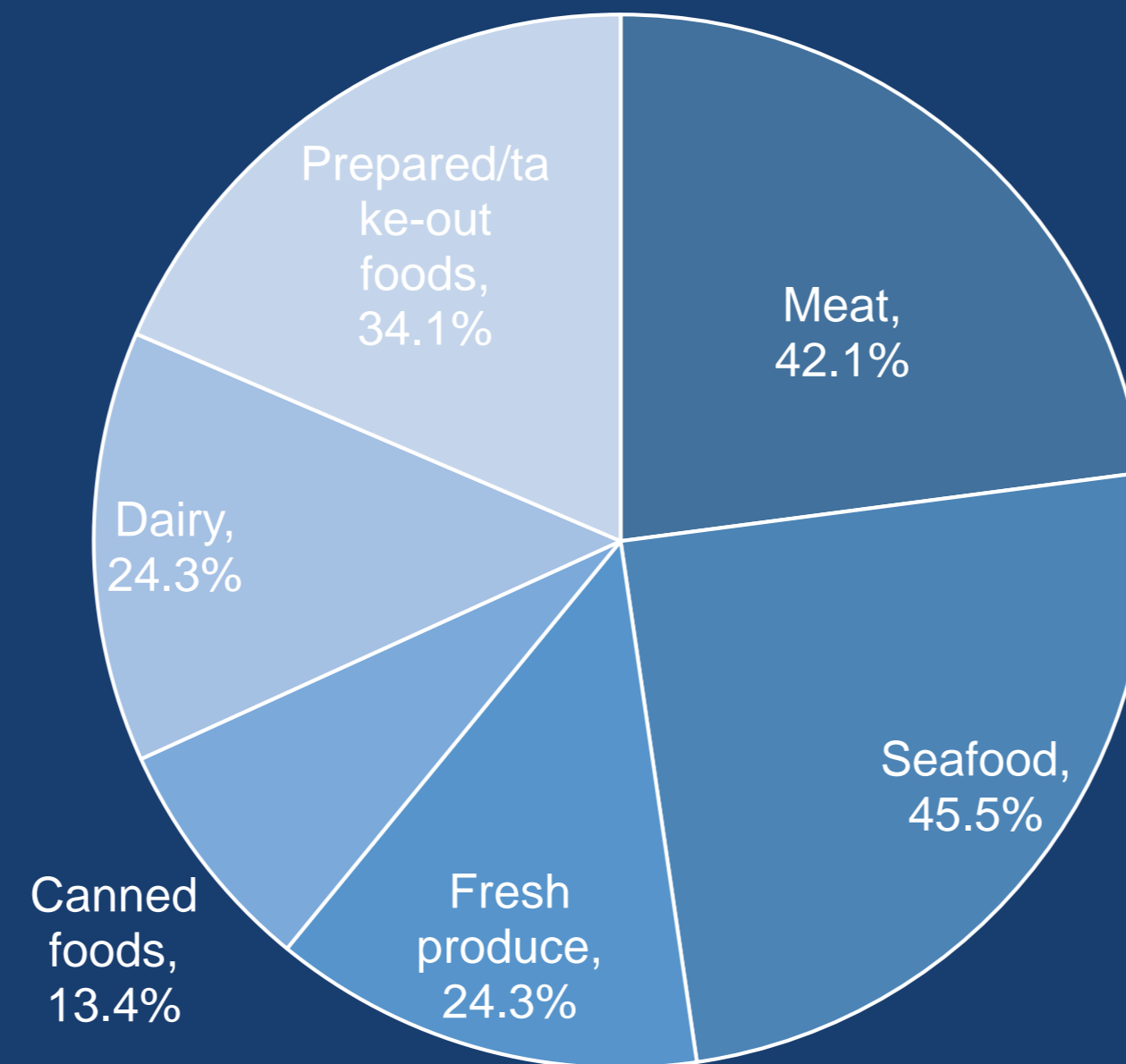
FOOD SUBSTITUTION & FAKE FOODS IN THE WEST

The 'Western' consumer is also concerned about food safety; creating opportunities for premium food with high provenance and food traceability solutions

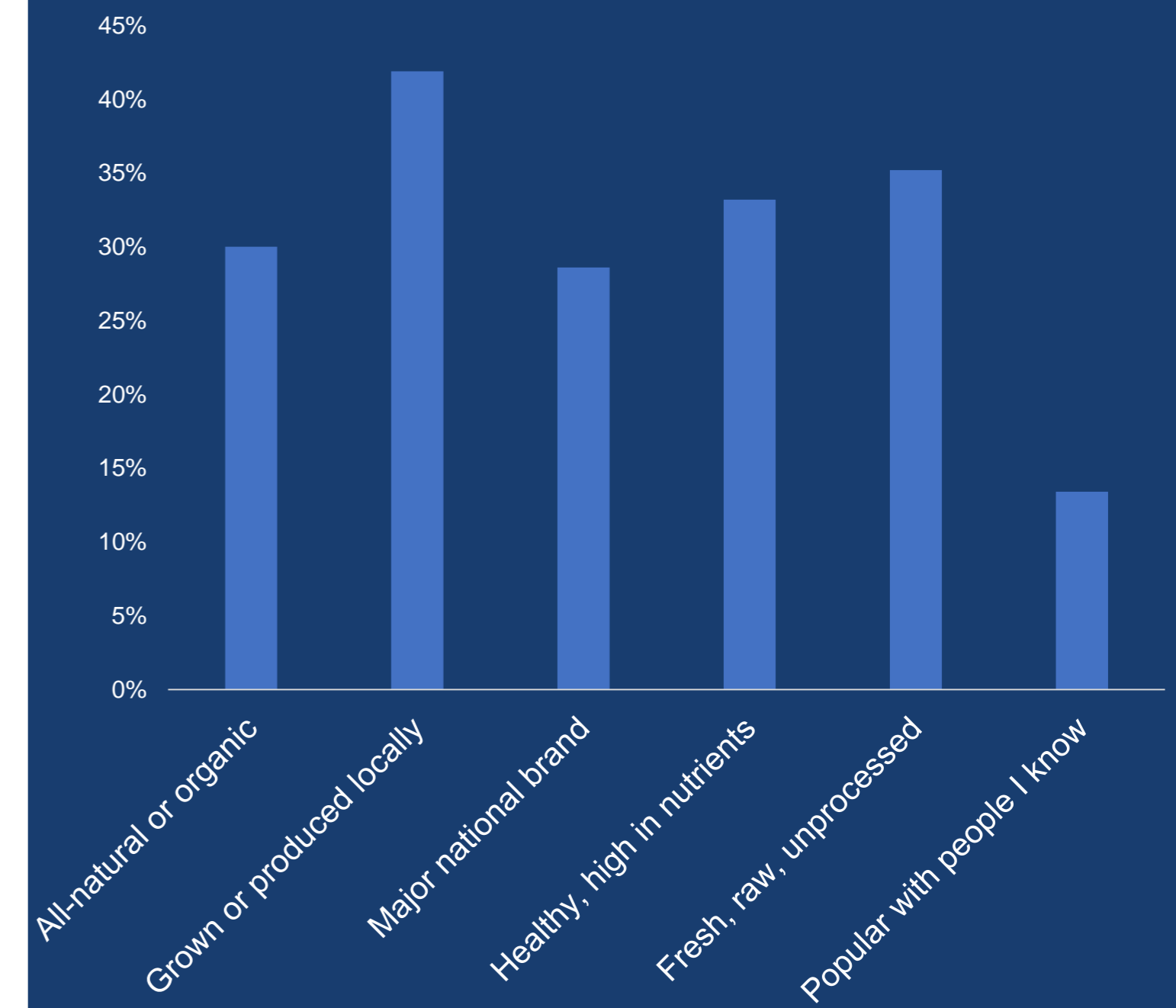
How often are you concerned with the safety of the food you eat?



Which foods are you most likely to be concerned about (3 choices allowed)?



Which of these attributes is more likely to help you feel a food is safe to eat (3 choices allowed)?



! KEY POINT: Is it safe to eat? How US consumers perceive and assess food safety, Hahn Public Research 2015. Click [here](#) for the report

CONSUMER PURCHASE DECISION INFLUENCERS

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Consumer trust in a brand is increasingly playing a bigger influence in the product purchase decision and consumers are placing a higher emphasis on product safety and information to provide consumer assurance

Western consumers concern about food safety continually grows and is playing a major purchase decision role for food products...



72% of consumers **prioritise product purchases from brands they trust** (Nielsen Research)



43% U.S. Millennials agree they **do not trust large food manufacturers** compared to just 18 percent of non-Millennials (Mintel Report)



42% of shoppers said they rely on **retailers to assume a greater role in managing food safety**, up from 25 percent in 2009 (FMI Study)



61% of US Consumers said they **are concerned about food safety** (Hahn Public Research)

...Whilst Chinese consumers have a high level of concern about food safety and a general lack of trust in the food supply chain



Chinese consumers have a high level of concern in relation to adulterated, counterfeit and incorrectly described food, and **therefore a stronger attitude and intention to purchase authentic food**



Chinese consumers have a **general lack of trust in the Chinese food supply chain**, particularly manufacturers and retailers



Demonstrating the authenticity of food has a positive effect on both attitude and intention to purchase

Presentation by Dr Sharron Kuznesof @ 2016 Asia-Pacific International Food Safety Conference



KEY POINT: The increasing incidence of product tampering and counterfeiting has elevated consumer awareness and concern over product safety whereby product security features are now becoming a point of brand quality and differentiation

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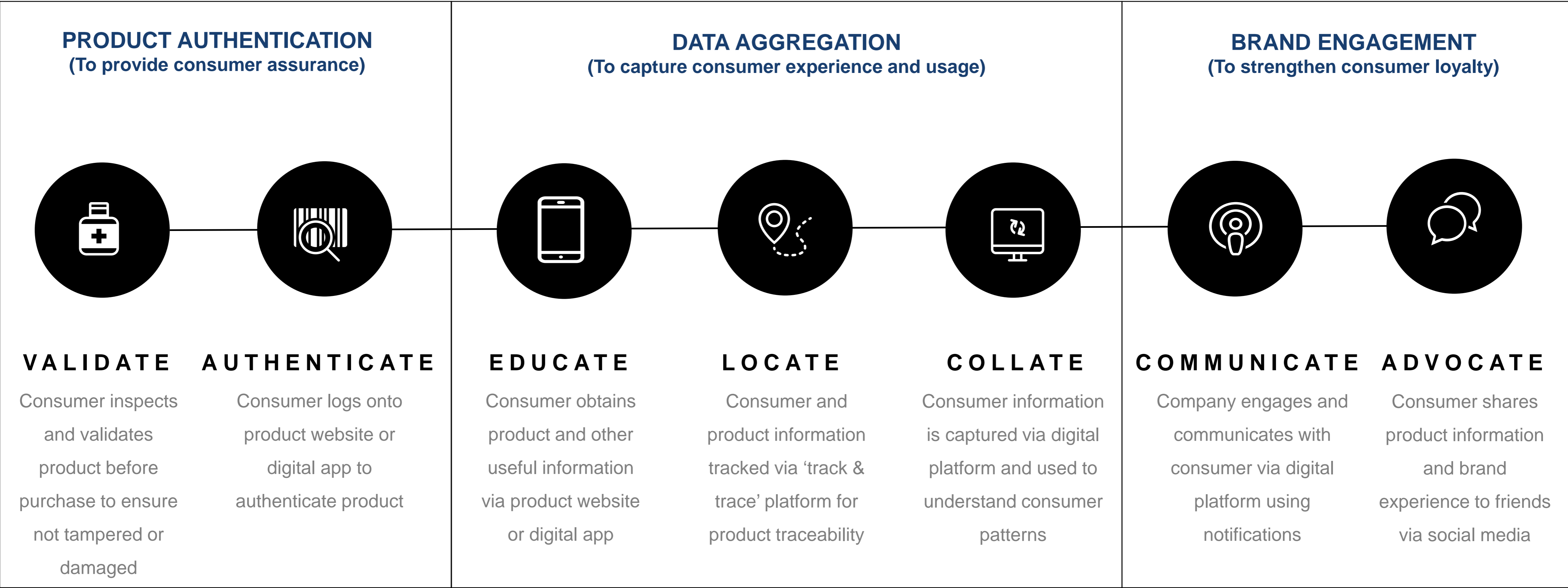
TRENDS TO COMBAT FOOD FRAUD

How these imperatives are being addressed

PRODUCT AUTHENTICATION AS A DIFFERENTIATOR

The challenges of brand protection can be addressed with an integrated authentication solution

“Without differentiation you have no brand” - Bernard Kelvin Clive



KEY POINT: Product authentication can create a powerful competitive differentiator through enhanced consumer assurance, engagement and experience that can lead to increased customer loyalty and sales

TAMPER EVIDENT SEALS (Validate)

Packaging having an indicator or barrier to entry which, if breached or missing, can reasonably be expected to provide visible or audible evidence to consumers that tampering has occurred.

While it may represent an additional cost for manufacturers, ensuring your packaging has a tamper-evident design is a safe move.

Packaging security is critical to food, for keeping food fresh as well as safe to eat.

Packaging security can protect against everything from consumer tampering to bioterrorism to product counterfeiting.



TRACK & TRACE (Authenticate)

Bellucci

Award Winning

Always Fresh
Always Traceable
Always Italian



Belluccipremium.com

GOLD AWARD
"A delicate Blend from Italy"
Best Olive Oils 2015
NYIOOC

SILVER
LOS ANGELES
INTERNATIONAL
EXTRA VIRGIN OLIVE OIL
COMPETITION
2015 & 2016

Bellucci Extra Virgin Italian Olive Oil fights fraud in the industry with innovative trace-to-source technology and a consumer education app.

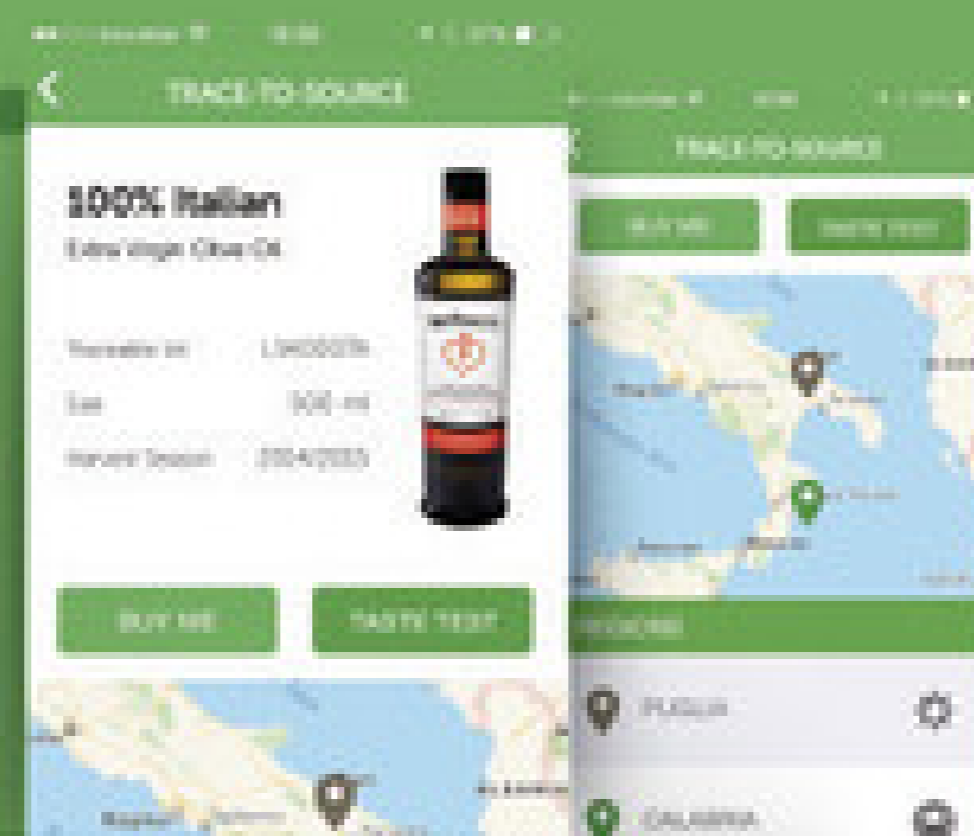
Bellucci keeps digital track of each olive grower's contribution throughout the cooperative milling and bottling process, so any bottle of Bellucci EVOO can be traced to its origin in rural Italy.

Bellucci



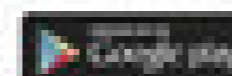
Discover the origin of your EVOO in rural Italy

★★★★★



Belluccipremium.com

Follow us



DATA AGGREGATION (Educate)

In addition to its traceability function, the Bellucci App teaches users how to evaluate for freshness and taste for flavors unique to each of their products.

The consumer is able to obtain product information, via the product website or digital app.

TRANSPARENCY (Blockchain)

Blockchain technology (and other systems) allows all stakeholders to collaborate via a digital ledger. This allows each stakeholder in the supply chain to capture information about the product and what they have done to it along the way, including geographic locations.

Storing and sharing information across a network of users in an open virtual space.

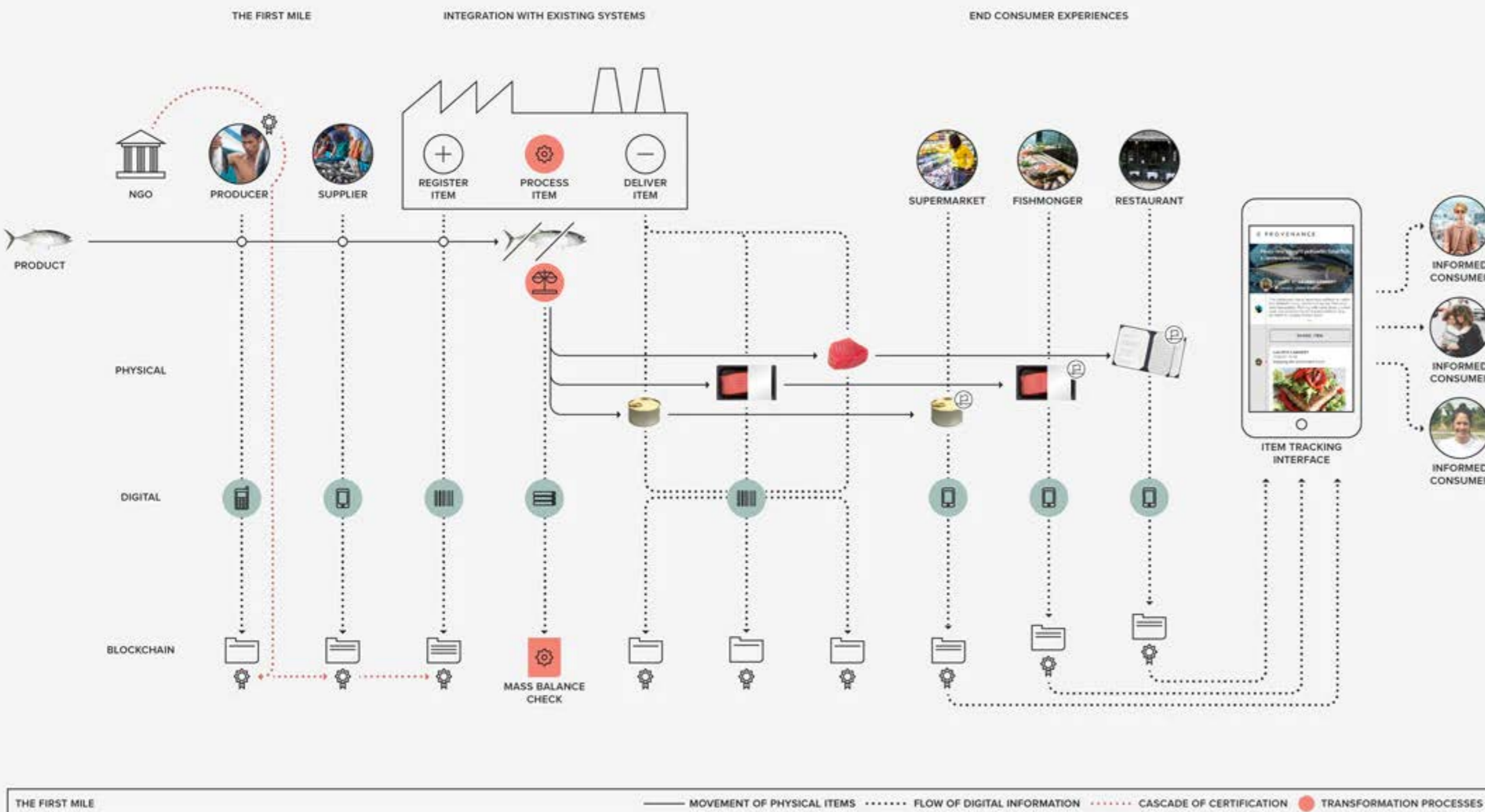


TRANSPARENCY (Blockchain)

Blockchain technology allows for users to look at all transactions simultaneously and in real-time.

In food, for example, a retailer would know with whom his supplier has had dealings.

Additionally, since transactions are not stored in any single location, it is almost impossible to hack the information.



QR CODES

(Communicate & Advocate)

For those in the USA who want to know exactly what's in what they eat, the USA federal labeling standards are set to arrive in July 2018 thanks to the National Bioengineered Food Disclosure Law.

Using QR codes on packaging to disclose GMO and other food information provides benefits to food manufacturers – the small size and customer engagement opportunities.

This digital platform is also ideal for consumers to share information across social media to advocate for their favorite brands. Brands can also leverage loyalty programs and discount offers.





4

CASE STUDY

An example of what can be done to ensure grow
consumer trust with effective data aggregation and
product authentication



AN EXAMPLE OF HOW TO REDUCE COUNTERFEIT RISK AND INCREASE CUSTOMER TRUST USING DATA AGGREGATION

The challenges of brand protection...

Rapid Growth	GBL is an innovative and rapidly growing company in the sector of high quality, healthy food supply, where brand reputation is critical to success
Brand Globalization	Their sales are increasing across the globe, into new areas where the brand must be built promptly and securely
Expanding Customer Base	GBL's growth has created challenges in engaging and servicing their expanding and more diverse customer base
Supply Chain Complexity	GBL has concerns about the security of its increased product supply chain as well as consumer engagement. The management therefore wanted to explore the possible solutions
Budget Consideration	As a young dynamic brand, GBL has to balance costs within its budget to cover for counterfeit protection & marketing development. Practical budget levels are in \$10,000's not \$100,000's for reasonable payback

BUSINESS CHALLENGES/OPPORTUNITIES

Objective

GBL's Challenge/Opportunity

Business Solution Requirements

Product Identification

Develop a system to identify individual product units to allow tracking throughout the process from manufacture to consumer



Allow for simple data collection, whilst providing the consumer with tangible and overt reasons to differentiate GBL products from the competition

Security of Identification

Build in security elements to ensure the identification is robust



Ensure extra layers of security are included as appropriate, giving confidence in the quality of the information

Manageability

Ensure that the system is straight forward, easy to use and secure against accidental or deliberate interference



Avoid over-complication and other pitfalls of new system introduction

BUSINESS CHALLENGES/OPPORTUNITIES

Objective

GBL's Challenge/Opportunity

Business Solution Requirements

Practicality and Clarity

Set up a data processing system with clear, easy-to-use and cost effective attributes as per a basic off-the-shelf solution, but have it customized to tailor it to the specific requirements of the brand



Focus on systems required to fit into the current business. Make it usable and manageable both practically and economically

Data Aggregation

Ensure the system gives traceability to track product through the distribution process, and collates consumer usage information



Collect data on supply-chain and distribution channels as well as vital customer intelligence

Brand Enhancement

Enhance the front part of the system to be customer facing to allow development of their trust in the brand and give new marketing opportunities



Pre-Sale: Provide consumer with provenance information
Post Sale: Create a platform for marketing communication

PRODUCT IDENTIFICATION

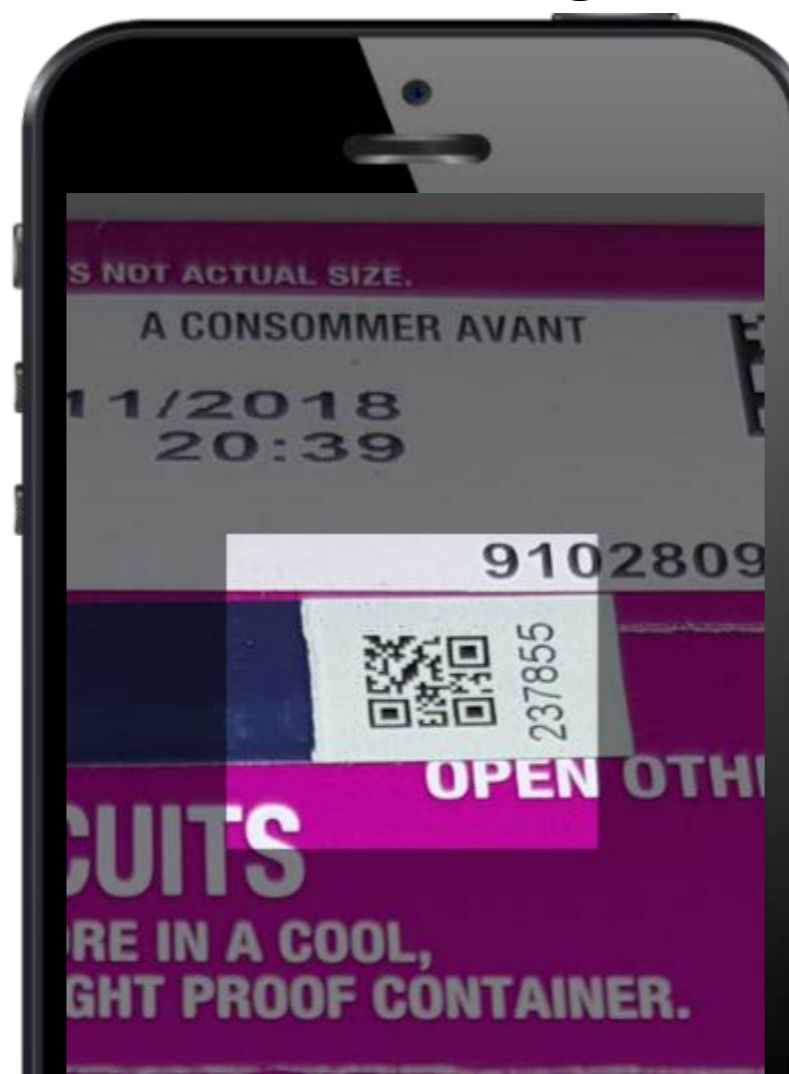
Challenge/Opportunity: Develop a system to identify individual product units to allow tracking throughout the process from manufacture to consumer

**Unique identity number
included in a tamper-
evident label**



Optically Thin Film (OTF)
label allows anti-tampering
features to be added to
packaging, showing void if
removed

**Number also held in 2D
QR code format to trigger
scan reading**



2D QR code triggers
digital identification
depending on who is
scanning

**Item tracked and
consumer assured**



Company or Consumer can
interrogate the product to
confirm provenance, as well as
originality and nutritional
information



KEY POINT: GBL's tamper evident labelling increases Consumer Trust & allows data to be collected

SECURITY OF IDENTIFICATION

Challenge/Opportunity: Build in security elements to ensure the identification is robust

Provenance authentication

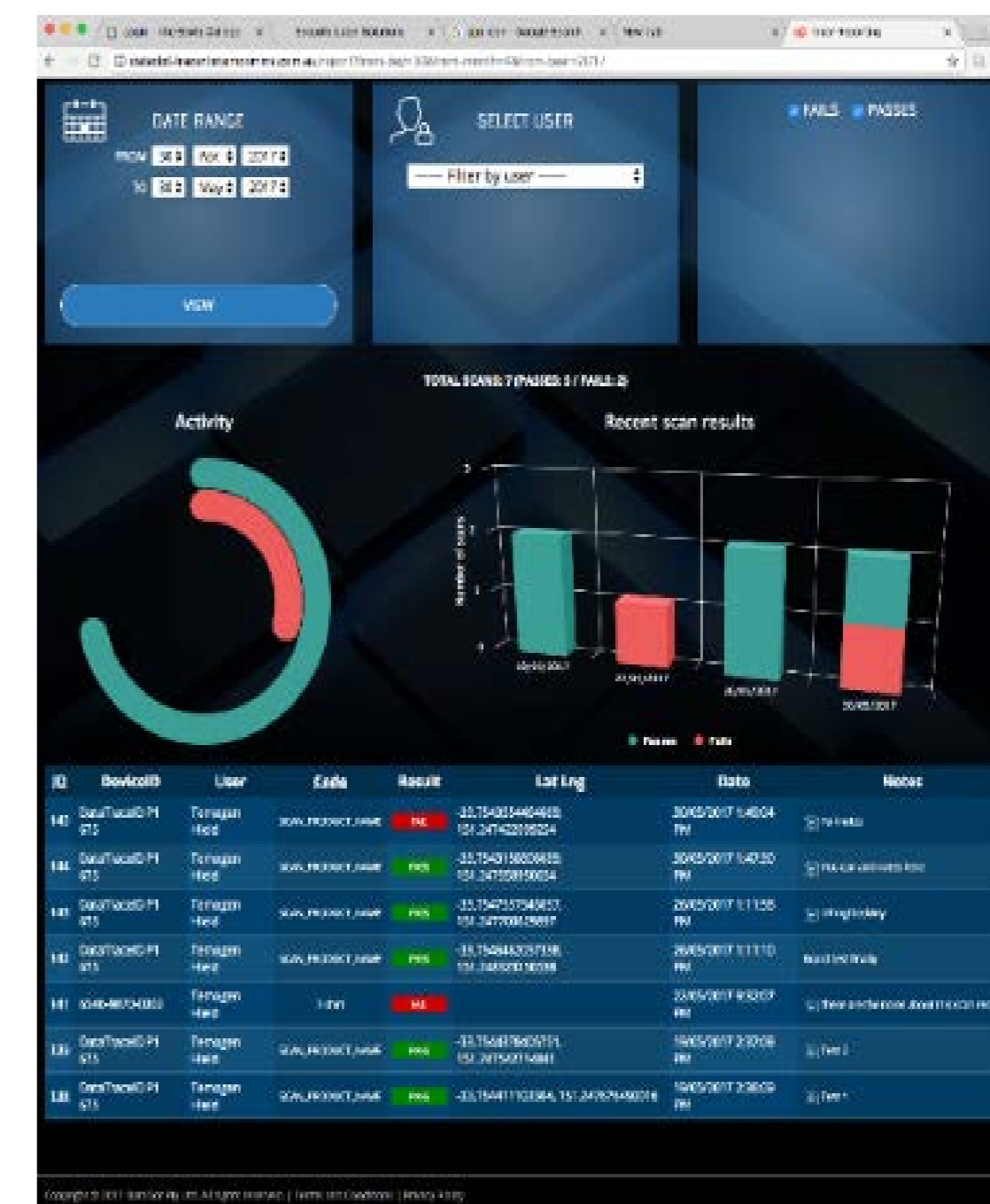
DataTraceDNA code provides a covert layer of forensic product authentication that can be applied in many ways. A company inspector can use the DataTrace app to scan the product to test its authenticity

Relevant Data Collation

The DataTrace app can record other information in addition to the authentication scan result such as photos and notes by the in-field inspector.

Security Data Aggregation

Authentication scan data is aggregated to provide real-time product and geographic data and reporting to monitor and manage counterfeiting. This data to be combined with other data sources.



KEY POINT: Data from all counterfeit authentication testing can be collated and analyzed

MANAGEABILITY AND CLARITY OF DATA AGGREGATION

Challenge/Opportunity: Ensure that the system is straight-forward, easy to use and secure against accidental or deliberate interference; set up a data processing system with clear, easy-to-use and cost effective attributes as per a basic off-the-shelf solution, but have it customized to tailor it to the specific requirements of the brand; ensure the system gives traceability to track product through the distribution process, and collates consumer usage information

Real Time	The Serialization of each item, linked to App detection allows data to be collected in real time
Provenance	Manufacturing process can be monitored to enhance provenience
Supply Chain	Monitoring of distribution chain can enhance management
Tracking	Product can be tracked through any part of the process
Data Aggregation	Consumer data is collected to monitor the market, with data collection of demographics, location, buying patterns, and customer feedback – All in real time



Product, consumer and geographic data is captured in Track & Trace serialization database to provide real-time product and consumer data

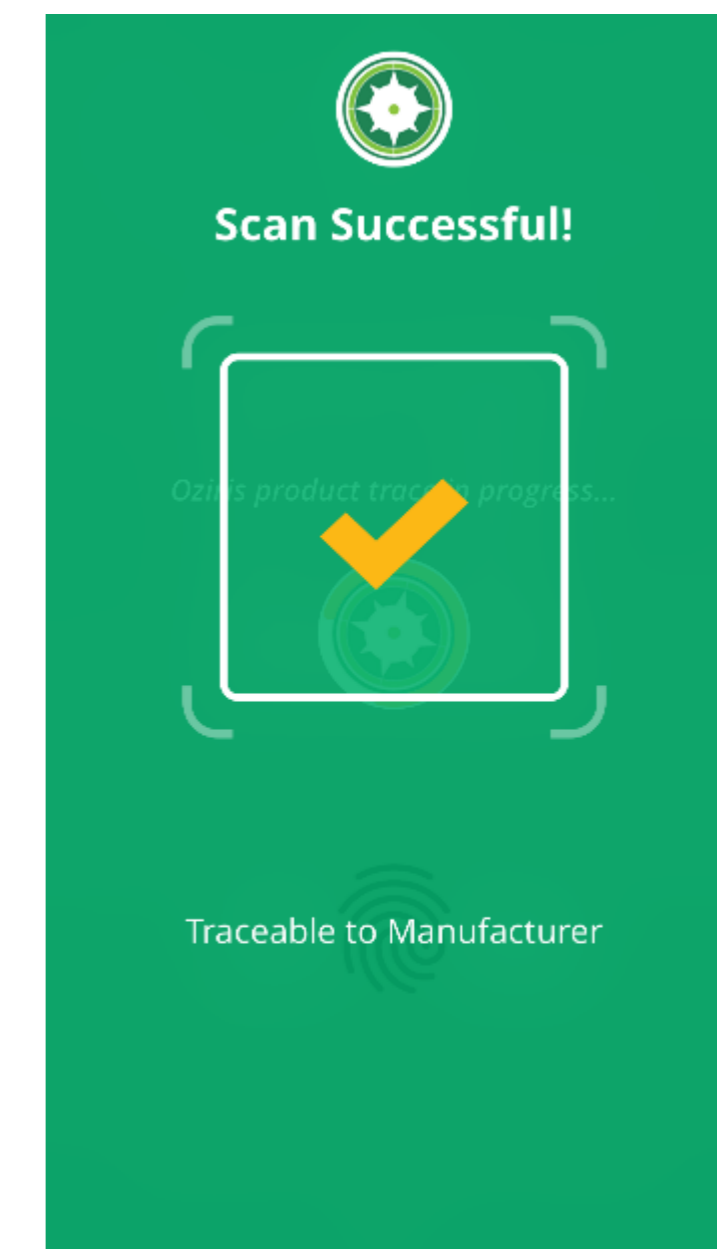
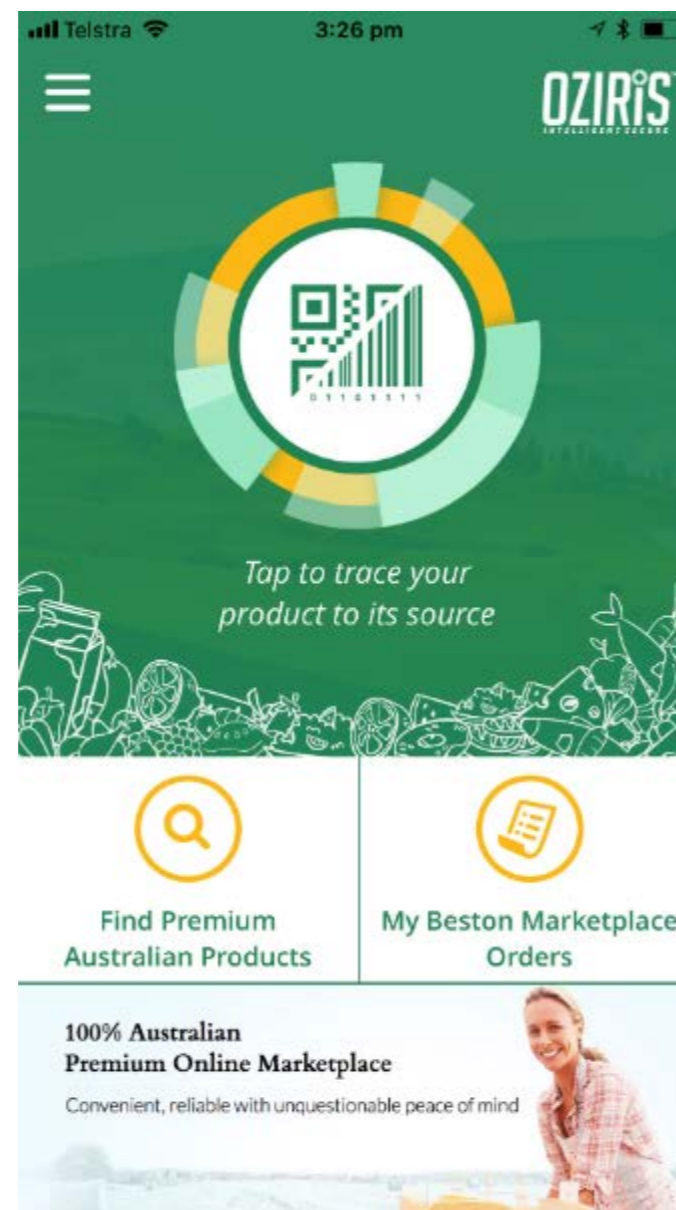


KEY POINT: GBL's system has the flexibility to report and drill down on product movements/usage

BRAND ENHANCEMENT

Challenge/Opportunity: Enhance the last part of the system to be customer facing to allow development of their trust in the brand and give new marketing opportunities

Smartphone App → **Smart Label** → **Product Authentication**



- Customer login to App registers consumer details, creating a customer contact and communication link with GBL Company
- Product, Brand and nutritional collateral encourages App download
- Customer uses consumer App to scan QR code – The App confirms authenticity and information on the product

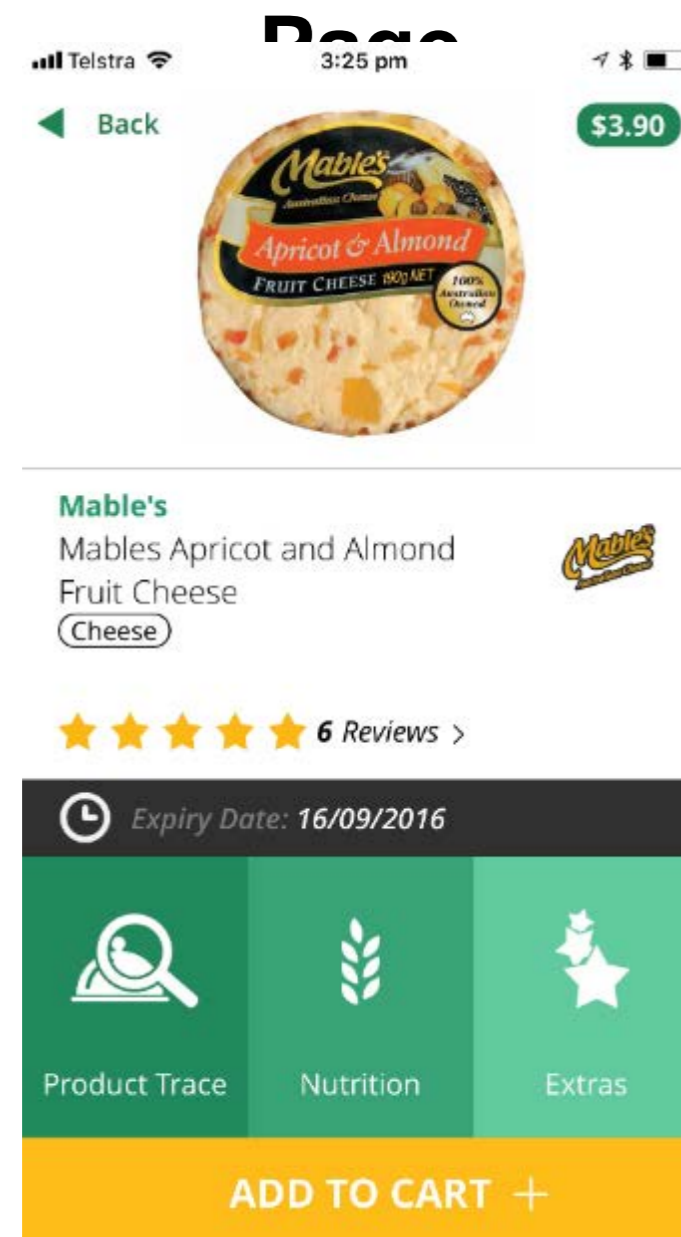


KEY POINT: GBL's brand and trustworthiness is brought closer to each consumer

BRAND ENHANCEMENT

Challenge/Opportunity: Enhance the last part of the system to be customer facing to allow development of their trust in the brand and give new marketing opportunities

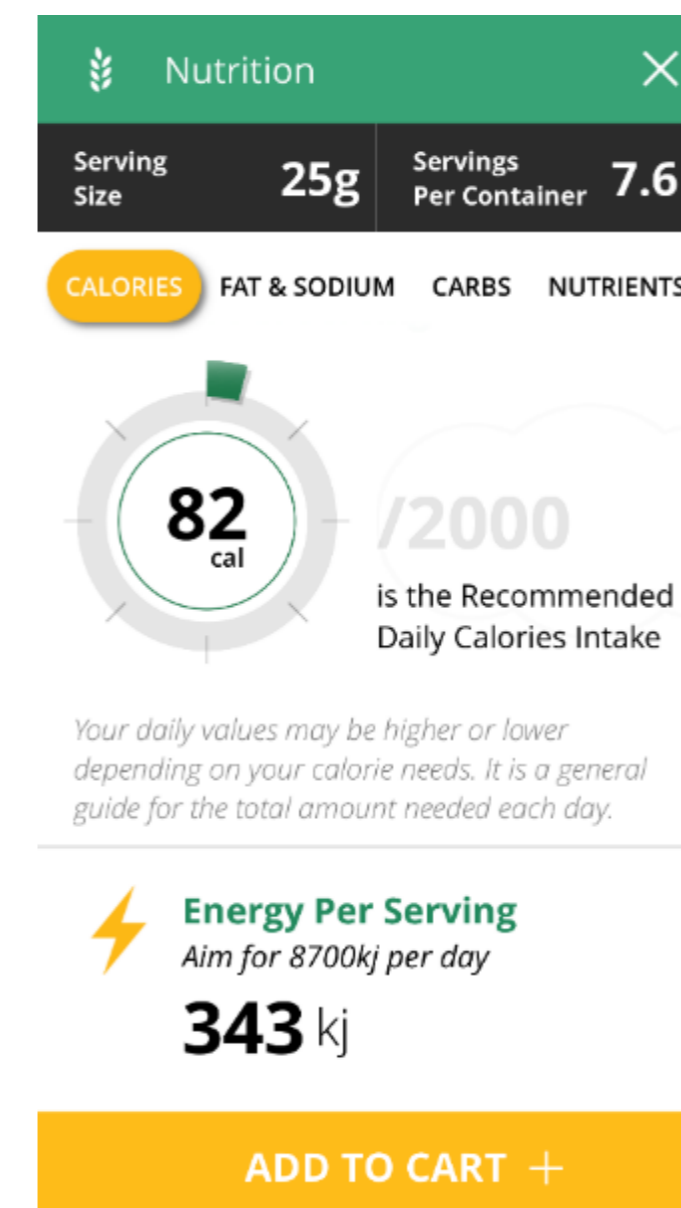
Product Home



Provenance



Nutrition



Promotion
GBL Company can communicate with customer via consumer app

- The provenance and nutritional information provided by the App enhances transparency and trust
- GBL can communicate with customer via consumer App to provide: Promotional offers, Loyalty rewards, Product recipe/usage tips
- Take up of the offers is also aggregated into marketing information feedback



KEY POINT: GBL's brand and trustworthiness is brought closer to each consumer

AN EXAMPLE OF HOW TO REDUCE COUNTERFEIT RISK AND INCREASE CUSTOMER TRUST USING DATA AGGREGATION

CUSTOMER

Consumer Trust

In-App authentication gives consumers confidence in the product that they are purchasing



COMPANY

The identity label can be applied directly to their existing packaging, without having to change the packaging design. Its anti-tamper features enhance confidence in its use and data obtained.

Cost Effective Data Collection

The information obtained by the company reduces customers risk of counterfeit supply and ensures adequate supply levels



The unique identification code on the authentication label can be uploaded to a SaaS database, capturing important customer, product supply-chain and geographical data. The information gained allows monitoring and associated forecasting of product demand.

Enhanced Marketing Potential

Customers benefit from receiving product information, loyalty and marketing offers in their native language via the smartphone App



The interactive nature of the App gives new targeted engagement opportunity to grow brand loyalty. Information feedback is real-time, geographic and demographically specific.

Counterfeit Deterrence

A sure way to help the customer know that they will get the value that they pay for



With a real-time, cloud based database capturing product authentication information, actual counterfeit detection and trends are picked up and pinpointed early, to allow swift reaction and resolution.

CUSTOMER

COMPANY



5

Q&A SESSION

Question time to answer your important
questions and provide further information

DIAGNOSTIC SOLUTION PROCESS

Integrated Authentication Solution

Discover



Building an understanding of the customer and their business to create a value hypothesis for change

Key Activities:

- Conduct initial meetings to build understanding of customer's business and stakeholders
- Develop Problem Definition Statement with stakeholders
- Create a value hypothesis for change

Diagnose



Exploring the elements of the customer's problem to identify and prioritise the key issues to resolve

Key Activities:

- Construct an Issue Summary identifying the key issues to solve
- Create an Issue Risk Assessment
- Quantify and validate business impact of issues and assign priority to resolve

Design



Develop a tailored solution to address the customer's needs

Key Activities:

- Assess possible solution options against customer criteria
- Develop Solution Design Statement with stakeholders
- Create Test Plan for solution
- Create Business Case and Pricing Model for solution

Deliver



Create and implement the tailored solution to realise the benefits

Key Activities:

- Finalise and sign Solution Proposal
- Execute Solution Implementation Plan and manage deliverables
- Provide benefit realisation reports to validate solution success

DataTraceID solutions ensure authenticity in supply chains and consumer products. We build trust into brands through leading edge marking and identification technologies.



DataTrace

Using trace elements we embed a unique authentication foot print into a wide range of products and raw materials.



Digital Assurance

Consumers can immediately verify the authenticity of your product by scanning a QR code generated by our authentication software.



Smart Labels

A SecureID label provides consumers with a physical symbol of assurance.



**Asset marking and theft deterrent
solution for automobiles and other
assets**

**Operating across the globe
(directly or through distributors)**

**B2B business targeting major asset
manufacturers, owners and insurers**



**Authentication solution for brands
seeking to protect supply chain and
consumer trust**

**Operating across the globe
(directly or thru distributors)**

**B2B business targeting major
brands; especially those at high risk
of counterfeit
(e.g. Food, Nutraceutical, Auto parts)**



Stable & Secure

Listed on the Australian Stock Exchange.
Headquarters in Sydney, Australia

Agile

An agile team from CEO down; With focus on delivering customer benefit efficiently

Industry Applications

Pharmaceuticals, Food and Beverage, Automotive, FMCG, Government, Textiles, National Security & Defence, Gaming, Industrial Assets, Bulk Materials

Global Reach

Offices in Australia, USA and UK. With distribution network across Europe, Africa, The Americas and Asia



Experienced

Over 10 years of experience in providing customised authentication solutions

Leading IP

The patented DATATRACE Forensic marking system is "Best-in-Class" and deployed in conjunction with a range of partner technologies

Major Brands

The brands worked with include:



Associations

ISO Certified, Crime Stoppers, Institute of Packaging Professionals, Interpol, National Insurance Crime Bureau, International Association of Auto Theft Investigators

GET IN TOUCH

For more information on how we can help enhance
your supply chain brand protection please contact us.



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