



BIG DATA

The opportunities and challenges.

How can retailers embrace the opportunities it holds for the future.



Agenda

- Defining the term, Big Data
- Project Objective and Scope
- Research methodologies applied
- Findings / Results
- Proposed recommendations & business case
- Risks & Mitigating factors
- Implementation Plan
- KPI's
- Conclusion

when you hear about

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA



What is Big Data?

Big Data in retail refers to **structured and unstructured variable data** that requires **techniques to capture, process and analyse large volumes of data** in a reasonable time frame.

This data is used to **drive or enable benefits** to organisations in the areas of **improved sales, productivity, demand planning, supply chain efficiencies, direct micro marketing and operations** in line with **Strategic business initiatives** or **driving profitability & increasing shareholder wealth.**

Definition developed by Syndicate 3

Big Data Source Matrix



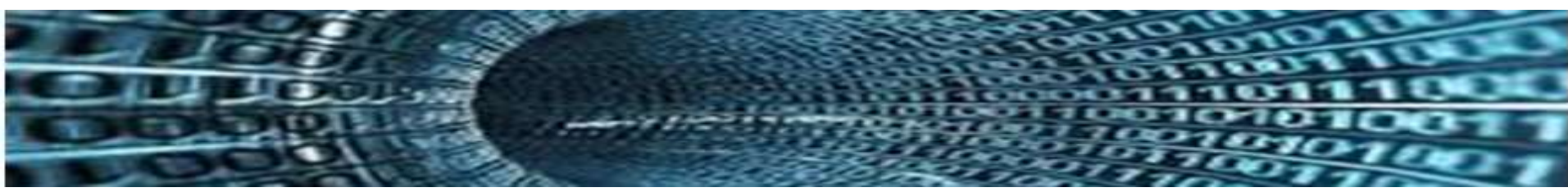


Objectives

- How can South African retailers embrace Big Data opportunities to:
 - maximise efficiencies,
 - meet customer expectations &
 - increase profit
- What Big Data challenges are being faced by South African retailers.

Scope

- Investigate formalised JSE listed South African and International retailers :
 - Included:
 - Large retail organisations such as Woolworths, Makro, Edcon, Loblaws, Canadian Tire etc.
 - Excluded:
 - Informal retail sector



Research Methods

- Literature review
 - Books, White Papers, Internet articles
- Interviews and Questionnaire's
 - Senior managers of 9 South African retailers
 - 12 International retailers were interviewed

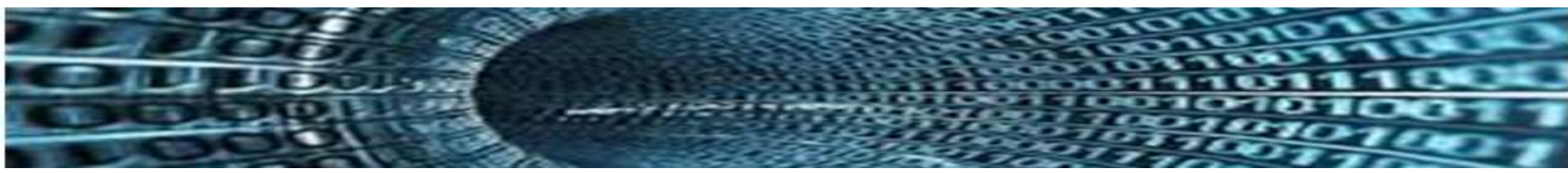


WOOLWORTHS
MASSMART



Research Findings

- Research of both Literature and interviews supported the view that:
 - **Big Data is not seen as a strategic lever in business strategy.**
 - Seen as a IT deliverable and not integrated across business units.
 - **Few RSA retailers actively use Big Data or predictive analysis.**
 - Limited to large retailers who have developed loyalty programmes
 - **Poor understanding of the concept and benefits.**
 - Strategic discussions have not started to influence retail thinking.
 - **Underspend in data analytics.**
 - Not integrated into business strategy
 - **No formalised skills plan & no tertiary programmes focus on retail analytics.**
 - In South Africa, only 1 university offers a Masters course in Data Analytics





Wegmans

WHO HAS TIME TO comparison shop? We do.

We have thousands of comparison shops to help you find the best price.

Compare & Save	Wegmans	Glenn	Wells
Bananas (Grosche Brand) 10lb Box (2 lb)	1.99	2.69	3.99
Banana Bread (10 lb) White (Grosche Brand)	1.99	3.97	5.99
Banana Bread (10 lb) White (Grosche Brand)	0.49	0.85	0.99
Banana Bread (10 lb) White (Grosche Brand)	7.29	11.49	N/A
Banana Bread (10 lb) White (Grosche Brand)	0.99	1.99	1.99
Banana Bread (10 lb) White (Grosche Brand)	4.99	5.99	6.99

Don't stop around here—stop around Wegmans and save.

the Wegmans app is now **faster** and **easier** to use.



☐ ☒

Your new shopping list.

Download at wegmans.com/mobile  

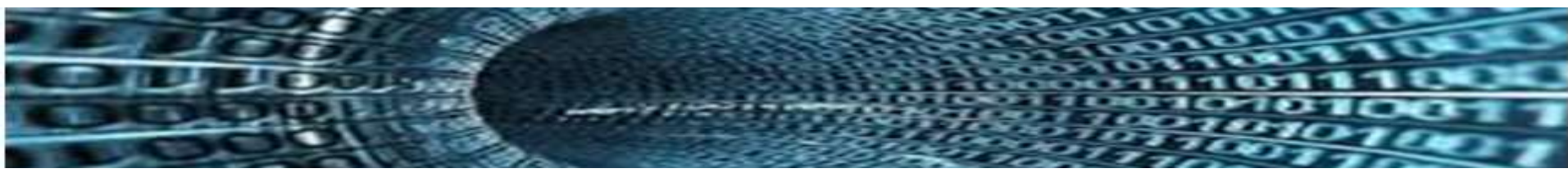
shopping made **easier**

we're big on **COUPONS!**



price

Effective 10/1/14 through 10/31/14. See store for details. ©2014 Wegmans Food Markets, Inc.

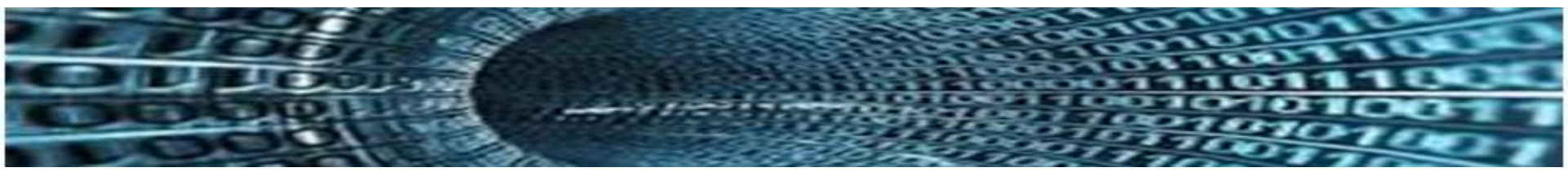


Research Findings Summarised

Challenges	Opportunities
 Data Management <ul style="list-style-type: none">- Volume, Velocity & Variety	 Micro Segmentation <ul style="list-style-type: none">- Create customer profile types
 Technology <ul style="list-style-type: none">- Storage, Legacy & Analytical Systems	 Price Optimisation <ul style="list-style-type: none">- Identify trends & manage prices
 Change Management <ul style="list-style-type: none">- Resistance to Change	 Inventory Management <ul style="list-style-type: none">- Improve stock availability
 Costs <ul style="list-style-type: none">- To be managed & planned	 Predictive Planning <ul style="list-style-type: none">- Anticipate fluctuating market conditions
 Shortage of Skills <ul style="list-style-type: none">- Scarcity & Educational programmes	 In-store Analytics <ul style="list-style-type: none">- Branch based promotions
 Organisational Strategic Intent <ul style="list-style-type: none">- Top of mind for business	 Effective Marketing Campaigns <ul style="list-style-type: none">- Target the right audience
 Policies and Procedures <ul style="list-style-type: none">- Security & Regulations	 New Product Development <ul style="list-style-type: none">- Grow sales from insights
	 Generating Customer Loyalty <ul style="list-style-type: none">- Product offer & placement

Strategies to take advantage of Big Data opportunities

- Criteria used to derive strategies:
 - Deliver new insights
 - Build Customer associations
 - Time to implement strategy





Proposed Strategies

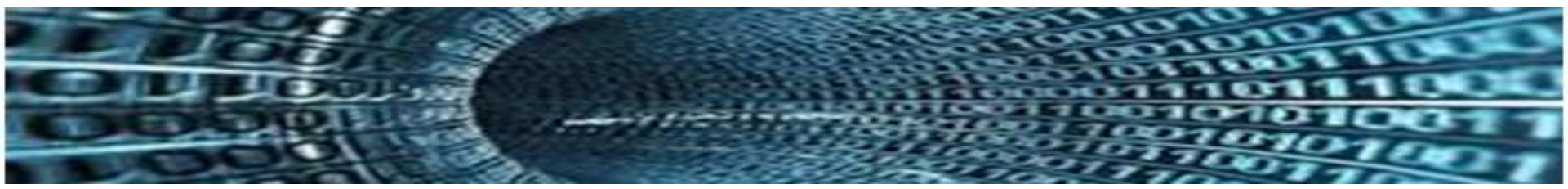
South Africans retailers will benefit from Big Data analytics and need to start the journey:

1. Develop a mid-term strategy around unstructured data as the new phase of Big Data growth.
2. Create a team of skilled data scientists to deliver the business insights throughout the value chain.
3. Retail businesses to evaluate their structured Big Data, incorporate it strategically in order to generate valuable customer insights.

Final Strategy

(based on an iterative process)

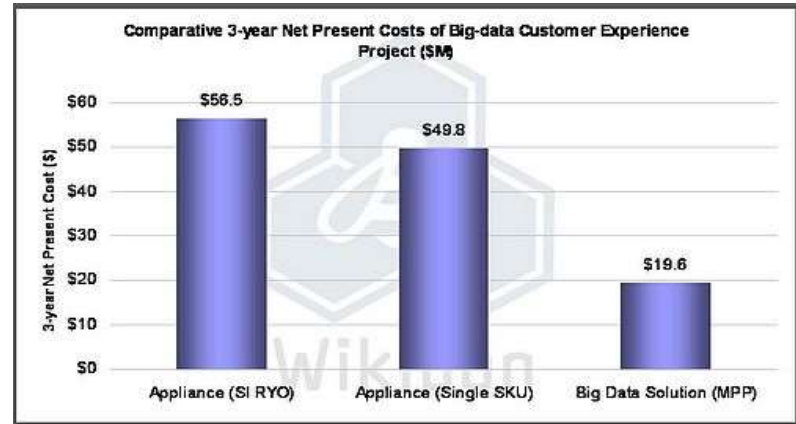
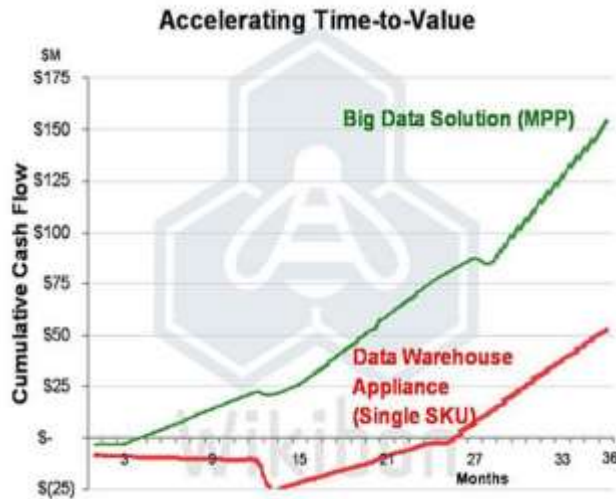
Retail businesses should evaluate their strategic intent around structured Big Data, using Point of Sale as a basis, in order to derive valuable customer insights.



POS BIG DATA – Business Canvas Model

KEY PARTNERS	KEY ACTIVITIES	VALUE PROPOSITIONS	CUSTOMER RELATIONSHIPS	CUSTOMER SEGMENTS
<ul style="list-style-type: none"> *Customers *Board of Directors and Exco. *Partnerships External IT and Data Companies. *Internal IT departments *Product areas within the business. *Training institutions. *Rewards Programme company. 	<ul style="list-style-type: none"> * Link to the Business strategic Intent *Customer relationship strategy. *Design of POS KPI of Data analytics programme. *Extract greater value from each customer transaction. 	<ul style="list-style-type: none"> *Price Optimisation & Inventory Management. *In-depth Customer knowledge. *Create a compelling offer based on data and strategy. *Create an aspirational, loyal environment. *Product groups. *Stores stock allocations. *Defining service offer and improvements. *Store formats. 	<ul style="list-style-type: none"> *Develop acquisition and retention. *Provide most wanted goods & services to customers. *Anticipate fluctuations in market conditions 	<ul style="list-style-type: none"> *Micro-segmentation, POS data collection. *Exclusive product placements and offers. *Effective Marketing campaigns. *Predictive Planning.
	KEY RESOURCES		CHANNELS	
	<ul style="list-style-type: none"> *POS Data. *IT and Data consultants. *Data Analysts in Product areas. *Marketing *BI and warehousing solution. 		<ul style="list-style-type: none"> *In-Store POS analytics. *Centralised KPI to influence buying and Planning decisions. *Expand the use of customer data across the organisation. 	
COST STRUCTURE			REVENUE STREAMS	
<ul style="list-style-type: none"> *Phased approach. *Link to Budgeting process. *Form partnerships with IT consultancy. *Set up Business Intelligence centre. *Set-up costs of mainframe servers to gather and process data. *Higher costs of Data Analysts. 			<ul style="list-style-type: none"> *Grow sales by gaining better POS insights. *Predictive Planning of products and services. *Growing data base of customer data and purchasing decisions. *Sale of customer data were permissible by law. 	

POS Big Data Project



- Enhanced customer experience
- The quality and availability of data
- Data distributed through many organisational systems

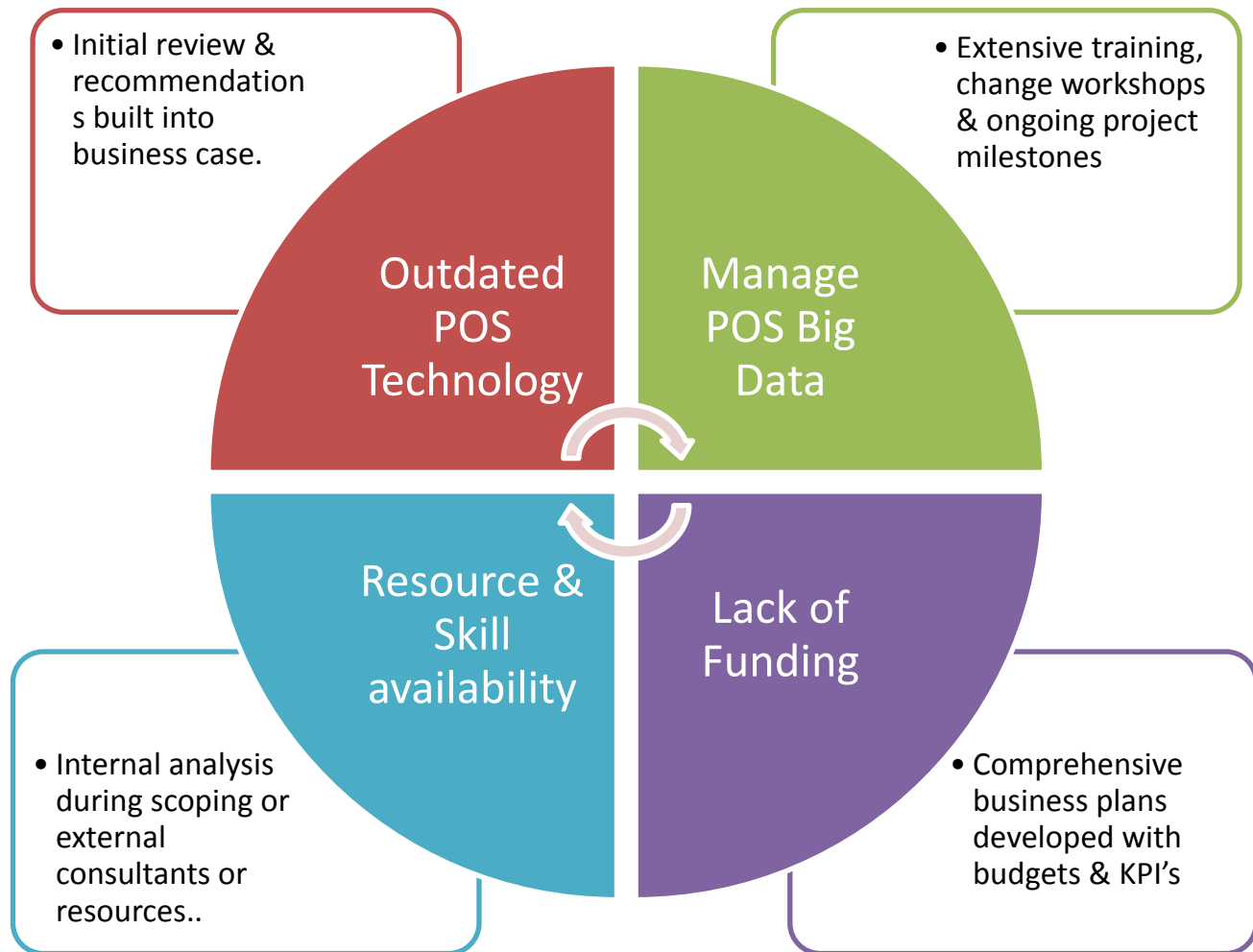
POS Big Data: what does it really cost

- Local RSA case study of a single branch: 10% IRR
- International Wikibon Case study of single SKU

Wikibon Consultants Case Study	Big Data	Traditional
Cumulative 3 year Cash Flow	\$152m	\$53m
Net Present Value	\$138m	\$46m
Internal Rate of Return	524%	74%
Breakeven	4 months	26 months



Risks and Mitigating factors - POS



Implementation Plan

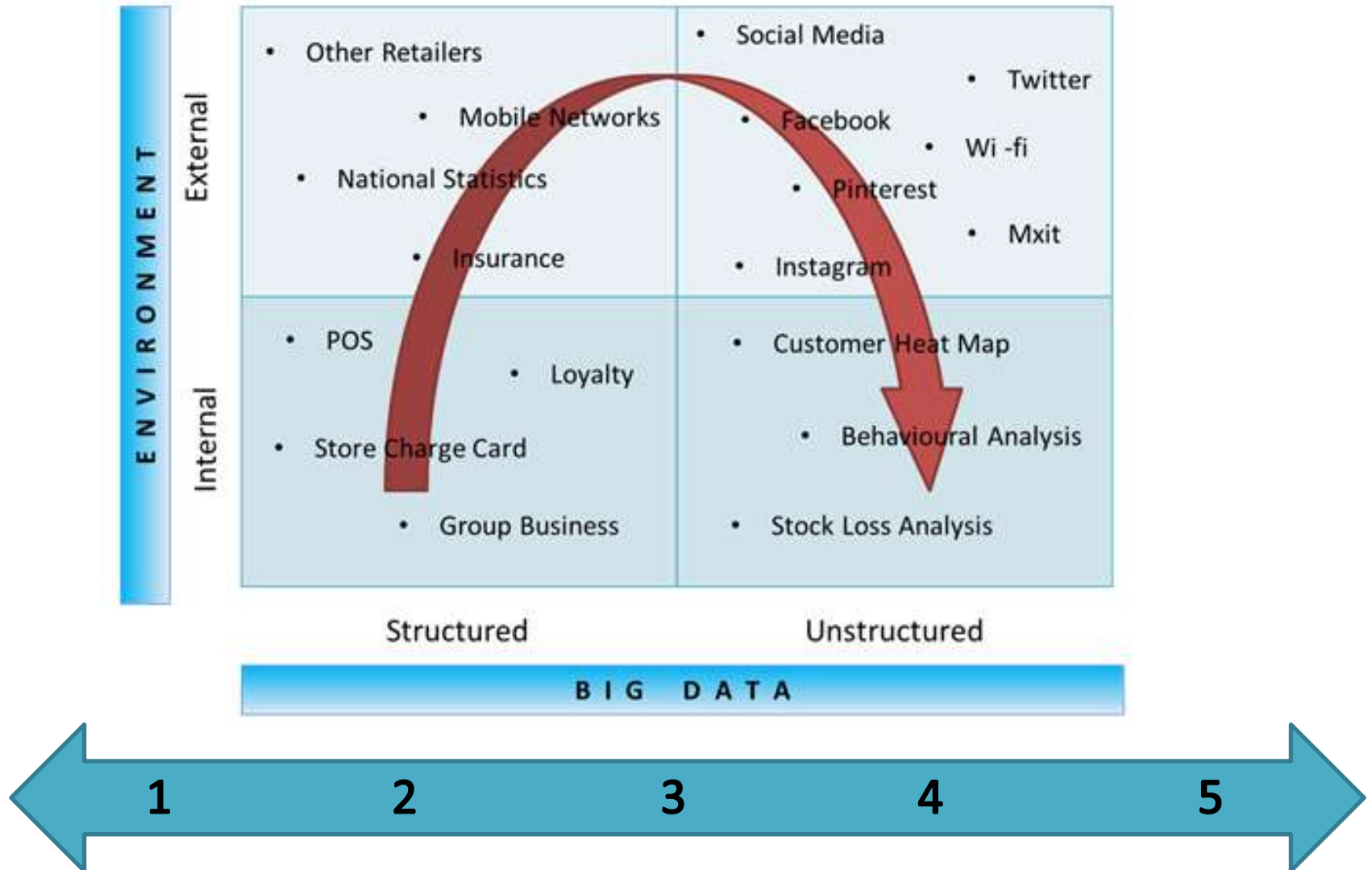


Implementation Plan

- Stage 1: Seek executive support and sponsorship
- Stage 2: Define your customer value proposition
- Stage 3: Extend existing POS infrastructure instead of re-building
- Stage 4: Conduct regular Agile workshops
- Stage 5: Agree on POS metrics and protocol
- Stage 6: Link POS data to company process
- Stage 7: Test, measure and learn
- Stage 8: Map POS data to the customer's life cycle



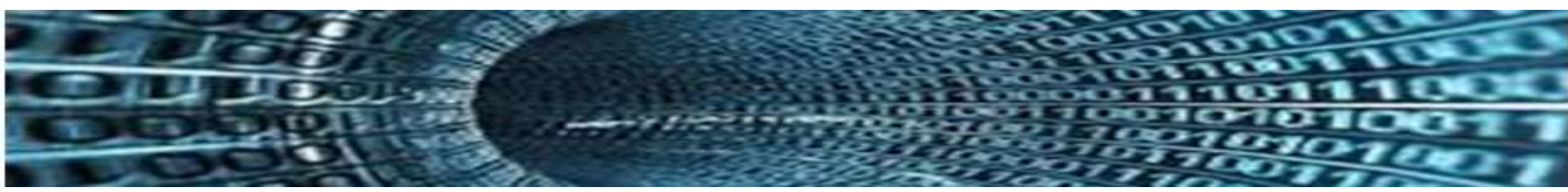
Timelines to implementing POS project



KPI's relative to POS

- Based on departmental deliverables
- KPI's will be varied but must all be tied to an organisational scorecard

KEY PERFORMANCE INDICATORS	Relative to Point of Sale (POS)
Average Items per Customer	- Track the increase/decrease in # of items sold
Average Customer Transactions	- Monitor the size of the customer transactions
Annual Customer Value	- Has the annual consumer value increased/decreased
Marketing cost per Customer	- Target the cost of marketing based on customer value
System Processing Speed	- Monitor the infrastructure relative to volume & speed
Quality of information	- Revisit POS KPI's based on project
Cost to Sell	- Evaluate the increase/decrease CTS %



Big Data Opportunities for Retailers



Marketing

- Multi –channel customer interaction, segmentation, real time decisions



Merchandising

- Engage customers in product co-creation, optimise and create relevant mix



Operations

- Efficiencies, standardisation, cost saving, better performance



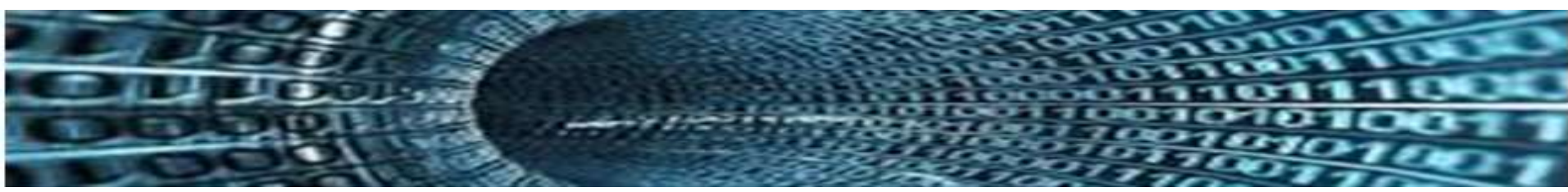
Supply Chain

- Advanced inventory management, analytics to improve supplier negotiations



New Business Models

- Dynamic pricing, offline price comparison, price differential offers

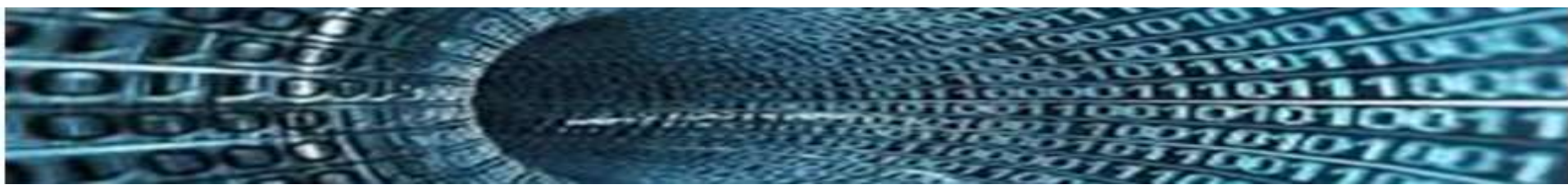


Conclusion

Retailers can benefit from the introduction of Big Data technology. Many are still at the **formative stages of development**, entry is best **using existing structured data** which many already possess, will **benefit their profitability.**

Exploration of **Big Data is a journey** but it allows for retail science to become a reality by **understanding customer behaviour.** These **data sets** allow one to **adapt products and services** to the **needs of customers.**

This **builds brand loyalty and customer satisfaction.**





Short Reflections on the year past ...

- Teboho Chomane
 - Edith Collopen
 - Bafana Dhlamini
 - Lawrence Madhlope
 - Tammy Moodley Vereen
 - Evangelos Morris
- Ellerines
 - Jabatha Stationers
 - Jo'Burg Market
 - Masscash
 - Makro
 - Woolworths

**Thank You
&
Questions**

