# Data-Driven Business Models (DDBMs): A Blueprint for Innovation

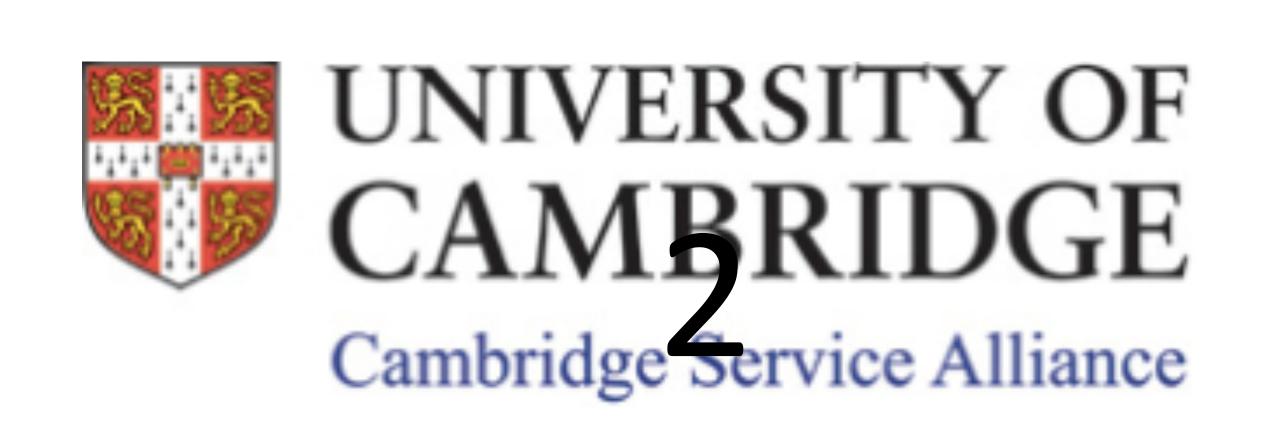
Patterns from Established Organisations

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## Agenda

- Introduction
- Methodology
- Results
- Summary



## Introduction

- Capitalizing on data explosion is increasingly becoming a necessity in order for a business to remain competitive
- The challenges are threefold:
  - how to extract data
  - how to refine it
  - how to ensure it
- Organizations that fail to align themselves with data-driven practices risk losing a critical competitive advantage and market share



## Research Objectives

RQ: How Does Big Data Affect Data Driven Business Models in Established Business Organizations?

#### Objectives:

- Further demonstrate the validity of the DDBM framework by applying it to established organizations.
- Where applicable, to add dimensions to the DDBM framework that are present in established organizations but were not present in business start-ups.
- Provide a foundation and structural guidelines within which an existing or new business can analyze, construct and apply its own DDBM



## Methodology:

#### Sampling

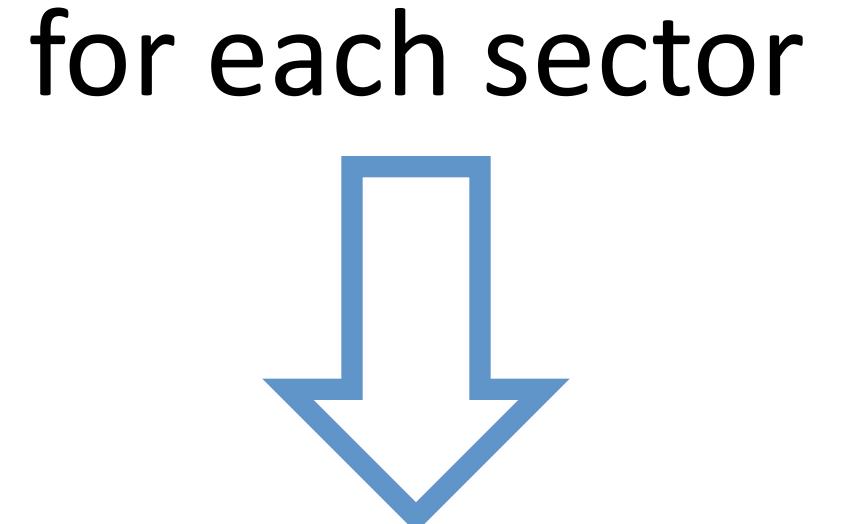
#### Data collection

#### Data analysis

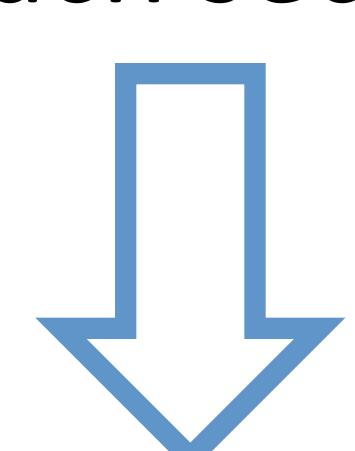
#### Validation

Sectors determined through literature reference frequency





Random sample
4 companies selected for
each sector



20 Companies



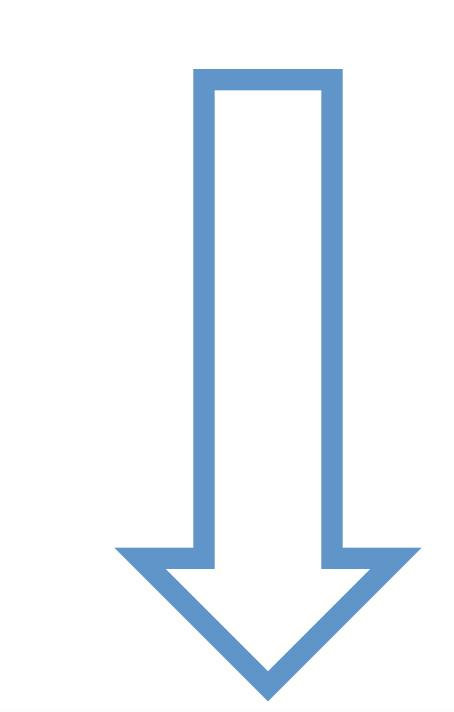
#### Company information

- Company websites
- Annual Reports
- Press releases

#### Public sources

- Case studies
- Business schools info
- Newspaper articles

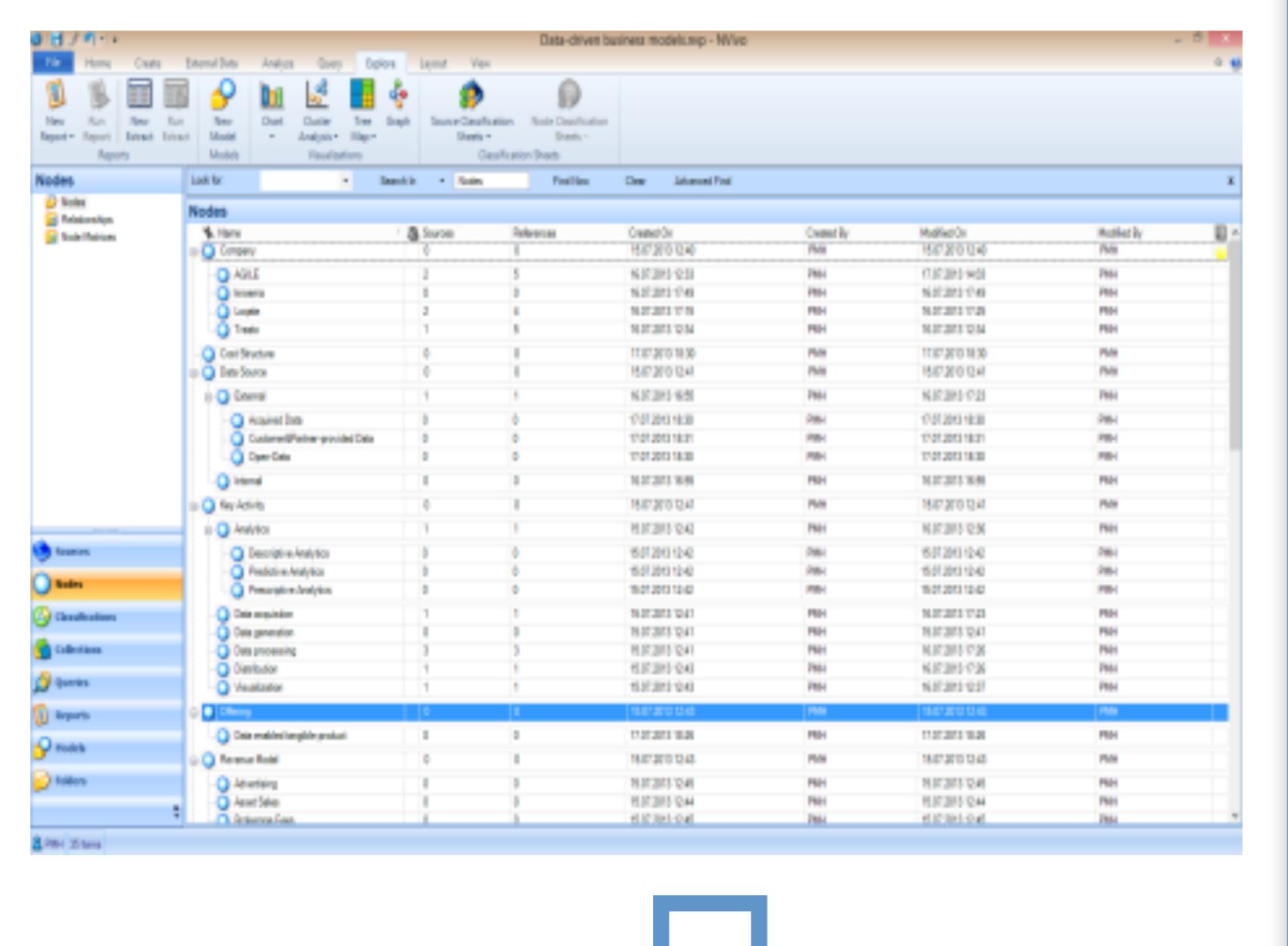


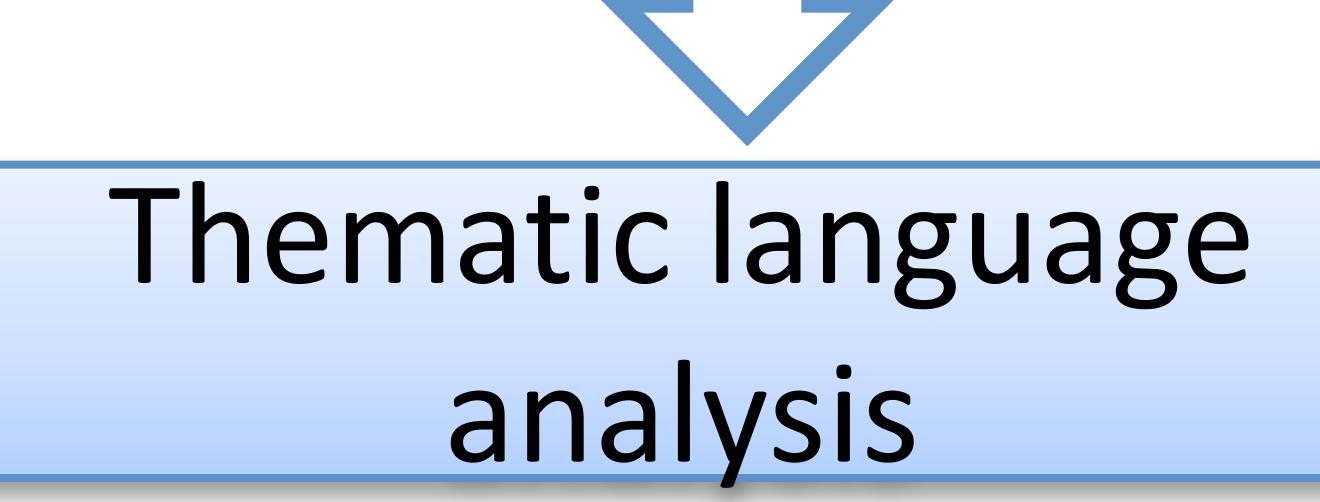


142 Sources

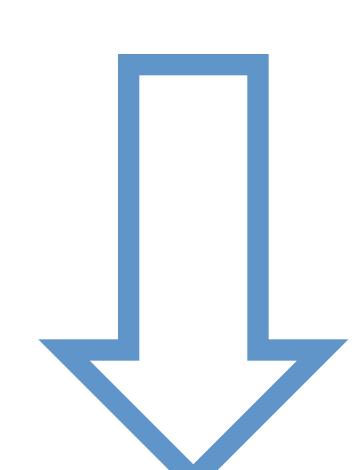
Over 7 sources per company

- Coding of sources using data driven business model framework
- Nodes added
- Nvivo analytic software

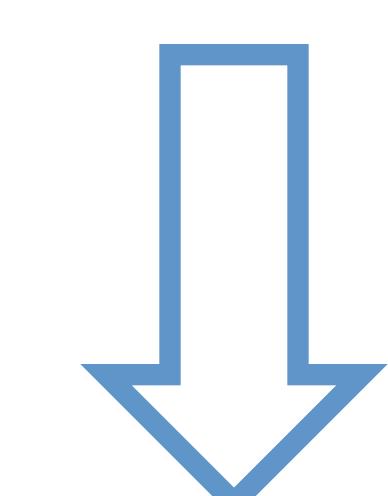




- Qualitative research
   utilizing a
   questionnaire
- Primary data
   collected.
- Compared with findings of thematic language analysis



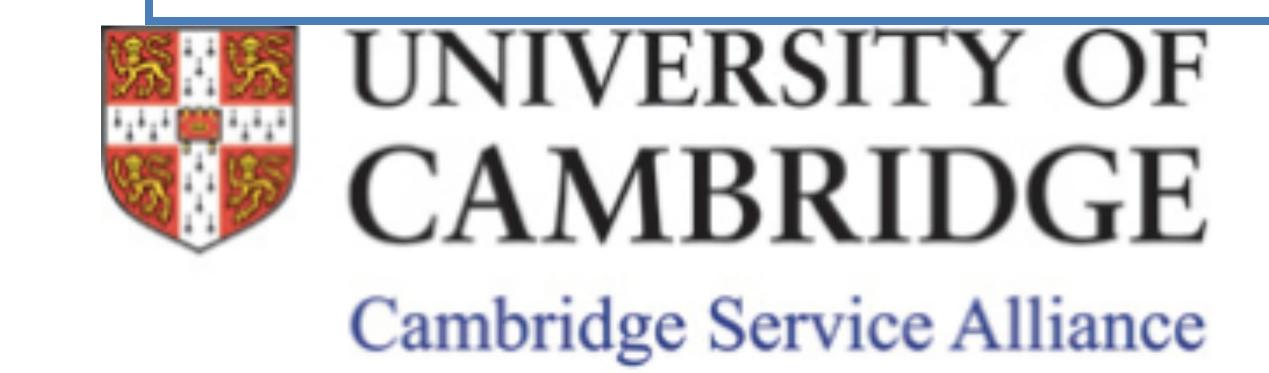
Formation of case studies.



Validation or Invalidation of Findings

## Company Classification Table

Finance	Insurance	Publishing	Retail	Telecoms
HSBC	Direct Line	The Times	Topshop	GiffGaff Mobile
HSBC	direct line	THE TIMES	TOPSHOP	giffgaff
Merrill Lynch	Allstate	New York Times	Primark	Vodafone
Merrill Lynch	Allstate. You're in good hands.	New Hork Times	PRIMARK*	vodafone
Wells Fargo	Admiral Group	The Financial Times	Asos	AT&T
WELLS FARGO	Admiral	FINANCIAL TIMES	CISOS discover fashion online	at&t
Goldman Sachs	ING Direct	Hatchette Livre	Zara	Orange
Goldman Sachs	ING DIRECT  People in Progress	HHACHETTE Ziore	ZARA	orange™



## Description of specific DDBM's for each established organization

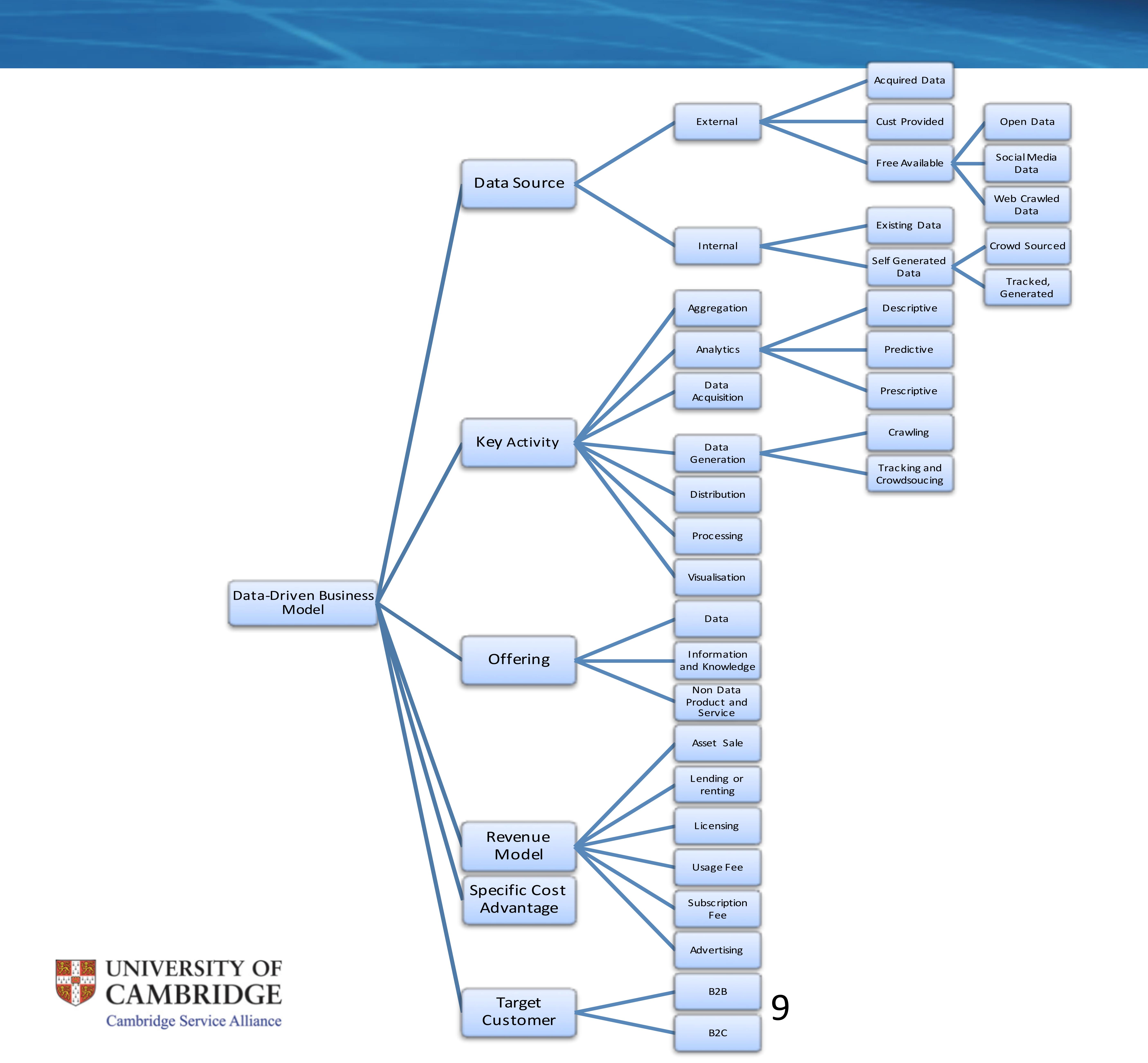
Company	Industry	Data Driven Business Model Description
Admiral Group PLC  Allstate Insurance  ING Direct		Customer provided data is combined with free available data from multiple sources to enable the company to manage risk with regards to insurance claims more efficiently and effectively.
Asos		Online transactions and activity are collected on users allowing for targeted advertising towards the individual based upon their unique preferences.  Purchasing data is utilized to determine current trends and styles, information which is then incorporated into future designs and product purchases.
AT&T	Telecommunic- ations	GPS tracking system data has been collected and sold to government planners to enable the accurate forecasting of crowd density at public events.
Financial Times  New York Times		Users of the online service can access up to 10 articles for free before hitting a pay wall requiring a subscription fee. The types of article accessed are then processed to determine the suggested articles for the reader encouraging continuous use of the service based on the individual's personal preference set.
Goldman Sachs Merrill Lynch		Data from a wide variety of sources including customer provided, acquired data and free available data is utilized in the construction of predictive modeling systems allowing a data-driven decision-making process to take place.



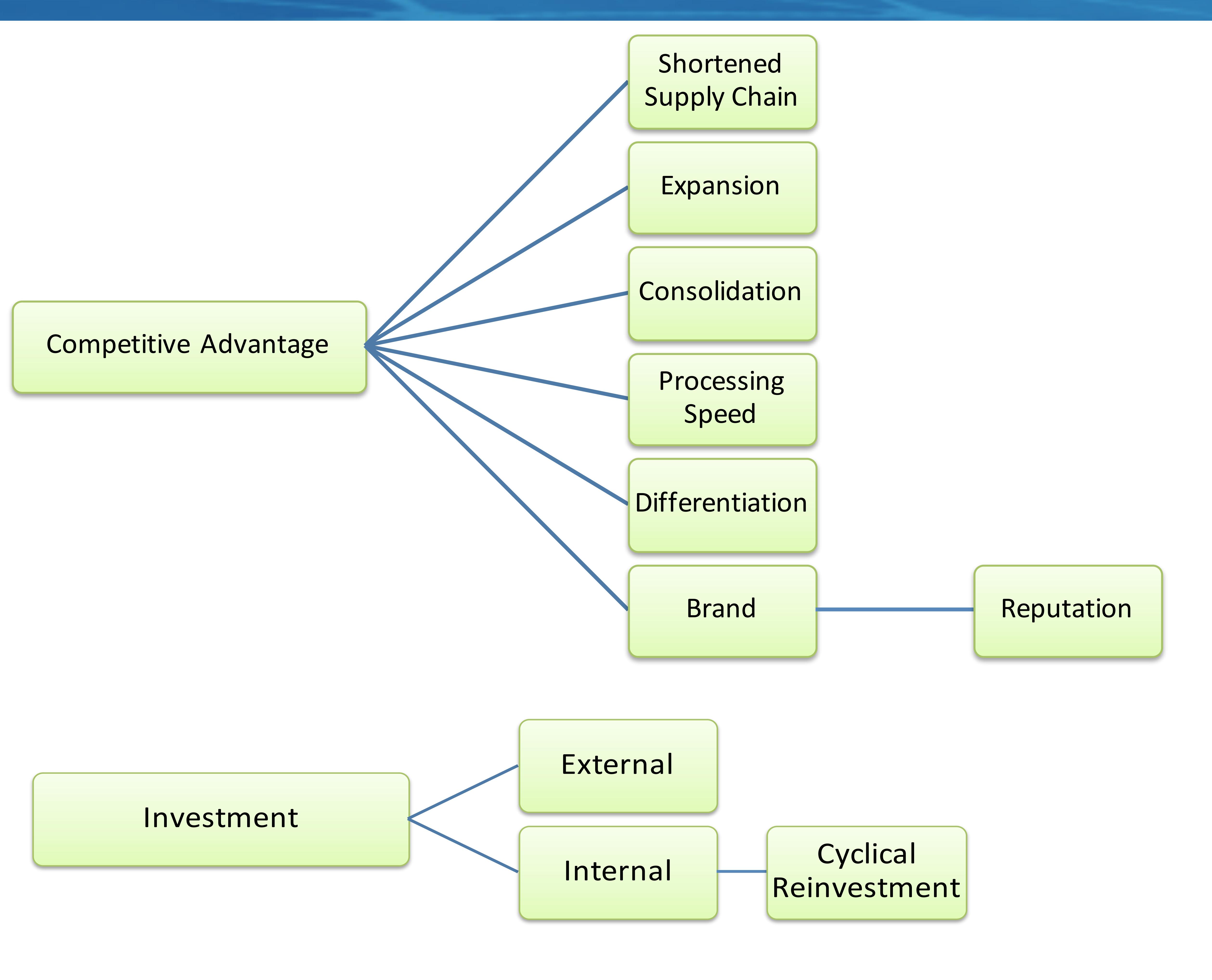
## Results:



## DDBM Framework in start-ups



## DDBM Framework in Established Organisations



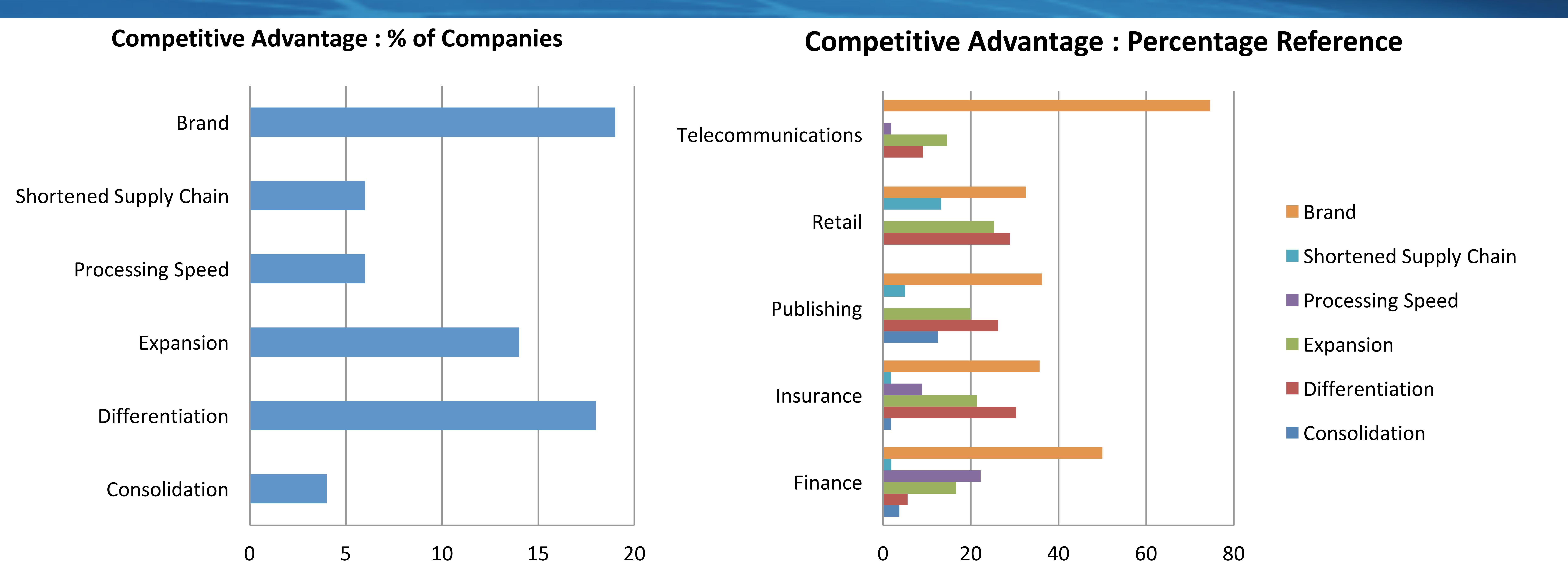
Two new main dimensions were added to the DDBM framework:

Competitive advantage and investment,

both of which received between 77 – 90% approval rating



## Competitive Advantage



- Brand and differentiation had the highest percentage of companies who considered this important.
- Brand considered most important competitive advantage throughout all the sectors analysed.
- Differentiation seen as important in retail, publishing and insurance.
- Processing speed considered a strong advantage by the finance sector.



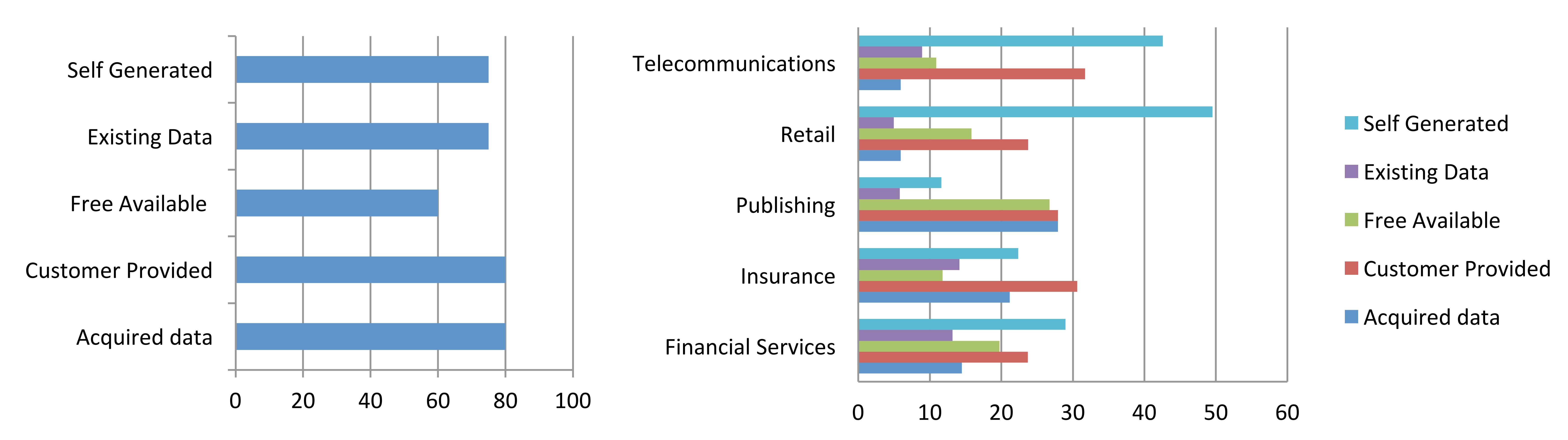
Note: Sum > 100% as companies might use multiple sources



### Data Source

#### Data Source: % of Companies

#### Data Source: Percentage Reference



- Highly varied use of data sources, with all sectors using multiple sources.
- •Telecommunications and retail sector emphasis on self generated data.
- Consistent use of customer provided data throughout sectors.

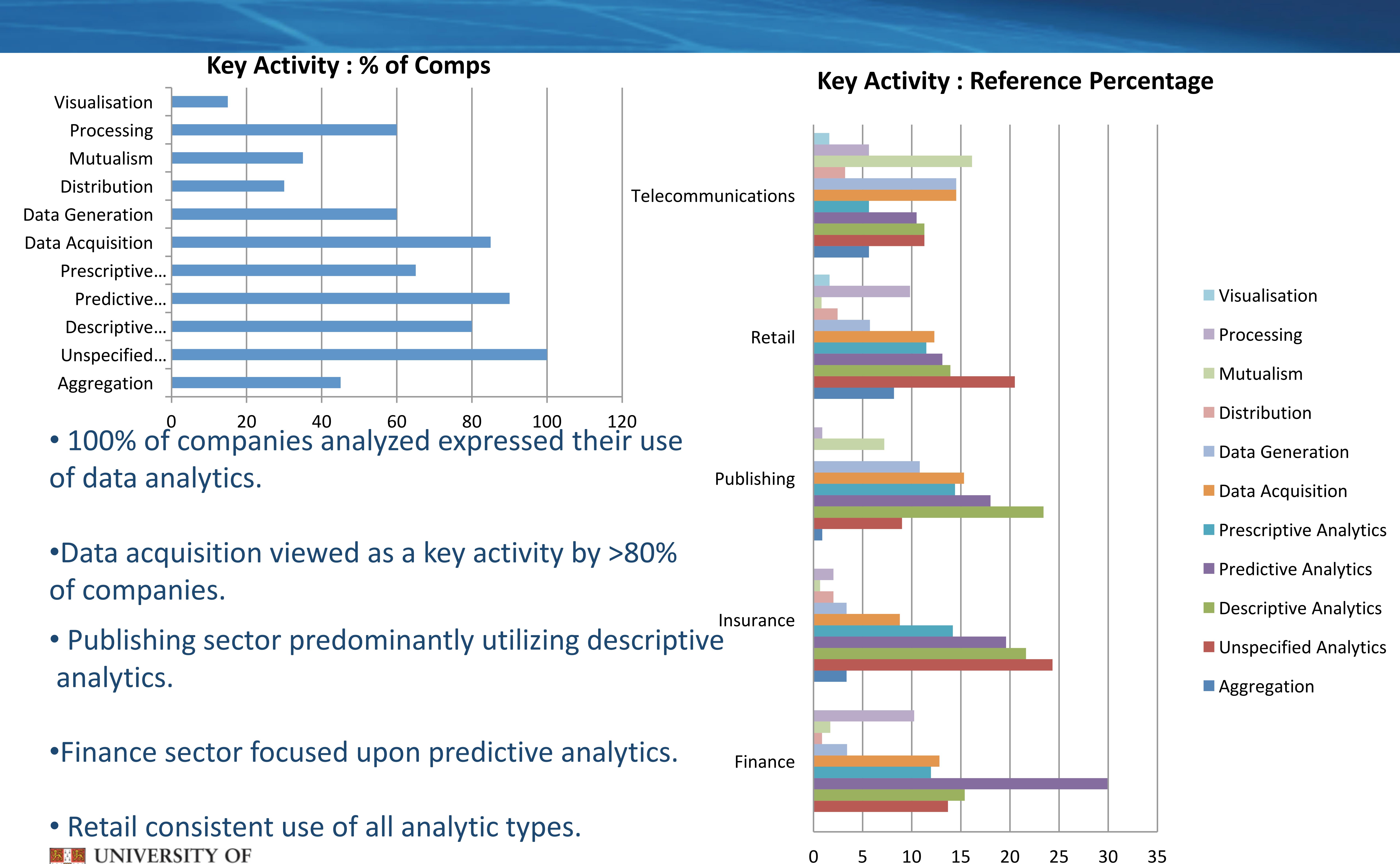




## Key Activity

CAMBRIDGE

Cambridge Service Alliance

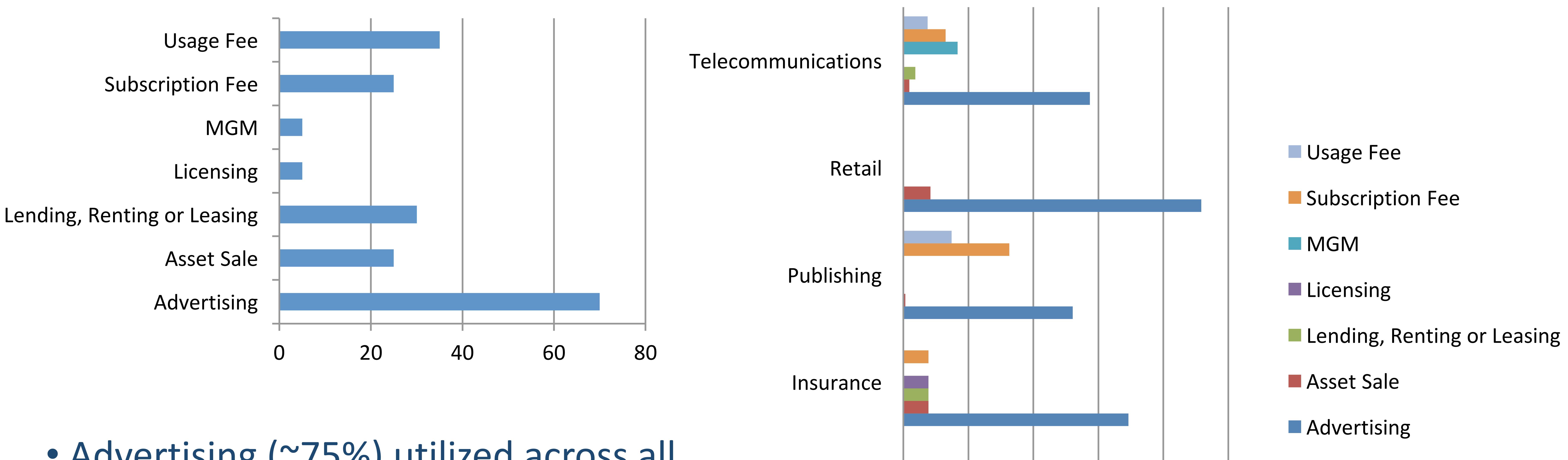


## Revenue Model

#### Revenue Model: % of Comps

#### Revenue Model: Reference Percentage

40 60 80 100



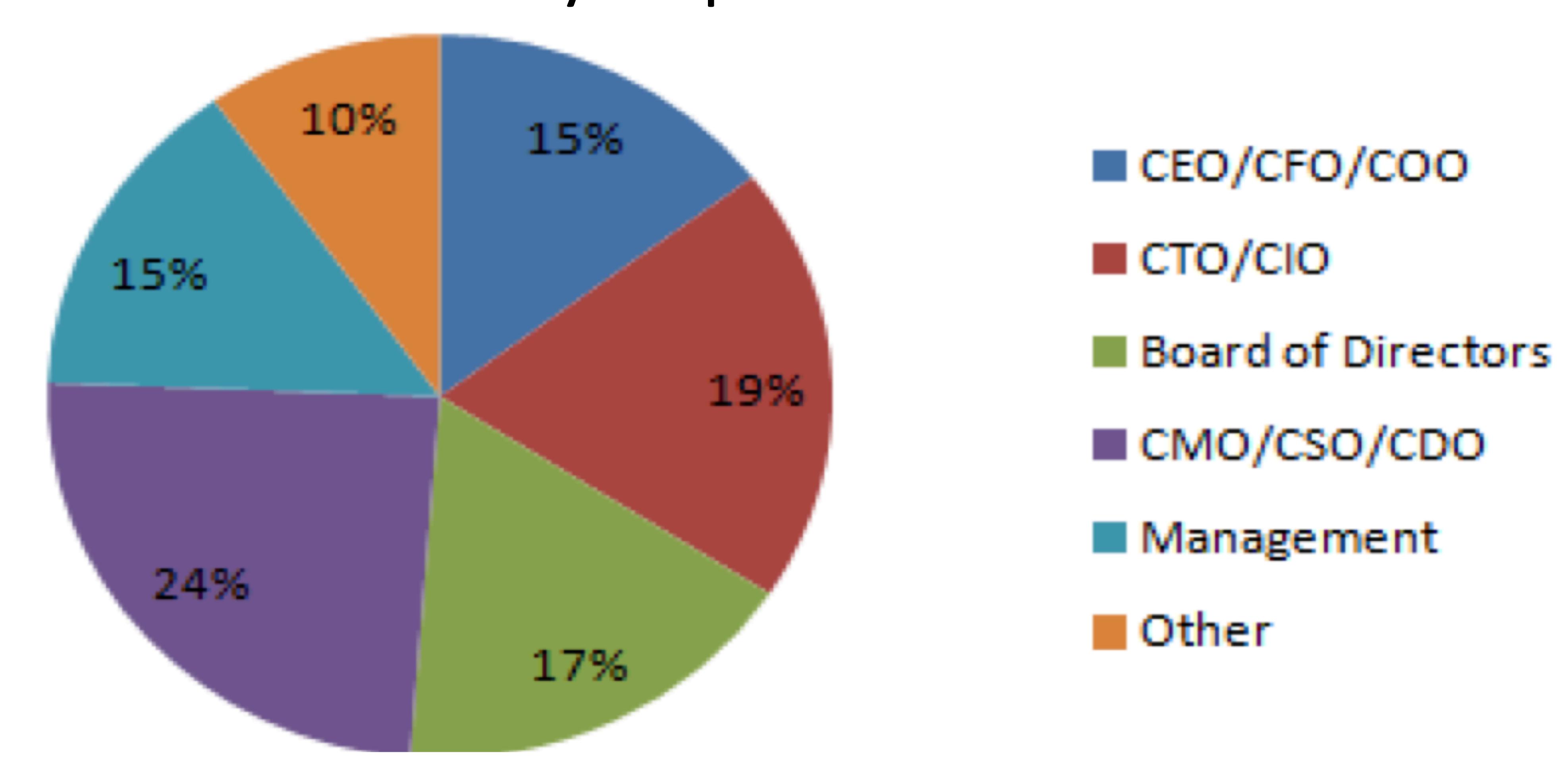
- Advertising (~75%) utilized across all analyzed business sectors.
- Telecoms, retail, publishing and insurance sector's concerned primarily with advertising.
- Finance sector emphasis on lending, renting or leasing.



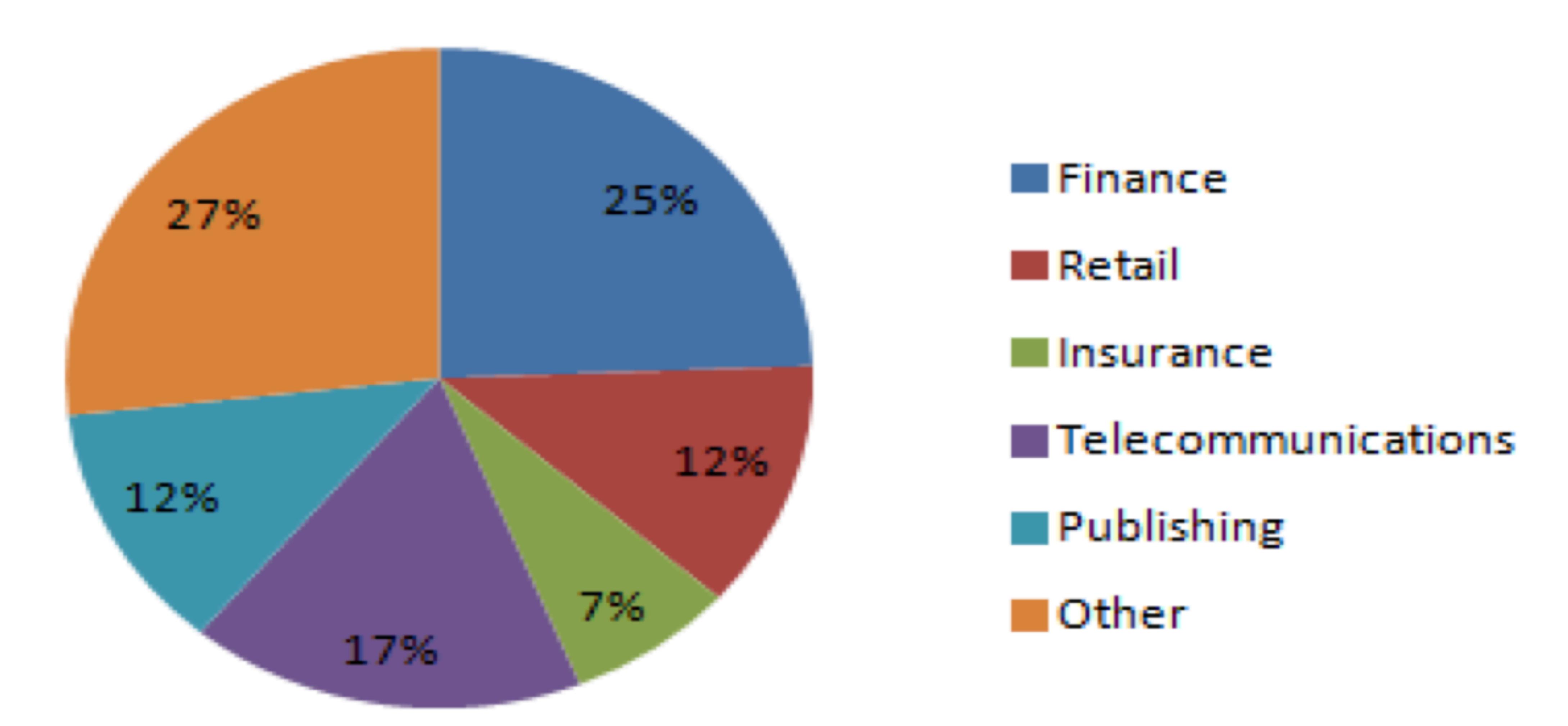
Finance

## Validation

#### A Total of 41 survey responses



#### Percentage of Respondents in Each Industry





## Industry Specific DDBM's

	Finance	Publishing	Insurance	Telecommu- nications	Retail
Competitive Advantage	Brand	Brand	Brand	Brand	Brand
Data Source	Self Generated	Customer Provided	Customer	Self Generated	Self Generated
Investment	Internal	Internal	Internal	Internal	Internal
Key Activity	Predictive Analytics	Descriptive Analytics	Analytics	Data Acquisition/ Generation	Analytics
Offering	Non-Data Product or Service	Non-data Product or Service	Non-data Product or Service	Data	Non Data Product or Service
Revenue Model	Lending, Renting and Leasing	Advertising	Advertising	Advertising	Advertising
Target Customer	B2B	B2B	B2C	C2C	B2C



## DDBM in Start-ups Versus Established Businesses Comparison

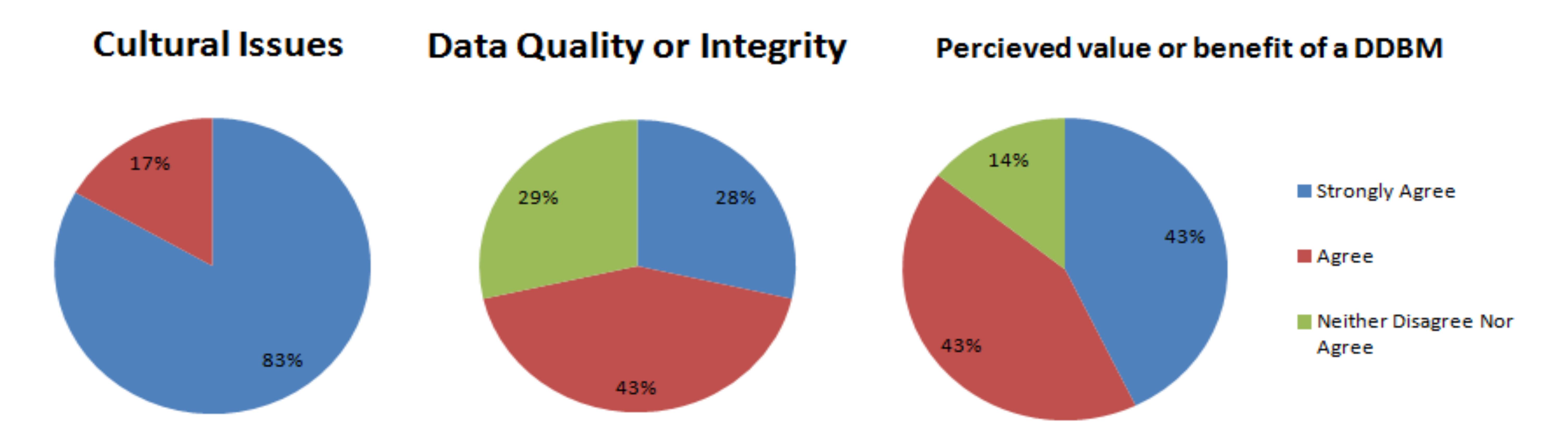
DDBM Dimension	DDBM Start-ups	DDBM Established	
Competitive Advantage	n/a	Brand	
Data Source	Customer Provided/Free Available	Customer Provided/Acquired Data	
Investment	n/a	Internal	
Key Activity	Analytics	Analytics	
Offering	Information/Knowledge	Non-data product or Service	
Revenue Model	Subscription Fee	Advertising	
Target Customer	B2B	B2C	



## Industry Specific DDBM's

Dominant Challenges Achieving a DDBM in Start-ups and Established Organizations						
Start-up Organizations	Hard	Soft	Established Organizations	Hard	Soft	
Issues acquiring a data source			Data quality and integrity	X		
Data analysis skills			Cultural challenges			
Resource Issues			Personnel issues			
Barriers due to practicality	X		Value perception of a DDBM			

#### Relationship between Personnel Issues and other Internal and External Issues



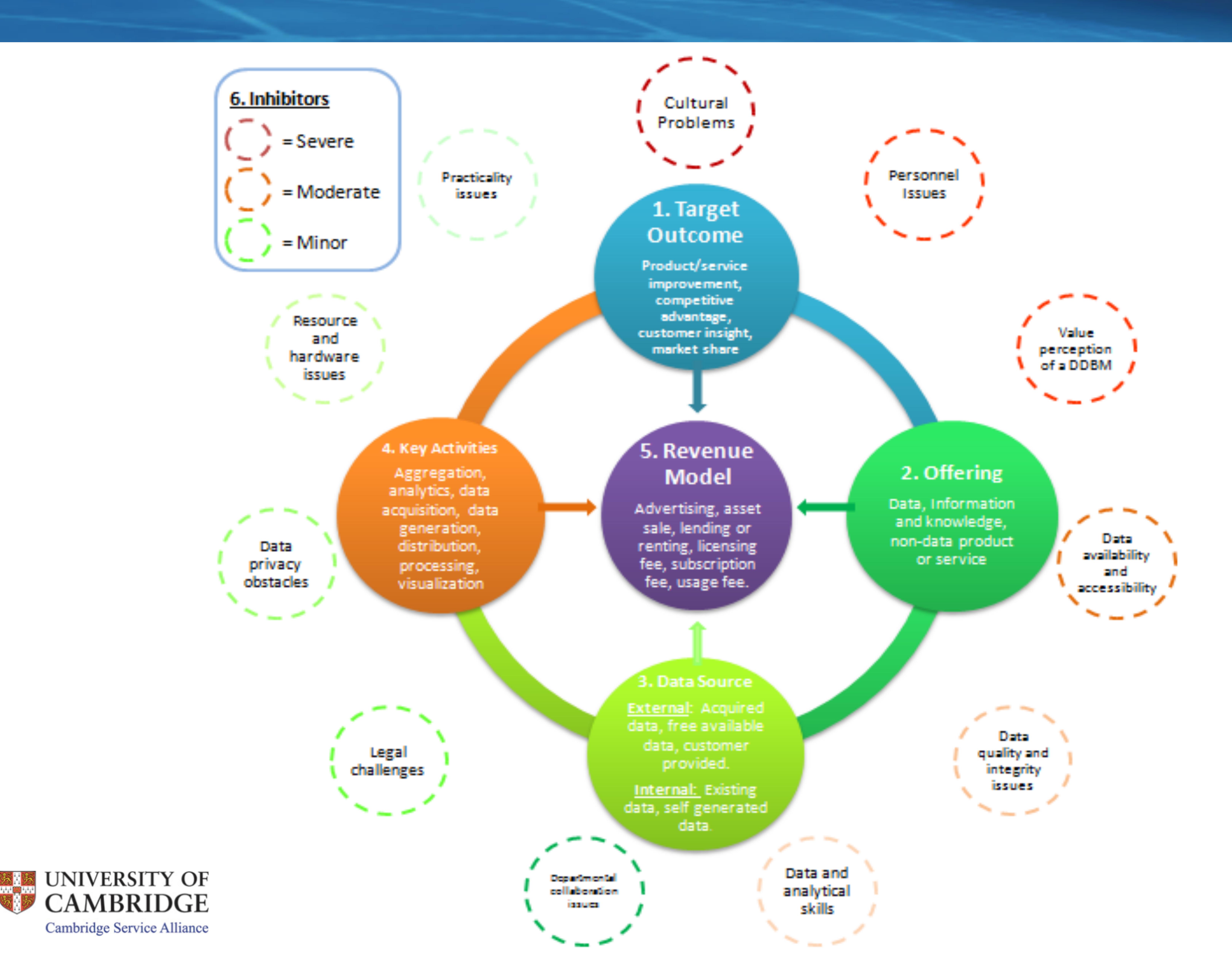
• Personnel issues may be the root cause of the other main hindrances to achieving a DDBM.



## Summary:



## DDBM Innovation Blueprint



# The Six Fundamental Questions for DDBM Construction

Established Organizations							
Company Name	Sector	1. Target Outcome: What are we trying to achieve?	2. Offering: What is our desired offering?	3. Data Source: What data do we require and where are we going to acquire it from?	4. Key Activities: How are we going to utilize this data?	5. Revenue Model: How will we monetize it?	6. Inhibitors: What are the barriers to us accomplishing our goal?
Zara	Retail	Customer insight	Non-data product or service	Free available data, customer-provided data and existing data	Prescriptive and descriptive analytics	Advertising – aligning products to customer wants	Cultural problems, value perception of a DDBM
AT&T	Telecom- munications	Brand awareness	Non-data product or service	Customer-provided	Data acquisition and analytics	Advertising	Data privacy obstacles, cultural problems
	Start-up Organizations						
Swarmly	Technology	Customer insight	Information/ knowledge	Self-generated data (crowd sourcing)	Aggregation	Advertising	Data quality and integrity issues
Gild	Recruitment	Market share	Information and knowledge	Free available	Descriptive analytics	Subscription fee	Legal challenges



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## Forthcoming Webinars The Cambridge Service Alliance

Date 14:30hr GMT	Topic	Invited speaker
May 11 <sup>th</sup> 2015	Data and analytics - data-driven business models: A blueprint for innovation	Dr. Mohamed Zaki
June 8 <sup>th</sup> 2015	Through life accountability: managing complex services	Chara Makri
July 6 <sup>th</sup> 2015	A capability-based view of service transition	Dr. Ornella Benedettini
Sept. 14 <sup>th</sup> 2015	Critical success factors on the shift to services	Dr. Veronica Martinez
Oct 12 <sup>th</sup> 2015	The transition towards a data-business model	Dr. Mohamed Zaki, Tor Lillegraven and Prof. Andy Neely
Nov. 16 <sup>th</sup> 2015	Making and sustaining the shift to services in the animal health industry	Dr. Veronica Martinez and Veronique Pouthas
Dec. 14 <sup>th</sup> 2015	Delivering outcome-based contracts using an alliance approach	Jingchen Hou

