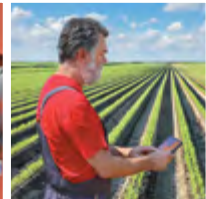
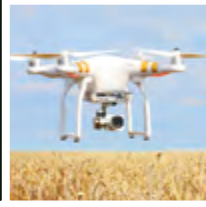


Enabling the Connected Future

rakon
2018 REVIEW



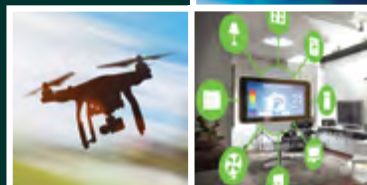
Rakon at a Glance

Rakon's purpose is to enable the connected future. It is a world leader in the design and manufacture of innovative Frequency Control Products (FCPs). Every electronic, communication or location system requires a precise and reliable electronic 'heart beat', or frequency reference. Rakon's advanced frequency and timing solutions use piezoelectric resonators to generate these heartbeats. They, in turn, generate wireless or optical signals used in systems and extreme environments around the globe.

Rakon products help set the frequency that all communications transmit and receive on. They also hold time and provide a stable timing reference for telecommunications networking equipment. This enables synchronised time globally, and the efficient and reliable transfer of data at ever-increasing precision and speed.

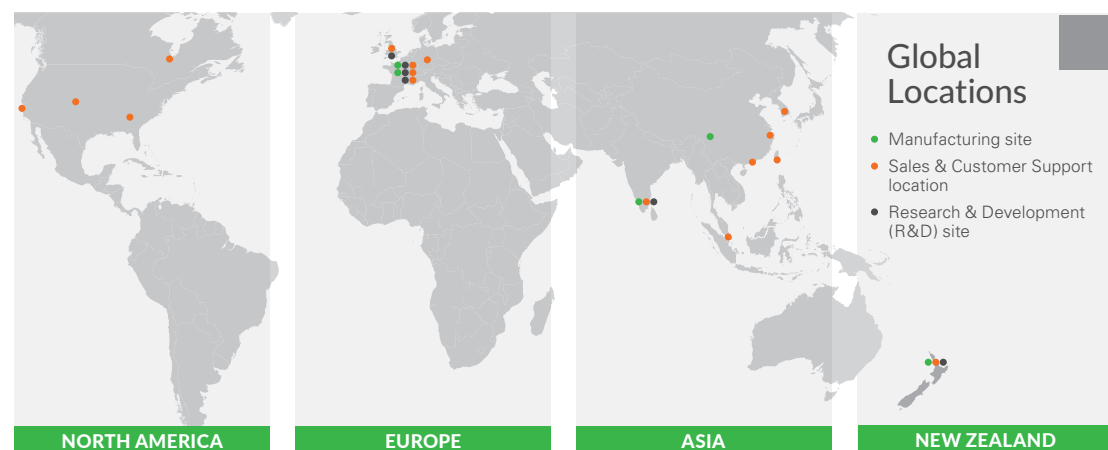
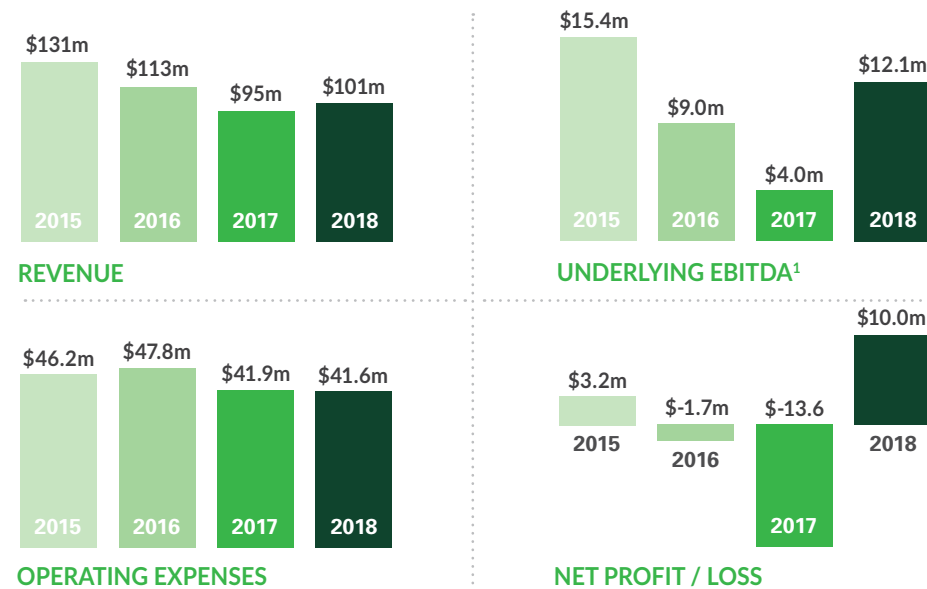
Whether it be within wired or wireless networks, radar, navigation systems or satellites in space . . .

Rakon products enable connectivity for today and tomorrow.



Rakon is a leading provider of frequency control products and a truly international business, selling into more than 80 countries.

99.5% of revenue is from outside New Zealand.



¹ Refer to the footnote on page 19 for the definition of Underlying EBITDA as a measure of non-GAAP financial information, referred to in this document.



All amounts in this document are in NZ\$ unless otherwise specified.

Key Operational Facts

- New facility opened in Gennevilliers, France February 2018**
- Argenteuil, France site sold March 2018**
- Centum Rakon India (CRI) acquisition completed May 2018**
- 50+ years of operation**
- Transfer of technology license to Siward mostly complete**
- 800+ global team (includes CRI)**

Rakon designs and manufactures frequency control and timing solutions. Its products enable connectivity for a wide range of applications. The company's three core markets are telecommunications, global positioning and space & defence.



Rakon has a highly skilled, global team rich in culture. There is a diverse range of roles in functions including: research and development, engineering (product, process, electronics, maintenance), equipment development, purchasing and sourcing, production planning, production, quality, continuous improvement, business development, sales and marketing, product management, people and capability, finance and information systems.



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Dear fellow shareholders, welcome to the 13th Annual Report of your company Rakon Limited.

The 2018 fiscal year's result can be described as adequate and improving; the result included a within guidance Underlying EBITDA³ of \$12.1 million, and a Net Profit After Tax (NPAT) of \$10.0 million. Underlying EBITDA contained specific non-recurring items of \$4.0 million and the NPAT result was further boosted by a reporting gain of \$4.8 million arising from Rakon's investment in Thinxtra.

Nevertheless, the Underlying EBITDA after adjusting for the non-recurring items was 100% better than for the prior year. NPAT after adjusting for non-recurring items improved by \$14.8 million on the prior year. The profit made from selling Thinxtra shares during the year and the reporting gain to the carrying value of the investment were positive gains from this investment.

Rakon's current position is one of strength with a solid and growing future before it. This belief is underscored by the following key points:

No bank debt

At the end of FY2018, Rakon had net cash in the bank of \$7.4 million. This is a major change from 18 months ago, when the company had around \$20 million of net debt. Certainly, some of this cash will be used to purchase the 51% share of Centum Rakon India Private Ltd (referred to as 'Centum Rakon India' or 'CRI'), as we announced after balance date, but it places Rakon in a very strong position.

The 100% ownership of CRI

Rakon has completed a pivotal takeover of CRI. As a result, Rakon has gained full control of a world class, hi-tech, low cost manufacturing facility in Bangalore. The facility specialises in the production of OCXOs⁴ and other key components necessary for the fast arriving, global 5G telecommunications roll-out. As well as what CRI (to be renamed Rakon India) does today, it is highly capable of much more under Rakon's full ownership. It will manufacture additional products that Rakon designs, to grow our other markets. It will also expand R&D and provide other business support functions.

Having been a 49% owner of CRI for the past decade, we well understand the business. We also have strong relationships with the team there, all of whom are very pleased about Rakon taking full ownership.

The continued investment in R&D (\$9.7 million this year)

This work and focus does take time to show in the market place. A considerable amount of the investment has been focused on leading edge products for the arrival of the huge 5G global roll-out. While we have been expecting the 5G roll-out to begin in 2020, some countries will be beta testing this year. There is no doubt that with all the new devices being made many will require 5G (autonomous vehicles being just one example).

The strong association with Siward

Having Siward Crystal Technology Co. Limited ('Siward'), as our major shareholder and close manufacturing partner based in Taiwan, will lead to good opportunities in new markets. Customers in these markets demand ultra-low prices, lower performance specifications and very high volumes. Rakon has limited its business in these markets due to its focus and strength in developing higher performance, higher margin products. Over the past year, Rakon's and Siward's teams have been working diligently to ensure both firms can benefit from the market opportunities readily available.

Growing markets and world leading customer relationships

Rakon provides world leading critical timing components to three core market categories: telecommunications, global positioning and space & defence. Telecommunications is by far the largest opportunity but is subject to the greatest volatility, as it relies largely upon network operator technology roll-out plans. It would however seem, as stated previously, to be on the cusp of significant growth over the next five to ten years. Personal Navigation Devices (PNDs) have been superseded somewhat by smartphones, however, there is growth in devices that require accurate and robust positioning, such as autonomous vehicles and the like. Space and defence has continued its steady growth in volume and profitability, and looks set to continue in the same vein for the foreseeable future.



Rakon's current position is one of strength with a solid and growing future before it.

Rakon has world leading customer relationships with most Tier One customers in each market sector. The value of these relationships is significant and ongoing.

A world leader in frequency control solutions and development

There is no doubt that Rakon is a world leader in frequency control products and solutions, and especially utilising quartz as the substrate. Within two of our core markets, our world leading R&D teams generally give us a period of time at the front of the market before the lower cost manufacturers catch up and erode our margin. This time, of course, depends on the complexity of the product. For instance, Pluto™ outlasted this competition for at least ten years in our ownership and a similar period prior to that. With new products under development and those soon to arrive, such as Mercury+™ Application Specific Integrated Circuit (ASIC) based OCXOs, we will be well ahead of the competition. Now we will also have the added advantage of a very high quality, low cost manufacturing plant in Bangalore that is 100% owned by Rakon. Initially, focus will be on maintaining high margins for longer and then meeting low cost competition, with the aim of being the preferred supplier.

A refreshed Board of Directors

Over the past two years we have made major changes to the Board of Rakon and the new Directors have added fresh insights, perspective and energy to the strategic and governance processes. The new team has sought new ways of supporting growth and profitability.

As I mentioned at the 2016 Annual Shareholders' Meeting (ASM),

I will retire by rotation this year and not stand for re-election. Bruce Irvine (current Chair of the Audit & Risk Committee), will replace me following the ASM and a search is already under way for a replacement Director.

Closing Comments

The changing market conditions over the past few years have been tough for Rakon and all of us who are shareholders. This is now behind us and Rakon can now focus on building on the strong position that our company is now in.

We have no debt, growing earnings potential, a revenue base in excess of \$100 million and positive operating cash flow. Additionally, we have a stronger, more agile, trimmed, focused and energised team at the helm.

It is unfortunate that Rakon's shares are trading in the low 20 cents, which is around half the net asset backing of 38 cents. No doubt Rakon's years of underperformance are largely to blame, coupled with virtually no analyst coverage of our stock. But don't be misled by that – Rakon is a tech stock that, like global peers, can suffer market peaks and troughs. Unlike a lot of those peers, Rakon is still in business and has been for 51 years. Rakon is now in the strongest position it has been for the past decade. With a net cash position, strong markets awakening, world leading products coming through, complete control of a world class, high-tech, low cost manufacturing facility in Bangalore, and a very strong relationship with Siward, our company is well positioned for growth.

Thank you for your support over these past years. I look forward to addressing any questions that you may have at the Annual Shareholders' Meeting on 7 August. I particularly look forward to remaining a very interested shareholder in our company's future performance.

Bryan Mogridge Chair



Lucky Wei
Customer Service
Coordinator
Shenzhen, China

Rakon has very loyal customers who maintain strong relationships with us. We have a global team in multiple time zones and located where our customers are based. This helps us to deliver on our strategy of supporting our customers with fast lead times.

³ Refer to the footnote on page 19 for the definition of Underlying EBITDA as a measure of non-GAAP financial information, referred to in this document.
⁴ Product acronyms and definitions are explained in the Glossary on page 19.



Naga Bettadhapura
Project Manager
Improvement Activities
Auckland, NZ

Rakon actively encourages all employees to be involved in the continuous improvement process and is focused on reducing waste, improving yields and delivering world class quality.

Rakon has embraced the Lean Six Sigma methodology for improving what we do. Lean is the continuous pursuit of waste reduction. Six Sigma is the relentless pursuit of quality through variation control.

Quality is everyone's job. Quality is a focus in everything we do: our products, our processes, our workplace and our company as a whole.

Managing Director's Report

An improvement in core business and non-recurring gains resulted in Rakon reporting strong earnings for the year ended 31 March 2018 (FY2018). Rakon reported a net profit after tax of \$10.0 million versus a net loss of \$13.6 million in FY2017. Underlying EBITDA⁵, at \$12.1 million, increased 200% compared to the previous financial year and was in line with our reported guidance of between \$10.7 million and \$12.7 million.

Revenue, at \$101.1 million, increased 7% vs. FY2017, with growth coming from our space & defence and global positioning markets. Gross profit amount increased 29% for the year, due to revenue growth and the mix of business coming from both higher margin markets and products within these markets. It is pleasing to see our revenue growing again, with the increase in space & defence coming from an improved product offering to both new and existing markets.

The strong profit result also included the following non-recurring gains:

- A gain from the sale of the property in France of \$2.1 million, with cash proceeds of \$4.5 million
- A gain from the partial sale of shares in Thinxtra of \$1.9 million, with cash proceeds of \$3.2 million
- A net dilution gain on Thinxtra shares of \$4.8 million, resulting from an equity accounted net asset gain following Thinxtra's successful capital raising.

There was a strong positive movement in Rakon's cash position, closing with net cash of \$7.4 million vs. net debt of \$4.5 million in FY2017. This allowed Rakon to complete the acquisition of Centum Rakon India ('CRI') after the balance date, from the company's own resources. The improvement resulted from positive operating cash of \$7.9 million in the period, as well as Rakon generating \$7.9 million from the sale of assets and investments.

Operational Overview

The company achieved solid progress with strategic objectives focused on manufacturing partnerships and platforms.

Rakon's commitments regarding the transfer of a technology license to our new manufacturing partner and cornerstone shareholder Siward are almost complete. Siward is now manufacturing Rakon's key components primarily for the Global Navigation Satellite System



We expect core business to continue to improve.

(GNSS) and location-based services market. It is partnering with Rakon on key component supply and mitigating previous supply chain risk for us. The partnership is well established and ready to be leveraged for the benefit of both parties.

The buyout of the 51% share of Rakon's joint venture partner Centum Electronics Limited ('Centum') completed after balance day on 2 May 2018 for US\$5.5 million. Rakon now holds 100% ownership of the CRI business. The buyout was a strategic decision in line with the company's manufacturing strategy to have a low cost operating platform suitable for future growth. Having total ownership and full decision-making control means that we can leverage the benefits that this established low cost manufacturing platform offers. A key support agreement was reached with Centum to provide services for up to 18 months while Rakon implements its ownership integration plan.

The sale of Rakon's property in Argenteuil, France completed in March 2018, which was a result of a number of years of work to have the property rezoned for sale. During the year the team in Paris relocated to a new leased site in Gennevilliers.

R&D focus has been on technology requirements and solution designs for next generation 5G telecommunications networks and applications. With the requirements for 5G becoming clearer, it is pleasing that we are well positioned with our product and technology offering based on prior years' R&D roadmaps with products like Rakon's Mercury™ and Mercury+™ ASIC based OCXOs⁶, as well as very high stability TCXOs. These products are being designed in to 5G Remote Radio Heads (RRHs) and base stations.

The Financial Year 2018 in Review

rakon

REVIEW FY2018

Market Update

Telecommunications The company delivered a flat revenue performance (on a US\$ currency basis) in this core market, with margins improving.

We did not fully capitalise on opportunities with telecommunication products from CRI; a desire to improve this situation is one of the drivers in Rakon taking full control of this company.

The small cell market was down as the demand for 4G small cells has not fully replaced the demand for 3G small cells as anticipated. The technology and solution design requirements for next generation 5G telecommunication networks and applications are becoming clearer, with many operators now waiting for the roll-out of 5G, which requires remote radio heads, rather than small cells.

5G requires very precise timing where everything has to be synchronised a lot more accurately. Rakon has been working with its Tier One customers and we are well positioned with our product and technology offering, where the requirements are for tighter OCXO and TCXO specifications. We have a product range that is market leading and cost competitive and we anticipate roll-outs to start happening at the back end of FY2019. This will support the market led demand to get more bandwidth for applications like video over the network and broadband to the home, using wireless.

Global Positioning Global positioning Tier One customer volumes and revenue increased. Precise positioning demand for industrial and autonomous applications grew 25%. This growth was in line with our strategy and focus, which is in the industrial end of the positioning market and on precise positioning and machine positioning. We remain of the belief that this market has great potential.

In China, with its localised positioning satellite network, Rakon's revenue increased by 30%. This is the equivalent of the US Global Positioning System (GPS), where there are geostationary satellites based over China providing positioning.

The emergency locator beacon market grew 25%, primarily from the Personal Locator Beacon (PLB) market. People are becoming more aware of their need for location and Rakon is a dominant global supplier.

Space and Defence Revenue from Rakon's space market grew 20%, with 50% of the growth coming from China. We have seen the market in China open up more recently, with orders being placed after a long period of restructuring in the country's space programme.

Defence revenue grew 25%, mainly from the US region, where we have seen quite a push from our long-standing Tier One customers.

The microsatellite Low Earth Orbit (LEO) networks present future opportunities for high volume and new value-add product development. These very fast moving, low orbit satellites will be used for internet based communications such as internet based satellite phones.

Rakon Chair's Retirement

It was announced at the time of our FY2018 preliminary result that our Chair, Bryan Mogridge, will retire from the Board at our ASM on 7 August. Bryan joined us just before we listed as a public company in 2006 and brought a wealth of knowledge and experience to Rakon's Board, having chaired and directed many diverse companies. We will sincerely miss Bryan and we thank him for his significant contribution. Bruce Irvine, who has been on Rakon's Board since 2005, will replace Bryan as Chair.

Closing Comments

A strong profit result has been delivered in the year from a return in the core business, along with a number of other gains. Revenue started a growth recovery in FY2018 and our balance sheet is very stable with the movement into a net cash position. The acquisition of CRI is strategic and significantly important to growing future profit.

FY2019 Outlook

We expect core business to continue to improve. The successful integration of CRI into Rakon is a key priority in FY2019, and we will also be focusing on a turnaround to profit from this business. I look forward to bringing you further updates at our ASM in August.

Brent Robinson
Chief Executive Officer / Managing Director

“



Nigel Hardy
Principal
Design Engineer
Harlow, UK

At the Rakon UK design centre we leverage our unique in-house ASIC design capability, coupled with our vast experience in frequency control oscillator design, to deliver a world leading product range.

Participation in international standards bodies allows us insight into the evolving and future requirements of some of our core and emerging markets. This allows us to focus our R&D activity to realise the right product early in the market cycle.

⁵ Refer to the footnote on page 19 for the definition of Underlying EBITDA as a measure of non-GAAP financial information, referred to in this document.

⁶ Product acronyms and definitions are explained in the Glossary on page 19.

Board of Directors



Bryan Mogridge
ONZM, FNZIOD

Independent Chair
Appointed Chair in 2005.

Bryan has been a public company Director since 1984.

Formerly Chief Executive Officer (CEO) of Corporate Investments and Montana Wines.

Has chaired BUPA Care Services NZ Limited, Yealands Wine Group Limited, Momentum Energy Pty Limited, Waitakere City Holdings Limited, Enterprise Waitakere, Lantern Hotel Group Pty Limited, Pyne Gould Corporation Limited, The New Zealand Food and Beverage Exporters Council, The New Zealand Wine Institute and The New Zealand Tourism Board, among many other companies.

Was also Vice Chair of UBS New Zealand and a former Director of Heartland Building Society Limited.

Other Current Directorships: BUPA Australia Pty Limited (Director), Mainfreight (Director), Adherium (NZ) Limited (Director), and Thinxtra Limited (Chair).

Bryan is also a Trustee of the Starship Foundation.



Brent Robinson

Executive Director
Appointed to Board in 2005.

Brent has 39 years at Rakon, which include establishing a global business.

32 years as CEO / Managing Director.

Under Brent's leadership Rakon has grown into a global business and a recognised leader in the industry.

Honorary Fellow of the Institution of Professional Engineers New Zealand.

Awarded the New Zealand Hi-Tech Trust – Flying Kiwi Award in 2011.



Bruce Irvine

Independent Director
Appointed to Board in 2005.

Bruce was Managing Partner of Deloitte Christchurch from 1995 until his retirement in 2007.

Bruce is a professional Director with extensive experience across a wide range of industries. He is a Chartered Fellow of the Institute of Directors, as well as an Accredited Fellow of Chartered Accountants Australia and New Zealand (CAANZ).

He is currently Chair of Market Gardeners Limited and Skope Industries Limited.

He is also a Director of PGG Wrightson Limited, Heartland Bank Limited, Scenic Hotel Group Limited, and House of Travel Holdings Limited.

Involved in a voluntary capacity as a Trustee of Christchurch Symphony Trust.



Lorraine Witten

Independent Director
Appointed to Board in 2017.

Lorraine is a professional Director with extensive experience in technology and Information Communications Technology (ICT) sectors, as well as competence in strategy and entrepreneurship. She is a chartered fellow of the New Zealand Institute of Directors and has 25 years' experience in senior management and finance roles, including past General Manager of Telecom Mobile from 1997 to 2001.

Lorraine is past Chair of Kordia Group Limited and past Director of New Zealand Trade & Enterprise among others.

Current Governance Positions: Soltius New Zealand Limited (Chair), StarNow Limited (Chair), vWork Limited (Chair), Corrections Department Audit & Risk committee (Member), TIL Logistics Group Limited (Director) and Simply Security Limited (Chair), a company she founded in 2007. Lorraine is also a member of Chartered Accountants Australia and New Zealand and Global Women. She holds a Bachelor of Management Studies with First Class Honours from the University of Waikato.



Yin Tang Tseng

Non-Executive Director
Appointed to Board in 2017.

Yin Tang (Tony) is the current Chair of Siward Crystal Technology Co. Limited, a substantial shareholder (16.6%) in Rakon.

Tony has over 30 years of experience in the Frequency Control Product (FCP) industry, having founded Siward in 1988 and grown the company to become one of the leaders in the industry globally, with revenue of US\$100+ million.

Other Current Directorships: Securitag Assembly Group Company Limited.



Keith Oliver

Independent Director
Appointed to Board in 2017.

Keith is a professional Director and also acts as a business advisor with ALTO Capital Limited, where he is also a Director. He is a past Director of a range of NZ technology companies operating in international markets in Asia, Europe and the Americas, several of which he has been a founder and investor in.

Other Current Directorships: Blackhawk Tracking Systems Limited (Executive Chair), Health Vision (NZ) Limited (Chair), and Vigil Monitoring Limited (Director).

Keith holds a Bachelor of Engineering (Electrical) with First Class Honours from the University of Auckland.

Board Q&A

rakon

REVIEW FY2018

What is the role of the Board?

The Board is ultimately responsible for setting the strategic direction of the company, providing oversight to the management of the company and direction of its business strategy, with the ultimate aim to increase shareholder value.

How does the Board work with management on strategy?

The Board works with management in a number of ways to ensure that the strategy that the Board ultimately sets is the one that it believes will increase shareholder value the most. This includes:

- Ensuring that management build the initial strategy based on a suitable strategy framework.
- Probing and challenging management on the initial strategy selection to ensure there is a consideration of opportunities beyond where the company is currently playing; presenting a vision of alternative choices.
- Prioritising the key areas of strategic focus amongst the many choices that the strategy selection offers.
- Ensuring that the capital, resources and capability of the company are sufficient to be able to deliver the strategy, or are within reach based on modification.
- Ensuring that the strategy contains a consideration and vision of the ecosystem in which the company intends to operate.
- Regular monitoring of the progress of the strategic plan.
- Ensuring that key executives' and senior managers' 'at risk' incentives are aligned to the strategy.

What benefits have resulted from the Board's approach to strategy?

It allows the Board and management to be aligned on where valuable time and resource should be spent, so that the opportunity to increase value is maximised.

Because Rakon is a company that has a number of parts, many of which are international, having alignment on the strategy allows the Board, management and all employees to have a clear direction on what they should be achieving. A further benefit is the higher level of engagement from employees.

What is one of the key strategies the Board has been keen to implement?

The Board has been keen to see a manufacturing strategy implemented that best supports both the current and future operational requirements. Following balance date the company announced that it would buy out its JV partner in Centum Rakon India, taking full control of this manufacturing company. This has been a strategic consideration that the Board and management have been working on together. It allows Rakon to have the control to make decisions about how the site can be used to derive a higher return on investment for this company and other Group assets.

What work is the Board doing around the NZX Code?

The NZX Corporate Governance Code was released in 2017 and the Board is acutely aware of the importance of best practice governance. Initially the Board worked to understand the company's gaps against the NZX Code, and then began working on a plan to implement against those gaps where it felt that strengthening governance will result in value being created for shareholders. As at the end of FY2018, the company is yet to fully adopt all of the guiding principles of the NZX Code, having a plan to further progress in the coming financial year.

What are the Board's other areas of focus?

The Board has many other focusses, such as ensuring the company operates with high standards and adapts to the changing environment in which it operates. Examples include ensuring that the company maintains its quality in financial reporting and ensuring that it is compliant with changing statutory and regulatory requirements, as they evolve. Ethical importance is also a critical requirement. The Board ensures that Rakon's employees have a clear understanding of what this means through the Business Code of Conduct.

Ultimately the Board sees itself as being accountable to shareholders for the performance of the company.

Q&A



Shawn Wang
Graduate Electronics
Engineer
Auckland, NZ

With products that are world leading in size, cost, and performance, we are building flexible product platforms that can then be tailored for different customers, within a shorter time frame and at lower costs.

It is exciting to be a part of the team that keeps pushing the boundaries and innovates.

Global Executives



Brent Robinson
CEO / Managing Director & Chief Technology Officer

Brent joined Rakon in the 1970s as a radio and electronics apprentice.

Subsequently, as a member of Rakon's engineering team, he developed various key product and production technologies and in 1986 he was appointed Managing Director and Chief Executive Officer. Under Brent's leadership Rakon has grown into a global business and a recognised leader in the industry.

In his capacity as Chief Technology Officer, Brent drives the business's technology and innovation.



Darren Robinson
Sales and Marketing Director

Darren has been Marketing Director since 1990, having earlier held various roles with the company both in New Zealand and overseas.

He leads the sales and marketing activities for Rakon globally and has been instrumental in Rakon's expansion into new markets, its commercialisation of new applications and its development of business relationships with many Fortune 500 companies.

Through Darren's in-depth understanding of the ecosystem and industry, he also plays an integral part in steering Rakon's R&D efforts. He guides product development teams to meet new requirements in emerging applications and to solve problems for customers and the industry.

Darren is also a strong advocate for Rakon's commitment to fostering local engineering talent.



Simon Bosley
Chief Financial Officer

Simon joined Rakon in November 2012 and was appointed as Chief Financial Officer in February 2013.

Simon has had a lead role in the structural change undertaken by the company in recent years, and has also led M&A activity in line with the company's growth strategy. In his current role he is responsible

for Rakon's finance, information systems and investor relations functions. Simon is also Rakon's Company Secretary.

He previously spent ten years with Sony in executive management positions in New Zealand and Australia. Simon is a member of Chartered Accountants Australia and New Zealand (CAANZ).



Dr. Sinan Altug
Managing Director, Europe

Sinan joined Rakon in 2002. In his role as Managing Director Europe, he is responsible for all aspects of Rakon's European business units, which include manufacturing operations, R&D sites and sales, and contributes significantly to Rakon's turnover.

Prior to his current role, Sinan was Global Business Development and Applications Director, driving Rakon's entry and growth in multiple strategic business segments.

Before joining Rakon Sinan held various management positions in the frequency control products industry. Sinan holds M.S. EE, Ph.D. EE, and MBA degrees.



Margo Thomas
Global General Manager, People and Capability

Margo has been the General Manager of People and Capability since January 2016. She is responsible for global Human Resources (HR) strategy, policy, organisational alignment, recruitment and selection, remuneration, recognition, leadership development, talent management, change management, employment relations, consultancy advice, and health and safety.

Margo has held senior HR positions in a range of industries, with Crowe Horwath, Spark, Westpac and New Zealand Post.



Michael McIlroy
Engineering Manager, Research and Development (NZ)

Michael joined Rakon in 1999. In his role as Engineering Manager, R&D (NZ), he is responsible for all aspects of Rakon New Zealand's research and development function, from early stage research through to product and technology development. Prior to his current role, Michael held a number of roles with Rakon including General Manager of Engineering (NZ) and Manufacturing Manager (NZ).

Michael has been instrumental in the development of many of Rakon's products, as well as the implementation of automotive certified, stage gate product development processes and project and portfolio management.



Scott Stemper
Global Quality Manager

Scott joined Rakon in January 2015 as Global Quality Manager. He leads the development and improvement of quality processes and systems to enhance Rakon's drive to be the leading provider of world class products.

Scott's background includes ten years as Global Quality Manager with Raltron Electronics Corporation and 20 years with CTS Frequency Controls in oscillator product engineering and quality management roles.

He has also held senior quality management positions with L-3 Communications and D&S Consultants Incorporated.



Cliff Hand
Senior Programme Manager, Global Integration

Cliff joined Rakon in January 2018. He is responsible for integration of the global business and driving operational improvements in productivity and efficiency to increase profitability.

Prior to joining Rakon, Cliff held the position of General Manager for the Fairview Group's Glass Relate business. Cliff has held cross-functional responsibility for finance, supply chain, sales and customer services, along with operations across two sites.

Over his 25 year career he has held a number of senior positions in a variety of manufacturing environments, including CEO for Patchell Industries Ltd and nine years at Fletcher Building.

Business and Strategic Focus

rakon

REVIEW FY2018

INPUTS

800+ global team

Strong ecosystem partnerships & customer relationships

Investment in R&D

Our trusted brand

Deep application expertise



Enabling applications that change the way we live our lives

Enabling our customers to advance technology

Improved service and efficiencies for our customers

Increased shareholder value

Growth of our people

OUTPUTS



Nicolas Gufflet
Quartz Engineering Manager France

Rakon is a rewarding multi-science and multi-cultural global hi-tech company, where highly skilled teams challenge themselves every day to propose new solutions to customers.

With production and research centres based around the world, Rakon is able to fulfil many different requirements: from low cost and high volume products to state-of-the-art Ultra Stable Oscillators (USOs). Rakon utilises these capabilities to ensure technology leadership.

An extensive review was undertaken of Rakon's strategic focus during FY2018, with a strategic plan implemented and adopted across the global business.

Financial Summary

rakon

REVIEW FY2018

Summary of Revenue and Profit/(Loss) For the year ended 31 March 2018	2018 \$000s	2017 \$000s
Revenue	101,127	94,738
Underlying EBITDA⁷	12,094	4,032
Depreciation and amortisation	(4,342)	(5,609)
Net dilution gain on Thinextra shares	4,815	–
One-off cash gains realised on derivatives closed out	1,096	(1,096)
Interest	(501)	(1,432)
Adjustment for associates and joint venture share of interest, tax and depreciation	(1,751)	(2,079)
Impairment	(120)	(6,594)
Other non-cash items	(294)	(713)
Income tax credit/(expense)	(998)	(67)
Net profit after tax	9,999	(13,558)

Summary of Statement of Cash Flows For the year ended 31 March 2018	2018 \$000s	2017 \$000s
Net cash flow		
– Operating activities	7,904	9,503
– Investing activities	3,856	(8,364)
– Financing activities	(4,542)	(346)
Net increase/(decrease) in cash and cash equivalents	7,218	793
Effect of exchange rate changes on cash and cash equivalents	246	(156)
Cash and cash equivalents at the beginning of the period	76	(561)
Cash and cash equivalents at the end of the period	7,540	76

This financial summary provides partially summarised financial information only, regarding the financial performance of Rakon Limited for the year ended 31 March 2018. Please refer to Rakon Limited's 2018 Annual Report for the full financial statements and accompanying notes.

⁷Refer to the footnote on page 19 for explanation of Underlying EBITDA.

Balance Sheet As at 31 March 2018	2018 \$000s	2017 \$000s
Assets		
Current assets		
Cash and cash equivalents	10,364	3,305
Trade and other receivables	28,395	28,249
Assets classified as held for sale	–	1,969
Derivatives – held for trading	211	2
Derivatives – cash flow hedges	1,078	179
Inventories	24,171	24,286
Current income tax asset	146	96
Total current assets	64,365	58,086
Non-current assets		
Derivatives – cash flow hedges	334	115
Trade and other receivables	2,716	1,365
Property, plant and equipment	13,481	12,745
Intangible assets	9,115	9,467
Investment in associates	14,640	12,004
Interest in joint venture	2,876	3,722
Deferred tax asset	5,906	6,692
Total non-current assets	49,068	46,110
Total assets	113,433	104,196

Balance Sheet As at 31 March 2018	2018 \$000s	2017 \$000s
Liabilities		
Current liabilities		
Bank overdraft	2,824	3,229
Borrowings	98	4,530
Trade and other payables	19,107	15,246
Derivatives – held for trading	91	1
Derivatives – cash flow hedges	144	225
Provisions	961	910
Deferred revenue	101	2,534
Total current liabilities	23,326	26,675
Non-current liabilities		
Derivatives – cash flow hedges	78	–
Borrowings	–	31
Provisions	2,734	2,909
Deferred tax liabilities	244	24
Total non-current liabilities	3,056	2,964
Total liabilities	26,382	29,639
Net assets	87,051	74,557
Equity		
Share capital	181,024	181,035
Reserves	(20,754)	(23,260)
Retained earnings	(73,219)	(83,218)
Total equity	87,051	74,557
Total equity and liabilities	113,433	104,196

“



Deborah Conn
Customer Service
Manager
Chicago, USA



Rakon's advancements in both integrated circuit design and crystal design lead the industry, and allow our customers to create new products in applications from communications to deep space exploration.

“



Amanda Blades-Farmer
Quality Engineering
Manager
Auckland, NZ



Quality has always been a key focus at Rakon. At our Auckland facility we are working toward recertification for IATF 16949, which is the highest quality standard.

To deliver world class quality we continually drive ourselves to get a little better, each and every day. Raising the bar is a way of life here at Rakon.

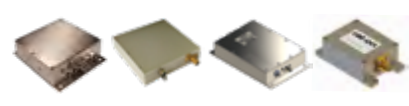
Telecommunications

The equipment that enables communications networks to operate. Includes base stations, microwave backhaul transmission, optical networks, small cells and network timing. *OCXOs, TCXOs, VCXOs and XOs.*



Space & Defence

Applications where reliability, precision and performance are all critical. This market also includes avionics and other high reliability applications. *DPCSSs, OCSOs, USOs, OCXOs, TCXOs, VCXOs, XOs and Crystals.*



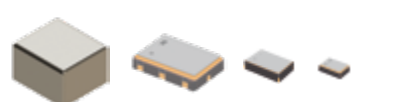
Global Positioning

Includes all Global Navigation Satellite System (GNSS) equipment and other positioning systems. Applications include Personal Navigation Devices (PNDs), high precision positioning (surveying, mining, and agriculture), emergency rescue beacons, aviation, drones, automotive, and sport and recreation products. *TCXOs, XOs and Crystals.*



Emerging & Other Markets

Many applications including wireless control, test and measurement, smart grids and metering, Machine-to-Machine (M2M), the Internet of Things (IoT), as well as other emerging markets. *OCSOs, OCXOs, TCXOs, VCXOs, XOs and Crystals.*



Rakon products can be found over land, under the sea, above the Earth and beyond.

The telecommunications market is undergoing a massive transformation. New technology and applications drive the need for precise timing requirements. 5G offers so much more than the current technologies available, including better reliability, faster speeds and wider bandwidth.

5G will enable critical and highly reliable infrastructure capability. It will enable applications like tele-surgery, based on remote robotic operation capabilities; and intelligent transportation, based on autonomous driving vehicles. 5G will enable next generation industrial automation of essential infrastructure, for resources like energy and water. The architecture of 5G also supports the ability to connect anything to the Internet – enabling the evolution of emerging new markets like the IoT. Broadband connectivity within homes using copper and fibre lines will also be replaced by the high speed wireless connection capability of 5G. Indoor location identification will become a reality, for instance, identifying a person's location within metres while inside a multi-storey shopping mall. Virtual and Augmented Reality (VR & AR) will also be possible. For example, super imposing physical and digital views to identify things like underground pipes and cables embedded beneath roads.

Most of the world's existing networks need to be upgraded to receive the best of what 5G can offer, and Rakon has a product for almost every type of network equipment needed.

Have you ever needed to activate an Emergency Position Indicating Radio Beacon (EPIRB) or a Personal Locator Beacon (PLB) to alert search and rescue to your remote location? In an emergency it can be a life saver. A system of satellites receives the distress transmissions when these beacons are activated and relays them to a control centre for action. Deep inside the beacons is a TCXO from Rakon. Today Global Navigation Satellite System (GNSS) technology can be found everywhere. Applications include location based services, in-dash navigation, agriculture and surveying, autonomous vehicles and drones.

For Rakon's space and defence products, reliability and performance are vital. Rakon's solutions can be found within many international programmes. Applications include instrumentation, aircraft radar systems, remote sensing satellites, launch vehicles (rockets), deep-space probes and many more.



Do you want to monitor your pet's activity? That's exactly what Xavier Burger, a fourteen year old from New Zealand, wanted to do after his pet bird died. To spare a new bird from the same fate he used a Sigfox device to develop a solution. After some tweaking and programming support from the Thinxtra[®] team, the solution went live. Suspecting the bird had died from either heat or falling off his perch, he now has a temperature sensor installed to make sure the cage is not too hot and a 3D accelerometer sensor to detect if the bird falls. This is just one example of the plethora of emerging possibilities available with the IoT. Rakon's products are able to provide the frequency references for IoT applications.

[®]Rakon has a 21.5% shareholding in Thinxtra as at 31 March 2018.

I love to work for a company that puts in so much energy – not only into product development – but also into understanding our customers' requirements. It is exciting and stimulating to look outside our company and see how Rakon solutions are widely used.

Thomas Borja
Senior Product Manager
Auckland, NZ

Our products are in many new high-tech applications, from self-driving vehicles to the latest telecommunications deployments.

I think Rakon has done an excellent job of developing complex technologies that allow simple solutions for our customers.



John Mundschau
General Manager US
California, USA

Rakon is a leader in technology – which is critical – but developing business starts with gaining customers' trust. Our global teams excel in building relationships based on trust. I'm very proud that the integrity of our organisation is evident from top to bottom.



Why Customers Choose Rakon

- 50 years of strong heritage in high technology across multiple markets; embedded in renowned international programmes.
- Continuous pioneering of innovative product solutions.
- In-house design teams who design patented ASIC technology and proprietary testing equipment. This is a unique capability in the FCP domain – enabling next generation technologies.
- Reliability and performance, including under extreme conditions.
- Broad product offering.
- Cost competitive global manufacturing platform.
- Localised technical support and customer service structure.
- Preferred and long term supplier to most Tier One and Tier Two customers in key markets.
- Leveraging established ecosystem partnerships.
- Rakon listens to its customers, participates in industry standards committees, and continuously evolves the business around emerging requirements of target industries.



Rakon's focus and strategy in the financial year has included building on its low cost manufacturing platform. This has been achieved through its acquisition of Centum Rakon India (to be renamed Rakon India), and through expanding on its relationship and partnership with Siward.

Centum Rakon India

Centum Rakon India ('CRI') manufactures high-performance Frequency Control Products (FCPs) primarily for the global telecommunications market. Most of these are sold through Rakon's French subsidiary to telecom network and equipment manufacturers. Additionally, Rakon India designs and manufactures high performance FCPs for the defence, aeronautics and space markets in India.

On 27 February 2018, Rakon announced it was in advanced discussions with Centum Electronics Limited ('Centum') to buy its 51% shareholding in the India based company CRI. Rakon held a 49% shareholding in CRI. On 30 April 2018 the company confirmed it would take full control of the CRI joint venture operations after the signing of an agreement for the buyout of its partner Centum. Transition of full control occurred on 2 May 2018. Brent Robinson said bringing Rakon India under Rakon's full control was a strategic decision.

"It now gives us flexibility to invest further into the capability of its manufacturing

plant. It will allow us to leverage the full potential of what is a high quality, low-cost operating platform suitable for growth, and provide the unconstrained ability to align the business with our international operations. Additionally, it gives us direct access to the growing market in India.

"Over time we expect further benefits to arise as we leverage the opportunities that this platform makes available to our R&D bases in the United Kingdom, France and New Zealand."

Rakon Senior Programme Manager – Global Integration Cliff Hand said the integration programme, which involves fully integrating CRI into the global business, is progressing well. Cliff has been based at Bangalore, India since April 2018 and is leading the programme through to its completion.

"Centum is continuing to provide some support functions in the short term. The integration programme is putting the necessary operational support structures in place to ensure continuity of supply with our customers

during this period and beyond."

Cliff believes that the low cost manufacturing platform CRI provides has the potential to grow the Rakon business significantly in the coming years.

"Rakon has built a sound strategic platform and is committed to investing and growing the business at CRI, to make it bigger and even better in the longer term. The team here is very enthusiastic about the opportunities that this may bring."

Siward, Taiwan

On 15 February 2017, Taiwanese company Siward Crystal Technology Co. Limited ('Siward') paid Rakon US\$10 million. In turn, Rakon allotted to Siward 38,016,681 new ordinary shares and announced it would now move to meet the requirements of a technology license signed by the parties. The allotment provided Siward with an after-placement stake of 16.6% in Rakon.

Brent Robinson noted that Siward's contribution to the business would go beyond strengthening the balance sheet.

"The newly established partnership with Siward opens a number of new opportunities for both companies, which they intend to accelerate."

Over the past financial year the relationship has strengthened between the two companies. Rakon Business Strategy and Planning Manager Preston Hatcher has been leading the technology transfer as well as focusing on bringing the two companies closer together. He has spent considerable time working closely with the team at Siward's headquarters in Taichung City, Taiwan and believes the Siward and Rakon businesses complement each other well.

"Siward excels at operational excellence and high volume, low cost production. Its facility is highly automated and it has the scale and capability to deliver very large volumes. Partnering with Siward enables us to provide a

complete Frequency Control Product offering to our customers. Rakon excels at breaking ground with high performance frequency control products. Combining the two strengths in this partnership, we are able to offer crystals, XOs, TCXOs and VCXOs in large volumes and very price competitively."

Preston says Siward's similar work culture and ethic has also helped build a closer working relationship.

"Siward has a great team with a lot of knowledge and expertise in producing at large scale. There are a lot of similarities between the two businesses, such as the depth of knowledge in areas of core competency and the importance placed on teamwork and relationships built on trust. Like Rakon, Siward also has sustained longevity (30 years) in a highly competitive, high-tech industry."

Selecting partners and suppliers who can help Rakon achieve its strategic outcomes is an important focus for Rakon management. Having a partner like Siward, which is operationally efficient and can produce to Rakon specification and at the right quality level, is key to improving stakeholder value.



At Rakon, we are focused on achieving increased value for our customers and other stakeholders. We do this through the formation and implementation of strategies such as low cost manufacturing and partnerships. Rakon also continues to cultivate an engaged workforce who are customer-centric and committed to achieving operational excellence.

Culture

Rakon is a fast paced, technical, global company with a strong heritage in all of its core markets. The company's focus is on product performance, reliability, quality and speed to market. Rakon partners with key ecosystem influencers and understands market needs, enabling it to develop the next innovative solution. Its engineers work within technically challenging environments and it interacts daily with world renowned government agencies, organisations, and equipment and infrastructure companies.

As technologies evolve at a rapid pace, the nature of the industry is dynamic, so a proactive culture of innovation and advancement is required. This fosters a culture around making things happen quickly and doing things better each day.

The Environment

In today's world the effects of climate change are becoming increasingly evident and there is a heightened awareness of the need to sustain our environment for future generations.

Rakon recognises the importance of protecting the world's environment and natural resources and must comply with applicable regulatory environmental requirements. It has achieved ISO14001 certification at its manufacturing facilities in New Zealand and India. This is an internationally agreed standard that sets out the requirements for an organisation's environmental management system.

The company encourages the creation of environmentally friendly products and technologies through its design and development processes. It routinely monitors and reports material content within its products to comply with major environmental directives like Restriction Of Hazardous Substances (ROHS); and Registration,



Evaluation, Authorisation and Restriction of Chemicals (REACH). The company also fully supports international actions for responsible supply chain management of conflict minerals. Rakon avoids using these minerals if sourced from conflict-affected countries. It also supports international actions for the prevention of human rights abuses in conflict-affected and high-risk areas of the Democratic Republic of Congo (DRC) and surrounding areas.

Across the global business, initiatives are ongoing to minimise and recycle waste, conserve water and ensure Rakon becomes more efficient in its use of energy and natural resources.

The company participates in the Carbon Disclosure Project (CDP) and has been reporting on CO₂ emissions since 2011.

Rakon will continue to make improvements in this vital area of environmental responsibility, and will do what it can to protect the world we live in and achieve environmental best practice.



The last three to four years at Rakon were focused on right-sizing the business to bring it into balance with the realities of the marketplace at that time. The instabilities caused by those activities are now behind us and we have a stable financial and organisational platform from which to focus on growth.

On the visible horizon, all the markets we serve point to increasing demand for Rakon products. Applications will continue to consume whatever bandwidths the infrastructure has in place. In today's world, current networks can't cope with existing demand, and new application possibilities can only become a reality with the network infrastructure that is available.

In the telecommunications market, 5G deployment looks set to become a reality in the next two years. This technology will require bigger and better of everything we currently have available. Bigger throughput, a larger number of connections, lower latency, longer battery power, better reliability and better spectrum efficiency. With support of ubiquitous fibre infrastructure and other high capacity backhaul technologies, large data throughput is possible with distributed base station architectures, small cells and remote radio heads. In the space market, data transfer is limited to the number of satellites in orbit. In the global positioning market, data transfer for applications like autonomous vehicles, precision farming and emergency beacons is limited to the networks available to support them.

Whatever the application may be, within every node, within every network, a stable and reliable timing and frequency reference is required for the successful transfer of data. Rakon products provide this timing, enabling the connectivity for today's applications as well as the technological possibilities of the future.



Brent Robinson
Chief Executive Officer / Managing Director

Glossary

Crystal Resonator (Xtal)

At the heart of XO's, VCXO's, TCXO's and OCXO's are quartz crystals, which are designed to resonate with electrical stimulation using the piezoelectric effect.

Crystal Oscillator (XO)

An XO is a quartz crystal combined with oscillation circuitry to generate a repeating electric signal.

Digital Pulse Compression Sub-System (DPCSS)

A fully programmable system solution used to upgrade an existing radar, improve performance and extend its life.

Oscillator

A circuit or device that generates a repetitive electric signal and consists of a resonator and electronic components.

Oven Controlled Crystal Oscillator (OCXO)

A crystal oscillator that uses a miniaturised oven to keep its internal temperature constant.

Oven Controlled SAW Oscillator (OCXO)

An oven controlled oscillator using Surface Acoustic Wave (SAW) technology instead of a quartz crystal.

Surface Acoustic Wave Resonator (SAWR)

At the heart of SAW oscillators are SAW resonators that use the piezoelectric effect to generate electrically stimulated acoustic waves at a resonant frequency.

Temperature Compensated Crystal Oscillator (TCXO)

A crystal oscillator with additional circuitry to remove frequency variations due to temperature change.

Voltage Controlled Crystal Oscillator (VCXO)

A crystal oscillator with an adjustable output frequency.

Definition of Underlying EBITDA

Rakon has used 'Underlying EBITDA' as a measure of non-GAAP financial information in this 2018 Review document. Underlying EBITDA is defined as "earnings before interest, tax, depreciation, amortisation, impairment, loss on disposal of assets, employee share schemes, non-controlling interests, adjustments for associates and joint ventures share of interest, tax & depreciation, and other cash and non-cash items." Underlying EBITDA is a non-GAAP measure, with its presentation not being in accordance with GAAP. The Directors present Underlying EBITDA as a useful non-GAAP measure to investors, in order to understand the underlying operating performance of the Group and each operating segment, before the adjustment of specific non-cash charges and before cash impacts relating to the capital structure and tax position. Underlying EBITDA is considered by the Directors to be the closest measure of how each operating segment within the Group is performing. Management uses the non-GAAP measure of Underlying EBITDA internally, to assess the underlying operating performance of the Group and each operating segment. The use of Underlying EBITDA for FY2017 and FY2018 has been extracted from audited financial statements. This document should be read in conjunction with the Rakon Limited Annual Report 2018. A detailed reconciliation of Underlying EBITDA to Net (Loss)/Profit for the year is contained at Note B1 c) of the financial statements.



Ryan Barron
Research Engineer
Auckland, NZ

At Rakon we use our highly flexible product platforms to help us to find solutions for world leading technology companies. As part of the research and development team, I find this drives innovation and motivates us to come up with new creative ideas.



Margo Thomas
Global General Manager
People & Capability
Auckland, NZ

It's the people that make Rakon successful. I'm proud to work with a global team of high calibre individuals who are committed to the group effort of designing and manufacturing market leading products.

Directory

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Managing Your Shareholding Online:

To change your address, update
your payment instructions or view
your investment portfolio including
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