

# Pulp & Paper Industry Overview & Outlook **Seventeen22**

Your five year Overview and Outlook

**Seventeen22** provides a succinct overview and summary of Australian and New Zealand paper, paper product, pulp and fibre supply markets for 2016 –17 and the prior decade, as well as the outlook and IndustryEdge's consumption forecasts through to 2022.





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**Contact IndustryEdge**

**T** +61 3 5229 2470

**E** [info@industryedge.com.au](mailto:info@industryedge.com.au)

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# Pulp & Paper Industry Overview & Outlook Seventeen22

Your five year Overview and Outlook

**This 2017 Overview and 2022 Outlook provides a snapshot and easy reference tool to help navigate the Australian and New Zealand paper & paperboard markets and industry.**

Seventeen22 delivers key information in a graphic and easily understood manner. It is ideal for business leaders, policy makers and analysts needing a quick introduction or ready reference to Australia and New Zealand's paper markets and industry.

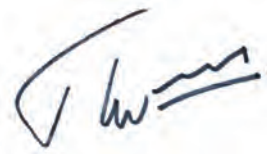
Much of the content comes directly from **IndustryEdge's** annual Pulp & Paper Strategic Review (now in its 26th annual edition) and many readers will recognize the format of Seventeen22. What is new is that this snapshot delivers the key points about this multi-billion dollar sector in just 32 pages.

Thanks to the support of the sponsors and in partnership with the **Australasian Pulp & Paper Industry Technical Association (Appita)**, Seventeen22 is being supplied, free of charge, to more than 12,000 individuals in Australia, New Zealand and throughout Asia.

This is the second edition of what is intended to be a useful and easy to use addition to your business information tools. Because it is an annual publication, we know it will be used across 2018, until the next edition is published.

We welcome your feedback and discussion with you about your business needs and how IndustryEdge can assist you to meet them.

Yours sincerely



**Tim Woods,**  
Managing Director,  
IndustryEdge



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# Snapshot

**The market for paper, paperboard and paper products in Australia and New Zealand is mature, and consumption remains stable. In 2017, the trend is moving back towards domestic manufacturing, driven by lower value domestic currencies, export opportunities and the prospect of import replacement.**

**Demand for paper and paperboard in modest decline in Australia and New Zealand – packaging and industrial papers remain strong.**

In 2017, total demand for all grades of paper and paperboard in Australia was 3.5% lower than the year before. At 3.13 million tonnes, total demand slipped back, despite modest but sustained growth in the Packaging and Industrial grade. Declining consumption of Newsprint and Printing & Communication papers drove total demand lower for the year.

Consumption trends were also uneven across the different grades of paper and paperboard in New Zealand. At 0.72 million tonnes, total demand decreased by 7,100 tonnes in 2017, despite growing demand for Packaging and Industrial papers.

To the year ended 30th June 2017, demand and demand growth for each sector is displayed in the following table.

### **Per capita consumption of paper and paperboard is declining**

Measuring paper and paperboard consumption on a per capita basis provides a useful economic indicator of the sector's importance to an economy, rather than demonstrating each individual's personal consumption.

In **Australia** in 2017, per capita consumption of paper and paperboard was 127 kg per person, down 5.7% on the prior year. In **New Zealand** in 2017, per capita consumption of

paper and paperboard was 151 kg per person, down 7.4% on the prior year.

The difference in the two countries' per capita consumption is explained by the significance of the packaging and industrial paper sector to the New Zealand economy, especially for export dairy products.

### **Demand is forecast to decline moderately to 2022**

In both Australia and New Zealand, aggregate demand is forecast to decline through to 2022. IndustryEdge has revised its forecast methodology to provide a five-year outlook based on the prior consumption trend over three periods – the last two years, the last five years and the last decade.

In Australia, it is forecast that from 2017 to 2022, total demand for paper and paperboard will decline on average by between 0.5% per annum (the 2 year trend) and 2.1% per annum (the 10 year trend).

In New Zealand, it is forecast that from 2017 to 2022, total demand for paper and paperboard will decline on average by between 0.1% per annum (the 5 year trend) and 1.6% per annum (the 2 year trend).

YE 30th June 2017	Australia		New Zealand	
	tonnes	% Change on prior year	tonnes	% Change on prior year
<b>Newsprint</b>	233,200	-29.9	101,400	-11.4
<b>Printing &amp; Communication</b>	1,048,600	-4.9	156,200	-6.8
<b>Tissue</b>	304,100	8.3	57,200	1.1
<b>Packaging</b>	1,552,000	1.3	408.0	4.5

Source: IndustryEdge

Australia's forecasts of total demand growth are shown in the table below

Forecasts of Total Paper & Paperboard Demand in Australia: 2017* – 2022 (ktpa)						
Year to June:	2017*	2018	2019	2020	2021	2022
<b>10 Year Ave. Forecast</b>	3,139	3,074	3,009	2,947	2,885	2,825
<b>5 Year Ave. Forecast</b>	3,139	3,090	3,041	2,993	2,945	2,899
<b>2 Year Ave. Forecast</b>	3,139	3,124	3,109	3,094	3,079	3,064

Source: ABS & IndustryEdge research and estimates \* = Actual

New Zealand's forecasts of total demand growth are shown in the table below

Forecasts of Total Paper & Paperboard Demand in New Zealand: 2017* – 2022 (ktpa)						
Year to June:	2017*	2018	2019	2020	2021	2022
<b>10 Year Ave. Forecast</b>	723	720	717	714	711	708
<b>5 Year Ave. Forecast</b>	723	722	721	720	719	718
<b>2 Year Ave. Forecast</b>	723	711	700	688	677	666

Source: Statistics NZ & IndustryEdge research and estimates \* = Actual

### Changes in industry & markets

Despite apparent demand stability, consumption trends are uneven across the different grades of paper and paperboard. Evidence of the decline in demand for **Newsprint** and **Printing and Communication** papers has been clear for some years, continued in 2017, and for Newsprint, appears to have accelerated.

**Packaging and Industrial** papers provided the majority of growth and development, as Australasia embraces the 'internet package delivery' phenomenon and exports growing volumes of food to Asia, as well as packaging paper and paperboard to the world.

The headline events and market defining factors and events of 2017 included:

Paper and paperboard demand and consumption trends are becoming increasingly uneven across the different grades of paper and paperboard and in both Australia and New Zealand.

Falling demand for Newsprint and Printing & Communication papers continues, with apparent consumption levels falling rapidly for some more discretionary grades.

The Tissue products sector continues to be febrile, with the role of imported stock for local conversion, as well as fully converted imports, disrupting domestic manufacturers,

especially in Australia. Apparent consumption however continues to grow, broadly consistent with population growth.

Packaging and Industrial papers provided the majority of growth and significant opportunities and development, as Australasia exports growing volumes of food to Asia, as well as packaging paper and paperboard to the world, not to mention New Zealand's exports of pulp and Australia's substantial exports of recovered fibre.

The headline events and market defining factors of 2016-17 included.

- Production in Australia rose 2.0% over the prior year, and by 2.7% in New Zealand
- Imports to Australia declined 8.8% in total while imports to New Zealand fell by 2.8% compared with the prior year
- In total, exports from Australia rose 5.7% in total, but varied massively on a grade-by-grade basis. Exports from New Zealand rose by 3.8%
- Domestic manufacturing increased in Australia, by 2.0%, driven by increased production of all grades of paper and paperboard, other than Newsprint:
  - Printing & Communication papers rose 24.0 kt, as Norske Skog's Uncoated Mechanical and Coated Mechanical production, and the Uncoated Woodfree production of Australian Paper all increased

- Tissue production rose 9.0 kt to their highest level since 2009-10
- Packaging & Industrial paper and paperboard production increased 39.0 kt
- In New Zealand, domestic manufacturing rose by 19 kt or 2.7%
- The Australian Ant-Dumping Commission determined that there had been systemic dumping of A4 copy paper into Australia and imposed significant duties on major importers, assisting the local producer to increase its market share
- Imports of tissue and tissue products continues to rise, taking up the majority of rising consumption
- Significant mergers and acquisitions saw the five major commercial printers merge into two groups in Australia: PMP/IPMG and the IVE Group, while the market leading merchant BJ Ball merged with KW Doggett to become Ball & Doggett as Japan Pulp & Paper purchased a significant interest in the merged entity. In packaging, US based West Rock acquired Cartonboard converter Hannapak
- Apparent consumption of Newsprint in Australia slumped by an unprecedented 100 kt in 2016-17

Details and more comprehensive analysis are included in the 2017 Pulp & Paper Strategic Review, published by IndustryEdge.

For further details go to [www.industryedge.com.au](http://www.industryedge.com.au).

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# 2017 Overview

The 2017 Overview summarises the state of the industry and markets in Australia and New Zealand in 2017 and outlines the major market and industry events of the last year. The Overview includes key global production and consumption statistics and details the role of Australia and New Zealand in that global context.

## Demand declined modestly in both Australia and New Zealand in 2016-17

The table summarises the Australasian pulp and paper industry to the middle of 2017.

Australasian Paper, Paperboard and Fibre Supplies to June 2017				
YE 30th June 2016	Australia		New Zealand	
		% Change on prior year		% Change on prior year
Number of pulp and paper facilities	14	-	7	-
Number of direct employees	12,450	-	1,910	-
Pulp & Recovered Fibre				
Production of virgin fibre pulp (t)	1,564,000	6.2	1,458,800	10.3
Imports of pulp (t)	297,000	8.0	50,200	5.7
Exports of pulp (t)	-	-	920,500	-5.8
Exports of recovered paper (k)	1,381,400	-2.8	323,800	7.8
Paper & Paper Board				
Production of paper & board (t)	3,123,000	2.0	724,000	-0.7
Imports (t)	1,276,100	-8.8	401,300	-2.8
Exports (t)	1,146,700	5.7	399,500	3.8
Apparent consumption (t)	3,253,400	-3.5	726,200	-1.0

Source: IndustryEdge

## Australia production, trade and demand details

For the year ended 30th June 2017, production, trade and consumption for each major grade of paper and paperboard is displayed in the following table.

Demand for Paper, Paperboard & Tissue in Australia by Main Grade: 2017 (tpa & % Change Over Last Decade)*										
YE June	Production		Exports		Local Sales		Imports		Apparent Consumption	
	t	% change	t	% change	t	% change	t	% change	t	% change
Newsprint	320,000	-3.0	151,800	139.8	168,200	-36.9	65,000	-6.2	233,200	-30.6
Printing & Communication	483,000	5.2	95,900	-25.1	387,100	16.9	661,500	-14.4	1,048,600	-5.0
Tissue	198,000	4.8	18,600	-7.9	179,400	6.3	124,700	11.2	304,100	8.3
Packaging & Industrial	2,184,000	1.8	945,100	1.2	1,238,900	2.3	313,100	-2.6	1,552,000	1.3

Source: ABS & *IndustryEdge* research and estimates. \*Full details for the last decade are supplied in the *IndustryEdge's* 2017 edition of the Pulp & Paper Strategic Review.

## New Zealand production, trade and demand details

For the year ended 30th June 2017, production, trade and consumption for each major grade of paper and paperboard is displayed in the following table.

Demand For Paper, Paperboard & Tissue In New Zealand By Main Grade: 2015 (tpa & % Change Over Last Decade)										
YE June	Production		Exports		Local Sales		Imports		Apparent Consumption	
	t	% Change	t	% Change	t	% Change	t	% Change	t	% Change
Newsprint	144,000	-2.7	51,500	15.0	92,500	-10.4	8,900	-20.5	101,400	-11.4
Printing & Communication	-	-	800	33.3	-	-	157,000	-6.7	156,200	-6.8
Tissue	31,000	-6.1	600	-25.0	30,400	-5.6	26,800	9.8	57,200	1.1
Packaging & Industrial	546,000	5.0	346,600	2.4	199,400	9.9	208,600	-0.1	408,000	4.5

Source: *IndustryEdge* research and estimates.

## Domestic manufacturing industry operates in global context

The domestic paper, paperboard and fibre supplies sectors in Australia and New Zealand generally experienced stable operating conditions over 2017.

In large part, this has been driven by reasonably stable currencies, maintaining the competitiveness of domestically manufactured paper, paperboard and paper products. In the main, this is reflected in the earlier sections of Seventeen22, including the data tables. Driven by these factors, apparently rapid growth in the delivery of packaged internet purchases to households and businesses, and increased exports of food from Australia in particular, consumption of Packaging & Industrial grade papers rose across fiscal 2017.

Demand growth is rarely consistent across the grades. Demand and therefore consumption of Newsprint and most grades of Printing and Communication papers remain in decline across the world, as well as in Australia and New Zealand, as later sections of Seventeen22 demonstrate. In Australia, the demand decline for Newsprint was especially dire.

Excess global supply continues to see developed countries like Australia and New Zealand caught up in a cycle involving competition from ever-cheaper imports, but rising input costs – most significantly for pulp and recovered fibre – has started to reverse that trend.

The depreciation of the Australian Dollar relative to the US Dollar since 2013 and its reasonable stability over 2017 does not entirely diminish the challenges for domestic paper producers. Imported pulp, chemicals and other materials are all more expensive, but manufacturers have only limited capacity to pass on costs to retailers or consumers.

For most grades of paper and paperboard, imports continue at high levels. This is a result of both global over-supply and the relatively high value of the Australian market.

For New Zealand, continued strength of its currency, supported by its solid export performance for agricultural products, eased slightly over the year, at least for access to the Australian market. Still, trade in paper and paper products between the countries remained patchy across the grades. Increased trans-Tasman integration in the Packaging & Industrial paper markets drives this trans-Tasman trade.

Challenges for domestic manufacturers continue, especially related to access to wood resources required for virgin pulp manufacture and on guaranteed access to gas and other energy resources, at a reasonable price.

Investment remains dependent in large part upon the security of supply of wood resources (both hardwood and softwood) and energy resources.

Trade disputation continues to impact the Australian industry more than their New Zealand counterparts. Despite historical challenges, recent experience in international trade disputes has been more positive, working in the interest of domestic manufacturers. Government support through procurement strategies remains sub-optimal, from an industry perspective.

Investments in the sector are generally smaller projects, primarily value-adding to existing processes, or in niches where competitive advantages are relatively assured.

Significant new investment announcements were thin on the ground in 2016-17. However, by the end of 2017, Oji Fibre Solutions was nearing completion of its new Corrugated Box manufacturing plant in Queensland, Visy Industries was operating to a program aimed at significant new Australian capital expenditure and Australian Paper was actively considering a range of manufacturing related options, including new energy generation potential.

On an outlook basis, conditions are expected to remain relatively stable and slightly negative, across the industry and in both Australia and New Zealand throughout 2018, with the exception of prices, which are rising in line with global input prices, especially those for pulp.

## Global Market Context and Overview

In 2016-17, Australia & New Zealand combined consumed approximately 1.0% of global paper and paperboard, producing 1.6% of global pulp, exporting 3.1% of global recovered paper shipments and produced 0.8% of the world's paper and paperboard.

### Global pulp production rose modestly – 184.4 Mt in 2016.

The world's annual pulp production was estimated at 184.4 million tonnes in 2016, with North America accounting for 36% and Europe 25%. This is being challenged by Asia (22%), which relies on both wood and non-wood pulp (made from bagasse, agricultural residues, grasses, etc.) as a significant input.

Global pulp production, by type, is included in the table below for 2015-16, with a comparison to the prior year.

## Global recovered paper volumes grew slightly – 228.6 Mt in 2016.

IndustryEdge estimates recovered paper volumes at 228.6 million tonnes worldwide in 2016, with the regional split displayed in the table below.

Asia is improving its local recovery rates, but imported a net 30.9 million tonnes of recovered paper in 2016.

As Asia increases its production of paper and board grades and reduces its use of non-wood pulps, it has increased its demand for recovered paper and is the key destination for recovered fibre. In 2016 it consumed 66.2% of global supply.

Australia and New Zealand combined recovered more than 3.6 million tonnes of paper and paperboard consumed in the two countries, and exported 1.7 million tonnes.

## Global paper and paperboard production declined – 392.0 Mt in 2016

Global production of paper and paperboard was estimated at 392.0 million tonnes in 2016, an apparent decline of 5.8% on the prior year, according to the FAO. Asia produced 39% of the world's output, well ahead of Europe's 26% and North & Central America's 22%.

Asian production growth remains strong, but is more muted than in recent years, even in China where programs to remove older, less efficient and more polluting manufacturing facilities continue.

Closures of machines manufacturing printing and communication papers in Europe and North America have slowed. Additionally, some production is being converted from Printing & Communication grades to packaging grades, slowing both the rate of capacity closure and the 'new building' of paper machines.



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Global Pulp Production by Type for 2015 and 2016 (Mt)*								
Pulp Production by Region	Chemical		Semi-Chemical/Mechanical		Non-Wood/Other Fibre		Total Pulp	
	2015	2016	2015	2016	2015	2016	2015	2016
North & Central America	51.3	51.7	13.5	13.4	0.5	0.5	65.3	65.6
Europe	31.0	31.8	13.0	13.2	1.4	1.4	45.4	46.4
Asia	25.2	25.6	4.8	4.9	9.8	9.9	39.8	40.4
South America	24.8	26.3	1.1	1.1	0.4	0.4	26.3	27.8
Africa & Middle East	1.1	1.1	0.4	0.4	0.2	0.2	1.7	1.7
Oceania	1.7	1.7	1.2	1.2	–	–	2.9	2.2
<b>Total</b>	<b>135.2</b>	<b>138.2</b>	<b>34.0</b>	<b>34.3</b>	<b>12.3</b>	<b>11.5</b>	<b>181.5</b>	<b>183.5</b>

Source: FAO and IndustryEdge\* Calendar Year

Global Recovered Paper Volumes by Region for 2015 and 2016 (Mt)*								
Recovered Paper Volumes by Region	Recovery		Imports		Exports		Utilisation	
	2015	2016	2015	2016	2015	2016	2015	2016
North & Central America	50.0	50.5	1.5	1.6	22.1	22.5	29.0	34.0
Europe	60.6	61.0	15.0	15.4	24.0	24.8	50.8	51.6
Asia	101.1	100.8	39.0	38.8	8.0	7.9	132.2	131.7
South America	10.7	10.7	2.0	2.0	0.9	0.9	11.8	11.8
Africa & Middle East	2.1	2.1	0.1	0.1	0.2	0.2	2.0	2.0
Oceania	3.5	3.5	-	-	1.7	1.7	1.8	1.8
<b>Total</b>	<b>227.0</b>	<b>228.6</b>	<b>27.6</b>	<b>57.9</b>	<b>57.0</b>	<b>58.1</b>	<b>227.6</b>	<b>232.9</b>

Source: FAO & IndustryEdge \* Calendar year

Global Paper & Paperboard Production by Main Grade: 2016 (Mt)# *					
	Newsprint	Printing/Communication	Tissue	P&I	Total
North & Central America	5.0	18.1	8.9	54.3	86.3
Europe	8.3	29.2	8.2	54.9	100.6
Asia	9.6	18.5	13.5	110.9	152.5
South America	0.4	32.0	2.3	9.3	44.0
Africa + Middle East	0.2	0.7	0.4	2.1	3.4
Oceania	0.5	0.5	0.3	2.7	4.0
<b>Total</b>	<b>24.0</b>	<b>99.0</b>	<b>33.6</b>	<b>234.2</b>	<b>390.8</b>

Source: FAO & IndustryEdge estimates # rounding and data error adjustments applied \* Calendar year

## Major Producing and Consuming Countries

Australia is generally ranked at around 20th in the world when it comes to total production and consumption of paper and paperboard. Though ranked lower in consumption terms, New Zealand is higher ranked in pulp production.

In 2016, China continued to lead the world in consumption of paper and paperboard at 110.4 million tonnes, and in production with 112.6 million tonnes. Both measures have increased by approximately 3.2% per annum since 2011. China produced 16.3 million tonnes of pulp, down 3% on the prior year.

The USA was the largest pulp producer at 48.8 million tonnes in 2016.

Top 10 Pulp Producers and Australia & New Zealand: 2016 (mt & %)			Top 10 Paper & Paperboard Producers and Australia: 2016 (kt & %)			Top 10 Paper & Paperboard Consumers and Australia: 2016 (kt & %)		
Pulp Production	2016	% Change 2015	P&PB Production	2016 1,000 tonnes	% Change 2015	P&PB Consumption	2016 1,000 tonnes	% Change on 2015
<b>1 USA</b>	48.8	0.6	<b>1 China</b>	112.6	1.3	<b>1 China</b>	110.4	1.3
<b>2 Brazil</b>	18.8	8.0	<b>2 United States</b>	71.9	-0.7	<b>2 United States</b>	70.1	-0.3
<b>3 Canada</b>	16.6	–	<b>3 Japan</b>	26.1	-0.4	<b>3 Japan</b>	26.4	-0.4
<b>4 China</b>	16.3	-3.0	<b>4 Germany</b>	22.6	–	<b>4 Germany</b>	20.5	-0.5
<b>5 Sweden</b>	11.0	-0.9	<b>5 India</b>	15.0	–	<b>5 India</b>	16.8	–
<b>6 Finland</b>	10.5	1.9	<b>6 Korea, Republic of</b>	11.6	–	<b>6 Italy</b>	10.5	1.0
<b>7 Japan</b>	8.6	-1.1	<b>7 Brazil</b>	10.3	-1.0	<b>7 Korea, Republic of</b>	9.4	–
<b>8 Russia</b>	8.5	3.7	<b>8 Finland</b>	10.1	-1.9	<b>8 Brazil</b>	9.2	–
<b>9 Indonesia</b>	6.8	–	<b>9 Canada</b>	10.1	-1.9	<b>9 United Kingdom</b>	8.9	-3.3
<b>10 Chile</b>	5.1	–	<b>10 Sweden</b>	10.1	-1.9	<b>10 France</b>	8.7	-1.1
<b>17 Australia</b>	<b>1.4</b>	<b>–</b>	<b>22 Australia</b>	<b>3.2</b>	<b>–</b>	<b>19 Australia</b>	<b>3.5</b>	<b>–</b>
<b>18 New Zealand</b>	<b>1.1</b>	<b>-26.7</b>						

Source: FAO

# Seventeen22

## 2022 Outlook

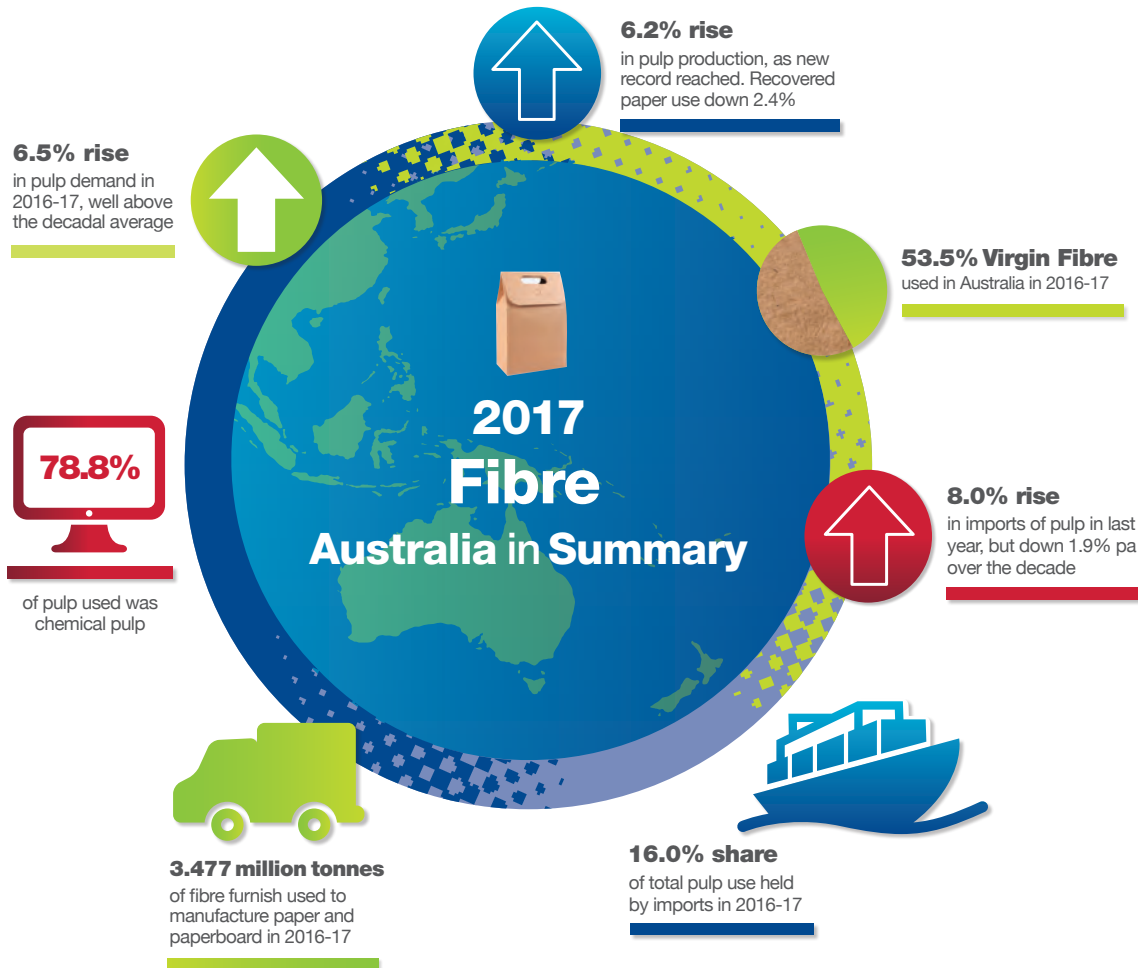
The 2022 Outlook provides an analytical window into the paper and paperboard industries and markets in both Australia and New Zealand, through to 2022.

It does so by detailing IndustryEdge's forecasts for demand for each of the major market segments and summarizing the prior decade's production, trade and consumption for each country, along with relevant additional analysis.

Full details and extensive, ongoing coverage of Australia and New Zealand's paper, paperboard and paper products markets is available from IndustryEdge at [www.industryedge.com.au](http://www.industryedge.com.au).



# Seventeen22 Australia



Sources: IndustryEdge research & estimates, ABS, company reports

IndustryEdge™

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

## Pulp, Recovered Paper and Fibre Resources

In 2016-17, Australia's consumption of pulp was 1,861,100 tonnes, a rise of 6.5% on the prior year and an average increase of 1.9% per annum over since 2006-07. Production was the highest on record for the third successive year, having grown at an average 2.7% per annum over the decade, and topping 1.5 million tonnes for the first time. Over the same decade, imports declined 1.9% per annum, with exports all but non-existent.

Focused on self-sufficiency, Australia's pulp production is primarily chemical and largely Kraft based. Production is limited to just four mills in Australia: **Australian Paper's Maryvale Mill, Norske Skog's Albury and Boyer Mills** and **Visy**

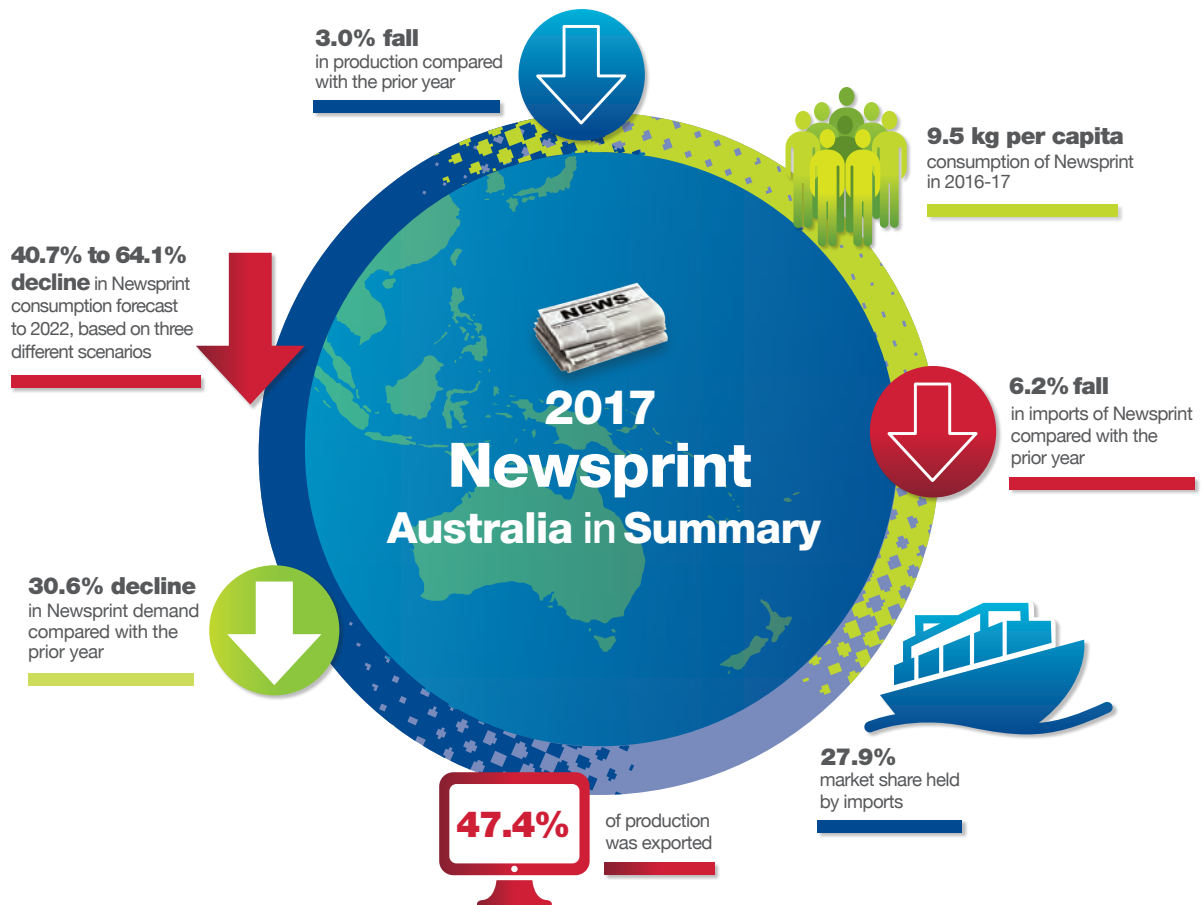
**Industries' Tumut Mill.** Australian Paper's production now includes de-inked pulp.

Recovered paper utilization has grown an average 1.2% per annum over the same decade and totaled 1,616,000 tonnes in 2016-17. Recovered paper exports totaled 1,381,400 tonnes for the year.

Australia is entirely self-sufficient for wood resources to manufacture pulp, and additionally in 2016-17, exported 6.112 million bone dry metric tonnes of woodchips (primarily to China and Japan). Of this growing volume, close to 95% was hardwood chips, supplied primarily from Australia's plantation resource base.



# Seventeen22 Australia



Sources: IndustryEdge research & estimates, ABS, company reports

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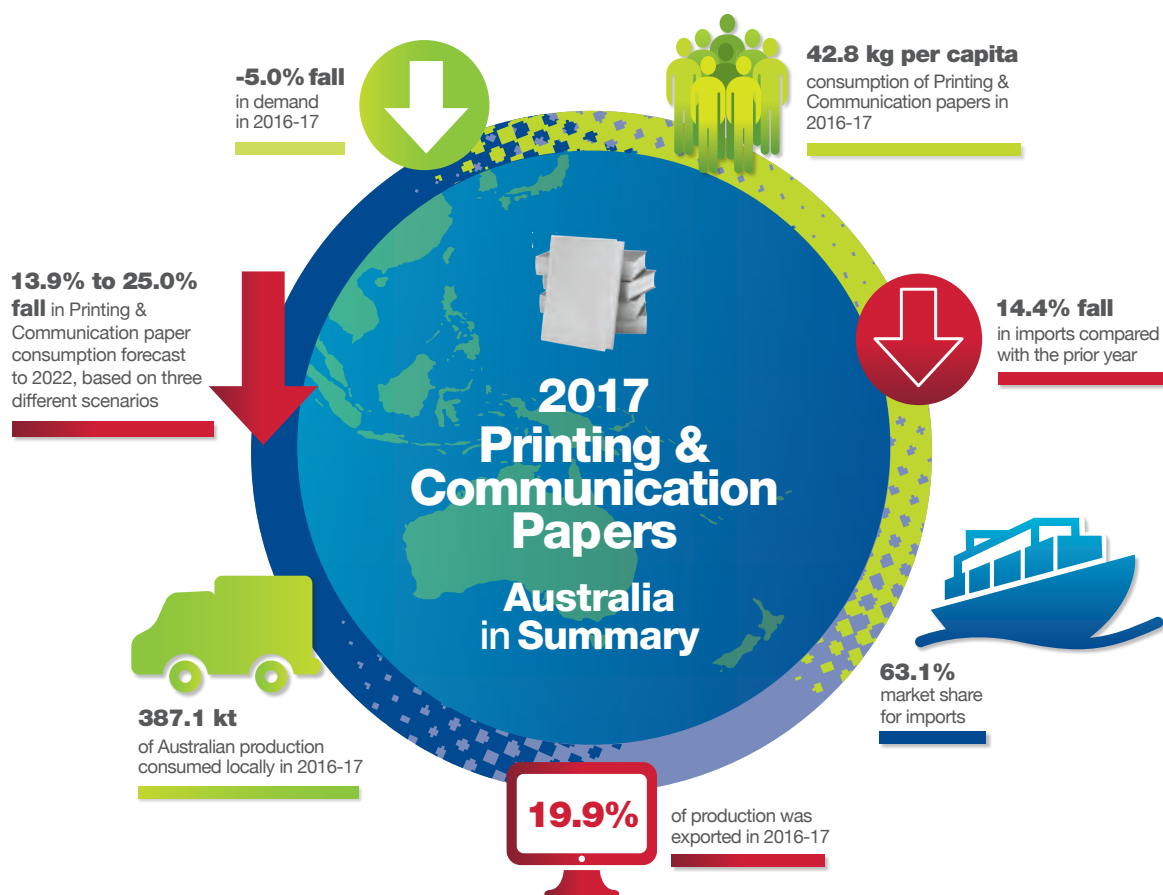
## Newsprint

The decline in demand for newsprint was a staggering 30.6% in 2016-17 alone. Averaging 10.0% per annum, consumption of 233,200 tonnes in 2016-17 was just 35% of consumption a decade earlier.

Production, all of which is by **Norske Skog**, remained relatively stable for some years, but had declined to 320,000 tonnes by 2016-17, with almost half of the production exported.

IndustryEdge's forecasts indicate Newsprint demand in Australia will fall by at least 40.7% from 2018 to 2022, and by as much as 64.1%.

# Seventeen22 Australia



Sources: IndustryEdge research & estimates, ABS, company reports

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## Printing & Communication Papers

Australian demand for Printing and Communication papers declined an average 2.9% per annum over the decade ended June 2017, falling to 1,048,600 tonnes. However, the demand decline from the prior year was 5.0%, underscoring what appear to be sharper falls in consumption in recent years.

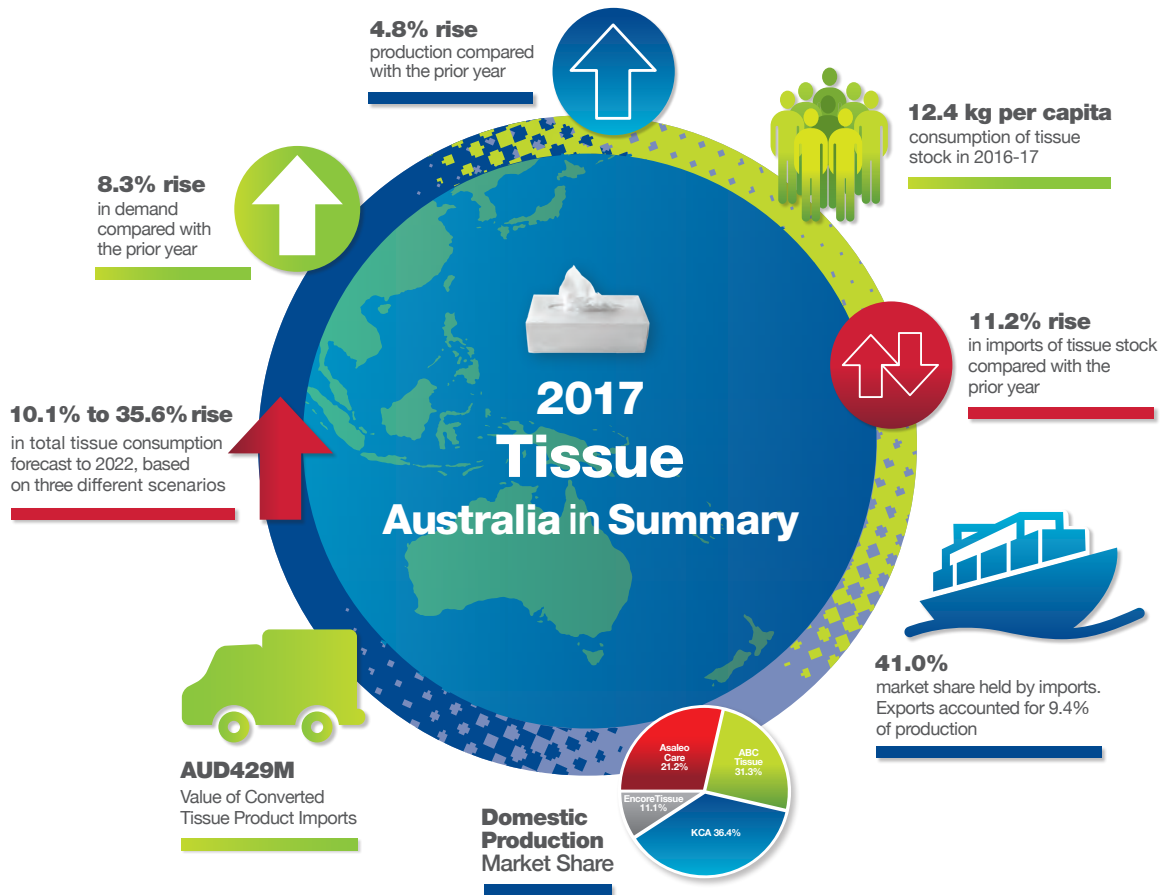
Commercial printing is declining, in part replaced by home and office printing, but primarily, by digital and electronic communication technologies.

Although declining, imports have remained relatively stable, declining by an average 3.9% per annum over the same decade.

Total production for the year ended June 2017 was 483,000 tonnes, an average 1.6% per annum decline over the decade. Domestic manufacturers are Australian Paper and Norske Skog.

Demand for Coated Mechanical (CM) papers used in catalogues and magazines has grown a paltry average of 0.1% per annum, while the lower quality grade of Uncoated Mechanical (UCM) papers used in directories and lower grade advertising has declined an average 3.8%. Coated Woodfree (CWF) papers, used in general commercial printing, have declined by 5.7% per annum and the Uncoated Woodfree (UCWF) grade which includes copier and office printer paper, have declined 2.9%.

# Seventeen22 Australia



Sources: IndustryEdge research & estimates, ABS, company reports

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## Tissue and Tissue Products

Australia's tissue consumption has grown an average 1.9% per annum over the last decade, reaching 304,100 tonnes in 2016-17, amounting to 12.4 kg per person. Over the same decade, production has declined an average 1.0% per annum, while imports have almost doubled over the same period and totaled 124,700 tonnes in 2016-17.

Australia's apparent capacity utilization rose to 77%, driven higher by recalculation of actual capacity and higher than expected production. *IndustryEdge* analysis anticipates capacity increasing in 2018 or 2019 – by **ABC Tissue** – with production unlikely to increase at the same rate as capacity is increased.

Tissue Manufacturing Capacity Utilisation in Australia: 2007 – 2017 (ktpa & %)											
Y/E June	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Estimated Capacity (ktpa)	285	260	260	260	260	235	235	235	240	269	256
Estimated Production (ktpa)	220	215	220	200	180	175	151	185	199	189	198
Estimated Capacity Utilisation (%)	77	83	85	77	69	74	74	79	83	70	77

# Australia



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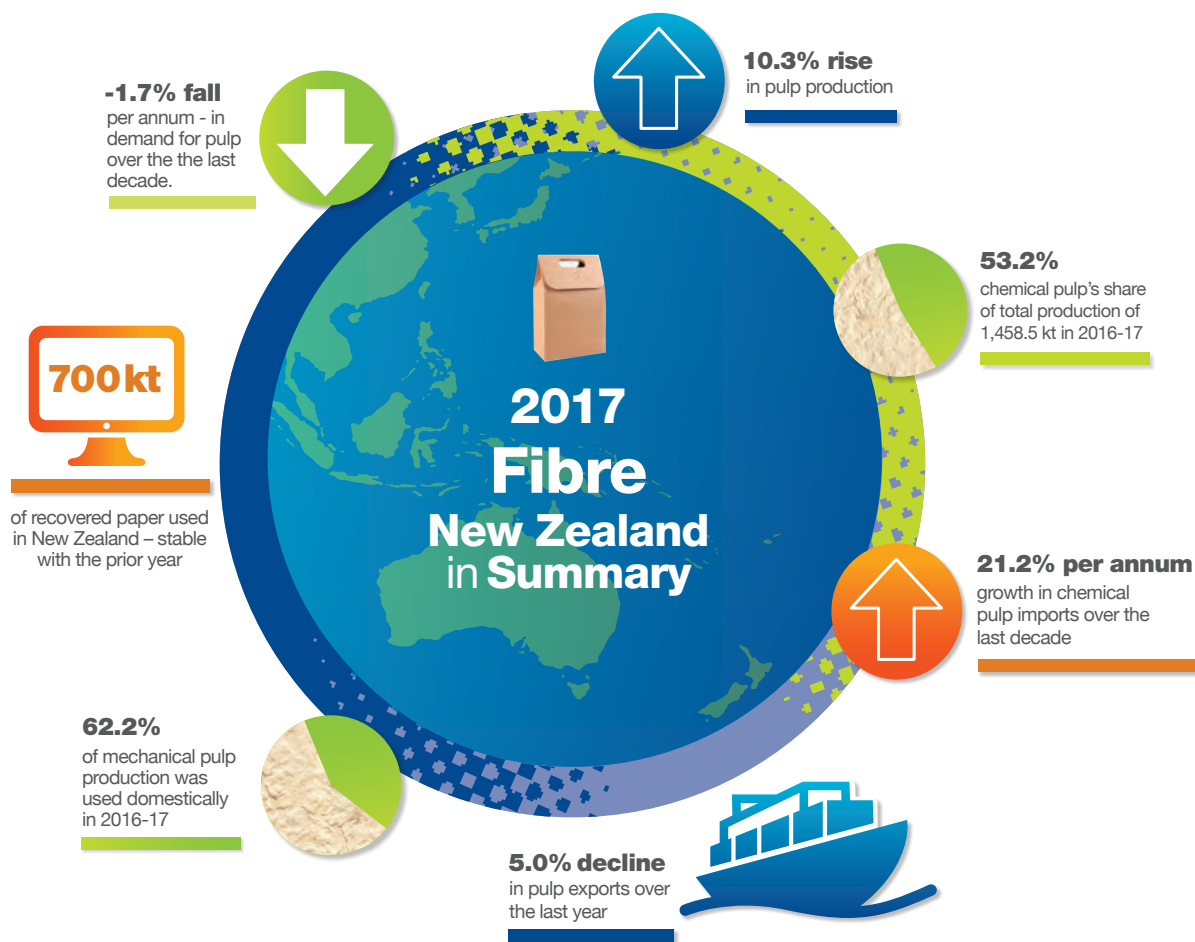
## Packaging & Industrial Paper & Paperboard

Measured by weight, Australia's consumption of Packaging and Industrial papers was stable over the decade to the end of 2016-17. Growing volumes of pre-converted packaging imports and strategies to reduce the weight of packaging mean there has been faster growth in the consumption of fibre based packaging materials.

Exports, almost all of which are containerboard materials, including Kraftliner, have grown at a solid 3.9% per annum, underscoring the importance of the region's softwood fibre resources for Asia's packaging markets.

Australia's pre-converted packaging imports totaled a record 112,000 tonnes in 2016-17, amounting to a little more than 6% of total consumption. Consumption growth is forecast by *IndustryEdge* to be as much as 37% by 2022, underscoring the sector's significance and prominence in the Australian industry.

# New Zealand



Sources: IndustryEdge research & estimates, NZ statistics, company reports

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## Pulp & Recovered Fibre

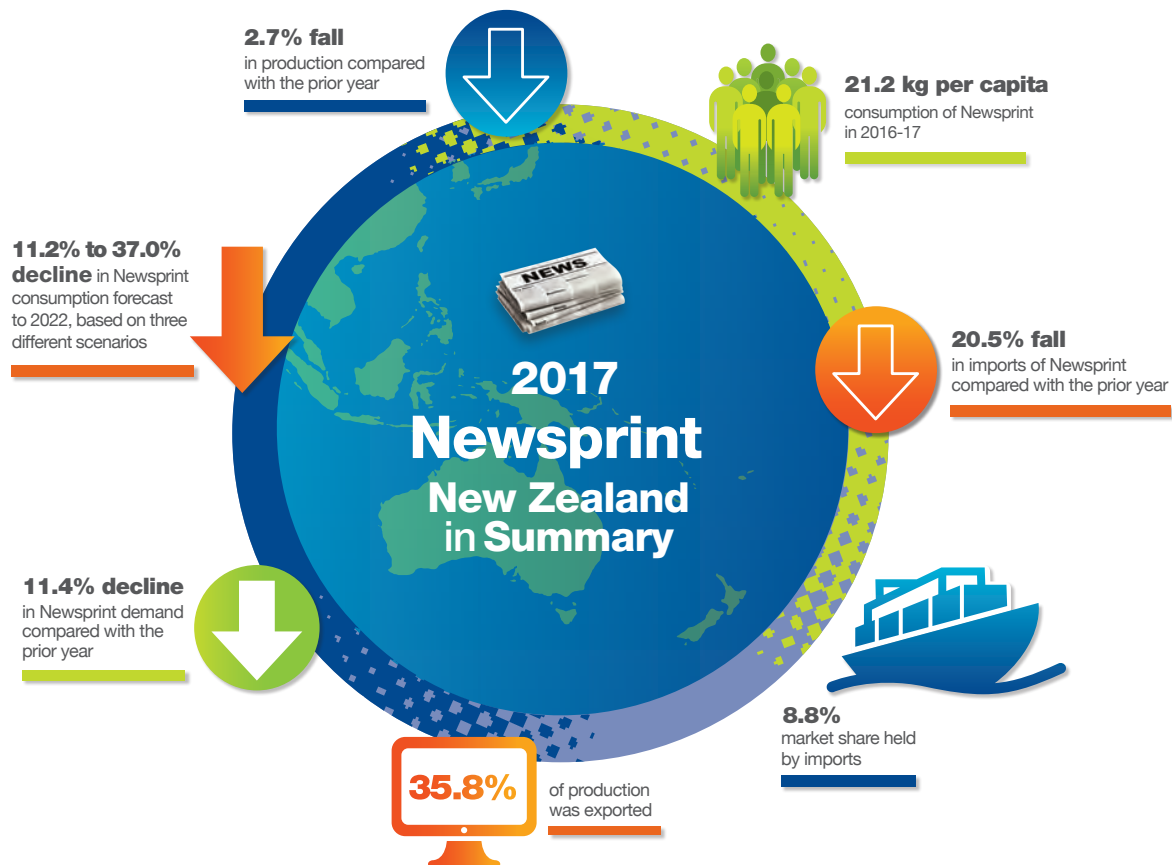
New Zealand's consumption of wood pulp has declined at an average rate of 1.7% per annum over the last decade, totaling less than 600,000 tonnes in 2016-17. Production has fallen an average 0.5% per annum over the same period, but totaled 1,458,500 tonnes in 2016-17.

Imports totaled 50,200 tonnes for the year, while exports totaled 920,500 tonnes, accounting for more than 63% of production.

Of its pulp exports, more than 663,900 tonnes was chemical pulp and 256,600 tonnes was mechanical pulp.

New Zealand's pulp exports continue to contribute to Asia's fibre supplies, especially for the manufacture of packaging paper & paperboard.

# New Zealand



Sources: IndustryEdge research & estimates, NZ statistics, company reports

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## Newsprint

Despite faring better than Australia (and most economically developed nations), demand for Newsprint in New Zealand has declined an average 2.4% per annum over the decade to 2016-17, falling to a low of 101,400 tonnes for the year. However, over the last three years, consumption has fallen a far steeper 7.7% per annum, underscoring that Newsprint consumption is now in rapid decline.

The sole domestic manufacturer, Norske Skog, produced an estimated 144,000 tonnes of Newsprint, exporting 51,500 tonnes, with imports totalling 8,900 tonnes.

More than half of the imports are delivered from Norske Skog's other operations in Australia.

New Zealand's slower than average consumption decline appears to be a result of discreet media markets, in which strong regional newspapers remains a more significant presence than in other countries, including Australia.

# New Zealand



Sources: IndustryEdge research & estimates, NZ statistics, company reports

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## Printing & Communication Papers

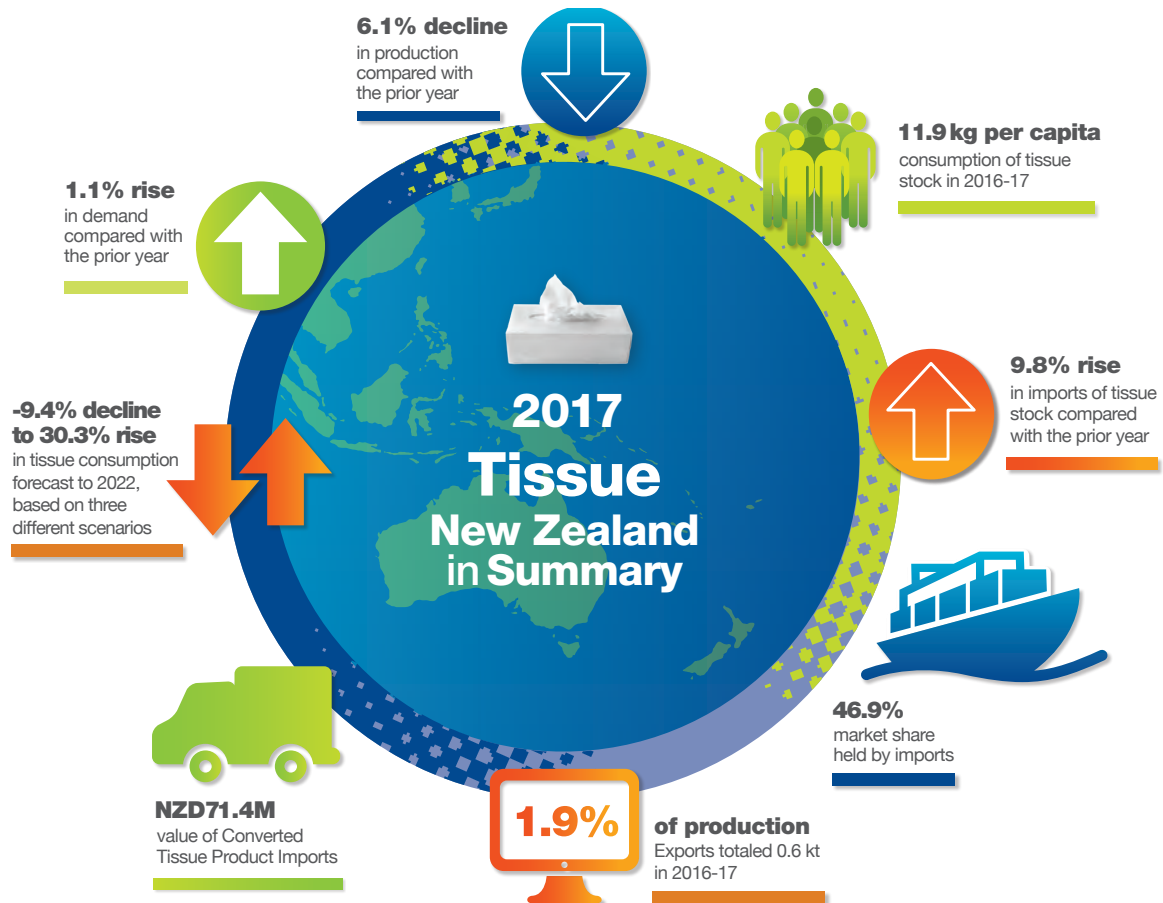
New Zealand's total consumption of Printing & Communication papers declined an average 3.5% per annum over the decade ended 2016-17, but had been more stable over the last five years, until a 6.8% decline in 2016-17, a year in which consumption totaled 156,200 tonnes.

Commercial printing in New Zealand is a relatively small sector compared with Australia, dominated by just a few larger printers and a small cohort of paper merchants. New Zealand's entire consumption of Printing & Communication papers is supplied by imports, including from Australia.

The main grades have had different average demand experiences over the last decade:

- Uncoated Mechanical (UCM) declined 9.7% per annum
- Coated Mechanical (CM) grew 0.8% per annum
- Uncoated Woodfree (UCWF) declined 3.5% per annum
- Coated Woodfree (CWF) declined 5.9% per annum.

# New Zealand



Sources: IndustryEdge research & estimates, NZ statistics, company reports

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## Tissue & Tissue Products

Consumption of Tissue in New Zealand has grown at 2.5% per annum over the decade to the end of June 2017. Per capita consumption amounted to 11.9 kg of tissue stock, per person, over the year.

Production, all of it by Asaleo Care, totaled 31,000 tonnes for the year, with exports all but non-existent. Imports of tissue

stock held almost 47% of the market in 2016-17, while the value of imports of converted tissue products reached NZD71.4 million for the year.

The longer-term prognosis for Tissue production in New Zealand is stable.



# New Zealand



Sources: IndustryEdge research & estimates, NZ statistics, company reports

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## Packaging & Industrial Paper & Paperboard

New Zealand's Packaging & Industrial paper sector is export focussed, with more than 63% of the 546,000 tonnes of production being exported in 2016-17. Demand has grown an average 1.2% per annum over the decade and totaled 408,000 tonnes in 2016-17.

In addition to exports of packaging papers for use overseas, New Zealand's production is also exported as packaging around the country's substantial food exports.

Despite the export focus, imports still accounted for more than half of total demand, four-fifths of which was supplied from Australia, where the local producer **Oji Fibre Solutions**, dominates.

In New Zealand, driven by food packaging requirements, export markets and limited access to large volumes of recovered fibre, production of packaging and industrial papers is dominated by virgin fibre and by Kraftliner in particular. In 2016-17, Kraftliner accounted for almost 60% of total production and just over half of total exports.

New Zealand's Packaging and Industrial paper sector is a significant industry, with the added advantage of being tightly integrated into the national food production industry and both domestic and export markets.

# Pulp&Paper Strategic Review 2017



*Now in its 26th consecutive annual edition, the Pulp & Paper Strategic Review is the only detailed review and analysis of the Australian and New Zealand pulp and paper industries*

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# Challenges & Opportunities for the Australasian Industry

## Situational Analysis for Australia's Pulp & Paper Industry

Paper and paperboard is a mature sector of the Australian economy. Demand and consumption lag considerably behind growth in the domestic economy. The domestic industry's virtues are steadiness of demand, relative price stability, despite a fluctuating international pulp price, and the country's stable political and economic environment.

Of the main sectors, limited growth in demand for Printing and Communication papers is being met by domestic production and declining imports, with Newsprint demand continuing to decline.

Packaging Paper and Paperboard production capacity has increased over the past decade, with exports continuing to be strong. Domestic demand is growing.

Apparent consumption for Tissue remains relatively unaltered by economic cycles, however the domestic sector is challenged by importers and the procurement strategies of major retailers.

### Key elements of the industry's outlook are:

#### Australia's Low Sovereign Risk

Australia is a politically stable, robust democracy. In economic terms it has confronted the issues of economic rationalisation, reform and globalisation and generally achieves growth rates, bank liquidity and employment levels that contribute to a stable investment environment and to low sovereign risk.

#### Abundant Primary Fibre Resources

Although a dry continent, Australia's fibre resources are abundant, relative to population. The Australian native wood resource is almost entirely made up of hardwoods of various species. Access to this resource remains under community and legislative pressure.

Australia has a very large volume of hardwood pulpwood, the vast majority of which is exported. A relatively small quantity is manufactured into bleached hardwood kraft pulp. (**Australian Paper - Maryvale Mill**). All of this pulp is used internally.

Australia's softwood resource is substantial, providing the majority of Australia's domestically used pulpwood. Additional volumes are exported. Softwood pulping includes mechanical pulping (**Norske Skog – Albury Mill & Boyer Mill**) and chemical pulping. (**Visy – Tumut Mill, Australian Paper – Maryvale Mill**).

#### Secondary Fibre

In 2016-17, Australia exported 1.38 million tonnes of recovered paper and paperboard, compared with its consumption of 3.2 million tonnes of pulp and recovered fibre. Most Asian economies rely on imports of secondary fibre, and having a substantial resource available locally is of definite strategic advantage for Australia. Recovery and implied recycling rates are stable at approximately 78% of relevant consumption.

#### Geographic Isolation

Apart from the formal protection that was long enjoyed by the Australian pulp and paper industry, a strategic strength has been its isolation. A combination of freight costs, some tariffs and shipping times traditionally protected the industry. These are all now declining in influence.

#### Access to Energy Resources at a Reasonable Price

Australia has abundant reserves of both coal and gas, providing power for high energy consuming forms of production. Future generating capacity is in step with potential demand and industrial energy demand has declined in recent years, with further decreases expected as industrial energy efficiency improves. The future of gas policy and guarantees of access – at a reasonable price – to Australia's gas resources, is a major issue for Australian manufacturing industries.

#### Ageing Production Base for Printing & Communication Papers

Prior to the conversion of a Newsprint machine in Tasmania, (Norske Skog – Boyer Mill) to manufacture Light-Weight

Coated mechanical papers, the newest of the small manufacturing base of the Australian Printing and Communication paper sector was built in 2005. (Australian Paper – Maryvale Mill) All machines are below scale and total capacity is limited.

Similarly, the most recent Newsprint machine dates from the early 1980s and although it was upgraded in 2006, with respect to width and speed, it lags behind modern world scale. (Norske Skog – Albury Mill)

### Market Size vs Machine Size

Because it has a relatively small population, the local market is not large. What constitutes a world scale production facility in each of the three main sectors; Printing and Communication papers, Packaging and Industrial papers and boards and Tissue, varies considerably. World scale in Printing and Communication paper machines is now around a half million tonnes (with one million tonne per annum machines now being operated in China) and in Packaging it is not much different. In Tissue, however, it would be possible to fit four world scale machines into the local market. The Tissue sector represents the market in which scale is not a particular issue.

### Local Market Orientation

Consistent with its geographic isolation, the industry developed capacity and strategies to supply domestic markets. Led first by **Visy Industries** and followed by **Orora** and **Australian Paper**, the industry's profile has, by necessity, become more outward looking.

The Newsprint and Tissue sectors are slowly being forced to follow suit as manufacturers find it difficult to fully utilise new capacity in the local market. One manufacturer is implementing a major investment strategy to compete with imports. (**ABC Tissue**)

### Pulp

In 2016-17, Australia exported more than 6.2 bone dry metric tonnes of hardwood and softwood chips to manufacture pulp. This is equivalent to at least 12 million tonnes of green wood. In the same year, Australia imported pulp.

Possibly the major opportunity for the development of the pulp and paper industry in Australia is to manufacture and export pulp, and at the same time, reduce reliance on imported pulps. There are strong influences working against such a development, including the existing very strong markets for Australian hardwood chips in China, Japan and elsewhere in Asia.

India in particular, shows prospects of being a larger market than China, and has almost no industrial forests. With its population growing faster, coupled with its technological orientation, a deregulated Indian economy has the potential to

develop an even greater appetite for Printing and Communication papers than has been the case with China.

Although it seems like sending coal to Newcastle, there are also opportunities in Indonesia, as fibre supply is increasingly stressed by competing land uses.

Domestic pulp utilization will rise, with the entire Australian tissue products market supplied by imported pulp. (**ABC Tissue, Asaleo Care, Encore Tissue, Kimberly-Clark Australia**)

### Paper

Undeniably limited, opportunity exists to produce Printing and Communication papers for import replacement (for example, Coated Woodfree grades of paper), especially if Australia and New Zealand are regarded as a single market. It is this opportunity that was taken up with the conversion of a Newsprint machine to the production of light-weight coated mechanical grade papers. (**Norske Skog – Boyer Mill**)

Import replacement opportunities also exist for Cartonboard (folding box-board) supply and for a range of pre-converted fibre packaging materials and for tissue products, especially those that are imported in pre-converted form.

### Price Deflation

The major threat to paper producers and their suppliers, in real terms, is price deflation. The cause, for much of the last several years, has been the appreciation of the Australian dollar – which made imported stocks cheaper in the local market. When the value of the Australian Dollar depreciated from mid-2014, the supply and demand imbalances were large enough that prices did not fully recover.

World oversupply, especially of Printing & Communication papers, has also been a factor, with increasing supply chasing diminishing demand.

### Printing Industry Rationalization

For many years, the printing industry in Australia has been characterized by its small-scale, low to mid-level technical capability and sophistication, disaggregation and at times, significant over-supply. As demand for printed material declines, the situation has become more pronounced. This situation is slowly resolving itself as competitive pressures cause more marginal participants to cease operating.

Rationalization continued in 2016 and 2017, with five major commercial printers merging into two more substantial, national printing groups, and two leading merchants, BJ Ball and KW Doggett also merged.

**Environmental**

**Pulp**

A continuing strategic threat to the industry and its expansion prospects is ongoing opposition – purportedly on environmental grounds – to the domestic manufacture of pulp and paper products. This applies especially to major capital investments such as pulp mills.

**Paper**

Paper is heavy and bulky and some quantities are still being deposited in landfills, even though that practice is diminishing. Australia has been very successful in recycling high volume, low value grades such as newsprint and packaging paper and paperboard, recovery of both hovers just below 80% of consumption.

The volume of high-end office papers claimed by the recycling process is lower. Much of this unrecovered material is retained in office archives and files. The industry has only recently begun to contribute significantly to collection and recycling of

these papers. One deinking facility (Australian Paper – Maryvale Mill) absorbs 80,000 tonnes per year of recovered printing and communication grade papers, from which recycled office and copy papers are manufactured.

**Free Trade**

Australia has signed free trade agreements with the USA, ASEAN, Korea, China and Japan. There is significant threat in these agreements, at least for paper and paperboard manufacturers (as opposed to importers). This is because the agreements have eliminated duties of at least 5%, in the case of China with no reciprocal rights, and anti-dumping actions will become more difficult to pursue.

There is little to fear from the high-cost and relatively inefficient paper industry in the USA, but the agreements with China and the ASEAN nations have serious consequences for paper and paperboard manufacturers in Australia. This is especially so as the Chinese manufacturing base has expanded ahead of domestic demand and the surplus is being tipped at an alarming and often very cheap price, onto the international market.

**Situational Analysis for New Zealand’s Pulp & Paper Industry**

More so than is the case for Australia, New Zealand’s economic fortunes are dictated by its small population and markets, despite its relatively abundant natural resources.

The long-term emphasis on supply to the Australian market is increasingly decoupled as both economies come to grips with the full impact of a truly globalised pulp and paper industry and increasing levels of international ownership.

New Zealand’s pulp and paper manufacturers – overall – appear to be marginally more nimble than their Australian counterparts. This is a function of its smaller scale and potentially greater vulnerability.

It is the abundance of natural resources that provides the opportunities for New Zealand in the future.

**New Zealand Enjoys Low Sovereign Risk**

New Zealand is politically stable. In economic terms, and was once one of the global leaders of economic rationalisation. As a destination for international investment, it is regarded as having a very low sovereign risk.

**Expertise, Market Knowledge & Reputation**

New Zealand has been manufacturing and exporting pulp, newsprint and packaging materials for a very long time and

has substantial expertise, market knowledge and international reputation in the industry. Its expertise in Asian packaging markets is particularly well considered.

**Plantation Base**

Pulp in New Zealand is almost entirely derived from a softwood plantation resource. As a result, it escapes much of the conflict of many other Asian manufacturers, as well as those experienced by Australia. A very significant quantity of softwood log exports from New Zealand has been recorded over the last decade or more, and is continuing, despite some concerns about the exports denuding the domestic manufacturers of their future resource. The significance of the Radiata pine resource for the manufacture of virgin kraft pulp cannot be under-estimated in New Zealand.

**Multi-National Ownership**

Almost all of New Zealand’s pulp and paper manufacturing assets are owned by multi-national corporations, allowing them to leverage technology and market development opportunities across the globe, and in particular in Asia. Global corporations with significant exposure include the **Oji Group** (Oji Fibre Solutions and Pan Pac) in pulp and packaging, **Norske Skog** in newsprint and **SIG Comblibloc** in liquid packaging.

## Necessarily Export-Oriented

The New Zealand industry's main products are pulp, newsprint and packaging materials. It has a reasonable home market for packaging (much of which is exported as packaging for food products), but with a small domestic market available for amortising fixed costs, it has been disadvantaged in world markets.

Although it had found it difficult to make inroads into the Australian packaging conversion market (corrugated boxes) in late 2016, **Oji Fibre Solutions** announced the construction of a third corrugated box manufacturing plant in Australia. This, its third facility, adds to its exports of packaging materials to the lower value, but larger and stronger markets of Asia.

Ownership of the Whakatane cartonboard mill by **SIG Combibloc** has resulted in that business being integrated into the global cartonboard and liquid packaging board markets, with exports supplied to a wider range of countries.

## Small Secondary Fibre Resource

Secondary fibre is relatively cheap fibre – more so in a country where power costs are high. With a small recovered paper resource, New Zealand must sustain its industry largely on virgin fibre.

## Fragmented Resource Base

While it has a sizeable softwood plantation base, apart from the Central North Island (CNI), much of it is geographically fragmented with little opportunity of establishing the critical mass required to sustain new, world scale production facilities.

In the CNI, there is a pulpwood shortage and, given that the resource is sawlog driven, there is little capacity for expansion. There is, therefore, little opportunity to increase scale to reduce costs. Pulpwood consuming reconstituted building products, such as MDF and particleboard, require less resource to sustain world scale facilities and are in a good position to dominate both the CNI and the non-CNI resource parcels.

## High Cost Power

New Zealand's difficulties are compounded by the fact that most of its hydroelectricity is generated in the South Island, leading to high transmission losses to the manufacturing centre in the Central North Island (CNI). Several pulp and paper facilities have access to geo-thermal power fields, providing them with a natural hedge against rising energy prices.

## High Freight Costs

New Zealand's main market for its pulp, paper (mainly newsprint) and packaging paper and paperboard is Australia, and in this respect it suffers from the high cost of sea freight on low utilisation routes. That aside, freight costs from Australia to New Zealand are higher than the other way, providing a buffer for the New Zealand industry.

## International Competition

The main threat to New Zealand's exporting pulp sector is competition from South America whose abundant resource, world scale production facilities and low local cost base make it a potent competitor in commodity grades of paper. The exploitation of Russia's vast Siberian natural softwood forest resource and the common border it has with the main Asian market, China, is a real and continuing threat, but one that may be ameliorated in time as the Russian industry's costs inevitably increase.

## Power Costs

High, and potentially higher, energy costs are particularly potent in relation to Bleached Chemi-Thermo Mechanical Pulp (BCTMP) pulp and newsprint production, where the main pulp source requires abundant mechanical (as opposed to chemical) energy.

# Sources

In addition to IndustryEdge research, forecasts and estimates, the content of Sixteen21 was informed by the following sources.

Australian Bureau of Resource Economic & Statistics (ABARES): [www.agriculture.gov.au/abares](http://www.agriculture.gov.au/abares)

Australian Bureau of Statistics (ABS): [www.abs.gov.au](http://www.abs.gov.au)

UN Food & Agriculture Organisation (FAO): [www.fao.org](http://www.fao.org)

Reserve Bank of Australia (RBA): [www.rba.gov.au](http://www.rba.gov.au)

Reserve Bank of New Zealand (RBNZ): [www.rbnz.govt.nz](http://www.rbnz.govt.nz)

Statistics NZ: [www.stats.govt.nz](http://www.stats.govt.nz)

IndustryEdge's ongoing research program includes continuous industry interviews in Australia and New Zealand and elsewhere around the world, as well as comprehensive analysis of production, trade and other relevant data, company annual reports and media reporting.

# Supporting Associations





# Pulp & Paper Industry Overview & Outlook **Seventeen22** Your five year Overview and Outlook

**IndustryEdge Pty Ltd**  
PO Box 7596  
4/115 Pakington St  
Geelong West,  
VIC, 3218 Australia

**Tel: +61 (0) 3 5229 2470**  
**Fax: +61 (0) 3 5229 0034**  
**Email: [info@industryedge.com.au](mailto:info@industryedge.com.au)**

**[www.industryedge.com.au](http://www.industryedge.com.au)**



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Rani Smale Design

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