

# **Bridging the Gap: systems models linking consumer behavioural insights to coherent strategic planning**

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# Decision Analysis Services Ltd , Foresight and tips of the hat



Decision Analysis Services Ltd (DAS) is a team with a shared vision of solving strategic challenges facing government and industry decision makers using systems modelling and simulation methods



4Sight Associates is a management consultancy with diverse industry experience seeking to create more fact-based, dynamically informed and shared strategy for brand leaders.

We have also worked for and as part of several key organisations also actively involved in tackling the types of challenges we are describing:

- Vanguard Strategy
- Strategy Dynamics Ltd



# Focus of the presentation



- We are supporting some of the world's biggest brands in developing and monitoring their marketing strategies
- Our analysis informs multi million pound investments
- Our analysis is based on system dynamics with models linking to big data sets
- Our clients have adopted the language of SD, and have rolled out our analytical methods across numerous territories
- We are going to talk today about the basis for our analysis, successes and scope for the future

## Objectives – bridging the gap

- **Our client executives have helped explain what we hope to convey today:**
  - *“This is a **bridge** that helps us connect the Business Goals of key stakeholders with the Actions that business managers can actually manage..”*
  - *“This is a **scenario-painting** tool that allows us to test our future ambitions against current reality of our brand’s strengths and weaknesses – so we know what we have to do to close the gap.”*
  - *“This is a tool to **enable scaling up of marketing programs** – one thoughtware set traveling across many markets with similar growth pathways.”*
  - *“It provides **common language** across different parts of the System – Planning & Execution, Marketing & Operations, Global Teams and Local Teams and so on. By providing common language it provides the basis for a unified vision of future goals and also the means to achieve them.”*
  - *“It allows us to do **end-to-end planning**, execution and tracking of results through one platform and set of metrics, all of them grounded in consumer targets.”*

## We will be looking at fast moving consumer goods



- Brands need to connect to consumers through:
  - Purchasing habits
  - How they consume
  - Product attributes
  - Brand essence

# FMCG brand influences can be complex – purchasers vs consumers

## Purchaser is consumer perspective



## Purchaser + consumer perspective





# Consumer level data comes in many forms – for some retail brands, transactional data may not provide the right knowledge



## Consumer transactional data

- Panel-based
- Typically shopper focus
- Often syndicated sources e.g. Nielsen
- Detailed purchase habits, SKUs
- Often hard to capture all purchase opportunities



## Consumer behavioural and attitudinal research data

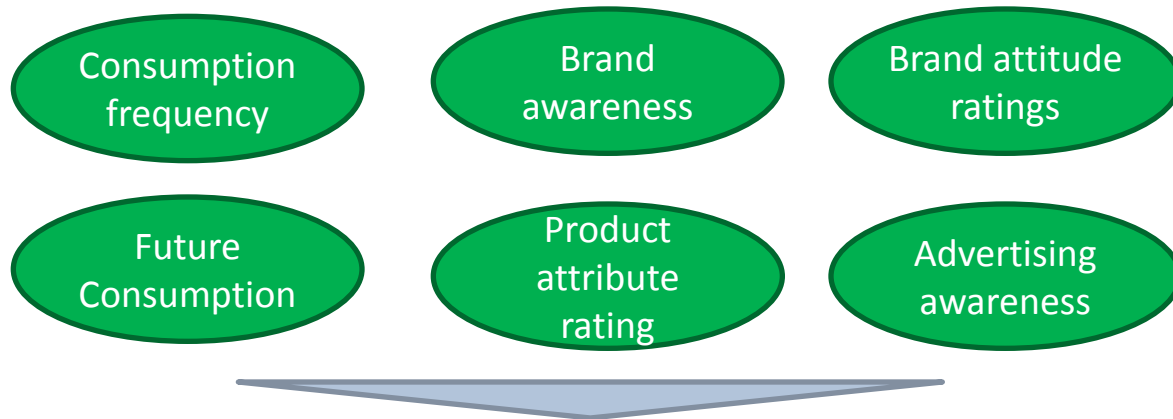
- Sample continuously recruited - panel-based sample if you are lucky
- Detailed snapshot surveys conducted e.g. day/week in life
- Often bespoke to the firm
- PLUS a lot of ad hoc data capture
  - Surveys/conjoint
  - Focus groups
  - Social media research

- We have found firms primarily use the panel data for tracking – focus on a few key queries and reports
- Data may be used to “inform” business planning but through a series of disconnected ad hoc analyses
- We set ourselves a challenge “squeezing” as much out of the data and constructing our analysis through the lens of the business planning need



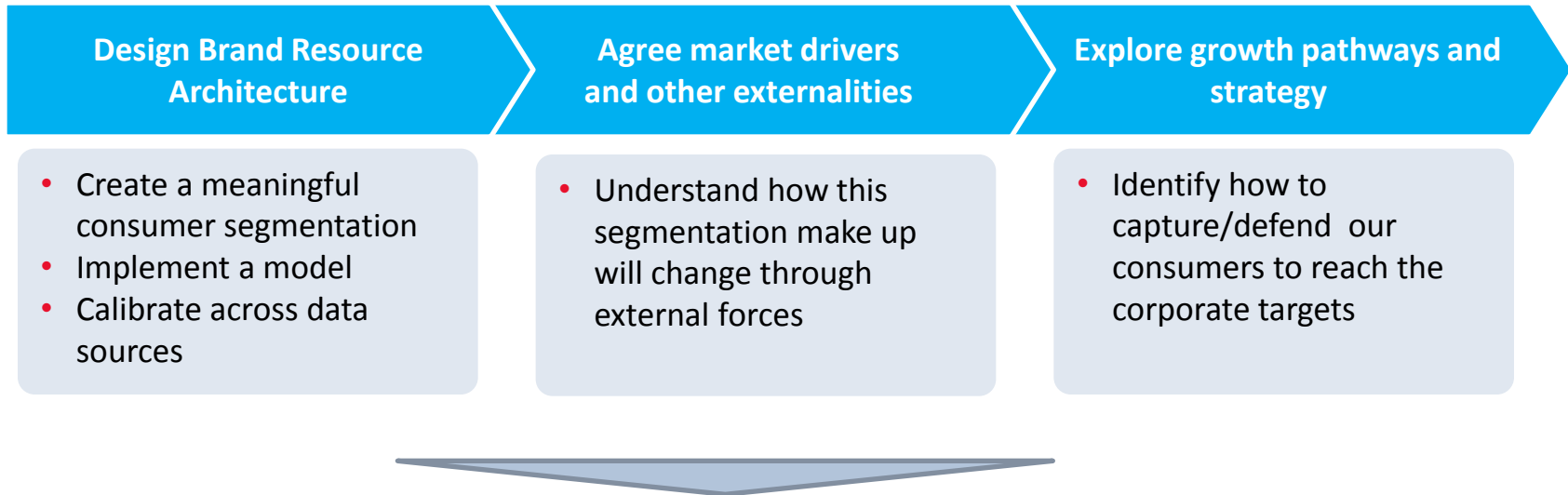
# What can consumer behaviour and attitude data look like?

- Example : Monthly brand tracking study which is conducted globally
  - Reaches 21% world population
  - Covers 90+% of market volumes
  - 85 markets
- Tracks consumers' awareness, stated behaviour, and brand image of categories and brands



- **How can we link this to strategic market planning?**

# What do we need to do?

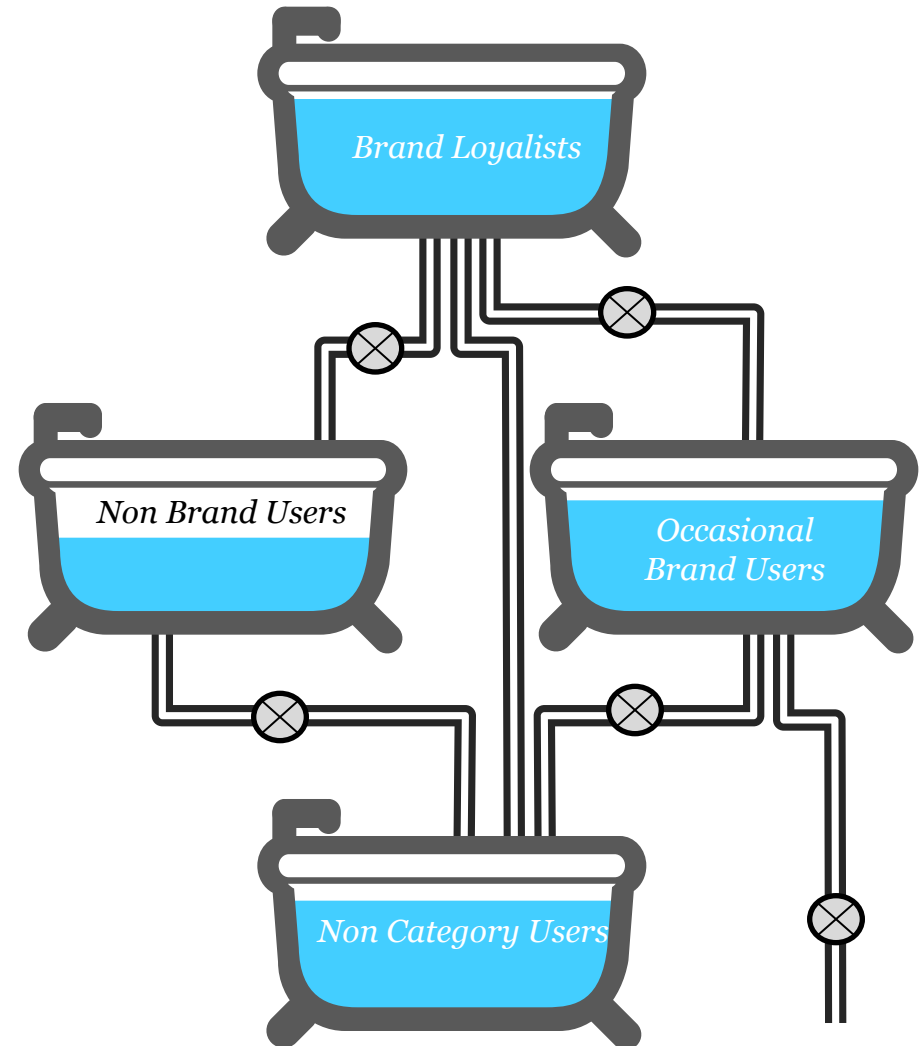


- We have adopted a systems approach starting with a simple strategic architecture
  - Treat consumers as resources
  - Building size of valuable segments requires moving or increasing the flow between the right segments

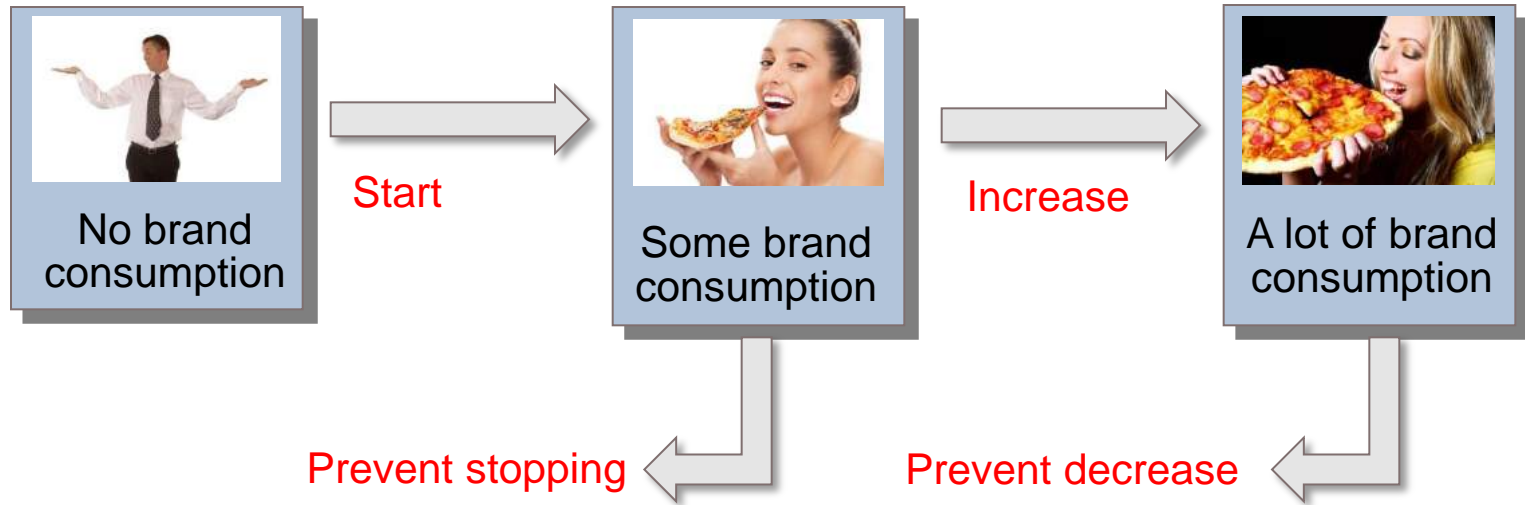
## Non-SD teams get bath tub dynamics

### Lesson:

Bath tub descriptions of our systems of study are a great way to communicate to brand teams



# The combination of resources and flows provides a framework for defining growth levers



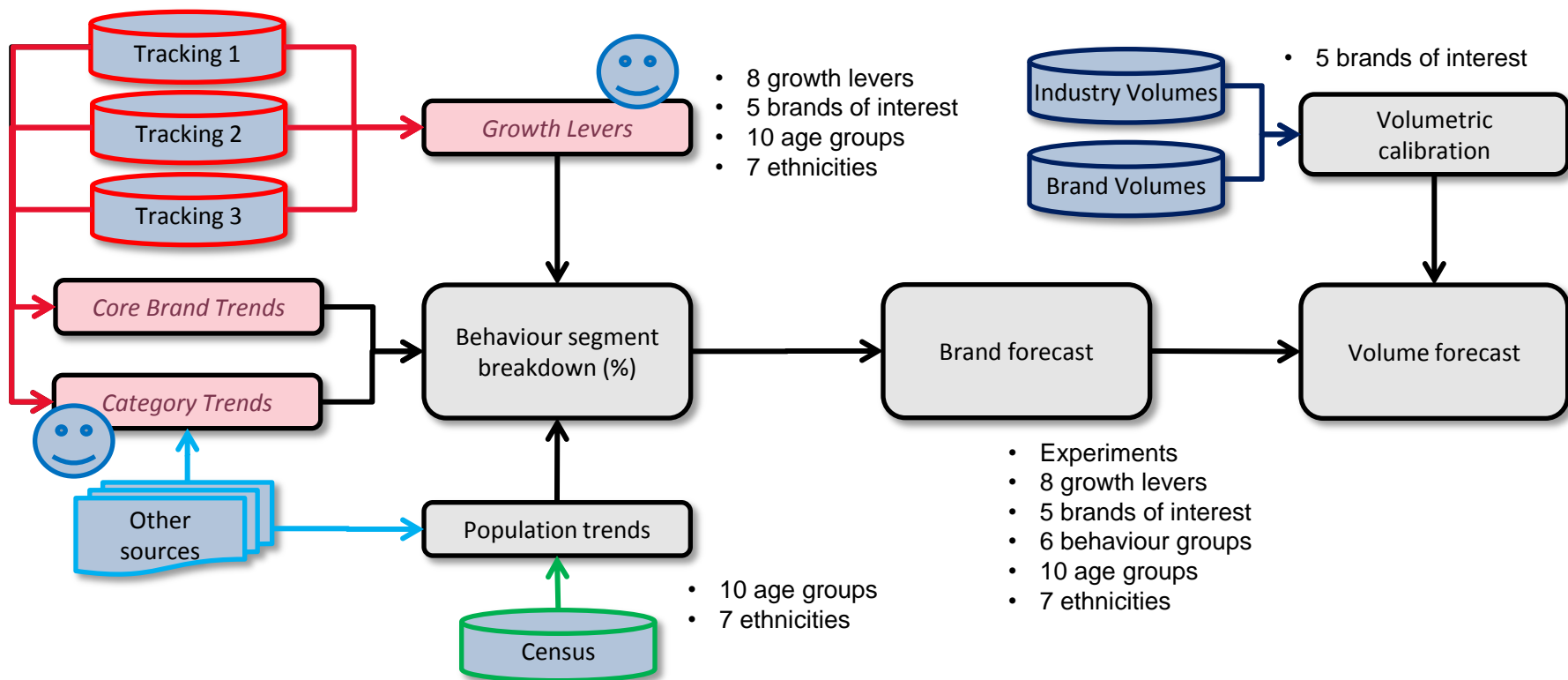
Brand Consideration and Preference i.e. consumer attitudes define the current growth potential for the Brand to.....

- Attract consumers to it
- Attract increased consumption
- Prevent loss of consumers or consumption

## Lesson

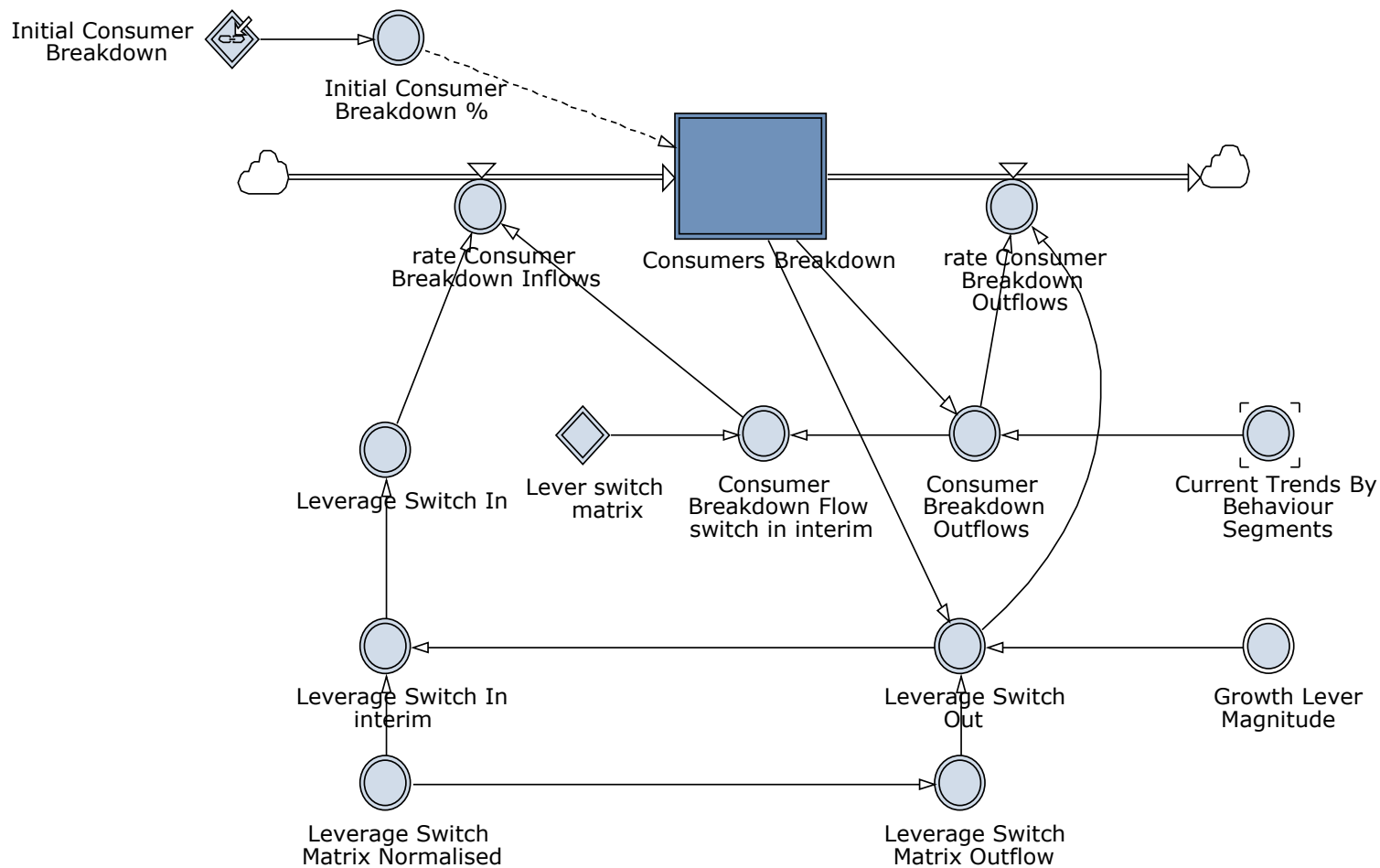
Simple stock flow visualisations are insightful and can become the new language of stakeholders

# For understanding the future, we mine our data sources to create our model – using SD toolsets for simulation



# The core SD consumer model can be relatively simple albeit heavily arrayed

## Representation of the consumer behaviour segmentation dynamics



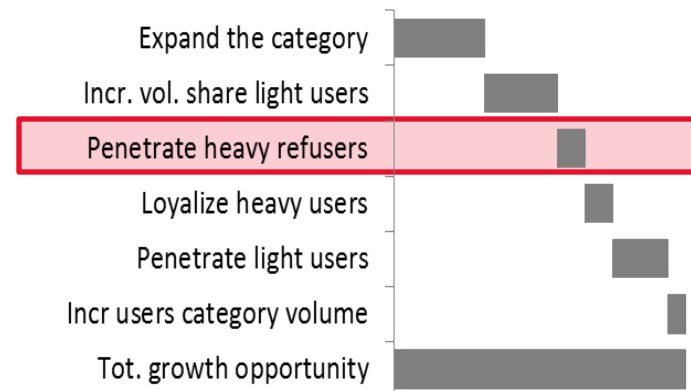
# We build up our targets across the strategic architecture – unlikely to rely on a single segment/growth lever

*Simplified and disguised*

## Our behavioural segmentation



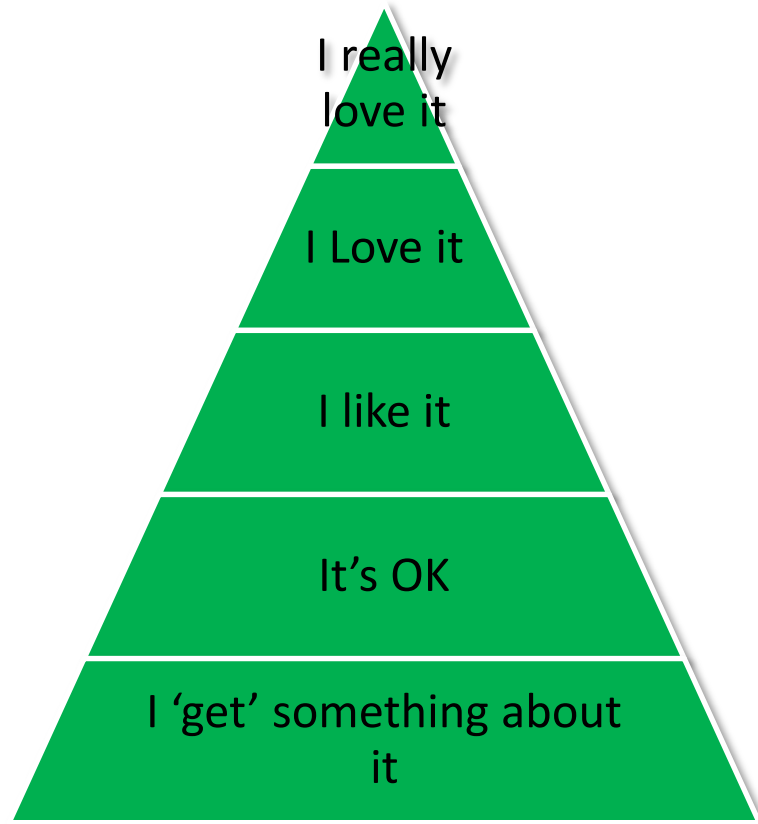
## Additional volume



- Two questions:
  - How did we decide on how many consumers to target?
  - What marketing activities can capture them?

# We can mine the panel attitudinal data to better understand our relationship with consumers – how many consumers

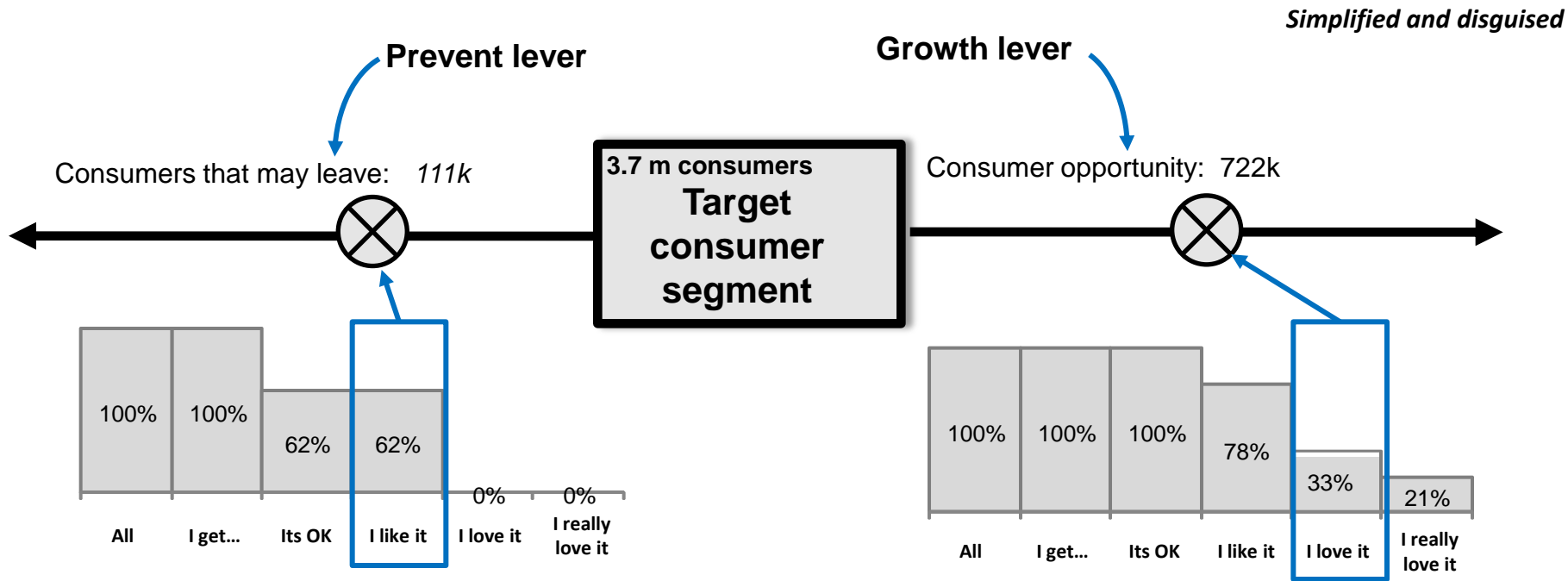
## A brand relationship hierarchy



- Many firms and market research agencies use these type of brand relationship measures e.g. Millward Brown's Brand Dynamics
- Built through business rules based on variety of attitudinal questions
- Shape of these relationships will vary markedly depending on brand performance and market development
- We further combine with questions about consumers future intentions

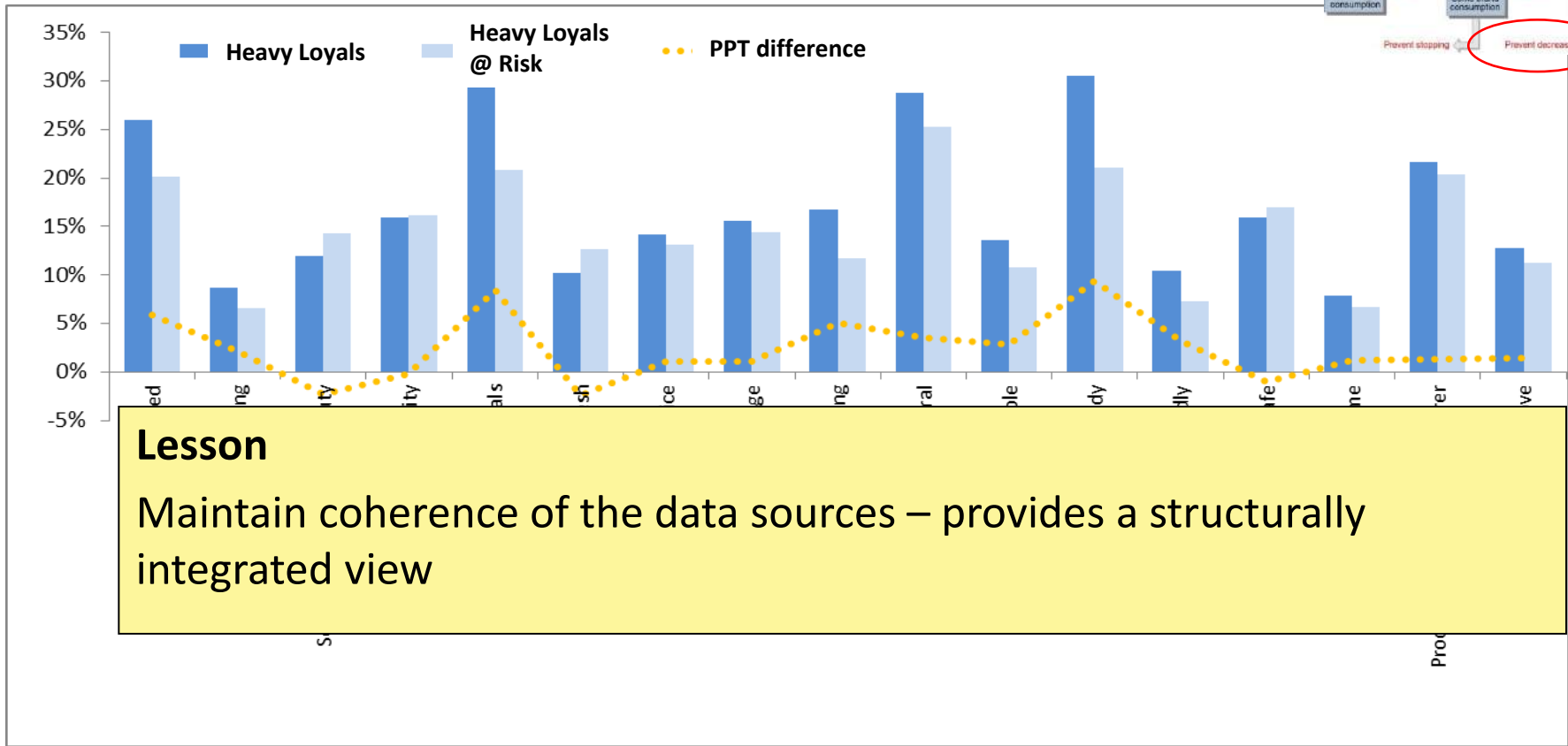


# Using the relationship hierarchies helps us debate and experiment with growth opportunity strategies



# The same data sources can provide rich information on how the consumers are different

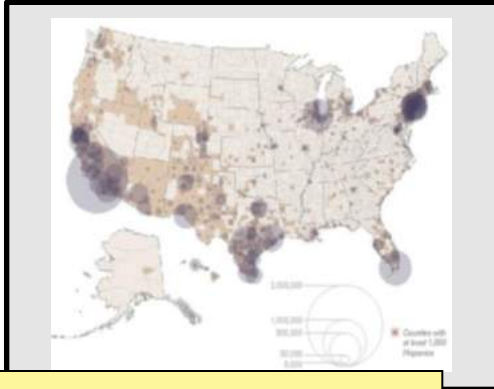
Simplified and disguised



|                     |     |    |     |     |     |     |     |     |     |     |     |     |     |     |    |     |     |
|---------------------|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| Heavy Loyals        | 26% | 9% | 12% | 16% | 29% | 10% | 14% | 16% | 17% | 29% | 14% | 31% | 10% | 16% | 8% | 22% | 13% |
| Heavy Loyals @ Risk | 20% | 7% | 14% | 16% | 21% | 13% | 13% | 14% | 12% | 25% | 11% | 21% | 7%  | 17% | 7% | 20% | 11% |
| Gap                 | 6%  | 2% | -2% | 0%  | 8%  | -2% | 1%  | 1%  | 5%  | 3%  | 3%  | 9%  | 3%  | -1% | 1% | 1%  | 1%  |

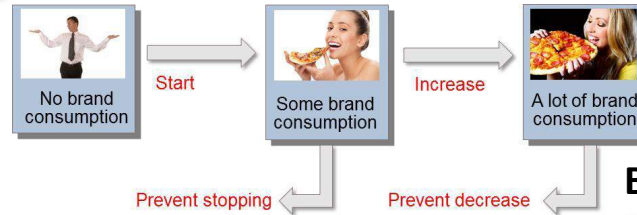
# How have we used these types of models – a stepping off point for a common language and approach across the company

## Strategic Challenges



**Lesson**  
Start small – educate and build Create a core language

## Training



## Balance of investment/ Prioritisation

| Category   | Item                  | Q1 | Q2 | Q3 | Q4 | YTD | Target | Variance | Notes                |
|------------|-----------------------|----|----|----|----|-----|--------|----------|----------------------|
| Marketing  | Brand Awareness       | 10 | 15 | 20 | 25 | 70  | 80     | -10      | Need more investment |
|            | Customer Retention    | 80 | 85 | 90 | 95 | 350 | 350    | 0        | On track             |
| Sales      | Revenue Growth        | 5  | 10 | 15 | 20 | 50  | 60     | -10      | Review pricing       |
|            | Market Share          | 10 | 12 | 14 | 16 | 52  | 55     | -3       | Competitor activity  |
| Operations | Production Efficiency | 90 | 92 | 94 | 96 | 372 | 370    | 2        | Excellent            |
|            | Logistics Cost        | 15 | 14 | 13 | 12 | 54  | 55     | -1       | Optimizing routes    |
| Finance    | Profit Margin         | 20 | 22 | 24 | 26 | 92  | 90     | 2        | Strong performance   |
|            | Debt Service          | 5  | 5  | 5  | 5  | 20  | 20     | 0        | Stable               |

## Embedding the toolsets



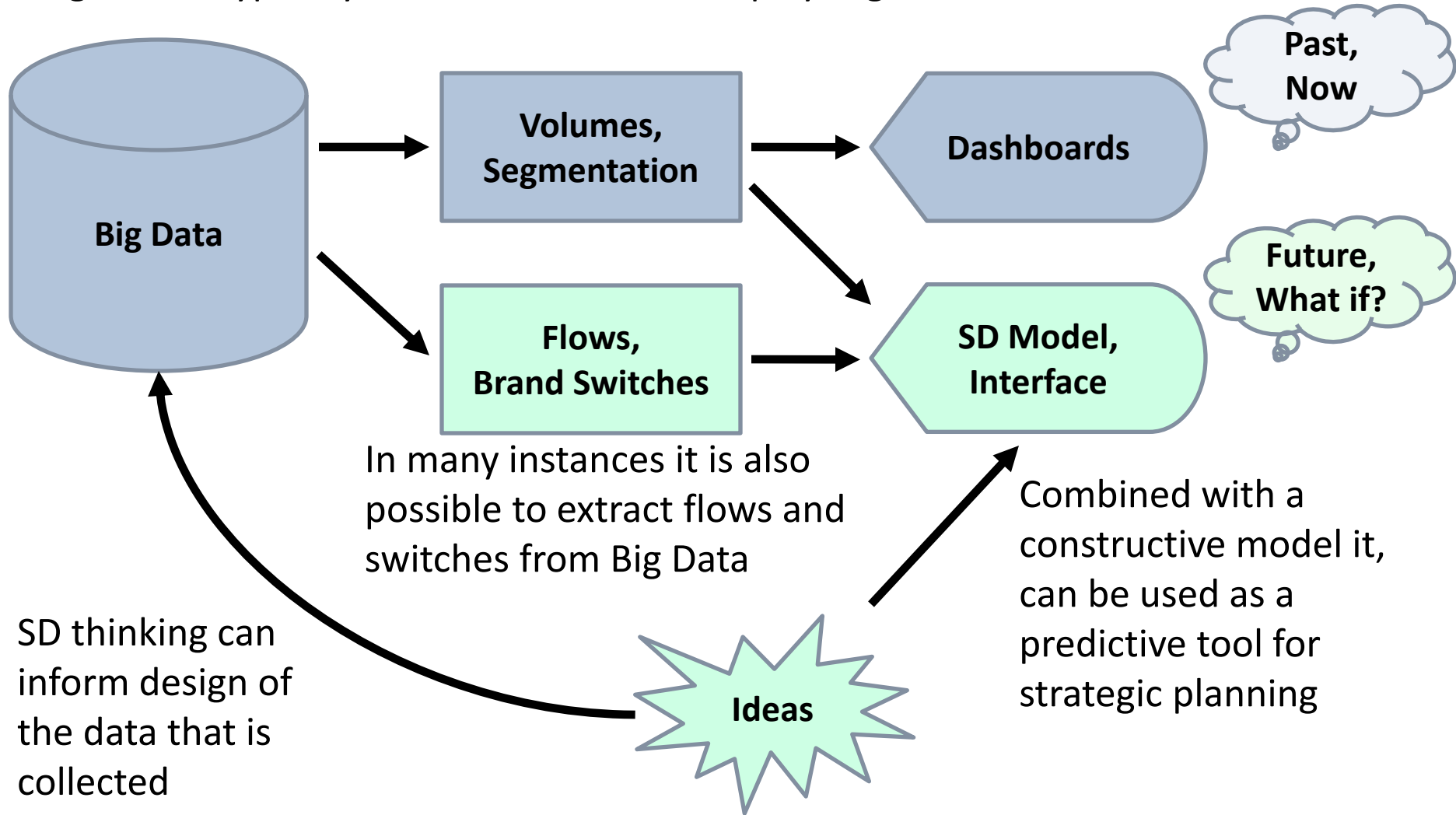
Augmenting your capability to make that critical decision



## Reflection:

# System Dynamics moves Big Data from dashboard to “What If...?”

Big Data is typically used to extract and display segmented volumetrics



# Challenges:

## We would love truly longitudinal consumer behaviour and attitudinal insight

- True cohort modelling remains a challenge
  - Cost
  - Sample retention
- Pharmaceutical industry is the exemplar here

### Pharma data example

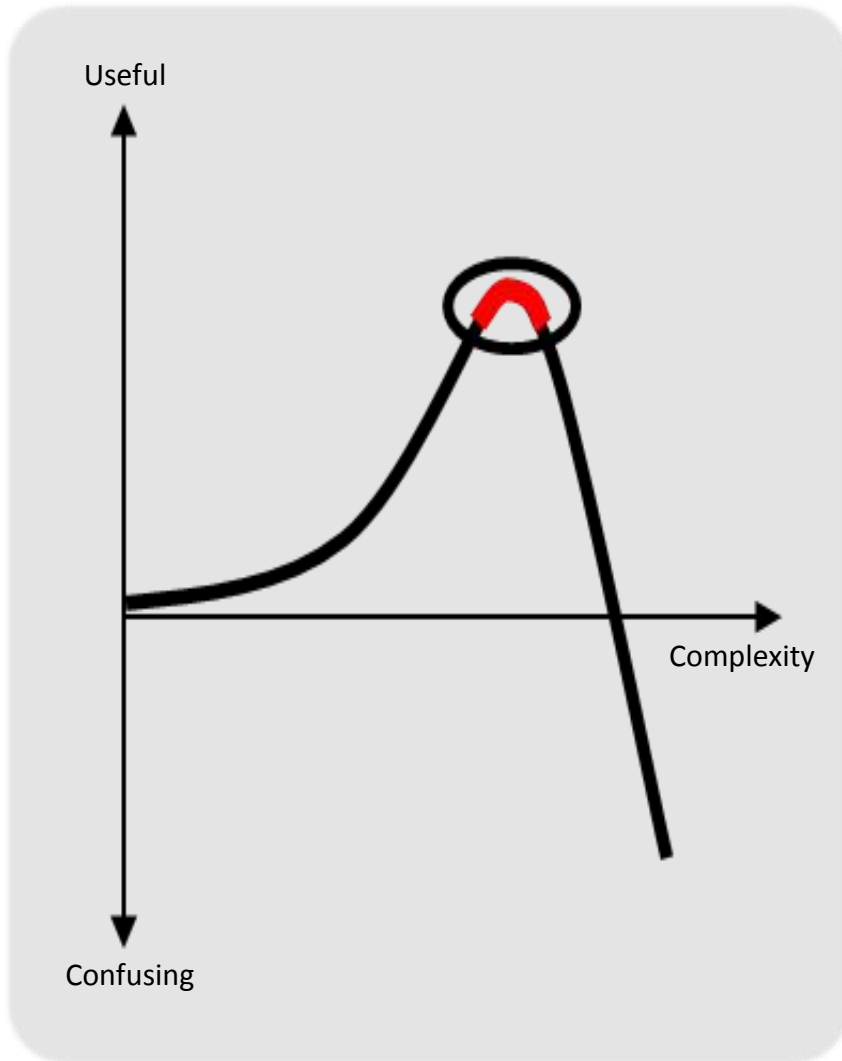
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- 144 million records Rx
  - 22 million episodes
  - 15.8 million patients
  - 70 months of patient data
- 



# Challenges:

## We can never lose sight of the usual modelling challenges



- Creating a right-size model
- Big data can lure you in
- Segmentation trade offs
  - Trend to finer segmentation in tactical marketing
  - The segment of “one” starting to appear??

# Summary



- System dynamics is being used by some of the worlds biggest brands to support multi £ million investment decisions
- Important lessons
  - Bath tub descriptions of our systems of study are a great way to communicate to brand teams
  - Stock flow visualisations are insightful and can become the new language of stakeholders and the datasets themselves
  - Forces coherence of the data sources – provides a structurally integrated view
  - SD has delivered end to end planning from corporate volume goals → growth strategy → targeted consumers → profiles → activations
  - Start small and educate. Embedding the thinking in the core toolsets and processes takes time

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