

# Plexure Group

## Patiently Waiting for a McFlurry of Deals

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### OUTPERFORM

We initiate Plexure (PX1) with an OUTPERFORM rating and target price of NZ\$1.58. PX1 is exposed to an ongoing thematic shift which has seen global advertising expenditure recycled into mobile and desktop solutions, away from more traditional print channels such as newspaper and magazine. PX1 provides customers with a mobile marketing platform utilising artificial intelligence (AI) in conjunction with existing mobile applications to create personalised loyalty offers, which are redeemable in store. In combination with its self-help turnaround strategy and growing international recognition, we believe the company is well positioned to win new contracts. Shortage of data engineers is likely to slow PX1's short term product development however we do not expect this to impact PX1's overall growth strategy or ability to secure new clients. PX1 has the option to recruit across different parts of New Zealand or outsource globally to alleviate inflationary wage pressure and employee shortages (corroborated by discussions with recruitment agencies). At current prices PX1 presents a compelling buying opportunity for the long-term investor, although patience will be required given PX1's expected lumpy revenue growth.

NZX Code	PX1	Financials: Mar/	20A	21E	22E	23E	Valuation (x)	20A	21E	22E	23E
Share price	NZ\$0.91	NPAT* (NZ\$m)	0.2	-6.7	-6.1	-3.8	PE	n/a	n/a	n/a	n/a
Target price	NZ\$1.58	EPS* (NZc)	0.2	-4.0	-3.7	-2.3	EV/EBIT	n/a	n/a	n/a	n/a
Risk rating	Speculative	EPS growth* (%)	n/a	n/a	8.4	37.4	EV/EBITDA	n/a	n/a	n/a	n/a
Issued shares	173.2m	DPS (NZc)	0.0	0.0	0.0	0.0	Price / NTA	0.0	0.0	0.0	0.0
Market cap	NZ\$158m	Imputation (%)	n/a	n/a	n/a	n/a	Cash div yld (%)	0.0	0.0	0.0	0.0
Avg daily turnover	254.4k (NZ\$288k)	*Based on normalised profits					Gross div yld (%)	n/a	n/a	n/a	n/a

### McDonald's do appear to be 'lovin it'

McDonald's bought a 9.9% stake in PX1 in 2019 at the same time as acquiring data engine Dynamic Yield. The latter is now for sale, while PX1 provides its services to 58 McDonald's country markets, and is expected to add to another eight markets in FY22. PX1's proposition is particularly effective within the Quick Service Restaurant (QSR) sector - a view which is supported by conversations with a McDonald's franchise owner, McDonald's employees, a large QSR brand and industry experts. We assume that PX1's long term contract with McDonald's is worth ~NZ\$30m in annual recurring revenue, making up 95% of PX1's total revenue at FY20.

### Growing proof points supportive of future contract wins

PX1 secured new contract wins with QSR White Castle and Ahold Delhaize-owned supermarket Super Indo in FY20 leading to 1) an increase in customer numbers, 2) increased visit frequency, 3) higher average transaction values and 4) improved customer satisfaction scores. Specifically, Super Indo achieved 107% of its first year registration target within just three months, driven by a +55% increase in average basket size and 42% of app members redeeming in store. There are 16 other brands within the Ahold Delhaize group (total revenue €74.7bn FY20) which in our view presents a natural pipeline of contract opportunities going forward.

### Valuation and forecasts undemanding

The market has little visibility on PX1's growth trajectory or revenue breakdown and we believe it is hesitant to reward PX1 with a higher growth rate and subsequent multiple. Beyond PX1's McDonald's contract, we estimate White Castle to generate ~NZ\$1.5m of revenue and Super Indo ~NZ\$0.5m of revenue per annum. We forecast PX1's FY22 revenue growth to be 15% which we currently believe to be undemanding with upside risk to estimates. PX1 is currently trading on an EV/forward sales multiple of 4.1x, with our target price of NZ\$1.58 derived by an EV/sales multiple of 7.1x. We expect future contract wins to be a likely catalyst for the stock.

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## Plexure Group (PX1)

Priced as at 16 Mar 2021 (NZ\$)

0.91

### 12-month target price (NZ\$)\*

1.58

Expected share price return

74.1%

Net dividend yield

0.0%

Estimated 12-month return

74.1%

### Spot valuations (NZ\$)

1. EV/Sales multiple

1.45

2. n/a

n/a

2. n/a

n/a

### Key WACC assumptions

Risk free rate

n/a

Equity beta

n/a

WACC

n/a

Terminal growth

n/a

### DCF valuation summary (NZ\$m)

Total firm value

n/a

(Net debt)/cash

n/a

Less: Capitalised operating leases

n/a

Value of equity

n/a

Profit and Loss Account (NZ\$m)	2019A	2020A	2021E	2022E	2023E	Valuation Ratios	2019A	2020A	2021E	2022E	2023E
Sales revenue	16.8	25.3	29.2	33.6	40.4	EV/EBITDA (x)	70.6	96.4	n/a	n/a	n/a
<b>Normalised EBITDA</b>	<b>2.2</b>	<b>1.6</b>	<b>(5.2)</b>	<b>(2.5)</b>	<b>(0.1)</b>	EV/EBIT (x)	>100x	n/a	n/a	n/a	n/a
Depreciation and amortisation	(1.9)	(2.2)	(2.7)	(3.0)	(3.1)	PE (x)	n/a	>100x	n/a	n/a	n/a
<b>Normalised EBIT</b>	<b>0.4</b>	<b>(0.5)</b>	<b>(7.9)</b>	<b>(5.4)</b>	<b>(3.2)</b>	Price/NTA (x)	0.0	0.0	0.0	0.0	0.0
Net interest	(0.1)	0.2	0.9	0.7	0.6	Free cash flow yield (%)	2.0	2.3	-2.2	-1.6	-0.3
Associate income	0	0	0	0	0	Net dividend yield (%)	0.0	0.0	0.0	0.0	0.0
Tax	(0.1)	(0.2)	0.2	0	0	Gross dividend yield (%)	0.0	0.0	0.0	0.0	0.0
Minority interests	0	0	0	0	0						
<b>Normalised NPAT</b>	<b>(1.4)</b>	<b>0.2</b>	<b>(6.7)</b>	<b>(6.1)</b>	<b>(3.8)</b>	<b>Capital Structure</b>	<b>2019A</b>	<b>2020A</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>
Abnormals/other	0	0	(0.1)	0	0	Interest cover EBIT (x)	0.0	0.0	0.0	0.0	0.0
<b>Reported NPAT</b>	<b>(1.4)</b>	<b>0.2</b>	<b>(6.8)</b>	<b>(6.1)</b>	<b>(3.8)</b>	Interest cover EBITDA (x)	0.0	0.0	0.0	0.0	0.0
Normalised EPS (cps)	(1.2)	0.2	(4.0)	(3.7)	(2.3)	Net debt/ND+E (%)	0.0	0.0	0.0	0.0	0.0
DPS (cps)	0	0	0	0	0	Net debt/EBITDA (x)	0.0	0.0	0.0	0.0	0.0
Growth Rates	2019A	2020A	2021E	2022E	2023E	Key Ratios	2019A	2020A	2021E	2022E	2023E
Revenue (%)	45.1	50.1	15.7	14.8	20.4	Return on assets (%)	-10.3	0.9	-11.7	-11.8	-7.8
EBITDA (%)	>100	-26.8	n/a	n/a	n/a	Return on equity (%)	-16.9	1.5	-14.7	-15.4	-10.6
EBIT (%)	n/a	n/a	n/a	n/a	n/a	Return on funds employed (%)	2.6	-5.0	-16.9	-13.6	-8.9
Normalised NPAT (%)	n/a	n/a	n/a	n/a	n/a	EBITDA margin (%)	13.3	6.5	-17.7	-7.3	-0.3
Normalised EPS (%)	n/a	n/a	n/a	n/a	n/a	EBIT margin (%)	2.1	-2.1	-27.0	-16.2	-7.9
Ordinary DPS (%)	n/a	n/a	n/a	n/a	n/a	Capex to sales (%)	4.4	12.1	10.6	9.5	8.1
						Capex to depreciation (%)	690	710	422	447	437
Cash Flow (NZ\$m)	2019A	2020A	2021E	2022E	2023E	Imputation (%)	0	0	0	0	0
<b>EBITDA</b>	<b>2.2</b>	<b>1.6</b>	<b>(5.2)</b>	<b>(2.5)</b>	<b>(0.1)</b>	Pay-out ratio (%)	0	0	0	0	0
Working capital change	0.6	1.1	0.6	(0.2)	0.1						
Interest & tax paid	0.3	0.3	(0.1)	0.1	0.1	<b>Revenue breakdown (NZ\$m)</b>	<b>2019A</b>	<b>2020A</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>
Other	0.1	0.7	1.3	0.1	(0.6)	Loyalty New Zealand revenue	0.2	0.2	0.2	0.2	0.2
<b>Operating cash flow</b>	<b>3.2</b>	<b>3.7</b>	<b>(3.5)</b>	<b>(2.5)</b>	<b>(0.5)</b>	White Castle Revenue	0.0	0.6	1.4	1.5	1.5
Capital expenditure	(0.7)	(3.1)	(3.1)	(3.2)	(3.3)	Super Indo Revenue	0.0	0.5	0.5	0.5	0.5
(Acquisitions)/divestments	0	0	0	0	0	McDonalds Revenue	16.6	24.0	27.0	27.3	27.6
Other	(6.1)	3.0	3.0	(0.1)	(0.1)	Expected new contract revenue	0.0	0.0	0.0	4.1	10.6
<b>Funding available/(required)</b>	<b>(3.6)</b>	<b>3.6</b>	<b>(3.6)</b>	<b>(5.8)</b>	<b>(3.8)</b>	<b>Total revenue with customers</b>	<b>16.8</b>	<b>25.3</b>	<b>29.2</b>	<b>33.6</b>	<b>40.4</b>
Dividends paid	0	0	0	0	0						
Equity raised/(returned)	0.0	5.5	37.0	0	0						
(Increase)/decrease in net debt	(3.6)	9.2	33.4	(5.8)	(3.8)						
Balance Sheet (NZ\$m)	2019A	2020A	2021E	2022E	2023E						
Working capital	1.3	2.4	2.9	2.7	2.8						
Fixed assets	0.2	0.3	0.5	0.6	0.7						
Intangibles	3.3	4.1	4.7	5.0	5.2						
Right of use asset	0	2.3	1.9	1.6	1.4						
Other assets	8.6	17.1	47.5	42.2	39.0						
<b>Total funds employed</b>	<b>13.4</b>	<b>26.0</b>	<b>57.5</b>	<b>52.1</b>	<b>49.2</b>						
Net debt/(cash)	(7.3)	(14.2)	(44.6)	(38.8)	(34.9)						
Lease liability	0	1.9	1.9	1.8	1.7						
Other liabilities	12.4	23.3	54.6	49.3	46.2						
Shareholder's funds	8.1	15.0	45.6	39.8	36.2						
Minority interests	0.0	0.0	0.1	0.1	0.1						
<b>Total funding sources</b>	<b>13.4</b>	<b>26.0</b>	<b>57.5</b>	<b>52.1</b>	<b>49.2</b>						

\* Forsyth Barr target prices reflect valuation rolled forward at cost of equity less the next 12-months dividend

## Executive summary

We initiate PX1 with an OUTPERFORM rating and a target price of NZ\$1.58. Key attractions include exposure to the growing personalised mobile marketing sector and PX1's self-help turnaround strategy which has been broadly executed on to date. We have a relative degree of confidence in PX1's ability to win future contracts given its growing international profile and the ready made pipeline of opportunities presented by the Ahold Delhaize Group. However we recognise the recent surge in demand for qualified data scientists across New Zealand will likely add inflationary pressure to PX1's cost base, and has caused the company to miss its recruitment targets for the current year. We estimate PX1's Serviceable Obtainable Market (SOM) to be ~NZ\$1.1bn.

## Investment thesis

For a company to create value it needs to generate a ROIC in excess of its WACC. On our forecasting this does not occur until FY25 for PX1. Instead, we believe the market is rewarding PX1 for its FY22 revenue growth which at this stage is pricing in growth 9% on our chosen set of specific sector peers. Against our comparable forecast of 15%, there is additional upside to numbers if, 1) management can execute anywhere close to its five year strategic plan, 2) if contract negotiations with McDonald's are successful in moving away from store-based revenue drivers towards app user revenue drivers and/or 3) contract win momentum ramps up. We remain cautious regarding workforce acquisition, and anticipate revenue growth to be frustratingly lumpy.

### Key drivers of our investment case

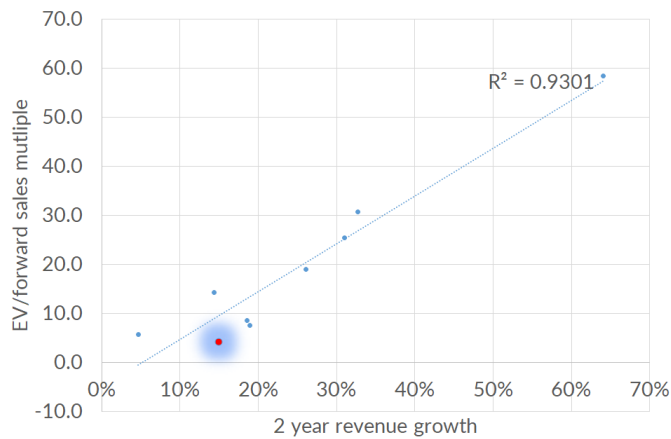
- **Exposure to high growth thematics:** In recent years mobile marketing, machine learning and personalisation have experienced exceptional demand growth, showing no signs of abating. Mobile marketing expenditure is expected to see a six year CAGR of +19%, while there is a global shift within marketing away from traditional print, towards personalisation and digital channels. The datasphere (sum of the world's data) is expected to reach 175 zettabytes in 2022 from 33 zettabytes in 2018.
- **New management, new strategy:** Previously known as VMOB, PX1 has redefined and refocussed its strategy, now aiming to generate NZ\$100m of revenue by FY25. Although highly ambitious, the company has broadly executed on its strategy to date, reaching positive NPAT for the first time at FY20. Success has also seen PX1 sign contracts with Ahold Delhaize-owned supermarket brand Super Indo and QSR brand White Castle, whilst adding 58 McDonald's countries to its platform.
- **Large and growing Serviceable Obtainable Market (SOM):** Which we estimate to be ~NZ\$1.1bn. We use a bottom-up approach to calculate immediate revenue opportunities within the QSR and grocery sectors based on specific criteria for future PX1 contracts.
- **Well positioned to win future contracts:** Following the well documented success with Super Indo, the Ahold Delhaize group (owning 16 additional brands to Super Indo) presents a ready made pipeline of immediate contract opportunities. Coupled with a growing number of proof points and increasing industry recognition, we view the COVID-19 related short term pause in contract wins as non-consequential for PX1's long term growth profile, with management confident of signing on new customers in FY22.
- In comparison to peers, PX1 has **four clear competitive advantages:** 1) experience of dealing with very large data (early cloud adopter in 2013/14), 2) a niche player in the mobile space (competitors more broadly-focussed), 3) ability to allow brands to capture and utilise their own customer data, and 4) the infrastructure to cater for the bespoke demands of global chains.

### We assign a speculative risk rating for PX1

- There is significant **concentration risk** attached to generating 95% of total revenue through its contract with McDonald's. Although PX1 has signed ~10 new country markets every year for five years in addition to McDonald's 10% ownership stake, there would be considerable reputational damage should McDonald's move away from using PX1's platform. PX1 customers are relatively sticky given the time and money spent on data transfer and integration in addition to the disruption caused from changing providers. PX1's contract with McDonald's makes up ~0.11% of McDonald's total revenue.
- **The competitive landscape** has improved for PX1 during COVID-19 with a number of competitors exposed to distressed sectors such as tourism or hospitality (or acquired by clients). In house competition remains PX1's biggest threat with the success of PX1's sales pitch dependent on convincing large brands that PX1 can do it better for cheaper (McDonald's the example).
- The **ability to continue product development** is underpinned by **acquisition of a high quality workforce**. Data engineers are currently in short supply, with high demand driving up average wages. Appointing a new head of HR and acquiring workforce in smaller cities will mitigate some of the risk although under resourcing could delay bespoke customer requirements.
- **Key people risk** includes loss of key management personnel including Craig Herbison (CEO) and Andrew Flavell (CTO).
- **Competitor replication** remains an ongoing risk within the technology sector. We take comfort in the short term barriers to entry given PX1's expensive and sophisticated technology which has taken a number of years to build. Given the large range of marketing solutions in existence currently, PX1's product remains a niche, sub-segment within the wider picture.

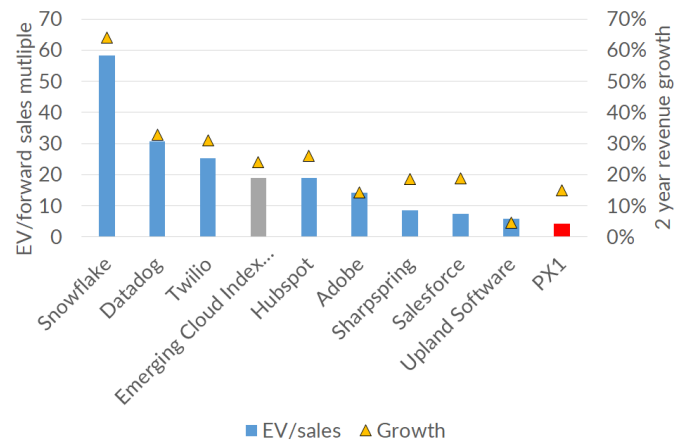
## Our thesis in pictures

**Figure 1. PX1 vs listed specific peers EV/sales vs growth**



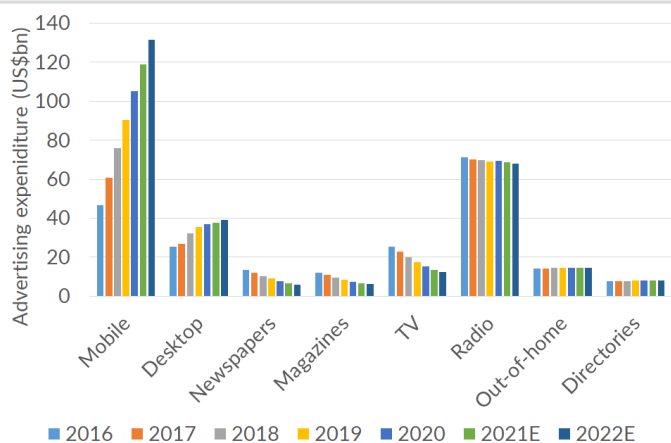
Source: Forsyth Barr analysis, Bloomberg

**Figure 2. PX1 vs listed specific peers EV/sales**



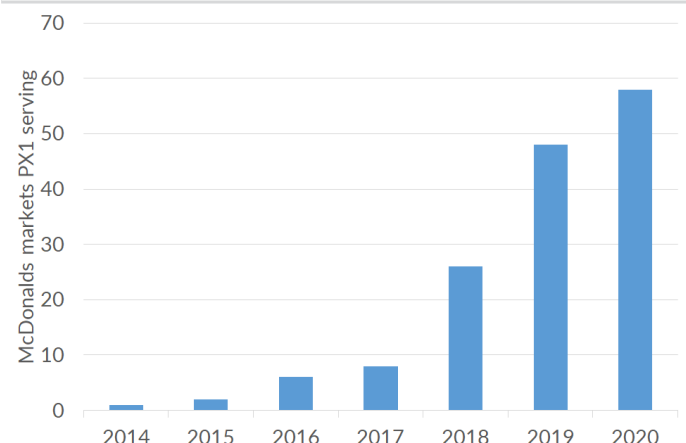
Source: Forsyth Barr analysis, Bloomberg

**Figure 3. Mobile the fastest growing advertising channel**



Source: Forsyth Barr analysis, emarketer

**Figure 4. McDonald's vote of confidence: now in 58 countries**



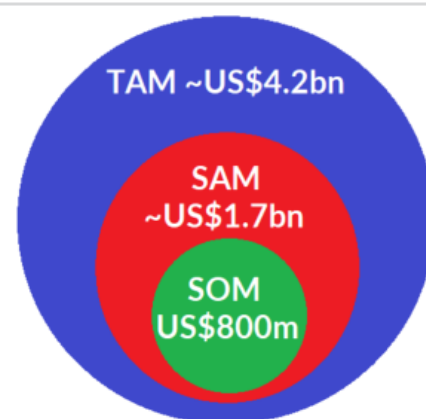
Source: Forsyth Barr analysis, PX1

**Figure 5. Advertised Australian data scientist jobs 2014-2019**



Source: Forsyth Barr analysis, indeed

**Figure 6. Serviceable Obtainable Market ~NZ\$1.1bn**



Source: Forsyth Barr analysis, marketsandmarkets, company financials

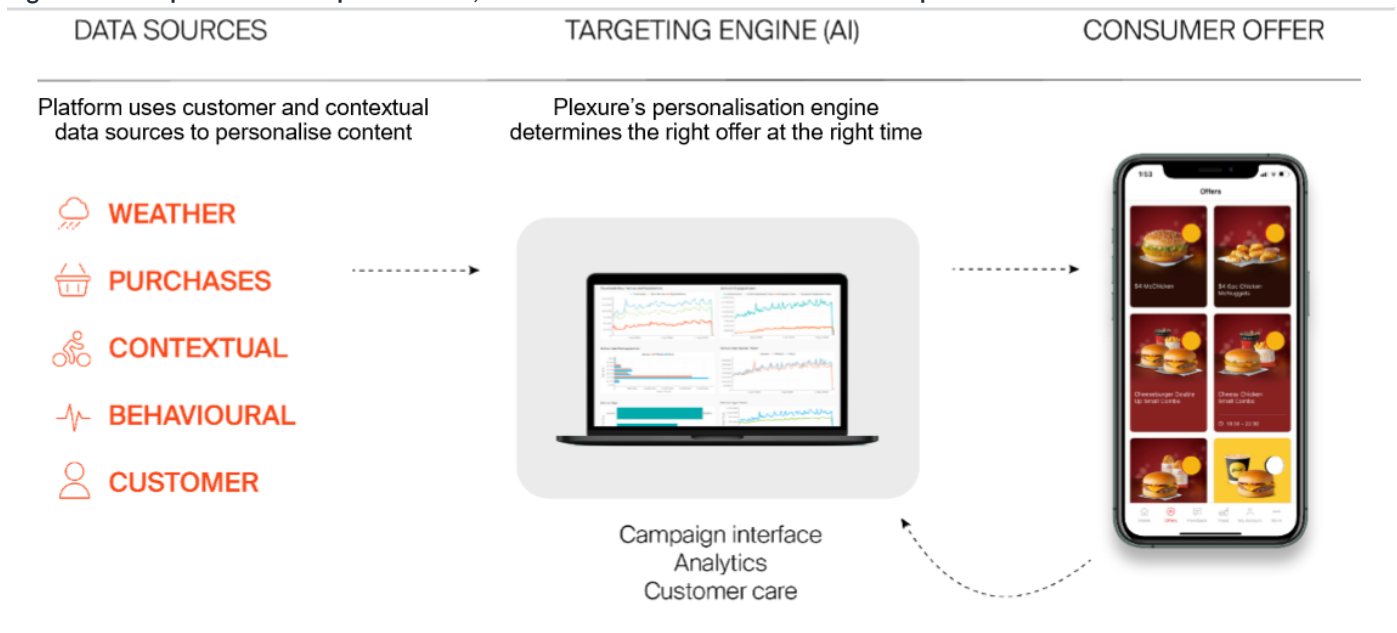
## How does PX1 make money and what does it do?

PX1 provides global brands with mobile marketing solutions, using sophisticated artificial intelligence and machine learning engines to process large datasets. This allows marketers to provide insightful and personalised marketing content to customers. Customers have reported that using PX1's services has resulted in an increase in the average basket size through enticing customers via redeemable offers into brick-and-mortar stores where up-sell opportunities exist.

Previously known as VMOB, PX1 was founded in 2010 in New Zealand and following the flagship signing of McDonald's in 2013 has grown its customer base across 60 countries, employing over 150 staff and capturing 219 million users on its platform. The company has offices located in the US, UK, Japan, Denmark and New Zealand. The current management team includes CEO Craig Herbison (appointed September 2017), CFO Andrew Dalziel (appointed September 2016) and CTO Andrew Flavell (appointed February 2020).

PX1 currently has four customers; McDonald's (95% of FY20 revenue), White Castle, Super Indo, and Loyalty New Zealand. At November 2020, PX1 dual listed on the ASX and raised NZ\$37m worth of capital to fund investment into headcount and allowing further development of the platform. This followed the FY20 result which saw PX1 reach NPAT positive for the first time in its history. Management has outlined a five year strategic plan which includes generating NZ\$100m of revenue by FY25 through targeting 35–40 customer brands and building build capability to support ~500 million end users. This involves returning to cash flow and NPAT negative in the short term; scaling its costbase aggressively in order to grow the business over the long term.

**Figure 7. PX1's platform offers personalised, real-time content to drive in-store and repeat visits**



Source: Forsyth Barr analysis, PX1

### A digital marketing solution designed for high-frequency, price-differentiated products

PX1 is currently engaged with brands operating in the Quick Service Restaurant (QSR), grocery, and loyalty sectors but could also provide services for companies in the retail, hospitality, themepark, convenience or fuel retail sectors. PX1 embeds its technology into new or existing mobile apps, while services include offer engagement, mobile order and pay, price optimisation, advanced analytics and AI-enabled fraud detection. This allows brands to 1) provide personalized offers and content, 2) identify where customers are, what customer preferences are — using previous purchase history and facilitating purchases, 3) create sticky and more profitable relationships with consumers, and 4) drive customers to physical stores in order to up-sell additional products.

### Revenue driven by licence and consulting fees

PX1 generates recurring revenue by charging a fixed monthly license fee to its clients, based on both the type of service provided as well as monthly usage of the platform. Its contracting terms differ across brands, with McDonald's revenue historically generated by the number of stores while newer contracts such as White Castle are based on number of users on the platform. Additionally, PX1 also charges consulting fees based on time, materials and hourly rates for defined projects or timeframes to support clients.

## Valuation

We value PX1 at NZ\$1.58 per share based on a forward EV/Sales multiple approach. We provide sensitivity analysis for our multiple valuation approach and also provide four discounted cash flow scenarios. We recognise that momentum is likely to be an influential price driver and expect the growth path to be highly unpredictable, especially in later years. On our chosen set of peers, the market is currently pricing in FY22 revenue growth of 9% against our forecast of 15% vs PX1's linear implied target growth of 61% (fig.17).

We use a specific peer set derived by subsector (SaaS companies offering a combination of data analytics & marketing services) and characteristic (global reach, US or Australasian listed). It is important to note that the US is an important valuation benchmark for PX1 as the dominant market for McDonald's (generating 95% of PX1 total revenue) while a number of direct competitors are US based. Management has indicated that PX1 intends to significantly grow its presence and client base in the US going forward.

**Figure 8. EV/sales valuation approach rolled forward at cost of equity (NZ\$)**

Valuation	Rolled forward	Dividends	Target price
1.45	1.58	0.00	1.58

Source: Forsyth Barr analysis

## EV/sales multiple valuation approach

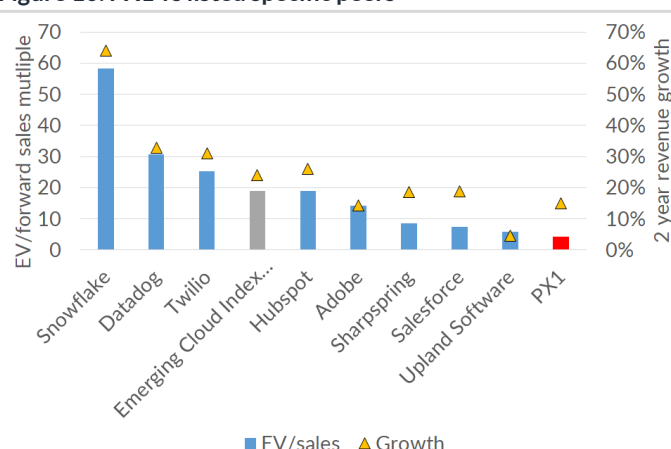
The EV/sales multiple valuation approach is the most relevant and widely used metric to value high growth (small cap) technology stocks. Our specific peer group has a correlation of 93% between forward EV/sales vs two year forward revenue growth. Our valuation uses the peer group two year average revenue growth of 26%, which with PX1's forecast FY22 revenue growth of 15% results in a discount of -43%. Applying this discount to the harmonic mean of PX1's specific peer group EV/Sales multiples, we calculate a EV/sales multiple of 7.1x, a spot valuation of NZ\$1.45 and a target price of NZ\$1.58 once rolled forward at cost of equity.

**Figure 9. PX1 peer set EV/Sales include meaning**

Company	Code	Price	Market cap	Description	2 yr revenue growth	1 Year EV/sales (x)
ADOBE INC	ADBE US	US\$453.33	US\$217,293	Digital marketing solutions	14%	14.2
DATADOG INC - CLASS A	DDOG US	US\$86.09	US\$26,386	Big Data analysis across integrations	33%	30.7
UPLAND SOFTWARE INC	UPLD US	US\$48.71	US\$1,461	Mobile and marketing	5%	5.7
HUBSPOT INC	HUBS US	US\$484.52	US\$22,450	Marketing and sales tech	26%	18.9
SALESFORCE.COM INC	CRM US	US\$216.66	US\$198,832	Marketing automation, analytics	19%	7.5
SNOWFLAKE INC-CLASS A	SNOW US	US\$238.49	US\$67,517	Personalised advertising, media	64%	58.3
SHARPSRING INC	SHSP US	US\$19.94	US\$251	Sales & marketing automation*	19%	8.6
TWILIO INC - A	TWLO US	US\$375.13	US\$63,951	Marketing & customer services	31%	25.4
Mean					26%	12.6
PX1	PX1 NZ	NZ\$0.92	NZ\$159	Mobile, personalised marketing	15%	
Discount					-43%	-43%
Implied multiple						7.1

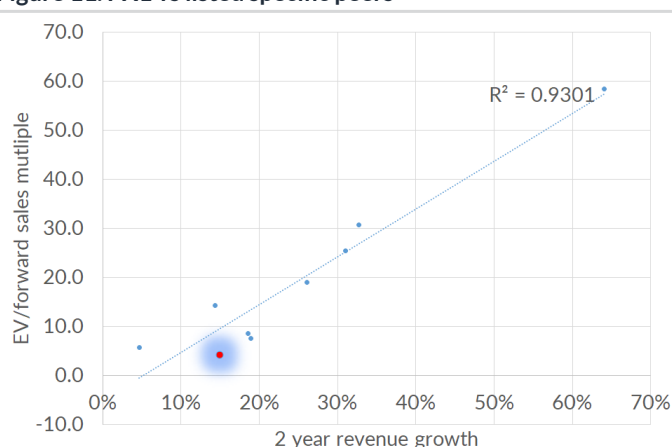
Source: Forsyth Barr analysis, Bloomberg (\*Sharpspring best peer based on market cap)

**Figure 10. PX1 vs listed specific peers**



Source: Forsyth Barr analysis, Bloomberg

**Figure 11. PX1 vs listed specific peers**



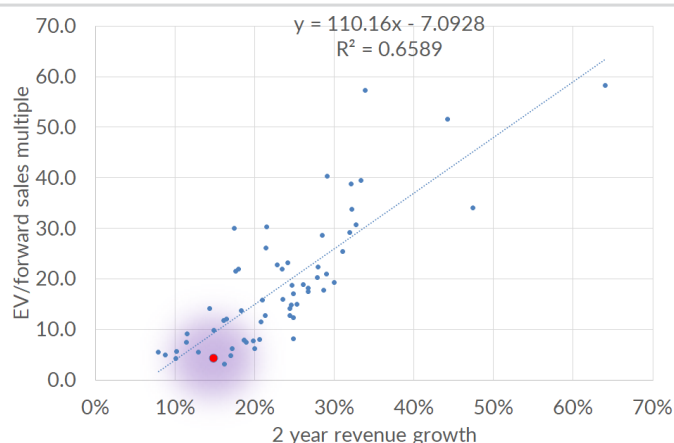
Source: Forsyth Barr analysis, Bloomberg



We include additional multiple analysis by comparing PX1 against the BVP Nasdaq Emerging Cloud Index and Australasian technology peers in the below charts. A number of direct competitors (Salesforce, Adobe) are listed on the Emerging Cloud Index, while PX1 is NZX and ASX dual listed.

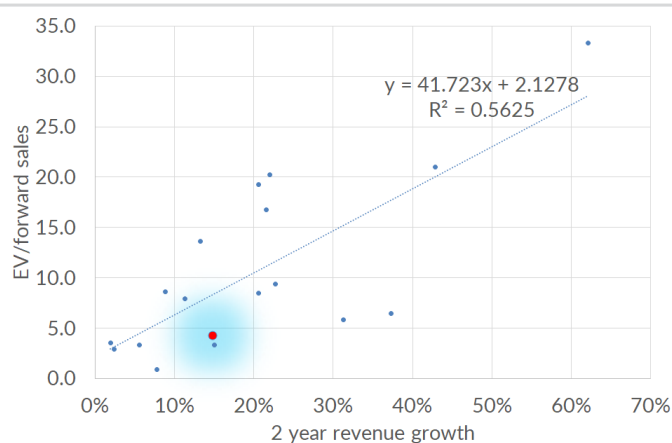
Both alternative peer sets suggest that PX1 is undervalued on its current EV/sales multiple of 4.1x. The below analysis implies that the market is pricing in FY22 revenue growth 10% growth on the BVP Nasdaq Emerging Cloud Index, whilst on Australian technology stocks, the current multiple implies a growth rate of 5%. Both are some way behind our forecast of 15% growth.

**Figure 12. PX1 vs Emerging Cloud Index**



Source: Forsyth Barr analysis, Bloomberg

**Figure 13. PX1 vs Australasian peers**



Source: Forsyth Barr analysis, Bloomberg

### EV sales sensitivity

The table below shows sensitivity to PX1's FY22 revenue growth and the resulting spot price from the implied forward EV/sales multiple. For example FY22 sales growth of 10% would imply a multiple of 4.8x and a spot price of NZ\$1.07 per share on our specific peer set. Sales growth of 20% would suggest a multiple of 9.6x and spot price of NZ\$1.87.

**Figure 14. Peer set sensitivity to PX1's FY22 revenue growth rate**

Sales growth FY22	EV/sales Multiple			Spot price (NZ\$)		
	8 specific peers	Emerging Cloud Index	Australasian peers	8 specific peers	Emerging Cloud Index	Australasian peers
7%	3.3	0.7	5.1	0.81	0.37	1.12
8%	3.8	1.8	5.5	0.90	0.55	1.19
9%	4.3	2.9	6.0	0.98	0.74	1.26
10%	4.8	4.0	6.4	1.07	0.92	1.33
11%	5.3	5.1	6.8	1.15	1.11	1.40
12%	5.7	6.2	7.2	1.22	1.29	1.47
13%	6.2	7.3	7.6	1.30	1.48	1.54
14%	6.7	8.4	8.0	1.38	1.66	1.61
15%	<b>7.1</b>	<b>9.5</b>	<b>8.5</b>	<b>1.45*</b>	<b>1.85</b>	<b>1.68</b>
16%	7.6	10.6	8.9	1.54	2.04	1.75
17%	8.1	11.7	9.3	1.62	2.22	1.82
18%	8.6	12.8	9.7	1.70	2.41	1.89
19%	9.1	13.9	10.1	1.79	2.59	1.96
20%	9.6	15.0	10.5	1.87	2.78	2.03

Source: Forsyth Barr analysis, Bloomberg \*(EV/sales spot valuation)

### Discounted Cash Flow (DCF) Scenarios

Given the high degree of uncertainty beyond our immediate forecasts, we have set up a DCF framework to provide scenario analysis and as a cross-check, with the DCF most sensitive to changes in revenue and EBITDA margin assumptions. Our four scenario differentials are based off of contract wins, with scenario 2 our current base case. Our scenario spot price ranges from NZ\$0.61 to NZ\$2.84, which considers the large number of assumptions, all of which can deliver materially different valuations.

Our WACC of 9.1% assumes an unlevered beta of 1.30 in light of the high risk, unpredictable nature of PX1's underlying operating model and the discretionary nature of PX1's current clients revenue. We use a terminal growth rate of 2.5%.

### DCF scenarios

- **Scenario 1:** Our first scenario assumes that 1) PX1 does not achieve a change in contract with McDonald's before FY25, 2) McDonald's annual payment is capped to NZ\$30m, 3) Ahold Delhaize group contract wins are limited to NZ\$20m annual recurring revenue in FY25 and 4) PX1 wins no other contracts outside of McDonald's or Ahold Delhaize. This totals FY25 revenue of NZ\$53m and assuming a terminal EBITDA margin of 20% implies a DCF spot price of NZ\$0.61.
- **Scenario 2:** Our base case assumes that PX1 wins up to NZ\$30m of annual recurring revenue from Ahold Delhaize by FY25, in addition to the current NZ\$30m annual recurring revenue from its McDonald's contract with no additional wins outside of these two groups. This results in total FY25 revenue of NZ\$63m. We assume a terminal margin of 25%.
- **Scenario 3:** Our third scenario assumes that PX1 is successful in its contract negotiation with McDonald's, moving to a NZ\$50m annual recurring contract based off of user-based growth, instead of store based growth and driving in a change in direction for our gross margin. Contracts wins for Ahold Delhaize and 'other' remain unchanged from scenario 2.
- **Scenario 4:** In our best case scenario, we assume 1) a McDonald's annual contract generating annual revenue of NZ\$50m, 2) Ahold Delhaize annual contract reaching NZ\$30m of annual recurring revenue, 3) in addition to NZ\$20m worth of contract wins from other groups. This takes total FY25 revenue to NZ\$100m, in line with the company's strategic target. We apply a 35% margin taking the spot DCF valuation to NZ\$2.84.

**Figure 15. WACC estimate for PX1**

Risk free rate	2.3%
Market risk premium	5.5%
Debt risk premium	2.3%
Target gearing	0.0%
Asset beta	1.3
Cost of debt	4.6%
Cost of equity	9.1%
<b>WACC</b>	<b>9.1%</b>

Source: Forsyth Barr analysis

**Figure 16. Key DCF assumptions/scenario impacts (NZ\$m)**

Scenario	1	2	3	4
McDonald's annual payment	30	30	50	50
Ahold Delhaize annual payment	20	30	30	30
Other contracts annual payment	3	3	3	20
<b>Total revenue FY25</b>	<b>53</b>	<b>63</b>	<b>83</b>	<b>100</b>
Implied 4 year CAGR	16%	21%	30%	36%
Assumed terminal margin	20%	25%	30%	35%
<b>Spot DCF (NZ\$ per share)</b>	<b>0.61</b>	<b>1.03</b>	<b>1.89</b>	<b>2.84</b>

Source: Forsyth Barr analysis

### Forecasts

- **Forecasts:** Our forecasts assumes no contract wins in FY21, NZ\$4m worth of new contracts in FY22 and NZ\$7m in FY23 building to a total of NZ\$63m at FY25. This roughly reconciles with the expected NZ\$30m annual recurring revenue from PX1's McDonald's contract and ~NZ\$30m of revenue opportunity from the total Ahold Delhaize group in addition to small contracts from other current clients. On our estimates a contract win of 1000 stores should generate ~NZ\$4m worth of revenue.
- **Revenue growth:** As a result our forecast revenue growth for FY22 is +15%, compared to the implied linear FY22 revenue growth of +61% should PX1 reach its FY25 target of NZ\$100m revenue. On current numbers our specific peer set and the Emerging Cloud Index are pricing in revenue growth of 10% given PX1's current one year forward EV/sales multiple of 4.1x, while PX1's Australian peers are implying a growth rate of 5% on current prices.
- **Value creation:** Our forecast ROIC does not exceed our assumed WACC of 9.1% until FY25. Should PX1 successfully execute on its FY25 target of generating NZ\$100m of revenue then we would expect FY23 to be the first year where PX1 is able to generate ROIC ahead of its WACC.
- **Catalysts:** We see upside risk to forecasts with new contract wins a likely catalyst for the stock. Should PX1 win a contract outside of the Ahold Delhaize group we believe the market would reward PX1 with a higher multiple given the additional long term opportunity generated. Additionally we would expect that if PX1 was successful in negotiating a change in contract with McDonald's (moving from a store based payment-driver to a user based payment-driver) there would be upside to our current forecasts.

**Figure 17. Forbar revenue growth vs company targets FY20–FY25E (NZ\$m)**

	FY20	FY21E	FY22E	FY23E	FY24E	FY25E
PX1 target total revenue (linear)	25	29	47	65	82	100
Implied growth		15%	61%	38%	28%	22%
Forsyth Barr total revenue forecasts	25	29	33	40	50	63
Implied growth		15%	15%	20%	25%	25%

Source: Forsyth Barr analysis



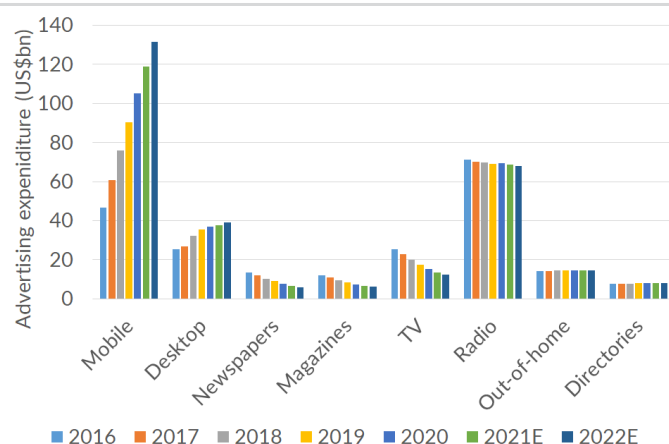
## Attraction #1. Exposure to three high demand, high growth thematics

Within the wider marketing sector PX1 provides personalised mobile marketing services to QSR and grocery brands, with the objective of driving commercial uplift by forecasting consumers' behavioural patterns. PX1 is highly exposed to three key thematics experiencing rampant growth: 1) the mobile marketing sector, 2) artificial intelligence and machine learning, and 3) the ongoing marketing shift towards personalisation. Industry data is highly suggestive that these trends will continue to intensify.

### 1. Mobile marketing expenditure expected to see 6 year CAGR of +19%

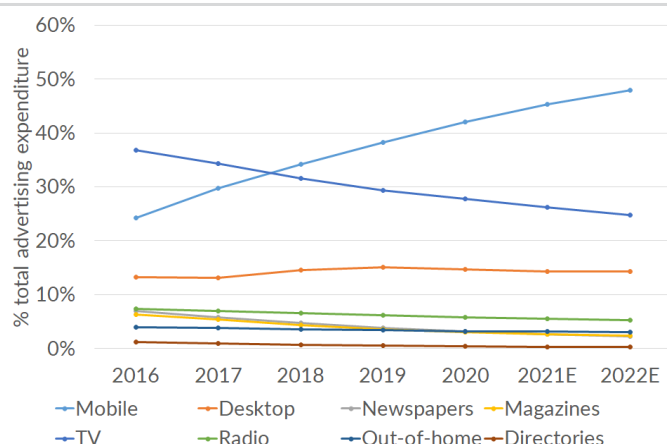
Total US advertising expenditure is expected to increase by a six year CAGR of roughly +6% between 2017 and 2022 according to emarketer. Segmentally, an increase in mobile and desktop expenditure (growing at a six year CAGR of +19% and +7% respectively) is forecast to significantly offset the decline in printed advertising expenditure. Thus newspaper advertising expenditure is expected to decline by a CAGR of -12%, magazines -10% and directories by -18%. This highlights, 1) the current shift away from traditional print channels towards modern, digital channels (mobile in particular), and 2) the continued growth of the marketing industry as a whole. We view exponential growth of the mobile marketing segment to be a direct result of rising global smartphone penetration.

**Figure 18. US advertising expenditure by channel 2016–2022**



Source: Forsyth Barr analysis, emarketer

**Figure 19. US advertising expenditure by % of total 2016–2022**



Source: Forsyth Barr analysis, emarketer

**Figure 20. Actual US advertising expenditure by channel 2016–2022 (US\$bn)**

	2016	2017	2018	2019	2020	2021	2022	CAGR
Mobile	47	61	76	90	105	119	131	19%
Desktop	26	27	32	35	37	38	39	7%
Newspapers	13	12	10	9	8	7	6	-12%
Magazines	12	11	10	8	8	7	6	-10%
TV	26	23	20	17	15	14	12	-11%
Radio	71	70	70	69	70	69	68	-1%
Out-of-home	14	14	14	14	15	15	15	0%
Directories	8	8	8	8	8	8	8	1%
<b>Total</b>	<b>193</b>	<b>205</b>	<b>222</b>	<b>236</b>	<b>250</b>	<b>262</b>	<b>274</b>	<b>6%</b>

Source: Forsyth Barr analysis, emarketer

**Figure 21. % of total US advertising expenditure 2016–2022**

	2016	2017	2018	2019	2020	2021	2022
Mobile	24%	30%	34%	38%	42%	45%	48%
Desktop	13%	13%	15%	15%	15%	14%	14%
Newspapers	7%	6%	5%	4%	3%	3%	2%
Magazines	6%	5%	4%	4%	3%	3%	2%
TV	37%	34%	32%	29%	28%	26%	25%
Radio	7%	7%	6%	6%	6%	6%	5%
Out-of-home	4%	4%	4%	3%	3%	3%	3%
Directories	1%	1%	1%	1%	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Forsyth Barr analysis, emarketer

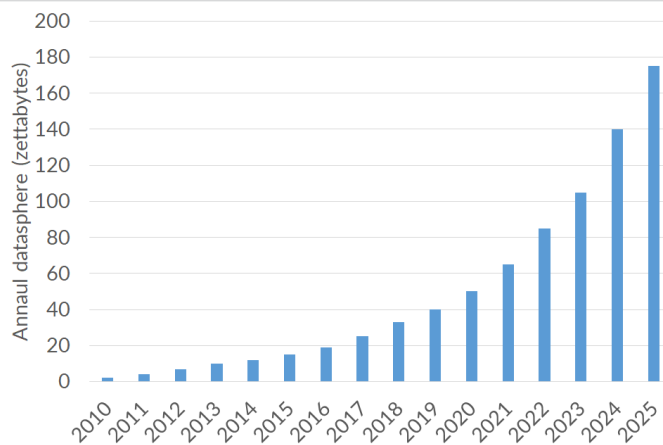
### 2. 'Big Data' deluge – a trend with no signs of stopping

For the past 20 years Big Data has become a ubiquitous presence across every day life. Within Big Data, artificial intelligence is used to provide data insights, reduce customer churn and generate commercial opportunities through sales, marketing and forecasting behavioural patterns. Machine learning is a sub-section of artificial intelligence (a computer based application replicating historical data patterns), and is used by PX1 to determine previous customer purchasing behaviour and drive marketing campaigns aimed to provide a more personalised approach. Personalised offers are sent to customers via a mobile app (based on previous purchase history, location or season) and redeemed in store, with the objective for the brand to up-sell/cross-sell and drive an increase in average basket size. PX1's product has also historically driven an increase in purchase frequency through personalised offers.

## What is 'Big Data'?

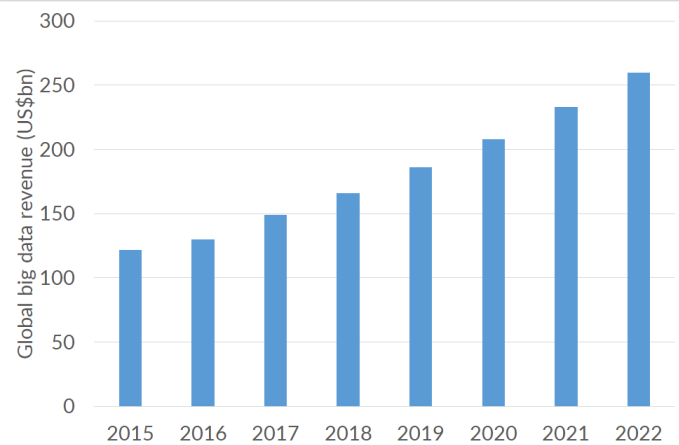
Big Data is the collective name for the increasing volume, variety and velocity of data that is being generated in today's digital ecosystem. Historic trends show the meteoric rise of Big Data, with industry forecasts suggesting this growth to continue exponentially. According to market research company International Data Corporation (IDC), the sum of the world's data (the datasphere) has grown at a seven year CAGR of +28% between 2015 and 2022 and is likely to reach 175 zettabytes in 2022 (10 to the power of 21) from 33 zettabytes in 2018. Revenue generated from Big Data is expected to reach over US\$250bn by 2022 (increased from US\$125bn in 2015).

**Figure 22. Annual datasphere 2010–2025 (15 yr CAGR of +35%)**



Source: Forsyth Barr analysis, IDC

**Figure 23. Global revenue generated from big data 2015–2022**



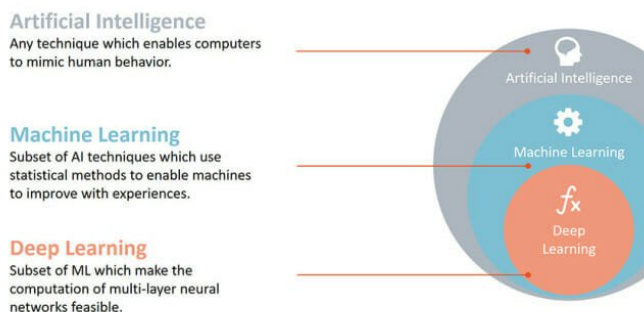
Source: Forsyth Barr analysis, statista

## Big data analytics: marketing strategies driven by artificial intelligence

Rapid growth in the use of Big Data has meant that marketers have needed to establish a more sophisticated approach in the way that businesses interact with customers. As a result Artificial Intelligence (AI) and Machine Learning (ML) capabilities are now universally deployed in order to generate in-depth marketing insights with a view to drive commercial uplift.

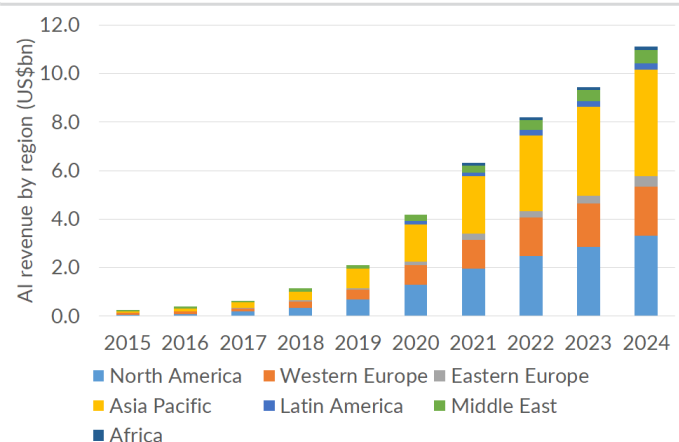
- **Artificial Intelligence:** Is the broad definition describing the process by which a computer program is able to imitate types of human behaviour and implement acquired intelligence to perform processes which require minimal human intervention. This includes movement, speech, thinking through robots, autonomous cars, logistics, robo-advice, surgical and bionics rehabilitation, entertainment, military robotics, drones and computer based applications.
- **Machine Learning:** Is a subset of AI, a computer based application which is able to recognise, replicate and learn from patterns found in historic data. This then allows the application to predict how patterns will form going forward often using algorithms, whilst providing live and relevant insights for optimal behaviour from a growing data pool to be used for marketing and strategic initiatives.

**Figure 24. Machine Learning makes up just a small part of Artificial Intelligence**



Source: Forsyth Barr analysis, rapidminer.com

**Figure 25. Global AI revenue by region (US\$bn) 2015–2024**



Source: Forsyth Barr analysis, Tractica

Tractica has estimated the global value of the Artificial Intelligence market to be worth US\$11.1bn by 2024, increased from US\$0.3bn in 2015, a nine year CAGR of 52%. This makes up roughly 3% of total revenue generated by Big Data globally.

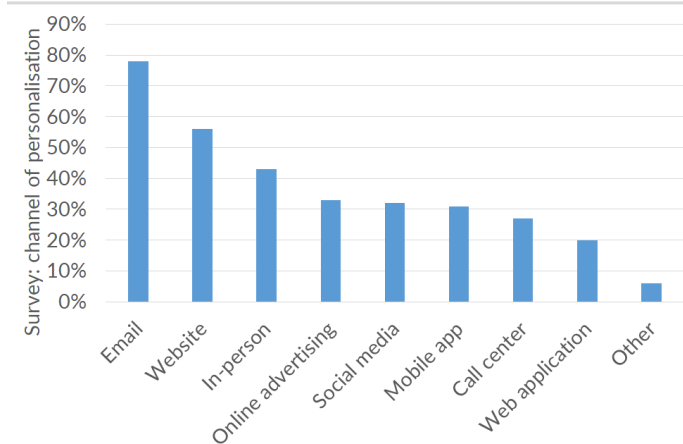
### 3. Personalised marketing: the in-demand value add

The rise of artificial intelligence and machine learning has allowed digital marketing strategists to focus specifically on personalised marketing in recent years. Personalisation is the use of demographic & other data to provide bespoke content through collecting information from individual users such as address, location and purchase history. The advantage of mobile marketing is that it is linked to a single, identifiable person, offering a personalised experience through individual offers, deals and loyalty redemptions.

#### Why and how is personalised marketing used?

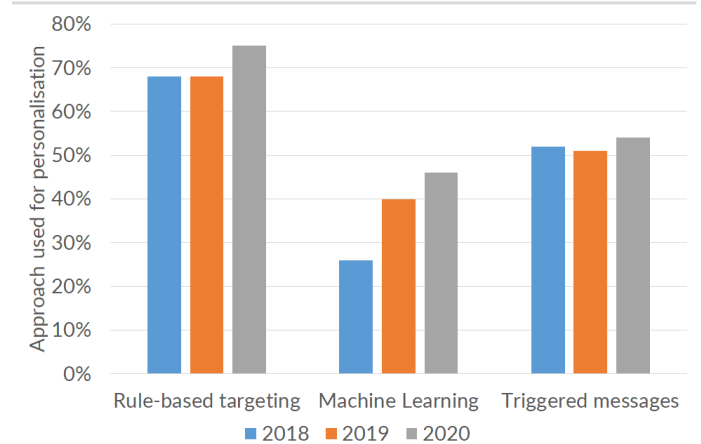
In 2020, industry consultant Evergage ran a survey of 326 marketing professionals across the US (42% of respondents employed by an organisation with greater than US\$1bn of sales). Results found that the most common channels to use personalised marketing strategies were email (78%), followed by website (56%), and thirdly in-person (43%). The drivers behind the use of personalisation showed an improved customer experience to be the most common reason why (89%), followed by increasing loyalty (61%) and ability to generate measureable lift or ROI (59%). A key conclusion from the survey showed that 46% of respondents were applying personalisation through machine learning and artificial intelligence ahead of other channels such as a rule-based approach or triggered message approach. This was increased from 26% in 2018, again highlighting the growth of machine learning.

**Figure 26. Channels used by respondents for personalisation**



Source: Forsyth Barr analysis, Evergage

**Figure 27. Approach to personalisation change 2018–2020**

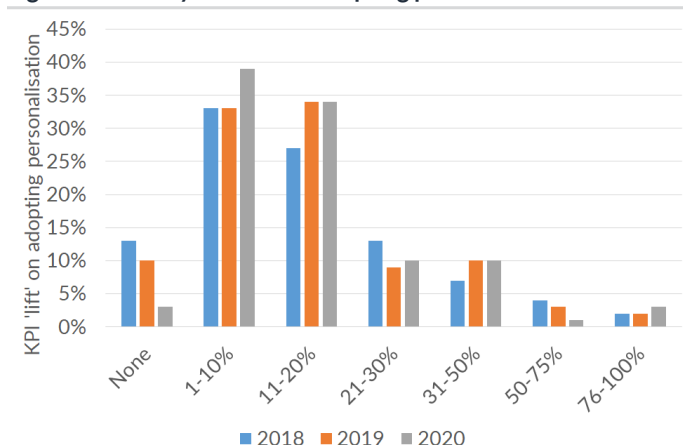


Source: Forsyth Barr analysis, Evergage

#### Significant KPI uplift achieved on adoption of personalised marketing

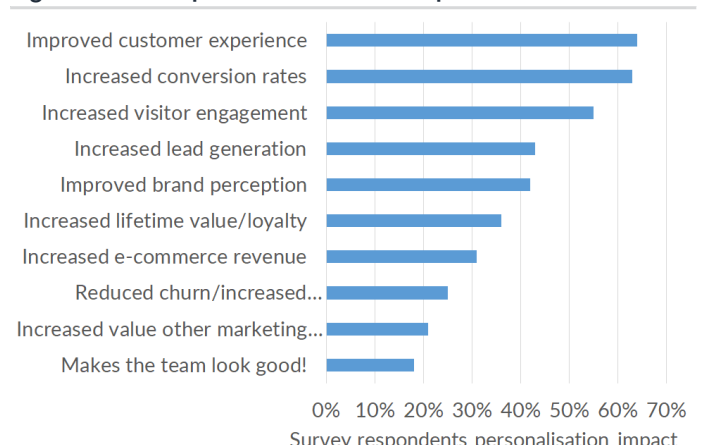
A McKinsey study published in 2019 showed that personalised marketing content and recommendations typically drove a 5%–15% increase in revenue, in addition to a 10%–30% increase in marketing spend efficiency. A study by US developer Hubstop showed that 80% of marketers believed personalised content was a far more effective tool than generic content. Evergage's survey showed an improved customer experience (64%), increased conversion rates (63%) and increased visitor engagement (55%) to be a result of personalised marketing. The average KPI lift reported by respondents was between 1–20% with just 3% of respondents in 2020 seeing no impact from adopting personalisation.

**Figure 28. Survey: KPI lift on adopting personalisation**



Source: Forsyth Barr analysis, Evergage

**Figure 29. KPI improvements seen from personalisation**



Source: Forsyth Barr analysis, Evergage

## Attraction #2. A clear, refined strategy focussed on re-balance

Under its previous name (VMOB), PX1 was historically criticised for a lack of focus, strategy and direction. On appointment, the current management team were keen to reverse this perception through a self-help turnaround strategy, with execution broadly successful to date. PX1 currently generates 95% of its total revenue from McDonald's and medium term targets include reducing this revenue concentration to under 40%, with the aim of acquiring additional contracts through focussing on global QSR chains and supermarket groups. Additionally, PX1 has approached McDonald's to change the terms of its contract so that revenue is rewarded for user-volumes which are growing at an estimated CAGR of 105%, instead of store-based growth, which is increasing at an average of ~2% per annum. This would allow PX1 to be directly rewarded for increased user activity on the McDonald's app.

### New strategy, new targets (includes implied 5 year CAGR revenue growth of 32%)

PX1 has announced an ambitious set of targets for the next five years, geared around the generation of NZ\$100m of revenue by FY25. PX1 is hoping to achieve contract wins of 35–40 individual brands within supermarket groups or standalone QSR chains with the target to return to NPAT positive by FY23. PX1 took the voluntary step to invest heavily in headcount and resources more recently, forecasting negative NPAT for the next 24 months. We take a more cautious approach, forecasting positive NPAT at FY24.

**Figure 30. PX1 revenue forecast by brand FY20-23E (NZ\$m)**

	FY20	FY21E	FY22E	FY23E
New contracts	0	0	4	11
Loyalty New Zealand	0	0	0	0
White Castle	1	1	1	1
Super Indo	1	1	1	1
McDonald's	24	27	27	28
<b>Total</b>	<b>25</b>	<b>29</b>	<b>33</b>	<b>40</b>
Sales growth		15%	15%	20%
McDonald's concentration	95%	93%	82%	68%

Source: Forsyth Barr analysis

**Figure 31. Company targets vs our forecasts**

Target	PX1	Forbarr
Total Revenue FY25	NZ\$100m	NZ\$63m
New brands by FY25	35-40	25-30
FY23 NPAT	Positive FY24 positive	
McDonald's revenue concentration FY23	40%	68%

Source: Forsyth Barr analysis, PX1

### Strong track record of execution to date

The current management team has achieved its first financial proof point by steering PX1 to positive NPAT at FY20. This was predominantly driven by winning contracts with White Castle in July 2019 (a QSR based in the US) and Super Indo in February 2020 (an Indonesian Super market chain part of the Ahold Delhaize group) in addition to adding more McDonald's markets to the PX1 platform.

PX1's success with Super Indo and White Castle has been well documented showing 1) an increase in customer numbers, 2) increased visit frequency, 3) higher average transaction values and 4) improved customer satisfaction scores.

Specifically Super Indo achieved 107% of its first year registration target within just three months, with a +55% increase in average basket size and with over 42% of app members redeeming offers in store.

### Increase in headcount set to unlock ability to win and service additional contracts

PX1 has committed significant expenditure to increasing staff resources across the business which includes customer accounts, sales, marketing and data engineers. Although an aggressive strategy, the business is now in a position to scale and meet the needs of expected new contract wins. This significant investment signals 1) a clear intent to grow the business and 2) a strong conviction on its pipeline of future contract wins.

**Figure 32. Current employee split by division**

Management executive team	5	3%
Customer	16	10%
Product & Innovation	23	15%
Sales	4	3%
Finance	4	3%
Marketing & strategy	4	3%
HR and operations	6	4%
Technology-related	92	60%
<b>Total</b>	<b>154</b>	<b>100%</b>

Source: Forsyth Barr analysis, PX1

**Figure 33. Staff resource allocation from recent capital raise**

Uses	A\$m
Staffing to support customer expansion	10.1
Staffing to support innovation	4.6
Staffing to support new verticals & geographies	6.9
Staffing to support scale & productivity	2
Costs of the offer	2.8
Working capital	8.3
<b>Total raised funds</b>	<b>34.7</b>

Source: Forsyth Barr analysis, PX1

## McDonald's contract negotiations ongoing

PX1 signed its first contract with McDonald's in 2014, providing services to McDonald's stores in Sweden, the Netherlands and Japan (a separate listed entity) before signing a master service agreement with McDonald's global in 2015. PX1's contract with McDonald's Japan was renewed for another three years from 1 January 2021, with the master service agreement now including 58 country markets, each with one year renewals and with each renewal occurring at different months over the course of the year.

In 2019 McDonald's took a 9.9% stake in PX1 with the added caveat that in a take over scenario by another entity, McDonald's would be treated as an insider, allowing it the option to prepare a counter bid.

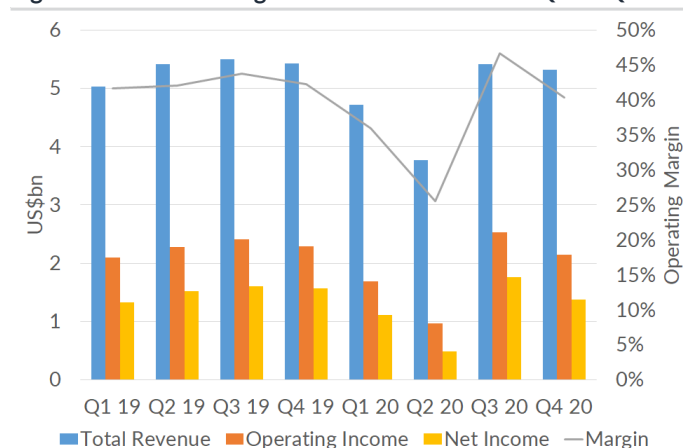
McDonald's corporation has seen strong profits throughout COVID-19 with higher than expected margins driven by impressive drive thru sales and decreasing staff costs in store. This led to record margin and profits reported for 3Q20, some of which would have been driven from increased user activity on PX1's platform.

**Figure 34. McDonald's global income statement 1Q19-4Q20**

US\$bn	Q1 19	Q2 19	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20
Total Revenue	5.0	5.4	5.5	5.4	4.7	3.8	5.4	5.3
Operating Income	2.1	2.3	2.4	2.3	1.7	1.0	2.5	2.1
Margin	42%	42%	44%	42%	36%	26%	47%	40%
Net Income	1.3	1.5	1.6	1.6	1.1	0.5	1.8	1.4

Source: Forsyth Barr analysis, McDonald's

**Figure 35. McDonald's global income statement 1Q19-4Q20**

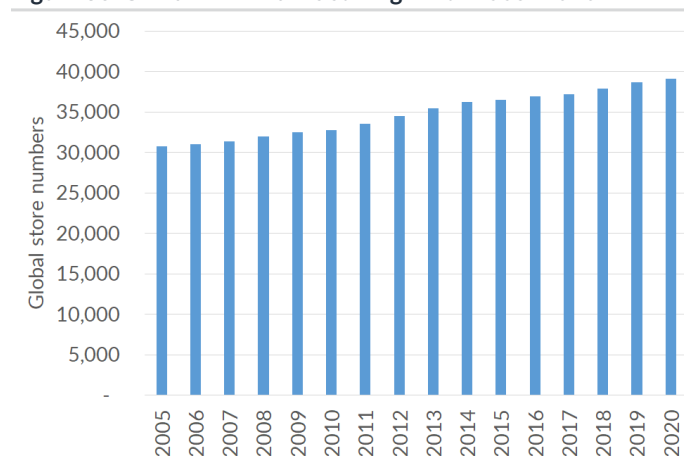


Source: Forsyth Barr analysis, McDonald's

## PX1 in talks with McDonald's to change contract to user-based drivers rather than stores

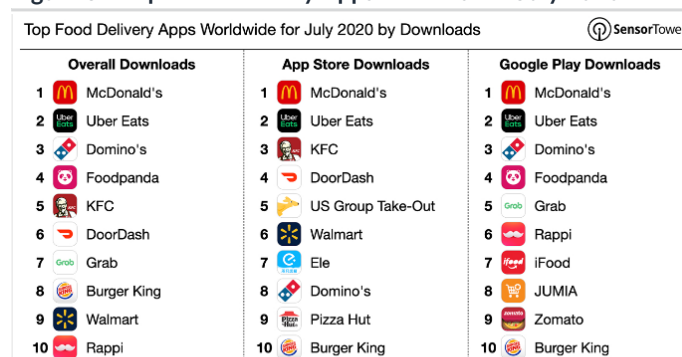
PX1's original contract with McDonald's determined that revenue would be rewarded on a store-volume basis in order to pass on the cost to the franchisees within the individual McDonald's market. With subdued store growth of around 2% per annum, the cost of increasing user numbers has far outpaced the rate of store growth given the sizeable uptake of the McDonald's app. McDonald's app downloads increased from 7 million in 2015 to 60 million in 2018, (a three year CAGR of 105%). As a result PX1 is currently absorbing the increased costs of data storage but without the additional revenue uplift. Sensortower shows the McDonald's app to be the most downloaded food delivery app globally in July 2020 (mid-way through lockdown).

**Figure 36. Global McDonald's store growth 2005-2020**



Source: Forsyth Barr analysis, McDonald's

**Figure 37. Top Food Delivery Apps downloaded July 2020**



Source: Forsyth Barr analysis, sensortower

### Why 40% McDonald's revenue concentration would be beneficial in more ways than one

Not only would a reduction in McDonald's revenue concentration by FY23 balance the business, reduce concentration risk and grow revenue at an impressive rate, it would also allow PX1 (with McDonald's permission) to serve immediate competitors in the QSR sector.

Currently under PX1's current contract agreement with McDonald's we understand there are a number of large QSR providers that PX1 is prohibited from servicing until revenue concentration is below 40%. We assume these to be the largest QSR chains by stores as shown below.

**Figure 38. Top 11 largest global QSRs by store 2019 (including McDonald's)**

Brand	Stores	Revenue (US\$m)	Domicile	Listed	Ticker	Marketing spend (US\$m)	Marketing % Revenue
Subway	44,758	10,400	Global (US)	N		459	4.4%
McDonald's	38,695	21,080	Global (US)	Y	MCD	366	1.7%
Starbucks	31,256	21,544	Global (US)	Y	SBUX	246	1.1%
KFC	24,104	27,900	Global (US)	N			
Pizza Hut	18,703	12,900	Global (US)	N		204	1.6%
Burger King	17,796	1,150	Global (US)	N		372	32.3%
Domino's	17,000	3,620	Global (US)	Y	DPZ	390	10.8%
Dunkin'	12,871	1,370	Global (US)	N		508	37.1%
Baskin-Robbins	8,000	162	Global (US)	N			
Taco Bell	7,363	11,784	Global (US)	N			
Dairy Queen	6,800	3,640	Global (US)	N			

Source: Forsyth Barr analysis, statista

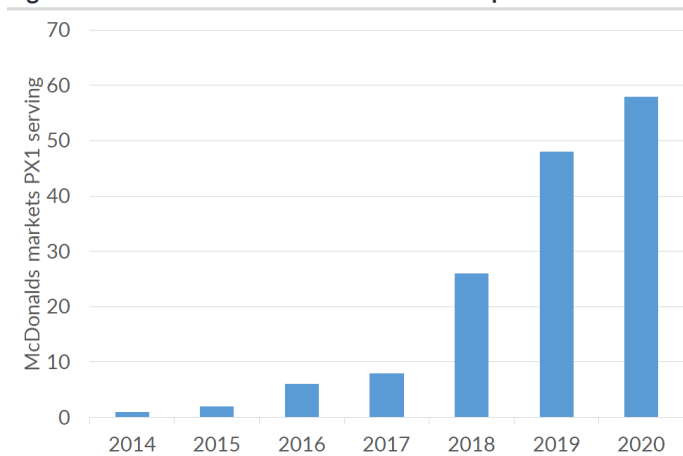
### Is there a chance of PX1 adding McDonald's core markets to its platform?

McDonald's global coverage splits its markets into core corporate markets (six) with no franchise ownership (such as the US, Canada and the UK) and the remaining 102 global markets as a quasi-corporate models – a mix between a handful of corporate stores in combination with majority franchisee owned stores (for example New Zealand, Italy or South Korea).

The corporate markets use McDonald's own in-house marketing software, supported by the acquisition of Israeli data analytics company Dynamic Yield (acquired a month before taking a 9.9% stake in PX1 but now up for sale according to CNBC). Dynamic Yield is a large data engine, with a focus on data insights but without the mobile functionality that PX1 provides. The core market mobile platform is served by a combination of in-house software built over a number of years through a joint venture with CapGemini started in 2017, with over 100 McDonald's tech staff becoming Capgemini employees after the deal (according to Chicagobusiness.com).

We assume given the sizeable investment that McDonald's corporate made between 2014 and 2017 on its in house technology and investment into CapGemini and later Dynamic Yield, it would be unlikely to see the corporate markets outsourced to PX1 in the near term. We remain sanguine in the longer run given the addition of 45 markets to the Plexure platform over the past 5 years and McDonald's intent to sell Dynamic Yield.

**Figure 39. McDonald's markets added to PX1 platform 2014-20**



Source: Forsyth Barr analysis, PX1

**Figure 40. 2019 split of stores per status**

Status	Stores	% total
In house (core market)	20,615	53%
PX1 currently provision	6,986	18%
Japan (PX1 provision)	2,910	8%
Won't reach	4,115	11%
Prospect (added FY22)	2,472	6%
Remaining markets	4,507	12%
<b>Total stores</b>	<b>38,695</b>	<b>100%</b>

Source: Forsyth Barr analysis, PX1, McDonald's

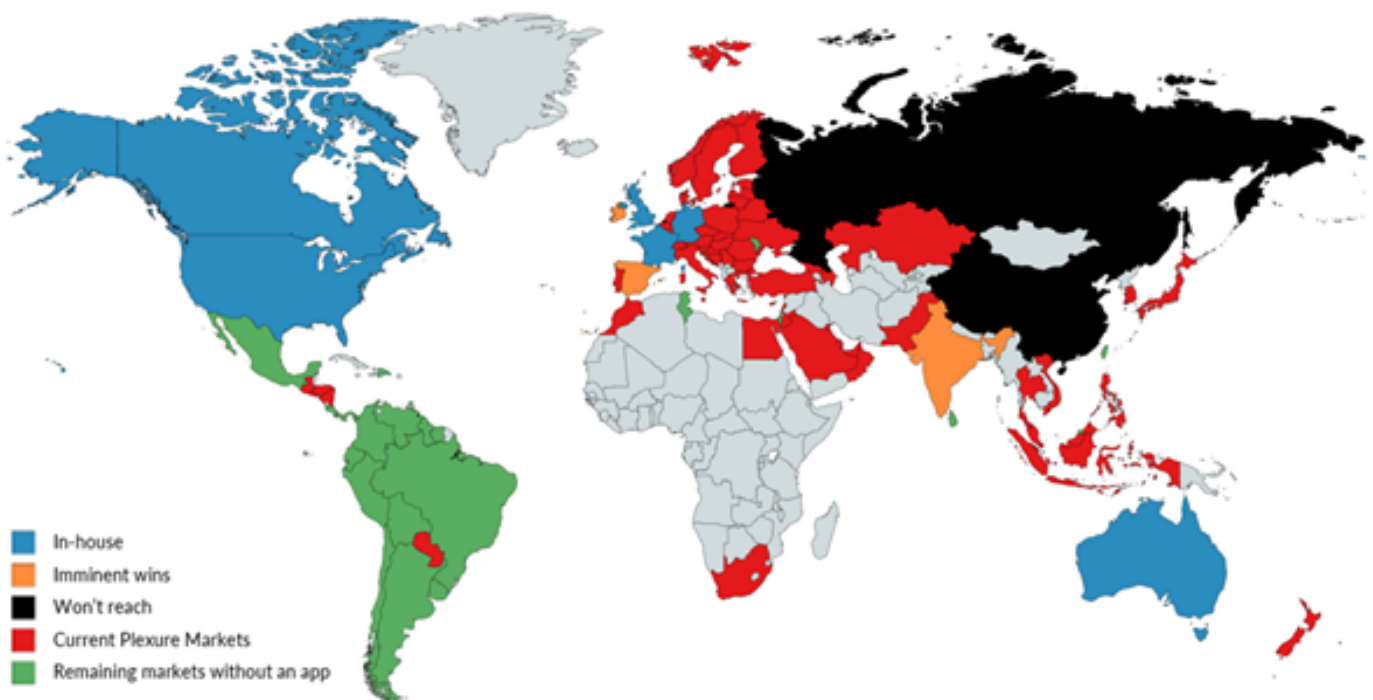


### Some back book growth remaining across McDonald's markets

We estimate that PX1 currently serves ~26% of McDonald's stores and is in 58 McDonald's markets. We understand the company is in talks to add eight new markets in FY22 which would take its share to ~32% of stores on our estimates. That leaves a remaining 12% of stores (mainly in South America) after accounting for in house markets (53%) and unreachable markets (Russia & China) that PX1 could add to the platform in future.

We assume the core markets to be Australia, Canada, France, Germany, the UK and the US (which itself has 13,846 stores, roughly 36% of all McDonald's stores). We expect Ireland, Spain and India to be among the likely additions to the platform in FY22.

Figure 41. Global McDonald's markets by provision



Source: Forsyth Barr analysis, PX1, McDonald's

Figure 42. Largest McDonald's markets by stores (2019)

Rank	Country	Stores	% of total	Status	Rank	Country	Stores	% of total	Status
1	United States	13,846	35.8%	Core	21	Turkey	253	0.7%	PX1
2	China	3,383	8.7%	WR*	22	Netherlands	252	0.7%	PX1
3	Japan	2,910	7.5%	PX1	23	Hong Kong	246	0.6%	Remain
4	France	1,485	3.8%	Core	24	Thailand	235	0.6%	PX1
5	Germany	1,484	3.8%	Core	25	Argentina	231	0.6%	Remain
6	Canada	1,478	3.8%	Core	26	Indonesia	217	0.6%	PX1
7	UK	1,323	3.4%	Core	27	Sweden	205	0.5%	PX1
8	Brazil	1,023	2.6%	Remain	28	Austria	196	0.5%	PX1
9	Australia	999	2.6%	Core	29	Israel	194	0.5%	Remain
10	Russia	732	1.9%	WR*	30	UAE	179	0.5%	PX1
11	Philippines	669	1.7%	PX1	31	Portugal	174	0.4%	PX1
12	Italy	597	1.5%	PX1	32	New Zealand	171	0.4%	PX1
13	Spain	527	1.4%	Prospect	33	Switzerland	170	0.4%	PX1
14	Poland	442	1.1%	PX1	34	India N&E	158	0.4%	Prospect
15	South Korea	409	1.1%	PX1	35	India W&S	158	0.4%	PX1
16	Taiwan	398	1.0%	Remain	36	Singapore	136	0.4%	PX1
17	Mexico	387	1.0%	Remain	37	Egypt	126	0.3%	PX1
18	Saudi Arabia	310	0.8%	PX1	38	Venezuela	120	0.3%	Remain
19	South Africa	299	0.8%	PX1	39	Czech Republic	101	0.3%	PX1
20	Malaysia	295	0.8%	PX1	40	Puerto Rico	99	0.3%	Remain

Source: Forsyth Barr analysis, McDonald's (\*WR=won't reach)

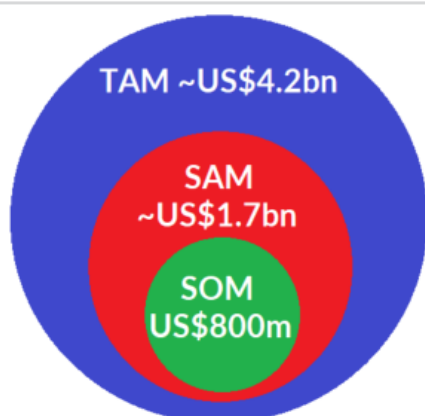
## Attraction #3. SOM of ~US\$800m for combined QSR/supermarkets

We estimate PX1's Serviceable Obtainable Market (SOM) to be US\$800m (NZ\$1.1bn), implying PX1's current share of its SOM to be ~2% and for its revenue target of NZ\$100m to represent ~9% of SOM. We are attracted to 1) the present opportunity that a SOM of NZ\$1.1bn presents for PX1, 2) the scalable nature of PX1's business which would allow the company to expand over the longer term into other sectors in its Serviceable Addressable Market (SAM), and 3) the expectation that PX1's Total Addressable market (TAM) will likely increase over time, given the demand growth of personalised mobile marketing, machine learning and Big Data. We note also that there could be upside risk to our assumed revenue per store as PX1 brings out additional products and features going forward.

### Why SOM is more relevant than TAM for PX1

The Total Addressable Market for the mobile marketing sector is extremely difficult to quantify given 1) the lack of high quality data available, and 2) the largely unknown nature of a new, fast growing and dynamic industry. Instead, we focus on a more specific approach – a Serviceable Obtainable Market (SOM) – the portion of the market that it would be conceivable for PX1 to capture in the long term. We use a bottom up approach to determine PX1's SOM through potential aggregated individual contract wins which broadly reconciles to conservative industry estimates for PX1's TAM.

Figure 43. PX1 TAM, SAM, SOM estimates



Source: Forsyth Barr analysis, marketsandmarkets, company financials

Figure 44. PX1 TAM, SAM, SOM estimates

US\$bn	Assumption
10.5	Industry estimate: global mobile marketing market
40%	PX1 mobile functionality
4.2	PX1 estimated TAM
40%	QSR, supermarket, highstreet, hospitality sectors
1.7	PX1 estimated SAM
0.3	Forbarr research: PX1 QSR sector SOM
0.5	Forbarr research: PX1 Supermarket sector SOM
0.8	PX1 current SOM

Source: Forsyth Barr analysis, marketsandmarkets, company financials

### Total Addressable Market (TAM) ~ US\$4.2bn estimate

Estimates for the global mobile marketing market size differ considerably across sources, with marketsandmarkets suggesting the value in 2019 to be US\$10.5bn, and expected to grow to US\$25bn by 2024. Conversely, grandviewresearch suggest the 2019 number to be nearer US\$65bn, expected to grow at a seven year CAGR of 22.9%. Within mobile marketing there are a number of channels such as messaging, push notification, mobile emails, QR codes, location-based marketing, in-app messaging, mobile web and other, with the size of each sub-segment again difficult to accurately estimate. A rough estimate of PX1's ability to provide 40% of all mobile marketing functionality and applying the conservative global mobile marketing value estimate of US\$10.5bn would imply PX1's TAM to be anywhere around the US\$4.2bn mark.

### Serviceable Addressable Market (SAM) ~ US\$1.7bn estimate

A serviceable Addressable Market is the segment of TAM by which a company has geographic or sector reach. With PX1 currently operating in the QSR and Supermarket sectors, and with the assumption that PX1 could also operate on the highstreet and in the hospitality sector, we apply a rough sector estimate of 40% taking PX1's SAM to US\$1.7bn.

### Serviceable Obtainable Market (SOM) ~US\$800m (bottom up approach)

To determine PX1's Serviceable Obtainable Market (SOM) we apply a set of criteria filters to our database of QSR and supermarket brands, matching contract wins that meet PX1's parameters. We estimate PX1's SOM for the QSR sector to be ~US\$290m and the supermarket sector to be ~US\$520m, taking the total to ~US\$800m.

### Criteria for new contract wins

PX1 is targeting contracted wins based on the following criteria:

- Minimum of US\$1.0m recurring revenue to PX1
- Physical store-based brand (over 400 stores minimum per brand)
- A frequently purchased, homogeneous product, differentiated by price
- Part of a QSR chain or global supermarket group to be positioned for additional contracts longer term

### QSR SOM ~US\$290m

We filter global QSRs to those with greater than 400 stores of which we estimate there to be at least 23 currently (with a presence in a number of countries). Taking revenue for each brand we apply a conservative range of 0.1% and 0.3% of total revenue spent on mobile marketing. (McDonald's spends ~0.1% of total revenue on mobile marketing, and 1.7% of revenue on total marketing expenditure, while Dominos and Burger King spend ~10% and ~30% of revenue on total marketing respectively) although this is unlikely to be on a like for like basis. From our range of 0.1% to 0.3% we apply a mid-point of 0.2% of total revenue spent on mobile marketing and calculate aggregate expenditure to be US\$290m.

Although in time we expect PX1 to be able to service McDonald's competitors if approached (once a 40% concentration threshold is reached), removing the top 10 providers in the near term would reduce PX1's QSR SOM to US\$91m (NZ\$126m) from the US\$290m.

**Figure 45. QSR SOM workings**

Brand	Domicile	Stores	Revenue (US\$m)	0.1% Of revenue (US\$m)	0.3% of revenue (US\$m)	Midpoint (US\$m)
Subway	Global (US)	44,758	10,400	10	31	21
McDonald's	Global (US)	38,695	21,080	21	63	42
Starbucks	Global (US)	31,256	26,700	27	80	53
KFC	Global (US)	24,104	27,900	28	84	56
Pizza Hut	Global (US)	18,703	12,900	13	39	26
Burger King	Global (US)	17,796	1,150	1	3	2
Domino's	Global (US)	17,000	3,620	4	11	7
Dunkin' Donuts	Global (US)	12,871	1,370	1	4	3
Baskin-Robbins	Global (US)	8,000	162	0	0	0
Taco Bell	Global (US)	7,363	11,784	12	35	24
Dairy Queen	Global (US)	6,800	3,640	4	11	7
Wendy's	Global (US)	6,500	1,710	2	5	3
Little Caesars	Global (US)	5,463	3,810	4	11	8
Papa John's Pizza	Global (US)	5,395	1,619	2	5	3
Popeyes	Global (US)	3,102	3,700	4	11	7
Chipotle Mexican Grill	Global (US)	2,622	5,586	6	17	11
IHOP	Global (US)	1,820	3,464	3	10	7
Denny's	Global (US)	1,703	541	1	2	1
Auntie Anne's	Global (US)	1,500	559	1	2	1
Carl's Jr.	Global (US)	1,500	1,416	1	4	3
Krispy Kreme	Global (US)	1,400	519	1	2	1
Nando's	Global (South Africa)	1,000	1,100	1	3	2
Pita Pit	Global (Canada)	600	300	0	1	1
<b>Total</b>		<b>259,951</b>	<b>145,030</b>	<b>145</b>	<b>435</b>	<b>290</b>
<b>Average</b>		<b>11,302</b>	<b>6,306</b>	<b>6</b>	<b>19</b>	<b>13</b>
<b>Non top 10 total</b>		<b>39,405</b>	<b>27,964</b>	<b>28</b>	<b>84</b>	<b>56</b>
<b>Average non top 10</b>		<b>3,031</b>	<b>2,151</b>	<b>2</b>	<b>6</b>	<b>4</b>

Source: Forsyth Barr analysis, company websites

### Supermarkets SOM ~US\$520m

We also filter global supermarket brands to those with greater than 400 stores of which we estimate there to be at least 55. Taking the total number of stores for each brand, we apply a range of PX1 revenue of US\$1,000 to US\$5,000 for each store to determine potential supermarket expenditure on mobile marketing (based on PX1's SuperIndo contract ~NZ\$500,000 for 181 stores). Applying a mid-point and aggregating potential supermarket expenditure, we calculate a SOM of ~US\$520m.

**Figure 46. Supermarket SOM workings**

Chain	Country	Stores	Revenue (US\$m)	US\$1k/store (US\$m)	US\$5k/store (US\$m)	Midpoint (US\$m)
FEMSA Comercio, S.A. de C.V.	Mexico	19,380	9,056	19	97	58
Rewe Group	Germany	15,828	76,531	16	79	47
SPAR	Global	13,300	37,100	13	67	40
Aldi	Global	11,235	91,900	11	56	34
Edeka	Germany	11,207	67,954	11	56	34
Casino Guichard - Perrachon S.A.	France	11,172	42,267	11	56	34
Reliance Industries Limited / Reliance Retail	India	10,901	1,828	11	55	33
Ahold Delhaize	Global	7,000	66,200	8	38	23
Dairy Farm International Holdings	Hong Kong	5,732	2,587	6	29	17
Walmart	United States	4,253	341,000	4	21	13
Centres Distributeurs E. Leclerc	France	4,035	47,397	4	20	12
Co-op Foods	UK	4,022	10,575	4	20	12
Tesco	UK	3,443	90,113	3	17	10
Shoprite Holdings	South Africa	2,829	11,025	3	14	8
Kroger	United States	2,757	122,000	3	14	8
Coop Group	Switzerland	2,478	37,454	2	12	7
Intermarche	France	2,364	28,670	2	12	7
Albertsons	United States	2,252	62,000	2	11	7
S Group	Finland	1,854	14,274	2	9	6
Pick n Pay stores	South Africa	1,795	6,301	2	9	5
Action	Global	1,718	5,114	2	9	5
Mercadona, S.A.	Spain	1,657	28,501	2	8	5
Grupo Eroski	Spain	1,645	5,899	2	8	5
Système U, Centrale Nationale	France	1,601	25,047	2	8	5
Fortenova Group	Croatia	1,517	16,999	2	8	5
Empire Company Ltd	Canada	1,500	21,005	2	8	5
Sainsbury's	UK	1,415	41,031	1	7	4
Metcash (IGA)	Australia	1,400	11,155	1	7	4
ICA Gruppen	Sweden	1,270	148,768	1	6	4
Publix Super Markets	United States	1,258	38,000	1	6	4
Schwarz Gruppe (Lidl/Kaufland)	Global	1,250	113,300	1	6	4
Coop Norge	Norway	1,227	61,742	1	6	4
Coop Denmark	Denmark	1,200	52,094	1	6	4
Kesko Corporation	Finland	1,200	6,748	1	6	4
Sonae, SGPS	Portugal	1,200	5,734	1	6	4
Axel Johnson AB	Sweden	1,200	61,903	1	6	4
Woolworths	Australia	1,052	33,299	1	5	3
Wumart Holdings	China	1,000	7,500	1	5	3
Conad Consorzio Nazionale, Dettaglianti Soc. Coop. a.r.l.	Italy	997	17,385	1	5	3
Iceland Topco	UK	985	4,583	1	5	3
Cencosud S.A.	Chile	921	9,591	1	5	3
Coles	Australia	824	26,064	1	4	2
Costco	Global	785	152,700	1	4	2
Metro Inc	Canada	698	13,248	1	3	2
Metro	Germany	678	31,271	1	3	2
Jumbo Groep Holding	Netherlands	672	8,579	1	3	2
Asda	UK	603	32,289	1	3	2
Sainsburys	UK	602	29,000	1	3	2
Colruyt Group	Belgium	601	9,706	1	3	2
Southeastern Grocers	United States	550	7,700	1	3	2
Wm Morrison Supermarkets PLC	UK	542	24,731	1	3	2
Whole Foods Market	United States	500	15,000	1	3	2
Giant Eagle	United States	474	8,900	0	2	1
New World/Pak n Save/Foursquare	New Zealand	442	4,913	0	2	1
Grupo Comercial Chedraui, S.A.B. de C.V	Mexico	431	6,291	0	2	1
<b>Total</b>		<b>173,504</b>	<b>2,223,022</b>	<b>174</b>	<b>868</b>	<b>523</b>
<b>Average</b>		<b>3,213</b>	<b>41,167</b>	<b>3</b>	<b>16</b>	<b>10</b>

Source: Forsyth Barr analysis, company websites

## Attraction #4. PX1 well positioned to win future contracts

With management expectant of winning new contracts from FY22 onwards, execution will be aided by 1) the ready made pipeline of opportunities presented by the Ahold Delhaize group, 2) the number of clear proof points recognised to date (including the inclusion to Gartner's Magic Quadrant of global mobile marketing platform providers), and 3) the sector stability from both QSR and grocery during COVID-19. Although the medium term goal of generating NZ\$100m of revenue is ambitious for FY25, we believe PX1 is well positioned to convert a number of contract wins in coming years.

### Ahold Delhaize – a ready made pipeline of contract wins

We understand that PX1 has a strong relationship with the current management team of Ahold Delhaize, owner of the Super Indo brand which PX1 brought onto its platform in February 2020. Given the success that Super Indo has achieved on implementing PX1 software, (Super Indo achieved 107% of its first year registration target within just three months), we would be surprised if other brands within the group did not follow adoption of PX1 technology. There are 16 other brands within the Ahold Delhaize group which in our view present a natural pipeline of contract opportunities.

PX1 provided Super Indo with both its front and back end mobile applications, showcasing its ability to design new apps in addition to its core focus of mobile personalisation and machine learning. Our estimates suggest that signing on the whole of Ahold Delhaize would generate ~US\$23m additional revenue for PX1 (NZ\$30m).

#### What is Ahold Delhaize?

Ahold Delhaize is one of the world's largest grocery retailers, operating in 7,000 stores across the United States, Europe and Indonesia, and serving more than 50 million customers each week. The group was founded as two large retail groups (Ahold – started in 1887, and Delhaize – started 1867) merging in 2016. The group has a history of focussing on innovation and was one of the first supermarket chains to 1) use self-branded products, 2) introduce self-scanning checkout lanes, and 3) create the first iPhone app for self-scanning. It has also recently launched its own meal-delivery service.

Its head office is located in Zaandam, the Netherlands. One of its current goals is to open new stores in Luxembourg so that everyone in the country lives within a 5–10 minute radius of a Delhaize store.

In addition to its continued store growth, Ahold Delhaize is also expanding the number of brands owned within the group, recently announcing the acquisition and majority ownership (80% stake) of Fresh Direct, a leading online grocery store based in New York, to be completed in the first quarter 2021.

**Figure 47. Current brands within the Ahold Delhaize Group**

Brands	Stores	Sector	Country	App
Albert Heijn	1,036	Grocery	Netherlands, Belgium	Yes
Food Lion	1,029	Grocery	USA	No
Delhaize	810	Grocery	Netherlands	Yes
Mega Image, Romania	797	Grocery	Romania	Yes
Gall & Gall	583	Alcohol	The Netherlands	No
Etos	539	Pharmaceuticals, Consumer	The Netherlands	Yes
Alfa Beta, Greece	508	Grocery	Greece	No
Pingo Doce	444	Grocery	Portugal	No
Maxi, Serbia	432	Grocery	Serbia	No
Stop & Shop	410	Grocery	USA	No
Albert, Czech Republic	325	Grocery	Czech Republic	No
GIANT brands	186	Grocery, pharmaceuticals, fuel	USA	No
Hannaford	183	Grocery	USA	No
Super Indo	181	Grocery	Indonesia	Yes
Giant Food	164	Grocery	USA	No
ENA, Greece	15	Grocery	Greece	No
Tempo, Serbia	12	Grocery, Hardware	Serbia	No

Source: Forsyth Barr analysis, Ahold Delhaize

## PX1 Proof Points beginning to get recognition

Following a strategic re-set of the business in 2018, management set out a number of initiatives which it has broadly executed to date. We view 1) successful contract wins, a 2) clear track record of delivering for clients and 3) greater financial stability across the business as a sign that PX1 is moving in the right direction, giving us a growing level of confidence in the company's future outlook. We also view the investment in additional sales and customer account management staff as an indicator that PX1 is confident in its growing pipeline of future contract wins.

### Key proof points to date

- **Contract win:** PX1 signed a contract with US-based QSR White Castle in July 2019. This is a two year contract based on users, stores and redemptions.
- **Contract win:** PX1 signed a contract with Ahold Delhaize owned Super Indo in February 2020. This was a five year contract, driven by stores and users for the first three years, moving to a revenue share for the next two years.
- **Delivering ahead of expectations:** Product success has been clear with Super Indo reporting that it reached 107% of its first year registration target within just three months on adoption of PX1, driven by a +55% increase in average basket size and 42% of app members redeeming offers in store.
- **McDonald's showing faith:** PX1 has added 10 countries per year on average within McDonald's every year since 2015. This continued demand for PX1's services within the McDonald's organisation shows clear faith in the product itself and the company, in addition to acquiring a 9.9% stake in the business in 2019.
- **Greater financial stability:** Under the current management team PX1 reported positive net operating cash for the first time in FY18 before becoming profitable in FY20, following a number of years of financial uncertainty and sustained losses as VMOB.
- **Industry recognition:** In 2020, Gartner named PX1 as part of its Magic Quadrant for Mobile Marketing platforms, positioned as a high execution, niche player and highlighting key areas of recognition which included 1) PX1's modular platform setup, 2) a specific sector focus on the grocery, retail and QSR sectors, and 3) high quality fraud preventative measures (using AI to detect fraudulent activity for a brand's mobile campaign)

Figure 48. PX1 recognised for the first time in Gartner's 2020 Magic Quadrant for Mobile Marketing Platforms



Source: Forsyth Barr analysis, Gartner



## COVID-19: a temporary pause in contract wins, stable sector backdrop

COVID-19 has resulted in a temporary pause in contract wins for PX1, with the company unable to continue its strong momentum seen in July 2019 (White Castle) and February 2020 (Super Indo). Management is expectant on winning new contracts in FY22. We understand the pause in contract wins is due to a high degree of uncertainties facing prospective brands in light of COVID-19 and inability for sales staff to meet in person due to lockdown restrictions. We see little material change to in-store dynamics across the QSR and grocery space post-lockdown, with COVID-19 highlighting the importance for brands in offering attractive deals, personalisation and clear value for money. We note that after an uncertain start to 2020 both the QSR and grocery sectors saw strong sales during COVID-19: 1) enhancing the ability for current PX1 customers to continue payment for its servicing, and 2) increasing the likelihood for brands to fund investment in PX1's services.

### QSRs supported by strong demand, drive-thru, takeaway, delivery and promotions

QSRs across the US and globally reacted to restaurant closures through channeling consumers to takeaway, drive-thru or delivery. Subway for example has offered free delivery through Uber Eats, DoorDash, Postmates, Grubhub, and Seamless in addition to offering promotional discounts. McDonald's benefitted from an increase in business through its drive-thru, which saw over 70% of its business. Dunkin' followed a similar model using its 5,300 drive-thru locations while Starbucks moved towards a to-go-only model and Dominos implemented contactless delivery. Numerator.com have suggested that third party delivery has also seen a strong performance during COVID-19 with a +36% increase in spend per trip and a +13% rise in spend per household. In October 2020 QSRmagazine ran a customer service survey of 1,007 drive-thru customers ranking the top 17 drive thru brands using a number of criteria. Given the recent date, 1) it is clear that drive-thru QSRs have performed well during COVID-19 (overall customer experience has ranked from 8.0 to 9.3 out of 10), and 2) the number of brands offering drive-thru is substantial.

**Figure 49. US drive-thru rankings October 2020**

brand	overall experience	speed of service	friendliness of staff	cleanliness and sanitation	menu item availability	quality of menu items ordered	order accuracy
Chick-fil-A	9.3	9.3	9.4	9.3	9.2	9.4	9.5
Arby's	9.1	9.1	8.7	8.2	9.3	9.2	9.1
Culver's	9.1	9.1	9.0	8.8	8.9	9.0	8.9
Panera Bread	9.1	8.9	9.2	9.3	9.1	9.2	9.1
Dunkin'	9.0	8.9	8.9	8.8	8.7	8.8	8.7
Wendy's	9.0	9.0	8.6	8.4	9.0	9.1	9.0
Starbucks	8.9	8.7	9.0	9.0	8.8	9.1	9.3
Hardee's/Carl's Jr.	8.9	8.8	8.6	8.4	8.9	8.7	9.0
Dairy Queen	8.9	8.9	8.7	8.2	8.8	8.9	9.2
Burger King	8.7	8.6	8.2	7.6	8.8	8.8	8.8
Checkers/Rally's	8.6	8.6	7.6	7.8	8.6	8.9	8.4
Taco Bell	8.6	8.6	8.5	8.3	8.8	8.4	8.8
Jack in the Box	8.4	8.4	8.4	8.1	8.8	8.4	8.4
Bojangles	8.3	8.5	8.1	7.6	8.5	8.9	8.9
McDonald's	8.3	8.5	8.2	8.1	8.4	8.5	8.4
KFC	8.2	8.1	8.2	7.9	8.3	8.4	8.3
Popeyes	8.0	8.0	8.0	7.8	8.2	8.5	8.5

Source: Forsyth Barr analysis, QSRmagazine

- **Domino's** made very few changes to its operational model, other than the addition of contactless delivery. 2Q20 saw same-store sales increase by +16% (its 37th consecutive quarter of same-store sales growth).
- **Popeyes** saw its same-store growth increase by +29% at 2Q20 with significant growth across every category on its menu despite the pandemic. This was partially driven by increased adoption of its mobile app.
- **Wingstop** also saw strong growth in its 2Q20 numbers with same-store sales +28%, its best quarter since 2015. This was driven by its improved online ordering and delivery process.

### Grocery market also seeing clear signs of financial strength during the pandemic

The global grocery market has also gone from strength to strength during COVID-19 partially due to 1) its essential service nature, 2) an increase in home cooking and reduction of eating out at traditional restaurants, 3) the addition of new, essential COVID-19 related products such as face masks, hand sanitisers and flour, and 4) a spike in demand as a result of hoarding. November 2020 was the biggest month ever for UK grocery sales while in the US supermarkets also reporting exceptional growth during 2020 supported by increased online sales.

## What about competition?

Barriers to entry in the short term are relatively high due to PX1's expensive, complex and sophisticated technology, although like all technology we suspect over the long term PX1's platform can be replicated by competitors. PX1's greatest competitor is surprisingly in-house solutions, with a number of firms historically attempting to deploy digital marketing strategies internally. Research suggests that before COVID-19 outsourcing was increasing, while talking to industry experts it is clear that COVID-19 has accelerated this thematic. While PX1 operates in a fragmented market many competitors are 1) currently exposed to struggling sectors such as travel and leisure, 2) have focussed on a higher proportion of smaller brands (with less ability to absorb distress), or 3) have been acquired by large clients (such as Grubhub acquiring Levelup), reducing the supply of providers in the market.

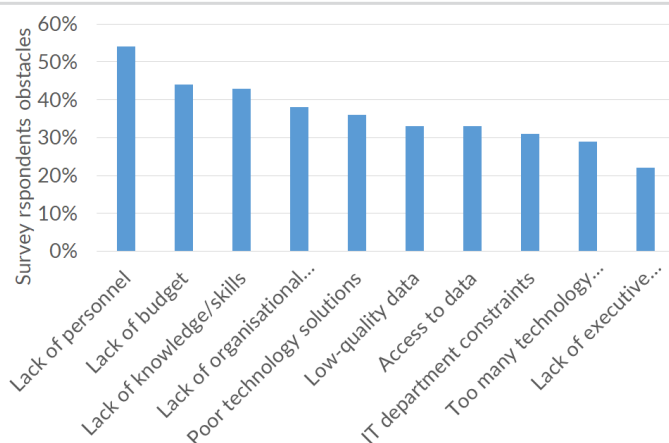
### So what is PX1's USP?

PX1 currently has four clear competitive advantages: 1) experience and a strong track of success in dealing with very large data (one of the first adopters of cloud computing in 2013/14), 2) a niche player in the mobile space (competitors more broadly-focussed), 3) ability for brands to capture and utilise their own customer data (rather than acting as a gatekeeper like delivery services), and 4) PX1 has built the infrastructure to cater for the bespoke demands of large groups and chains (performance at scale).

## In house solutions PX1's greatest competitor but trend showing outsourcing on the rise...

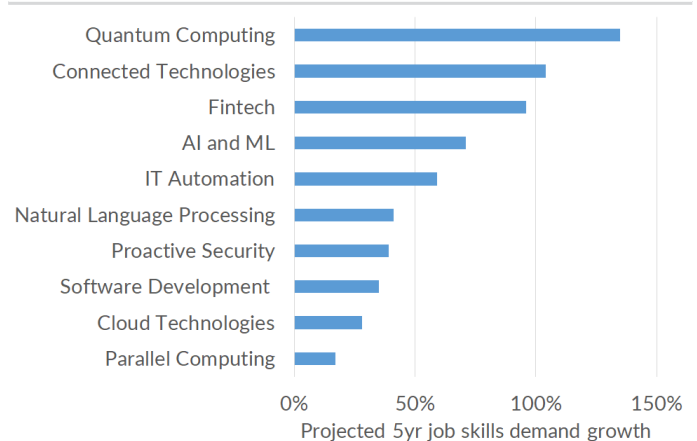
Studies show that there is a growing trend of large brands that are outsourcing marketing solutions in order to gain exposure to global data techniques, rather than to purely reduce costs. According to Gartner, cloud system infrastructure services is expected to grow from US\$44bn in 2019 to US\$81bn by 2022. COVID-19 has also seen a number of firms scale down IT teams, and re-scale back up through outsourcing, with many companies who have never outsourced previously looking to implement for the first time. N-ix.com has estimated that only 9% of businesses decided to terminate relationship with IT outsourcing partners during the 2008 recession and also expects CEE (Central & Eastern Europe) to be an emerging market hotspot for outsourcing. This is in part due to the shortage in supply of highly skilled data scientists to bring in-house.

**Figure 50. Obstacles to adopt personalisation in-house (survey)**



Source: Forsyth Barr analysis, Evergage

**Figure 51. 10 tech job skills projected to grow the fastest**



Source: Forsyth Barr analysis, Burning Glass Technologies

### Cost, skills and convenience driving outsourcing

Cost saving is a clear driver for outsourcing combined with improved quality, flexibility and scalability. Additionally, with large global skills gap for IT workers and increasing wages for data employees, the cost saving gap has grown since the start of COVID-19. Outsourcing also allows businesses to access remote-ready global talent and expertise, while due to wage differentials it also allows access to less expensive offshore workers. PX1 has suggested that its product is 1) more reliable than in-house solutions, 2) considerably cheaper, and 3) possess a far higher degree of functionality. However, we recognise fears over security and control in outsourcing.

The study above by Evergage showed that the lack of personnel, budget and highly qualified skill sets were the greatest obstacles to adopting personalisation in-house, highlighting the challenge for in-house teams to fully implement sophisticated personalised marketing. Interestingly clutch.com has estimated that 29% of businesses with fewer than 50 employees outsource, compared to 66% with 50 or more employees. This is supportive of PX1's strategy of focussing on winning contracts with large groups and brands.

## Fragmented market, PX1 a niche player

The mobile marketing market is hugely fragmented with a large number of providers ranging from very basic solutions to the highly complex. Gartner has narrowed PX1's direct competitors to 12 peers in its Magic Quadrant, while PX1 itself has stated (below) its closest 20 competitors by function. It is clear that PX1's combination of mobile focus and QSR and grocery exposure is relatively unique, given the wide range of functions and sectors across the board. Airship for example, is a high quality provider which has a focus on digital but is exposed to airlines, media, sport, finance and telecoms.

### Direct competition exposed to flagging sectors or acquired by large brands for in-house-use

PX1 has been fortunate by its exposure to the QSR and grocery sectors which have performed well during COVID-19. Competitor exposure to the hospitality, leisure, retail and travel sectors among others has meant providers have seen a lack of payment with some brand also failing to survive during the year. As a result some competitors have suffered over the period, cutting back staff and stunting future growth. Many competitors were also exposed to small and medium sized companies with less ability to absorb financial distress.

Additionally, high levels of M&A within the industry has seen small, higher quality providers acquired by larger brands and deployed effectively in-house. For example

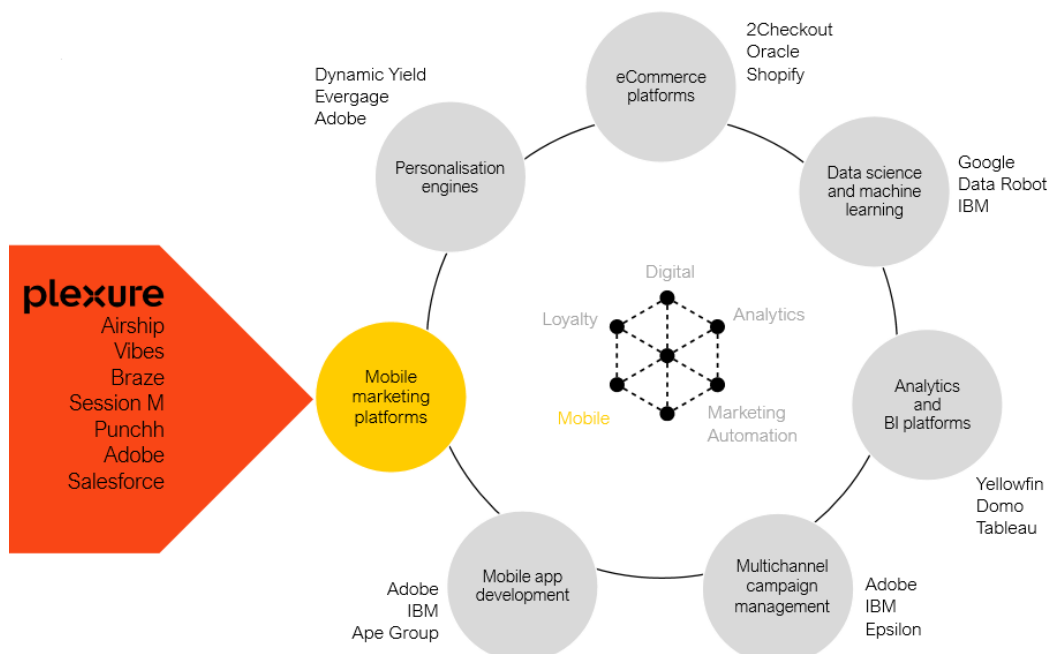
- At July 2018 Grubhub acquired mobile payments platform Levelup for US\$390m (revenue US\$30-40m, EV/Sales ~11x)
- At March 2019 McDonald's acquired data engine Dynamic Yield for \$300m (revenue US\$40-50m, EV/sales ~7x) - now up for sale
- At October 2019 MasterCard bought customer data and loyalty platform SessionM
- At January 2020, Paypal invested US\$4bn for shopping experience provider Honey (revenue US\$100m, EV/sales ~20x)
- At December 2020 Salesforce acquired chat software developer Slack for over US\$27bn (revenue US\$1.1bn, EV/sales ~24x)

This has resulted in substantial, high quality competitors taken out of the market, reducing the supply of digital marketing providers despite the growth in demand. Again we see this is a positive tailwind for PX1 in closing future sales.

### Larger competitors less focussed on personalised mobile marketing

At the larger end of the scale global marketing providers such as Salesforce and Adobe provide a range of general marketing services, including mobile, email, messaging, analytics and data insights. Given the diluted templated approach of larger players, a niche, bespoke provider such as PX1 may be a more appealing option for a brand looking to outsource, with PX1 able to offer a more tailored solution, offering clear competitive advantage.

**Figure 52. PX1's view of its direct competitors**



Source: Forsyth Barr analysis, PX1

## How significant are constraints to growth?

PX1's greatest constraints to growth are currently 1) its ability to attract and retain in-demand data scientists, 2) its current contract with McDonald's based on store growth over user growth, and 3) the time taken to build on legacy technology should a smaller brand require a bespoke solution. We take comfort from the fact that workforce constraints have little to no importance on winning new contracts, with the majority of sales in the short term driven by existing relationships. PX1 has also recently hired a new head of people and culture while the company has plans to employ new data staff in smaller cities across New Zealand including working from home. Secondly, whilst the current McDonald's contract is currently eroding PX1's gross margin due to increased activity on the platform which PX1 is not currently rewarded for, we are sanguine of change given the impact PX1 has had on McDonald's business through increasing loyalty and driving redemptions. Finally, building on legacy technology is a greater issue for smaller customers as large brands typically have a more standardised back end infrastructure which is more easily integrated with PX1's platform.

### Data scientists in short supply across the board

In the short term PX1's capacity to maintain, improve, and scale its operations is somewhat limited by its ability to attract and retain data engineers and developers. This has become an increasingly significant challenge due to (1) a small talent pool in New Zealand, and (2) increased competition for employees domestically. This implies the average cost of new staff is likely to continue upwards for PX1. Our conversations with a number of recruiters confirm this.

- With borders closed the available talent pool for PX1 is now limited to those living in New Zealand. While outsourcing remains an option for PX1, there is a risk of cultural dilution, slowdown in communication and additional operational costs.
- PX1 is not the only tech firm acquiring data talent and competition for data engineers. The banks and other technology firms such as Xero and Serko have also looked to aggressively hire additional data engineers in recent months.

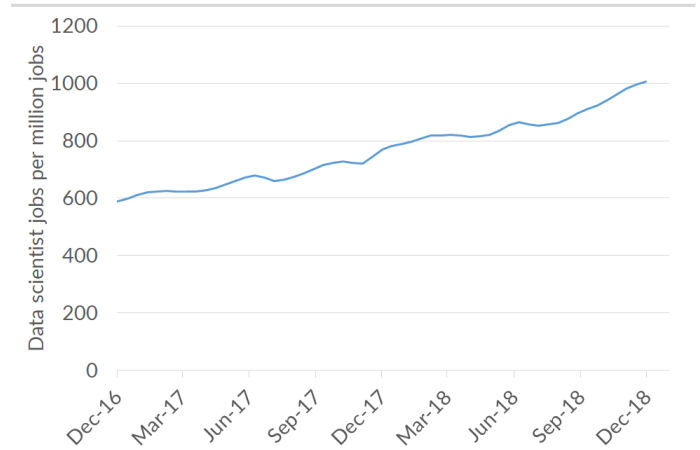
The bulk of PX1's workforce is data science related, and management has commented on the difficulty of finding appropriately skilled talent. PX1 currently has vacancies for data engineers, software engineers, DevOps engineers, and test engineers, among others. The challenge of sourcing high quality, data engineers is not unique to PX1, with local studies providing evidence of an under supply of data scientists in Auckland (currently exacerbated by border closure), and also mismatches between the desired skills and those of the available workforce (i.e. Azure and AWS), particularly for higher-level roles. Additionally, a 2018 study showed that demand for data scientists had increased by 29%, while the supply of skilled data scientists only increased by 14% over the same period.

**Figure 53. Australian data scientist jobs per 1 million postings**



Source: Forsyth Barr analysis, indeed

**Figure 54. Global data scientist jobs per 1 million postings**



Source: Forsyth Barr analysis, Indeed

Corporate roll-out of the working-from-home trend, which has seen higher take up in technology-related based businesses may provide some relief to PX1 and technology peers. This could also allow companies to hire outside of the Auckland/Wellington hubs. On speaking to a number of recruiters it is clear 1) COVID-19 has heightened the demand for data engineers in New Zealand, accelerating the previous trend seen, 2) average data engineer wages have risen significantly in recent months, and 3) it usually takes around three months to find and hire people of high calibre within the data sector. PX1 has looked to address this challenge by appointing a new People and Culture director in February 2021. Paula Williams has significant experience in talent management, having worked for Simpson Grierson, IAG and Air New Zealand.

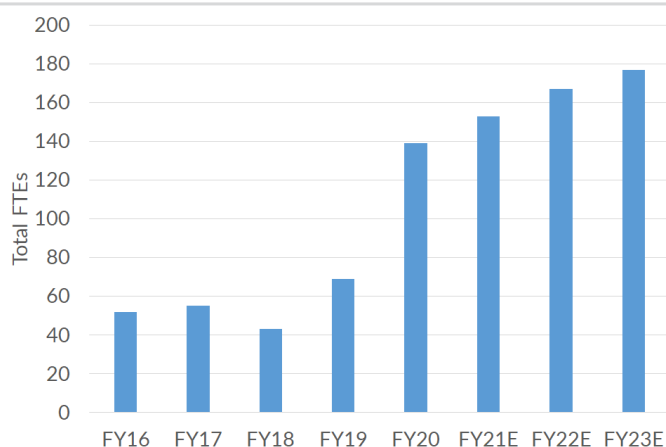
### Worker shortage impacts limited to additional product development, with little impact on new contract wins

PX1 is now forecasting a reduction in total headcount at FY21 (153 down from 161 at 1H21) despite previously looking to grow its workforce towards 190 for the full year. This is a function of increasing demand across New Zealand from other technology companies, with the Auckland job market particularly aggressive at present. We expect this to cool over the medium term, with the most significant impact a slow down on additional product features to its platform and an increase in average wages going forward. Coupled with the option to hire workers in other New Zealand cities or offshore (such as the Philippines) we believe any material slowdown in resource acquisition should have little impact on the ability to win future contracts. Historically New Zealand companies have had little to no need for outsourcing, while significant increases in the global demand for data engineers has meant it now takes up to three months for a firm in New Zealand to hire currently (which was around 1–2 weeks pre COVID-19).

While New Zealand developers typically have a more generalist skill set (such as a full stack engineer), outsourcing to offshore employees would mean contractors would likely be more specialised. The advantage of outsourcing to a developer in a country such as the Philippines would mean the product is being continuously worked on with a far longer working day, due to time differences. Industry feedback, however, suggests that outsourcing costs per hour for developers have increased 30%–40% in just under a year, predominantly driven by increased global demand. The best option for PX1 may be to have a small team of local 'control' developers based in New Zealand, leading a team of contracted specialists offshore to speed up project work.

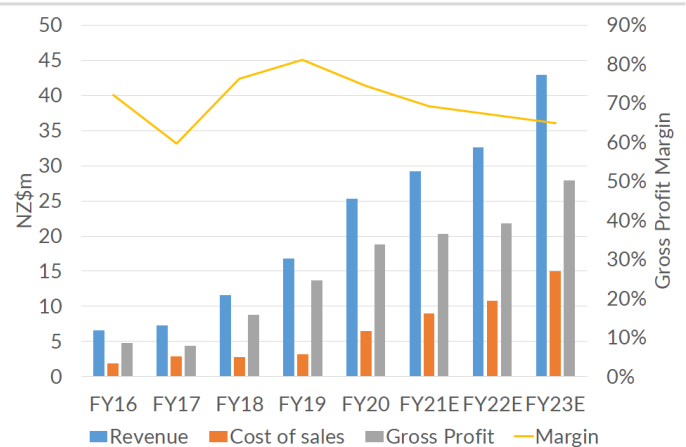
Financially, there may also be a greater lag time for PX1 to convert a new contract into recurring revenue. In our view this should not affect the longer term business model for PX1 although there is a risk of client frustration if project deadlines are not met.

**Figure 55. PX1 total FTEs FY16–FY23E**



Source: Forsyth Barr analysis, PX1

**Figure 56. Expected gross profit margin compression**



Source: Forsyth Barr analysis

### Failure to change McDonald's contract would see gross margin track lower

Our base case assumption is that PX1's gross margin falls from 74% in FY20 to 66% at FY23, given the current contract agreement with McDonald's which sees PX1 bear the costs of additional data storage as the number of McDonald's mobile app users increase. Although additional contract wins with other brands may allow PX1 to decrease costs through scale, McDonald's remains a significant part of PX1's business in the near term. We are sanguine that PX1 can negotiate a user-based deal through redemptions which would see upside to our numbers, both from a revenue and gross margin perspective. Currently PX1 is not rewarded for all activity on the McDonald's platform, with Microsoft Azure costs tracking upwards as a result due to increased data storage.

### Time taken to build on legacy technology

Whilst PX1's template can take just a couple of days to integrate a new brand to the platform, delays can be caused by 1) building on legacy technology, and 2) implementing a bespoke solution should the brand want a more customised solution. Legacy technology is more generally found within smaller brands (which may have already attempted to provide its own in-house solution). PX1 suggests that it typically takes three to six months before the brand is fully integrated to the platform and revenue is shifted from consulting to recurring licence revenue.

The additional advantage of working with large global brands is that back end infrastructure is standardised and as a result once a project has been completed once, it can be rolled out again in duplicate for another large brand. PX1 also uses flexible architecture which allows its to customise its solution for prospective clients and as a result the time taken to deploy and integrate a new brand fully is dependent on the level of bespoke features required.

## Appendix 1: What is Loyalty New Zealand

Flybuys is a loyalty rewards scheme that offers consumers points when scanning a Flybuys card at participating companies. These points can then be spent at the Flybuys store, used for fuel discounts or converted into New World Dollars. Flybuys then sells the data to participating companies so they can understand their customers better. Although Flybuys provides a very small, immaterial proportion of PX1's revenue we provide a summary of the Flybuys business model below.

Plexure works with Flybuys to deploy its cloud-based software platform to provide advanced mobile marketing capabilities to the Fly Buys program as well as the wider Loyalty NZ business.

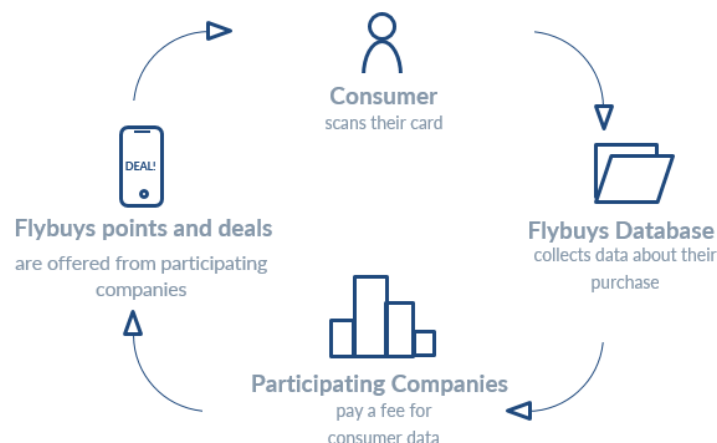
Companies to earn Flybuys points with include: Agoda, BNZ, Caltex, Clearly, Colmar Brunton, Elgas, Europcar, Genesis, Gilmours, Harrisons Group, helloworld Travel, Henry's Beer Wine & Spirits, isubscribe, Kiwi Holiday Park and Accommodation, Liquorland, Mini-Tankers, New World, Noel Leemings, Northfuels, Petplan, Shopnz.com, Southfuels, State, Torpedo7, Trents, Yellow, Z, Z Business.

Figure 57. Loyalty New Zealand mechanics



Source: Forsyth Barr analysis, Loyalty New Zealand

Figure 58. Flybuys points explained



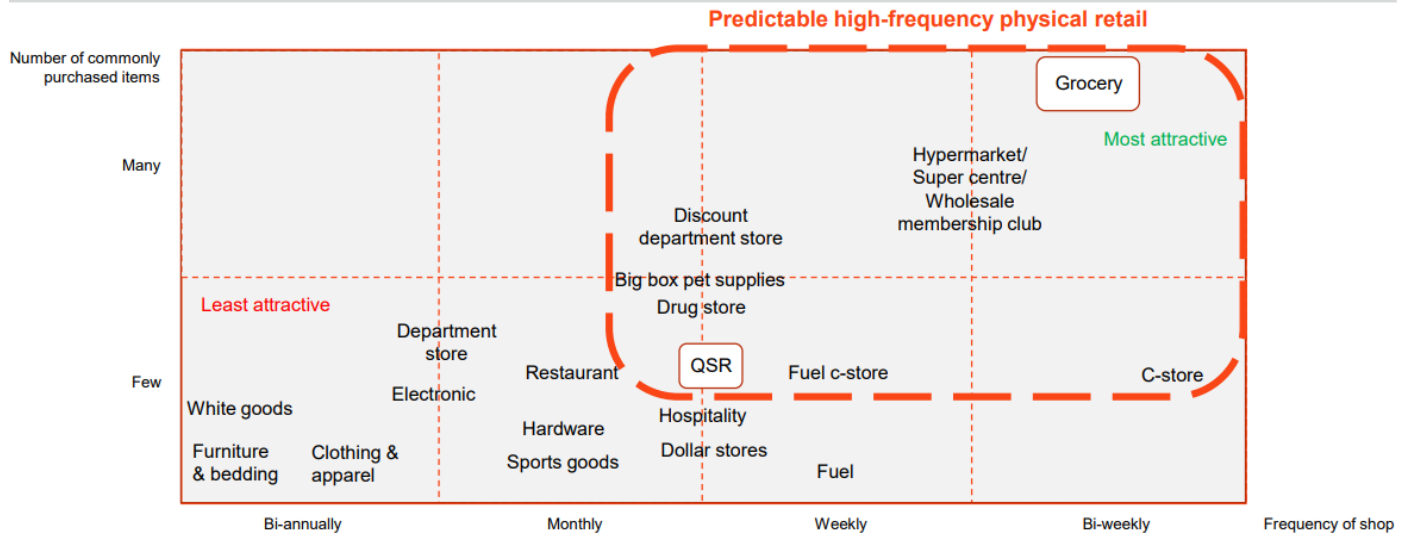
Source: Forsyth Barr analysis, Loyalty New Zealand



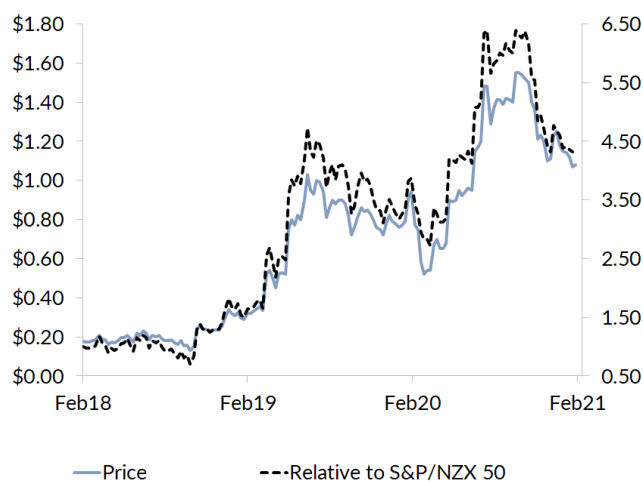
## Appendix 2: Other sector possibilities?

With PX1 currently providing its services in the QSR and grocery sectors, the below diagram provides insight into which other sectors it may find appealing such as discount department store, pet food, hospitality or fuel points.

Figure 59. Sectors appropriate for PX1's product



Source: Forsyth Barr analysis, PX1

**Figure 60. Price performance**


Source: Forsyth Barr analysis

**Figure 61. Substantial shareholders**

Shareholder	Latest Holding
Forsyth Barr Custodians Limited	11.0%
Atlas Bear LLC and McDonad's Corporation	9.9%
Allectus Capital	7.8%

Source: NZX, Forsyth Barr analysis, NOTE: based on SPH notices only

**Figure 62. International valuation comparisons**

Company	Code	Price	Mkt Cap	PE		EV/EBITDA		EV/EBIT		Cash Yld
(metrics re-weighted to reflect PX1's balance date - March)			(m)	2021E	2022E	2021E	2022E	2021E	2022E	2022E
<b>Plexure</b>	<b>PX1 NZ</b>	<b>NZ\$0.91</b>	<b>NZ\$158</b>	<b>&lt;0x</b>	<b>&lt;0x</b>	<b>&lt;0x</b>	<b>&lt;0x</b>	<b>&lt;0x</b>	<b>&lt;0x</b>	<b>0.0%</b>
ADOBE INC	ADBE US	US\$447.59	US\$214,541	40.5x	37.7x	37.2x	27.0x	44.3x	30.8x	0.0%
APPEN	APX AU	A\$18.22	A\$2,241	42.1x	35.1x	21.3x	18.7x	34.8x	26.2x	0.7%
DATADOG INC - CLASS A	DDOG US	US\$87.61	US\$26,852	<0x	>50x	>75x	>75x	<0x	>75x	n/a
UPLAND SOFTWARE INC	UPLD US	US\$48.65	US\$1,459	<0x	26.3x	49.2x	17.6x	<0x	36.4x	n/a
HUBSPOT INC	HUBS US	US\$477.26	US\$22,114	<0x	>50x	<0x	>75x	<0x	>75x	0.0%
EAGLE EYE SOLUTIONS GROUP PL	EYE LN	£5.02	£129	>75x	>50x	36.6x	28.5x	n/a	n/a	n/a
SALESFORCE.COM INC	CRM US	US\$212.80	US\$195,294	49.7x	59.4x	52.2x	25.3x	>75x	40.2x	0.0%
SNOWFLAKE INC-CLASS A	SNOW US	US\$238.76	US\$67,593	<0x	<0x	<0x	<0x	<0x	<0x	n/a
SHARPSRING INC	SHSP US	US\$19.84	US\$250	<0x	<0x	<0x	<0x	n/a	n/a	n/a
TWILIO INC - A	TWLO US	US\$369.58	US\$63,005	<0x	<0x	<0x	>75x	<0x	<0x	n/a
<b>Compco Average:</b>				<b>44.1x</b>	<b>39.6x</b>	<b>39.3x</b>	<b>23.4x</b>	<b>39.5x</b>	<b>33.4x</b>	<b>0.2%</b>
<b>PX1 Relative:</b>				<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>-100%</b>

EV = Current Market Cap + Actual Net Debt

Source: \*Forsyth Barr analysis, Bloomberg Consensus, Compco metrics re-weighted to reflect headline (PX1) companies fiscal year end

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