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Using data to power possibilities

How organisations across the globe are using data and AI to innovate and unlock transformational outcomes for customers

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Who am I?



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10 years experience in data science

12 countries across 4 continents

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20 years experience in data science

11 offices across 7 countries

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- An aerial view of a city skyline at dusk, featuring prominent skyscrapers like the Shard and the Gherkin. The scene is overlaid with a complex digital network of glowing blue and white lines and nodes, suggesting data connectivity and AI. In the background, there are faint, semi-transparent circular patterns in shades of blue and green.
- 01 Data and AI use cases across the globe
 - 02 Assortment: Combining human and artificial intelligence
 - 03 Lessons for applying AI

01

Data and AI use cases across the globe



There's a broad spectrum of ways organisations are using data and AI, spanning descriptive, predictive and prescriptive analytics techniques

Descriptive

Interpreting historical data to obtain insights

EXAMPLES

1. COVID-19 cases
2. Inflation analysis
3. Changes in global temperature

Predictive

Learning from historical data to predict future outcomes

EXAMPLES

1. Fraud detection
2. Demand forecasting
3. Predictive maintenance

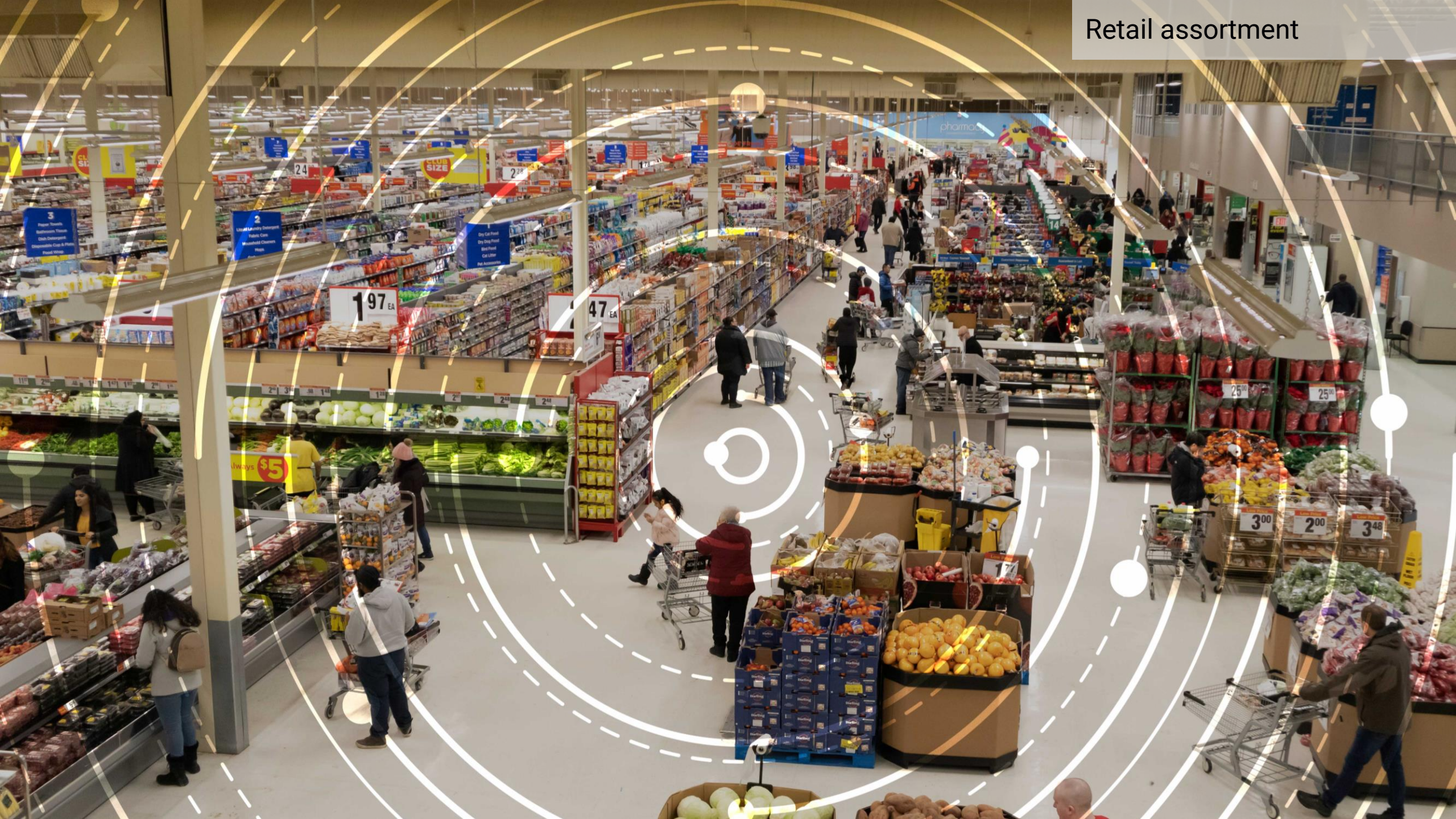
Prescriptive

Learning from historical data to recommend actions that will achieve a stated goal

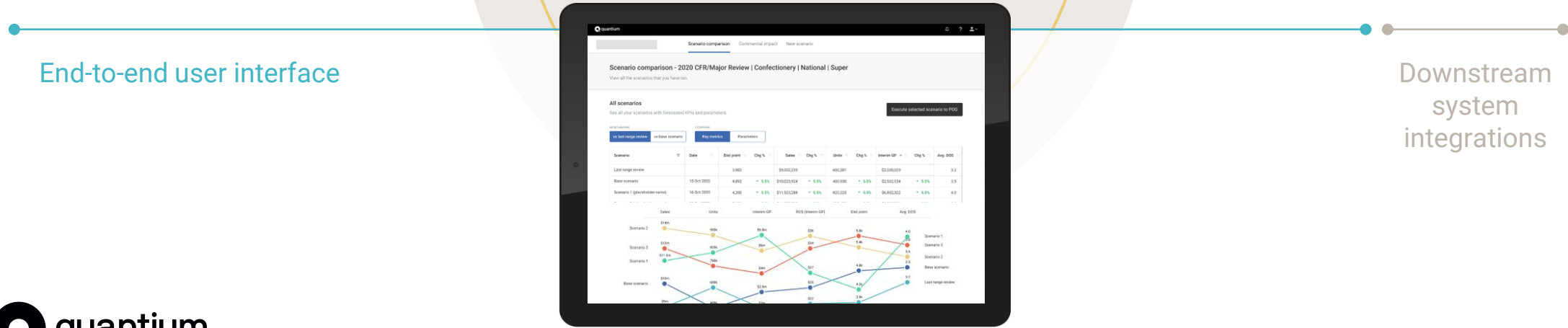
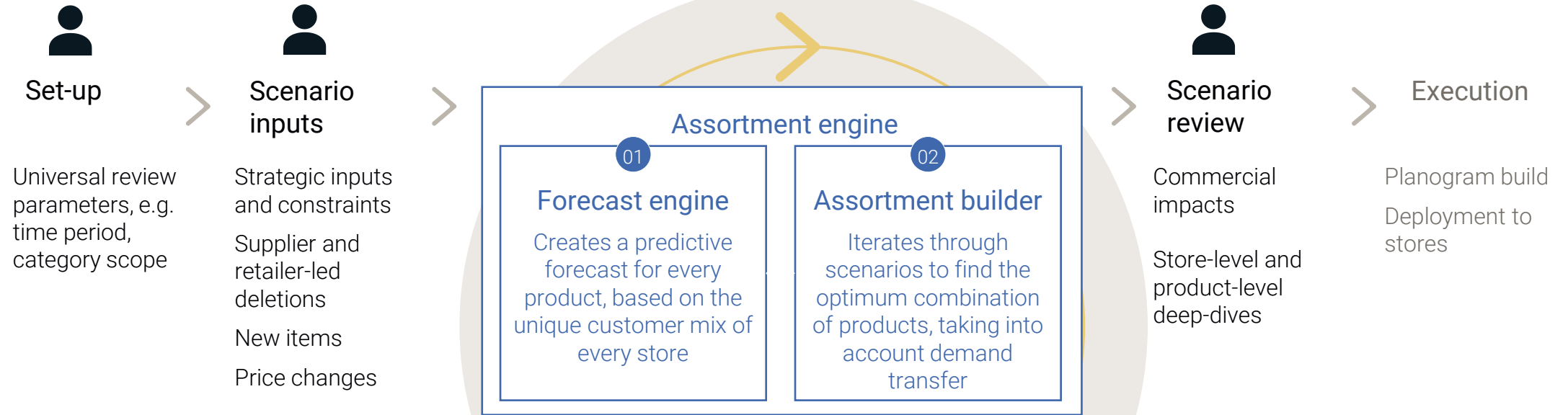
EXAMPLES

1. Self-driving cars
2. Pricing
3. Retail assortment

Leveraging AI and ML to achieve automation and scale



Assortment requires combining human intelligence for strategic decisions with advanced analytics and iterative scenario optimization



03

Lessons for applying AI



Which problems are best to tackle with AI?

Repetitive

Problems which require lots of decisions to be made, which makes it worth the effort to train a model to achieve scale

Measurable

Problems where the quality of the model output can be measured, since you need to automatically reward 'good' behaviour for the model to learn

Complex

Simple decision-making can be coded explicitly as logical steps ("if...then...else...") rather than using AI which requires data for the model to learn logical rules

Lessons for applying AI

KISSing technique

Cutting-edge \neq best

Occam's razor: the simplest solution is best

Core requirement for AI is having data (ideally lots of it in good quality)

Requires time and effort to clean and engineer

Commit to the possible – not everyone is a data scientist and it's not possible to become one overnight

Use tools to help bridge the gap, but make sure you know what you're doing

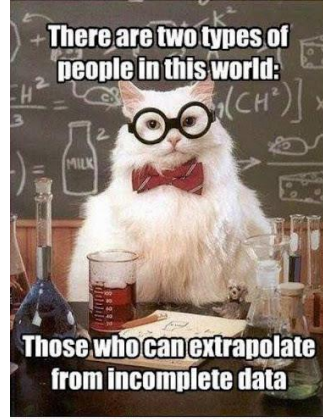
Be curious and skeptical

Leverage your creativity in designing the solution and choosing the right data sets

Critical to get this right, and there's a lot to consider

Bottom line: AI replicates bias and scale can be a disadvantage

Read: *Weapons of Math Destruction* and Australia's AI Ethics Framework



Big Data Borat
@BigDataBorat

In Data Science, 80% of time spent prepare data, 20% of time spent complain about need for prepare data.

Talent/skills

Human intelligence + AI

Ethics



Questions



Thank you

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