



Consumer trends and storytelling technologies report

Provenance storytelling for success
February 2020



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'Stories for success guide'

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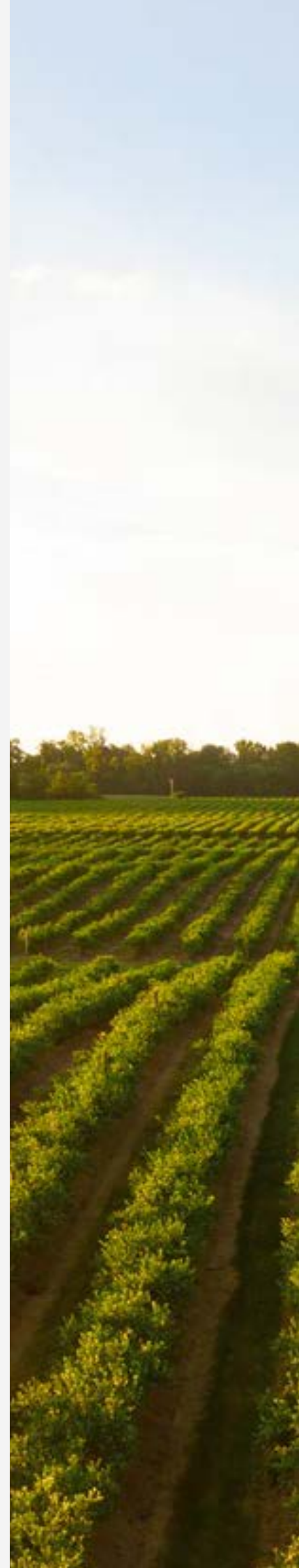
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Contents

Table of Contents

1	Introduction		07
		Provenance	08
		Authenticity	09
		Storytelling	11
2	Consumer trends		15
		Understanding consumers	16
		Culture & ethnicity	17
		Generational differences	18
		Information transparency	19
		Food safety & health concerns	21
		Ethical consumer	23
3	Technologies and platforms		25
		Blogs	28
		Case study: Blogging on Central Station	29
		Websites	30
		Case study: Shorthand- Fairfax Media	31
		Apps	32
		Case study: POI Palm Oil Investigation	33
		Social Media	34
		Case study: #goodmeat	35
		Instagram Stories	36
		Case study: Life on a Station	37
		Augmented Reality	38
		Case study: 19 Crimes	39
		Virtual Reality	40
		Case study: Farm VR Virtual Reality Farming Experiences	41
		Authenticity & Traceability Technology	43
		Blockchain	44
		Authenticity Platforms	47
		Case study: Manbullo Mangoes	49
		Case study: MOWI Salmon	51
		QR Codes	53
		Case study: Oceanwater Masterfishers	54
		Case study: McDonalds Track my Maccas	55
		New Retail	57
		New and emerging technologies	58
4	References		61

Storytelling for success

This document is part of a suite of information and resources that aim to assist agricultural and food producers develop and tell impactful provenance stories.

The 'Provenance Storytelling for Success' package comprises a number of resources. These are all available on the AgriFutures Australia website at:

www.agrifutures.com.au/provenance-storytelling

Consumer trends, technologies & platforms

Consumer trends and storytelling technologies report (this report)

This report details recent research about why consumers are interested in provenance stories and the technologies and platforms that are available to help communicate them.

This document includes short case studies illustrating how the technologies have been used by food and agriculture producers to support their provenance stories.



Case Studies

Provenance Storytelling Case Studies

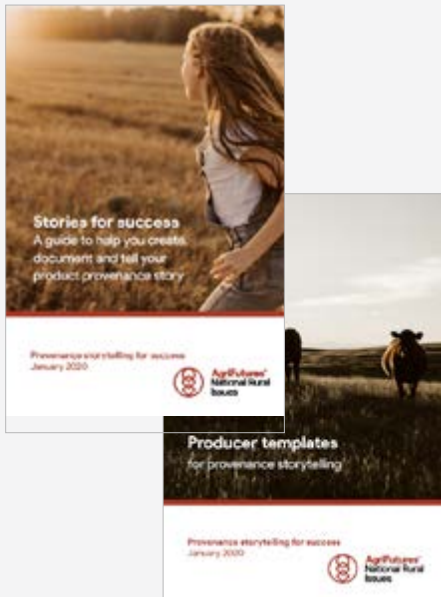
These case studies demonstrate how six Australian food and agriculture producers have created impact in their businesses using provenance storytelling and technologies. Each case study details why the business created their provenance stories (business goals) and an assessment of the impact that storytelling has had on their business.

Provenance Technologies Videos

These detail why four food and agriculture businesses chose the technologies they used for their provenance stories and how they did it.



Provenance Storytelling Guide



Stories for success

This handbook provides a decision-making framework to assist businesses to determine how and where to tell their provenance stories, taking into account their target market and audiences as well as their level of expertise and available resources.

Producer templates

These templates provide guidance to individual businesses on how to construct their stories and use them with impact. The templates relate to the decision-making framework in the handbook.

A guide to the ‘Storytelling for success’ resources

To navigate around the various resources, please look out for these symbols.

Each symbol will appear throughout the resources and provide a link through to other relevant or interesting information.



More information that explains this trend
agrifutures.com.au/consumer-trends



More information about this technology
agrifutures.com.au/consumer-trends



There is a case study explaining this
agrifutures.com.au/provenance-storytelling



There is a video to show how this technology has been used agrifutures.com.au/provenance-storytelling



An easy to use template to help do this here:
agrifutures.com.au/producer-templates



Storytelling guide for producers to tell their story
agrifutures.com.au/provenance-guidebook

Consumer trends, technologies and platforms:
for product provenance storytelling

Part

1



Introduction

Introduction

Increasing physical and psychological distance of consumers from the source of food and agricultural products is driving the growth in demand for provenance information and assurance. Consumers want to know where the products they purchase and consume come from, who is producing them and how they are produced.

Fortunately, Australia has arguably the strictest food and farming regulations in the world, all with the aim of making food, drink and agricultural products the cleanest and safest available. Even so, there is an increasing interest in food provenance and provenance assurance from both consumers and government regulators. Both are seeking assurances that food is safe and in the case of premium products, that it is authentic - "it is what it says it is".

Using storytelling to wrap information into a provenance story that transports people and provokes an emotional response is a powerful way to communicate with consumers.

The impact of provenance stories can be amplified and multiplied by using technologies and platforms that not only prove authenticity, but also invite the audience to engage with and become a part of the story themselves.

The following pages introduce the concepts of provenance and authenticity, explain the science behind storytelling and detail some of the major consumer trends that are driving the growth in provenance storytelling. It then goes on to explore some of the many channels and technology platforms available to communicate provenance stories to consumers, with case studies to show how these technologies have been applied to agri-businesses, as well as the challenges and impacts of the platform.

Provenance



The place of origin of something:

(Source: Cambridge Dictionary)

Key elements of provenance



Origins and History

Of the product and producers



Where and how

It came to be and is produced



Journey

It takes to reach the consumer

Provenance relates to the origin of a product. It is about understanding its history, the story of where and how it came to be, and the journey it has taken to reach the consumer.

By communicating the provenance of produce and value-added product, including how it was produced and transported, farmers and producers may obtain a competitive edge over their rivals and potentially, the ability to access niche markets and higher profits that might normally be unattainable [1].

The regional origin or 'provenance' values of products are generally communicated to consumers by way of branding and signs, these include geographical identifiers (place names), registered trade marks and registered geographical indications of origin [32].

Various technologies are available to help communicate throughout the supply chain, increasing consumer knowledge of a product's provenance and enabling producers to effectively differentiate themselves in competitive markets.

Authenticity



The quality of being real or true:

(Source: Cambridge Dictionary)

Authenticity has overtaken quality as the main purchasing criterion, just as quality overtook cost, and cost overtook availability before that. Put simply, authenticity creates value and benefits to customers [3 p. 200].

Traceability and authenticity are often used interchangeably, but the two terms are distinctly different:

- Traceability involves recordkeeping that enables tracking an item (i.e. food) through all stages of production, harvest, processing and distribution.
- Authenticity (or genuineness) is more of a subjective evaluation of a product or brand by consumers [2].

Academics and practitioners agree that it is imperative for businesses to understand the powerful role of authenticity in developing a meaningful brand – one that resonates with customers [3].

Consumers expect the provenance story to be backed up with authenticity, which simply means the product is genuine – it is “as described”. It appears that the more virtual that consumers’ lives get, the more something genuine is desired. Modern consumers are demanding products that reflect this renewed desire for what is authentic.

Communicating authenticity

Creating and implementing authentic communication strategies work because they can [4]:

- Elevate a business above the competition
- Build a business identity and image into something influential
- Give substance to a business, its services and products
- Enable people to relate to a business
- Help people understand how and what offer is of benefit to them
- Tell people that what a business offers is of high quality
- Demonstrate that a business is a reliable, trustworthy company
- Encourage engagement and can turn audiences into advocates

A photograph of two young girls standing in a grassy field at sunset. The girl on the left, with light brown hair in a bun, wears a dark blue dress with a sequined butterfly and black boots. She has her arm around the girl on the right. The girl on the right, with dark curly hair, wears a maroon dress with a white unicorn and pink boots. They are both looking down at an open book held by the girl on the right. The background is a bright, hazy sunset with trees and a field.

**“What we learn with
pleasure we never forget”**

- Alfred Mercier

Storytelling



The activity of writing, telling, or reading stories:

(Source: Cambridge Dictionary)

Practitioners and academics agree that only by telling stories that highlight provenance and brand authenticity can businesses build strong and meaningful trust with their customers [5, 6].

In terms of agribusiness product provenance, customers are interested in both where food comes from (provenance) and that a genuine article has been purchased (authenticity).

Storytelling, done well, is a powerful way of communicating these product attributes to customers and driving business growth. Research has confirmed that when consumers lose themselves in a story, attitudes and intentions change to reflect that story. This is known as narrative transportation theory [7].

Consequently, storytelling is now achieving significant acknowledgment in terms of persuading customers.

Experts agree that telling stories is a valuable and necessary strategy for businesses because storytelling brings brands and products to life.

Importantly for food and agriculture businesses, research has demonstrated that stories regarding provenance and authenticity of a product significantly influences how consumers think and feel about a brand and will impact on their intention to purchase.

Key elements of a story



Characters

The people involved



Setting

Where and when the story takes place



Focus

A beginning, middle and end



Adversity

The challenge

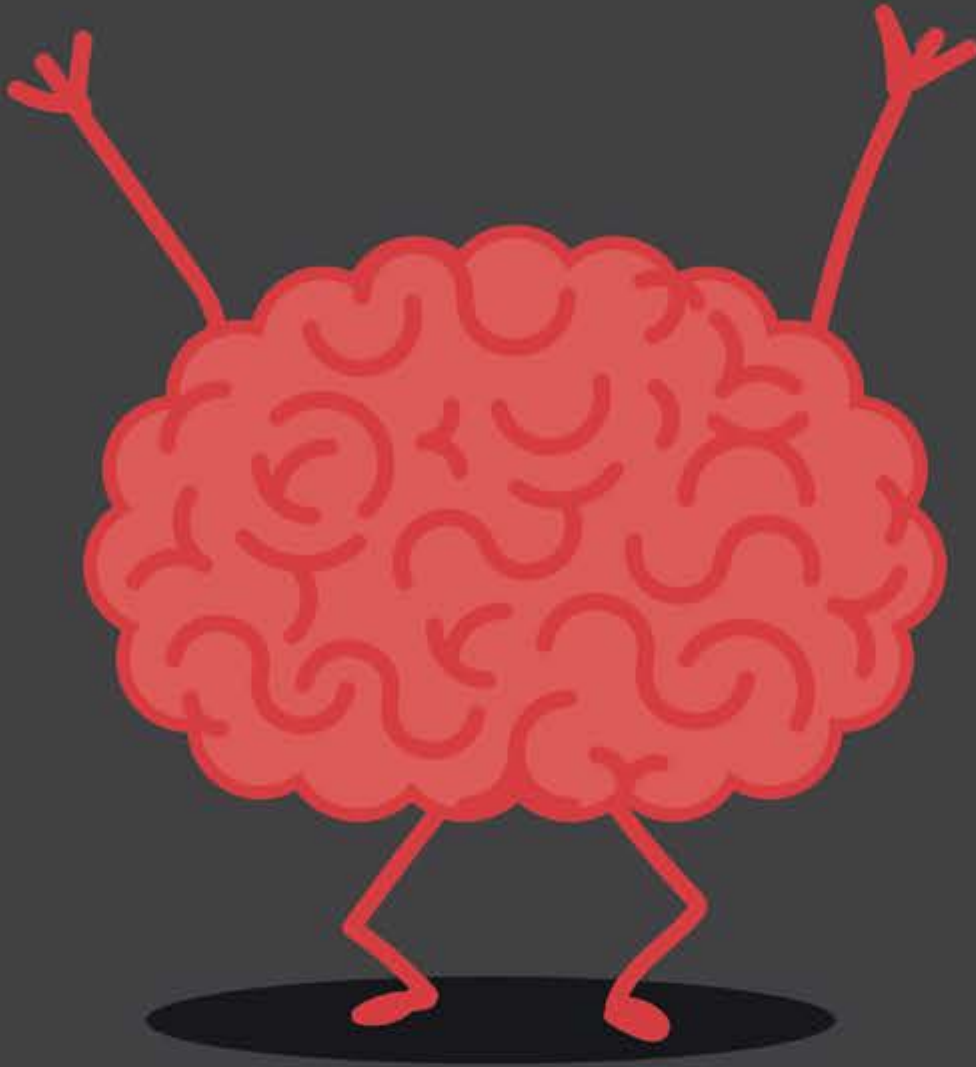


Triumph

How the adversity was dealt with



Storytelling guide for producers to tell their story
agrifutures.com.au/provenance-guidebook



**“Our brains are wired
to understand and
retain stories”**

- Jennifer Aaker, Stanford

Consumer trends, technologies and platforms:
for product provenance storytelling

Part

2



Consumer trends

Trends

The interest in food and agriculture product provenance has been building over the past two decades globally.

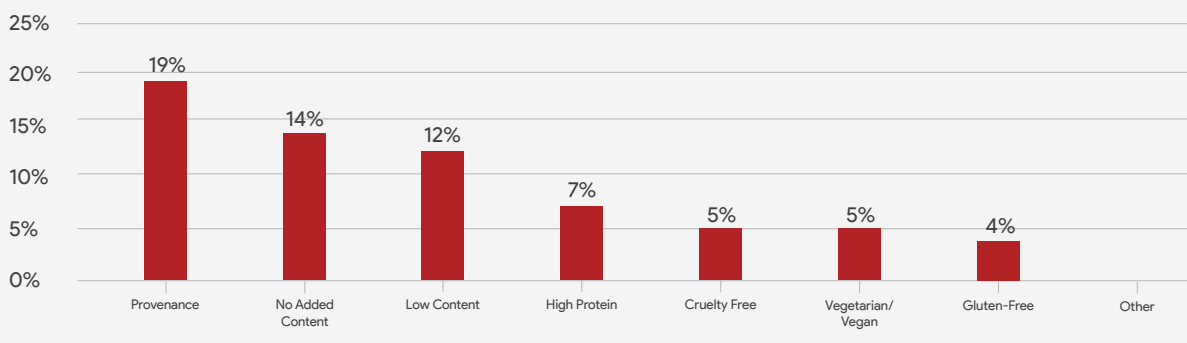
This increasing interest is driven largely by consumers wanting to support local communities and economies [8]. Greater knowledge sharing, enabled by technology, is providing consumers with the tools to seek out information about the food they consume.

In retail, consumers are paying attention to the impact of their food choices. Across food, groceries, clothes and more, consumers are actively seeking ethically-conscious and sustainable products, and choosing brands that support social issues that resonate with them [21].

Research shows that consumers in the UK and Australia are also increasingly conscious of food provenance when dining out, next to price, food provenance and nutritional value are impacting consumer choice [8 & 9]. According to global information company The NPD Group, Provenance and products that are grown in Australia and owned by Australian businesses, prepared from local ingredients, or fair trade – were identified by 19 per cent of consumers as the most top-of-mind characteristic at foodservice occasions [15]. See Figure 1 below.

Figure 1

Top food and beverage attributes in foodservice

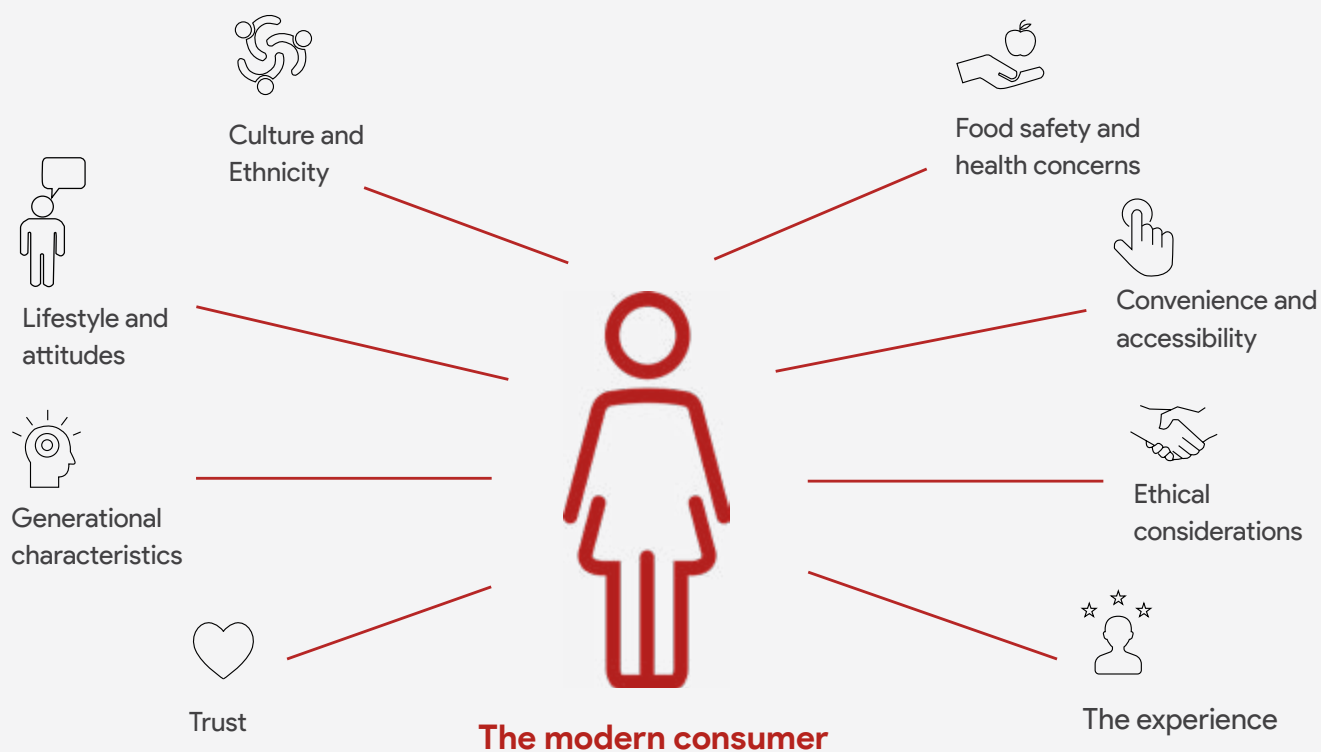


Source: The NPD Group/CREST, Total Foodservice, 12 months ending June 2017

Understanding Consumers

Influencing purchase decisions

There are many factors influencing consumer purchasing decisions, aside from price, quality and availability:



It is important for producers to understand what influences their consumer. All of these factors can and should be considered when developing provenance stories for food and agriculture products.

More detail on these factors are provided in the following pages.



More information that explains this trend
agrifutures.com.au/consumer-trends

Culture and ethnicity

Australia is a multi-cultural society. It is home to one of the world's oldest continuous cultures – thought to be in existence for more than 60,000 years. In recent years “bush tucker” has been increasing in popularity. Chefs and diners alike are seeking information about the traditional use of native foods and how to incorporate them into new dishes. [39]

Almost one quarter of Australian's were born outside of Australia and over one third speak another language in addition to English. [40]

Culture and ethnicity heavily influence consumer food preferences and purchasing decisions in terms what foods are purchased as well as when, where and with whom the food is consumed. For example, in Chinese society consuming food is a sharing occasion, used to celebrate family, friend and business relationships. There are also special foods for special occasions.



Lifestyles & attitudes

Products and services enable consumers to express themselves and demonstrate what they are passionate about in their life. Food plays a key role in Australian lifestyles. Casual dining out with family and friends as well as a strong coffee culture sees Australians spending over \$100 billion annually on dining out and takeaway food (Solomon et al. 2013). Many Australians are also seeking to make healthy eating a salient part of their lifestyle; with an increased focus on healthy choices (e.g. organic produce) when making food purchase decisions (Pearson, 2013).

Fit for purpose

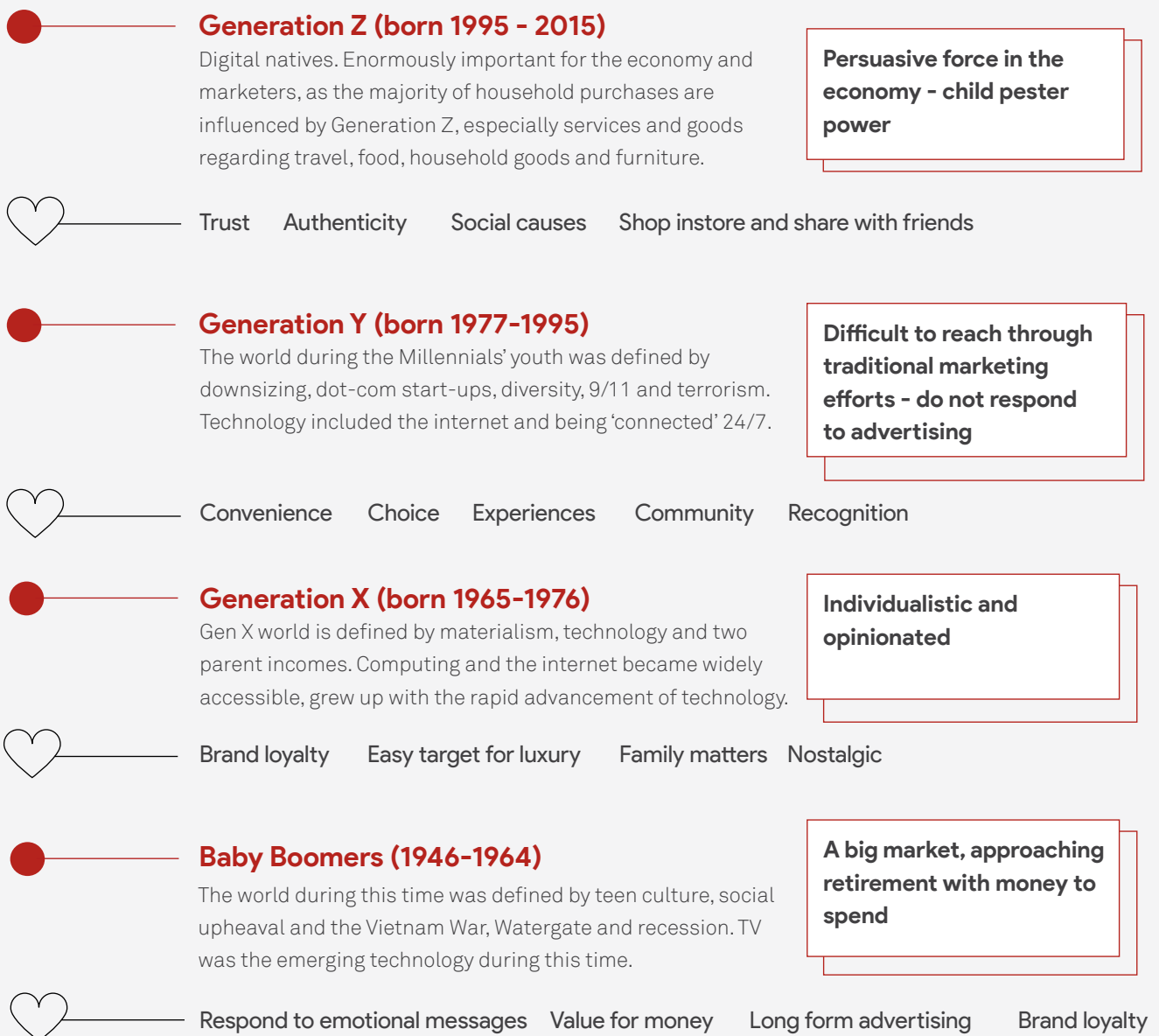
Consumers often buy the same products for different reasons and use them in different ways. For example, two people might buy fruit for different purposes. One might buy the fruit to pack in their child's lunchbox and to be eaten as an after-school snack, whilst another person might buy fruit to make smoothies to align with their busy lifestyle. Similarly, some consumers may buy soup to use as a meal while others may buy the soup to use as an ingredient in another dish.

Some products are consumed more regularly than others. Some products or services may also be seasonal. For example, more lamb may be sold near Australia Day, because it is Australian to eat lamb. Prawns are often consumed in Australia around the Christmas holidays. And certain types of chocolate are sold on Easter and Valentine's Day.

Generational Differences

Baby boomers have the most discretionary income to spend on food and produce purchases when compared to other generations who are more focused on spending on other goods and services. They also seek information differently,

from different sources and in different formats. Generations X and Y are likely be more open to a wider variety of food as they have grown accustomed to having several cuisines to choose from instead of the traditional meat and three 'veg' [16].



Information transparency

In 2017, Response Media, a digital communications agency, conducted a study of 500 Gen X and millennial consumers based in the USA. While the information is US based, the information largely holds for Australian consumers.

Findings included [10]:

- Consumers are overwhelmingly interested in more transparent information about the provenance of food products and would pay more for it - 99% for fresh food and 98% for packaged food. 70% said purchases are always or often influenced by this “transparency content”.
- Demographically, 100% of millennial mothers said they would pay more for products that provided transparent information about provenance.
- Many different areas of transparency are also viewed as important by consumers. More than nine out of 10 consumers said transparency in ingredients and their sources should be communicated, as well as more in-depth information being available on each. The same proportion also said they also wanted to know more about production and manufacturing processes, shipping and handling, and sustainability efforts.




70%

70% of consumers are ‘often’ or ‘always’ influenced by transparency of content when making a purchase decision [10].

62%

62% of consumers will “often” or “always” switch to a transparent product [10].

A close-up photograph of a person's hands holding a cluster of small, round, dirt-covered potatoes. The person is wearing a dark blue long-sleeved shirt and blue jeans. The background is dark and out of focus, with some green foliage visible on the left side. The lighting is soft, highlighting the texture of the potatoes and the person's hands.

**“Authenticity requires
vulnerability, transparency
and integrity”**

- Janet Louise Stephenson

Food safety and health concerns

Food safety and health concerns are key drivers for product provenance storytelling. This is illustrated in both Australian and international research.

Examples include:

- A case study by Bamboje-Ayodel et. al. [11] studied an Australian premium manufacturing company that had experienced a food recall in 2014. The incident was considered in the context of changes in Australian consumer attitudes, behaviours and purchasing preferences towards different types of food. These changes have resulted in increased demand for better quality information about safety, quality and provenance of food production. The study highlighted that these changes provide both opportunities and risks for food producers. Recovering from a food safety incident relies on many factors and from a consumer perspective, the responses to a food safety incident and how it is responded to are sensitive to information modes and platforms used.
- An EU study by Sadilek [12] found that geographical provenance, age, propensity to read the label on products, scientific knowledge and understanding of food safety-related issues influenced the perception of product quality and impacted purchase decisions.
- Kendall et. al. [13] looked at how Chinese consumers make purchase decisions in an environment of high-profile food scandals, many of which linked to food fraud. Chinese consumers particularly have a very low level of trust in food regulatory systems. It was found that Chinese consumers rely on informal kinship networks as trusted sources of information regarding food products' authenticity and safety.



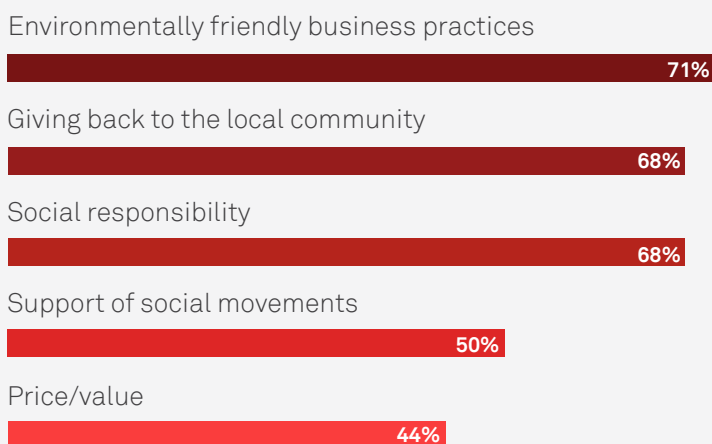


Ethical consumer

In addition to wanting assurances about food safety, consumers are increasingly interested in knowing more about other aspects of the food and agriculture products that they purchase. These include:

- the safety of ingredients, including food additives, preservatives or colourants
- certification and verification of lifestyle or faith-based methods of production and preparation (e.g. kosher, halal, vegan etc.)
- whether pesticides, herbicides or insecticides were used, and if harmful residue remains on the product
- sustainability and ethical sourcing issues (e.g. human slavery and animal cruelty).

Companies attributes people find most important



Percentage of total respondents: N=420 people who made a purchase online or in-store in last 6 months

Source: Clutch 2019 PR and Corporate Social Responsibility Survey

“66% of global consumers say they’re willing to pay more for sustainable brands—up 55% from 2014. 73% of global millennials are willing to pay extra for sustainable offerings—up from 50% in 2014”

(Source: 2015 Nielsen Global Corporate Sustainability Report)

The need for an environmental and social purpose is increasingly expected by consumers, who are disaffected with big business in particular.

“The public expectations of your company have never been greater. Society is demanding that companies, both public and private, serve a social purpose.”

Larry Fink, Chairman, BlackRock.

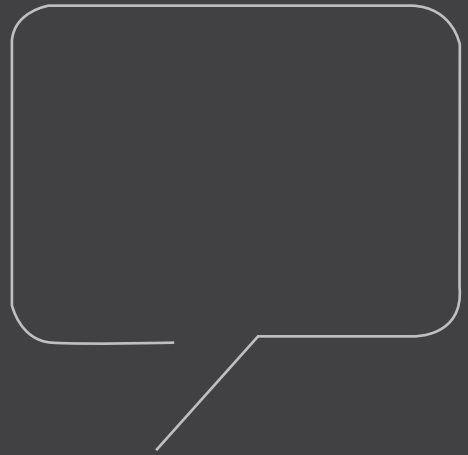
Some organisations have made it easier for customers to make ethical choices by launching apps for consumers to find products they love from brands who do better by people, the environment and animals. See case study on page 33.

The Global Sustainable Development Goals are aimed to meet urgent environmental, political and economic challenges facing the world. These goals are important to consumers and business partners. Specifically they are interested in how agriculture responds to the specific goals associated with environment and climate change.

Consumer trends, technologies and platforms:
for product provenance storytelling

Part

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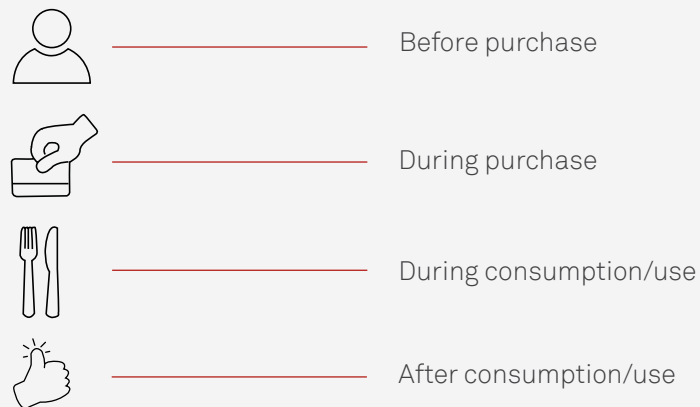


Platforms & Technologies

Platforms & Technology

Storytelling can make a brand more convincing and memorable in multiple ways (visually, factually and emotionally).

Opportunities to communicate product provenance and authenticity information occurs right throughout the customer journey. There are four stages to this journey



Provenance and authenticity information tends to be the most important to consumers during the first two stages; however, more and more consumers value such information throughout all stages of the purchasing journey and across all touchpoints.

Therefore, to have the greatest impact on consumers' purchase behaviour and to distinguish products and services from competitors, businesses need to consciously communicate authentic product provenance stories to consumers when and where it is wanted. Once consumers are informed, it is more than likely content will be shared. However, not all channels are equal. SMS, brand emails, and Facebook see the most activity but there are many more channels to choose from.

A close-up photograph of a person's hands holding a black DSLR camera. The camera's LCD screen is flipped out and shows a photo of a glass of red wine on a wooden surface. The background is a blurred outdoor scene with green grass and trees. The text is overlaid on the lower half of the image.

**“Your brand is a story
unfolding across all
customer touchpoints”**

- Jonah Sachs

Communication channels and technologies

Commonly used channels:

There are many channels for communicating provenance stories to consumers including but not limited to:



Labelling, packaging and marketing collateral



Social media



Blogs



In-store information



Websites



Apps

Lesser known channels:

Lesser known and used channels include immersive technologies like augmented reality and virtual reality, live streaming on Facebook and Instagram, 360-degree photos.



Immersive Technologies



Authenticity and Traceability Technologies



Livestreaming on facebook and instagram



Blogs

A blog (short for ‘weblog’) is an online journal or informational website. It is a platform where a writer (or a group of writers) share views on an individual subject with the aim of demonstrating industry expertise. As such, blogging is a powerful provenance storytelling channel.

Blogs help drive traffic to a company’s website, convert that traffic into leads, and establish authority in an industry sector. Most blog traffic is driven organically—in other words, consumers will search for something on a search engine and click on a blog if it matches an intended topic.

For example, Australian Avocados use a blog to inform readers about the Australian avocado industry, whereas Lilydale and Australian Extra Virgin Olive Oil use blogs for consumer-focused content such as recipes and links with brand ambassadors.

Challenges with blogging

1. Blogging is a commitment. The businesses that commit to publishing quality content to blogs, tend to reap the rewards in terms of website traffic and leads. Those results continue to pay out over time. To help establish consistency, companies need a clear strategy, an editorial calendar and a dedicated person (internal or outsourced).

2. It takes time to build momentum. To drive long-term traffic, blog posts should be written to have durable relevance on a consistent basis. These posts are called “evergreen” blog posts. Relevant year after year, valuable and of high quality. Over time, it will build search authority. Such blog posts end up being responsible for a large percentage of a company’s blog traffic.

3. It takes significant time to have impact. Using blogs to penetrate Google rankings take time to rank for more competitive keyword phrases. Once a blog is launched, it may take months of effort before the pay-off is realised. It can take a year or more before a blog produces results.

4. Being too honest can lead to trouble. There is a risk that blog posts may expose an individual too much. Regular posts about work and that are controversial in nature may get an industry sector offside, or worse, consumers).

5. There is a lot of competition. Competition is very intense in some niches, bloggers must be creative and unique to stand out and continuously develop a unique slant which can be difficult.

Further information

Businesses can engage a communication and content specialist to prepare stories, manage uploading and sharing on social media. The Blog Topic Generator is a useful resource to assist businesses with finding blog topics [22], [23], [24], [25], [26], [27], [28].

Read more:

<https://www.hubspot.com/blog-topic-generator>



There is a case study explaining this
agrifutures.com.au/provenance-storytelling

Case study: Blogging on Central Station

Article source: abc.net.au [43] and centralstation.net.au [42]



Photo source: abc.net.au [43]



Photo source: Central Station, Stories from Outback Australian Cattle Stations [42]

Background

An impressive producer storytelling blog <https://www.centralstation.net.au> that shares stories on social media from pastoral properties across northern Australia is Central Station, which has become a vital tool for connecting consumers to the northern beef industry. Central Station offers a platform for contributors to share all elements of station life, from the wild tales of mustering rogue cattle to the more confronting accounts of depression and drought.

Following the live export ban in 2011, Kimberley pastoralist Jane Sale founded the blog with editor Steph Coombes to showcase the northern beef industry. It came about from a group of pastoral women who joined forces and followed a shipment of cattle over to Indonesia. During this visit, the supply chain was witnessed - from abattoirs to eating a beef meal in an Indonesian home, and after that the group of women decided to blog about the experience.

Impact

The blog began with four or five women. Now, Central Station covers the whole of the northern beef industry, with blogs coming from Queensland, Northern Territory, Pilbara, Kimberley and even Indonesia. The site has grown from strength to strength, reaching more than 55,000 Facebook followers across the country as well as inspiring a book.

“We’re not just focusing on live export [on our blog]. We’re telling the story all the way through and people have opened up about some amazing heartache and stories that really help everyone. We get some incredible stories that have you in tears or in absolute fits of giggles and that definitely comes through from messages from urban Australia. People in urban and rural populations, we all have the same values. We all care for our families, our animals and our land, so it just brings people together I think.” Jane Sale



Websites

A website or web site is a collection of related network web resources, such as web pages and multimedia content, which are typically identified with a common domain name, and published on at least one web server.

Websites are the hub for a company's storytelling initiatives and online presence which in turn, supports a multitude of other individual story telling platforms such as blogs, immersive technologies, videos and social media feeds. In some ways, a website can be likened to a voice in which the aim is to make the audience feel something quickly, to build trust and credibility whilst providing useful and engaging content that is easy to navigate.

Websites benefit significantly by placing storytelling and narrative techniques at their core to create emotional connection in comparison to a user simply reading information on a screen.

There are multiple options for businesses to build their website, and it largely depends on budget, skills and resources available to the company. It is important for businesses to consider the value of the site to their business, and to understand that self building and hosting can be time consuming and restrictive.

Most website builders offer a drag and drop user interface to build your website. However, it is worth thinking about the future, as Search Engine Optimisation (SEO) and scalability can be an issue with some of these.

Platforms like Wordpress offer powerful features, scalability, ease of use and good SEO and site security options.



There is a case study explaining this
agrifutures.com.au/provenance-storytelling

Case study: Shorthand

Article source: shorthand.com [44]



Photo source: shorthand.com [44]

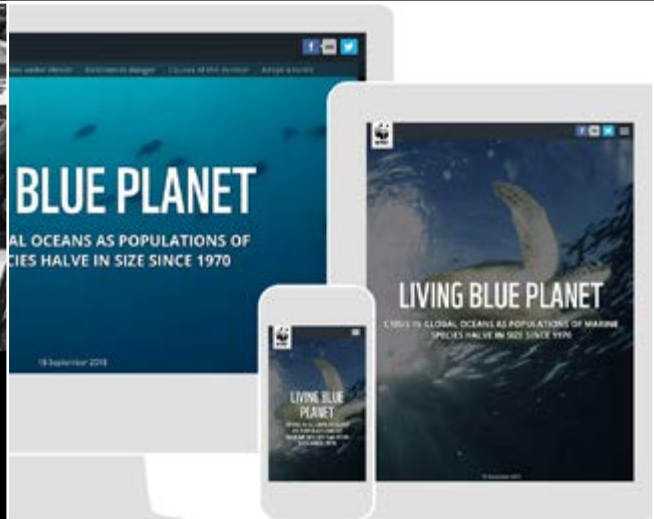


Photo source: shorthand.com [44]

Background

Shorthand is a web platform that brands, publishers, non-profits, universities and others use to create engaging stories, annual reports, case studies and other content.

Shorthand elevates stories and communications. It works by visually showcasing stories on desktops, mobile and tablets with fully responsive design.

When producing online stories for The Sydney Morning Herald and The Age, the Fairfax team would have to spend numerous hours carrying out the vital cross-browser and device testing required, which meant less time to pull the end story together. As such, a better solution for longform storytelling than the company's standard article template was needed. Using Shorthand, Fairfax Media's use of the tool has grown with more than 50 stories being created within the application in a year. It has also been used to experiment with new formats offering a more visual focus to storytelling. [44]

Impact

Fairfax Media was an early adopter of Shorthand. The desire to use Shorthand stemmed from a need to cut down the time spent producing big, multimedia story projects online — something which could take several weeks to achieve. [44]

- Using Shorthand brought development time down from several weeks to a day or less with analytics demonstrating that readers spend more time engaging with the story developed using Shorthand (time on page) than normal Content Management System (CMS) stories.
- One story published in January 2016 received more than a million unique browsers. [44]

Read more: <https://shorthand.com/>



Apps

The word “app” is an abbreviation for “application.” It’s a piece of software that can run through a web browser or offline on a computer, on a smartphone phone, tablet or other electronic devices, including smart TVs and smartwatches. Apps may or may not have a connection to the internet.

There are numerous storytelling apps available to help structure a story for impact. While many of them are targeting the education market, there are some that are specifically designed to help businesses develop and present their product provenance and brand stories using different digital formats.



Photo source: Mashable Composite, DoneGood [45]

Apps are also widely used to help consumers make ethical and sustainable food and product choices, giving customers access to provenance information. There are now apps to help consumers discover eco-friendly and cruelty-free brands. From food to home goods and fashion, offering ethical alternatives to big name brands [20]. This provides a platform for producers to tell their provenance story.

Apps are a successful platform to help communicate provenance stories. Producers may consider developing an app for their company’s provenance story, or alternatively look into other available apps to promote their provenance and authenticity.

Case study: POI Palm Oil Investigations

Article source: Palm Oil Investigations [18] and Sustainability Hackers [46]



Photo source: POI Palm Oil Investigations



Photo source: POI Palm Oil Investigations

Background

Palm oil is often a hidden ingredient that is rarely labelled by its correct name. This app is in response to consumer demand to ensure the products they are buying do not support corrupt industries. In this case rainforest destruction to support massive expansions of palm oil plantations in Borneo and Sumatra - the main threat to the survival of orangutan populations in the world. The app has all the features and tools required to regulate the palm oil industry, putting power in the hands of the consumer and encouraging them to support companies using ethical palm oil.

The barcode scanner works for Australian and New Zealand products, and has been developed to assist concerned consumers identify palm usage in products so that information purchasing decisions can be made prior to purchase.

It's as easy as scanning the product barcode, reading the status, and selecting an alternative ethical product. [46]

Impact

- Raises awareness and education about the impacts of unregulated Palm Oil production and how often it is used in every day household products.
- Empowers and educates consumers on how to identify palm oil content in products and make informed choices about purchasing certified products.
- Educates consumers about the various palm oil supply chains and the complexity of certification and palm oil usage.
- Assists with transparency - finds, investigates and exposes products that hide palm oil as an ingredient to consumers.
- Helps brands to understand the supply chain options [18].

Read more: <https://www.palmoilinvestigations.org/about-poi.html>



Social Media

Social media are web-based communication tools that enable people to interact with each other by both sharing and consuming information. The most common accounts used for storytelling are Facebook and Instagram. However, other platforms such as Pinterest, Snapchat and Twitter are also popular, and more platforms are likely to be developed in the future.

Content is critical on social media. Every clip, blog, video or image on social media should be a mini-story and have a beginning, middle and end. Each piece of content can, and should be used, to build a bigger story—one that connects with product provenance and a company's unique story.

Facebook Live

Useful for storytelling, Facebook Live is a feature of Facebook that uses the camera on a computer or mobile device to broadcast real-time video to Facebook. Live broadcasters can decide who can view the video content and use this content to engage audience by giving an opportunity to ask questions. Live broadcasts can last up to four hours and when finished, published to a nominated page so that people who missed it can watch later. Live videos can be used to support other social media posts and, just like any other post, can be removed at any time.

Livestreaming can be successfully achieved via a mobile phone, or other apps, external cameras and microphones can be used to create video. Again, analytical tools should be used to understand how and when an audience was engaged. [47]



Did you know?

Since its launch, livestreaming video has exploded in popularity—particularly on Facebook Live where, according to Vimeo, 78% of online audiences are watching video on Facebook Live as of 2018.



There is a case study explaining this
agrifutures.com.au/provenance-storytelling

Case study: #GoodMeat

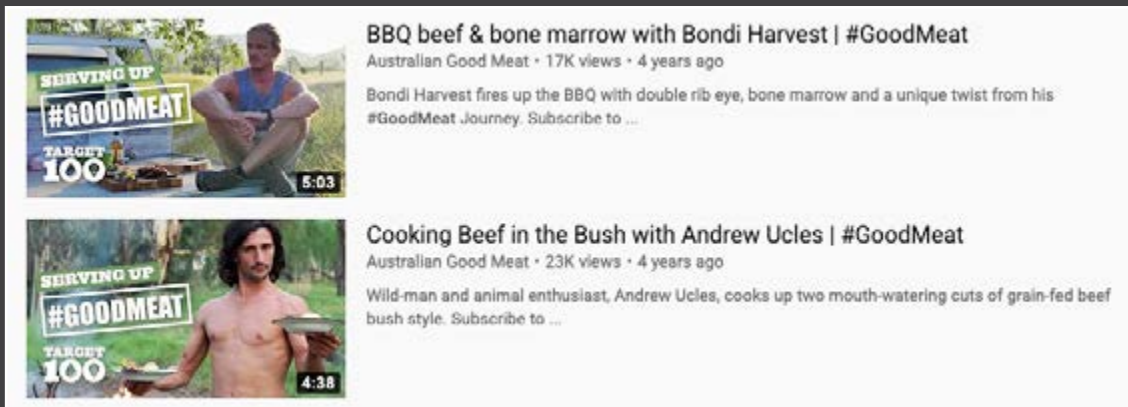


Photo source: Good Meat Youtube Channel [48]

Background

Meat and Livestock Australia (MLA) used YouTube, Facebook and Twitter to engage in digital conversations, and share the stories of what red-meat producers and the wider industry are doing to improve animal welfare and environmental sustainability through the Target 100 project and #GoodMeat stories.

Using social media and ambassadors (such as Bondi Rescue's Reidy in 2016 and chef Rob 'Niko' Nixon), the series connected sheep and cattle producers with the general public to inform where meat comes from, and answer questions on how producers care for animals and the land. Other topics tackled included biodiversity, livestock transport, low-stress stock handling, animal welfare in feedlots, climate change from methane emissions and protecting the Great Barrier Reef from sediment runoff.

MLA reported that working with popular identities such as TV presenters who have a dedicated audience, coupled with social media, provided an effective and instant way to garner the attention of the community. [47]

Impact

Over three years, more than 230 sheep and cattle producers from all over Australia shared stories. Here is the result:

- With chef Rob 'Niko' Nixon having more than one million YouTube followers, producer stories as part of the Target 100 series had an average 15,000 views per episode
- The #GoodMeat series had more than 200,000 views on Target 100's YouTube channel
- The Target 100 Facebook presence also grew, with 60% of people engaged living in capital cities



Instagram Stories

Particularly popular with millennials and younger demographics, Instagram has a 'stories' feature where users can capture and post related images and video content in a slideshow format. It is a useful tool for real-time stories to be shared with audiences, as Instagram Stories exist for only 24 hours. Text, drawings and emoticons can be added to images or video clips. Filters and augmented reality (AR) stickers are also available.

Useful Resources - Livestreaming

Step by step guide to livestreaming

Read more:

<https://www.socialmediaexaminer.com/how-to-facebook-live-marketing-8-step-plan>

Step by step guide to Instagram stories

Read more:

<https://www.planthat.com/instagram-stories/>

Step by step guide to FaceBook stories

Read more:

<https://au.oberlo.com/blog/facebook-stories-guide>

Specialist Help

Producers can engage with social media specialists to prepare stories suitable for all social platforms that stay on brand. Such specialists will work with producers to create a calendar of content up to 12 months in advance (allowing for real-time posting as interesting stories come to light) with a posting schedule.



Case study: Life on a station

Article source: ABC News [43, [50]



Photo source: ABC News [50]

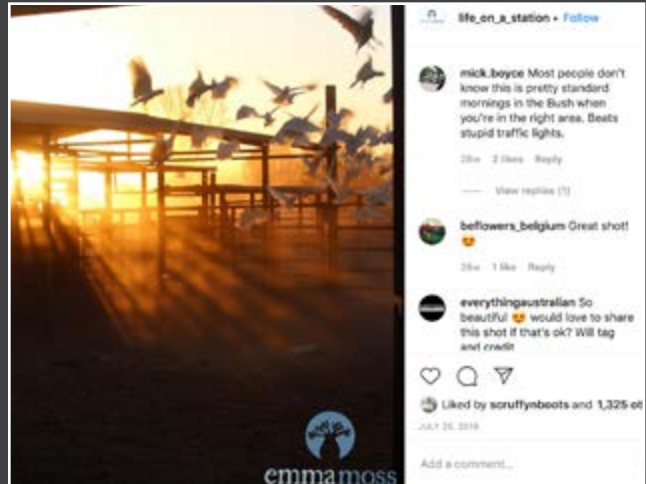


Photo source: @life_on_a_station Instagram page

Background

Emma Moss struck Instagram fame after sharing photos of life as a jillaroo during a gap year on the Kimberley's Nerrima cattle station in 2016. Since then, the Instagram account [@life_on_a_station](#) has attracted over 18,000 followers through content posts and Instagram Stories. Ms Moss has been featured on ABC Landline and is regularly asked to speak as an advocate for the northern beef industry around the country, all stemming from the industry exposure created using Instagram. [50]

"I walked away from that whole experience with a strong respect for the passion and professionalism of Australian farmers and wanted to share that story with whoever would listen. My time on the station opened my eyes to more aspects of rural life and coming back I have realised how great the divide is between city and pastoralists' lives. I think creating a brand on social media is so important so people can see where their food is coming from and how it's being produced. With over 80% of Australia's population being in the cities and urban areas, they don't see the calf drinking from mum, or a nice cow in the sunset. I think producers forget those nice things that people really do want to see because they want to know the story behind their food from paddock to plate."

Emma Moss, interview by ABC News [43]



Augmented Reality

Augmented reality is the integration of digital information with the user's environment in real time. Unlike virtual reality (VR), which creates a totally artificial environment, augmented reality (AR) uses the existing environment and overlays new information on top of it [51].

Immersive technology is an amazing way to take users to places they otherwise wouldn't be able to go. In particular this could be useful for remote location producers.

AR is quite a new technology to implement into a business for marketing use, but in fact, forward thinking brands are already using AR in a variety

of ways to reach consumers via new, innovative and increasingly immersive methods.

Whether it's AR headsets, smartphones, or headsets a number of companies are already leveraging the this new tech to tell stories and engage target audiences on a whole different level.



Case study: 19 Crimes Wine

Article source: Mumbrella [51]



Photo source: <https://19crimes.com>



Photo source: <https://19crimes.com/en-au/living-wine-label>

Background

Winemaker 19 Crimes launched the first ever AR wine labels with every 19 Crimes wine label, telling the story of different 18th century convicts who became colonists and committed one of the 19 crimes punishable by transportation.

Consumers could use smartphones to hover over the label to reveal the story of the convict on the label. [51]

Impact

19 Crimes used the technology in an attempt to market to a specific target audience - millennials.

“19 Crimes has used technology to break down the barriers normally associated with wine, such as tradition, heritage and region. We are challenging these conventions and cutting out the ‘wine talk’ that may be intimidating to some wine drinkers. Augmented reality is the future and it’s fun, interactive and easy to share.”

Interview with 19 Crimes Ambassador, Nick McArdle, by Mumbrella [51]



Virtual Reality

Virtual Reality (VR) is the use of computer technology to create a simulated environment. Unlike traditional user interfaces, VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds. By simulating as many senses as possible, such as vision, hearing, touch, even smell, the computer is transformed into a gatekeeper to this artificial world. The only limits to near-real VR experiences are the availability of content and cheap computing power. [33]

ABC News reported that a growing number of large agribusinesses are using virtual reality as a practical tool to do everything from training staff to selling stock [34]. There is a huge potential for using immersive technology to educate in schools about farming, and to use as a marketing tool to showcase their produce and provenance story.



Case study: FarmVR Virtual Reality Farming Experiences

Article source: Tasmanian Agricultural Education Network [53] and Farm VR [54]



Photo source: FarmVR Virtual Reality Farming Experiences [54]



Photo source: FarmVR Virtual Reality Farming Experiences [54]

Background

FarmVR is a Virtual Reality Agricultural Experience, designed to “immerse” people into various agricultural experiences to learn more about where their food comes from, consider Agriculture as a career pathway and assist teachers to engage their students in the classroom. [53]

The FarmVR team attend agricultural shows, events, conferences to connect children with farm life. There are a range of FarmVR applications available, the Farm VR World website, and FarmVR Mobile. [54]

Impact

Tim Gentle (Founder of Farm VR) believes in immersing students in farming experiences to better educate them about where their food comes from, and to encourage them to consider agriculture as a career path. [54]

Read more: <https://farmvr.com>



Authenticity and Traceability Technology

Technologies for communicating product provenance stories are increasingly focusing on bringing the consumer closer to the source – aiming to reveal relationships with the world that is somewhat alien and distant to everyday or urban lifestyles.

There are many systems and platforms to choose from, and more are being developed regularly. Major considerations when choosing a system or a platform include:



Level of investment required, both upfront and ongoing



Ease of use by the business and the consumer



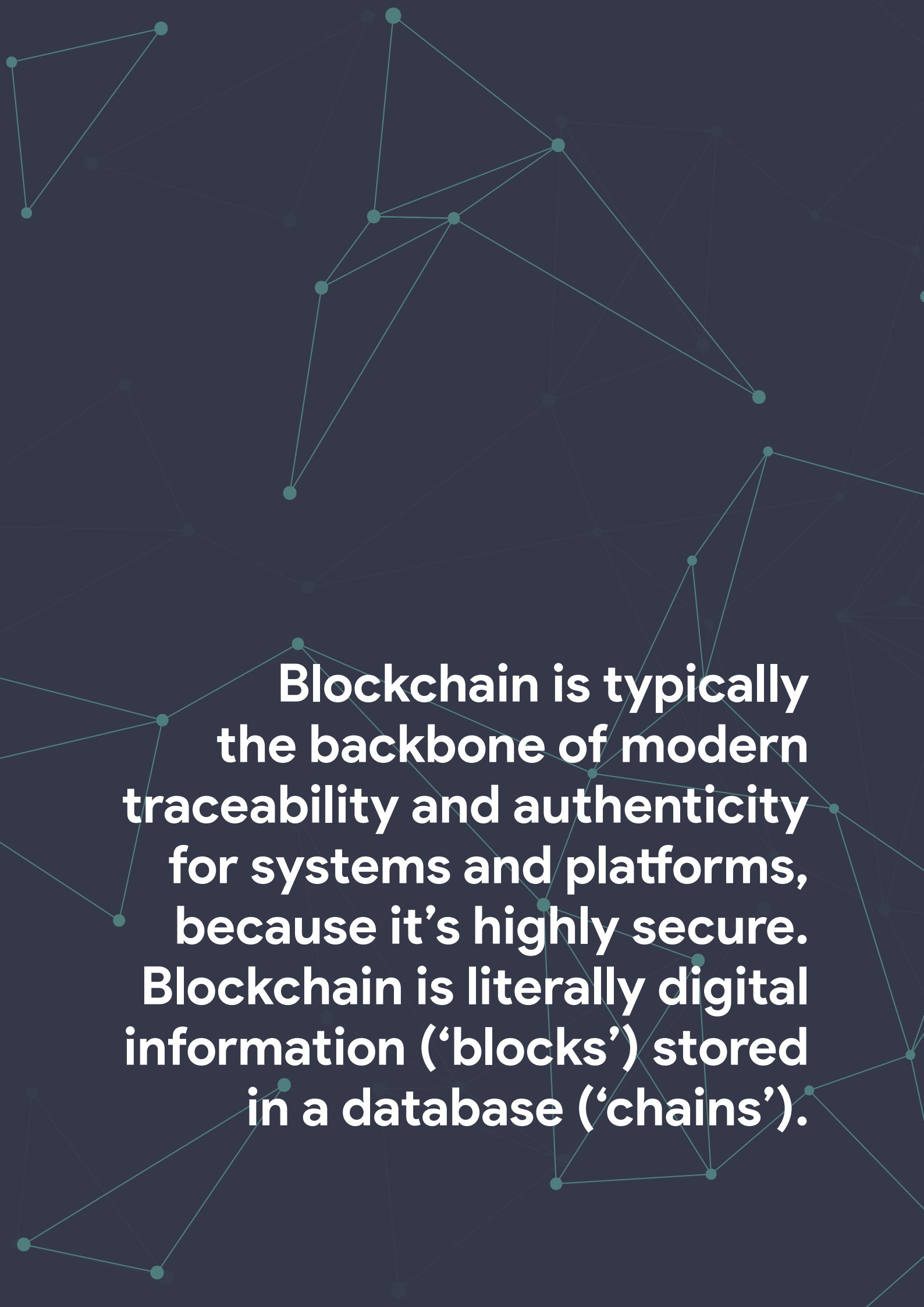
The amount of information that can be stored and communicated through the chain



How secure and trustworthy the system is



How supportive the supply chain partners are



Blockchain is typically the backbone of modern traceability and authenticity for systems and platforms, because it's highly secure. Blockchain is literally digital information ('blocks') stored in a database ('chains').



Blockchain

The goal of blockchain is to allow digital information to be recorded and distributed, but not edited. Blockchain works via the following processes. The block has three types of digital information:

1. Transaction information, e.g. time, date, amount paid.
2. Who's participating in the transactions using a unique digital signature.
3. Information that distinguishes each block from each other. This is a unique, identifying code called a 'hash'.

The chain consists of multiple blocks joined together. There are four things that must happen for a block to be added to the chain:

1. A transaction must occur.
2. The transaction must be verified by a network of computers. These networks confirm the details of the transaction.
3. After the transaction has been verified, all the information about that transaction is stored in a block.
4. The block is then given a hash. The block is also given the hash of the previous block added to the blockchain. The block can then be added to the blockchain.

A copy of the blockchain is then placed on every computer in the network (this can be thousands or even millions, such as in the case of cryptocurrency). Each copy of the blockchain is identical and spreading that information across a network of computers makes the information more difficult to manipulate. As such, a hacker would need to manipulate every copy of the blockchain on the network.

New blocks are always added to the 'end' of the blockchain. Once a block is added to the blockchain, it becomes very difficult to edit and impossible to delete. This is because each block has its own hash code and the hash code of the block before it. If the data is changed in one block, then a new hash code is generated again, making it difficult if not impossible for a hacker as all of the data in all of the blocks would need to be changed.

Most traceability and authenticity platforms use blockchain in some format to operate.

Studies undertaken by IBM and global food suppliers have identified significant benefits for food and agribusinesses to use blockchain based authenticity platforms including:

- Improving collaboration across the supply chain which helps to improve the way food is tracked, transported and sold to consumers. Accelerating tracing of food from days and weeks, to mere seconds. This will help enable precise and rapid recalls to preserve consumer trust in the food industry.
- Ensuring that all testing documentation, certificates and audits are up to date and accessible through sharing information across the supply chain with all participants in a transaction. Achieving greater transparency and response, enabling Australian regulatory bodies to function more efficiently and safely with more rigorous compliance with regulations.
- Increasing transparency, blockchain can help retailers better manage the shelf-life of products in individual stores, and further strengthen safeguards related to food authenticity, whilst helping to reduce food waste.
- Enabling consumers to get to know their food better, including the source of production and how it was produced and handled in the supply chain.





Authenticity Platforms

There are many authenticity platforms to choose from. Some are specialised for specific products while others are more general. Some of the systems that might be useful for Australian agriculture businesses are listed in this section, and there are many more:

My Origins Technology

Uses blockchain technology to trace merino fibre directly back to Australian Merino growers, who produce fibres that are certified to independent global standards such as the Responsible Wool Standard and the Organic Protocol. The platform aims to support tracing the fibre from the farm as a foundation for ethical and transparent supply chains. Doing so will help brands build trust with consumers. The personal stories of Australian Merino farmers are highlighted on the www.myorigins.com.au website.

Two Hands

Two Hands is a start-up company that aims to connect fishers and farmers with high-end restaurants underpinned by guarantees of provenance using blockchain. The company has established a southern rock lobster chain direct to premium restaurants in Shanghai. Videos showcasing southern rock lobster fishers are highlighted on the www.twohands.world/ website.

The IBM Food Trust

Built on blockchain, IBM Food Trust is a collaborative network of growers, processors, wholesalers, distributors, manufacturers, retailers and others. A system that works internationally, the platform connects participants through a permissioned, immutable and shared record of food provenance, transaction data and processing details. Visibility and accountability are enhanced across the food supply chain. The focus is on enabling data sharing between trusted participants, traceability beyond the one-up, one-down and underpinning certifications. There are plans for different types and sizes of business.

Read more:

www.ibm.com/au-en/marketplace/food-trust



Source Certain

Source Certain is an Australian company working internationally. The platform is underpinned by a robust, definitive, tested and validated scientific method for establishing provenance of a product. It is used to determine a chemical profile of the product, which reflects the geographical location a product was grown and/or the system by which it was produced.

Read more: www.sourcecertain.com/service

Fresh Supply Co

Fresh Supply Co is an Australian marketing technology company for fresh food products. The company works collaboratively with producers to identify how products can be tracked without disrupting operations. Data that is captured is used to create a full narrative of each unique product unit that's tracked. The blockchain-based, track-and-trace platform is integrated with content development (e.g. recipes) to support storytelling on a range of platforms. The company also helps producers establish performance metrics and reporting.

Read more: www.freshsupplyco.com

Provenance

A UK-based company operating worldwide. The Provenance platform is underpinned by blockchain and open data. Provenance is a platform for businesses and shoppers to provide greater transparency about their products and the journeys to the customer.

Provenance enables businesses to share stories and verifiable claims about themselves and products in a trustworthy way. It can be taken further by showing the traceability of each batch or item through its tracking tool. This creates a time-lined supply chain with product data unique to each batch. The transparency framework is a structured suite of product 'claims' with proof provided via a trust engine that links to third-party data sources.

The Provenance publishing suite enables the transparency story to be shared directly with customers. Whether it is via publishing on a website, as a standalone URL, or as 'cards' to use across social channels, content is optimised for any device or platform and can be tailored for all points of the customer journey.

For Provenance's case studies and company information on those using the platform click on the relevant links.

Read more: www.provenance.org

Case study: Manbullo Mangoes

Article source: Australian Mangoes [49]



Background

Cooperative Research Centre for Developing Northern Australia-backed startup, Trust Provenance, implemented a blockchain based technology solution at Manbulloo's Horseshoe Lagoon property, the trial monitors mangoes as they are boxed, stacked in pallets and loaded onto trucks ready to be sent to market.

The \$755,000 project was awarded funding from the Cooperative Research Centre for Developing Northern Australia in 2017. Using a network of sensors attached to fruit trays and pallets, the trial tracks tens of thousands of mangoes on their journey from the farm to the retailer.

The sensors will time stamp the fruit as it's boxed, then provide real-time data feedback on temperature and humidity.

Impact

The trial is set to help the supply chain better understand how various factors influence the quality of the fruit that ends up on consumer's plates, while providing retailers with more information to help them reduce fruit spoilage and waste. [49]

Read more: www.industry.mangoes.net.au



Aglive

Aglive provides evidence-based tracking and authentication of animals through the production supply chain from farm to stockyard, feedlot, abattoir and exporter. It developed the world's first electronic National Vendor Declaration (eNVD) app in consultation with Meat and Livestock Australia. The eNVD app converts the movement of all livestock within the industry to a real-time and completely traceable, paperless system.

Read more: www.aglive.com

IDlocate

The NZ-based IDlocate Authenticity Platform assists brands to create connections with global consumers to prove provenance and authenticity anywhere, anytime. IDlocate's anti-counterfeit logic provides customers with a brand-verified purchase, using unique QR codes that bring authenticity and provenance stories to life directly from the product packaging.

Using the combination of unique QR codes and the IDlogic fraud engine, a series of checks are activated as each scan occurs. These checks ensure the product is legitimate, in the right market and alerts are generated when there is an inconsistency.

Read more: www.idlocate.co.nz

Trust Provenance

T-Provenance Pty Ltd (Trust Provenance) is an Australian start-up that works to build a new level of trust and quality management into agricultural supply chains. It does this by bringing farmers, logistics companies and distributors together on a blockchain platform driven by autonomous Internet of Things (IoT) measurements. The platform supports previously impossible collaborations and efficiencies by identifying, measuring and analysing supply chain blind spots, resulting in new levels of quality assurance, waste reduction and supply chain efficiency gains.

The Trust Provenance blockchain platform is agnostic for produce type; that is, it works for fruit, vegetables, meat, wine, seafood etc. It creates the trust environment for data integration and information exchange. Collaboration on quality assurance practices is automated and verified in-chain to guarantee quality, reduce wastage, and streamline exception reporting and reconciliation between stakeholders. Trust Provenance replaces the proof and recourse cycle with trust.

Read more: www.trustprovenance.com/what-we-do

Case study: MOWI Salmon

Article source: evrythng.com [19]



Photo source: <https://mowi.com/about/>

Background

EVRYTHNG, the IoT platform and Mowi ASA, the world's largest producer of Atlantic salmon, launched the seafood industry's first end-to-end food traceability platform in May 2019, delivering full visibility into provenance of Mowi-branded salmon.

Consumers will find Mowi products with the new GS1 Digital Link codes on shelves initially in Poland this with plans to continue the global rollout through 2020.

"The trustability of the world's food supply chain is a major question mark in the industry today," said Ola Brattvoll, COO, Mowi. "Consumers want to understand how the food they consume is produced and where it comes from. Mowi is addressing this need by bringing greater transparency to the market. Think of it as we're opening our 'black box' to consumers."

Mowi's innovative industry initiative is powered by EVRYTHNG Active Digital Identities (ADIs) and

uses the new GS1 Digital Link standard to provide consumers direct access and visibility to item-specific product traceability information. Consumers now have full insight into how Mowi operates and cares for its salmon, including origination, farming activities and harvesting, simply by pointing their smartphone at the product item's unique code [19].

Read more: www.evrythng.com/press-releases/mowi-food-traceability-platform-powered-by-evrythng/



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Scan your ticket or Facebook code

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QR Codes

A QR code (short for 'quick response' code) is a type of barcode that contains a matrix of dots. It can be scanned using a QR scanner or a smartphone with a built-in camera.

QR codes are particularly popular in China as the popular WeChat app uses QR codes to link people with each other and with brands. While they are not as popular in Australia, QR codes are a powerful platform for product provenance storytelling. Scanning a QR code takes on an average 15 seconds. This includes the time it takes for the consumer or interested person to take out the smartphone, open a scanning app, hold the device steady towards the code and scan.

QR codes have a high information storage capability including text, URLs and webpages. QR codes have a tolerance of up to 30% damage without impeding its ability to be used effectively. The food and beverage industry internationally have adopted the QR code due to its capacity to link consumers to product authentication information. They are also easy to generate and link to information. They can also be printed on many different materials including waterproof packaging and labels.

QR codes can be used to disseminate information to the consumer including:

- Offering product information and specifications
- Delivering coupons and relevant deals
- Boosting app downloads
- Delivering product videos
- Increasing post-purchase engagement by allowing customers to re-order



There is a case study explaining this
agrifutures.com.au/provenance-storytelling

Case study: OceanWatch Master Fishers Program



Source: OceanWatch Master Fishers Program

Background

The OceanWatch Master Fishers program is a formal training and assessment program for professional fishers to recognise those in the industry that are continuing to raise the standard of responsible fishing in Australia.

Once accredited as an OceanWatch Master Fisher, individual stories of the fishers are published on the OceanWatch website as part of a “meet your fishers” series. Each story describes the fishing location, what they catch and why they care, along with a photo of the fisher. Stories may be published as text content or video. A QR code is provided to the fisher to put on to their products and marketing materials to link the consumer back to the source.

Impact

Stories of each individual fisher demonstrates to the consumer and their community that they are personally committed to responsible and sustainable individual fishing practices, going above and beyond the requirements prescribed by state, national and international regulations.

108 fisher stories have been published to date.

Learn more: <http://www.oceanwatch.org.au>

Case study: McDonalds - Track my Maccas

Article source: [Telegraph UK \[55\]](#) and [qr-code-generator.com \[56\]](#)



Photo source McDonalds Australia

Background

McDonald's pioneered a creative use of codes on food packaging. As Australian customers increasingly demanded transparency about sourcing, McDonald's introduced an app called 'Track My Macca's'. The app was triggered by scanning a code on McDonald's packaging, leading to videos from farmers who worked with the fast-food giant, and information about where every burger or nugget had come from.

McDonalds had been trying to overcome negative perceptions of their food, they tried using traditional channels but research they conducted in 2013 showed that half of their Australian customers still didn't trust their ingredients. The app allows them to track the ingredients in the McDonalds food they purchased. It uses augmented reality technology to show where the products come from and the story behind the ingredient.

Impact

The mobile app was a whole new way for McDonalds to engage people directly about their food. This was a way to get the freshness of their ingredients back on the agenda and a response to consumers wanting to know and trust where their food comes from.



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New Retail

New retail in China is redesigning the consumer journey [31].

For Jack Ma, Alibaba's executive chairman the future of retail is not a question of channels, but experience.

New retail consists of offering a new shopping experience without boundaries: merging online and offline commerce. As a massive supermarket at the cutting-edge of technology, Hema supermarkets allow customers to purchase a product by scanning their QR Code. Thanks to the Hema app, they can form their virtual shopping cart. To pay, the consumer can use the Alibaba app Alipay or practice 'Hands-free shopping': once the products have been scanned, the customer can choose to have all or part the purchase delivered home.

This combines both online and offline shopping experiences. In China, the traditional marketing strategy called O2O (Online to Offline) is now becoming OMO (Online merge Offline).

Today the youngest Chinese consumers are more selective in the provenance and source of their products, and are willing to pay more for quality and international products. Healthier products, high levels of food safety, and more precise tracking are now part of consumer demand [31].

The Food Trust Framework

Retail News Asia reports several of Alibaba's Hema supermarkets in Shanghai have launched a feature showing customers an item's farm-to-store journey. The QR code on the product leads customers in-store to photos of the distributors business licences and food-safety certificates, complete with an official government seal. As the information lives on the product page of each item, those shopping from home via mobile app also have access to it.

Since the system was implemented in January 2019, over 1,700 items have been included – including meat, seafood, rice, tofu and soy products, fruits, vegetables, poultry and eggs, dairy and cooking oil. Alibaba is also part of a consortium which has introduced a food tracing system based on blockchain technology - The Food Trust Framework.

The initiative, includes two New Zealand-based companies, Fonterra and New Zealand Post, as well as Australia's Blackmores and Australia Post. It uses a central ledger to achieve "end-to-end supply-chain traceability and transparency to enhance consumer confidence and build a trusted environment for cross-border trade" says Alibaba. [30]

New and emerging technologies

The technologies and platforms described in this section aren't commercially available but may be on the horizon. Whether these technologies are able to be commercialised and applied to product provenance storytelling is yet to be seen.

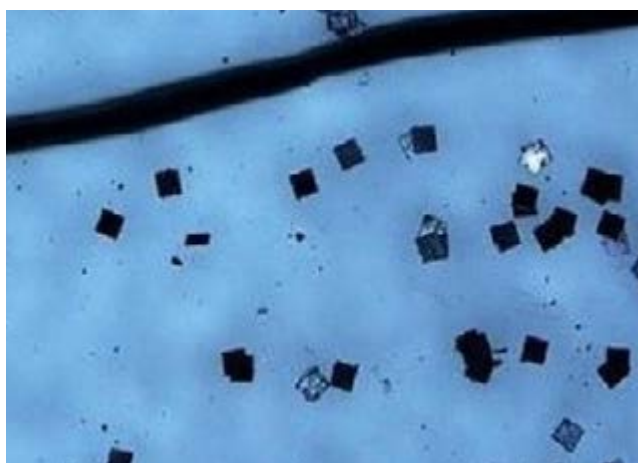
Smart Dust

Smart dust is a network of nanotechnology that can permeate different environments, be used to collect and communicate information, and then act on it. Key components driving the development of smart dust are nanoscale sensors and robots, nanoscale power generation and storage devices, and molecular machines. Applications can include tracking products from producer to consumer. A benefit of smart dust is that it can de-commoditise agriculture products. For example you can track the specific wheat that goes into making the flour to produce the bread, this can also be tracked right through to the consumer. [

While it has been around for quite a while, there are still concerns about its use that need to be overcome. These include privacy concerns (the particles are so small making detection difficult, control (retrieving the devices once they are deployed) and cost. As with any new technology, these issues will be resolved as applications, many of which are only in the concept stage, and use increase.

Context-aware computing

Context aware computing is where devices (such as smartphones, laptops and tablets) can detect who's using them, what they're doing, when they're doing it and where they're doing it. This information can then be used to better target products and services to consumers. An example of context-aware computing is the screen turning when a phone is moved. More and more sophisticated applications are being developed so it can be expected that these will include applications used to target product provenance stories and information to consumers.



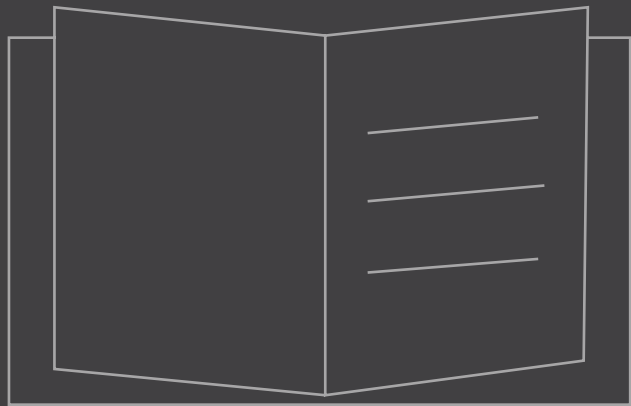
Talking Vegetables

An interesting food project is one where consumers can have a conversation with a tomato or share a laugh with a bunch of grapes. The Talkable Vegetables were created in a collaboration between Suda Lab and Hakuhodo i-studio's HACKist creative lab. Aiming to bridge the connection between farmers, produce and grocery store shoppers, Talkable Vegetables involves a touch-activated technology that plays a recording of a farmer's voice to reiterate the authenticity and honesty to fresh farm-grown produce. Although it may be startling to have broccoli and apples start talking to a customer in the store, this is a clever way to establish a direct connection with the producer.

It is an interesting concept that, as far is known, has not made it to full commercialisation. It's likely that advances in augmented-reality and virtual-reality technologies have now overtaken the technology used in this project.

Futher information

Read more: www.youtube.com/watch?time_continue=129&v=Q4GdIV8G0dE



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A person with long, dark, wavy hair is seen from the back, looking up towards a bright, glowing light source, likely the sun during a sunset or sunrise. The scene is framed by the dark, silhouetted branches of a tree. The overall mood is contemplative and hopeful.

**“The end of a story,
the beginning of many...”**

- Anonymous

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