

# CCP Technologies Limited (ASX:CT1)

## Investor Update



INVESTOR PRESENTATION SEPTEMBER 2018

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A network diagram with various icons (truck, shopping cart, airplane, house, satellite, factory, laptop) connected by lines, set against a starry space background. The 'O' in 'IoT' contains a globe.

# IoT

## INTERNET OF THINGS

**Our vision is to be the IoT Platform of choice for critical control point management in the Food Industry**



# FOOD IS THE WORLD'S LARGEST INDUSTRY

Problems not yet solved

## ADVANCED TECHNOLOGIES

Simple and Cost Effective  
Scalable IoT Solutions





# Size of the Food Industry

Approximately 3.6 billion tonnes of food was produced in 2017 (FAO).

Global value of food and beverages rose from \$8.3 trillion in 2004 to \$15.1 trillion in 2014.  
Compounded growth of 7% per year.

Complex industry with many supply chain participants.



# Industry Challenges

## Food Waste

Every year the world wastes 1.3 billion tonnes of food intended for human consumption, along with all the energy, water and chemicals needed to produce and dispose of it. That's equivalent to one third of total food production.

## Food Safety

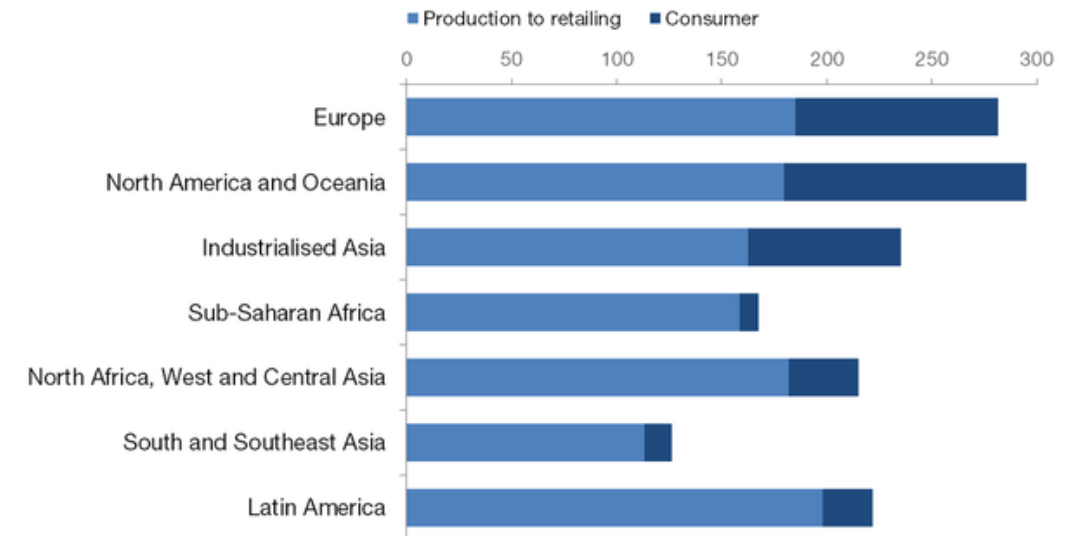
In Australia, an estimated 4.1 million domestically acquired cases of foodborne illness occur every year, costing an estimated \$1.2 billion.

## Energy Costs

Refrigeration is a massive energy consumer. The Smart Energy Design Centre found that for an average US grocery store, 57% of its energy costs are directly associated with refrigeration.

### Which regions waste the most food?

Per capita food losses and waste, kg/year



Source: The Food and Agriculture Organization of the United Nations (FAO)

# Market Need

Market research shows that almost one quarter of food waste is due to deficient refrigeration or what's known as a "cold chain failure".

Not only is the food wasted, but all the energy, water and chemicals needed to produce it and dispose of it is also lost.

**Cold chain failure leads to increased food safety risk and reduced product shelf-life.**

CCP data shows that 4.9% of refrigerated coolers and freezers will suffer a complete failure each year. It's not a matter of 'if a fridge breaks down'; it's 'when will it break down'.

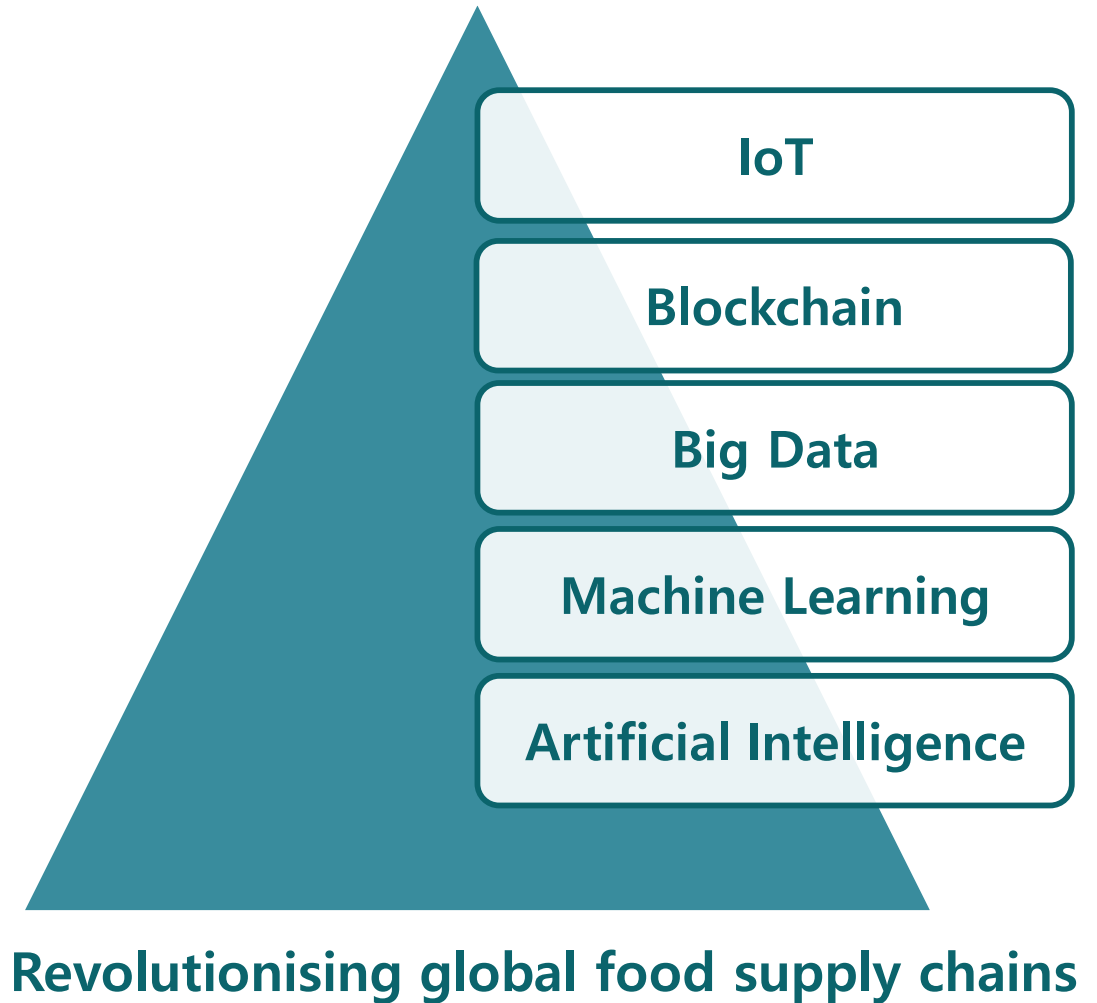


# Addressing the Market Need

## CCP is an Advanced Technology Solution

"Just as the Internet has become an indispensable part of every business, IoT is set to feature in every supply chain. No matter what industry you can think of, there are hundreds of millions of critical control points in every supply chain. Companies such as CCP Technologies are positioning to secure opportunities where IoT makes a positive impact on supply chains and people's lives."

*Small Caps (smallcaps.com.au), 18 September 2018*





# The CCP Solution

Our goal is to help our clients save money and reduce business risk. Continuous monitoring and data analytics provide the intelligence needed to reduce product wastage, minimize food safety risk, improve the operating efficiency of refrigerated assets.

CCP hardware is patented in Australian and with patents pending in other territories.

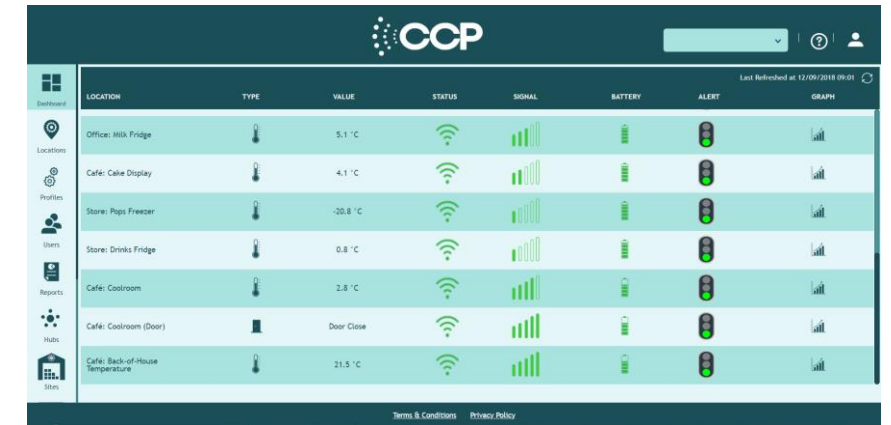


CCP cloud-based software analyses data to provide advanced business intelligence.



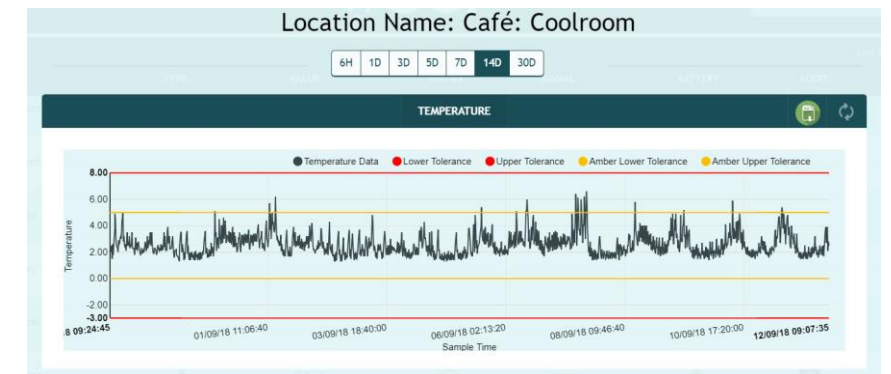
# CCP Differentiation

- ✓ **Edge Computing** – unlike many IoT devices, CCP Smart Tags contain firmware to process data on-board. CCP Tags deliver a powerful edge-computing solution.
- ✓ **Multifunction** – CCP's tags monitor a range of critical control points such as temperature, humidity, pH, door status, power status.
- ✓ **Proprietary & Patented** – CCP's devices firmware and software is designed and developed in-house. Our tags operate on patented technology.
- ✓ **Low cost** – Smart Tags are low cost by market standards.
- ✓ **Easy to use** – simple and quick to install – Plug & Play, providing real-time monitoring, analytics and notification of breaches.

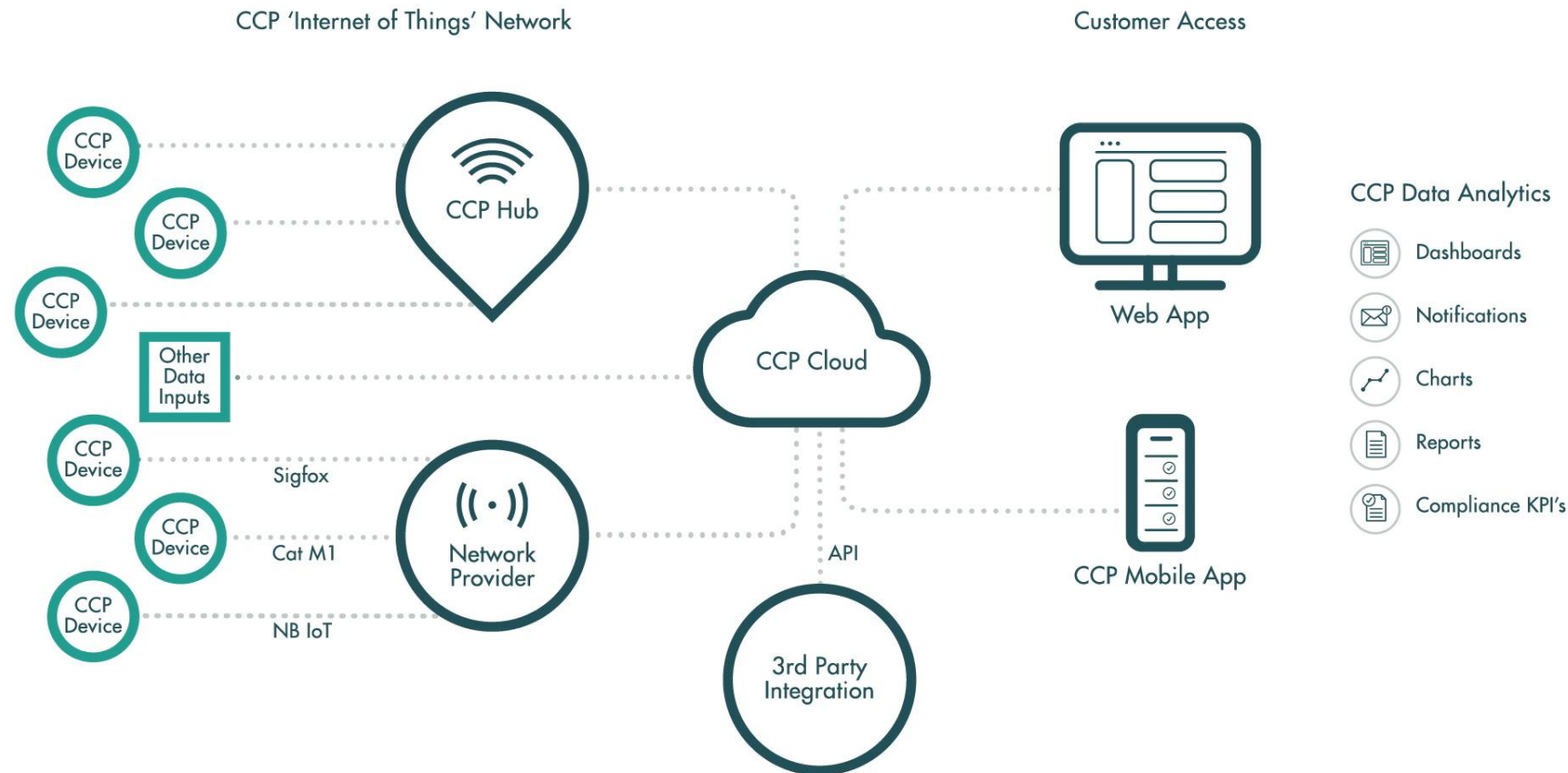


The screenshot shows the CCP dashboard interface. At the top, there's a header with the CCP logo and a user profile icon. Below the header is a table with columns: LOCATION, TYPE, VALUE, STATUS, SIGNAL, BATTERY, ALERT, and GRAPH. The table lists several locations being monitored, including Office: Milk Fridge, Café: Cake Display, Store: Pops Freezer, Store: Drinks Fridge, Café: Coolroom, Café: Coolroom (Door), and Café: Back-of-House Temperature. Each row shows the current value, status (e.g., Wi-Fi signal), battery level, and an alert indicator (traffic light icon). A sidebar on the left contains navigation icons for Dashboard, Locations, Profiles, Users, Reports, Hubs, and Sites. At the bottom, there are links for Terms & Conditions and Privacy Policy.

LOCATION	TYPE	VALUE	STATUS	SIGNAL	BATTERY	ALERT	GRAPH
Office: Milk Fridge		5.1 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Café: Cake Display		4.1 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Store: Pops Freezer		-20.8 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Store: Drinks Fridge		0.8 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Café: Coolroom		2.8 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Café: Coolroom (Door)		Door Close	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon
Café: Back-of-House Temperature		21.5 °C	Wi-Fi	Signal strength bar	Battery icon	Alert icon	Graph icon



# Scalable Platform



**Continuous 24/7 data capture**

**Immediate notification of breaches**

**Dashboards accessible 24/7 from any device**

**Sophisticated user-friendly platform**

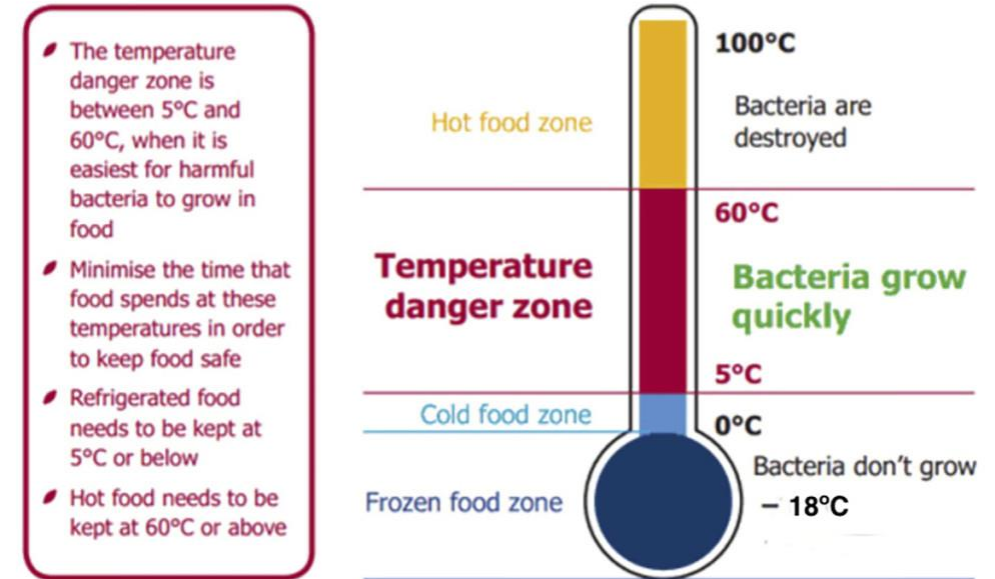
**Automated HACCP reporting and diagnostics reporting**

**Monitor temperature, door events, humidity and more**

# In-situ Monitoring

Temperature monitoring in-situ (fixed location) within controlled environments underpins food safety and automates compliance reporting. It also optimises the performance of refrigeration assets by reduce energy and maintenance costs. These capabilities reduce business risk.

Smart tags can be placed in any environment-controlled asset including coolers, freezers and warming ovens. The CCP Solution provides notifications when temperature tolerances are breached, when power is lost or when a door is left open.

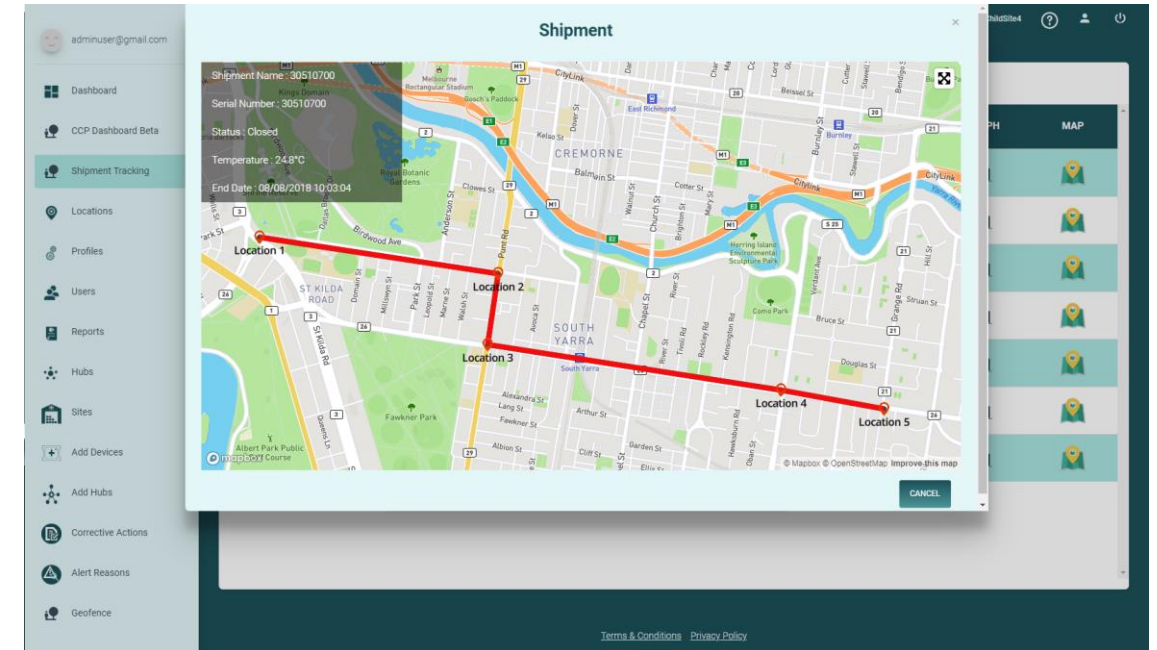


Across the globe, regulations to underpin the cold chain are tightening. This is driving the adoption of critical control point management systems.

# Shipment Monitoring

Temperature monitoring in refrigerated environments during transport is also critical to underpinning food safety, automating compliance reporting and reducing business risk.

CCP tags can be placed in pallets of goods or fixed inside refrigerated vehicles to capture critical control point data including temperature, humidity, location, shock etc. The CCP solution incorporates geo-fencing and sends notifications when tolerances are breached.



Real-time shipment monitoring supports our Blockchain initiatives by providing convenient and continuous access to validated data as goods move along the supply chain.



# CCP has over 100 customers - many multi-site



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# Target Market Drivers

**Clear Drivers for Uptake** – Food Safety legislation establishes a legal requirement for every business handling perishable food in Australia, USA, Asia, Europe (and increasingly in every developed country) to monitor temperature.

**Compelling Value Proposition** – CCP delivers improved food safety through automated digitised record keeping, and manages assets to reduce costs associated with food waste, excessive energy consumption and maintenance. It also reduces business risk.

**Tightening Regulations** extend CCP's opportunity to leverage its platform to include key enablers for 'smart contracts'.

**Massive Market** – Temperature monitoring in the US food industry is a US\$2bn+ market.

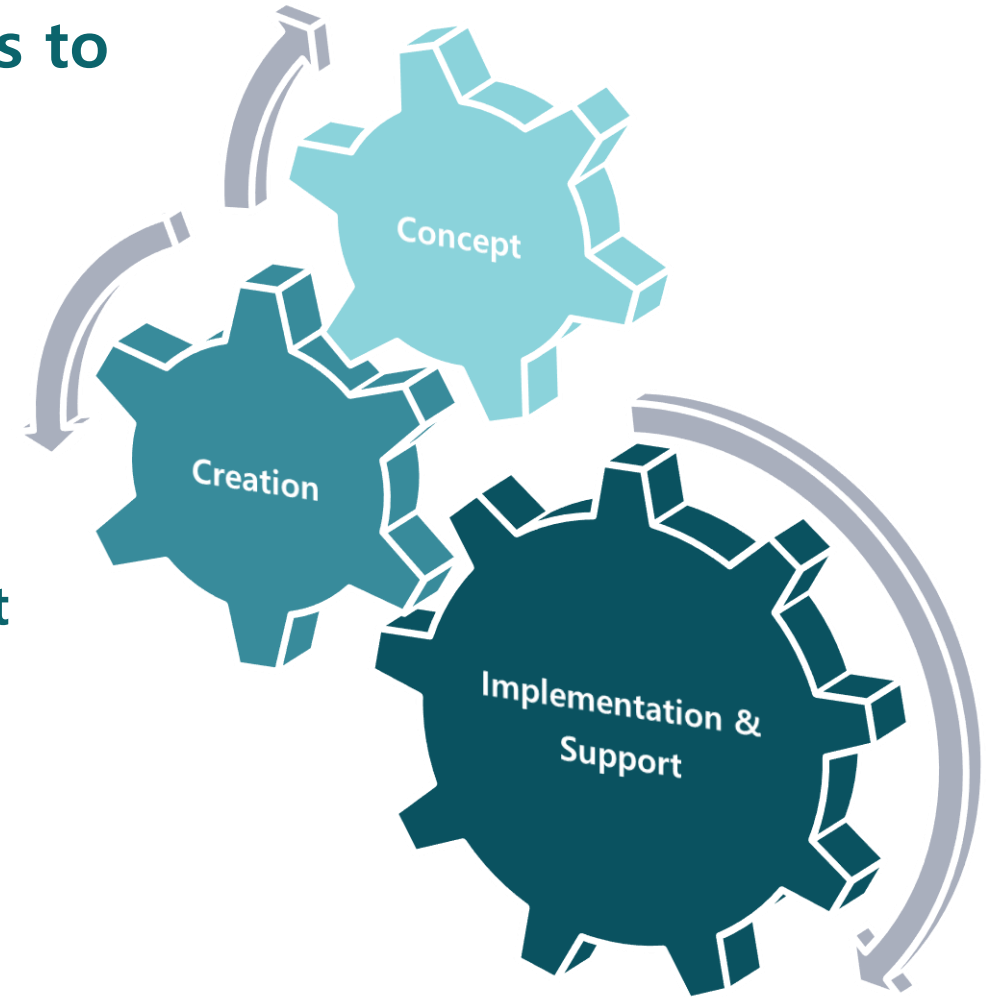
**Studies estimate that 90% of food businesses manually monitor temperatures, keep paper-based records, or fail to comply.**

# Contract Development Services

CCP is leveraging its IoT development resources to undertake contract development projects for partners and other third parties.

Current activities include Blockchain and IoT projects

- Rapid R&D and production services for IoT hardware
- Devices, Web and Mobile Apps, Platform development
- Opportunities for licensing existing IP
- System Integration
- Data Analytics



# Impressive On-trend Capability

## VERTICALS

CAPABILITIES	Internet of Things	Software	Web Technologies	Data Analytics	Blockchain
	LP WAN IoT Protocols including Sigfox, NB-IoT and Cat-M1	Hybrid (Web and Mobile device application) development	Dynamic web application development using Angular JS Framework	Set-up and maintenance of Big Data Platforms (Microsoft HDInsight)	Custom development of Distributed Application (DAPP) development on the Ethereum Platform.
	Local Communication Protocols including WiFi, Bluetooth Low Energy (BLE), Near Field Communication (NFC)	Native iOS and Android device application development for smart phones ,tablets and smart watches.	Responsive, cross-platform development using Xamrin forms	Streaming of IoT device data using Kafka streaming services	Blockchain to secure data and enhance trust verification processes.
	Modular hardware design and manufacture (up to four layers)	Design and implementation of layered software architecture	Robust REST API design and development using ASP.NET Web API	Machine learning algorithm development using R Language	Development of smart contracts and Decentralized Autonomous Organizations executed in distributed environments for enforceability and verification.
	Sensor and probe interfaces (temperature, humidity, pH, DO, shock, location, movement etc)	Structured and unstructured database design and integration (SQL server, MongoDB)		Deployment of Machine Learning algorithms using SparkR & Hive	Blockchain technologies including Solidity, Truffle Suite, Remix, Ganache and Drizzle
	Firmware development in EmbeddedC	Cloud-based application deployment		Business Intelligence tools including Power BI & Tableau (dashboards, reports etc.)	
	Rapid prototyping for nascent technologies	Continuous integration			
	End-to-End product development and production (hardware/firmware/software)	Agile Development			
	Certification-ready product development (Sigfox, FCC Part 15B, IP67)	Xamarin,Tizen,watchOS			

# Blockchain Pathway

## CCP has developed a showcase IoT Blockchain solution

- Blockchain is poised to transform commerce as we move towards fully-automated supply chain management with smart contracts.
- By using Blockchain technology, tracing contaminated product to its source quickly will help curb the spread of foodborne illnesses and potentially prevent deaths.

"We invested in CCP because we see many strategic opportunities to work with the company to deliver new solutions to the market. The new partnership will see the integration of Blockchain and IoT technologies to deliver socio-economic impact."

*David Ritter, CEO of Penta Global Blockchain Foundation*

*"I brought a package of sliced mangoes into my staff meeting. I put it on the desk, and I said to my team, the traceback study starts right now" said Walmart's Vice President of Food Safety. He waited seven days for his team to track mangoes to the farm. By using Blockchain, Walmart has reduced that timeline to 2.2 seconds.*





# White Tiger Strategic Joint Venture

**A 50/50 JV in the USA (Las Vegas) announced 30 August 2018 with Koolmax Monitoring Technology Inc. This JV offers a compelling bundled solution which combines White Tiger Filters with the CCP Monitoring Solution.**

Immediate JV Customer Contract Value of US\$71,000 (A\$97,000) announcing on formation.

At-risk incentive program established to drive JV net revenue. If milestones are met, Koolmax will have the right to subscribe for equity in CCP which has the potential of delivering at least \$1.75m of new capital into CCP.

**JV provides CCP with access to new clients, distribution channels and an experienced team in the US market.**



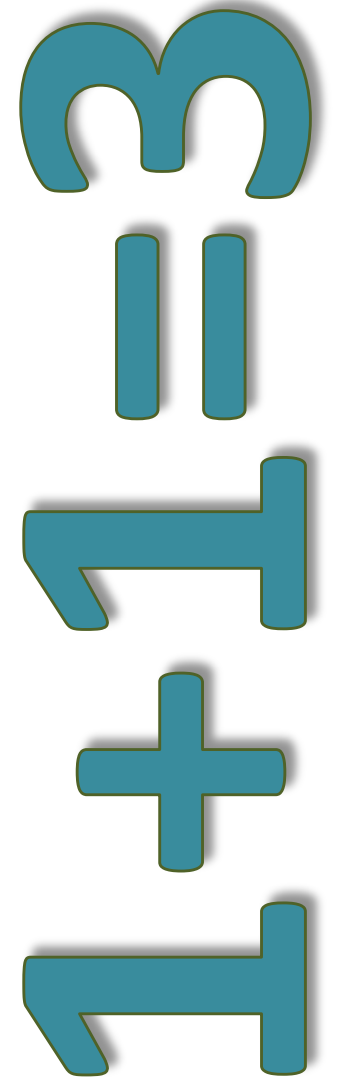
# M&A Opportunity

- Currently, the IoT space is fragmented
- Opportunity to create an IoT flagship company accommodating leading disruptive solutions in the supply chain space
- Pathway to augment revenue growth and diversification

## M&A Strategy

- Capture a defensible position in niche markets using IoT & Blockchain applications and partnerships
- Target synergistic small to medium sized businesses with revenue growth and sustainable positive margins built on innovative disruptive technologies

**Our White Tiger JV presents a first step along this path.**



# Company Information

"As a testimony to the quality of CCP's critical control point management system, the company secured agreements with global firms such as Vodafone, sales channels were broadened (including an agreement with Dicker Data – one of Australia's largest hardware distributors), and we were buoyed by independent research which outlined our company's comparative strengths."

Leath Nicholson, Chairman, CCP Technologies – Annual Report 2018

Market Capitalisation	\$6.4 million
Current Shares on Issue	394,166,170
Number of Shareholders	896
Average Holding	440,000 shares
Founding Shareholders (4) hold	118.6 million shares (30.1%)
Top 20 Shareholders hold	234.1 million shares (59.4%)

Note. Current as at 18 September 2018

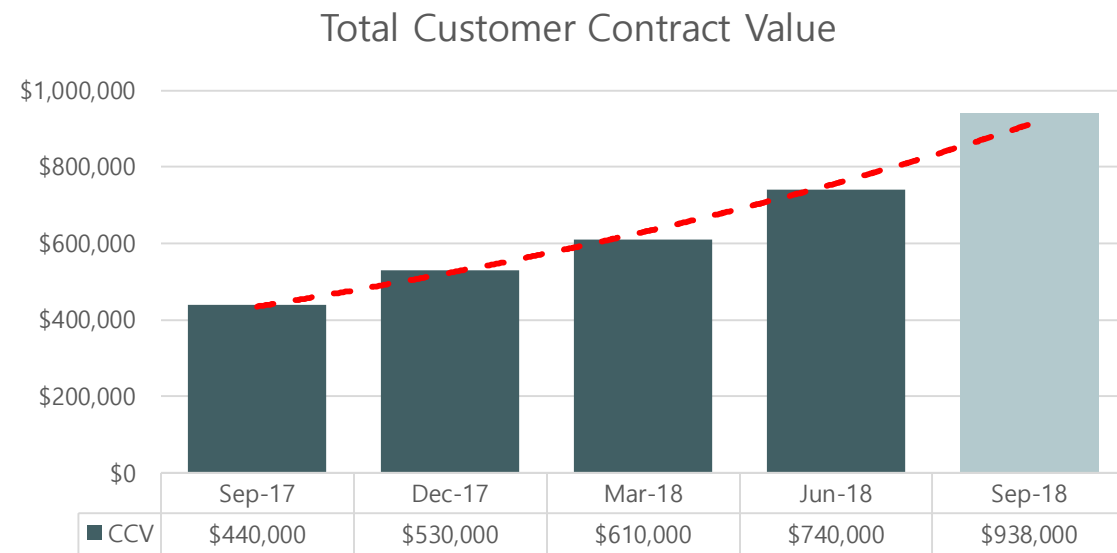
**"Valuation Rating:  
Undervalued"** Morningstar  
Quantitative Rating, Sept 2018

**"Buy Recommendation  
with initial price target  
of 4.6 cents per share"**  
TMT Analytics Research Report

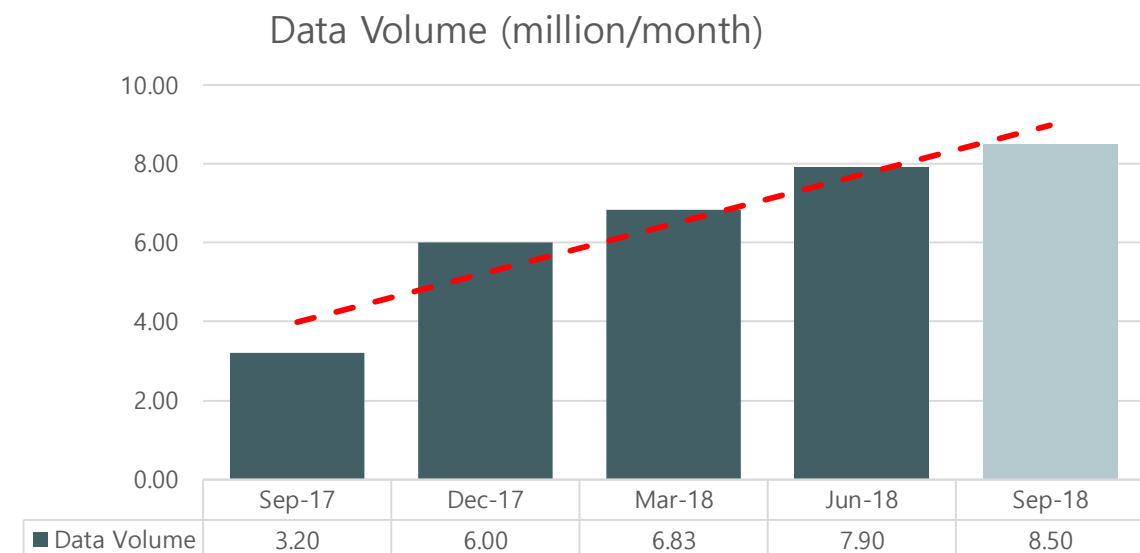
# Customer Contract Value

**Customer Contract Value (CCV)** is growing at an average rate of 23% on a quarterly basis. This is due to consistent growth in Subscription Revenues (supported by the White Tiger JV and resellers in Australia and SE Asia) and growth in contract development revenue with four contracts now underway.

**Data Volume (Data Points captured over past 30 days)** steadily rising.



**Note:** Figures for the Sep-18 QTR are estimates only



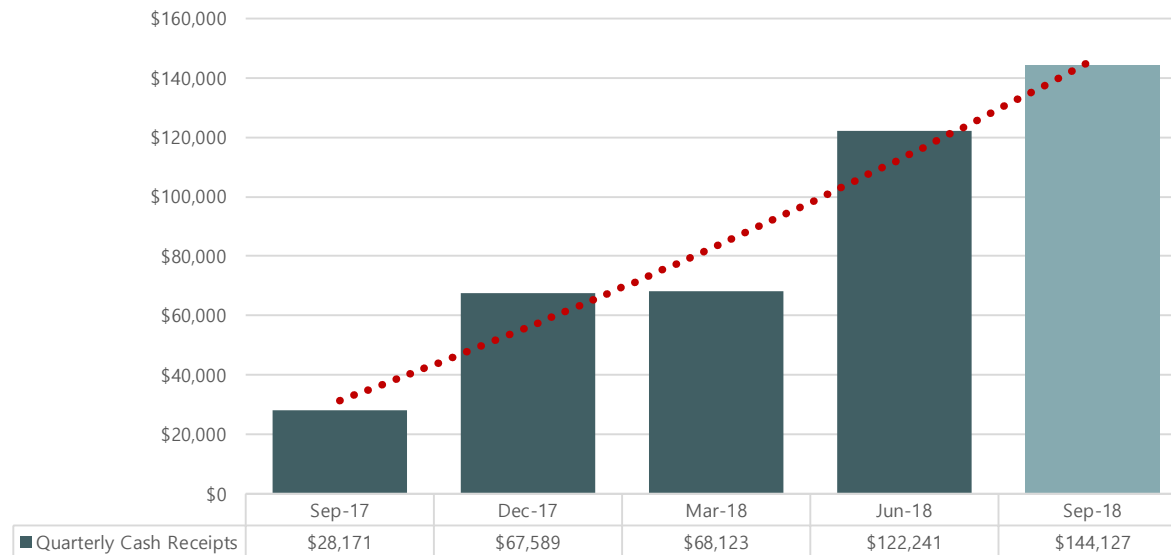
**Note:** Figures for the Sep-18 QTR are estimates only

# Strengthening Quarterly Results

**Quarterly Receipts** are steadily rising as we secure more subscription and development contracts.

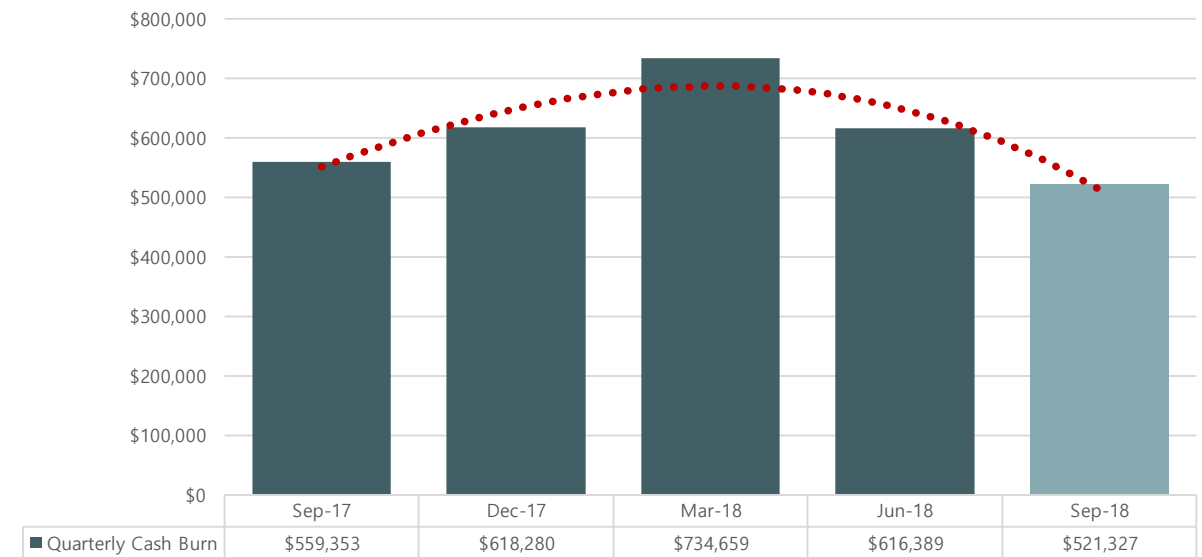
**Quarterly Cash Burn** reached a peak in the Mar-18 QTR and has declined steadily with the increase in customer receipts. Whilst labour costs will rise, we anticipate the monthly cash burn will continue to decline as larger contracts are secured.

Quarterly Cash Receipts



**Note:** Figures for the Sep-18 QTR are estimates only

Quarterly Net Cash Burn



**Note:** Figures for the Sep-18 QTR are estimates only



# Key Pillars

<b>Solution</b>	CCP's proprietary hardware in conjunction with its patented hardware platform provides a truly differentiated IoT solution. Recurring monthly per-device fee.
<b>Market</b>	CCP is relevant to any operation that monitors critical control points. CCP is currently focusing on the food industry market where regulation is driving the adoption of automated wireless monitoring.
<b>Customers</b>	CCP's subscription client base spans Australia and the US with trophy clients across most food sectors including food service, retail, production and distribution.
<b>Partners</b>	CCP has direct and indirect sales channels, including partnerships with telecommunication network providers (e.g. Vodafone, Sigfox operators), distributors (e.g. Dicker Data with over 5,000 resellers), and service providers (e.g. refrigeration services firms like Channon's).
<b>Operations</b>	CCP is based in Melbourne, Australia with its major R&D and manufacturing capability in Bangalore, India and an additional US-based sales team.

# Why Invest in CCP?

Business Model Validated

Global Reach

Competitive Advantage

**MASSIVE MARKET OPPORTUNITY**

Strengthening Regulatory Environment

**EXPERIENCED & PROVEN MANAGEMENT TEAM**

# Executive Management and Board

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**Michael White**

CEO and Managing Director

Over 25 years entrepreneurial and executive experience in food production and supply management and technology innovation.



**Anthony Rowley**

COO and Executive Director

Over 25 years experience in corporate governance, sales and marketing, business planning and administration.



**Kartheek Munigoti**

CTO

Over 15 years experience in IT including 8 years managing software development in wireless cold chain management.



**Leath Nicholson**

Non-Executive Chairman

Co-founded Foster Nicholson Jones in 2008. Non-Executive Director of Money3 Corp (ASX:MNY) and AMA Group (ASX:AMA).



**Anoosh Manzoori**

Non-Executive Director

c.20 years' experience in building successful businesses with a focus on scaling tech companies. Executive Director of First Growth Funds Limited (ASX:FGF) and CEO of Shape Capital.



**Adam Gallagher**

Non-Executive Director

Experienced public company director with skills in business strategy, market communications and M&A. Director of Envirosuite Limited (ASX:EVS).