



Corporate Presentation

Etherstack plc (ASX:ESK)

December 2020

Authorised for release by David Carter



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Etherstack Snapshot

Who we are

- Etherstack is an established wireless technology company serving public safety, electric utility, resource and defence sectors across the globe
- We develop and license wireless technologies to other equipment vendors as well as design, manufacture and deliver our own innovative digital radio communications products and networks
- Founded and based in Sydney, the company is twice as large offshore than onshore
- The company has four international R&D centres:
 - Australia (Sydney)
 - UK (Reading, 2005)
 - Japan (Yokohama, 2006)
 - US (New York, 2008)
- Designing in our own labs, we manufacture and assemble in advanced partner facilities in Australia, Canada, US and UK
- Etherstack is open 24x7 providing support services to our burgeoning customer base
- IPO in 2012 on the ASX



Business Overview

Terrestrial Digital (VHF, UHF, 700MHZ)

Cellular Networks (4G & 5G)

Satellite PTT Networks (GS, LEOS, MEOS)

Traditional Digital LMR Products

Mission Critical Push to Talk (MCPTT)

Push to Talk (PTT) Over Satellite Solutions

Overview

Digital Land Mobile Radio (LMR) Networks: Etherstack designs, manufactures and delivers our own innovative digital radio communications networks

OEM Supply: range of highly specialised Original Equipment Manufacturer (OEM) modules

Technology Licensing: Etherstack licenses technologies to wireless equipment manufacturers, for embedding in chipsets within their solutions

Emerging international cellular standard to provide public safety solutions across 4G and 5G networks

Global partnership with Samsung to use Etherstack technology

Builds on Etherstack's **existing** digital LMR soft-switching technologies

Technology to be supplied to Samsung's telco carrier clients globally

High yield plus long term support revenues

Advances in satellite communications technologies and unprecedented number of satellites launched in the past 12-24 months

Has provided significant satellite bandwidth availability and commensurate cost reductions

Etherstack has been developing secure PTT over Satellite solutions for the past 36 months

Initial pilots with public safety and other govt departments in Australia, US & Canada underway

Example Customers / Partners

LMR: Public Safety agencies the US, Canada and Australia

OEM and Licensing: Cisco, Icom, NEC, JVC Kenwood, Harris, Thales, Rockwell Collins and Lockheed Martin

June 2020: Samsung Global Teaming Agreement

Targeting global telcos through the Samsung partnership, multiple pursuits underway

In discussions with a major satellite equipment supplier to incorporate Etherstack's technology into their offering

October 2020: Delivered satellite PTT solution to RCMP (Royal Canadian Mounted Police)



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December 2020 - Australian Department of Defence Contract Win

Etherstack's Defence Technology Expertise

- Small form factor tactical communications products, providing secure communications on the move. Supplied to US federal agencies for some years
- Cryptographic modules and end points, as well as sophisticated key management and storage systems. Supplied to US, Canadian and Australian government clients and numerous international defence equipment manufacturers for over a decade
- SDR transceiver platforms and associated waveform technologies (narrowband and wideband) for use in diverse applications including airborne repeaters and tactical link solutions

New Award

- Opening AUD\$4.1m contract to provide certain technology and services to the Australian Department of Defense over next 18 - 24 months
- Scope for additional work packages
- Highly repeatable solution with strong overseas interest and export opportunity

Proven Track Record of International Wins

- Previous and current direct engagements with multiple NATO member governments
- Successful export of technologies to international defence companies such as Harris, Thales, Raytheon, Lockheed Martin, Rockwell Collins, GDC4S and Cobham

June 2020 - Samsung Global Teaming Agreement

Partnership to Deliver Next Generation MCPTT

- Emerging cellular standard to provide public safety solutions within 4G and 5G cellular networks
- Builds on Etherstack's digital land mobile radio technologies embedded within Samsung's advanced network solutions
- Multiple pursuits underway with telecommunications carriers around the world
- Commitment to open standards to deliver premier solutions

Etherstack's Proven Track Record of Expertise

- Two decades of experience in digital land mobile radio and Push to Talk softswitching in multiple technologies (Cellular, APCO P25, TETRA, DMR and Satellite)
- Global footprint in mission critical markets and innovative technologies
- Key technology licensor of underlying technologies to almost two dozen wireless equipment manufacturers
- Longstanding support presence and delivery record

Etherstack Market Opportunity

Global Push to Talk Market Size

\$43.8 bn

by 2025¹

Global Push to Talk CAGR

10.1%

forecast to 2025¹

Global Telcos

National carriers expected to provide guaranteed capacity to public safety agencies in each country (e.g. bushfires, ambulance, policing)

Initial focus is on 37 OECD countries – approximately 100 -120 telcos
Each deal won would represent \$2m - \$8m license to Etherstack plus long-term annual support revenues

Etherstack technology bridges traditional digital LMR and new 5G public safety solutions

Selected end user sectors



Digital radio networks and equipment for essential services such as **electric utilities** and **first responders**



Tactical communications systems for **security services** (e.g. police) and **defence** deployments



Wireless communications systems for **resource sector** projects such as mine sites and pipelines

Etherstack Market Trends

Etherstack is leveraged to government and infrastructure spend

- ✓ Etherstack is influenced by government and industry infrastructure spending which flows to areas such as public safety, utilities, defence and resource projects
- ✓ Unprecedented global stimulus spending will be directed to health, emergency services, public safety and security
- ✓ Increased need for secure sovereign communications
- ✓ Covid-19 has highlighted long term supply chain disruption and self sustainability issues in major markets globally
- ✓ Record investment in re-establishment of domestic capability and sustainability will be a major theme in developed economies over the coming decade
- ✓ Etherstack is positively exposed to these trends and government expenditure

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Etherstack Traditional Business

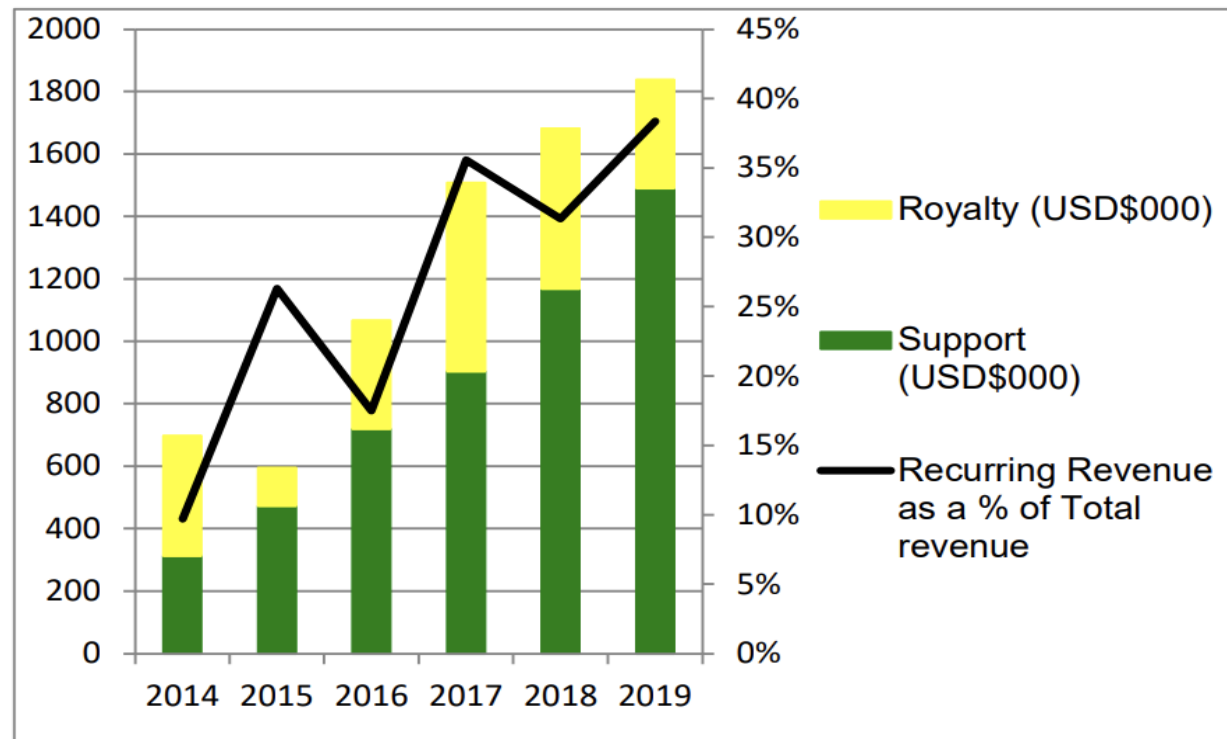
Digital Land Mobile Radio Networks

- Used by police, fire, ambulance services, utilities, resources etc.
- Typical lifespan 10-15 years (= long term govt. backed support contracts)
- **Electric utilities:** in recent years, Etherstack has deployed **five** large state/province wide networks in Canada, Australia and the US, covering Queensland, Alberta, New Jersey, Pennsylvania, Maryland and Virginia
- **Public Safety:** the company has large police, fire and ambulance digital radio networks in Idaho, Wisconsin and Canada (RCMP), and numerous smaller networks with other agencies such as the US Department of Interior
- Networks deployment deals are typically US\$1m - \$8m in initial size, typically followed by long term support revenues

Etherstack Traditional Business

Recurring Revenue: Network Deployments drive Support Revenues

- As we deploy more networks, our long-term support revenues continue to grow
- Support revenues have increased by over 350% since 2014 (an CAGR of 36.7% over the past 5 years)
- New deliveries in 2019 and 2020 triggering new support contracts will continue to see **support revenue growth** in FY2020 and FY2021 with current contracts in hand



Etherstack Licensing and OEM business

Technology licensing & OEM supply

- Etherstack licenses core wireless technologies, such as "air interface protocol stacks" to wireless equipment manufacturers for embedding in chipsets within their products
- The company also supplies a range of highly specialised OEM modules, manufactured in Australia, Canada and US for inclusion in other manufacturers' wireless solutions
- Technology licensees of Etherstack include Cisco, Icom, NEC, JVC Kenwood, Harris, Thales and Lockheed Martin to name a few
- Etherstack derives licensing revenues, module revenues and royalties from these sources

Etherstack Underlying Tech Trends – 5G

Etherstack Key Technology Trends:

1. Evolution to MCPTT (Mission Critical Push To Talk a.k.a. MCPTX)

- Ubiquitous availability of broadband wireless technologies (wifi, 4G & 5G) in urban areas is transforming emergency services and public safety communications in cities and other built-up areas
- Traditional digital narrowband (VHF& UHF) networks are still essential to meet the needs of first responders and new networks of this technology type will be built and deployed for decades to come (e.g. bushfires, flooding etc)
- These two technologies need to be harmonised into hybrid networks to keep our communities safe and industry operating
- Etherstack has unique solutions to build hybrid solutions for MCPTT & Digital LMR (Land Mobile Radio) and has entered into a Global Teaming Agreement with Samsung to deliver solutions in this market



Etherstack Underlying Tech Trends – Satellite

Etherstack Key Technology Trends:

2. PTT over Satellite Solutions

- Advances in satellite communications technologies and launch vehicle platforms have seen an unprecedented number of satellites launched in the past 12-24 months
- This has created an explosion in satellite bandwidth availability and commensurate cost reductions allowing satellite communications to become an order of magnitude less expensive
- Etherstack has been developing secure PTT over Satellite solutions for the past 36 months
- Etherstack has recently delivered a PTT over Satellite solution for the RCMP, the Canadian federal policing and security agency, to provide essential communications to their officers
- Etherstack is currently in discussions with well known satellite communications suppliers to incorporate Etherstack's technology into their networks



Etherstack Evolving Business

MCPTT Networks Focus

- Developments in MCPTT will require the development of hybrid cellular and traditional narrowband public safety networks to serve public safety and security services over the next two decades
- The initial focus from our large equipment partners is on developed countries (e.g. there are 37 OECD countries), trading/entrepot cities in Asia, and the Middle East
- There are approximately 100 - 120 large cellular telecommunications providers in these markets
- In the next few years MCPTT deployments will accelerate in developed (and other) countries where there is a need
- Etherstack is the key technology licensor to wireless equipment manufacturers of the underlying technologies used in existing digital land mobile radio networks (known as TETRA, APCO P25 & DMR)
- Through strategic partnerships such as Samsung, our global engineering and support presence, longstanding reputation and proven delivery record, Etherstack is well placed to capitalise on the evolution to MCPTT networks globally

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Etherstack Revenue Mix

How we derive revenues

- Etherstack supplies wireless products and technologies to the essential communications industry **globally** in the form of finished products, digital radio network systems and technology licensed to other manufacturers for inclusion in their product lines
- As a result, the company derives a broad mix of revenues from technology licensing, manufacturing equipment, royalties and ongoing support revenues
- The company also delivers “turn key” digital radio networks to the public safety, electric utility, resource and defence sectors
- As a result, Etherstack’s revenues are closely coupled with government spending on infrastructure, public safety and defence with additional revenues deriving from utilities, mining and other users



Public Safety



Utilities



Resources



Defence

2021 Vision: New Products & Partnerships

Innovation and Investment in R&D

🔗 Etherstack has invested in excess of US\$20 million into our suite of intellectual property assets and has developed a substantial intellectual property portfolio that generates revenue streams from diverse technologies, clients and regions, and from a mix of mature, new and emerging product lines

🔗 As 4G and 5G cellular networks become ubiquitous and advances in satellite communications technologies are made, Etherstack is well placed to capitalise on the shift in technologies and the application of these to our market area

🔗 The company is currently undertaking development of new military waveform technology for the defence industry as well as reimagining the form factor and functionality of highly specialised communications devices



Building on Success

Key accomplishments 2019 – 2020 YTD

April 2019	New radio network contract for public safety and emergency services personnel in the State of Idaho
June 2019	Order from the US State Department & supply contract with an Australian state police force
October 2019	Order from Australian energy utility for equipment and software at 18 new sites
November 2019	Etherstack wins Federal Police Digital Radio Network in Canada
May 2020	Etherstack enters contract with CSE Crosscom
June 2020	Etherstack signs Global Teaming Agreement with Samsung for 4G/5G Public Safety
October 2020	Etherstack signs licence agreement with TPL Systèmes
November 2020	Etherstack signs \$4.1m first stage Australian Defence Contract

Public Safety

Defence

Resources & Utilities

Key short and medium term milestones

- Release of new MCPTX products
- Announcement of first telco carrier deals
- Expansion of Australian & international public safety networks
- License and supply of communications solution to other nations
- First contracts with satellite network providers
- Expansion of solution offering
- 2nd stage of WA resources project network
- Addition of new mining clients
- Commencement of upgrades to virtualised switching solutions across installed base

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December 2020 Business update

Selected business achievements in 2020 include:

- Global Samsung Partnership: Ongoing development and integration activities with Samsung, in parallel with Samsung pursuit of initial orders;
- Royal Canadian Mounted Police: First contract order from a Canadian federal public safety agency for our PTT over Satellite product, known as the IVX (In-Vehicle Switch);
- Resources Sector deployment: Earlier deployed WA resource mining client digital radio network is now live, and is expected to lead to further network upgrades and future support revenues;
- Australian Department of Defence: New \$4.1m contract announced in December 2020, with a significant majority of the contract to be recognised in FY2021;
- Recurring revenue continues to grow, driven by both long term support contracts and royalty payments derived from technology licensing; and
- Continued strong opportunity pipeline

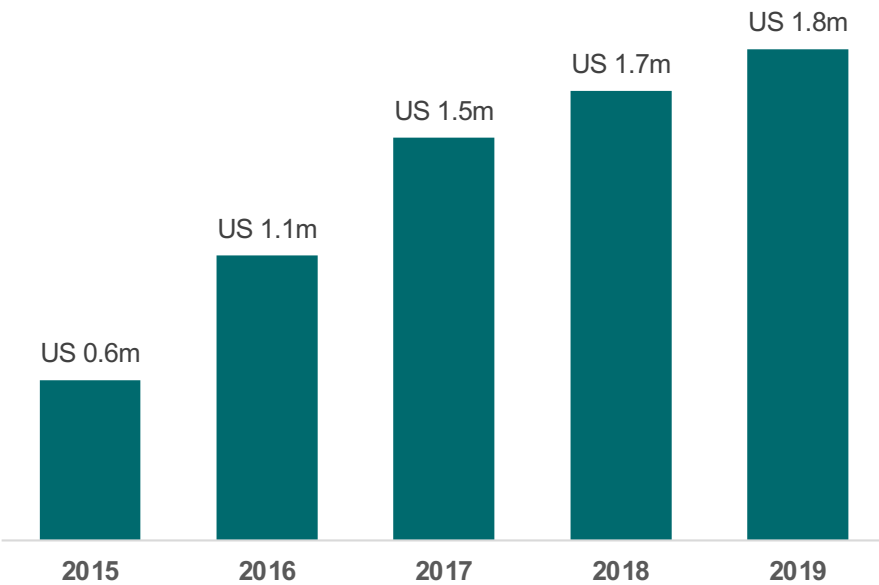
Key financial achievements:

- FY2021 Update: Based on the current order book and recurring revenue base, management expects FY2021 to significantly outperform FY2020.

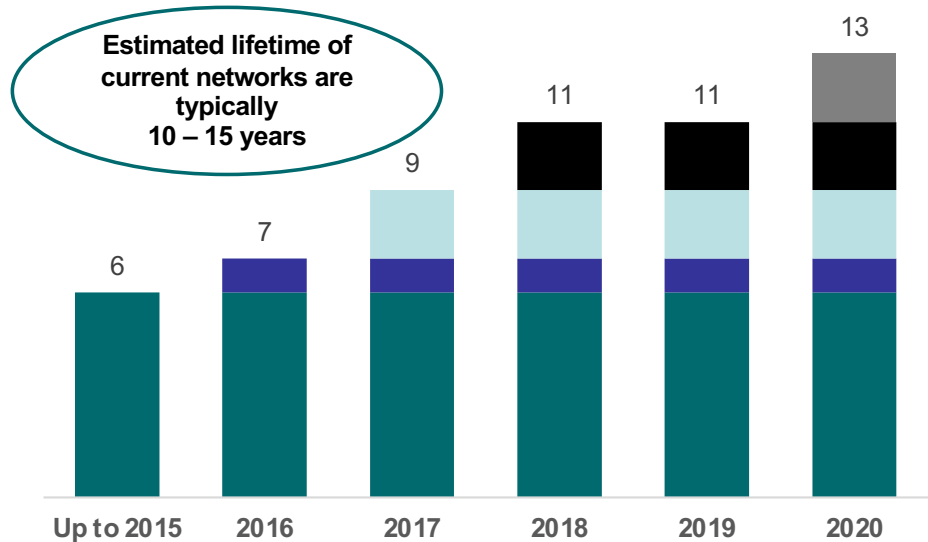
Growing high margin, recurring revenue base

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Recurring Revenue



Number of significant supported networks



- Predominantly support contracts, with networks having a lifetime duration of 10 – 15 years
- Support contracts would typically be required for the life of network
- Also includes Royalty revenue streams

Income Statement

US\$'000	2017	2018	2019	1H 2020
Revenue from Contract with customers	4,239	5,366	4,792	2,405
Recurring Revenue	1,508	1,682	1,838	929
Project and Product Revenues	2,731	3,685	2,954	1476
% Recurring Revenue to Total Revenue	36%	31%	38%	39%
Cost of Sales	(1,857)	(1,668)	(1,507)	(1,059)
Gross Profit	2,382	3,698	3,285	1,346
<i>Gross Margin</i>	56.2%	68.9%	68.6%	56.0%
Other income; R&D & government incentives		0	100	72
Other Overheads	(4,349)	(3,354)	(2,435)	(662)
EBITDA	(1,967)	344	950	756

- Recurring Support revenues driven by multiple contract wins including:
 - Ergon Energy
 - First Energy – Allegheny Energy
 - First Energy – Jersey Central Power & Light
 - ATCO Electric
 - Idaho Public Safety
- Project and product revenue is primarily sales of equipment and software from of new network rollouts as well smaller transactions.
- Gross margin on recurring revenue is consistently high as royalty revenues are 100% margin and support revenues attract high margins once the mostly fixed cost base is in place
- Low incremental costs of new support contracts added demonstrates operating leverage of the business

Balance Sheet & Cash Flow Statement

US\$'000	Pro-Forma 1-July-20 ¹
Cash and bank balances	1,480
Trade and other Receivables	933
Other current assets	236
Intangibles	3,126
Other non-current assets	94
Total assets	5,869
Trade and other payables	2,064
Deferred revenue	1,448
Borrowings	792
Convertible Notes	285
Other liabilities	600
Total liabilities	5,189
Net Assets	680

US\$'000	FY17	FY18	FY19	1H FY20
Net cash generated from operating activities	(599)	1,528	1,364	1,354
Net cash flow (used in) investing activities	(819)	(1,267)	(1,223)	(502)
Net cash flow (used in) financing activities	1,305	(246)	739	(297)
Net increase/(decrease) in cash	(113)	15	880	555
Cash and cash equivalents at start of period	236	41	51	931
Cash at end of period	41	51	931	1,480

- Net cash position of USD\$767 as at 30 September 2020
- Convertible notes expected to convert to equity prior to August 2021
- Remaining borrowings are Director related loans

1. Pro Forma for the impact of the convertible notes were converted to equity on 1 July 2021.

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