Retail Credit Analytics
Intro to Propensity Modelling

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Introduction

Predictive modelling has been an established methodology within the credit side of portfolio management (i.e. prediction of loss)

The techniques are under-utilised on the revenue side of the equation

However, for credit cards, banks can enact strategies /marketing campaigns that encourage spend, reactivation or retention (retention can also be used within long term lending, e.g. housing loans).
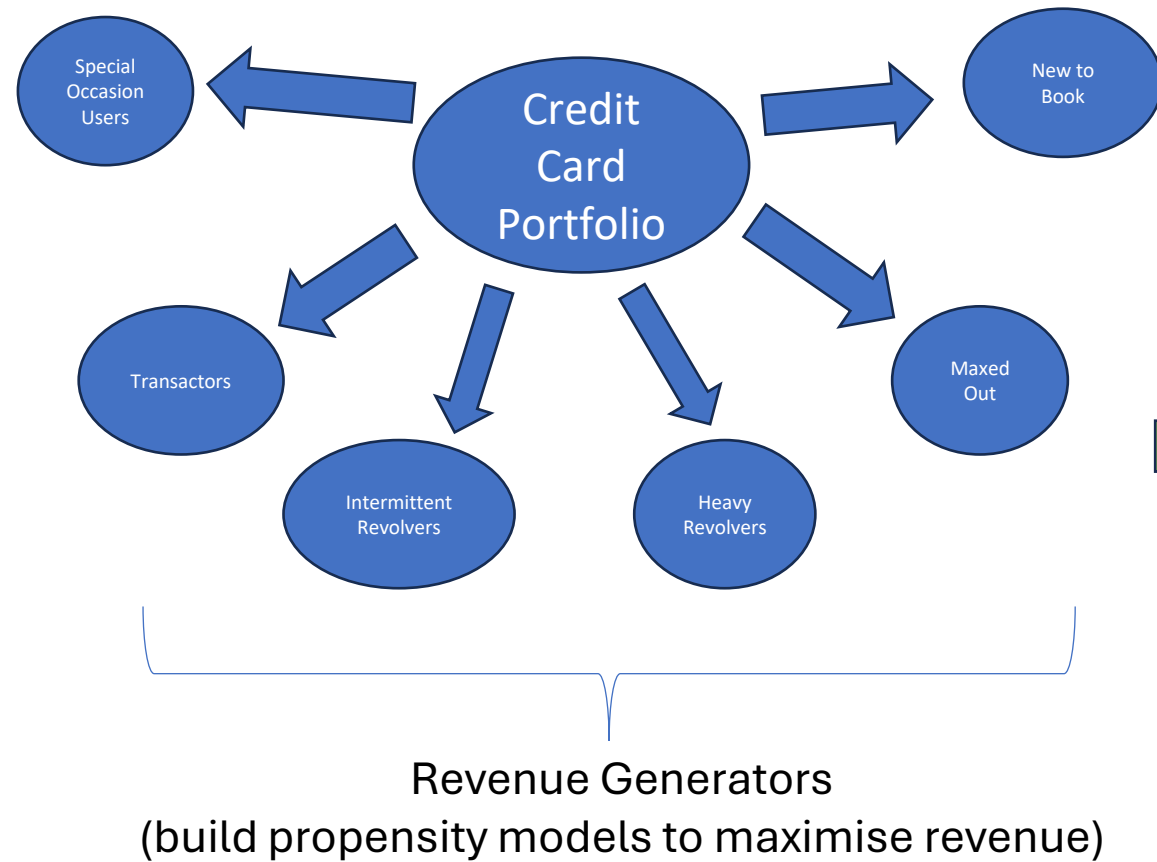
Transactional Data harvested from the card portfolio can be highly predictive in the prediction of such events or to attempt to amend customer behaviour, i.e. From Transactor to Revolver

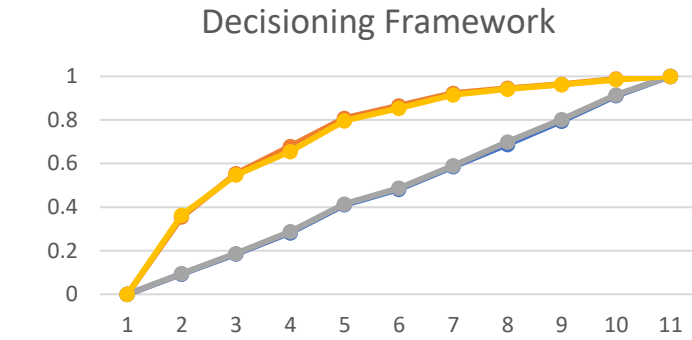If the bank has access to open banking data the effects on model quality would be fantastic

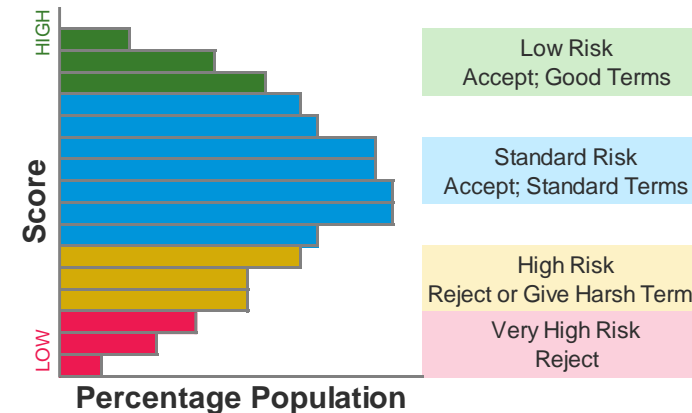# Application of Propensity Models to boost Credit Card Revenue

Identify Customer Behaviour Groups
(Customer Lifecycle Management)

Revenue Modelling to influence behaviour
**within select customer group**

Special Occasion Users

Credit Card Portfolio

New to Book

Transactors

Maxed Out

Intermittent Revolvers

Heavy Revolvers

Revenue Generators
(build propensity models to maximise revenue)

Decisioning Framework

Add in Risk (from Scorecards)

Score — HIGH — LOW

Percentage Population

Low Risk
Accept; Good Terms

Standard Risk
Accept; Standard Terms

High Risk
Reject or Give Harsh Terms

Very High Risk
Reject

Customer Lifecycle - Cards

Current Status	Future Status	Action
Revolver – Spend Active	Revolver – Spend Active	Maintain
Revolver – Spend Active	Revolver – Paydown (Spend Inactive)	Model Spend Propensity
Revolver – Paydown (Spend Inactive)	Revolver – Spend Active	Model Spend Propensity
Revolver – Paydown (Spend Inactive)	Revolver – Paydown (Spend Inactive)	Model Spend Propensity
Transactor – Spend Active	Transactor – Spend Active	Maintain
Transactor – Spend Active	Transactor – Spend Dormant / Occasional User	Model Spend Propensity
Dormant	Revolver - Spend Active	Model Reactivation & Spend
Dormant	Transactor – Spend Active	Model Reactivation & Spend
Dormant	Dormant	Model Reactivation & Spend

Propensity Modelling Arena
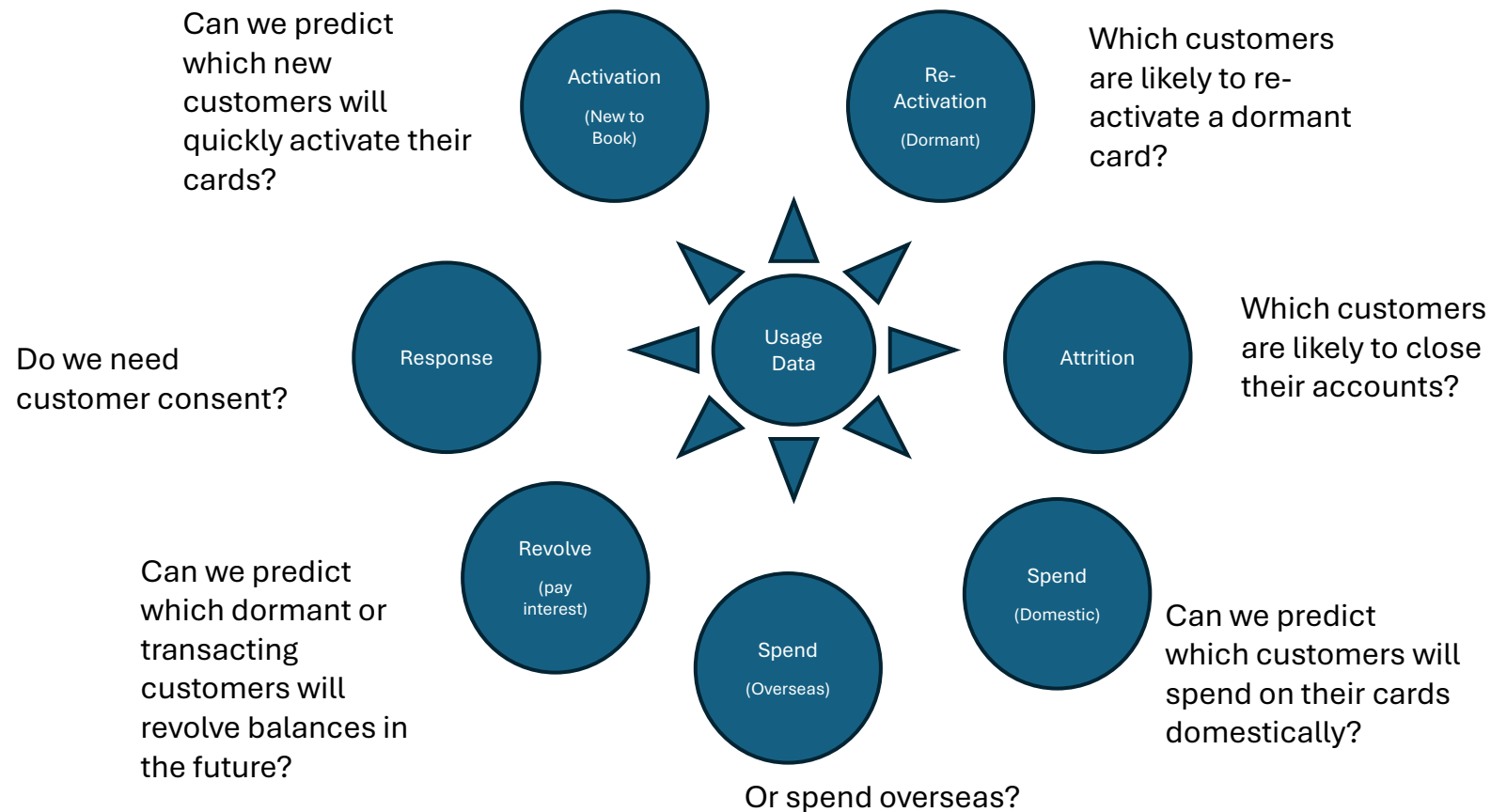
Business Problem Identification

What is the business problem?

Low Spend, High Limits with High Capital Costs

Majority of Revolvers are in Paydown mode, Falling Interest Income

Majority of Cards are Occasional Transactors, High Capital Costs

High Proportion of customer close their accounts, Portfolio Shrinkage / Lower Share of Wallet

New Cards do not activate

What Data is available?

Transactional

Demographic

Bureau Data (Risk)

Regulatory Metrics

Alternative Data

Open Banking Data

Effects on Portfolio Management

Increased Overheads

Monitoring / Validation Overheads

Model Risk Management

Effect on Risk Management

High Capital Numbers from increased Revolving Balances

Determining the Risk Reward Metrics

Higher Volumes in Collections

More Models on the Model Inventory and in Model Management Process
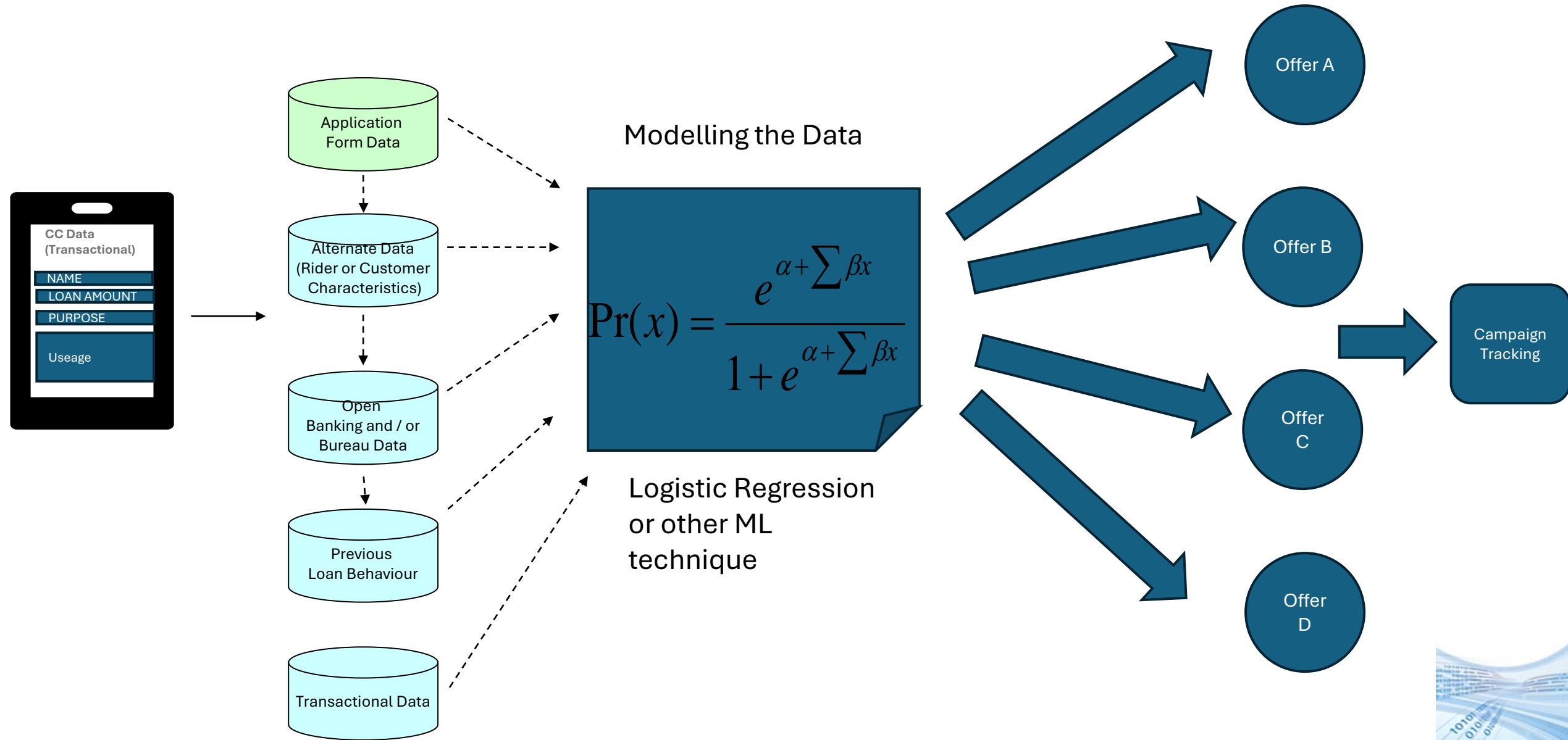
Modelling Techniques – Decision Trees
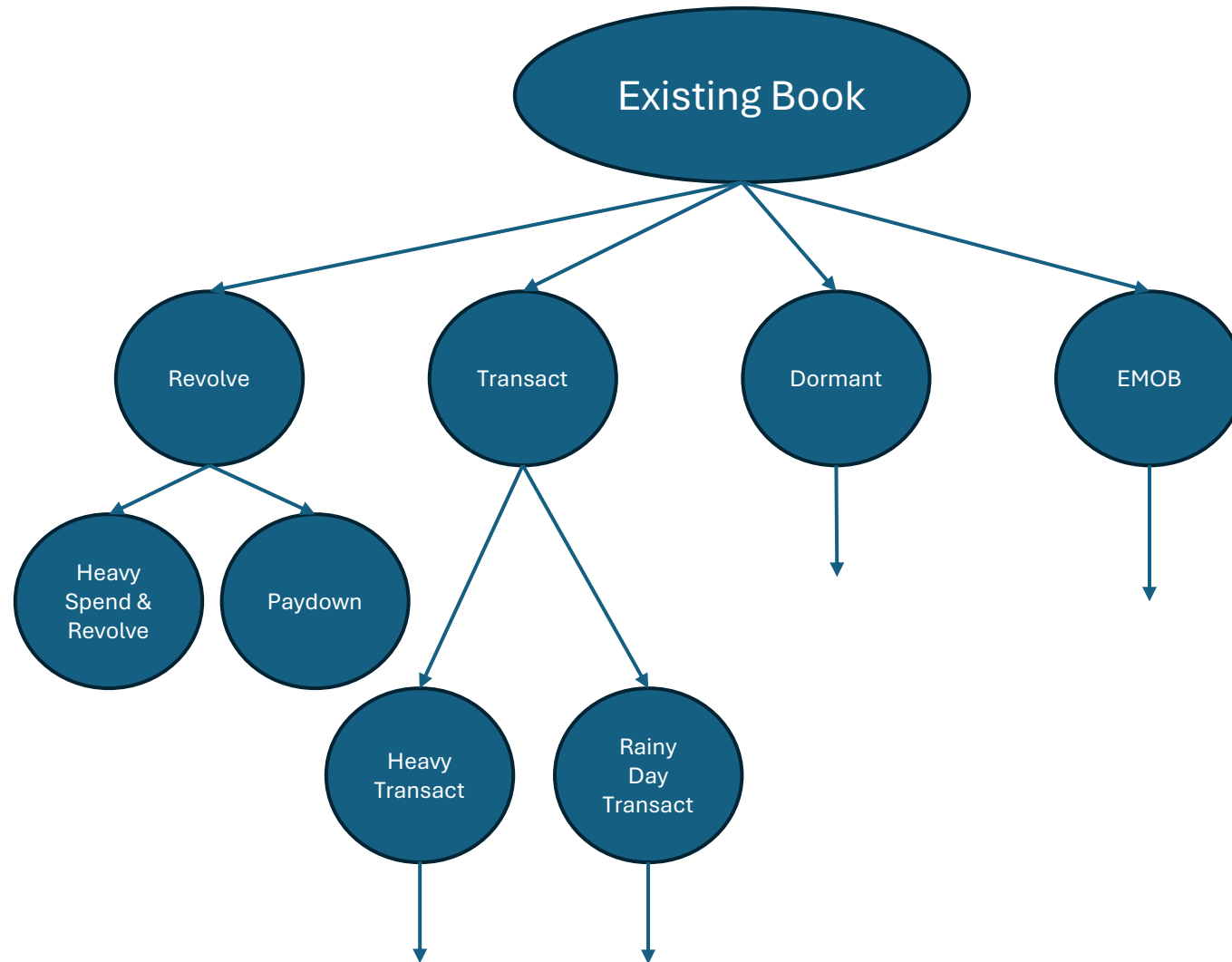
Modelling Techniques – Predictive Analytics

Automation and Analytics - Validation

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