

**When you're drowning in collections
optimising your swimming technique can be helpful**

Bruce Curry
Sr. Principal Consultant, Pre-
Sales

Richard Cowley
Sn. Principal Consultant, Analytics

Debt Collection and Recovery Life Cycle

Early Collections



Late Collections



Recovery



Focus

- Remind
- Self-cure
- Prevent deterioration

Challenge

- High volumes
- Operational Expense
- Service Level

Decisions

- How to contact? (Call, Text, Letter, CCS)
- When to contact?

- Resolve payment issue
- Prevent charge-off / write-off

- High risk provisions
- Write-offs

- Whom to restructure?
- How to restructure?
- Pre-approved offer?

- Maximise recovery

- Low conversion rates
- Low recovery rates

- Work internally?
- Place where?
- Sell?



Decision Optimization is a prescriptive analytic solution designed to discover and evaluate optimal decision strategies that satisfy multiple business objectives.

What is a Decision Impact Model?

A **Model** that represents the complex interaction between the:

- Criteria used in a Decision
- Decision(s) to be taken
- Reactions to and Outcome of the Decision(s)
- Objectives of a Decision Strategy

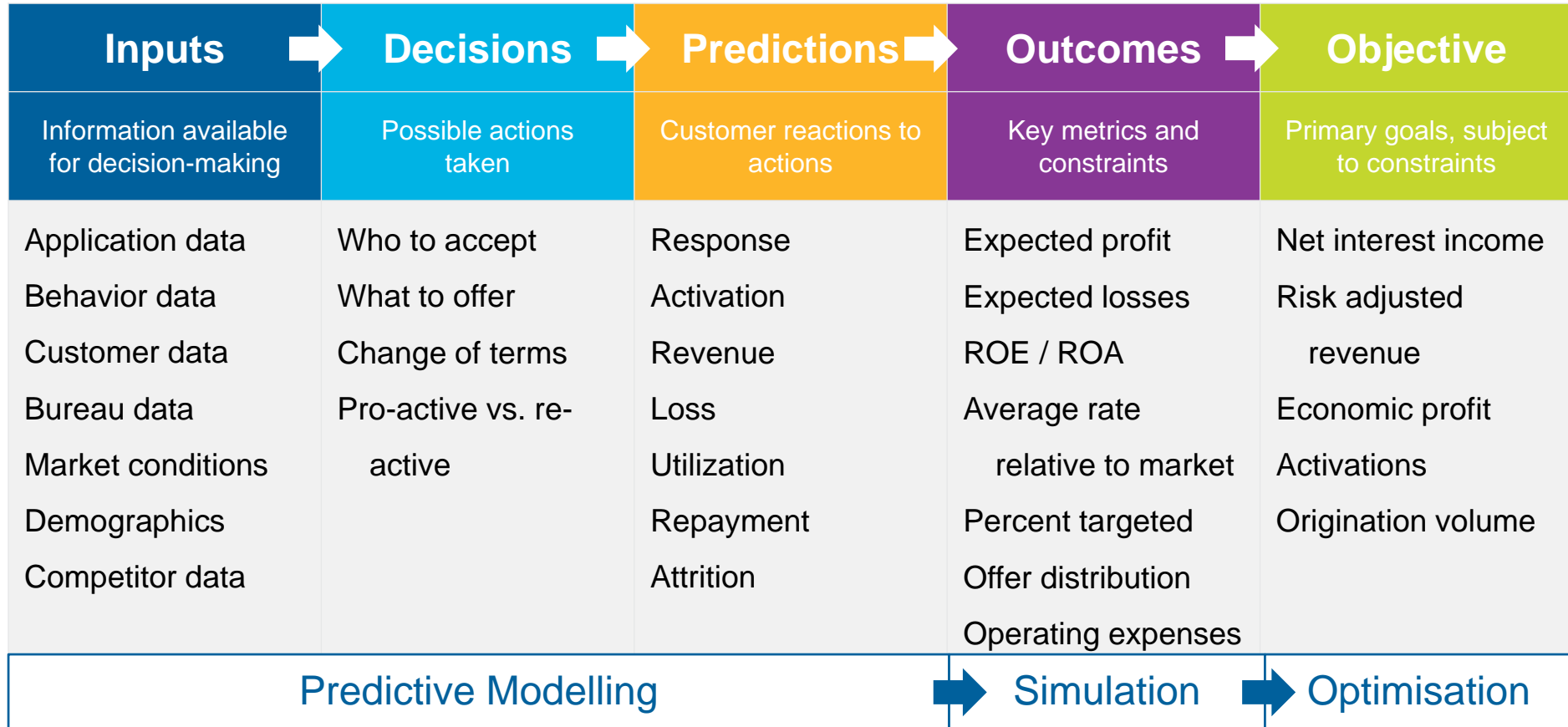
The purpose of a **Decision Impact Model** is to assist decision makers in making better decisions in complex situations.

By modelling the Decision itself:

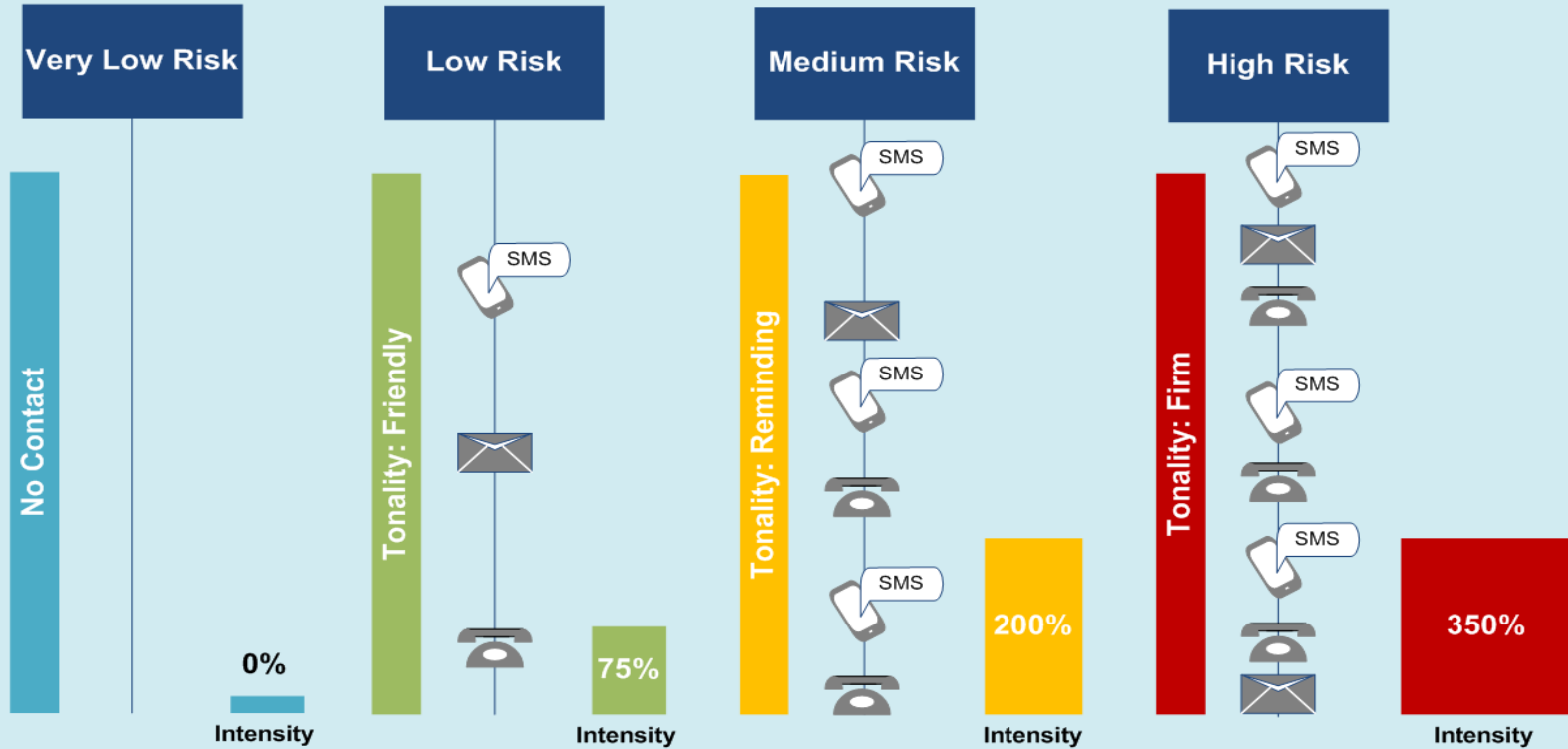
- it allows for better decisions to be identified (@ account, segment, portfolio)
- compared to those made today, and
- potentially identify the optimal Decision to meet the Objectives



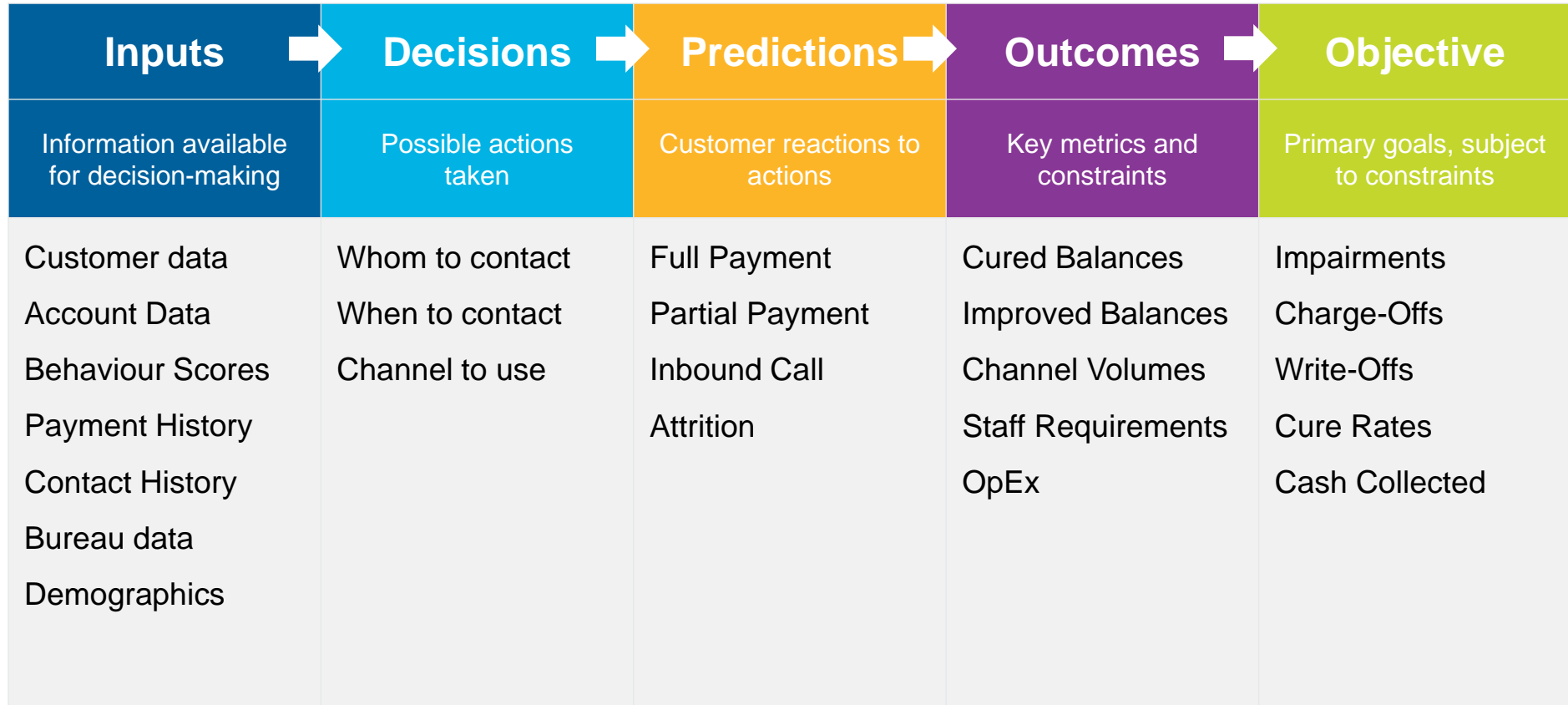
At the Heart of Decision Optimization is the Decision Model



Example 1: Operational Segmentation – How should I treat my customers?



Decision Impact Model – Early Collection Treatments



Example 2: Restructures – Common Observations

- Too little too late
- Only focus on the known good customers
- Low solution take-up ratios
- Insufficient range of restructure instruments
- Looking to cover losses/increase profit from credit-stressed customers
- High post-restructure default rates
- Many business units involved in the process
- Over-restructuring—erosion of portfolio quality
- Too many blind spots over policy adoption, process and solution effectiveness
- Too rigid an interpretation of regulation

Restructures - Combinatorial explosion

90+ DPD Static 2 months+	Customer profile	PD EAD LGD	MOB	Term remaining	Profit made	Future Revenue	NPV of do nothing	Impact on portfolio	RFD DOI & DI	Total Exposure
	Low risk 29 years	Low \$8400 \$8000	60	12	X%	Y%	-\$A	RWA > X%	Maternity 7 months <30%	\$24000 3 products 2 UTD 1 secured
	Medium risk 62 years	Med \$14700 \$13000	72	36	X%	Y%	-\$B	RWA > X%	Medical retirement Permanent <50%	\$14700 1 product
	High risk 22 years	High \$4900 \$4700	24	60	X%	Y%	-\$C	RWA > X%	Redundancy 4 months <70%	\$9900 2 products 1 UTD Un-secured



The number of constrained restructure options will run to multi millions

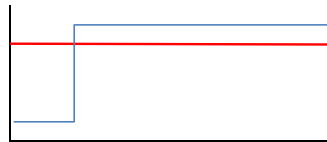
What will be the top 3 restructure shapes for each of the 3 customers that achieve the business goal. E.g. <10% restructure default rate within 6 months

What will the options be for 1000's of customers that qualify

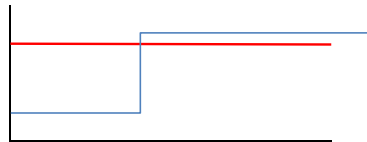
What are the different options that could be scenario played and what are the implications of each scenario

Which of the following would you chose for each and what influences the choice?

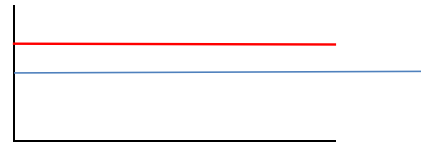
Key Contractual instalment and remaining term 
Restructure 



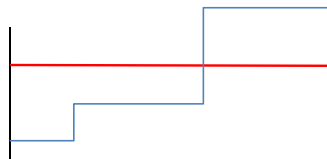
Reduced monthly for x months recouped within term



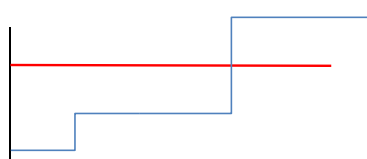
Reduced monthly for x months recouped over longer term



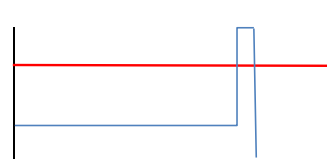
Term extension



Multiple step up within term

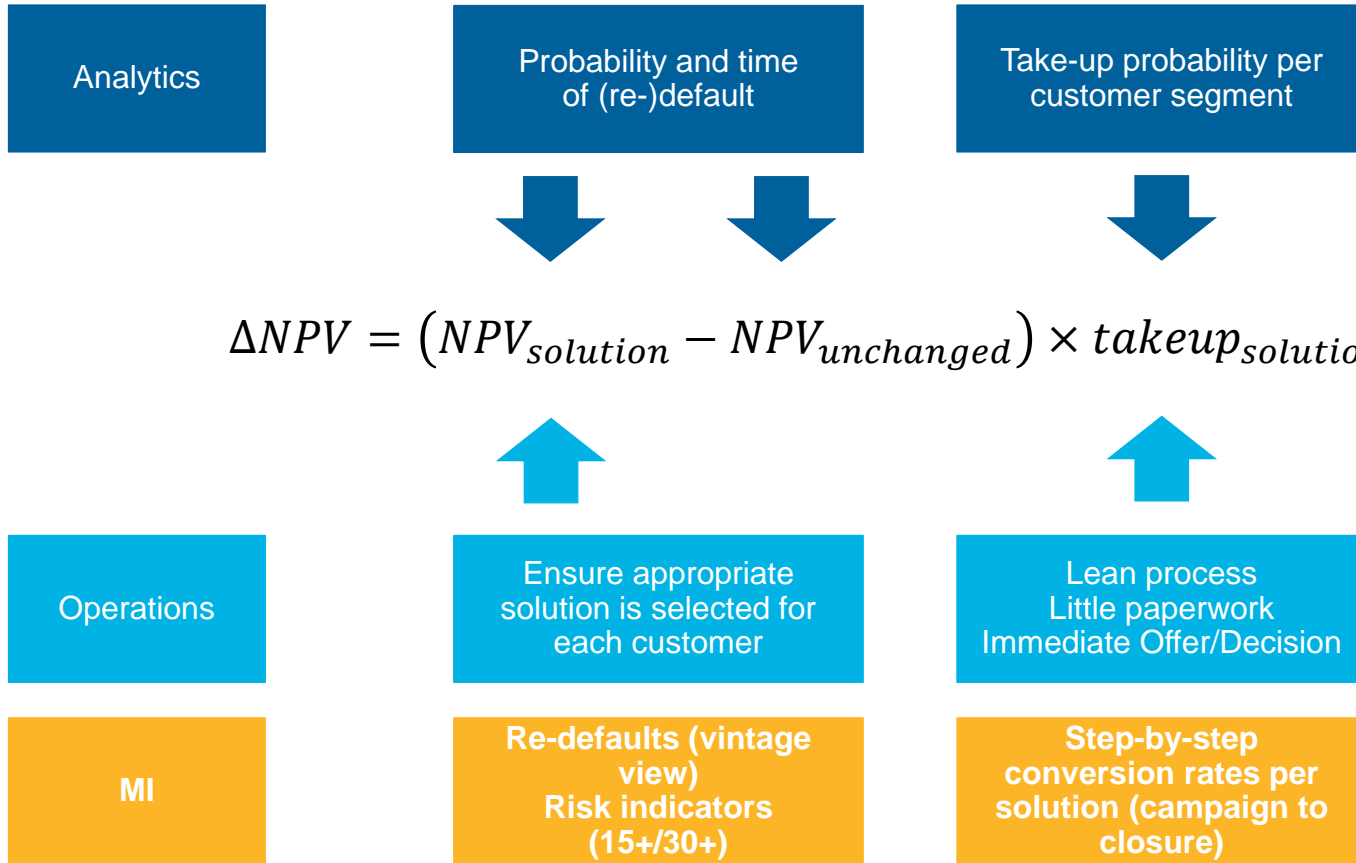


Multiple step up with term extension



Reduced monthly for x months followed by balloon payment

Restructures - Maximise NPV impact



Restructures – Two similar decision problems

Campaign Optimisation

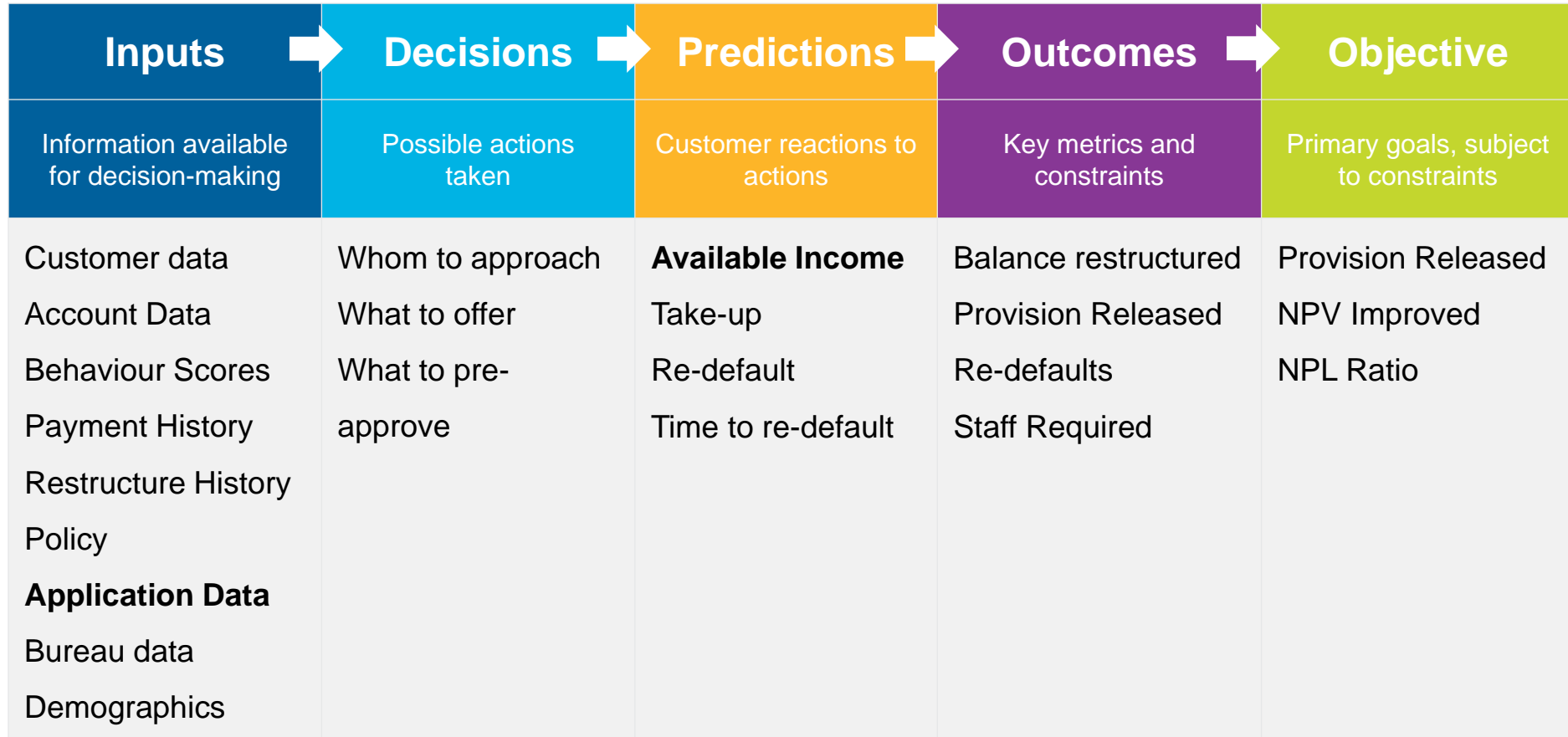
- Which customers to approach for restructure?
- Whether to make pre-authorized offer?
(arrears capitalisation, instalment reduction, payment holiday, interest reduction)
- Typically before discussion with customer - without up-to-date income and expenditure data

Event Optimisation

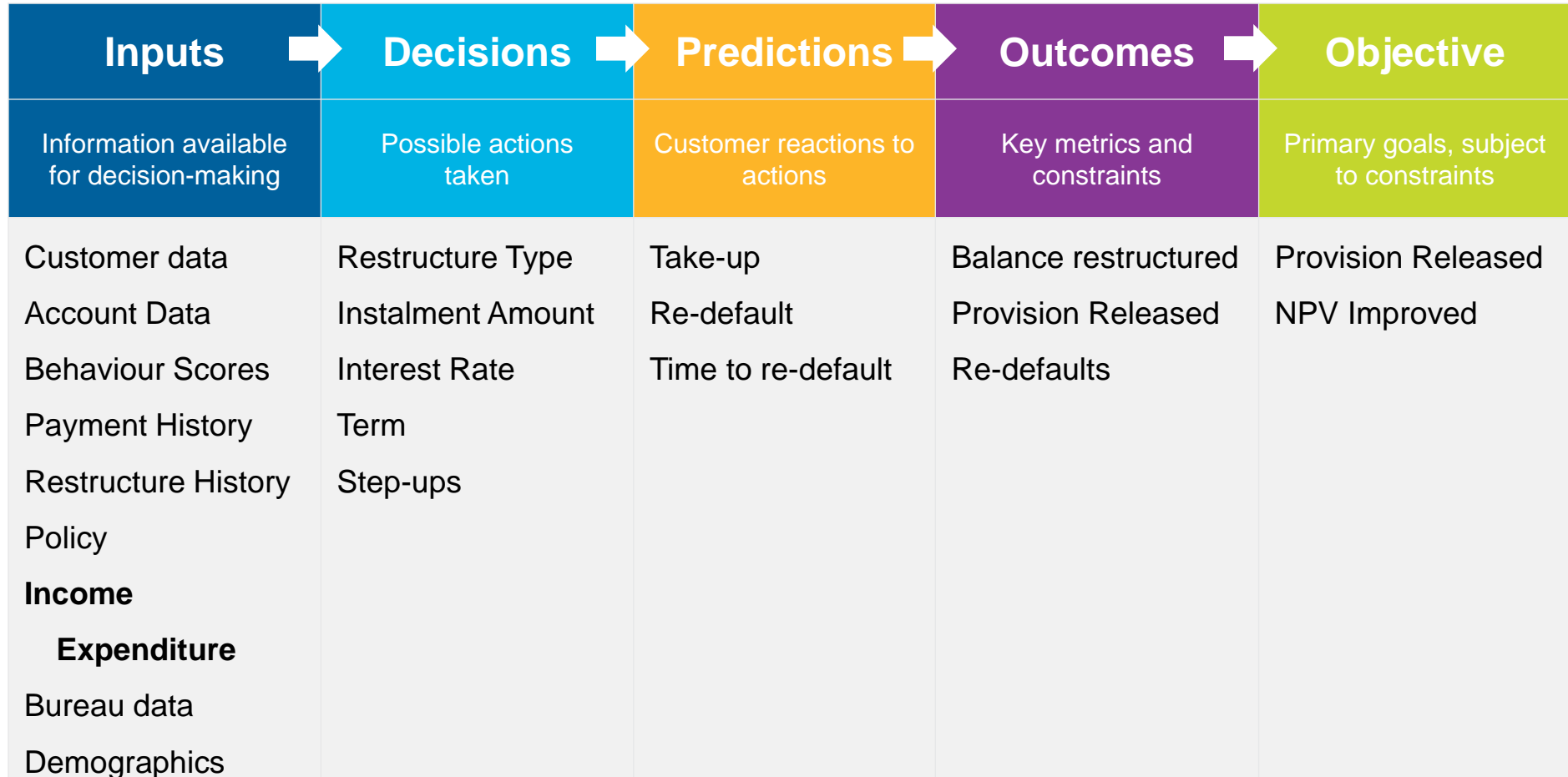
- How to restructure?
(arrears capitalisation, instalment reduction, payment holiday, interest reduction)
- Which parameters to offer (instalment, term, interest, step-ups)



Decision Impact Model –Restructure Campaign



Decision Impact Model –Restructure Event



Example 3: Recovery - Optimisation of Work/Place/Sell Decisions



ECA Score

- Probability to pay
- Amount if pay

Work

- Liquidation Rates
- Operational Costs

Place

- Which Agency?
- Liquidation Rates
- Commissions

Sell

- Price
- Cost of Sale

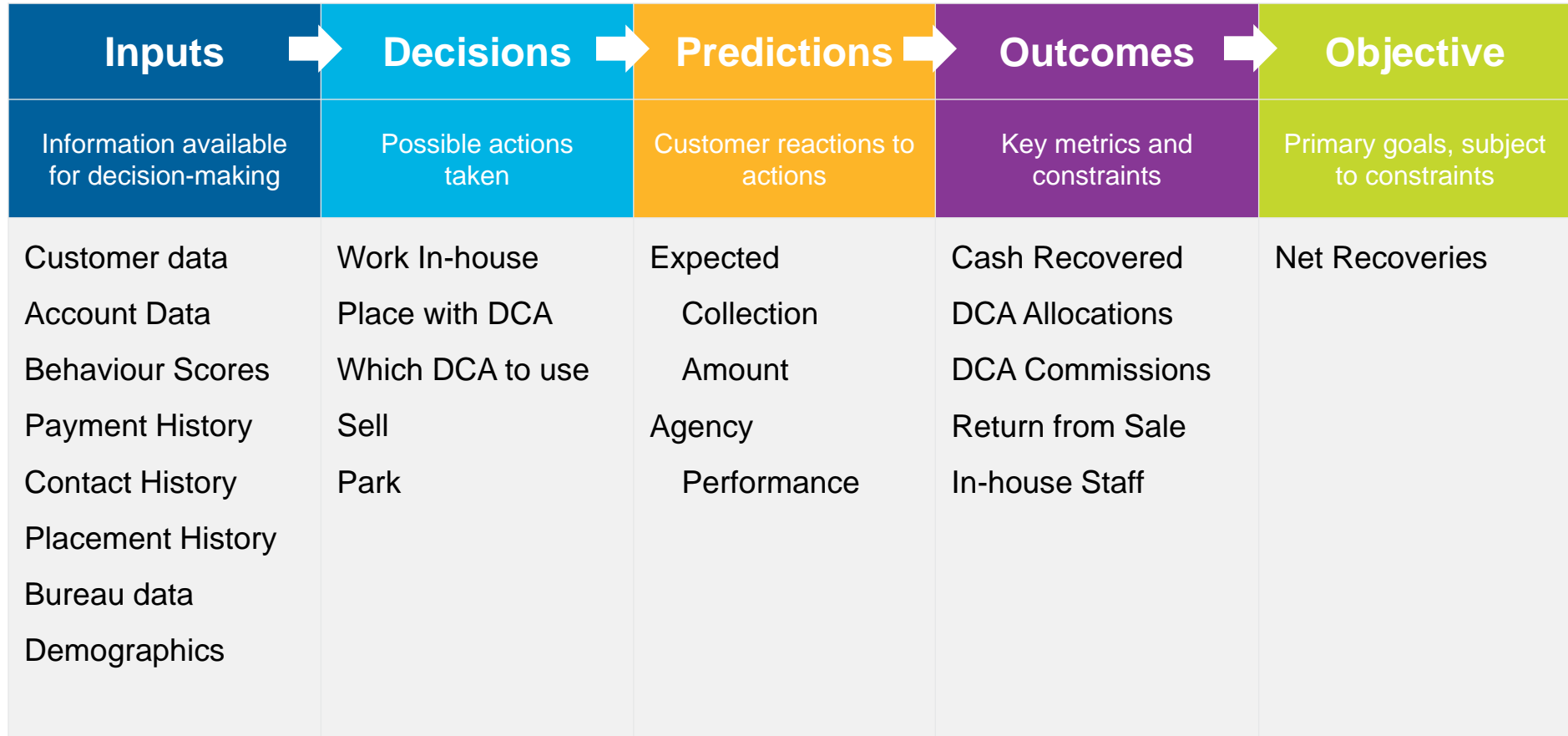
Bottom Line

Constraints

Policy & Business driven

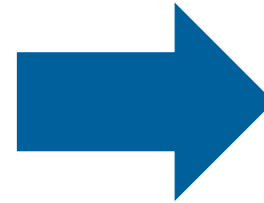
- ▶ In-house capacity
- ▶ Min/Max % per channel
- ▶ Max # for agency A
- ▶ Min \$ for agency B
- ▶ Max % for sale
- ▶ Min \$ for sale

Decision Impact Model – Recovery (Work/Place/Sell)

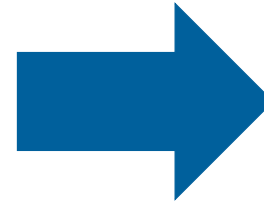


Summary

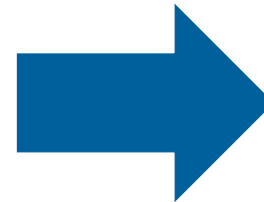
- Portfolio Performance & Profitability
 - Restructures
 - Work/Place/Sell
- Operative Expenditure & Efficiency
 - Capacity Management
 - Contact Management
 - Balancing Costs und Service Level
- Scenario Simulation
 - Better understand impact of decisions
 - Better understand impact of constraints
 - Conscious, strategic selection of operating point



Portfolio-
Profitability



Operative
Expenditure



Strategic
Management

Thank You