The nexus between Quality Data, Credit Decisioning & Risk Management

Sharief Allie
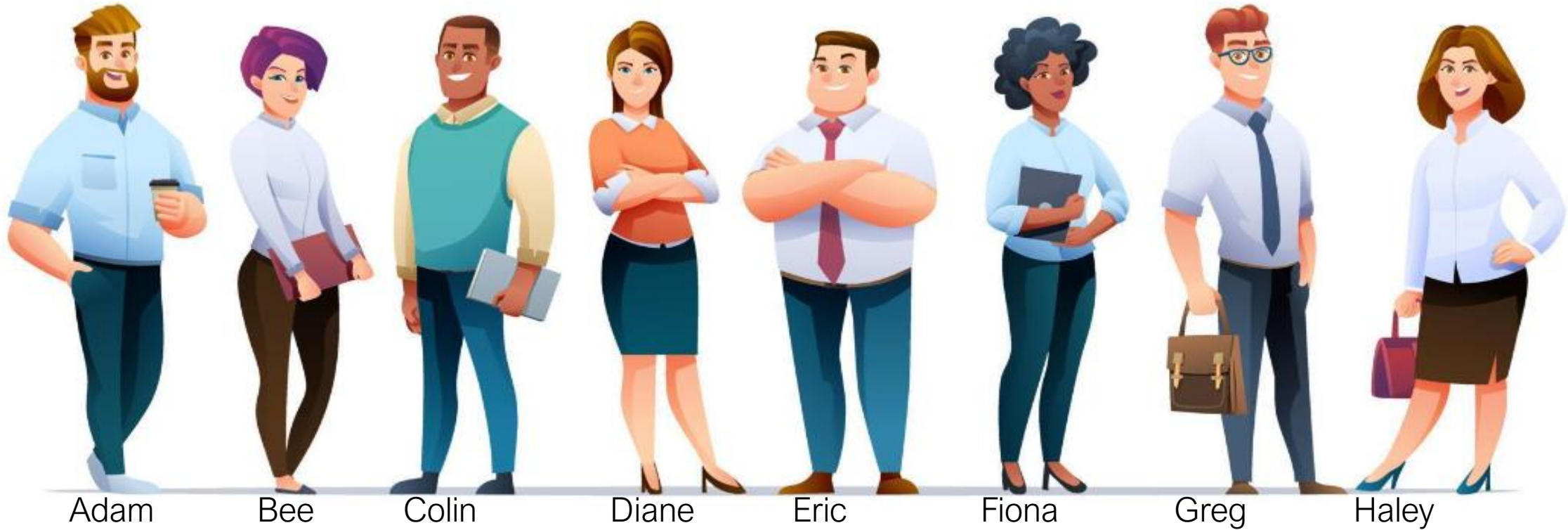
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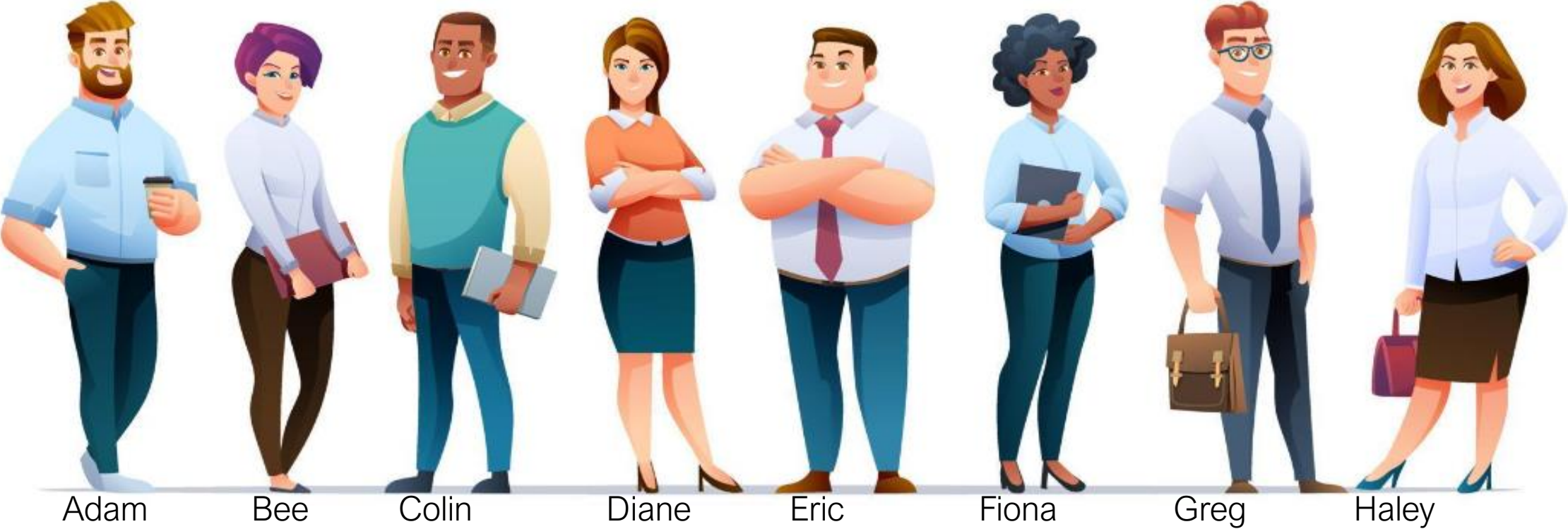
- Why data-based credit decisions?

- Data Quality – Accuracy & Relevance

- Use of Data in the Credit Life Cycle

- Closing Remarks

Who would you approve for Credit?

Adam　　Bee　　Colin　　Diane　　Eric　　Fiona　　Greg　　Haley

Adam   Bee   Colin   Diane   Eric   Fiona   Greg   Haley

We need some data, *right?*

Who would you approve for Credit?

Adam	Bee	Colin	Diane	Eric	Fiona	Greg	Haley
Missed the last 2 payments on his student loan	Part-time employed (for now)	Pays whatever & whenever he wants	Always pays on time	Pays ahead of time, overpays	Pays every 2nd month	Uses credit to the max and always pays the minimum	Severely delinquent 3 months ago

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Rank	08	05	04	02	01	06	03	07

- Objective, Independent & Consistent
- Accurate data enables
    - Decision automation
    - Scorecard developments
    - Random selections for strategy testing
    - Forecasting and KPI tracking
- Accurate data is a confidence builder

"Without data, you're just another person with an opinion."

"In God we trust; all others bring data."

— W. Edwards Deming

Data Quality

"Data is the new oil. It's valuable, but if unrefined it cannot really be used. It has to be transformed into gas, and then it can drive real value."

— Clive Humby

Data Accuracy

☑
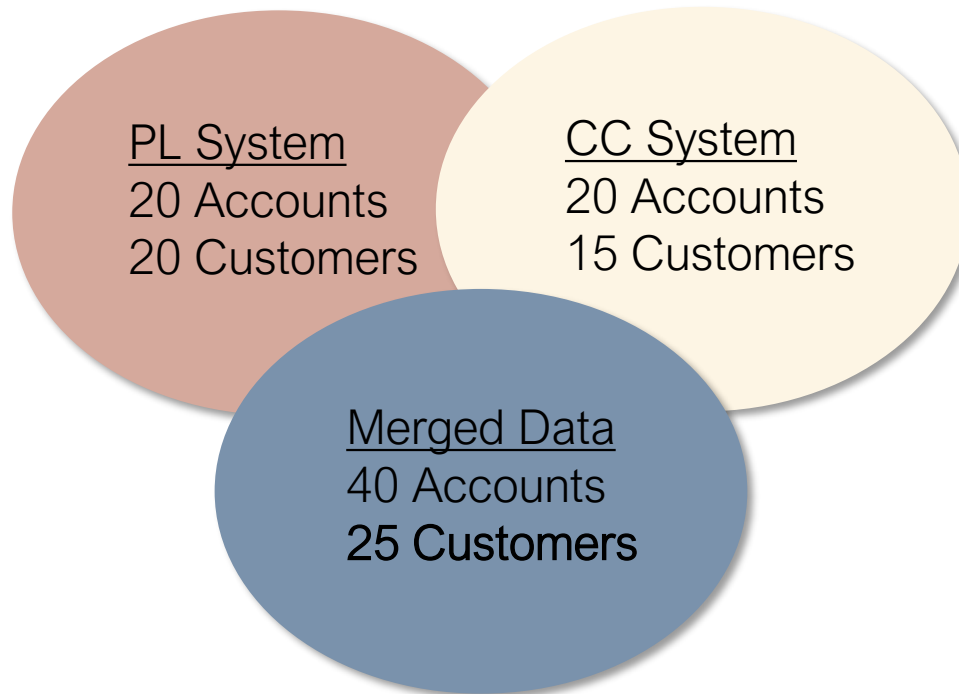
Data Relevance

- Trusted source
- Consistent
- Timeous
- Comprehensive

- Pertinent
- Valuable
- Insightful
- Decision navigator

Data Accuracy

Data Source example: *Why do we get 25 customers?*

PL System
20 Accounts
20 Customers

CC System
20 Accounts
15 Customers

Merged Data
40 Accounts
25 Customers

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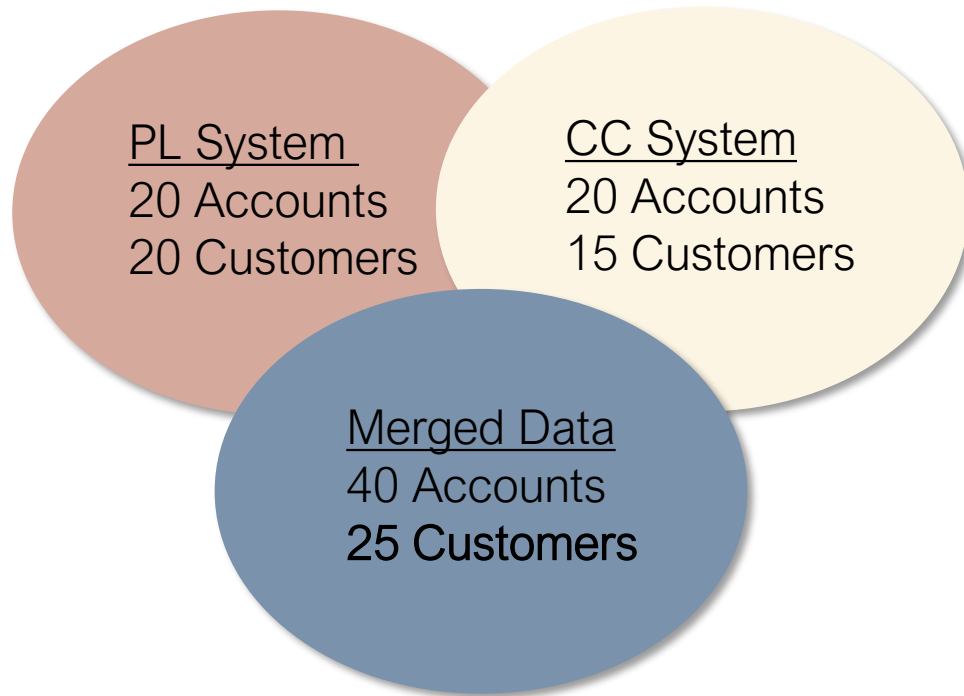
A: Customers have
multiple CC accounts
and most have PL
accounts too

Cust	Acct	# Accts
A	PL 123	1
A	CC 123	2
A	CC 456	3

Data Accuracy

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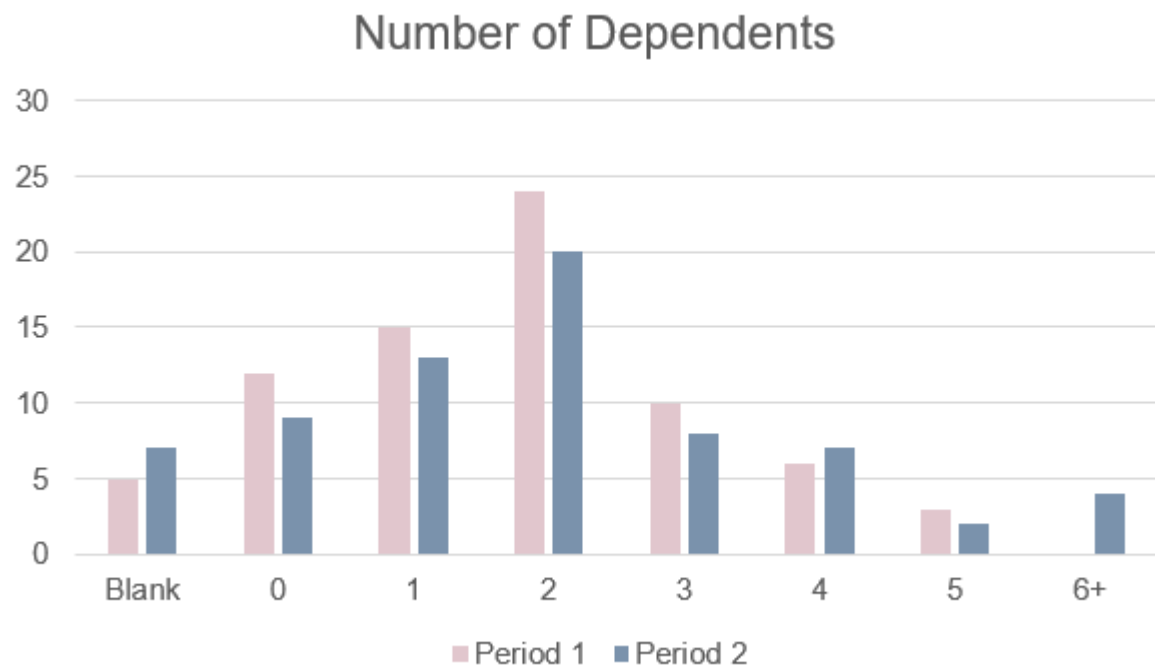| Cust	Acct	# Accts
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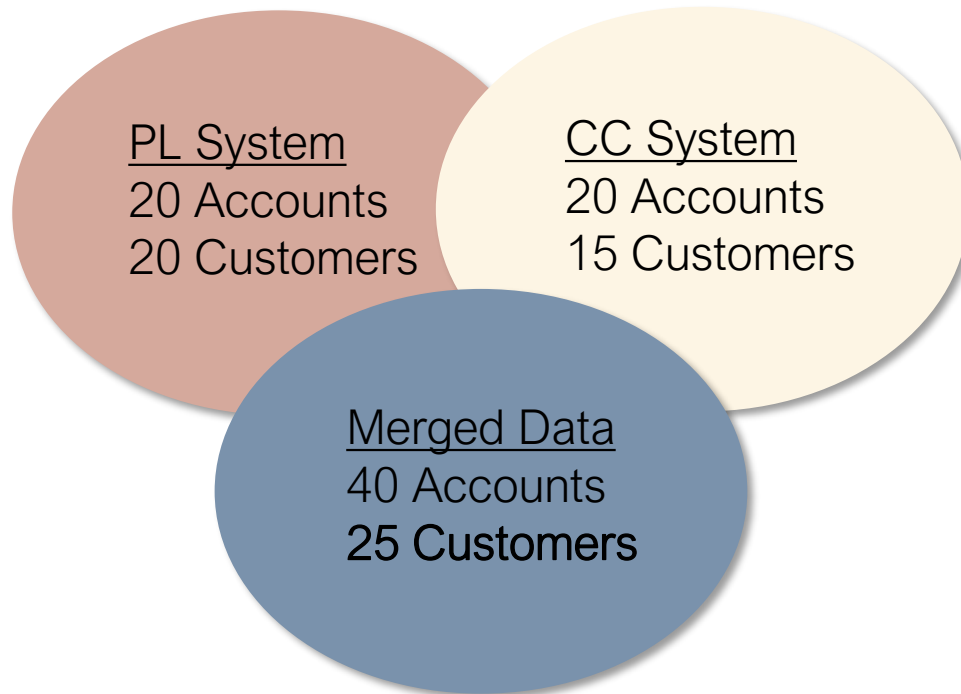
Tips:

- Single source is best, auditable

- Know the uniqueness of record types & layers e.g.
  - Customer level
  - Product level
  - Account level
  - Card level

- Understand related business rules i.e. multi-product holdings
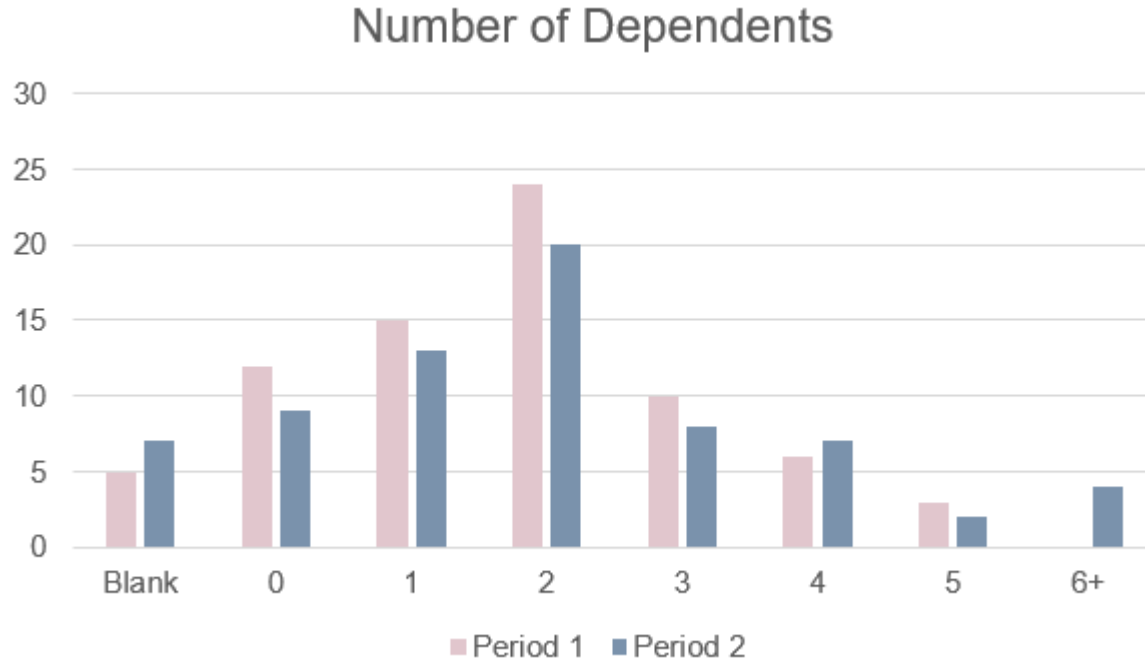
- Document & creatively explain ☺

Data Accuracy

Data consistency example: *Are we happy with Period 2's distribution?*

Number of Dependents

Data Accuracy

Data consistency example: *Are we happy with Period 2's distribution?*

Well, we have to check a few things:
- What is "Blank"?
- Do Blanks = zero?
- Is the 6+ correct?

Tips:

- Fully understand operational processes especially where data is captured or amended

- Understand Categorical vs Continuous variables
  - Classing of outliers & strays

- Regularly check distributions of key decision and business metrics

- Understand missing and defaulted values

- Know seasonality and business cycles

- E.g. Home Tel / Work Tel ► Cellular ► Pre-Post paid ► Location services, Usage patterns ► what's next?

- Track key variables over time, including credit scores

- If you don't have the right data for informed decision-making… create it! Combine:
  - Commercial and credit risk understanding
  - Business process experience
  - Data analytics expertise

- Consolidate Financial, Risk, Consumer & Behavioural information to understand acceptable risk-return thresholds

- Optimise and model scenarios, targeting a given goal variable
  - Track the results

- Consider Champion-Challenger approach, i.e. run different tests under the same external circumstances

Conceptually

- Create representative test groups that are statistically random

- Decide the policy you want to test, different from your current policy
  - Either a different action or a different selection

- Set the KPI

- Decide the test appetite i.e. size, timing, duration and scale

- Deploy & track results

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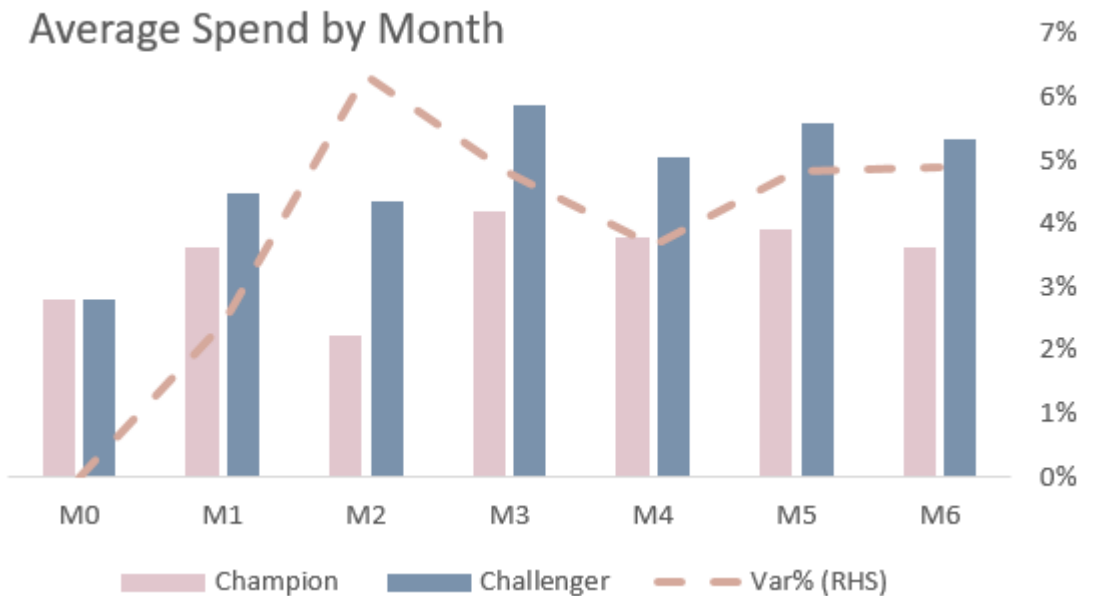
- Deploy & track results

Example: Increasing Customer Spend
Champion - Normal customer spend, no incentive offer
Challenger - Spend incentive offered

Average Spend by Month

Legend: Champion · Challenger · — Var% (RHS)

Result
A spend incentive will provide a circa 5% uplift in spend

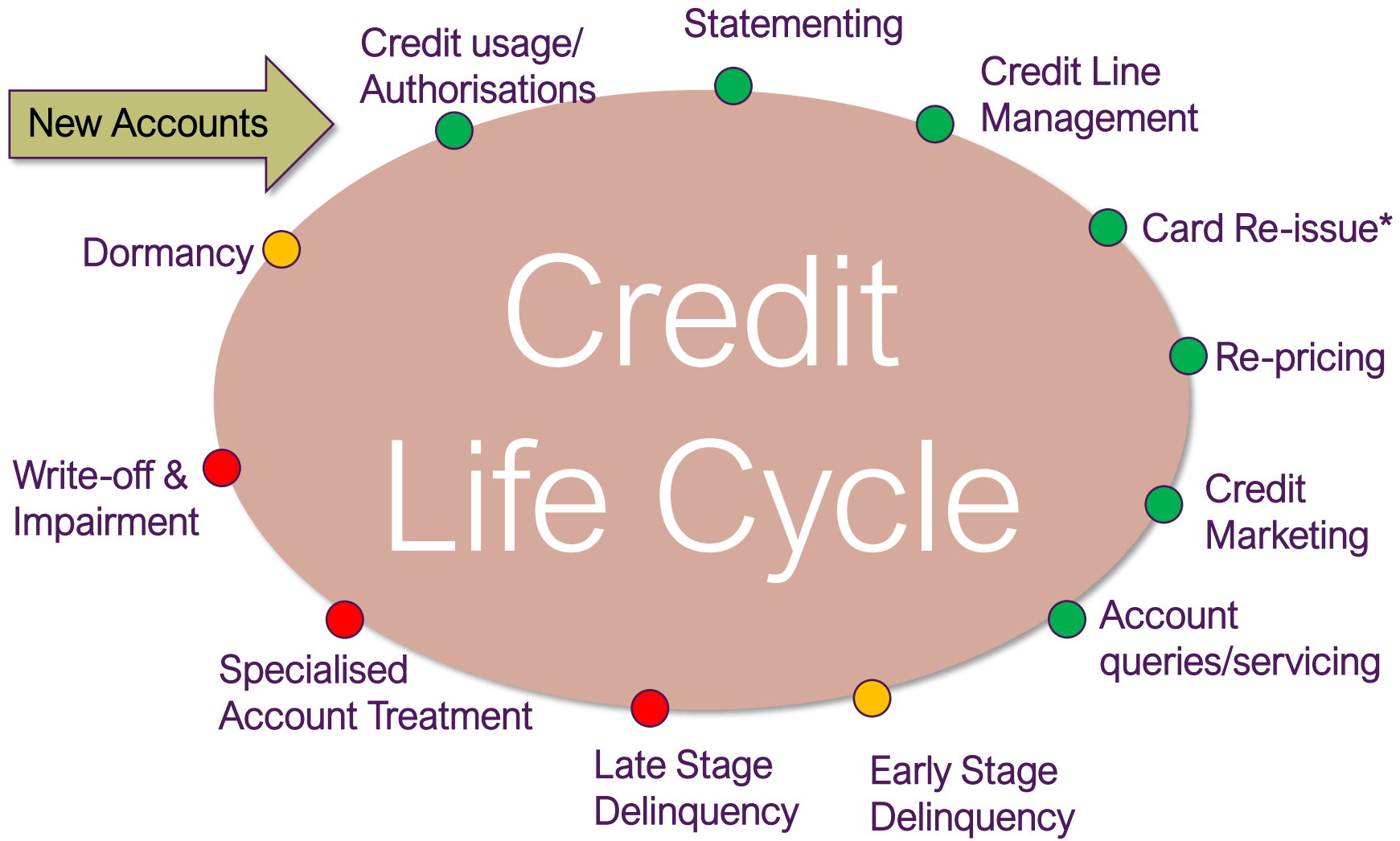# Data Relevance: Is your existing data relevant?

- Bureau data especially Payment profile data is generally stable to model expected credit performance

- Alternate / Unconventional data – not a silver bullet & must be proven

- The right data enables better and more comprehensive business & customer understanding, which enables better strategic insights

- Understand whether the data is static/ dynamic or forward/ backward looking
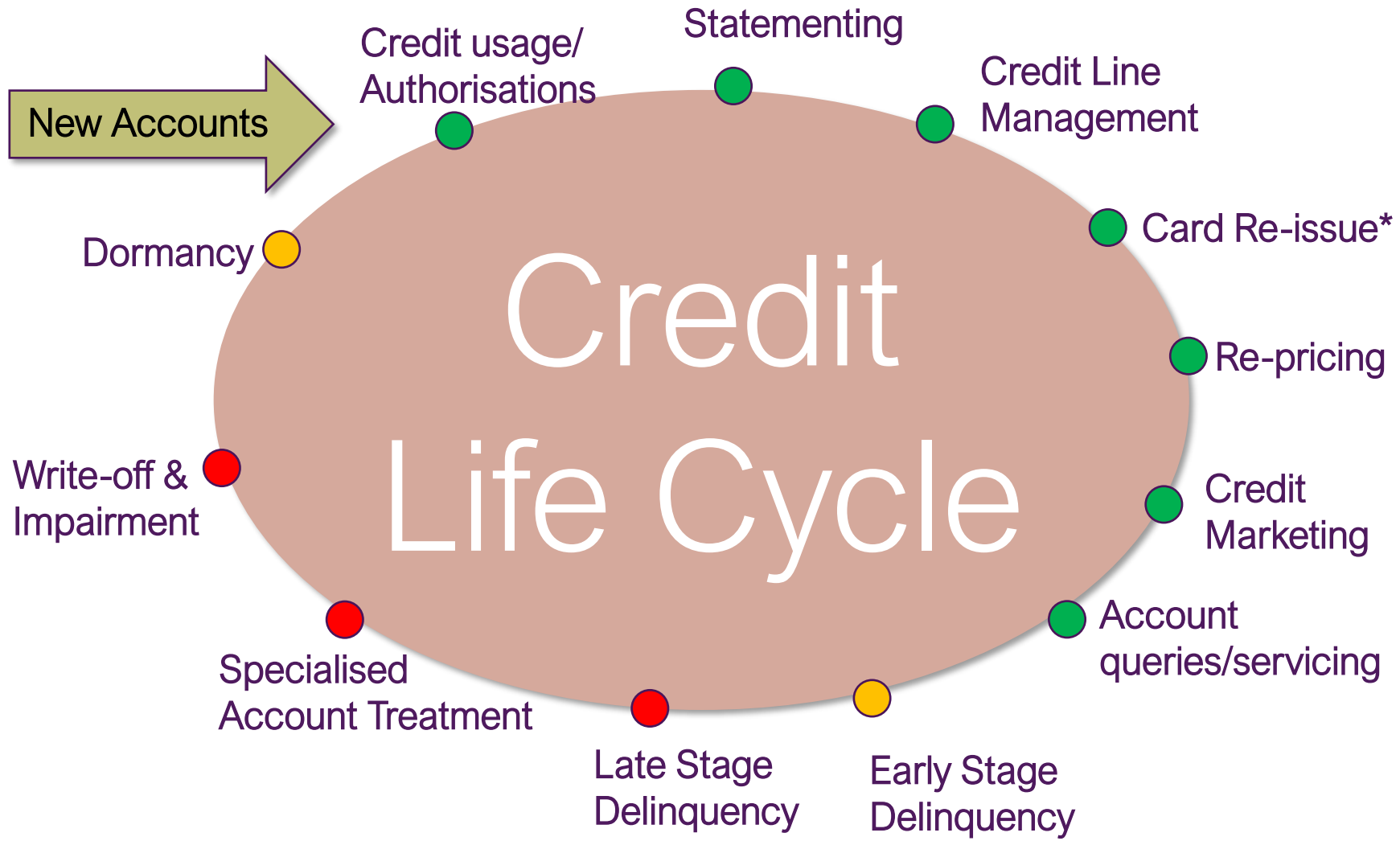
- Review KPI's & targets, but stay true to the cause ☺

"If you interrogate the data enough, it will confess."

— Anonymous

New Accounts

Credit usage/ Authorisations

Statementing

Credit Line Management

Card Re-issue*

Dormancy

Re-pricing

Credit Life Cycle

Write-off & Impairment

Credit Marketing

Specialised Account Treatment

Account queries/servicing

Late Stage Delinquency

Early Stage Delinquency

Data is used throughout the CLC
Typically Descriptive and Predictive

- Policy rule sets
- Segmentation trees
- Credit Scores – consistent & independent
- Trigger events
- Impairment calculations PD, LGD, ECL, etc.
- Operational efficiency
- Governance checks & audits

Computations & decisions can be automated

Closing Remarks

- Top Quality Data = Top Quality Decisions

- Ensure data remains accurate & relevant

- Typically the best strategies combine best-of-breed business practice & data-evidenced ones

- Stay cognisant of changing conditions & data opportunities created therefrom

Thank You

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