IAAust Insights Session

Uma Joshi

6 August 2014

Agenda

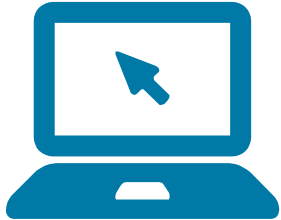Big data... What is it?

Data strategy = Big opportunity

Data in action

Challenges

New technologies are driving an explosion in variety

Five new / maturing technologies are causing profound shifts in the technology ecosystem
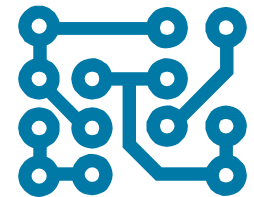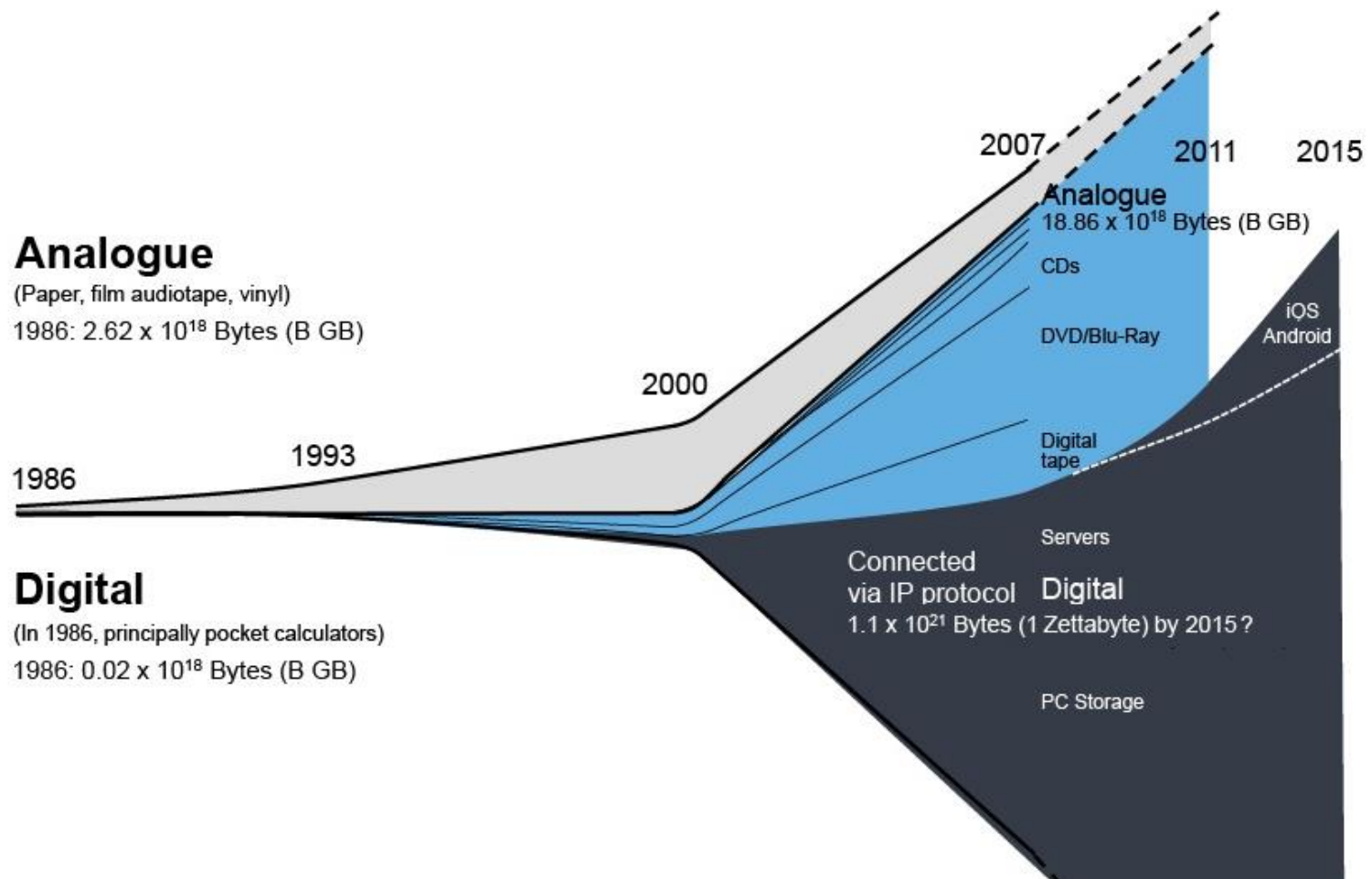
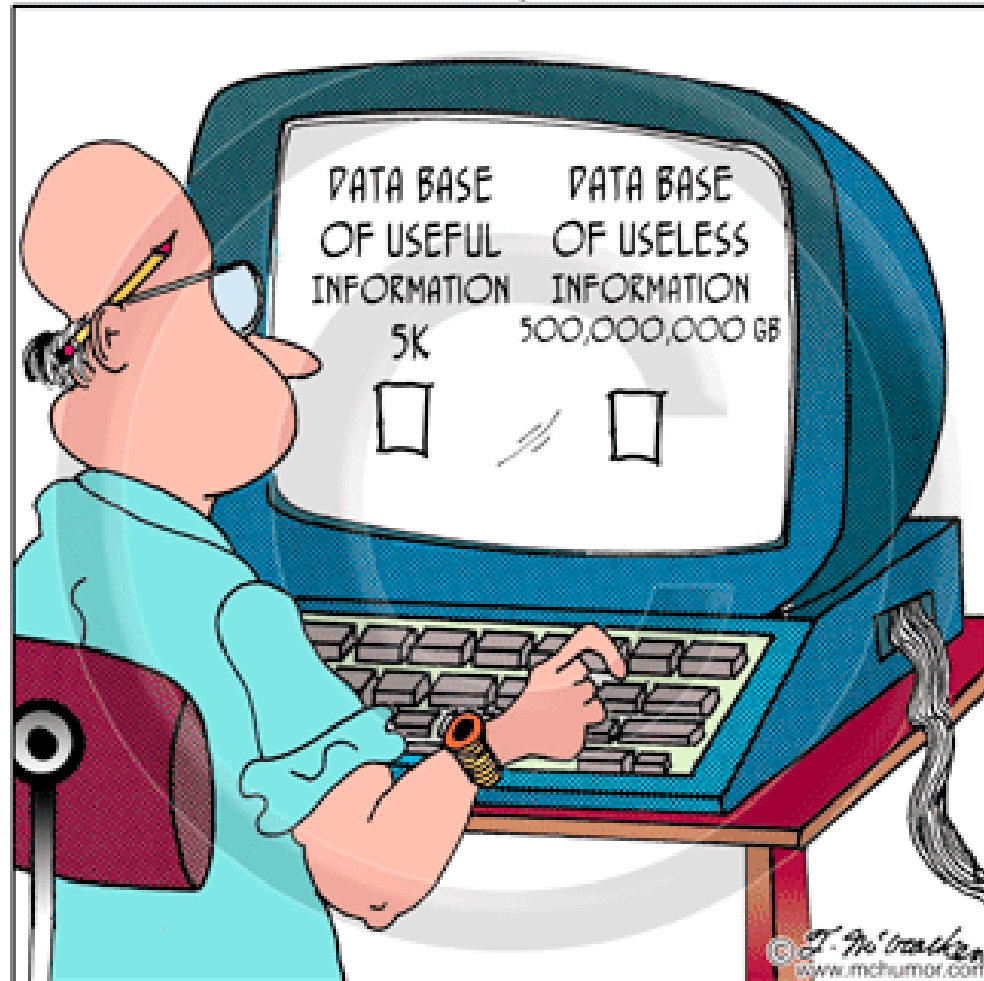Internet   Mobile   Social   Cloud   'Internet of things'

Walmart data

Walmart collects 2.5 Petabytes of Data every hour
This is 20 million filling cabinets worth of text

A new dimension of data volume

Analogue
(Paper, film audiotape, vinyl)
1986: 2.62×10^{18} Bytes (B GB)

Digital
(In 1986, principally pocket calculators)
1986: 0.02×10^{18} Bytes (B GB)

1986
1993
2000
2007
2011
2015

Analogue
18.86×10^{18} Bytes (B GB)

CDs
DVD/Blu-Ray
Digital tape
iOS Android
Servers

Connected via IP protocol **Digital**
1.1×10^{21} Bytes (1 Zettabyte) by 2015 ?

PC Storage

Dumb data

Current opinion is that Big Data can be measured across three key metrics

*"The differences between big data and analytics
are a matter of volume, velocity, and variety"*

- Andrew McAfee, Harvard Business Review (October 2012)

*"When we think of big data, the three V's come to mind
– volume, velocity and variety"*

- Steve Baunach, Starview Inc. (March 2012)

*"The phrase 'big data' in this solicitation does not refer just to
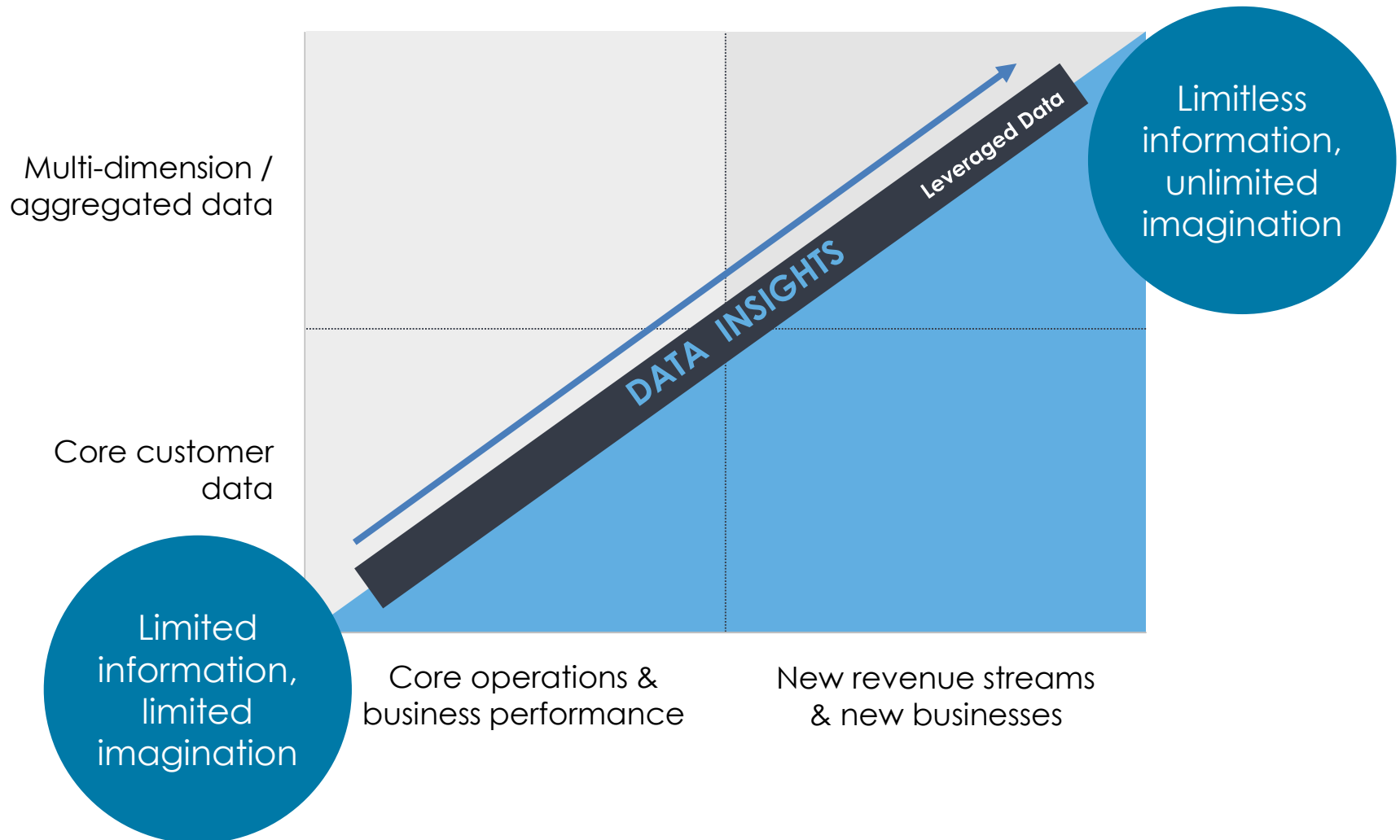the volume of data, but also to its variety and velocity"*

- National Science Foundation (May 2012)

*"The 3V's framework for understanding and dealing
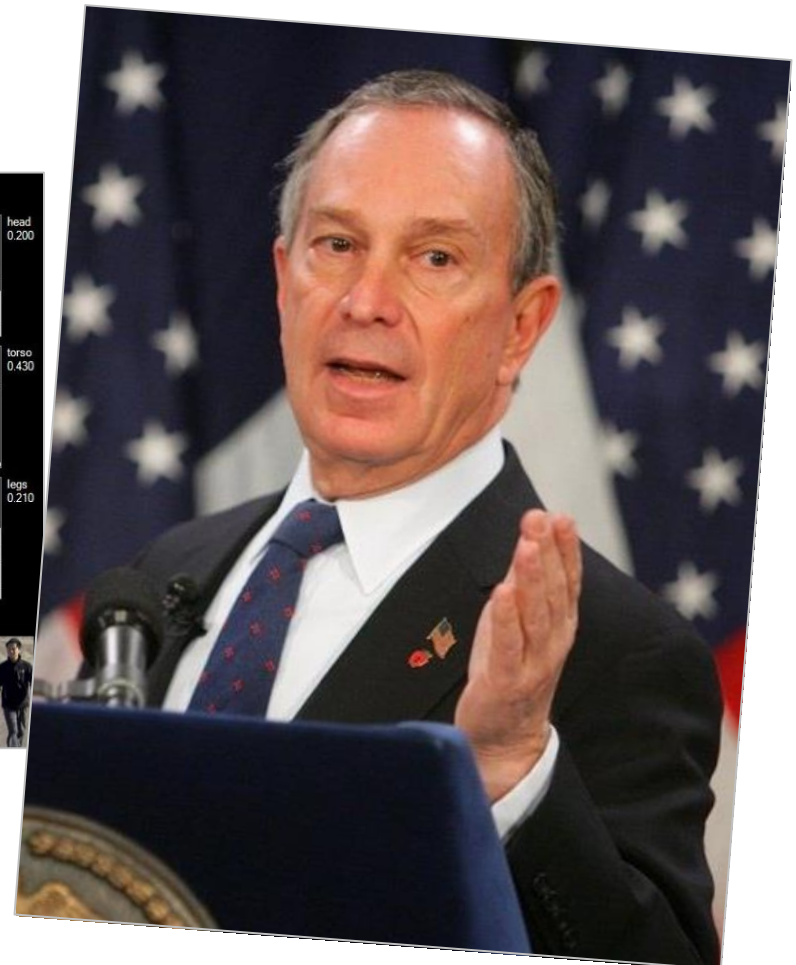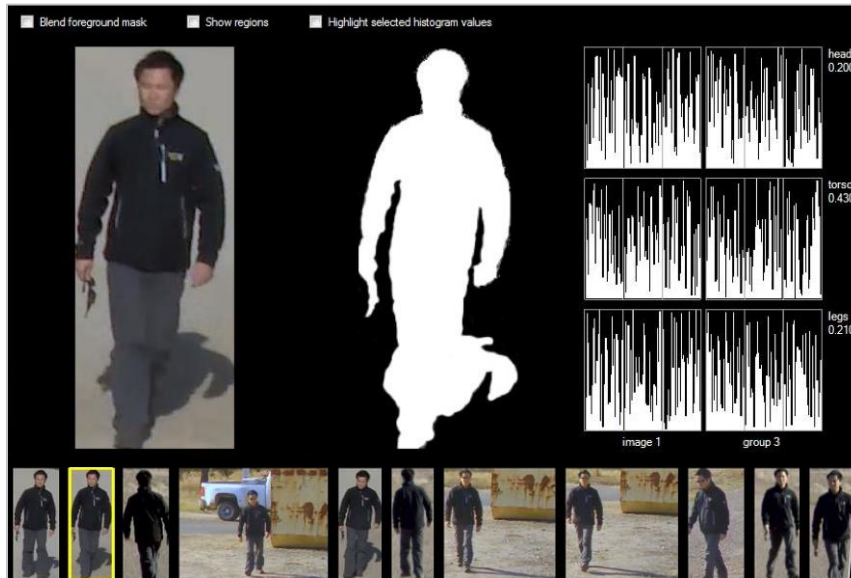with big data has now become ubiquitous."*

- Doug Laney, Gartner Inc. (August 2012)
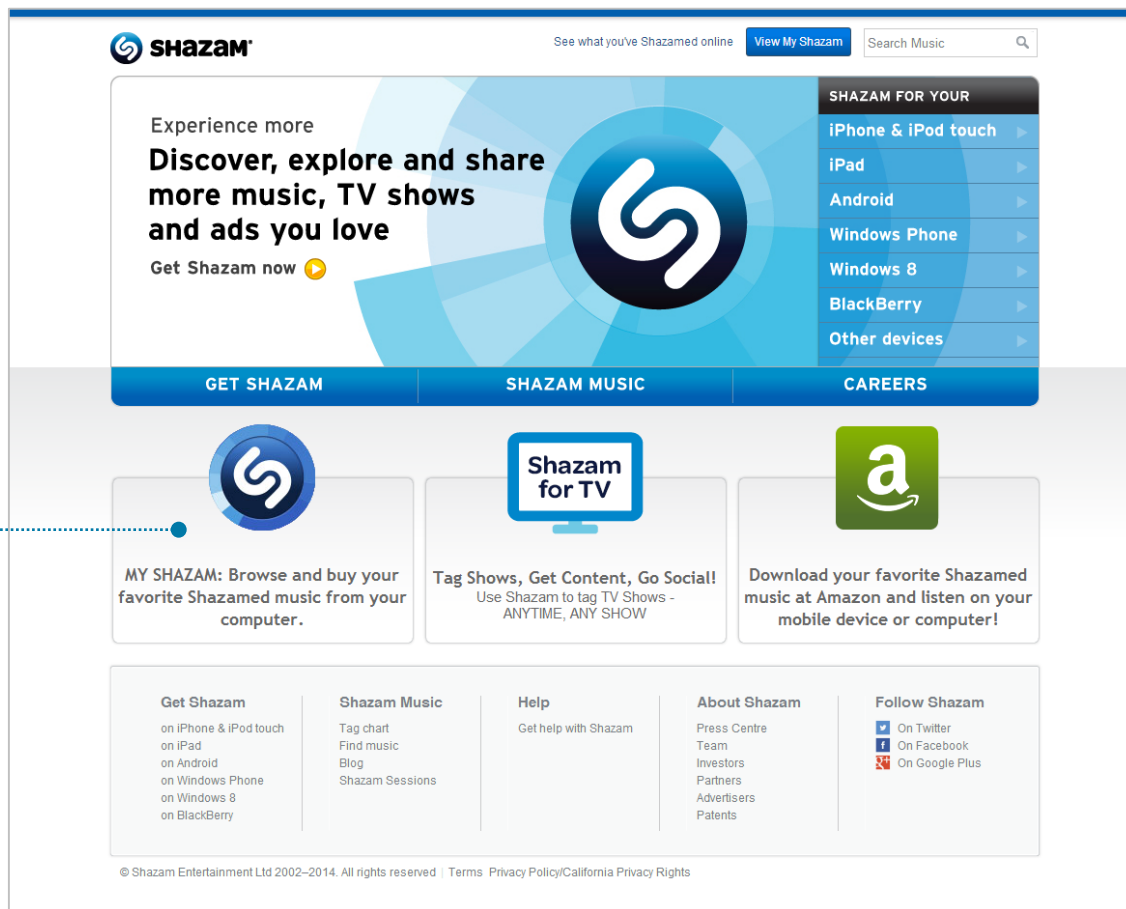
Commercial applications of data to create new value

Big data innovation in use

Shazam

Shazam is able to predict hits based on song searches
33 days before they are hits

Data is the new board governance issue

With $billions pouring in, and with some very smart minds thinking about data and applications it is time to run at this space or get run over

30% of revenue

selling recommendations by its own customers
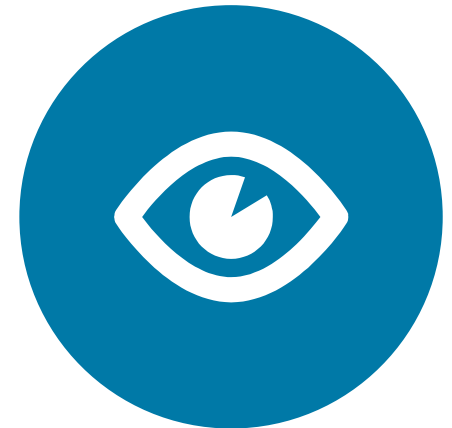
$1 billion

in advertising from its viewer's eye balls

Henry Ford said…

" *If I had asked the public what they need...*

…they would have asked for a faster horse

Businesses have a customer blind spot

Their best customers:

Might never fill in a survey

Might never 'like' them

Don't go to focus groups

Are not in an online panel

Don't search for them

... and their defectors never complain they just leave

Understanding actual, not stated behaviours

Example: Actual v stated behaviours

"Have you made a purchase from Department Store X in the last 4 weeks?"

8.3%

152% overstatement of actual behaviour

Actual transaction with Department Store X in the last 4 weeks

3.3%

Recalled

Observed

Women aged 18-64 in Melbourne

Illustration only
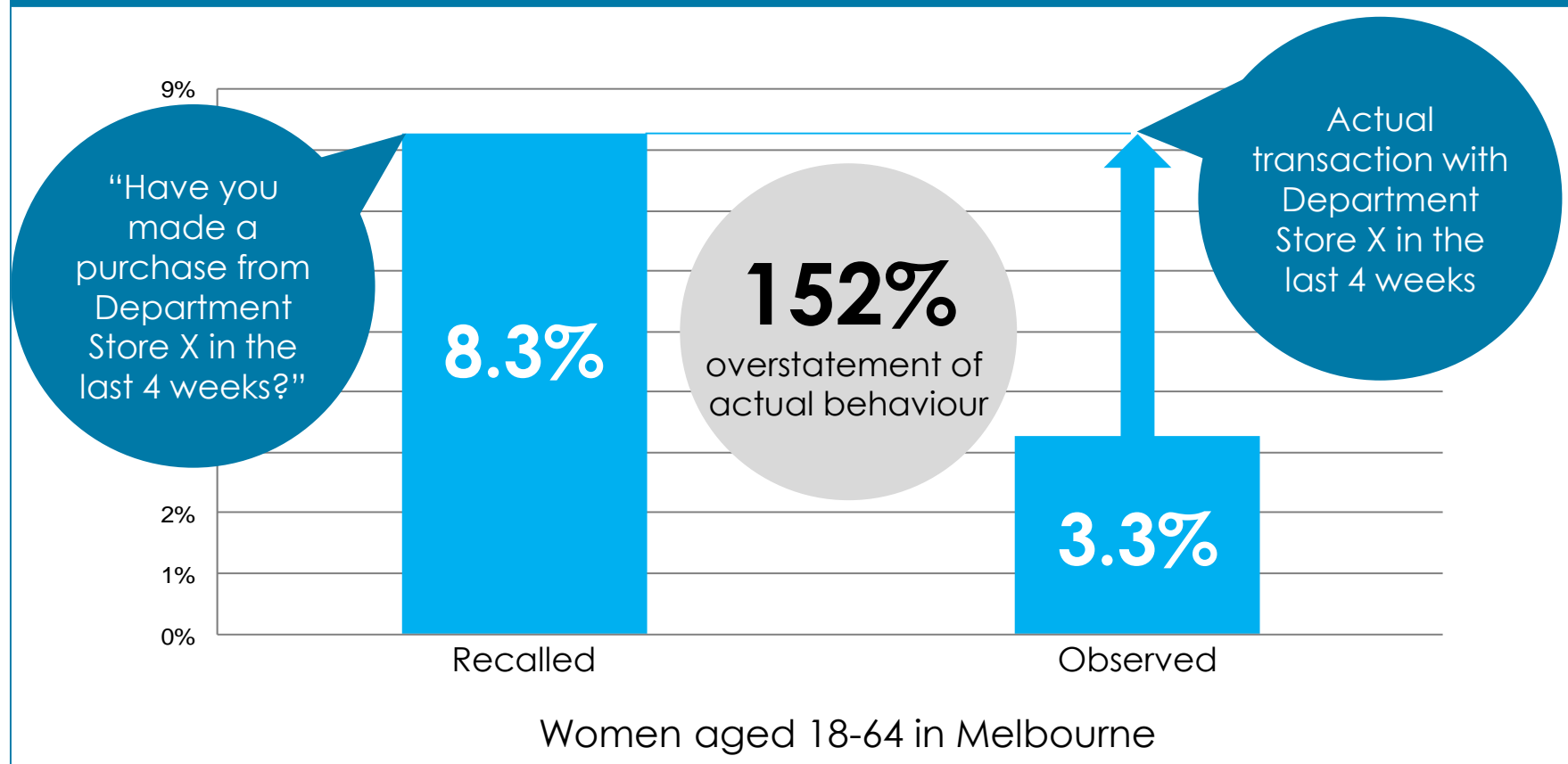
Over reliance on generalised data

- Male
- Born in 1948
- Remarried
- Multiple kids
- Educated

Sources of data can include internal and external data

Woolworths
Australia's fresh food people

7.5m registered cardholders

7.4m weekly transactions

Daily Sales
back to 2010

22.6m People

9.1m Households

FOXTEL

150k+ households

All FOXTEL & free-to-air metro channels

Daily viewing from January 2014

nab

2.5m+ customers weighted to population

14m weekly transactions

Daily Sales
back to 2010

Impact of Insurance challenger brands in NSW

Challenger Market Share by Quarter – NSW
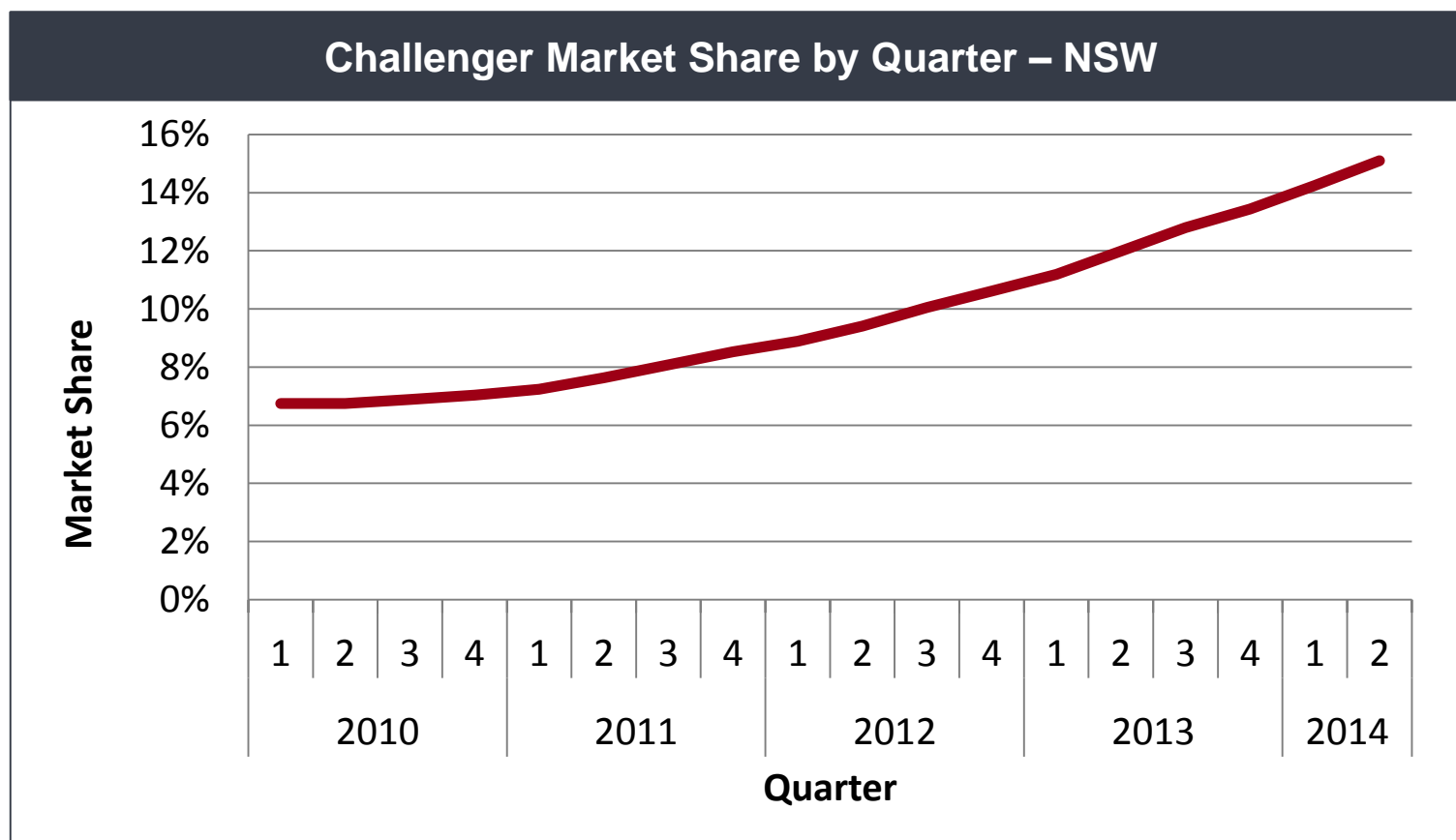
Using data to develop a detailed profile of the challenger brand segment in insurance
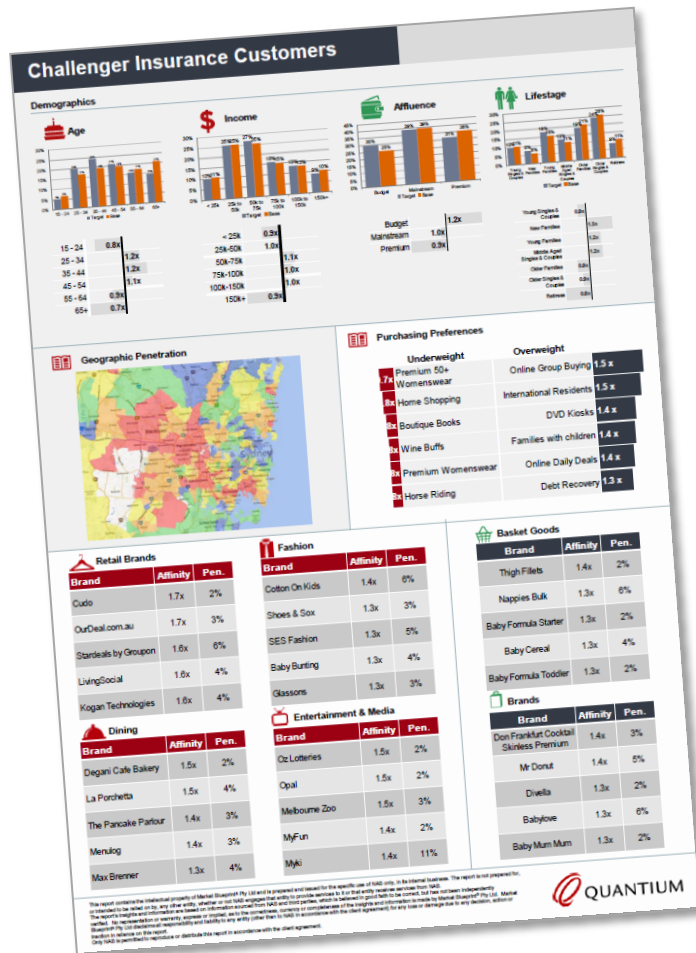
	Demographics
1	**Demographics** Age, Gender, Affluence, Lifestage
2	**Customer Geography**
3	**Brand and Category Preferences** Online, Entertainment, Media, Travel, Dining Out, Fashion
4	**Lifestyle and Shopping Behaviours**
5	**Bespoke Segmentations** Competitor Loyal, Low Loss Ratio etc

Challenger customers are more skewed towards new and young families

Young Singles & Couples	0.9x	
New Families		1.3x
Young Families		1.2x
Middle Aged Singles & Couples		1.2x
Older Families	0.9x	
Older Singles & Couples	0.9x	
Retirees	0.8x	
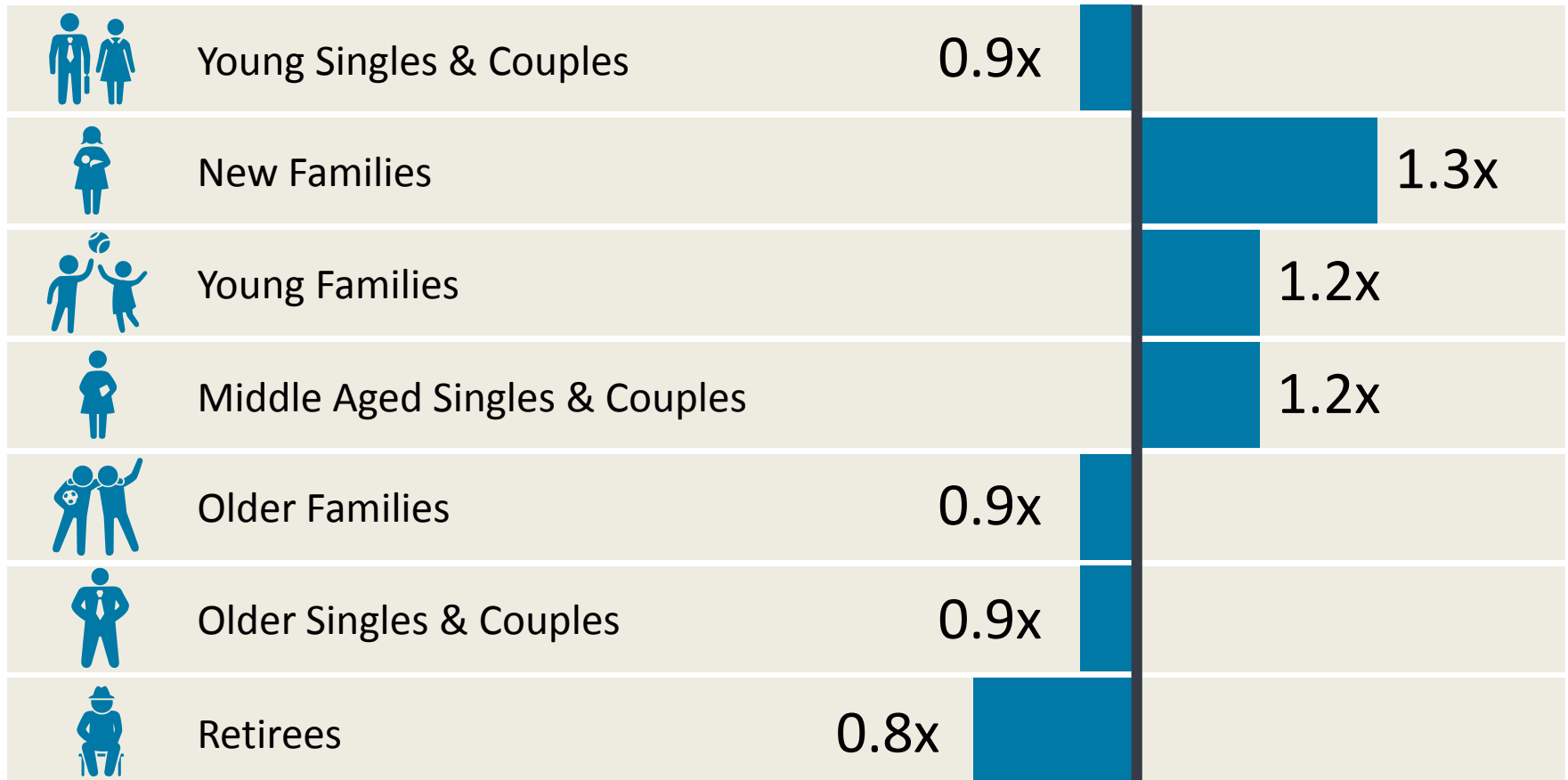
Newspaper and magazine preferences of challenger brand consumers

Newspapers

10% more likely	**10%** more likely	**10%** less likely	**20%** less likely	**40%** less likely

Magazines

10% more likely	**10%** more likely	**10%** less likely	**10%** less likely	**30%** less likely

Challengers are now having an impact in most customer segments

Sydney Market Share - 2010

Sydney Market Share - 2012

Sydney Market Share - 2014
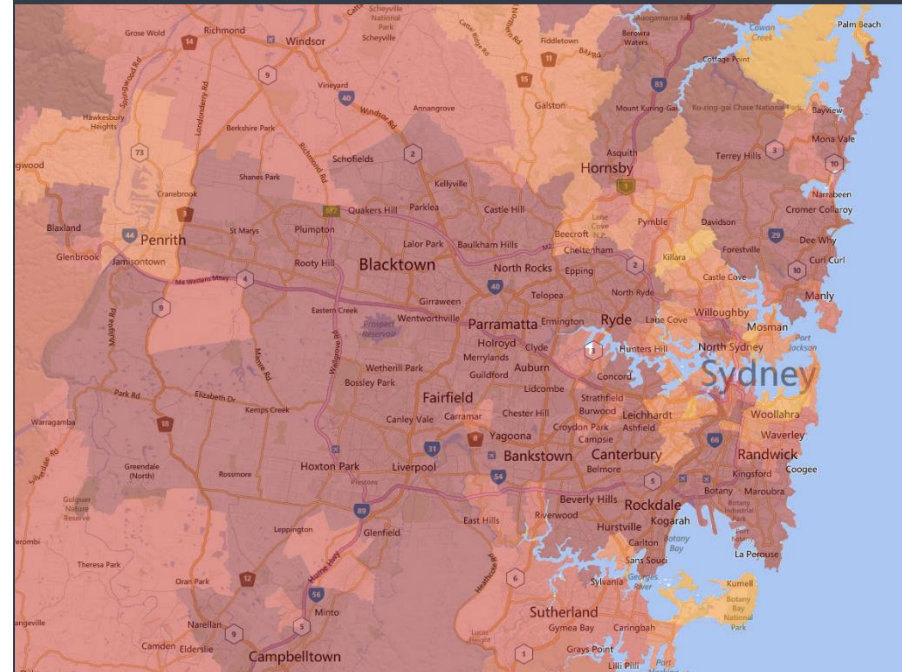
- 10.0% +
- 8.5% to 10.0%
- 7.0% to 8.5%
- 5.5% to 7.0%
- <= 5.5%

Market Blueprint – transaction history provides rich insight into your profile and preferences

De-identified and privacy compliant   Unique agreement with NAB

Female   Age: 32   Postcode : 2095 (Manly)

nab

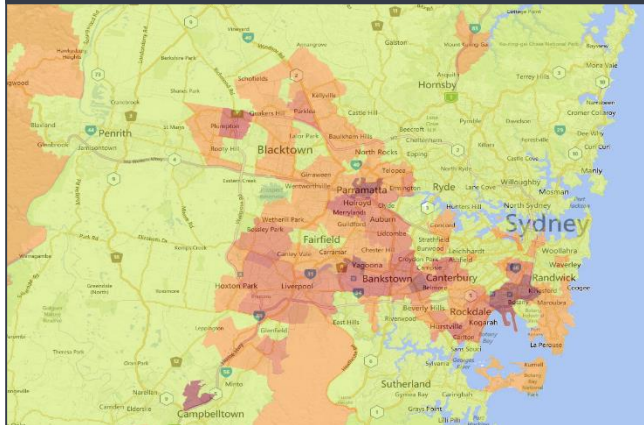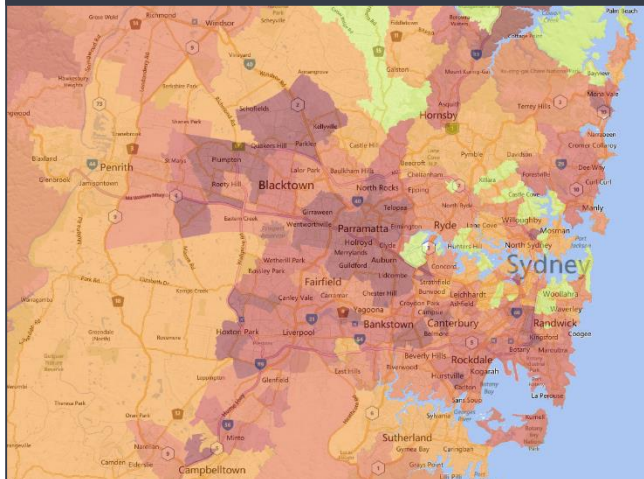| DateID	TranTimeID	Amount	Termtext
08-Sep-13	12:35:18 PM	$ 112.00	Foxtel Management Pty Sydney
10-Sep-13	8:29:35 AM	$ 78.23	Strawberry Cosmetics Online HK
10-Sep-13	1:10:14 PM	$ 135.90	ZARA Aus Sydney
10-Sep-13	1:55:47 PM	$ 45.95	Cotton On Kids Sydney
13-Sep-13	8:45:34 PM	$ 85.00	Manly Noahs Ark Child Care Centre
14-Sep-13	11:18:01 AM	$ 103.00	BP Pittwater Rd Manly
14-Sep-13	10:14:43 AM	$ 57.05	Woolworths Balgowlah
14-Sep-13	8:32:27 AM	$ 37.72	Petsure Australia P/L AU
14-Sep-13	3:02:06 PM	$ 219.83	Petbarn PTY LTD Brookvale
14-Sep-13	12:03:47 PM	$ 45.95	Cotton On Kids 2209 Brookvale
15-Sep-13	10:55:30 AM	$ 129.95	Marcs Chatswood Chase
15-Sep-13	11:27:35 AM	$ 36.00	Lovisa Westfield Chatswood
15-Sep-13	4:27:11 PM	$ 27.78	COLES Stockland Balgowlah
15-Sep-13	5:27:53 PM	$ 30.71	asos.com Limited London
15-Sep-13	6:14:02 PM	$ 157.75	Qantas Airways Australia
15-Sep-13	5:27:53 PM	$ 30.71	asos.com Limited London
16-Sep-13	8:28:59 PM	$ 40.35	Menulog Sydney
26-Sep-13	9:17:27 AM	$ 40.00	oceanswims.com.au
28-Sep-13	11:53:52 AM	$ 48.51	Fitness First Brookvale
05-Oct-13	8:32:27 AM	$ 8.75	iTunes Music Store Australia
05-Oct-13	4:38:15 PM	$ 169.98	Sea World Resort Main Beach
05-Oct-13	9:38:24 PM	$ 109.60	Chiangmai Thai Restaurant Broadbeach

Over 2.5m customers weighted to be nationally representative

Visa payWave   eftpos   BPAY   DIRECT Debit   PayPal

Daily sales data back to January 2010

Retail sales performance – categories aligned to ABS trade survey

Market Blueprint can provide a macro view of retail spending for the most recent month, ~1 month in advance of the ABS release

Market Blueprint: 143.0
ABS: 141.9

Legend: Market Blueprint Retail Radar — ABS Retail

2012 | 2013 | 2014
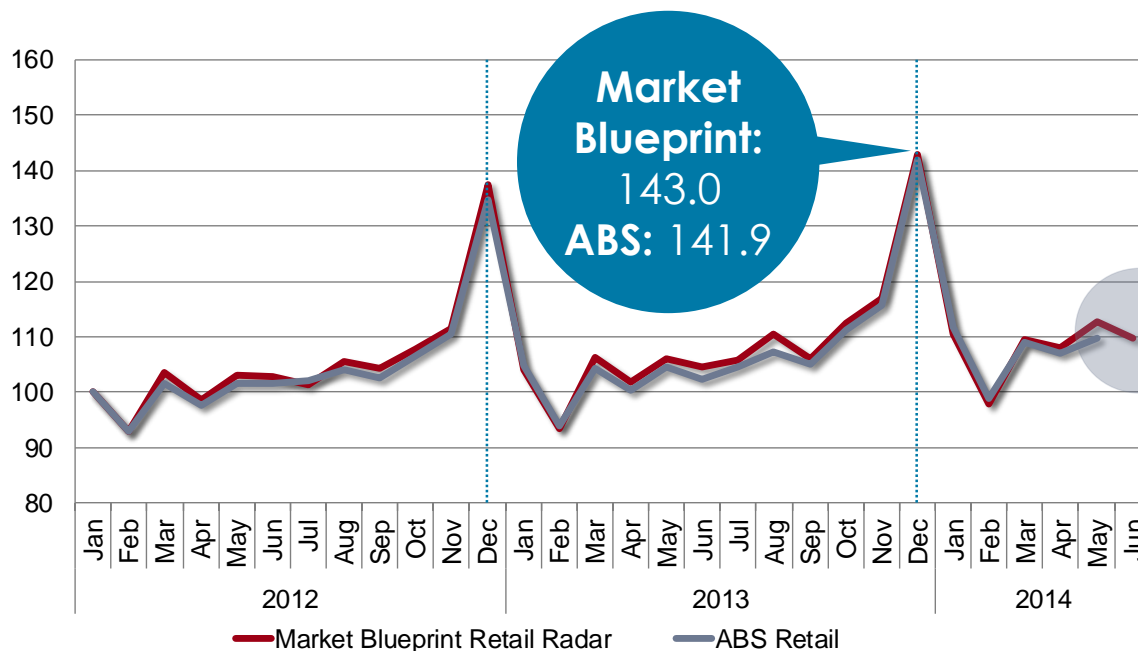
Market Blueprint retail radar will not attempt to replicate the ABS as we have fuller coverage of the 'tail' of small retailers, compared with the ABS survey's random sample set. We also include spending with international players (online and bricks and mortar)

Nonetheless, the index compares well directionally with ABS retail trade survey – Market Blueprint has a ~99.5% correlation with the ABS retail index for the 29 months to May 2014

Online retail environment 2014 story so far…

Proportion of Sales Online[1]

Chart showing proportion of sales online rising from about 3% in 2010 to about 6.8% in 2014. Two bubbles labelled $8bn (2010) and $15.2bn (2013-2014). X-axis months 1, 4, 7, 10 across years 2010, 2011, 2012, 2013, 2014. Y-axis 0% to 8%.

The online market is continuing to grow but at a decreasing rate in most categories, the exceptions continue to be supermarkets and specialised food & alcohol

6.6%[1] of retail sales were made online (up 0.1% from last quarter)

Online sales growing at 14% YoY with Australians spending around $15.2 bn[2] with online retailers

Two-thirds of Australians transacted with an online retailer in the year
Over half a million people were new to online this year

Growth in total online sales is primarily driven by the increasing frequency in which shoppers are transacting online

Insights have been sourced from the interactive web-based dashboard ('Market Blueprint Online') which is accessible to Woolworths and updated quarterly. Similar to the NAB Online Retail Sales Index ('NORSI'), Market Blueprint Online provides key insights into online spending in the retail goods space, capturing domestic and international trends, as well as regional and age demographic trends. Market Blueprint Online monitors a larger basket of retailers (approximately 2,000 compared to 500 under NORSI). These retailers are categorised across 9 major categories and 27 sub level categories.
[1]Cash transactions are not captured. A 30% cash assumption for offline purchases has been assumed and applied to overall retail. No adjustments have been made for category trends and these metrics reflect the proportion of electronic sales, in that category, that are made online.
[2]Source : NAB Online Retail Sales Index March 2014

Online retail – Myths

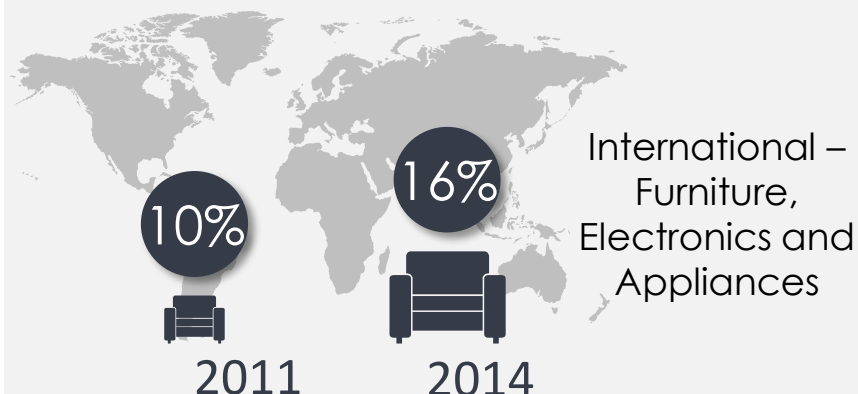International brands are dominating online sales

Retirees are a slow growing online customer segment
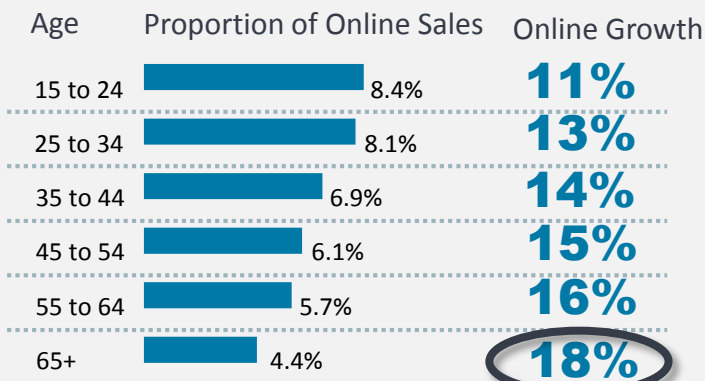
Online spend in Apparel is bigger than Food and Drink

Sunday is the biggest online trading day

Online retail – Myths busted

Of all online spend, ~26% is directed internationally

10% — 2011

16% — 2014

International – Furniture, Electronics and Appliances

Retirees are the fastest growing online segment

Age	Proportion of Online Sales	Online Growth
15 to 24	8.4%	11%
25 to 34	8.1%	13%
35 to 44	6.9%	14%
45 to 54	6.1%	15%
55 to 64	5.7%	16%
65+	4.4%	18%

Food and Drink has larger online spend than Apparel

- $5.3B — DS, DDS and Aggregators
- 2.6 — Furniture, Electronics and Appliances
- 2.0 — Apparel
- 1.6 — Music, Movies and Books
- 1.2 — Supermarkets
- 1.1 — Specialised Food and Alcohol
- 0.6 — Misc.
- 0.4 — Toys, Games and Hobbies
- 0.3 — Recreational Goods
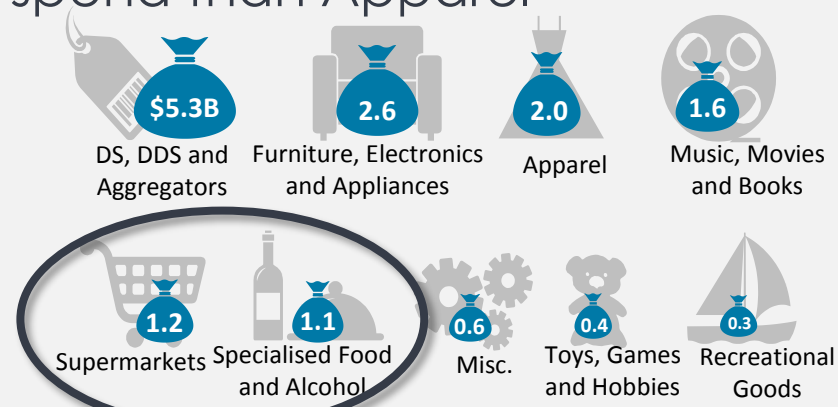
Australians spend more online while at work (business days)

Proportion of Sales by Day of the Week

- Typical Business Day — 15.5%
- Typical Weekend Day — 11.2%

Actuaries Institute
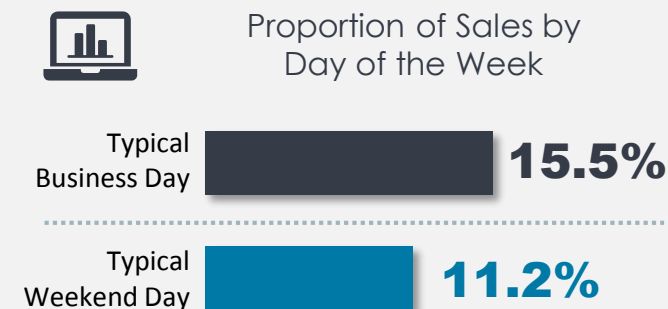
Data arms race

Best users of data will create an advantage

Market Blueprint in M&A – Informing revenue and customer opportunity

Attractiveness of Target Market	Demystify and Verify	Customer Base and Strategic Fit	Future Value Generation / Customer Opportunities

1 Who are the target's customers? Are they attractive for the acquirer?
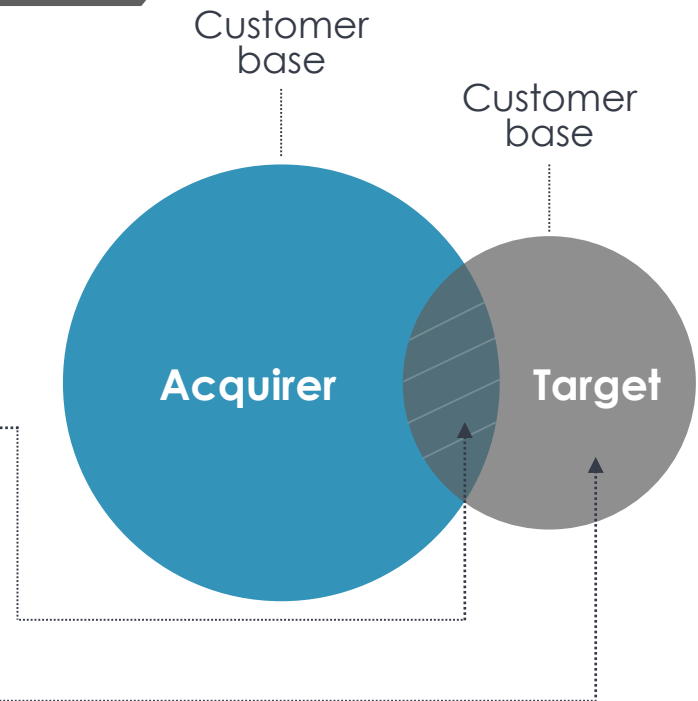
2 Demography trends over time in customer base

3 Understand target customer:
- Expansion of value proposition (and share of wallet) OR
- New and different customers?

4 Loyalty of customer base

Customer base

Customer base

Acquirer

Target

Providing customer, industry and market insights

Store Network Optimisation & Rollout

What are the key performance metrics by geography – penetration, frequency of visits, or basket size trends?

What are customer traits of best performing stores / outlets ?

Identifying key target areas based on demographic and shopping behaviour characteristics of better stores

Measure each postcode's market share, customer penetration, and spend per customer. Define a catchment area

Market Share by Postcode

Market Share

- High
- Low
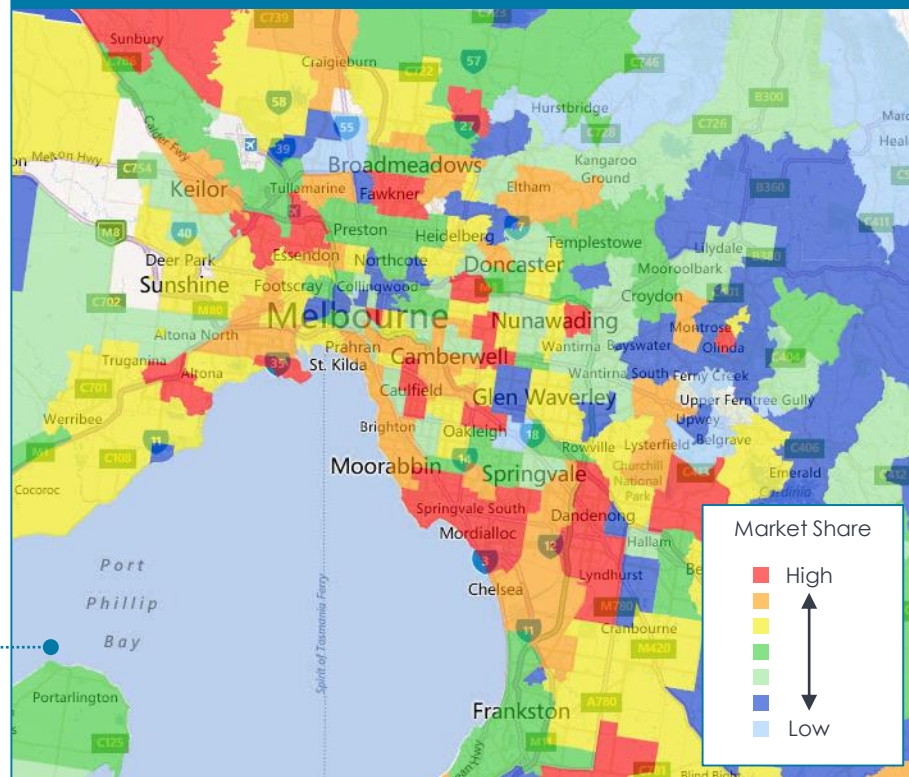
Data in Market Blueprint – Delivers a new lens on markets and customers

Online Customers vs. Offline Customers

15 - 34 Young Singles

Premium

Shopping Behaviour Factors

- Wine Buffs
- Concerts & Music Festivals
- PC Enthusiasts
- Frequent International Flyer

Categories

- Parking Services
- Luxury Boutiques
- Flower Retailing (Florists)

DAVID JONES

Peter's OF KENSINGTON

crust Gourmet Pizza Bar

New Online Adopters vs. Early Adopters

65+ Retirees

Budget

Shopping Behaviour Factors

- Smokers & Drinkers
- Debt Recovery Services
- Fast Food Junkies

Categories

- Cigar Stores & Stands
- Used & Second-hand Goods

FREECHOICE TOBACCONIST

cashconverters

BIGW

DONUT KING
Life is a hole lot sweeter with Donut King

Challenges

Cultural

Technology

Collaboration

We are closer to the beginning of data and analytics development than we are to the end


Report | McKinsey Global Institute

Big data: The next frontier for innovation, competition, and productivity

May 2011 | by James Manyika, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh, Angela Hung Byers

Download » **Executive Summary** » PDF–922KB

The amount of data in our world has —so-called big data—will become a waves of productivity growth, inn research by MGI and McKinsey's P sector will have to grapple with th oriented managers. The increasin enterprises, the rise of multimed fuel exponential growth in data f

Interactive
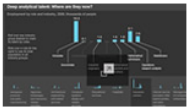
Silicon Valley's Next Great Company

Square's mission: Make shopping so easy that everyone starts buying more stuff.

By Farhad Manjoo

837   255   0

Jack Dorsey, chairman of Twitter and CEO of Square

Photo by Bill Pugliano/Getty Images.

Ever since Facebook went public, people in Silicon Valley have been a bit bummed out about the tech industry. Keep in mind that the Valley is infinitely optimistic, so even when they're bummed, folks here keep smiling. Still, in numerous conversations over the past few months, I've detected a sense of gloom, and it's obvious why.

10:4

USER F
PLAC
DEMOGI

Wal-Mart targeting shoppers in the queue at Safeway with geo and time located ads

Walmart
Save money. Live better.

5 years from now …

Can we picture a consumer facing business not using data?

Customer insights used to inform new market entry

Media optimisation and scale

Harvard Business Review features the "Data Scientist"

Thank you

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