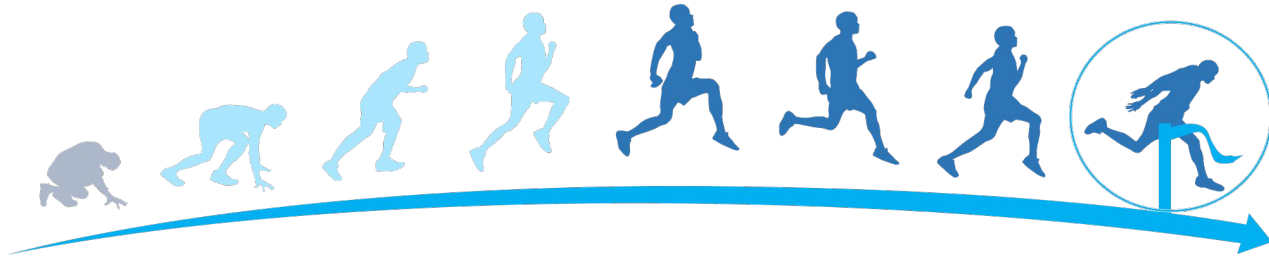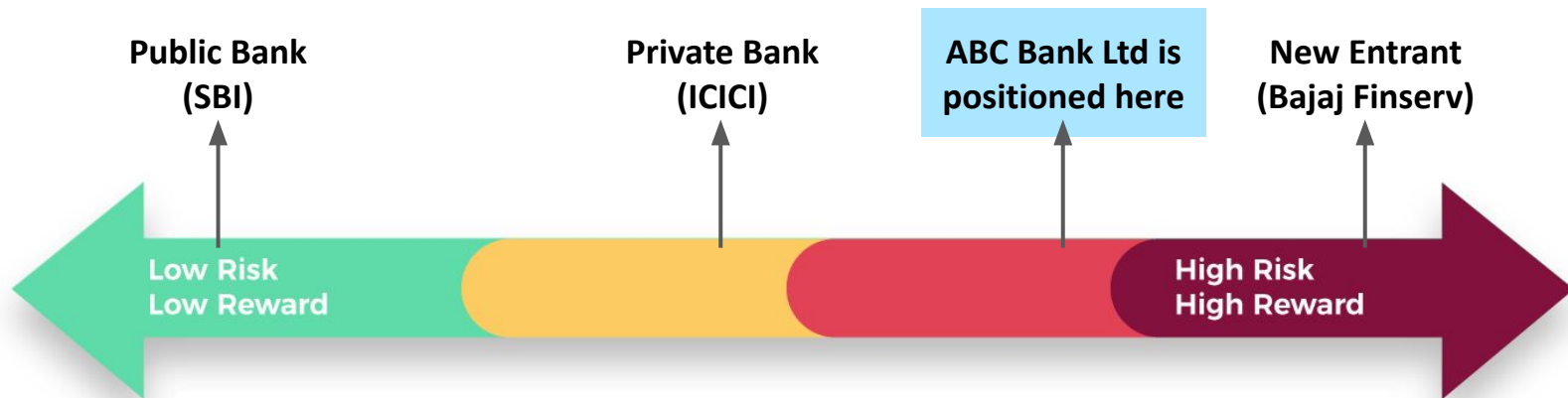# SKILLCATE

Credit Scoring Project for ABC Bank

Business Case: Credit Risk Modelling

- ABC Bank Ltd. intends to build an **in-house risk model** to make **lending decisions for <u>subprime mortgages</u>**

- Business objective is to **maximise profitability**, given:

  - Profit from a good customer is $100
  - Loss from a bad customer is $500

- Bank has shared historical data on customers':

  - Credit bureau records
  - Loan outcomes (paid off or bad loan)

Our understanding of the assignment

Public Bank
(SBI)

Private Bank
(ICICI)

ABC Bank Ltd is
positioned here

New Entrant
(Bajaj Finserv)

Low Risk
Low Reward

High Risk
High Reward

Risk Minimization | Profit Maximization | Market Expansion

- **Credit Scores - High**
- **Subprime Credit - No**

- **Credit Scores - Optimal**
- **Subprime Credit - No**

- **Credit Scores - Low**
- **Subprime Credit - Yes**

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High-level solution architecture...

Lending Decision

1 **0**

Risk ML Model

~80%

Training Set

Logistic Regression

Lending Decision Predictions

Labelled Historic Data on Credit

~20%

580
640
700
750

421

Subprime

300
850

Decile Methodology

Test Set

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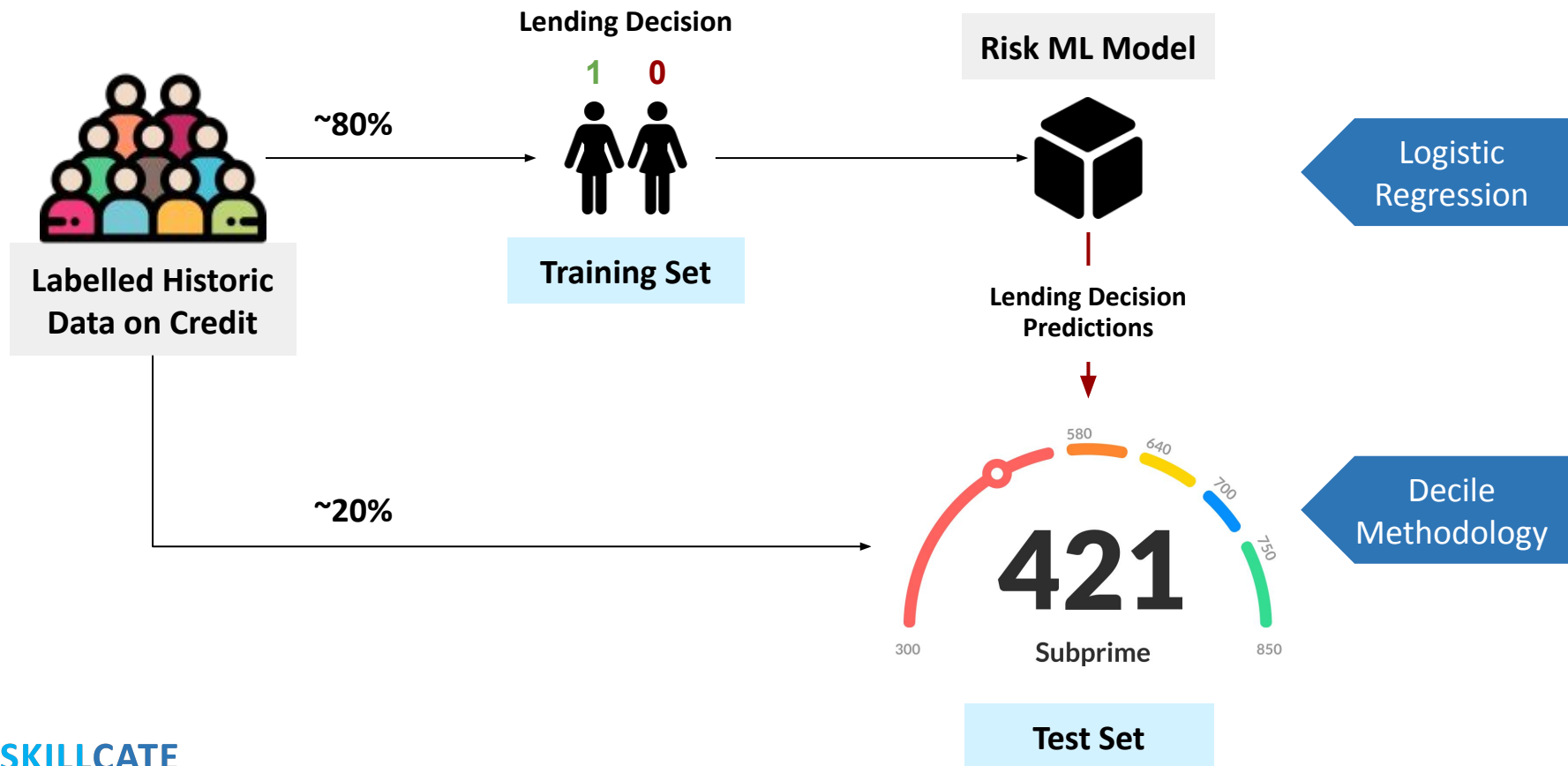
Our approach

- **Assumptions**
  - missing values imputed with mean
  - customer ID excluded from analysis

- **Trained a classification model, for**
  - predicting likelihood of loans being good/bad
  - using Logistic Regression Classifier

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Deliverable #1: In-house Risk Model

83%

Model accuracy achieved

Zero

Operational Cost to Business

ABC Bank's Lending Strategy: Options

	% of Good Loans predicted correctly	% of Bad Loans predicted correctly	Probability Threshold for Approvals
Strategy for Profit Maximisation	**67%**	**74%**	**85.47%**
Strategy for Profitability-cum-Market Expansion	**77%**	**62%**	**79.73%**

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