



22 October 2015

## Fast Facts

### Capital Structure

Shares on issue	241.3M
Options	24.4M
ASX Code	NXR

### Directors &

### Senior Management

**Patrick Flint**

Chairman

**Hui Zhang**

Non-Exec Director

**Paul Jurman**

Non-Exec Director &  
Company Secretary

### Project Highlights

#### WBT Investment

- Biometric technology
- Potential global market
- Strong management

#### Guinea (Iron)

- High-grade iron discovery
- Large resource potential

#### W Australia (Iron)

- Woodley DSO Project

### Contacts

**Mr Patrick Flint**

T: +61 8 9388 2277

[www.nemexres.com.au](http://www.nemexres.com.au)

## Wavefront Investment Update

### HIGHLIGHTS

- **Revised investment strategy** – Nemex to secure 51% interest in Wavefront, allowing Nemex to explore additional global biometric opportunities simultaneously given the rapidly expanding nature of the market opportunity.
- **Capital raising plans** – Cicero mandated to manage a priority placement to shareholders of A\$5 million.
- Wavefront investing in further miniaturisation and software development during 1H 2016 to accelerate commercialisation. Ongoing dialogue with customers and partners globally.
- **Nemex to appoint new management team** – appointment of an experienced team to assist Wavefront in developing and commercialising its biometric technology whilst also exploring wider market opportunities at a group level.

Nemex Resources Limited (ASX: NXR) (Nemex or Company) provides the following update with respect to its investment in Wavefront Biometric Technologies Pty Ltd (Wavefront).

### Revised Investment Strategy

In June 2015, Nemex entered into an agreement under which it had a conditional right to acquire 100% of the issued capital in Wavefront that it did not already own (Acquisition). As a result of delays in completion of the Acquisition the conditions precedent to settlement have become incapable of being satisfied within the period required under the Acquisition agreement (being 31 October 2015). As a result, the Acquisition agreement will automatically terminate on 31 October 2015.

Nemex currently holds a 40% interest in Wavefront. Under pre-existing contractual arrangements, the terms of which are set out in Nemex's announcement dated 1 April 2014 (Subscription Agreement), Nemex has the right to subscribe for a further 11% interest in Wavefront (to increase its holding to 51%) by investing a further \$1.75 million cash in Wavefront, which is expected to be satisfied through a payment of A\$0.8 million cash and converting existing loans to Wavefront totalling A\$0.95 million.

Nemex intends to exercise this right to increase its interest in Wavefront to 51% (Investment) subject to the following conditions:

- Completion of the validation of Wavefront's internal performance testing of its technology and Nemex being satisfied with the results of that testing. Wavefront has arranged for this independent testing to be completed through Purdue University, a globally recognised leader in biometric technology analysis. Wavefront has advised this validation work is expected to be completed in mid November.
- Shareholder approval in respect of all resolutions required in order to complete the increased Investment. It is expected shareholder approval will be sought at the upcoming Annual General Meeting.
- ASX has advised that since the Investment will result in a significant change to the nature and scale of Nemex's activities, the Investment will require shareholder approval under ASX Listing Rule 11.1.2 and will also require that Nemex re-complies with Chapters 1 and 2 of the ASX Listing Rules.
- Nemex completing a fundraising for a minimum of A\$1.5 million (refer Capital Raising Plans below).

From 2015 – 2020, the global biometric market is estimated to more than double in value from US\$10 billion to US\$22.4 billion. Nemex also plans to explore acquisition opportunities in and around the biometric market space that are additive and complementary to Nemex's strategy.

### **Capital Raising Plans**

Nemex has mandated Cicero Advisory Services Pty Ltd (Cicero) to exclusively manage a priority placement to shareholders to raise up to A\$5 million (Capital Raising). It is proposed that the Capital Raising will be partially underwritten by Cicero to an amount of A\$1.5 million. The pricing of the Capital Raising will be set following receipt of the results of the independent testing through Purdue University and completion of the shareholders meeting, but (subject to shareholder approval) will be at no less than a 20% discount to the volume weighted average price of Nemex shares during the 10 days in which trades were recorded prior to shareholders meeting at which Nemex will seek approval from the shareholders to undertake the Investment.

Nemex and Cicero have worked together previously to successfully complete a number of capital raisings.



## Technology Development and Commercialisation Plans

Details of Wavefront's ongoing development plans and commercialisation strategy are set out at Annexure A, and a copy of Wavefront's recent investor presentation is at Annexure B.

Wavefront's short term plans include:

- completion of the validation testing through Purdue University, a globally recognised leader in biometric technology analysis. Wavefront has advised this validation work is expected to be completed in mid November.
- further significant miniaturisation, performance and usability improvements through enhanced software and algorithm development – Wavefront is targeting completion of the next phase of this work in 1H 2016.
- Continuing dialogue with potential customers and global partners, including demonstrations of the updated technology. These engagements are targeted during 1H 2016.

### New Nemex Management Team

Nemex plans to appoint a new management team to assist Wavefront in developing and in particular commercialising its biometric technology whilst also exploring wider market opportunities at a group level.

It is proposed that Nemex's new management team will be lead by Mr Darren Patterson, who is currently working with Nemex in a consulting role.

Mr Patterson has more than 20 years experience working with both start-up and blue-chip technology companies spanning Australia, Europe, US and Asia. As a leading senior executive his experience includes telecoms, IT, digital media and venture capital.

Mr Patterson's international experience has seen him hold senior business development roles with Yahoo, ECI Telecom, Energis Communications/Cable and Wireless PLC and Cisco Systems.

He is an investor in technology ventures Firstwave Cloud Technology, Lumific and Datasift where he secured investment from US venture funds. Most recently he was the CEO and Co-Founder of Australia's only regulated property investment platform, BrickX.

Mr Patterson holds an MBA from the University of Chicago, Booth School of Business and a Bachelor of Computer Science from the University of Technology, Sydney.

It is proposed Mr Patterson will be appointed as Chief Executive Officer and a Director of Nemex at completion of the Capital Raising. Further appointments of directors with the appropriate skills and qualifications necessary to govern an ASX-listed biometric technology company are also planned in conjunction with completion of the Capital Raising and Investment.

In addition, Mr Hui Zhang has been appointed to the Nemex Board as a non-executive director. Mr Zhang is a nominee of the Company's major shareholder. Mr. Zhang has more than 25 years experience in corporate management and business and customer development in Asia.

Dr Peter Turner has resigned as a director of the Company effective immediately. The Board thanks Dr Turner for his significant contribution since the Company listed on the ASX in 2011.

As the Acquisition agreement has been terminated, Dr Dyer, Mr Bertini and Mr Ezzes, are no longer proposed to be directors of the Company.

### **Pro-Forma Capital structure and Financial impact on Nemex**

Nemex's proposed capital structure will be as follows (assuming that the minimum amount of A\$1.5 million is raised under the Capital Raising at \$0.05 per Share (being the latest share price of Nemex), no options are exercised and no other Shares are issued):

	<b>Shares</b>	<b>5c Options</b>	<b>10c Options</b>	<b>Broker Options<sup>1</sup></b>
<b>Current</b>	241,325,421	12,412,500	12,000,000	Nil
<b>Capital Raising</b>	30,000,000	Nil	Nil	10,000,000
<b>TOTAL</b>	<b>271,325,421</b>	<b>12,412,500</b>	<b>12,000,000</b>	<b>10,000,000</b>

Note 1 – it is proposed to issue 10 million options to Cicero in respect of the Capital Raising. 5 million options will be exercisable at the capital raising price and expire on 31 March 2017, and a further 5 million options will be exercisable at a 100% premium to the capital raising price and expire on 31 March 2017.

As noted above, as part of the process for re-complying with Chapters 1 and 2 of the ASX Listing Rules, the Company will be required to conduct a capital raising. The offer price per share of the raising and the number of shares to be issued are yet to be determined, but a minimum of A\$1.5 million is currently proposed.

As the final details of the capital raising are not yet known, an unaudited pro-forma balance sheet showing the impact of the transaction has not been included in this announcement, but will be included in the Notice of Meeting seeking shareholder approval for the Investment.

## Indicative Timetable

An indicative timetable for completion of the Investment is set out below:

Milestone	Indicative Timetable*
Release of notice of meeting	30 October 2015
Hold annual general meeting	30 November 2015
Issue Capital Raising prospectus	7 December 2015
Completion of Capital Raising and Investment	22 December 2015
Re-quotation on ASX	15 January 2016

\* Please note this timetable is indicative only and the directors of Nemex reserve the right to amend the timetable as required. Shareholders should also note that the Company's securities will be suspended from trading on the day of the general meeting seeking shareholder approval for the Investment and, if such approval is obtained, will remain suspended until such time as the Company has satisfied Chapters 1 and 2 of the ASX Listing Rules.

### For further information about Nemex contact:

Patrick Flint (Chairman)  
Nemex Resources Limited  
P: 08 9388 2277  
E: [pflint@nemexres.com.au](mailto:pflint@nemexres.com.au)

Darren Patterson (Proposed CEO)  
Nemex Resources Limited  
P: +61 427534959  
E: [dpatterson@nemexres.com.au](mailto:dpatterson@nemexres.com.au)

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## ANNEXURE A – WAVEFRONT OVERVIEW

Wavefront’s core business is developing innovative biometric solutions for authentication of identity utilising the unique properties of the eye. Wavefront’s vision is to become the identity authentication platform provider for all mobile devices and transactions requiring end-user verification, across government and military; enterprise; and consumer markets.

The Wavefront technology is a multi-modal biometric that captures unique features of the eye utilising a single sensor - being a camera. The images are captured using the visible light range and are taken randomly to either capture the image of the iris or the contours of the cornea by reflected light. These images are converted to a numerical output and, through a series of calculations and equations, provide a result that enables identification of whether or not an identity is genuine. Wavefront has completed internal performance tests in a mobile (self acquisition) scenario demonstrating that Wavefront’s multi-biometric system can operate on a mobile platform. Independent validation of these performance tests is currently being undertaken through Purdue University.

Wavefront has patents in various jurisdictions that cover most aspects of the cornea and key features of the eye in visible light. Wavefront has developed a unique use of the features of the eye not previously commercially adopted. The combination of the cornea and iris provides a new biometric in visible light. The biometric is strengthened by the fact that the features measured are uncorrelated. Wavefront plans to add features to its existing patent portfolio as further intellectual property is identified.

Liveness is an important feature for biometrics and provides a mechanism to detect spoofing or fraud by confirming that the images are generated from a live person in real time. Wavefront’s technology has a number of liveness measures within its biometric capability, providing an even stronger biometric for the authentication of identity.

Wavefront’s system operates in the visible light spectrum. Most commercially available iris recognition systems utilize near-infra red (NIR) spectrum. NIR spectrum requires a specific illuminator. Standard mobile devices, such as tablets and mobile phones, provide illumination in the visible light spectrum.

Commercial biometric systems currently in the market that offer very high levels of assurance are predominantly either static / fixed units or require a third party to operate the system. The incumbent security system in the mobile (self acquisition) market is passwords and pin codes, and this system offers a lower level of security and its weaknesses are well documented. The rapid evolution of the mobile identity-services market has left a void with no clear incumbent or dominant biometric technology. There are currently no industry standards for mobile (self acquisition) biometric authentication, and there is a lack of independently tested and reported information regarding potential solutions in the market. Wavefront is obtaining expert commentary on the mobile (self acquisition) market.

Wavefront considers its multi-modal biometric technology provides a unique solution to human biometric identification that has application to a range of identified industry sectors. Wavefront plans to build strategic partnerships with device manufacturers and software vendors while it builds out a product based portfolio of software applications into key targeted markets.

Wavefront is currently planning the next stage of its ongoing technology development program. Wavefront is targeting further significant miniaturisation and performance and usability improvement of the technology. Wavefront is targeting completion of this work in 1H 2016.

### **Potential Applications of Wavefront Technology**

Wavefront has developed a Go To Market Strategy that focuses on the strengths of its technology and has identified key industry sectors for commercialisation, including:

*(i) Mobile device manufacturers*

Mobile device manufacturers have shown a strong desire to incorporate biometrics into their devices as both a security measure and as a marketing tool. Wavefront is ideally placed to exploit this market application. Currently fingerprint, and more recently iris recognition, has been incorporated into mobile phones.

*(ii) Identity as a Service (IaaS) Platforms*

Securing online data in the cloud and through enterprise applications is a high priority for all enterprises. These include financial institutions, governments, telecommunication companies, social networks and healthcare providers. Whilst there is a broader requirement for end-to-end security, Wavefront's solution is purely focused on identity authentication.

It is envisaged that the roll out of the technology could be as a software-as-a-service platform. This solution would provide an additional asset for Wavefront that could provide a valuable revenue stream. It would also enable Wavefront to integrate with other businesses and potential partners, as well as competing technologies, thereby decreasing the competitive risk.

*(iii) Specialist hardware providers*

The Wavefront technology can be provided as separate hardware to apply to a range of applications, such as border security, physical access, healthcare and critical infrastructure such as for military or data facilities and other high value assets. Wavefront has identified a number of hardware suppliers that it would aim to licence its technology, in the form of software, to access these markets.



Wavefront

*Identity in the blink of an eye*

# Company Presentation

Wavefront Biometric Technologies Pty Ltd

**October 2015**





# Wavefront Overview



- Wavefront is an early stage Biometric Technology company, transitioning to a product based organisation, to facilitate the commercial adoption of its core technology globally
- Wavefront's solution is currently protected by 9 international patents, predominantly focused on the cornea as a Biometric, but also includes the use of the iris in the Biometric
- Independent Technology verification is currently being conducted at Purdue University
- The company will continue to innovate around its core technology, but also look to expand the platforms and systems required to protect the worlds most critical information. This may involve selective M&A transactions to enhance its product and service offering
- The company plans to recruit and develop a world class organisation to bring its technology to market

# Wavefront's Vision



To become the identity authentication platform provider for **all mobile devices & transactions** requiring end user verification, across:

- ✓ **Government and Military**
- ✓ **Enterprise, and**
- ✓ **Consumer markets**

# What is biometrics?



Automated recognition of individuals based on what they ARE (biological or behavioral), not a password that needs to be remembered.

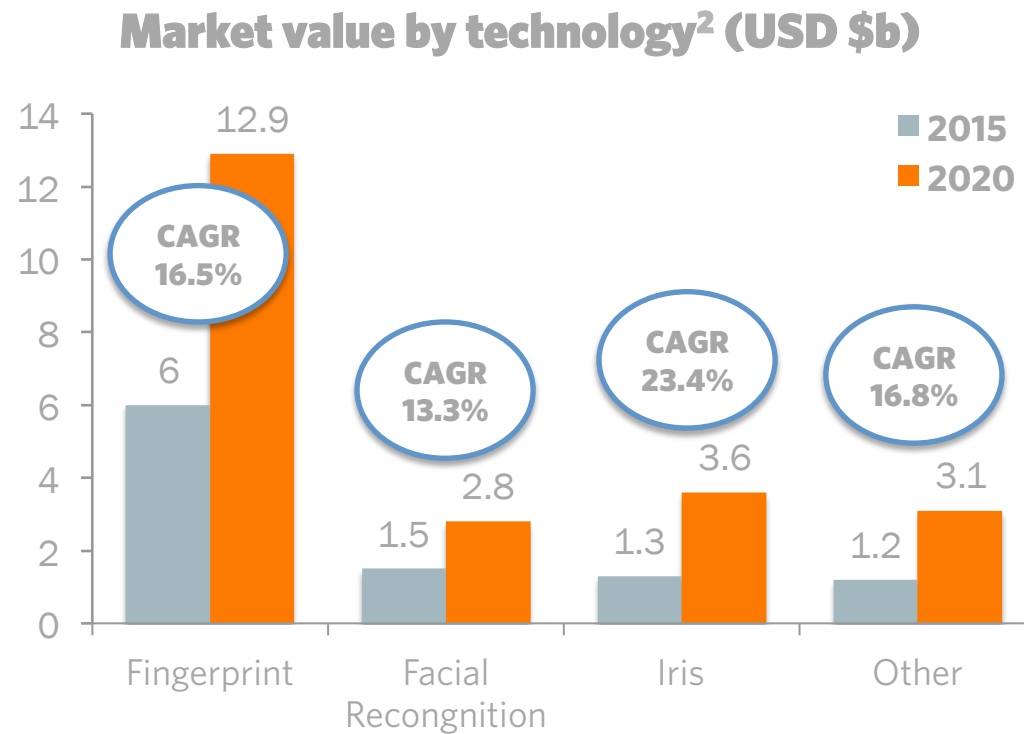
## Examples of biometrics in action:

Industry	Use
Government	<ul style="list-style-type: none"><li>• Voting booth ID/polling</li><li>• In-field identification verification</li><li>• Border control</li></ul>
Enterprise	<ul style="list-style-type: none"><li>• Access control for IP and trade secret management</li><li>• Time and attendance – stop buddy-punching of clocks</li><li>• Access control for healthcare/hospitals</li></ul>
Consumer	<ul style="list-style-type: none"><li>• Cardless payment verification – e.g. Apple pay</li><li>• PINless entry ATMs to prevent skimming</li><li>• Secure mobile device access</li><li>• Keyless home entry</li></ul>

# The biometric security market



From 2015 - 2020, the global biometric market is estimated to more than double in value from \$10b to \$22.4b (CAGR 18.2%)<sup>1</sup>.



<sup>1,2</sup> Markets & Markets, 2015 Next Generation Biometrics Markets

# The evolution of online security



- ✦ **Version 1.0 - Evolved from passwords, which can be lost, forgotten or stolen.**
- ✦ **Version 2.0 - Biometrics offer the ability to uniquely identify an individual, however until now they were also prone to theft or replication.**
- ✓ **Version 3.0 - Multi-modal, single sensor Biometric identification, delivered as a service**

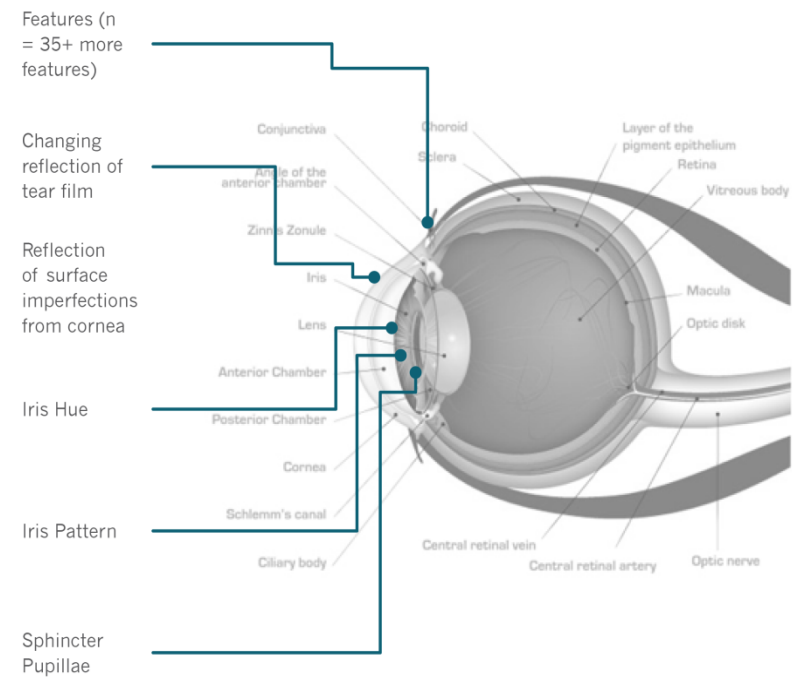
# The Wavefront solution



Wavefront uses 1 sensor to capture multiple features of the eye simultaneously within seconds

## Features of the eye used:

- ✓ **cornea shape**
- ✓ **changing corneal reflection**
- every time you blink**
- ✓ **Iris - hue and pattern**



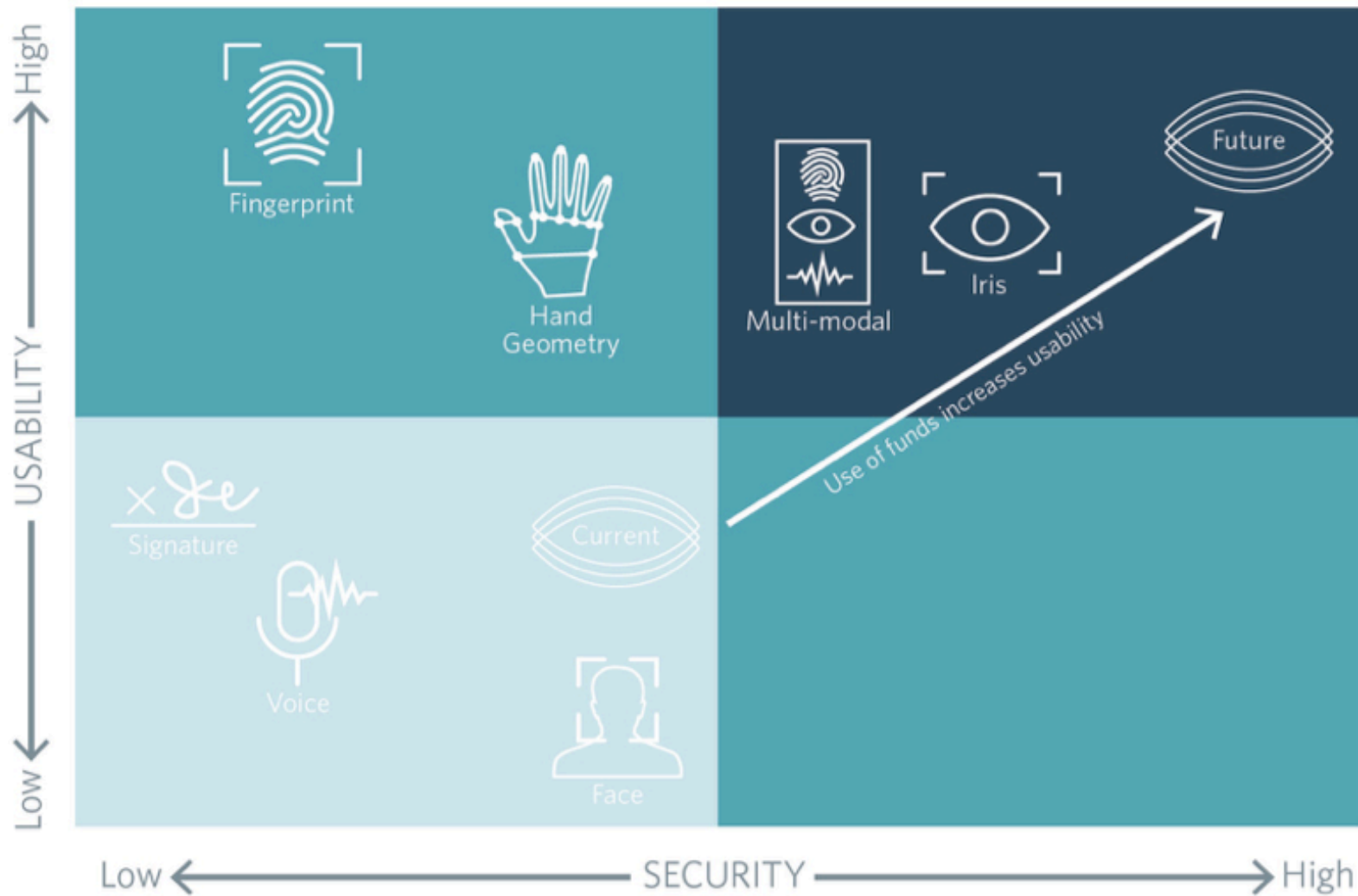
# The Wavefront advantage



Wavefront initially recognised the properties of the tear film, and has combined with other independent eye based features to develop an authentication solution based on a biometric signature uniquely recognisable as you.

Wavefront combines a multifactor identification and Liveness Testing in a single sensor.

# Wavefront Target Performance Roadmap





# Wavefront's Patent Portfolio



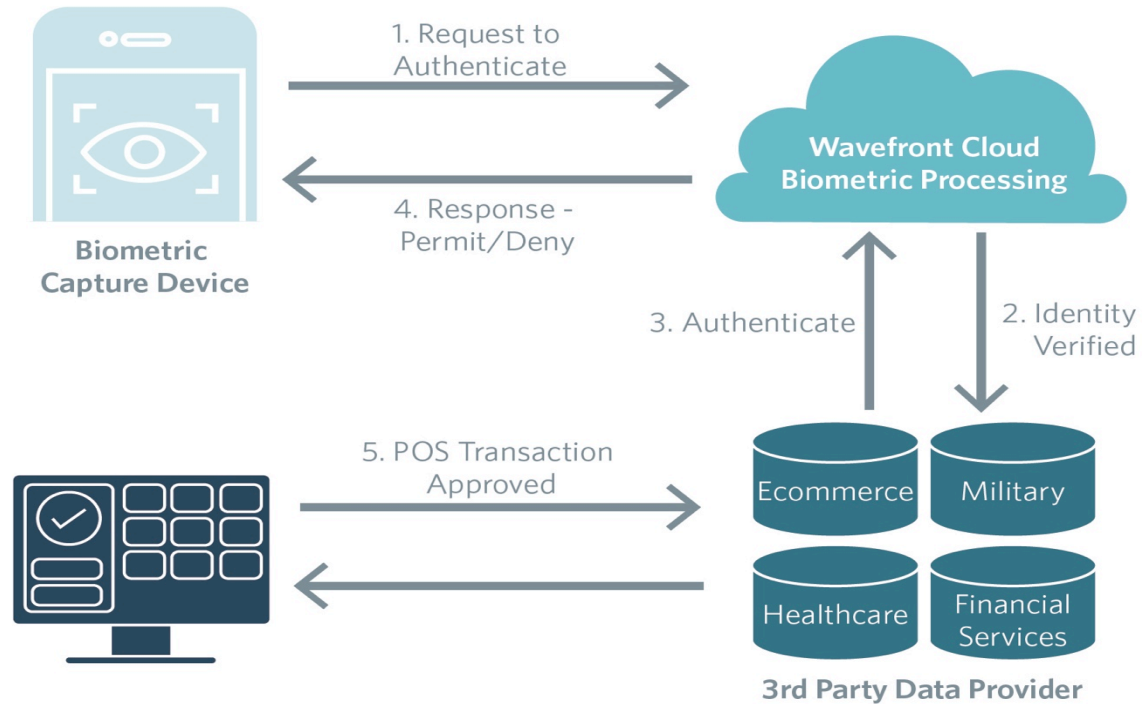
Official No.	Title	Country	Case Status
2008329544	Biometric Authentication using the Eye	Australia	Registered
2014280908	Biometric Authentication using the Eye	Australia	Pending
2744757	Biometric Authentication using the Eye	Canada	Pending
08854035.6	Biometric Authentication using the Eye	Europe	Pending
5674473	Biometric Authentication using the Eye	Japan	Registered
8718335	Biometric Authentication using the Eye	US	Registered
US 9036872	Biometric Authentication using the Eye	US	Registered
US 14/694886	Biometric Authentication using the Eye	US	Pending
2015901256	Multi-biometric authentication	Australia	Pending

The original patent family protects IP relating to the cornea and light reflected from the cornea through the tear film. The latest invention (filed in Australia on 8<sup>th</sup> April 2015) provides international protection for a multi-modal biometric system that incorporates elements of the first patent family.

# Wavefront Future Biometric Cloud Platform



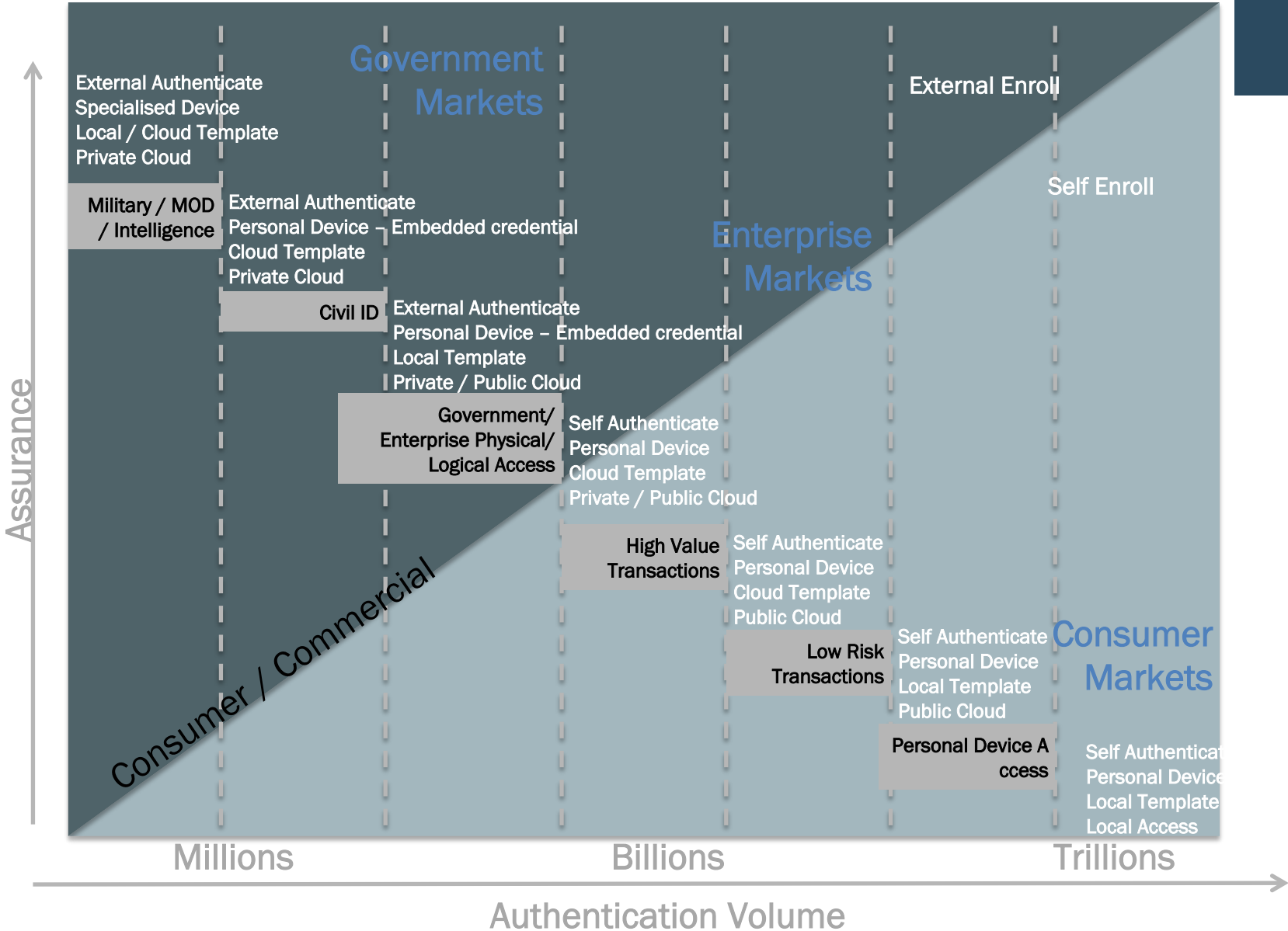
## Wavefront Cloud Platform



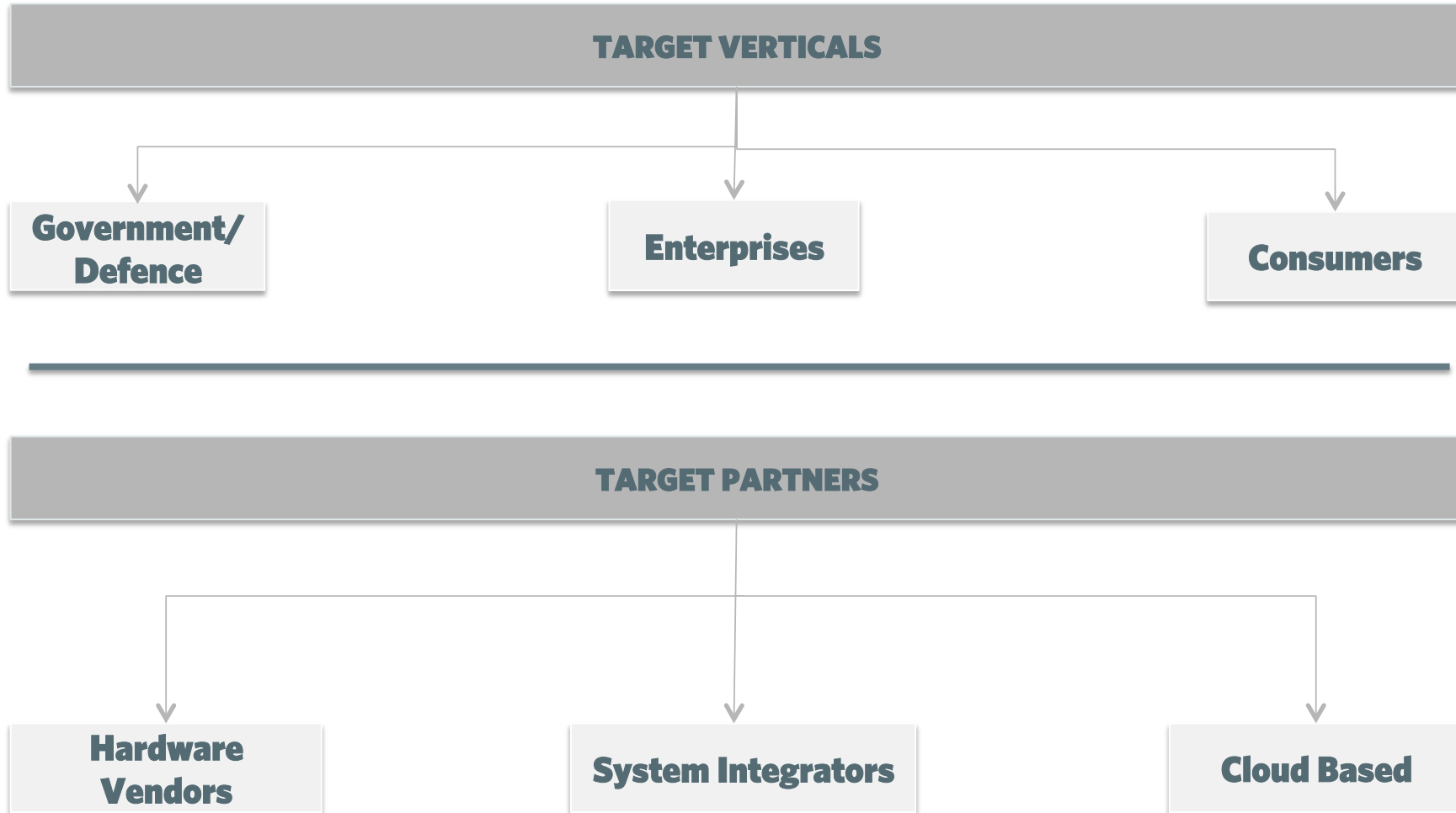
# Customer Demand and Requirements



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# Wavefront go-to-market plan



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# Wavefront's Revenue Models



- ✓ Licensing and OEM agreements for specific HW and SW devices by vertical – Enterprise, Government, Consumer
- ✓ Distribution / reseller agreements by vertical – Enterprise, Government, Consumer
- ✓ SaaS<sup>1</sup> subscription model for Bio-Engine services
- ✓ Transaction fees, revenue share for usage and % of revenue financial services, utilities etc

<sup>1</sup>Software As A Service



# Current Customer and Partner Engagements

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	Vertical	Geography	Opportunity Description	Stage	Priority
Customer Confidential	Aerospace	Global	Secure infrastructure in cockpit and systems	NDA	High
	Banking	APAC	SaaS Authentication platform	SOW, On hold pending Phase 3	High
	Payments	Global	HW and SaaS Authentication platform	Prelim Discussion	High
	Payments	Global	HW and SaaS Authentication platform	NDA	High
	Government	Australia	HW and SaaS Authentication platform	Prelim Discussion	High
	Enterprise SaaS	Global	SaaS Authentication platform	NDA	Medium
	Payments	Global	HW and SaaS Authentication platform	NDA, Information Exchange	Medium
	Payments	Global	HW and SaaS Authentication platform	NDA, Information Exchange	Medium
	Consumer OEM	Global	HW OEM and SaaS Authentication platform	NDA and Product Evaluation	Low

# Wavefront's Immediate Focus



1. Refining the Offering to meet the prioritised needs of potential commercial partners including:
  - ✓ licensing and OEM agreements
  - ✓ distribution agreements
  - ✓ SaaS<sup>1</sup> platform
2. Developing a robust runway to revenue, backed by a detailed product roadmap

Immediate technical priorities are:

1. Building the necessary platforms to support customer requirements
2. Improving the usability, HW&SW performance - miniaturisation and multi platform apps

<sup>1</sup>Software As A Service

# Recent valuations in biometrics



Target	Eyelock	Validity	AuthenTec	L1 Identity Solutions
<b>Target details</b>	Early phase revenue	Early phase revenue, series E funded	Mature publicly traded OEM \$70 m annual revenue	Mature identity management solutions provider in US \$450 m annual revenue
<b>Technology</b>	Iris authentication: <ul style="list-style-type: none"> <li>• USB-enabled key (2014)</li> <li>• Proof-of-concept automotive key – partnered with Voxx (2015)</li> </ul>	biometric fingerprint authentication for smartphones, tablets and notebook PCs	Data encryption Fingerprint sensors	Electronic passports Biometric registration centres – U.S. Fingerprint, facial, & iris scanning for govt id & border crossing
<b>Acquirer</b>	Voxx International (Auto accessories)	Synaptics	Apple	Safran (aerospace & defense)
<b>Deal details</b>	51% stake All IP	Full acquisition + multi-year performance payments of \$162 m	Full acquisition Some licensing rights for additional \$117 m	Full acquisition
<b>Cost</b>	\$15.5 m + \$3 m	\$92.5 m	\$356 m / \$8 share	\$1.09 bn / \$12 share
<b>Vertical</b>	Automotive	Consumer Electronics	Consumer Electronics	Enterprise
<b>Year</b>	2015	2013	2012	2011



# Contact Details



Suite 704, Level 7  
140 Arthur St  
North Sydney NSW Australia

E: [info@wavefrontbiometric.com](mailto:info@wavefrontbiometric.com)

W: [wavefrontbiometric.com](http://wavefrontbiometric.com)