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BEEFLEDGER TOKEN {BEEF}

888,888,888 BEEF

A BLOCKCHAIN PROVENANCE & PAYMENTS PLATFORM:

Empowering individuals and
communities to create value in
beef production excellence

WHITE PAPER II

Dated: 7 May 2018

Community enterprise created by Sister City Partners Ltd.





Directory

| | |
|--|---|
| COMPANY | BeefLedger Ltd – a public company registered in Australia ACN 622 620 875 |
| REGISTERED OFFICE AND CONTACT DETAILS | Sister City Partners Limited (Token Generation Event Developer and Manager) Registered Office: Level 1, 410 Flinders Street, Townsville QLD 4810 Email: inquiries@sistercitypartners.com.au |
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Chairman's Letter

Credentialed provenance sits at the heart of Australia's ability to capture the opportunities of the growing demand from Asia's rapidly emerging middle class for Australian foods and primary produce – in particular, the opportunities to realise greater value in the export of branded beef products.

Delivering a digital platform that can provide credible, credentialed provenance is the key to this opportunity, and that's what BeefLedger is all about. Confidence in the credentials of any meat product relies upon an immutable chain of data – linking the animal from the farm, through to the final product on the plate.

The Value of Data

The BeefLedger Token {BEEF} is a key component of giving life to credentialed provenance, and capturing and transmitting value that arises from the data that backs up the claims about food quality and its attributes.

Using the BEEF to enable transactions in the supply chain will give users access to exclusive data layers, which will provide the provenance proofs that give consumers peace of mind ...

- For consumers, that's data on everything you'd want to know about the meat ... where it came from, where it's been to, who's handled it along the way, what it's eaten and ultimately, how it was slaughtered.
- For producers, it's about being rewarded for production excellence. The BEEF is the means by which investments in better farming methods, more ecologically responsible practices and achieving high levels of certified animal welfare is acknowledged and rewarded.
- For processors and everyone else along the supply chain, it's about ensuring a fair and stable business environment with visibility on what producers are providing and what consumers are demanding. BeefLedger will deliver to all the participants along the chain a smoother payments system, which will reduce the costs and uncertainties of doing business.
- Last but not least, for regulators, the BEEF is the transmitter of credentialed auditability ... with biosecurity issues always at the forefront of regulators' minds, not to mention compliance with labeling and associated requirements, we are able to deliver visibility throughout the participating supply chain to domestic and international regulators.

BEEF – What Money Can't Buy

The digital token that we call the BEEF is all about what "good old fashioned dollars" can't buy ... that is, the data value that ultimately drives choices about what consumers will or won't buy. We are committed to enabling the constant pursuit of excellence in how we produce food, and in this case, beef.

Today's consumers are increasingly concerned about the provenance of what they put into their bodies, and no more so is this the case than in the burgeoning markets for beef in the rapidly expanding middle classes of Asia – and China in particular.

The BEEF will be the means by which consumers anywhere in the world can access all the data that sits behind the beef on their plate. And, in a world in which the demand for beef keeps on growing, our ability to meet this need while at the same time rewarding best practice and the pursuit of excellence throughout the supply chain requires lifting the veil between the consumer and the production chain.

The development of BeefLedger and the BEEF connects the world of “ether” to the old fashioned world of analogue infrastructure. We are able to undertake this developmental activity because of our ability to anchor into existing supply chains and infrastructure. We want to deepen this connection to make sure that everything we do in the ether-world is robustly tested and validated in the real world of live animals, climate, farms, trucks, yards and abattoirs.

BeefLedger is also the means by which a revitalised regional economic fabric can be achieved. Regional economies are – despite their considerable advantages and natural assets in terms of, for instance, Asia's insatiable appetite for all things “clean and green” – hampered by fragmentation and technological immaturity. We overcome both of these obstacles in one move. And in the process, we are positioned to crystallise rapid value growth over a relatively short time horizon.

Yours sincerely

A handwritten signature in black ink, appearing to read "Warwick Powell", is written over the typed name and title.

WARWICK POWELL
Director, BeefLedger Limited

Overview

Our key strengths are summarised below:



**ROBUST
DEVELOPMENT
INSTITUTIONAL
SUPPORT**
Government
Agencies and
Universities
active



**BEEF INDUSTRY
PARTICIPATION**
Graziers are
active
participants



**OWN SUPPLY CHAIN
ABATTOIR
INFRASTRUCTURE**
Opportunity to increase
stake in real assets to
secure long run
development certainty



**TECHNOLOGY
EXPERTS**
Blockchain and
smart contract
leaders

Contributing to the BeefLedger project through the BeefLedger Token (BEEF) offer is an invitation to join this industry-based, research-backed, asset-supported ecosystem, with years of industry know-how and experience behind it.

No more than 888,888,888 BEEFs will be made available.

Given consumers' demands for safe food, and ethically produced, ecologically sustainable food, there's few better ways to reward good practice and improved impacts than through the data-rich carrying capacity of digital crypto-tokens and smart contracts. That's our version of 21st century value creation that turns technology towards meeting the planet's needs and humanity's desires.

The BEEF Token is the means by which consumers can purchase beef that has been credentialed by the BeefLedger blockchain system. Without the BEEF Token, consumers cannot be sure of the provenance of the product. Other system users (e.g. abattoirs, transporters, graziers etc.) will benefit from streamlined payments made possible by the blockchain.

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1 Introduction

Demand for Australian beef from Asia, and China in particular, keeps on growing.

Producers and supply chains that meet this demand in a manner that satisfies today's consumers' ethical and ecological expectations should be, and will be, rewarded.

Provenance sits at the heart of this. And robust and immutable credentialing is what makes provenance more than a word but rather, a system that can grow new value and distribute it fairly and transparently.

We need to incentivise the pursuit of excellence. BeefLedger does that.

1.1 Food Security and Demand for Excellence

Food security is a key driver of demand for Australian primary produce and downstream value-added products from the growing middle class markets of Asia, and China in particular. As wealth rises in China, so too does demand for imported beef.

Australia has a strong reputation as a producer of clean and safe foods. Consumers increasingly want to know, and be confident in their knowledge, about a product and its origins. Provenance, authenticity, exacting ethical standards and concerns for safety are amongst key drivers of consumers' interest in Australian food products.

Our ability to make the most of the demand potential is impacted by a number of challenges.

- Firstly, food fraud is a growing problem, no more so than in the supply of beef into export markets. Substitution risk and lack of certainty and transparency in provenance sits at the heart of this concern.
- Similarly, the Australian beef supply chain exhibits a range of information asymmetry constraints adversely impacting on the efficiency and security of payments and use of capital. This increases the overall risk of sustainability in the supply chain as a whole.

1.2 BeefLedger Overview

These two problems have a common root, and can be resolved through the BeefLedger platform.

BeefLedger is **an integrated provenance, blockchain security and payments platform**. It has been designed to underpin value growth, profitability and sustainability of the Australian beef supply chain. The digital platform delivers solutions to:

- Product credentialing to support consumer confidence and effective decision-making; and
- Asynchronous payments systems and supply chain dysfunction and risk.

1.3 Food Fraud is Big Business

Globally, food fraud is a US\$40 billion per year problem.¹

Australia's beef industry has been exposed to fraud as recently as 2013 when buffalo meat was released into Europe with fake labels stating it was from Australia and Brazil. Similar experiences are known in South East Asia.²

Credentialed provenance enables the beef supply chain to tackle directly the three main dimensions of provenance risk, namely:

- **Product substitution:** where a product other than beef is substituted for beef;
- **Origin misrepresentation:** where beef from one part of the world is substituted for beef from Australia (because Australian beef is more valuable than beef from other parts of the world); and
- **Cut substitution:** where protein binders are used to “manufacture / fabricate” prime cuts e.g. rib fillets, eye fillets from meat waste.

1.4 Six Outcomes

The BeefLedger platform delivers six core outcomes. These are:

1. Confidence in beef provenance;
2. Increased brand value and supply chain profitability;
3. Streamlined payments and secure cash flow stability;
4. Mitigation of meat fraud risk and increased bio-security transparency;
5. Feedback to producers to drive continuous improvement; and
6. Transparency on impact credentials in areas such as ecological, social and economic impacts.

¹ Source: SSAFE and PWC; John Spink (2014) Michigan State University

² Source: www.sbs.com.au/news/massive-fraud-over-australian-beef

1.5 Provenance = Win⁴

In delivering these outcomes, the BeefLedger platform demonstrates the practical “win outcomes” for key industry stakeholders.

- For consumers, BeefLedger ensures better, proven products;
- For producers, BeefLedger ensures better value capture;
- For processors and other supply chain participants, BeefLedger ensures a fair and stable supply chain with rewards for the pursuit of excellence;
- For regulators, BeefLedger delivers a transparent compliance and audit system to ensure compliance with community and regulatory expectations and requirements in areas such as food safety and bio-security management; and
- For data collectors and providers – what we call Data Oracles – BeefLedger provides a transparent and accountable opportunity to valorise data value.

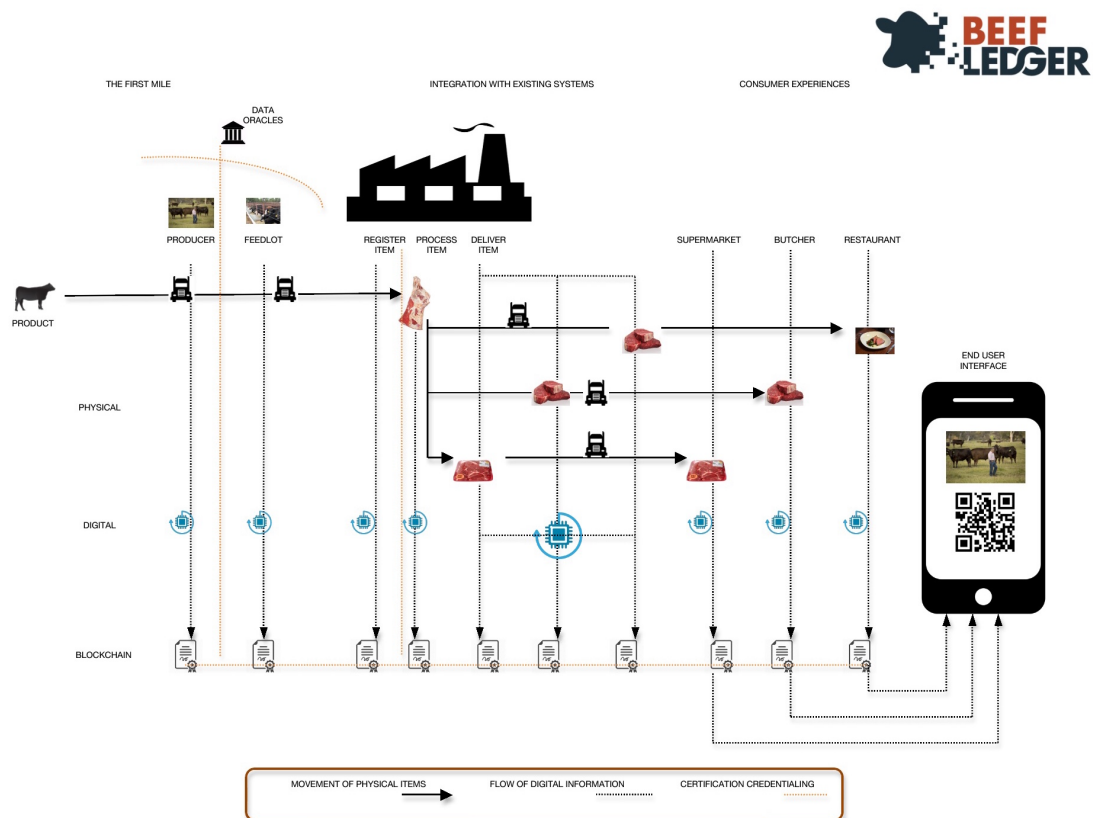
In addition, for cattle, BeefLedger provides the means by which consumers can reward producers that ensure a humane ethical treatment avoiding animal cruelty scandals.



2 Development Strategy, Scope and Path to Market

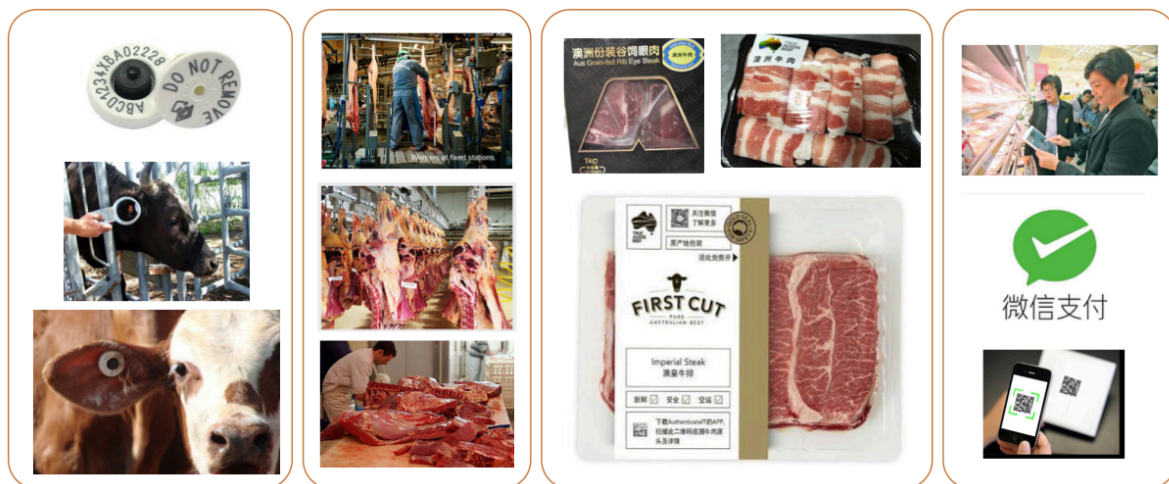
Figure 1 summarises the overall BeefLedger ecosystem.

FIGURE 1



The critical path connecting data with analogue processes is summarised in Figure 2. This shows the present cattle tagging system on the left, through slaughtering and processing, then into packages and ultimately to be interfaced with consumers on retail centres where product information, consumer feedback and payments is enabled via digital platforms such as WeChat Pay, or cryptocurrency payment systems.

FIGURE 2



2.1 Roadmap

BeefLedger will primarily deploy resources raised through the various pathways in the following activities:

1. Launch the BEEF Token in June 2018 (ICO);
2. Embed the system into at least one independent supply chain delivering transactions capabilities within 12 months (Beta);
3. Create a platform user account management system with easy-to-use user dashboards;
4. Create a stakeholder engagement platform enabling platform users to communicate with each other (peer-to-peer; referrals; ratings), and for the platform developer to maintain an ongoing loop of communication with users via active engagements, user community groups etc.;
5. Secure agreement from Biosecurity bodies that the system and platform delivers acceptable provenance data and audit compliance for food safety and export certification and governance purposes;
6. Create a payments platform and capability to enable fiat currency and crypto-currency and hybrid multi-currency transactions to take place;



7. Secure cross-border payments agreement with Chinese counterparties, and/or intermediaries, utilizing the Ethereum payments platform (especially for wholesale transactions that are bank-supported from the buy-side); and
8. Complete a data integration framework / operational protocol via API's with international freight forwarders, to enable seamless data and form processing and audit ability.

3 Market Need and Opportunity

3.1 Size of market

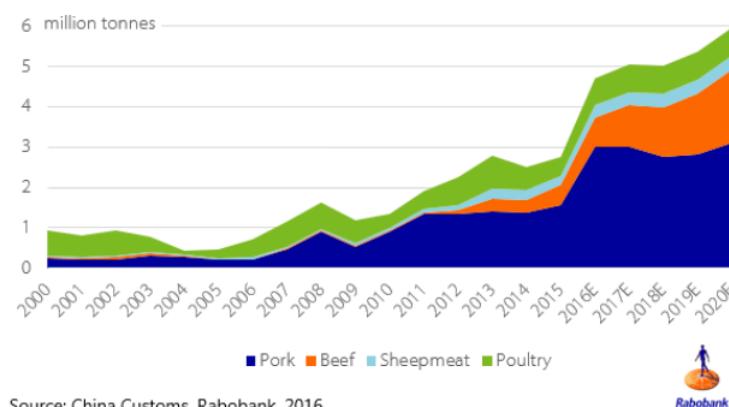
The Australian beef cattle herd is approximately 27 million head at present. Approximately 7 million head are slaughtered each year.

Australia's export of beef to China has risen dramatically over the past four years. The total value of exports was AU\$737.3 million. The vast majority of this was frozen (89%) with the remainder chilled (11%). Australian beef occupies approximately 20% of total direct imports of beef into China.

The rapid economic development of Asian countries – especially China – in the past two decades has changed the nature of food production and consumption in these markets.

FIGURE 3

Animal protein imports to mainland China will total over 6 million tonnes per year in 2020



Source: China Customs, Rabobank, 2016

Rising real incomes, rapid urbanisation, changes in lifestyle, availability of new cooking methods, and changes in consumer tastes and preferences have been, and continue to be, key drivers of growth in imported food products. This is especially the case in high quality proteins, of which beef is regarded as the pinnacle product of choice (Figure 3).

According to a recent report from Rabobank³:

In 2017, beef production [in China] is expected to drop.

Thereafter, the industry will grow at 1% to 2% each year, until 2020. However, beef demand is expected to outpace

³ Rabobank (March 2017), *China's Animal Protein Outlook to 2020: Growth in Demand, Supply and Trade*.

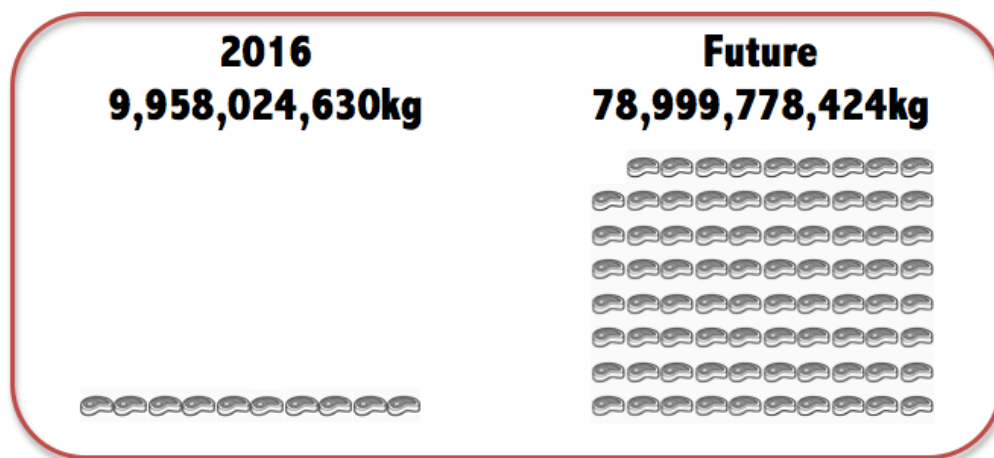
domestic production. This will lead to growing imports in the coming years. By 2020, imports are expected to make up more than 20% of the total supply.

Hong Kong also offers a significant market and gateway to the burgeoning middle classes of Mainland China, especially those located in the Pearl River Delta.

In volume terms, it is worth noting that:

- China's consumption per capita consumption of beef is 6.1kg or 12.2lb (2016). It ranks 47 in per capita consumption;
- By way of contrast, Hong Kong's per capital consumption is 57.1kg (114.3lb). As China's household wealth increases, growth in per capita consumption can be expected; and
- If Hong Kong's demand is any guide, we can expect China's consumption volumes to grow tremendously (Figure 4). The challenges of food fraud go up a notch in this environment.

FIGURE 4





3.2 Diversification

Horizontal diversification utilising the core platform into other protein chains, and then to other foods is the logical horizontal application of the underlying BeefLedger architecture. In this regard, the underlying platform architecture being developed to enable the BeefLedger suite of credentialed provenance and payments tools can be ported to other application domains, with modest amounts of customisation.

This represents not only a significant market growth opportunity for low marginal cost expansion, it also provides other food production sectors with a low risk entry point into a digitalised end-to-end provenance and payments platform with similar benefits to those sectors as will be delivered in the beef industry.

4 Our Advantages

BeefLedger has three core advantages. They are:

1. We have access to our own supply chain assets;
2. We operate within a robust research and development institutional ecosystem, with strong linkages with reputable higher education and research organisations; and
3. We have in place our own initial user community, as a foundational platform for the development and future implementation of the underlying network.

Our partners include:

- Research
 - James Cook University (Queensland);
 - Food Agility Cooperative Research Centre (funded by the Australian Commonwealth Government);
 - Innovation Policy and Practice Institute, Curtin University (Western Australia)
- Beef Industry
 - Commbeef Processing – an Australian beef abattoir operator;
 - My Farm Australia, premium producers and breeders of Black Angus cattle;
 - Blue Lake Station, an award-winning beef producer and feedlot operator;
- Technology and Specialists
 - Soar Labs Pte Ltd, a global blockchain ecosystem developer;
 - ASTA, a leading IT development company;
 - One of Australia's leading packaging company (confidentiality agreements prohibit us from naming them at present);
 - TSW Global, a highly respected analytical laboratory specializing in traceability, provenance and supply chain forensics;

Our partner base is growing all the time.



5 BEEF Token

BeefLedger will issue BEEF Tokens, a network token that will be tracked on the BeefLedger blockchain. To benefit most from the provenance credentialing, customer feedback and payments streamlining services to be delivered over the BeefLedger platform, the buyers and sellers of cattle and meat will need to utilize BEEF Tokens as the platform's means of payment and data access and transfer.

5.1 Drivers of Value

The BEEF Token is the foundations for a public blockchain-based ecosystem of trading platforms and meat supply chain-related businesses and companies. We envisage a future in which an emergent network of developers will be incentivized to improve upon and help maintain a suite of tools and applications on the back of the immutable data thread anchored in BeefLedger. In this way, BEEF Tokens give rise to platform stickiness and network growth effects: those that develop useful infrastructure on the BeefLedger architecture using the BEEF Tokens will increase its value, providing further incentive to improve the library of tools and applications.

Aside from the virtuous cycle of value growth implied in a user-developer ecosystem, the BEEF Token also has other key value drivers related to the intersection between the value of provenance data *per se*, and the assets and activities that give rise to its need. These arise in the following main areas:

1. The growing demand for beef in conditions of constrained supply, and a finite number of BEEF Tokens on offer;
2. The increasing demand for “peace of mind” and ethical procurement anchored by credible provenance data;
3. The grounding of the BEEF Token in activities undertaken across a supply chain infrastructure anchored by tangible real assets (e.g. abattoirs);
4. Payments streamlining giving rise to monetized cost reductions; and
5. The ability of producers to have access to direct feedback and engagement with the end user community, creating new opportunities for growing loyalty value and goodwill value between producers, consumers and their surrounding social community.

5.2 BEEF Token Sale

There will be a total of 888,888,888 BEEF Tokens available in the BeefLedger ecosystem. These will be offered through a structured sale program. The details are summarised below:

| Stage | Dates | Token Distribution | BEEF Volume | ETH : BEEF Value | BTC : BEEF Value |
|---|--------------------------|--------------------|------------------------|---------------------------|---------------------------|
| Pre-Sale | Pre-Sale Dates | | | | |
| Stage 1 | 31 March 2018 | 15% | 133,333,333 | 0.00001206 : 1 | 0.00000075 : 1 |
| Stage 2 | 31 May 2018 | 15% | 133,333,334 | 0.00002159 : 1 | 0.00000125 : 1 |
| Stage 3 | 30 June 2018 | 10% | 88,888,889 | 0.00003239 : 1 | 0.000001875 : 1 |
| Exchange | June 2018 | | | | |
| Surplus Tokens | | | | | |
| Partner Tokens | | 30% | 266,666,666 | | |
| Retained by the company to support future network development and provision of system liquidity | | 30% | 266,666,666 | | |
| Total | | 100% | 888,888,888 | | |
| Initial Exchange Value | | | | | 0.00000288 |

The issuer reserves the right to discontinue the pre-sale or alter the sales program without explanation or notification.

5.3 Retained Tokens

A total of 45% of all BEEF Tokens will be retained:

- 15% (133,333,333 BEEFs) for Partners, to support ongoing development of the platform; and
- 30% (266,666,666 BEEFs) for the BeefLedger to enable it to act as the platform lender of last resort, to maintain liquidity where and when necessary.

5.4 Token Issue

Our TGE structure will perform an exchange of BEEF Tokens from your contribution of Ether or Soarcoin during June 2018. Tokens unsold during the sale will be added to BeefLedger Limited Tokens.



5.5 BEEF Liquidity

The BEEF Token is paired with Soarcoin, thereby providing liquidity for users when they do not need to hold BEEF Token. BEEF Tokens may be listed on at least one international cryptocurrency exchange enabling crypto-to-crypto exchange to take place.

6 The Team

6.1 Governance

A Board of Directors, comprising the following, will govern BeefLedger:

| Name & Role | Background |
|------------------------------------|---|
| Warwick Powell Director and CEO | <p>Warwick Powell is the founder of Sister City Partners Limited, and brings over 20 years' experience in innovative business and project curation and development. His experience covers supply chain integration, including in the beef sector, telecommunications, funds management, property development (in diverse sectors), energy and natural resources, big data analytics and systems re-engineering. He is a recognized leader in the regional innovation ecosystem in Australia. He is an Adjunct Research Fellow at James Cook University; has developed and taught MBA courses in innovation, creativity and leadership; is a member of the Peer Review Colloquium of <i>She Ji</i>, an international multi-disciplinary design journal; and is a founder and executive member of Innovation NQ Inc., a regional incubator and co-work space based in Townsville, North Queensland. The Institute of Managers and Leaders recently recognized him for his work in the not-for-profit space, when he was a Regional Finalist in the Australian Leadership Excellence Awards (2017).</p> <p>Warwick is a blockchain thought leader, and has been invited to speak regularly on the opportunity of the technology to transform agribusiness and regional economies in general.</p> |
| Mark Dunworth Director | <p>Mark Dunworth is a successful businessman, based in Townsville North Queensland, where over the past 30 years he developed an integrated suite of businesses in property management, construction and financial services. He exited the businesses in 2008, and took a sabbatical. He returned to active professional business life in 2015 when he joined Sister City Partners Limited as its North Queensland Director. He is a Director of CommBeef Processing Pty Ltd, and is responsible for the strategic and operational direction of the supply chain integration that is being undertaken within the CommBeef umbrella. Mark's experience "on the ground" will be an invaluable contribution to the practical success of the BeefLedger project.</p> |
| Charles Morris Director | <p>Charles is a finance specialist with over 30 years' experience in business and corporate financing. His expertise lies in ensuring compliance with relevant laws and providing innovative solutions to business financing needs.</p> |



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|--------------------------------------|--|
| Ross Honeyman (Company Secretary) | Ross is a 40 year veteran of the financial services industry, whose experience in corporate governance together with detailed knowledge of product supply chains will add invaluable robustness to the integrity of the BeefLedger project and associated initiatives. |
|--------------------------------------|--|

7 Roadmap

Our development path is evolving rapidly. The Roadmap below is indicative of our trajectory and targeted key milestones. These may be altered as project progress develops.

BeefLedger Roadmap



www.beefledger.io