



Understanding customer behaviour through the extraction, storage, modeling and reporting of customer data

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Introduction

- **Scope of today's presentation**
- **Benefits of understanding customer behaviour**
- **Basic methodology in predicting customer behaviour**
- **Statistical modeling applications**
- **Data requirements**
- **Data extraction and storage**
- **Benefits of a data focussed approach**



Scope

- **Consumer facing businesses**
 - Finance
 - Telecoms
 - Utilities
 - Mail Order
 - Insurance
- **Relatively high numbers of customers for statistical model building**



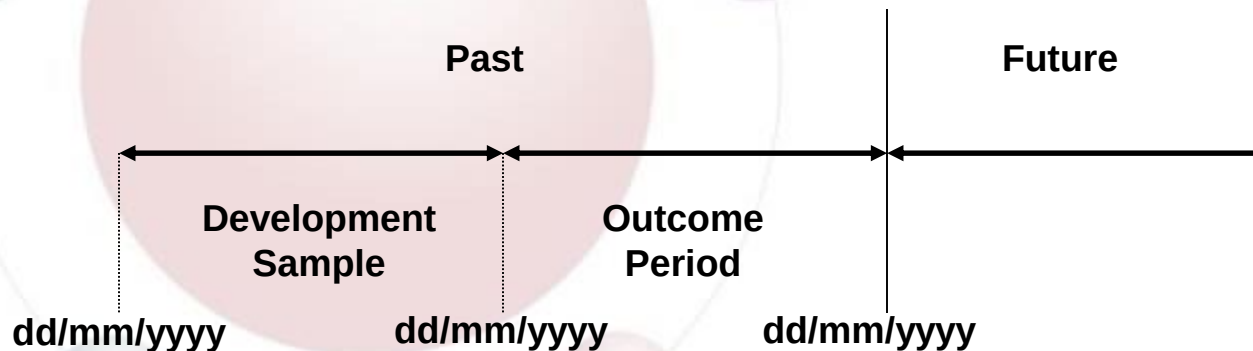
Benefits of Understanding Customer Behaviour

- **Understanding enables prediction**
 - the future will be like the past
- **Identify an individual's likely future behaviour**
- **Take actions to mitigate negative behaviour, or capitalise on positive behaviour**
- **Prediction used to**
 - Minimise risk
 - Maximise response
 - Maximise value
- **Outcome is increased Profit**



Predicting Customer Behaviour

- **Behaviour predicted through use of customer models**
 - Scorecards
 - Propensity models
- **Models based on underlying assumption**
 - the future will be like the past
- **Basic methodology**





Example – Application Scoring

- Obtain development sample
- Define which customers “good” and which “bad” in outcome period
- What did a “good” customer look like at point of application and what did a “bad” customer look like
- Which characteristics are predictive of being “good” or “bad”, and which are not
- Simple scorecard – assign weighting to each predictive characteristic
- Sum of weightings gives good:bad odds



Example – Application Scoring

Characteristic	Value	Score
Age	18 – 25	22
	26 – 40	35
	41+	48
Time @ Bank	0 – 2 years	20
	3 – 7 years	28
	8+ years	40
Residential Status	Owner	38
	Occupier	27
	Other	22



Example – Application Scoring

Application Score	Good/Bad Odds	Decision
<120	2 / 1	Decline
121 – 140	3 / 1	Decline
141 – 160	4 / 1	Decline
161 – 180	7 / 1	Refer
181 – 200	8 / 1	Refer
201 – 220	10 / 1	Refer
221 – 240	14 / 1	Accept
241 – 260	18 / 1	Accept
261+	25 / 1	Accept

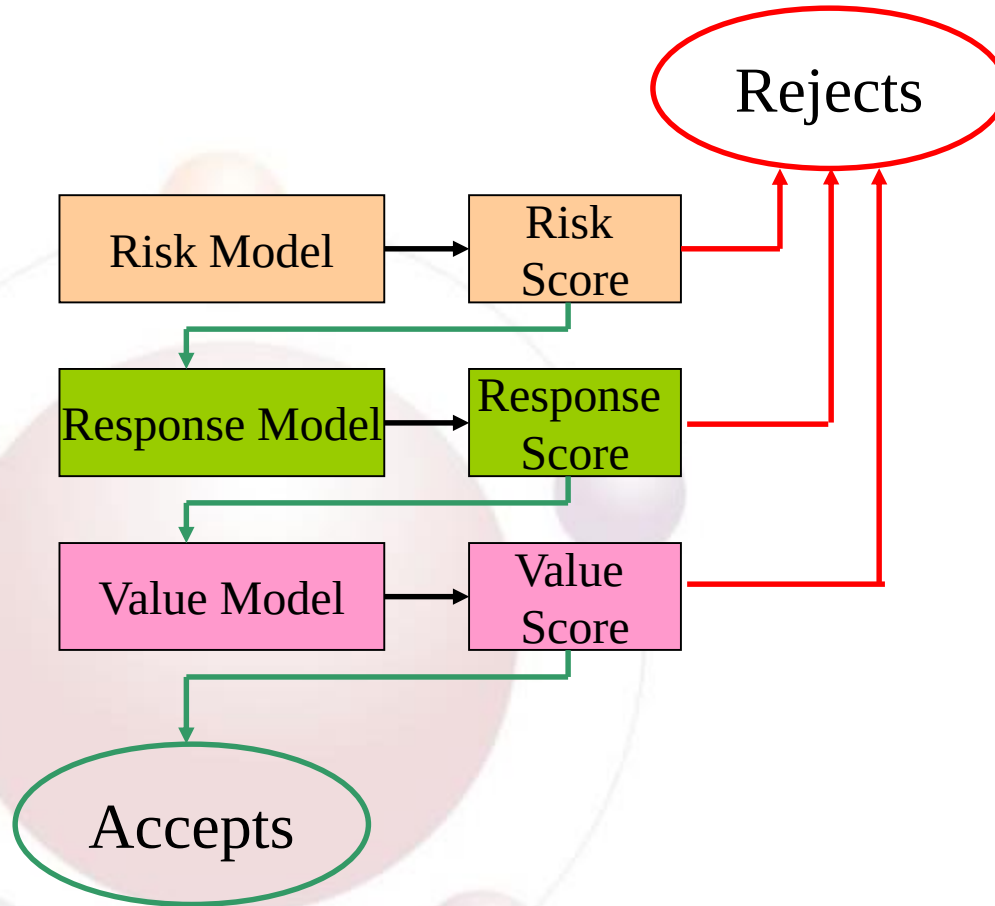


Other Statistical Modeling Applications

- **Propensity models / scorecards used in**
 - Prospect targeting
 - Application processing
 - Customer management
 - Collections & recoveries
- **Uses of Models**
 - Response scoring
 - Application scoring
 - Value scoring
 - Cross sell
 - Up sell
 - Retention
 - Credit limits
 - Collections scoring
 - Recoveries scoring

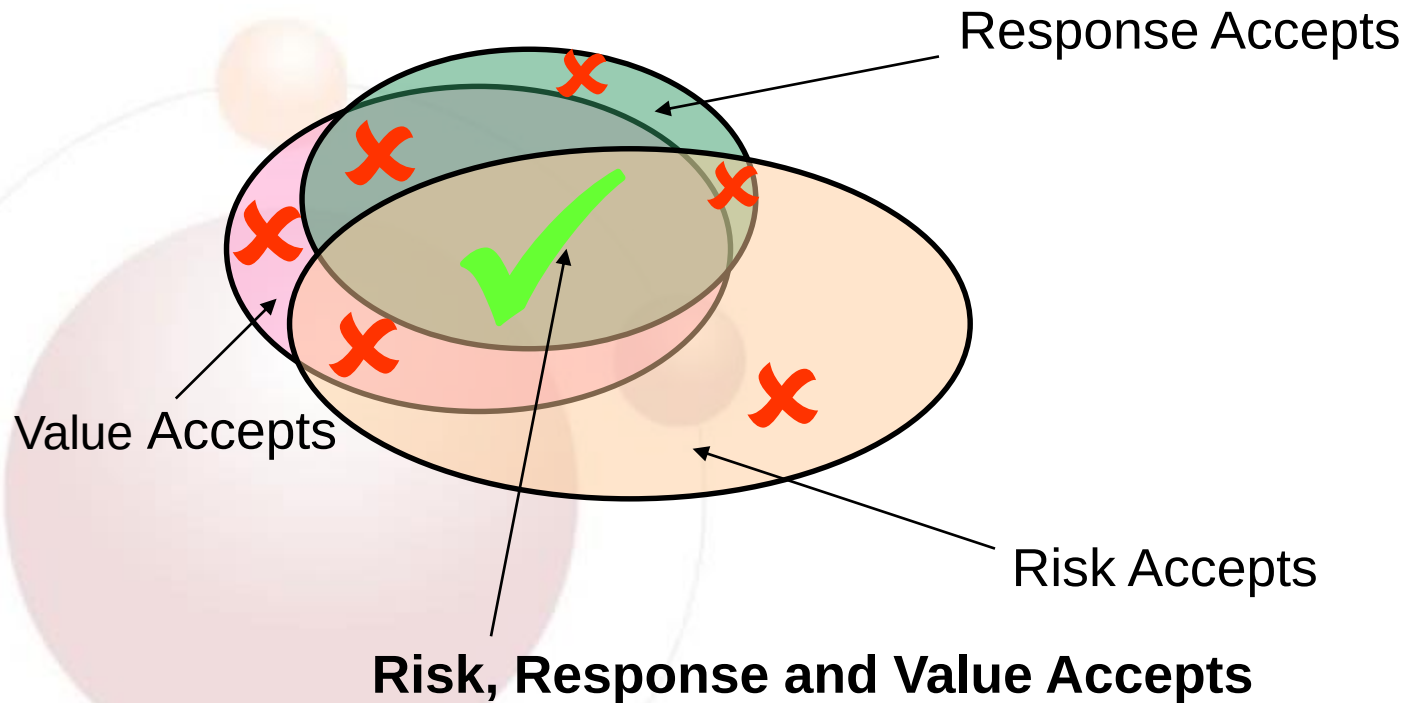


Example - Risk, Response and Value Scoring



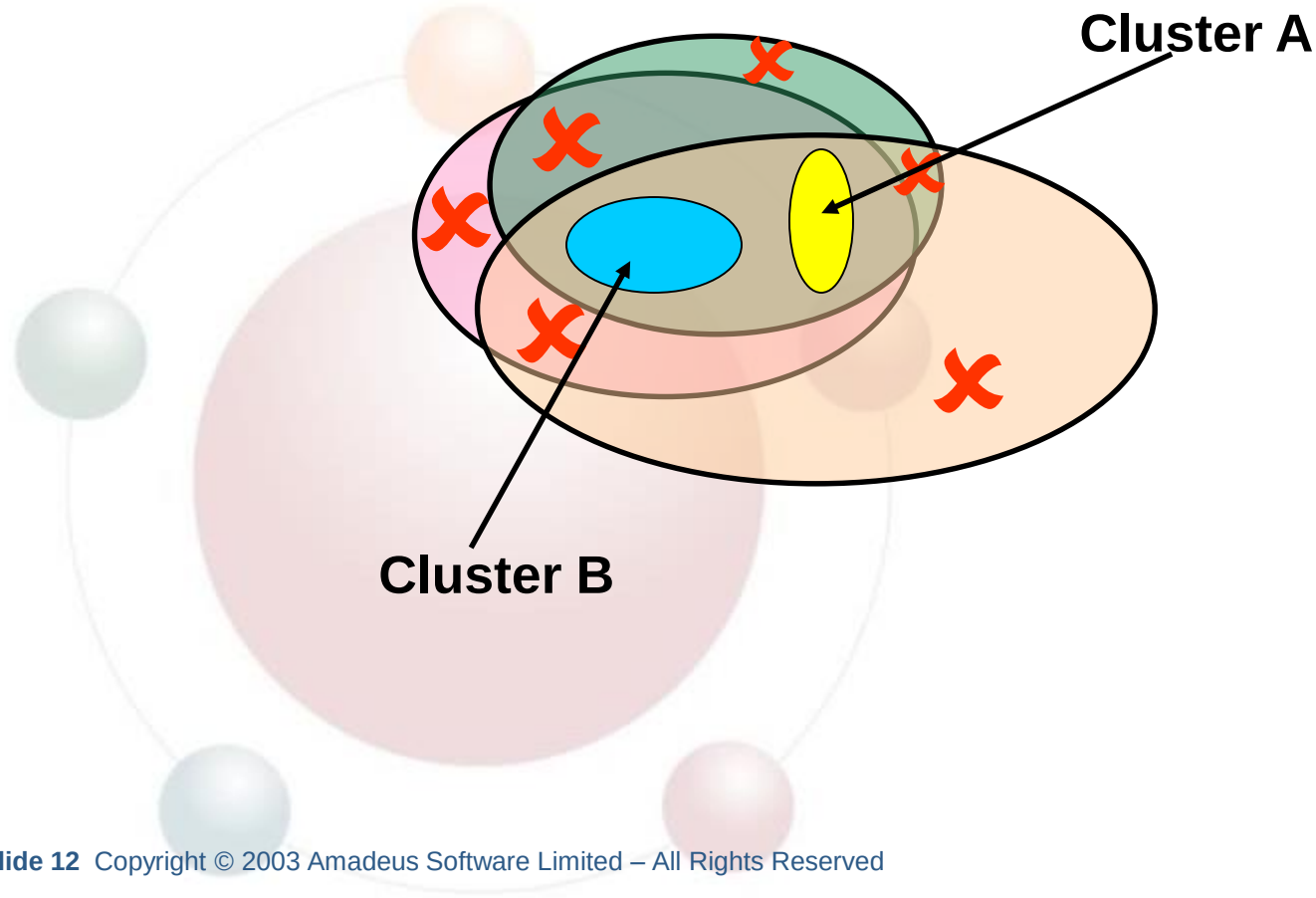


Example - Risk, Response and Value Scoring





Example – Cluster Analysis





Example - Cluster Analysis

- **Cluster A**
 - Older, high-income telemarketing responsive females
- **Cluster B**
 - Younger, middle-income direct mail responsive males
- **Marketing then telemarket Cluster A and direct mail Cluster B**
- **Both groups targeted with specifically tailored messages**



Data Requirements

**Application Processing
System**

**A/c Management
System 1**

**A/c Management
System 2**

Bureau Data

Demographic Data

Fulfilment Data

Risk Model

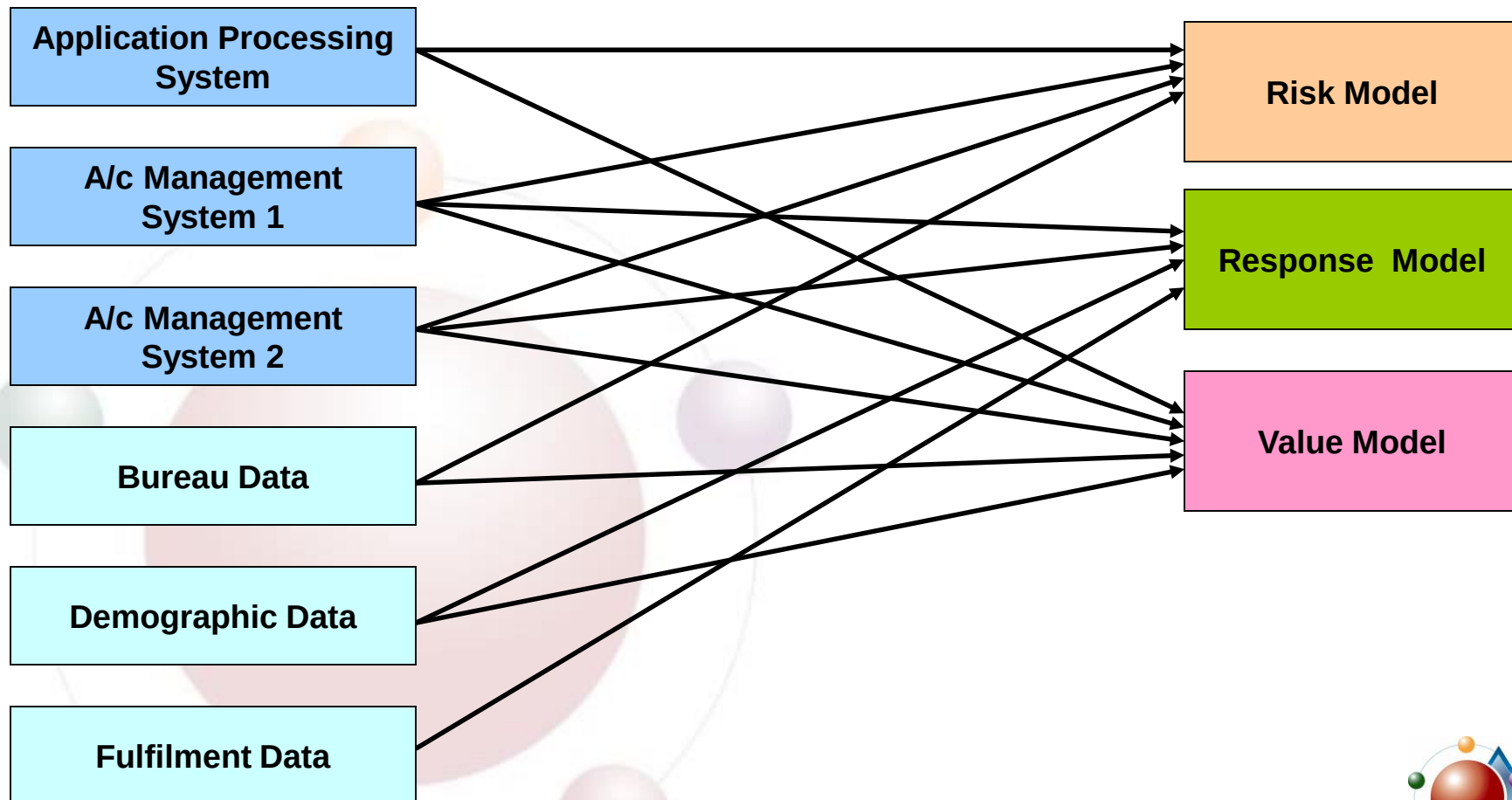
Response Model

Value Model



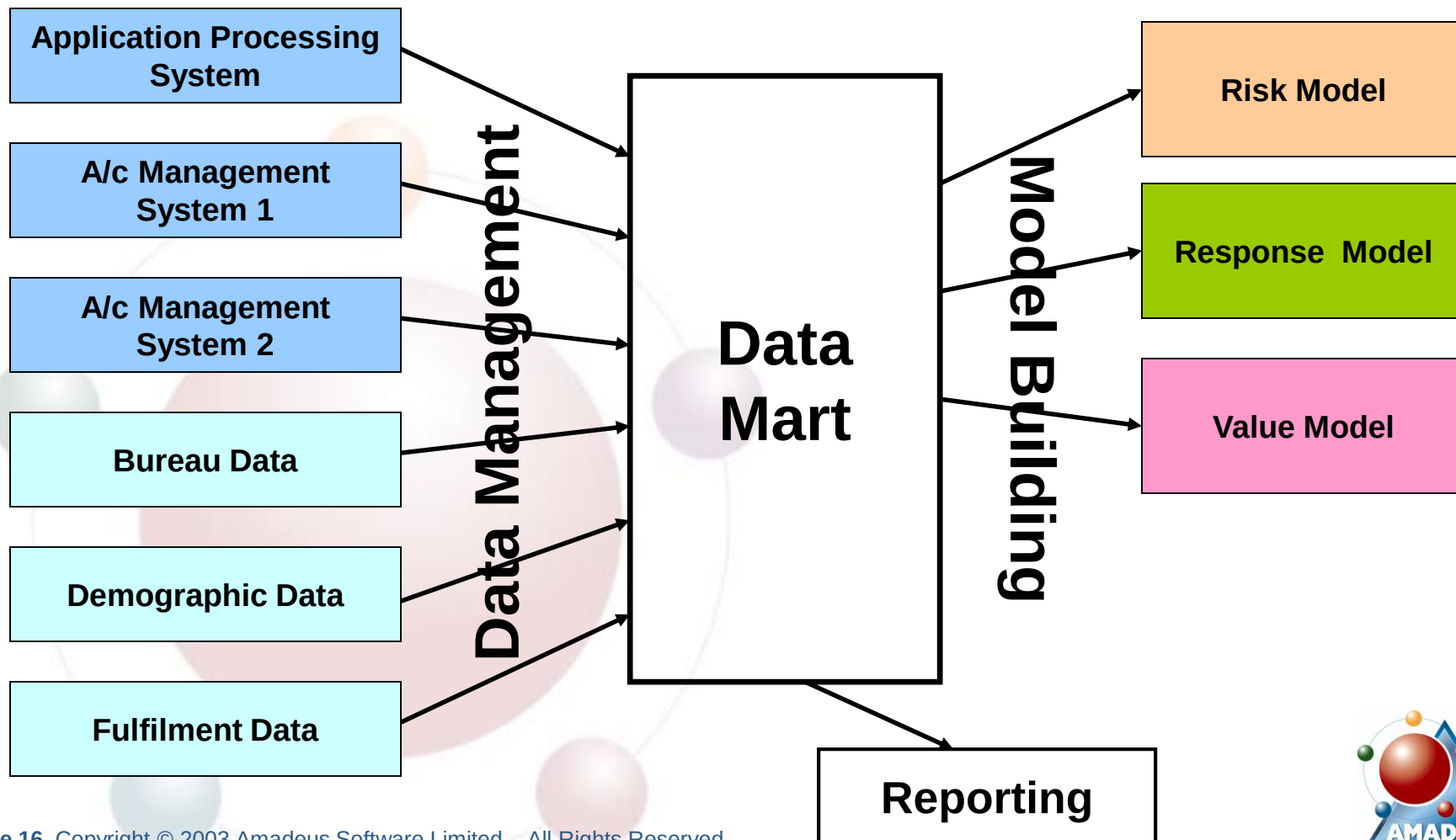


Data Extraction





Data Storage





Benefits of Data Focussed Approach

- **Analysts – less time obtaining data, more time modeling**
- **Cross-over of predictive characteristics**
- **Shared skills and resources between Risk & Marketing**
 - Data management
 - modeling tools
 - Analysts
- **Facilitates co-operative approach between Risk & Marketing – focus on Value**
- **Reduced duplication = lower cost**
- **Same data = consistency**
- **Better models = higher profit**



Questions?

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