



**Big Data & Analytics**

**Increase customer retention,  
profitability and enhance loyalty  
using big data**

Mike Kearney – big data product marketing

April 2014





## Agenda

- Perspectives on big data and the consumer
- Data-driven marketing case studies
- Optimise to achieve more with less
- Closing thoughts



# A customer – are you ready to help?

## Interaction data

email and chat transcripts  
call centre notes  
web click streams  
in-person dialogues



## Attitudinal data

opinions  
preferences  
implied desires

## Descriptive data

self-declared  
inferred  
geographic  
demographic

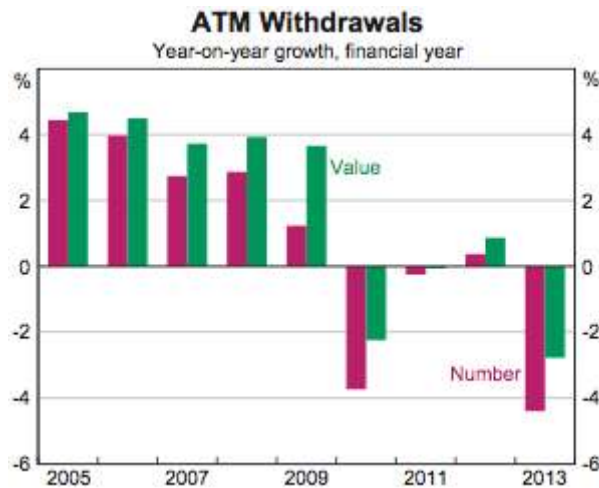
## Behavioural data

orders  
transactions  
payment history  
usage history

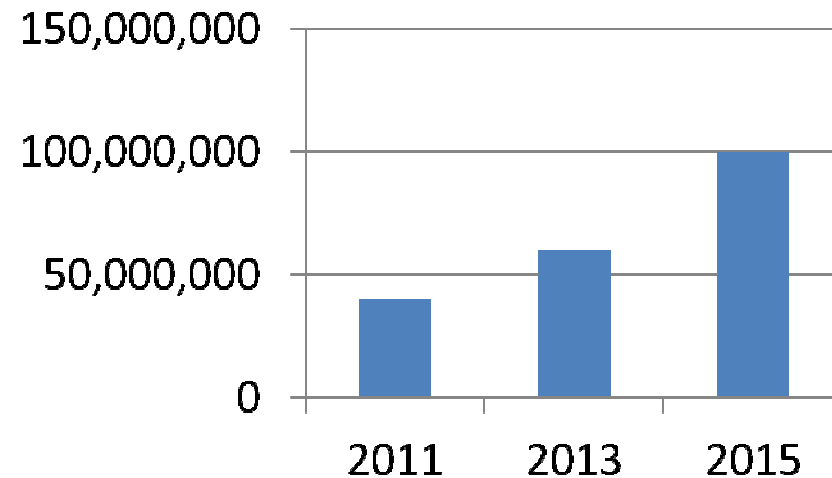


# Less cash, more interactions, greater opportunity

## Online interactions per month



Source: RBA Payments Systems Board Annual Report 2013



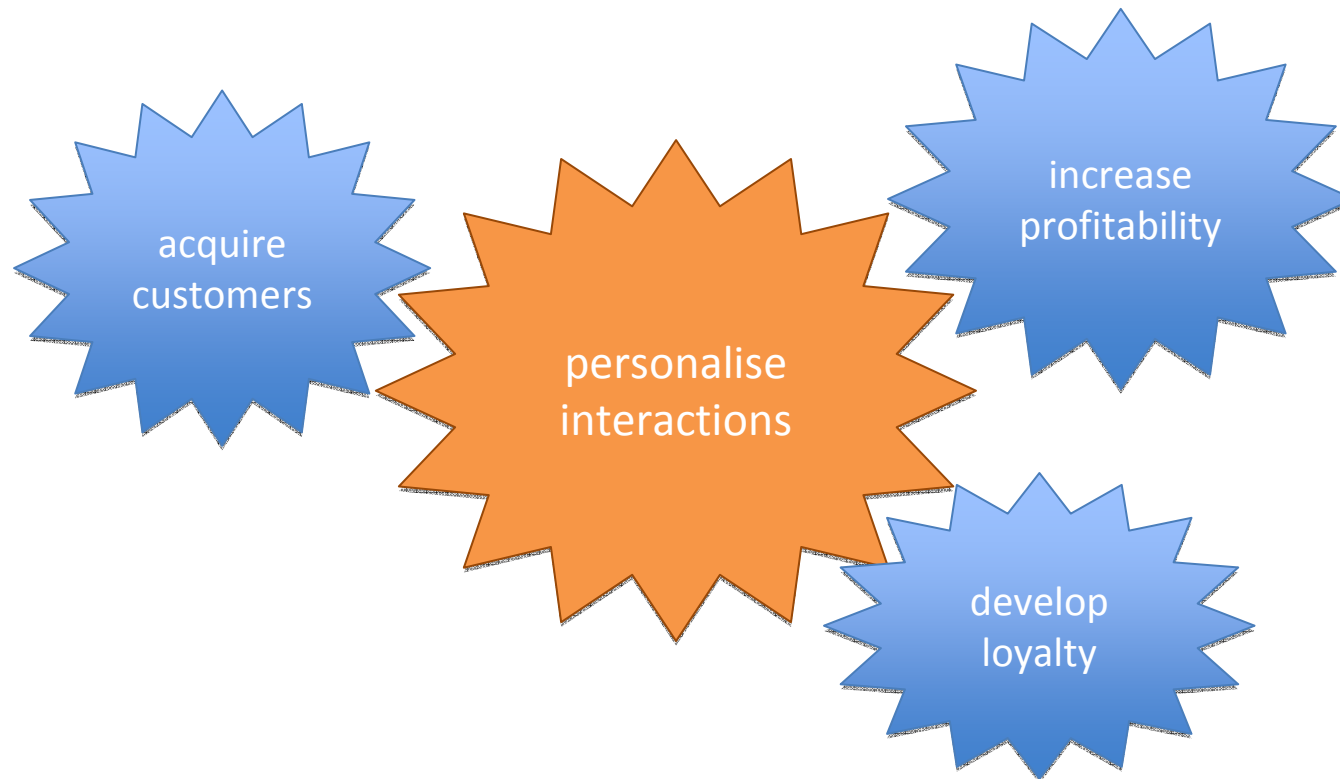
### Westpac using big data to woo customers with offers made to measure

SMH March 4<sup>th</sup> 2013

[www.smh.com.au/it-pro/business-it/westpac-using-big-data-to-woo-customers-with-offers-made-to-measure-20140303-hvfx5.html](http://www.smh.com.au/it-pro/business-it/westpac-using-big-data-to-woo-customers-with-offers-made-to-measure-20140303-hvfx5.html)



## A simple assertion: use data to inform interactions





# Agenda

- Perspectives on big data and the consumer

- **Data-driven marketing case studies**
  - acquire customers
  - increase profitability
  - develop loyalty by creating valued relationships

- Optimise to achieve more with less

- Closing thoughts





## Lifting customer acquisition at Constant Contact

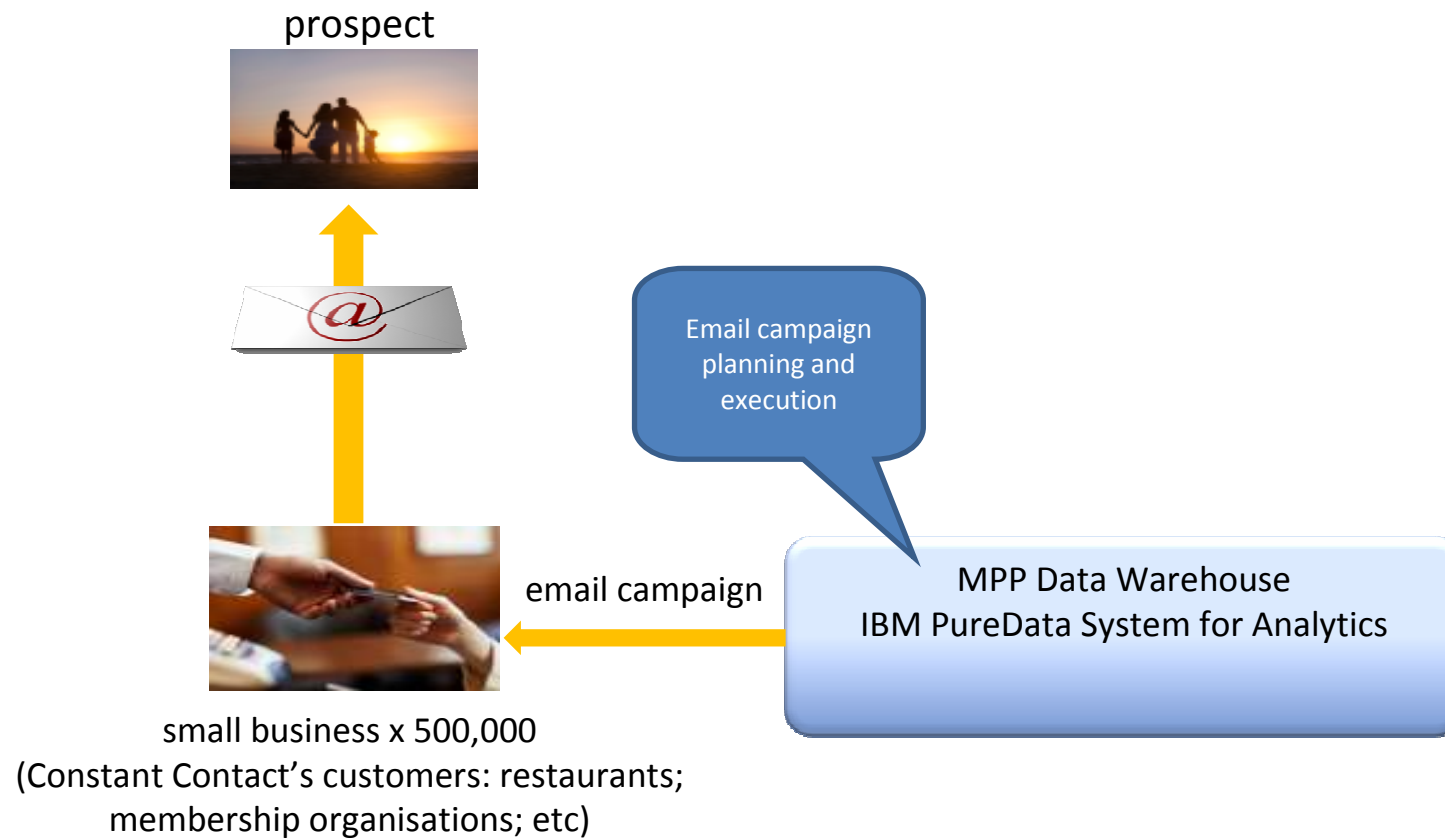


[www.ibmbigdatahub.com/video/constant-contact-transforming-e-mail-marketing-effectiveness](http://www.ibmbigdatahub.com/video/constant-contact-transforming-e-mail-marketing-effectiveness)

*“Constant Contact is a software company that provides a marketing platform for small businesses. Through our platform our customers send about 35 billion email every year.”*

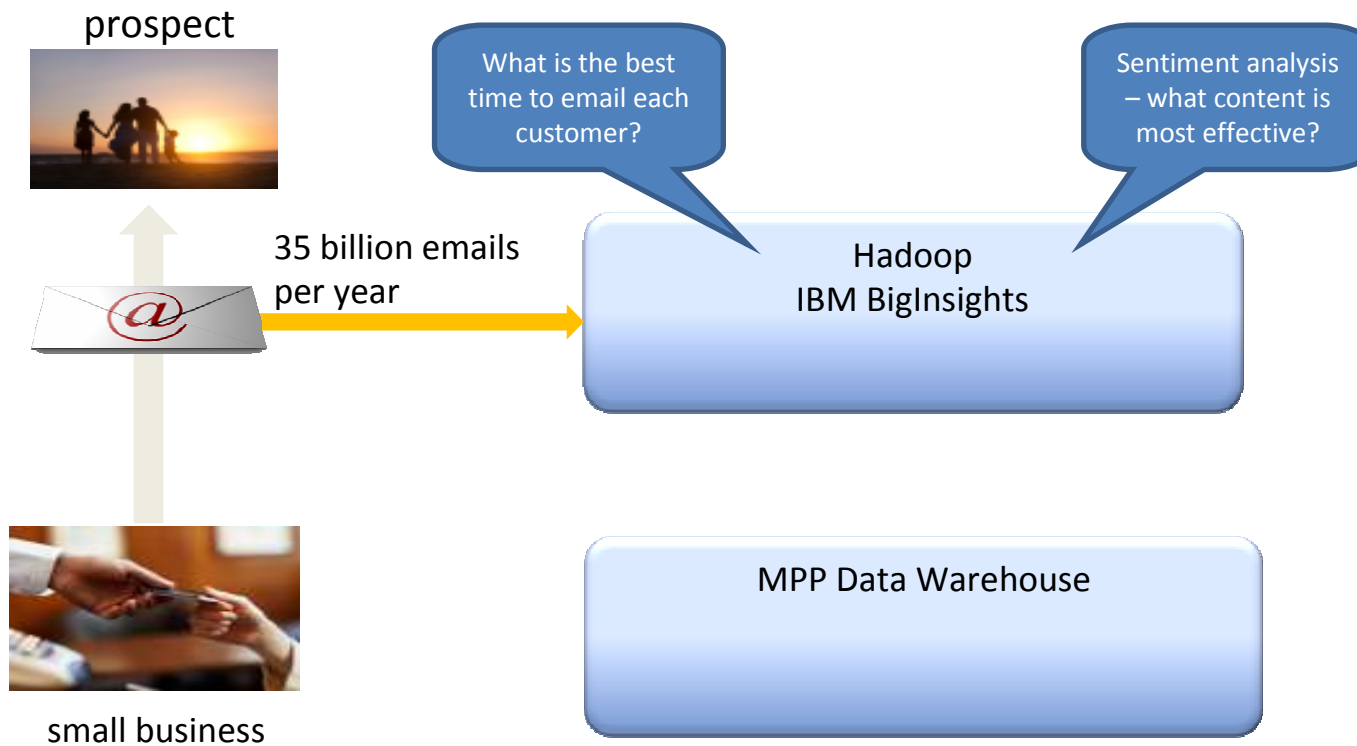


# Email campaign management at Constant Contact



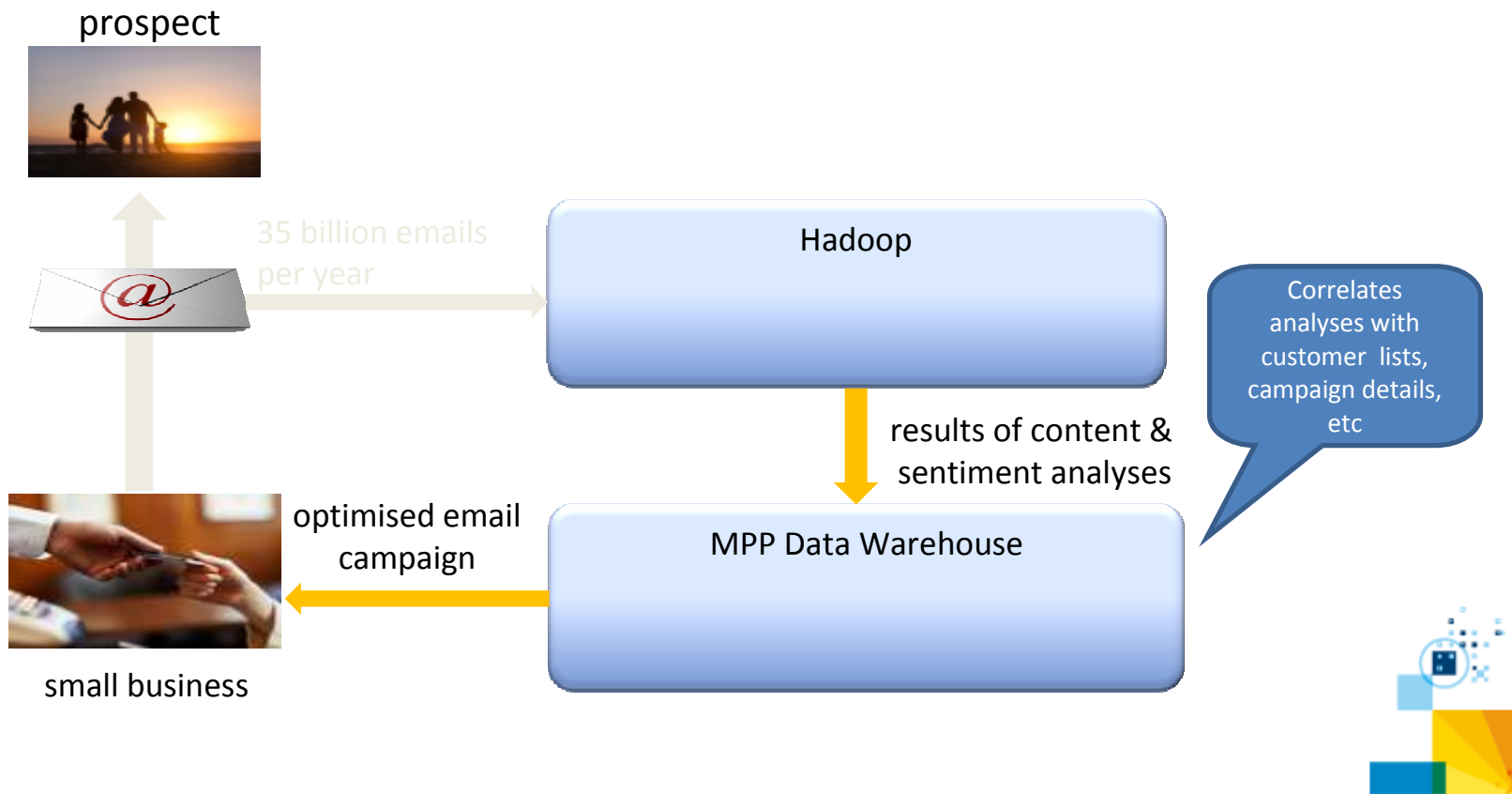


# Analysing campaign success

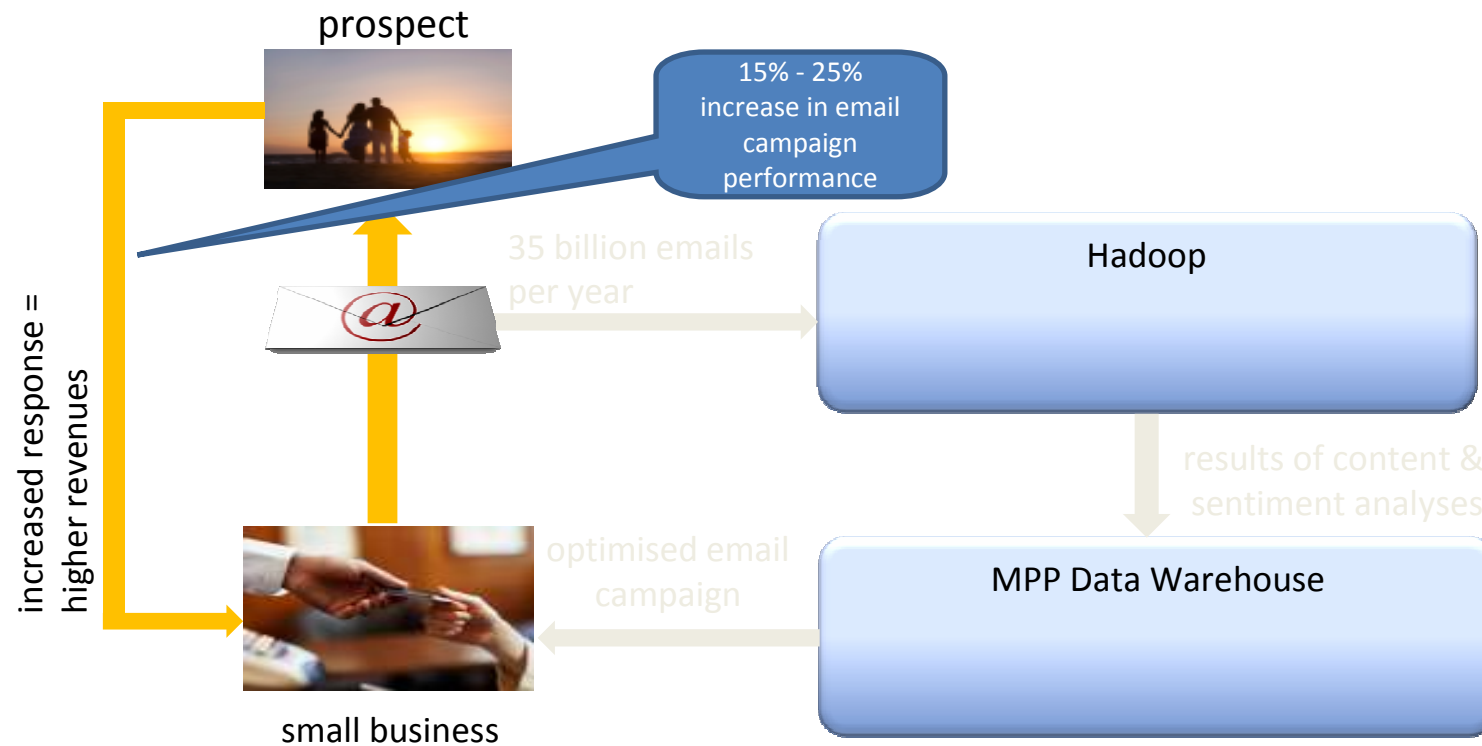




# Merging new insight with historic data to optimise campaigns



# Acquiring customers to help small businesses grow





# Acquiring new customers at The North Face



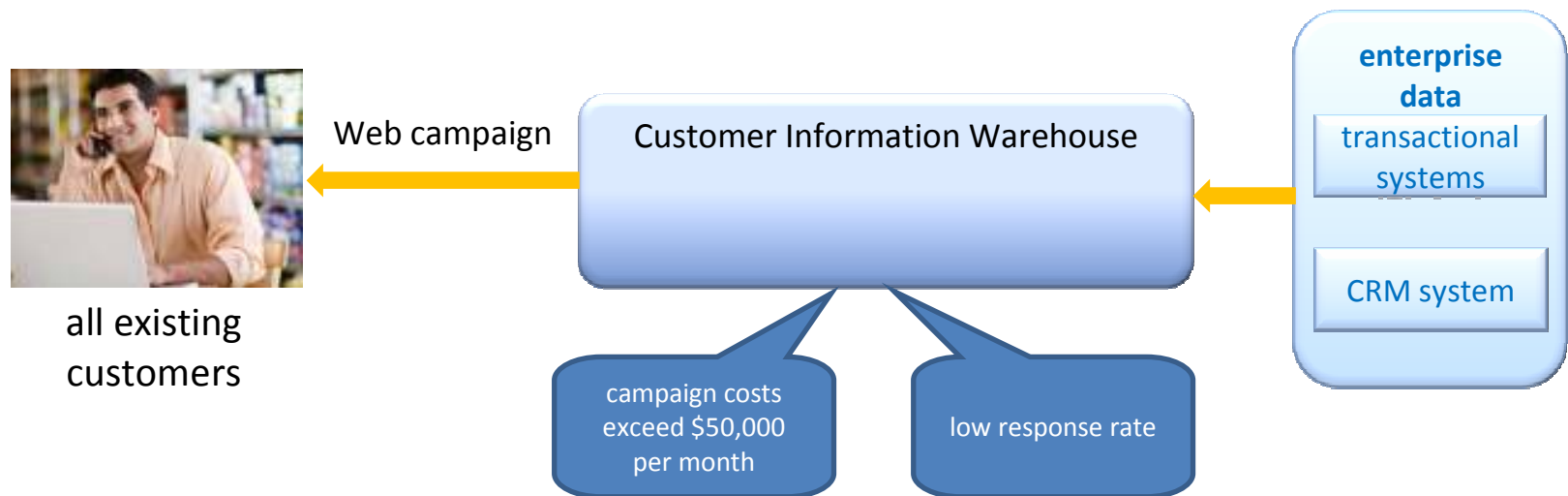


# Real-time product recommendations by Watson

The screenshot shows the The North Face website with a navigation bar at the top containing categories like MEN'S, WOMEN'S, KIDS, EQUIPMENT, SHOP BY, EXPLORATION, INNOVATION, and GET OUTDOORS. A search bar and utility links for 'FIND A STORE', 'CUSTOMER SERVICE', 'SIGN IN', and 'CART' are also present. The main content area features a 'CLIMBING & HIKING' banner for the 'SUMMIT SERIES' with the headline 'INNOVATION FOR FIRSTS' and sub-headline 'SUMMIT SERIES™ PIONEERS PROGRESS IN THE UNKNOWN'. Two orange buttons, 'SHOP SUMMIT SERIES' and 'SHOP CLIMBING', are visible. A 'Live Chat' window is overlaid on the right side of the page, containing the text: 'What jacket do I need to go hiking in Patagonia in July?'. On the left side, there is a Twitter feed for @thenorthface. At the bottom of the page, a news snippet reads 'Allfrey, Honnold Become Fastest to Wrestle Alligator Route' with the date 'November 21, 2013'.

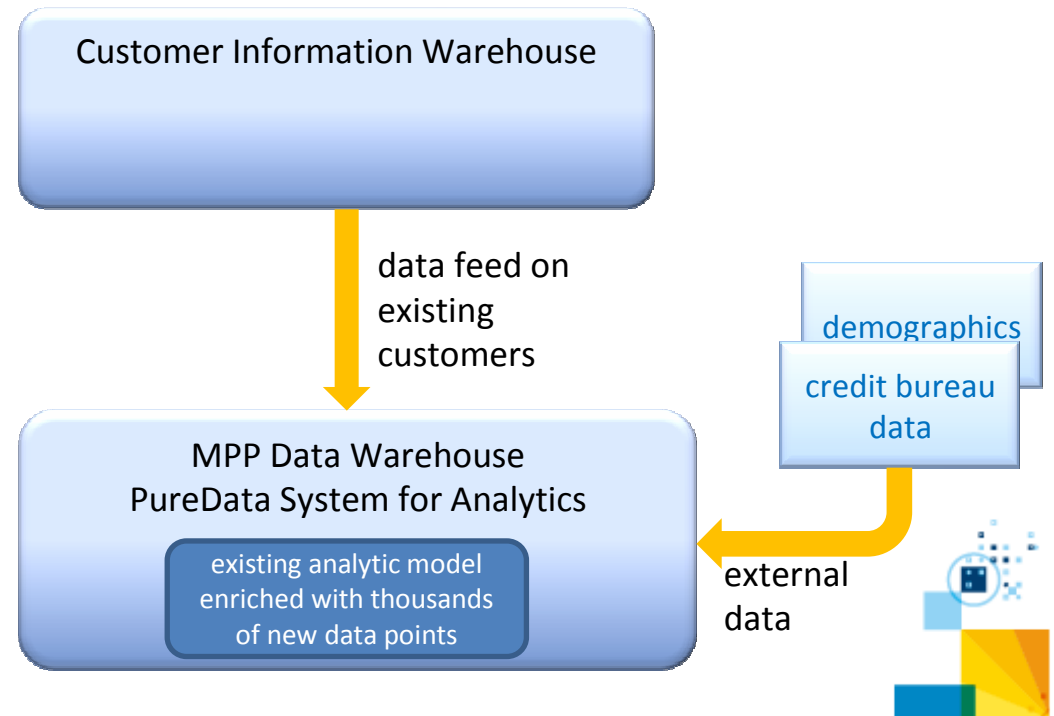


# A failing credit card campaign at an unnamed NA Bank



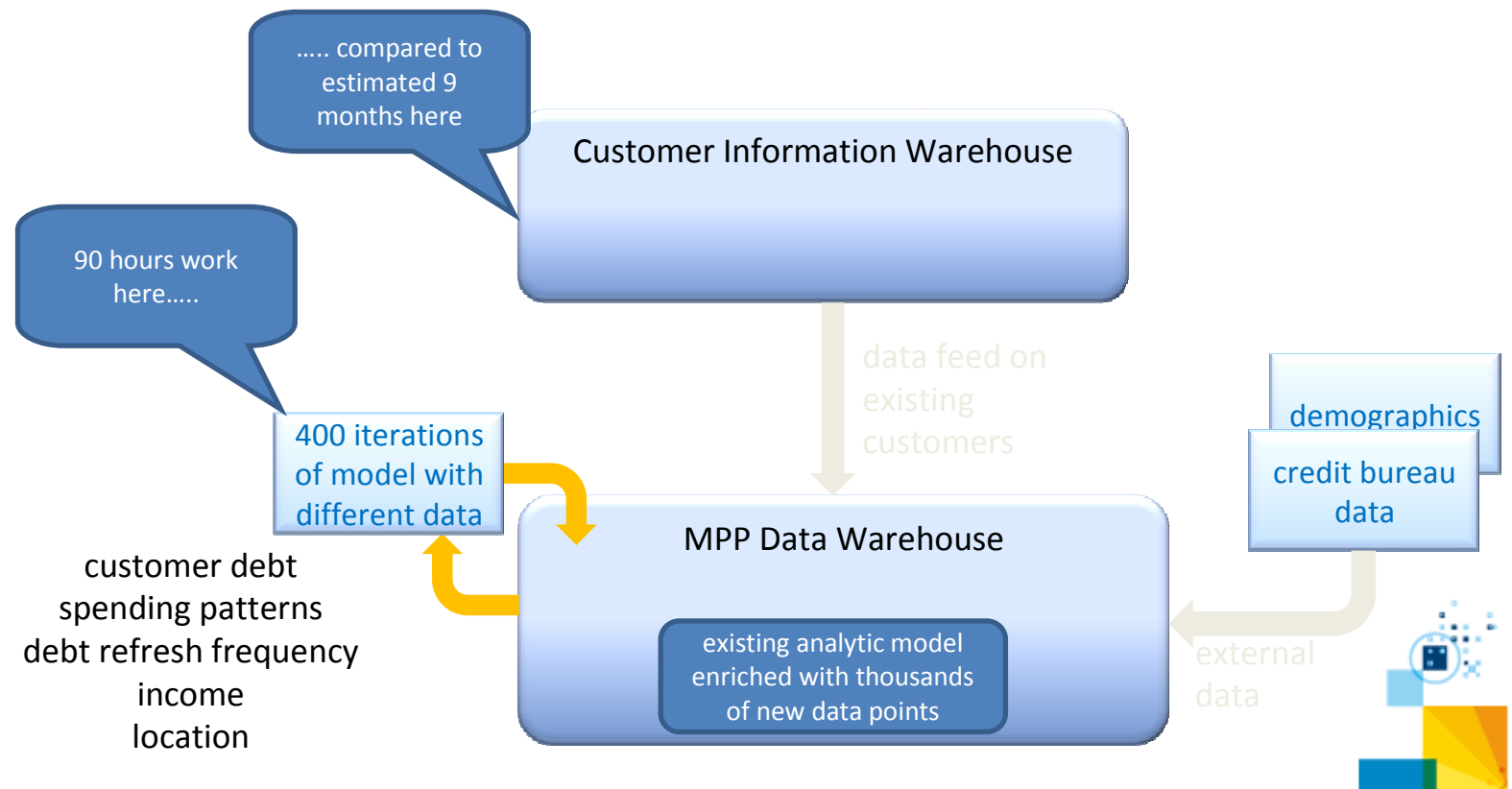


# Enriching existing model with new data





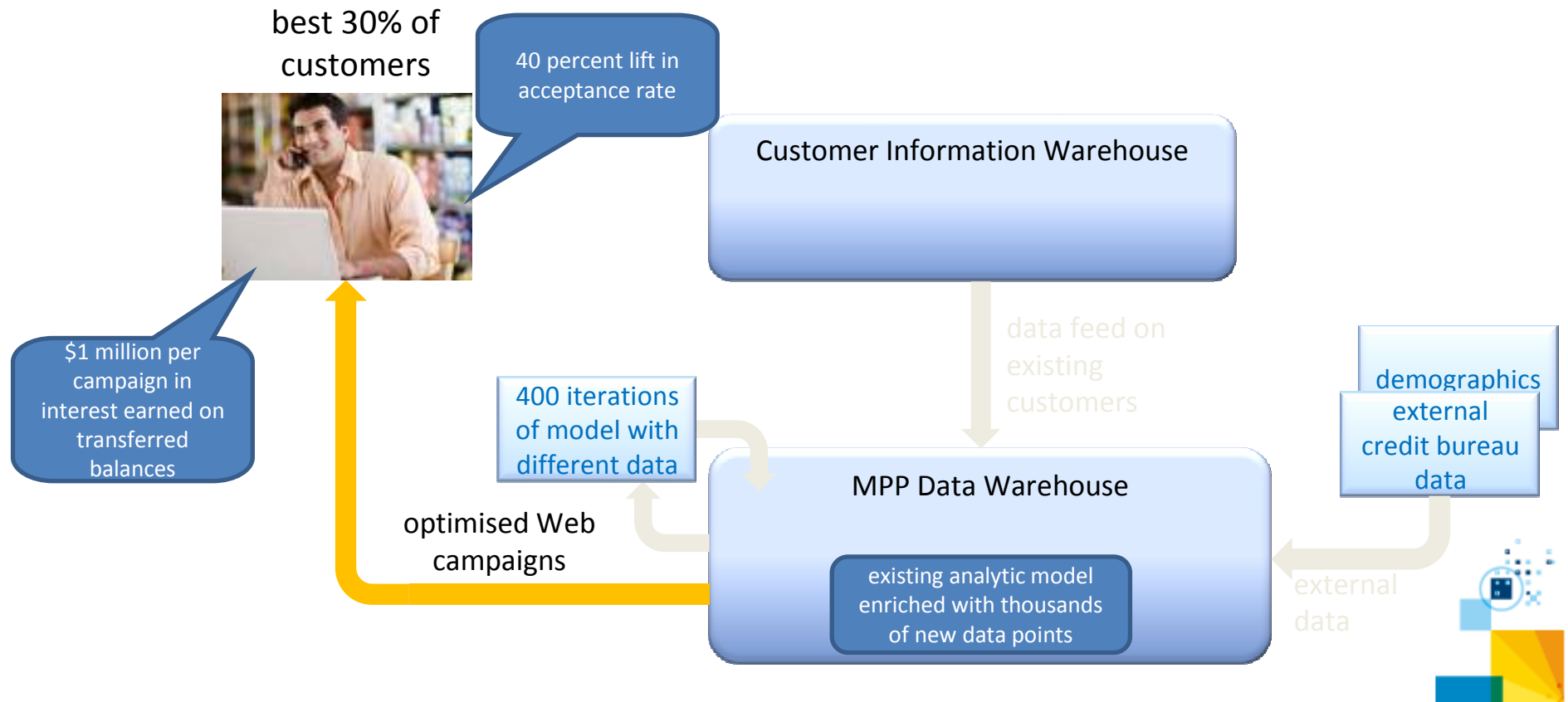
# Iterate the model to predict profitable responders







# Increasing profits: 10 optimised campaigns





## Increasing profits by reducing “return fraud”

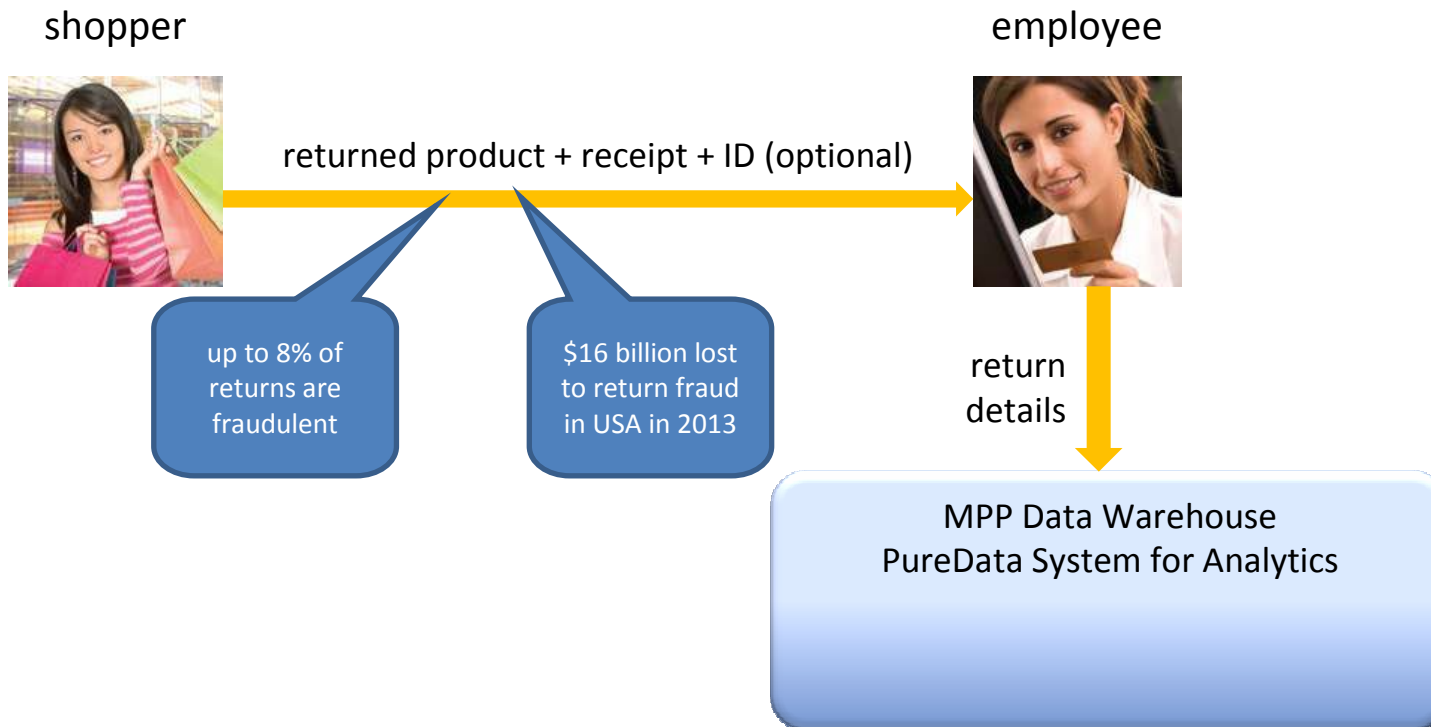


[www.ibmbigdatahub.com/blog/can-retailers-really-predict-shopper-behavior-leveraging-big-data](http://www.ibmbigdatahub.com/blog/can-retailers-really-predict-shopper-behavior-leveraging-big-data)

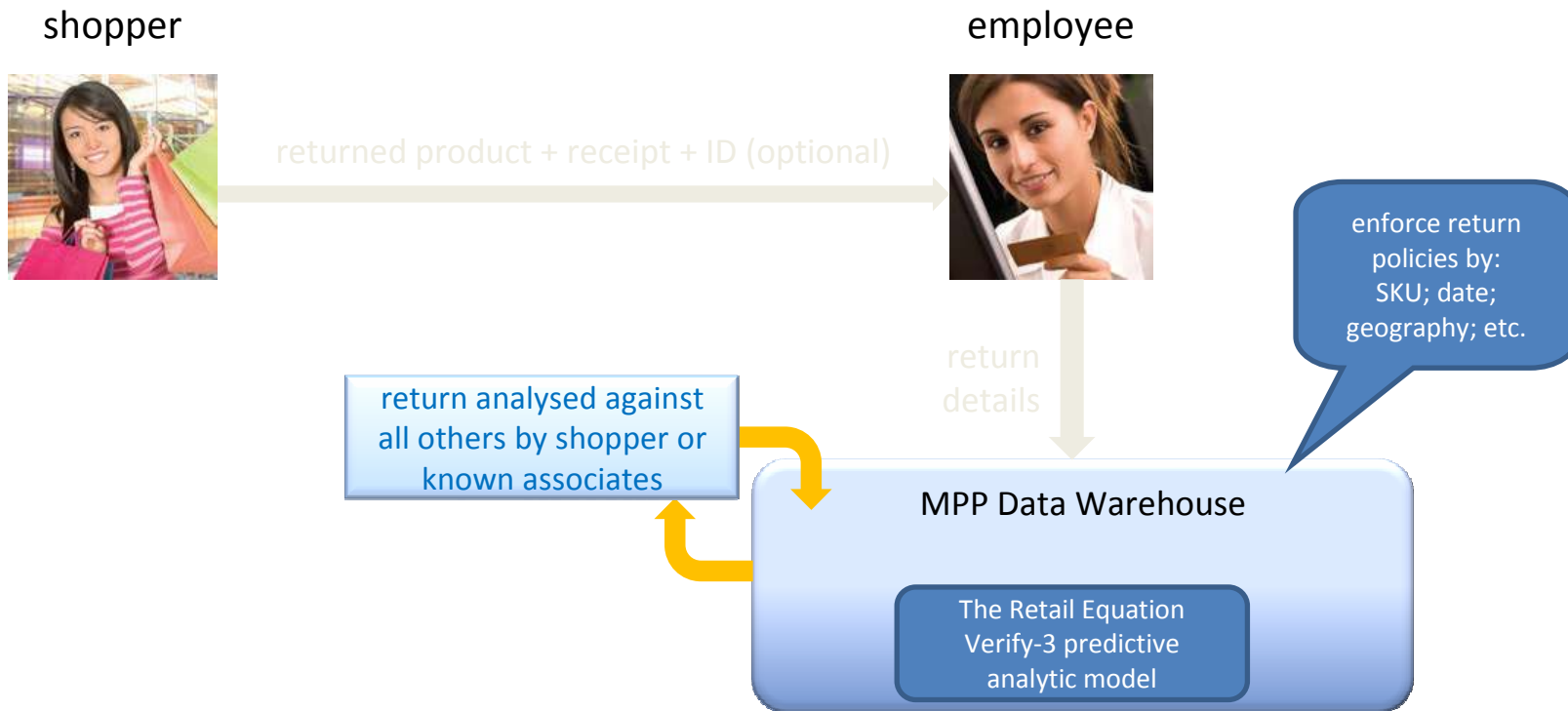
*“With PureData System for Analytics, our proprietary linking system is able to uncover those patterns of activity that were otherwise unseen in the data.”*



# Shoppers value their right to return goods



# Predictive model to identify the one percent





# Real-time consumer-based decisions

shopper



returned product + receipt + ID (optional)

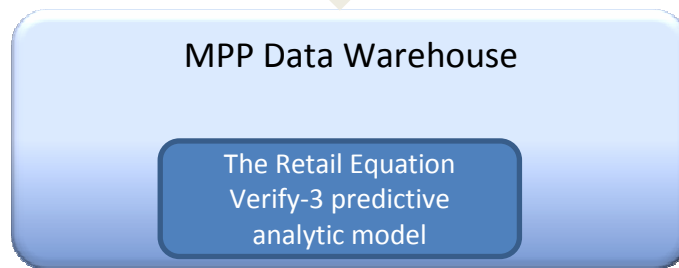
employee



return details

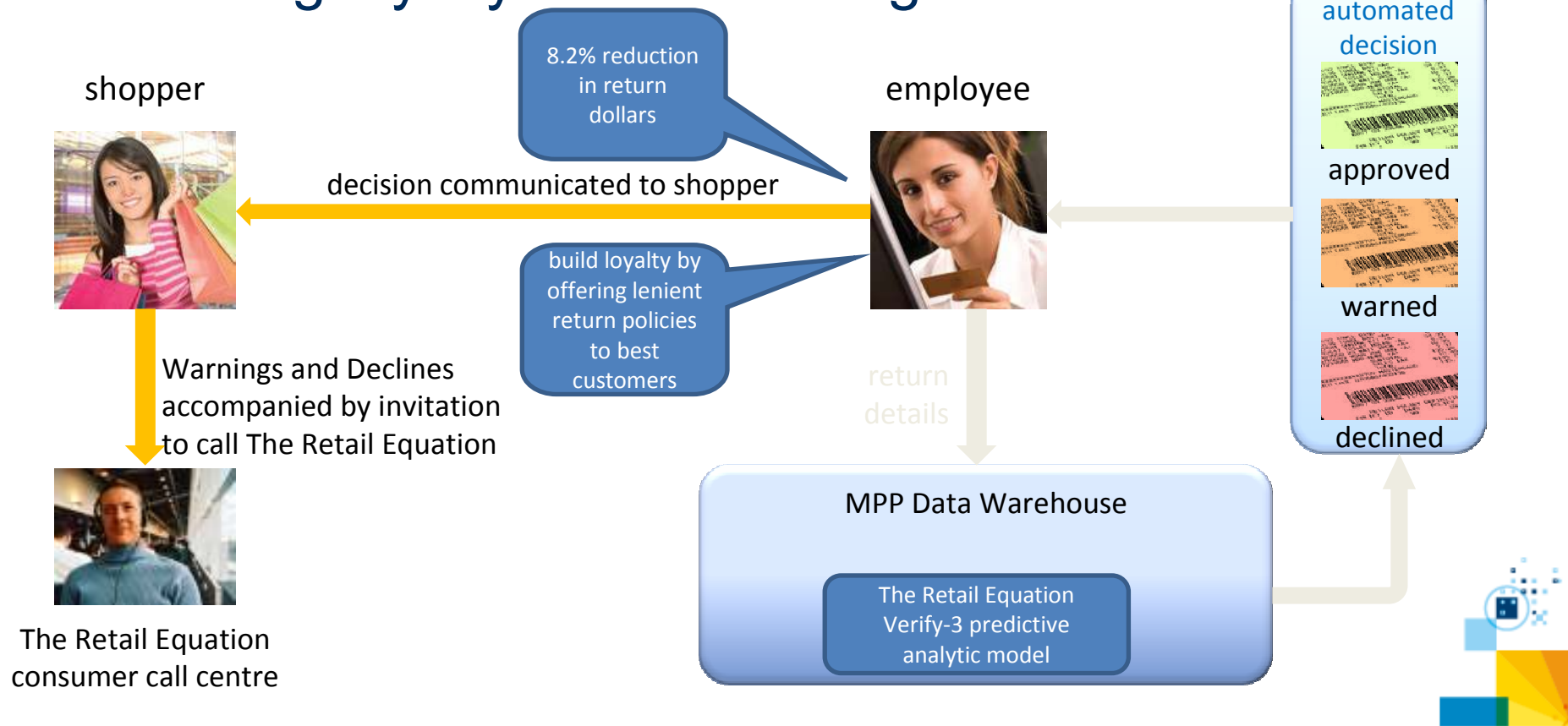
decision generated in 80 milliseconds or less

warnings preferred to declines - fosters perception of better service





# Rewarding loyalty while reducing fraud



shopper



decision communicated to shopper

8.2% reduction in return dollars

employee



build loyalty by offering lenient return policies to best customers

return details

Warnings and Declines accompanied by invitation to call The Retail Equation



The Retail Equation consumer call centre

MPP Data Warehouse

The Retail Equation Verify-3 predictive analytic model

automated decision



approved



warned



declined



# Mobile network operators of India

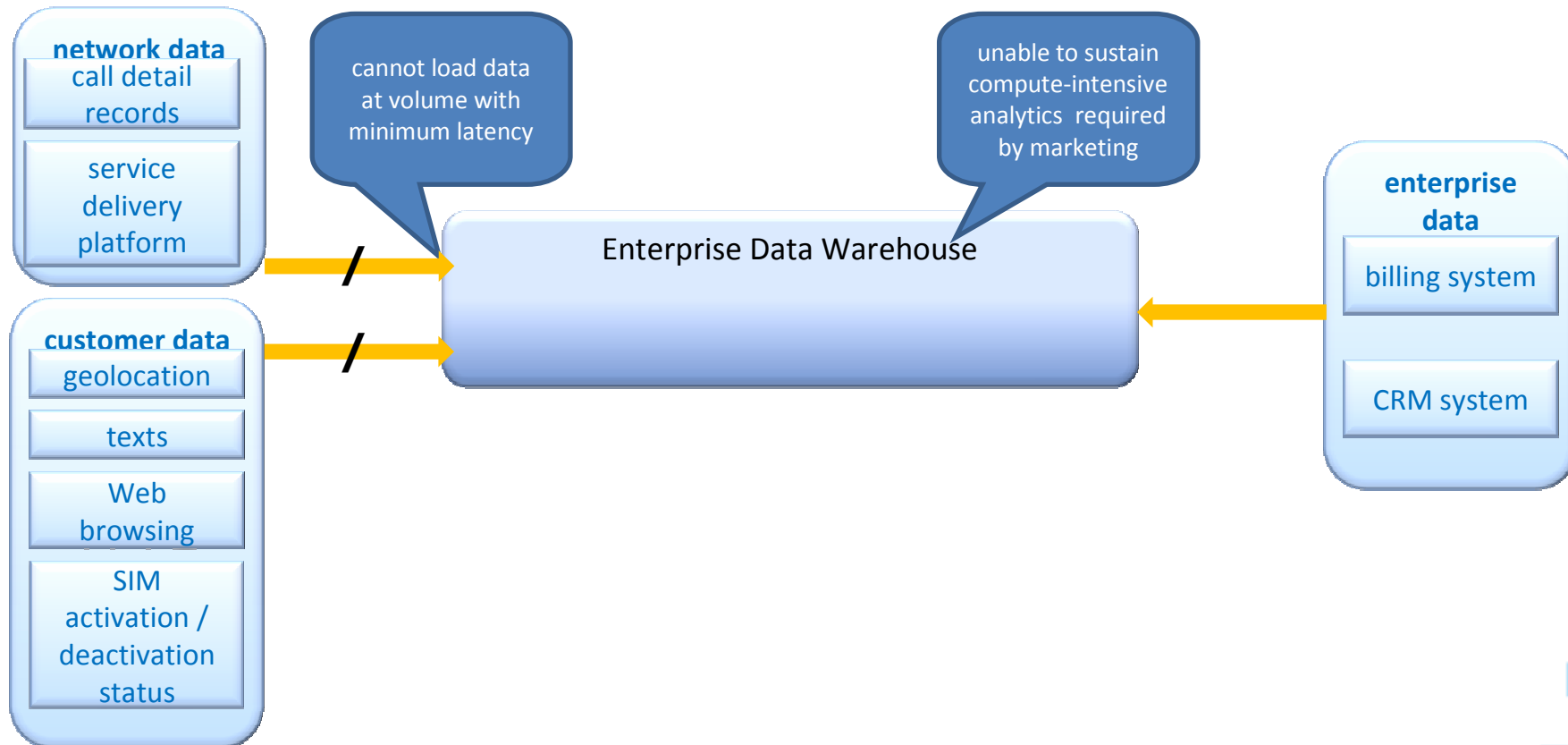
Data as at October 2013:

[http://en.wikipedia.org/wiki/Mobile\\_network\\_operators\\_of\\_India](http://en.wikipedia.org/wiki/Mobile_network_operators_of_India)

1	Airtel	28.49%
2	Vodafone	22.91
3	Reliance Communications	N/A
4	Idea Cellular	18.74
5	BSNL	14.31
6	Tata DoCoMo Virgin Mobile India	N/A
7	Aircel	9.32
8	Uninor	4.77
9	MTS India	N/A
10	Videocon	0.48
11	MTNL	0.53
12	Loop Mobile	0.45

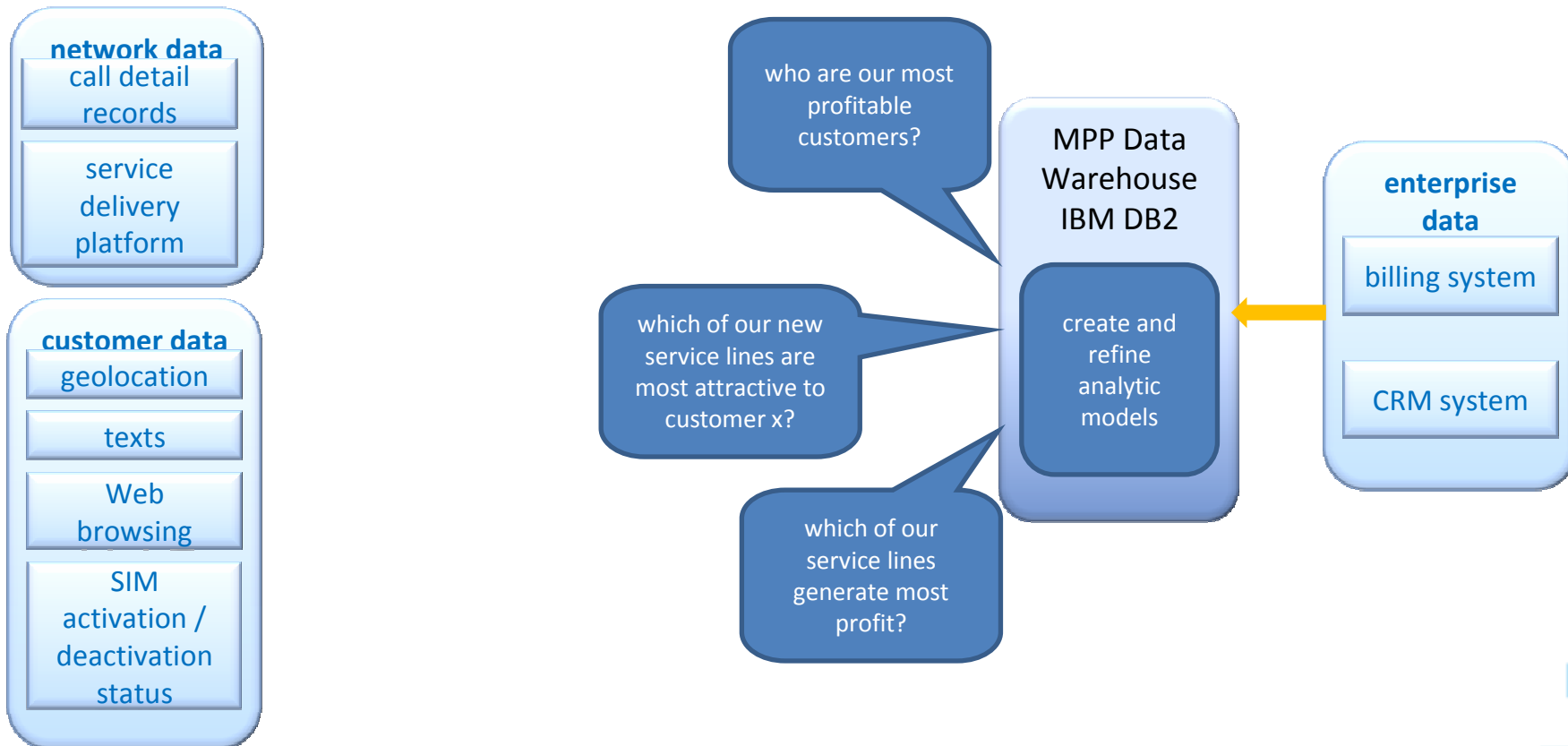


# Many and varied data sources challenge infrastructure

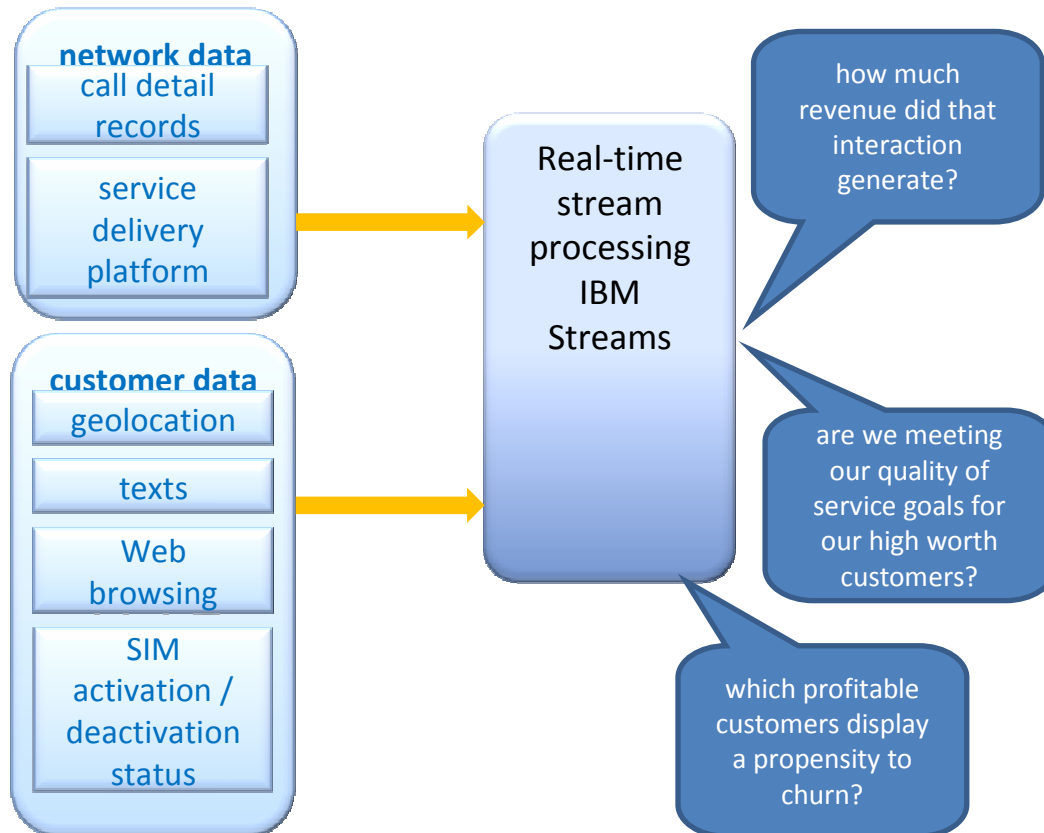




# Modernising infrastructure (i)

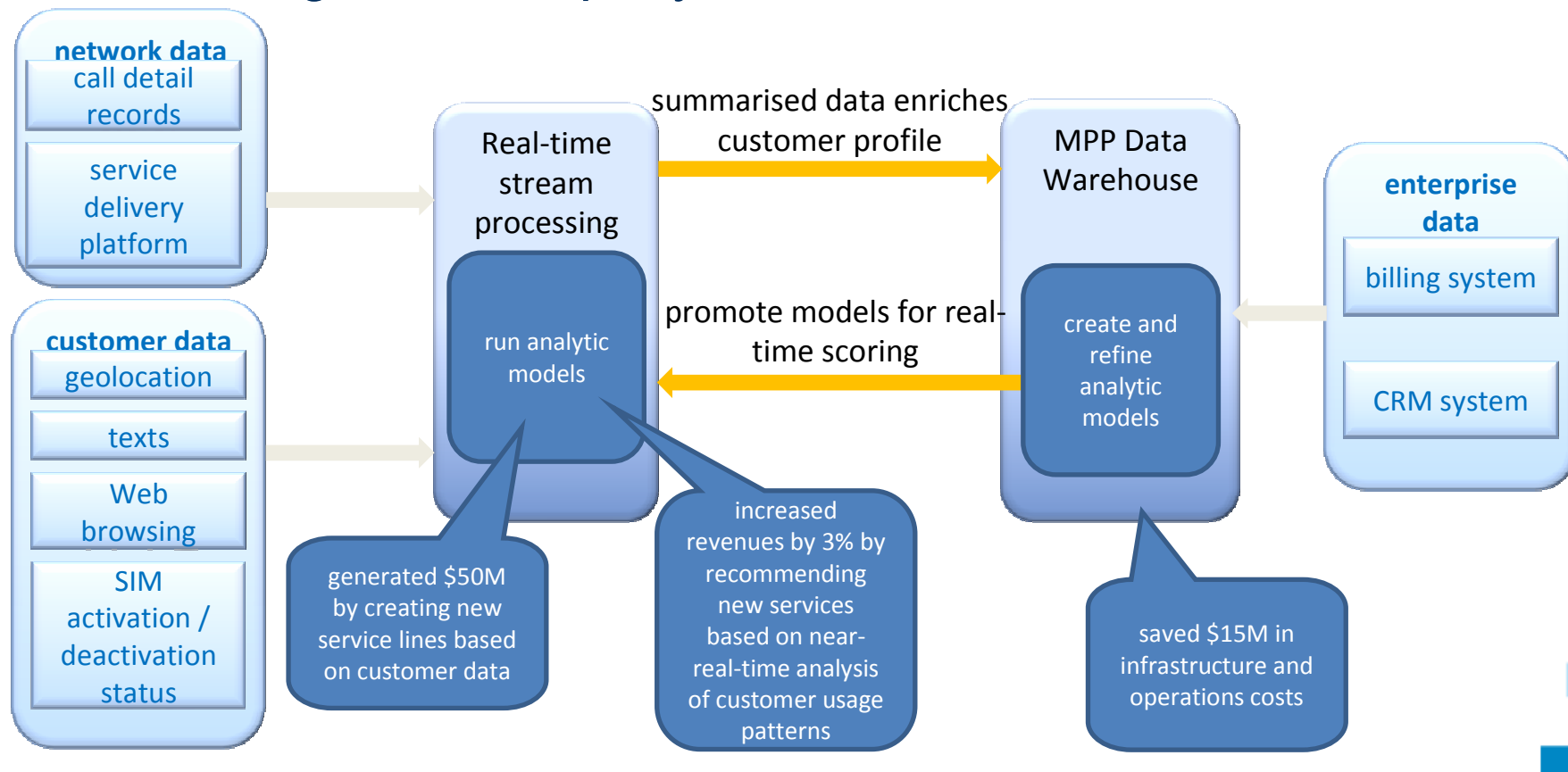


## Modernising infrastructure (ii)





# Innovating to develop loyal customers at an Indian telco





# Developing loyalty at Catalina Marketing



[www.youtube.com/watch?v=M0t-Q8sVurQ&list=UU58XuplpHJ2YRzTQ86XQCqg](http://www.youtube.com/watch?v=M0t-Q8sVurQ&list=UU58XuplpHJ2YRzTQ86XQCqg)



# Shopping app launches automatically

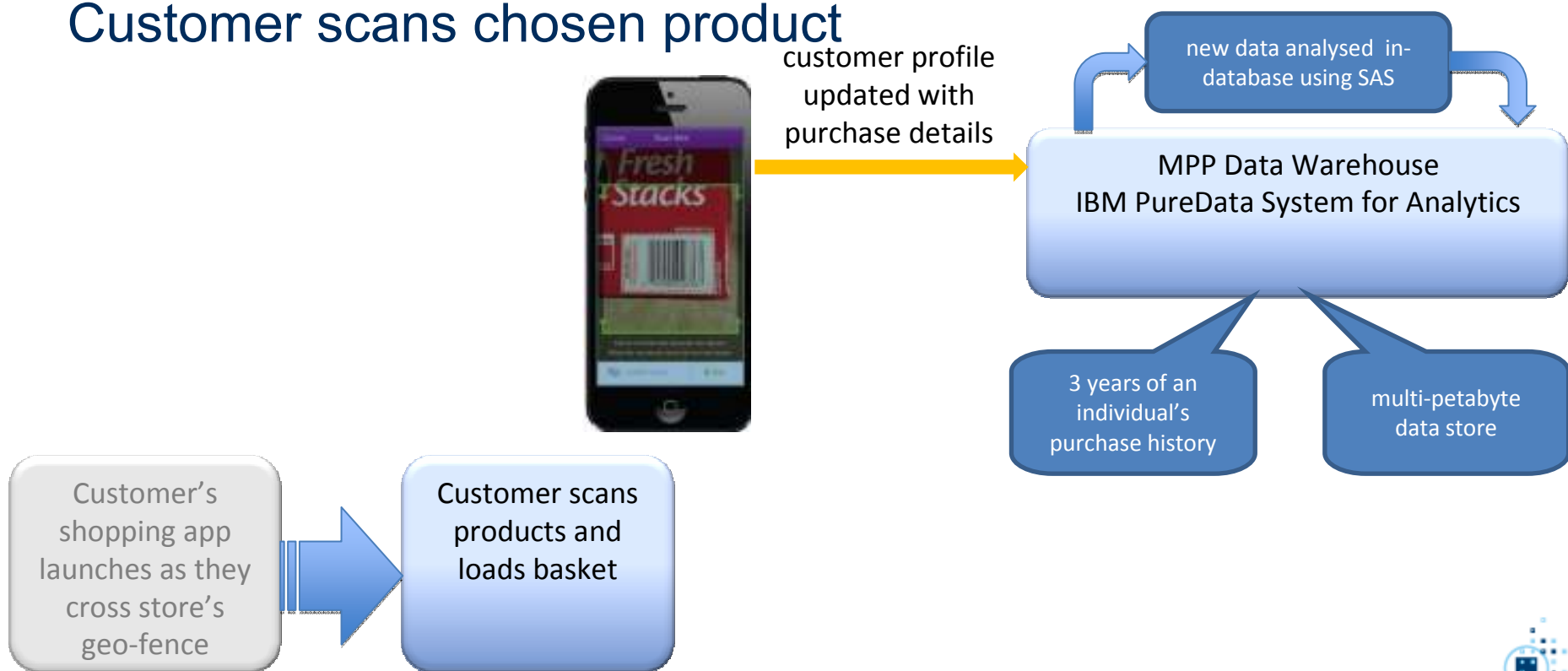


Customer's shopping app launches as they cross store's geo-fence





# Customer scans chosen product





# Campaigns delivered to the point of decision



# Customers prefer self-checkout







## Data driven interactions at Catalina Marketing

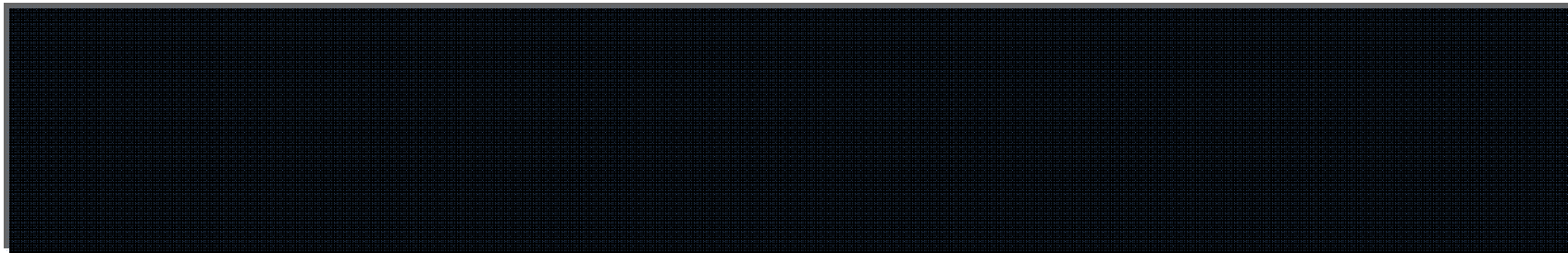
	no targeting	basic targeting e.g., offer dog food coupon to customer buying dog food	personalised coupon printing post- sale using predictive models to find latent correlations	personalised offer delivered to smart phone in aisle at point of product display
offer redemption rate	1%	6-10%	25%	40 – 60%





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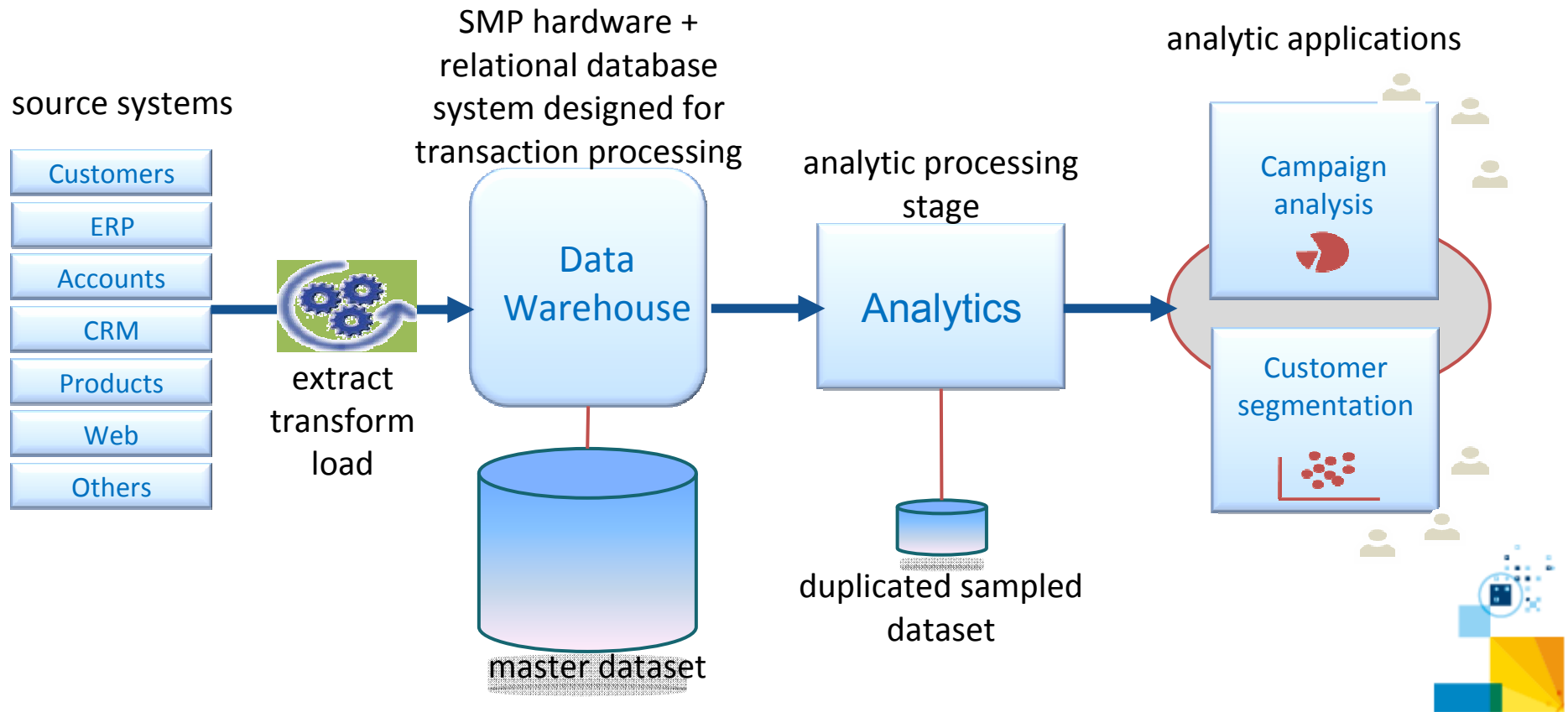


- Closing thoughts





# Traditional analytics: sampled, offline data



# PureData System for Analytics



## Speed

Up to 2000X faster than previous system  
Growing by 30% every month



## Simplicity

Up and running 6 months before having any training ROI in less than 3 months



## Scalability

1 PB of data  
7 years of historical data  
100-200% annual data growth



## Smart

researchers reduced the time to perform quintillions of computations from 27 hours to 12 minutes



# PureData System for Hadoop

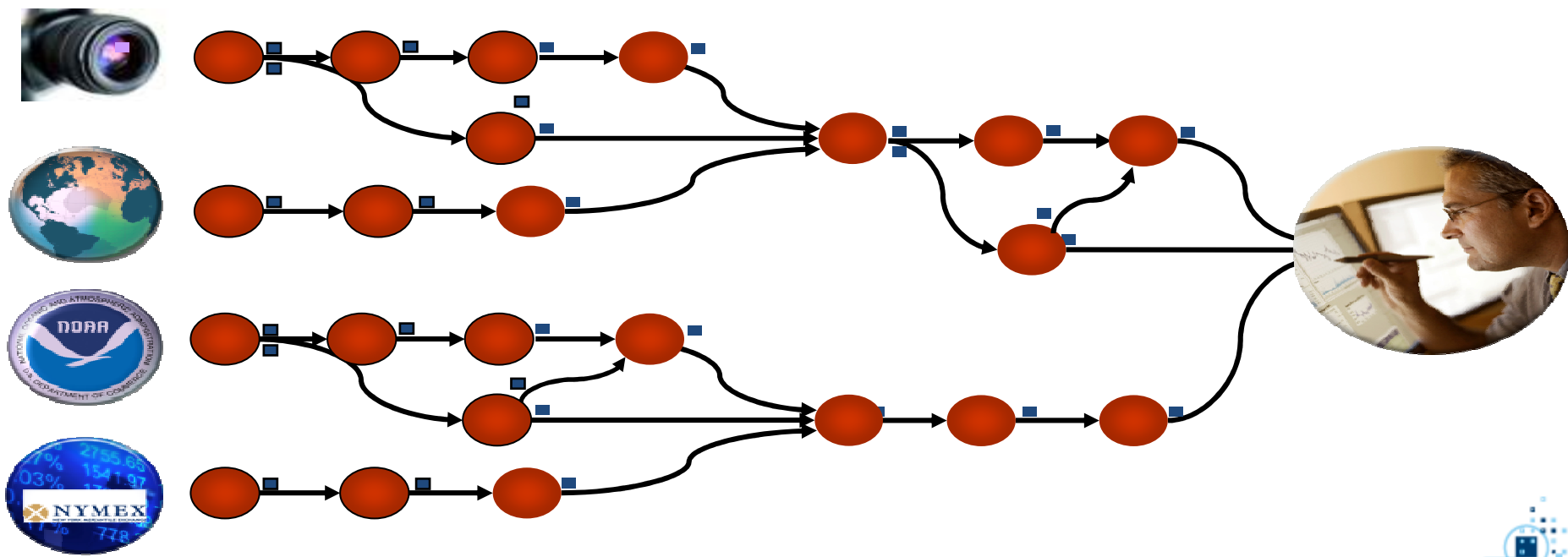


## *Designed to...*

- SIMPLIFY building, deploying and managing a Hadoop cluster
- SPEED time-to-value for Hadoop and unstructured data analysis



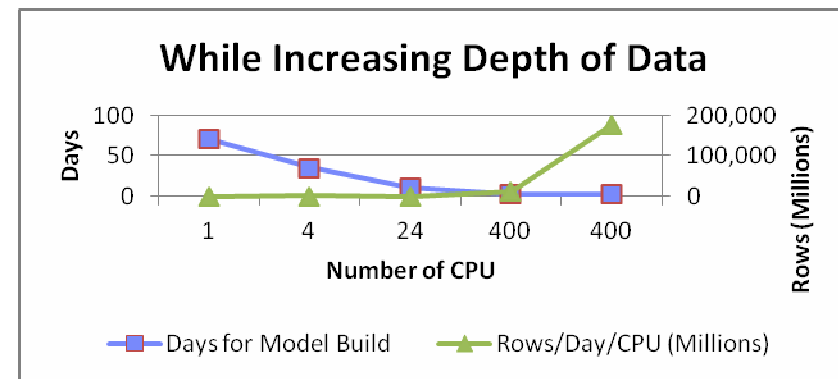
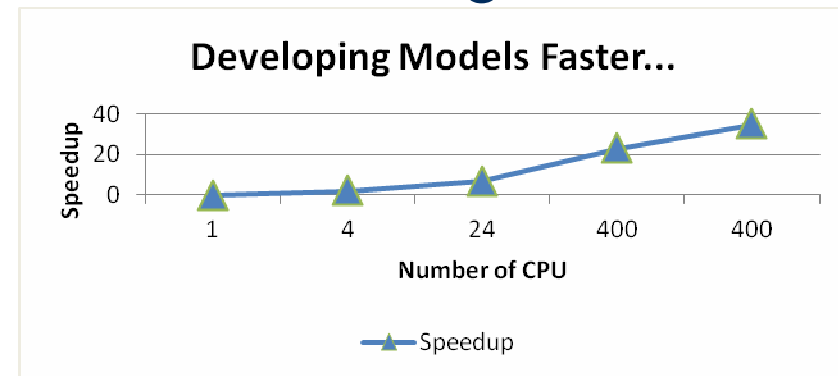
# Infosphere Streams





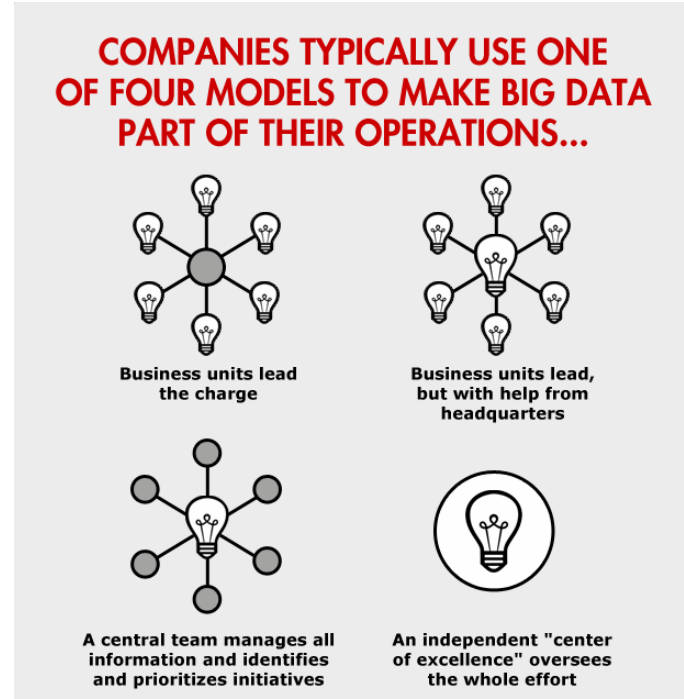
# In-database analytics as Catalina Marketing

- 35X improvement in staff productivity
  - model development reduced from 2+ months to 2 days
  - 90 models per year in 2006
  - 900 models per year in 2011
    - with the same staff
  - model scoring time reduced from 4.5 hours to 60 seconds
- Increased depth of data per model
  - 150 to 3.2 million features
  - 1 million to 14.5 trillion records per analysis





# Creating an organisational home for advanced analytics



**Big Data: The organizational challenge, Bain & Company, September 2013**

[www.bain.com/publications/articles/big\\_data\\_the\\_organizational\\_challenge.aspx](http://www.bain.com/publications/articles/big_data_the_organizational_challenge.aspx)

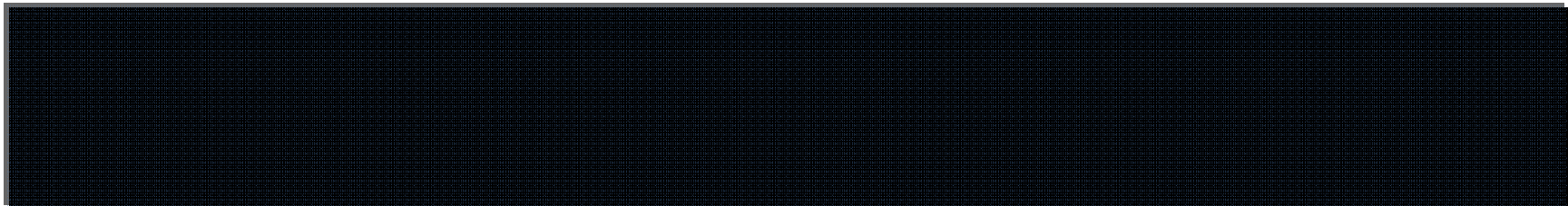






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## Concluding Thoughts

- Data growth demands modern infrastructure
- Marketing leaders minimise data management costs to invest in analytics
- Harness customers' data to deliver value at their point of decision

