

What you need to know about retail and AI

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Today's agenda

Opportunities in AI & Retail

Navigating the Challenges

Tomorrow's Retail Innovation

The full spectrum of AI

Machine Learning

Reinforcement (Deep) learning
Unsupervised learning
Supervised learning

Natural Language Processing

Text generation
Question Answering
Context Extraction
Classification
Machine Translation

Speech

Speech to text
Text to speech

Vision

Image recognition
Machine vision

Expert systems (Little data)

Robotics

Planning

Our research field the past 7 yrs

Machine Learning

Reinforcement (Deep) learning
Unsupervised learning
Supervised learning

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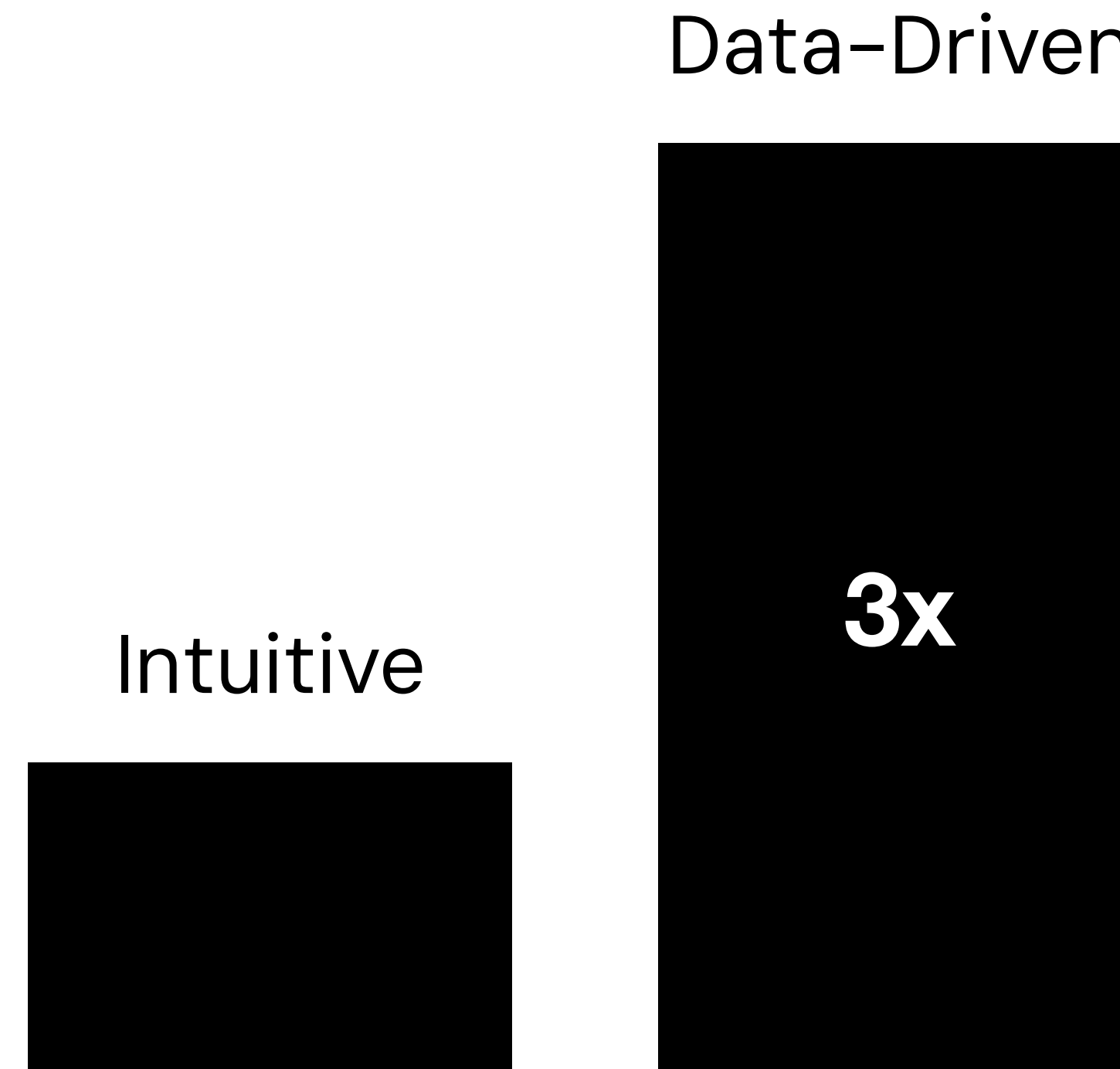
Robotics

Planning

AI & Digitalisation: A paradigm shift

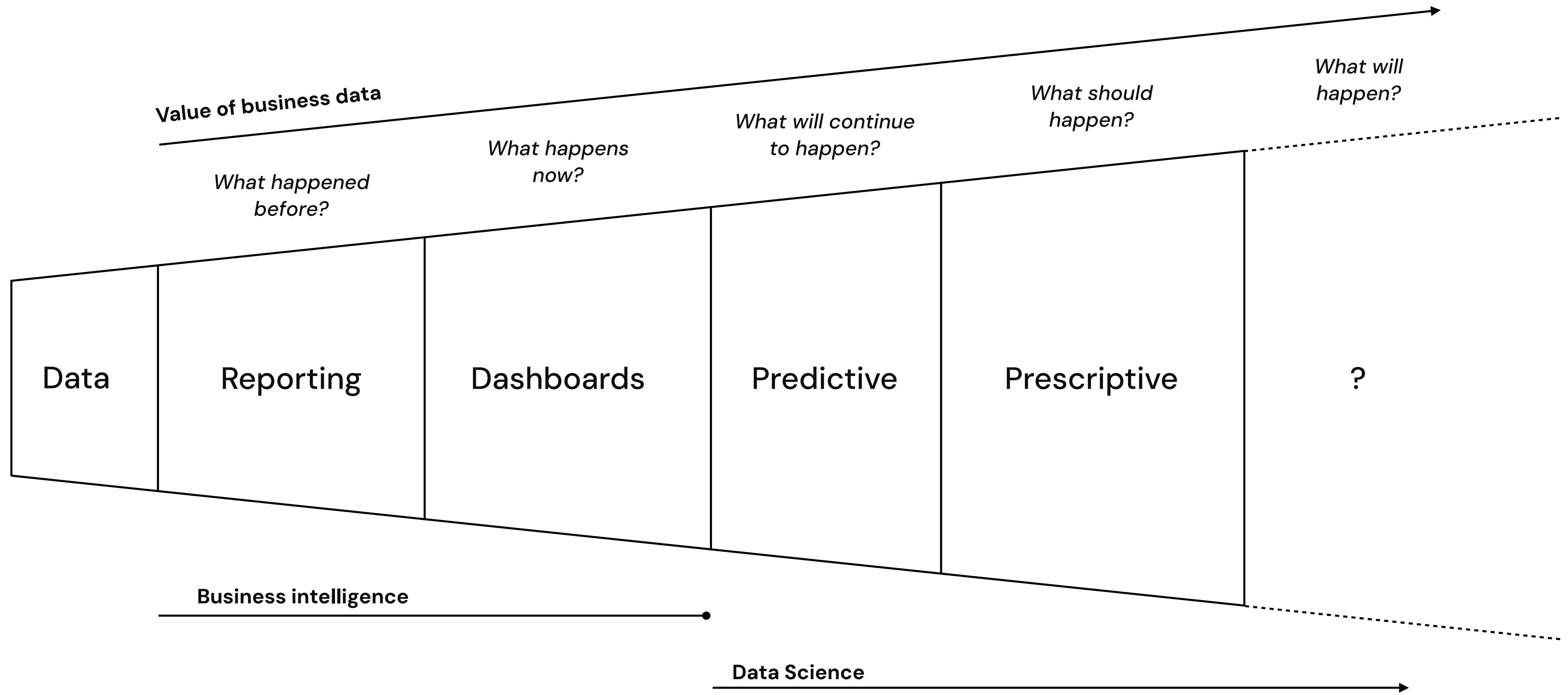
- **Up to 90% Cost Reduction**
- **Enhanced Process Insights**
- **Improved Risk Management**
- **Real-Time Data Access**
- **Superior Economic Growth**

Intuition can provide a hunch but it's through data that you verify, understand, and quantify.



Highly data-driven organizations are three times more likely to report significant improvements in decision-making compared to those who rely less on data (PwC, 2019)

Value of data



The Global Retail Sector's Bullish Outlook on AI

2021

H&M's \$24M Data
Science Initiative

2022

Retail AI Market
Hits \$6B

2023

26% More in AI
Investment in retail

Physical stores are 15 yrs behind

Stores

- People counting
- Point of sale
- Loyalty systems
- Tests / pilots

Online

- Diagnose
- Predict
- Optimise
- Plan
- Recommend
- Categorize
- Pattern Recognition
- Decision Support

Being average can cost you...

84%

Of retailers use people counting to assess their store performance.

19%

Days when the accuracy of people counting was not within 95–100%.

432%

Highest error rate observed in competing people counting solution systems so far.

These insights presented reflects our rigorous analysis from over 300 hours of content and over 100,000 visits, achieved with a 99.99% confidence level through Indivd's Quality Assurance (2024).

Retailers digitalization the past 20 years can be viewed as unsuccessful

- Companies invested \$12.5 Trillion in digitalization 2019
- No significant correlation to profit margins ($\beta = -.094$, $p = .355$)
- This challenges the expected benefits

WHY?

Overall trends

Advancements

Current inefficiencies

WHAT?

Changning
Behvaiours

Benchmark

A digital spine

Integrations

Makro

**The new
Phyical Retail**

Sales

New
technologies

Service

Staffing

Marketing

HOW?

Reliable data

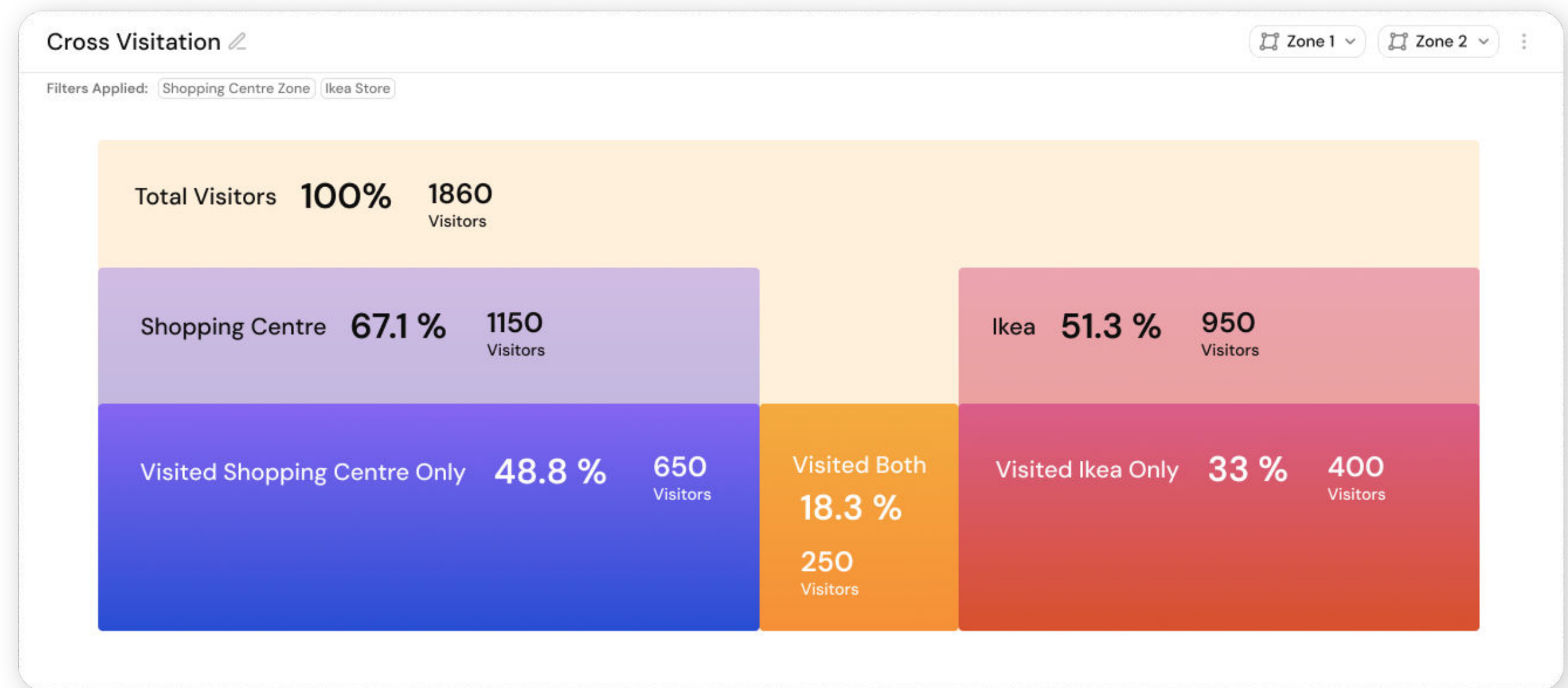
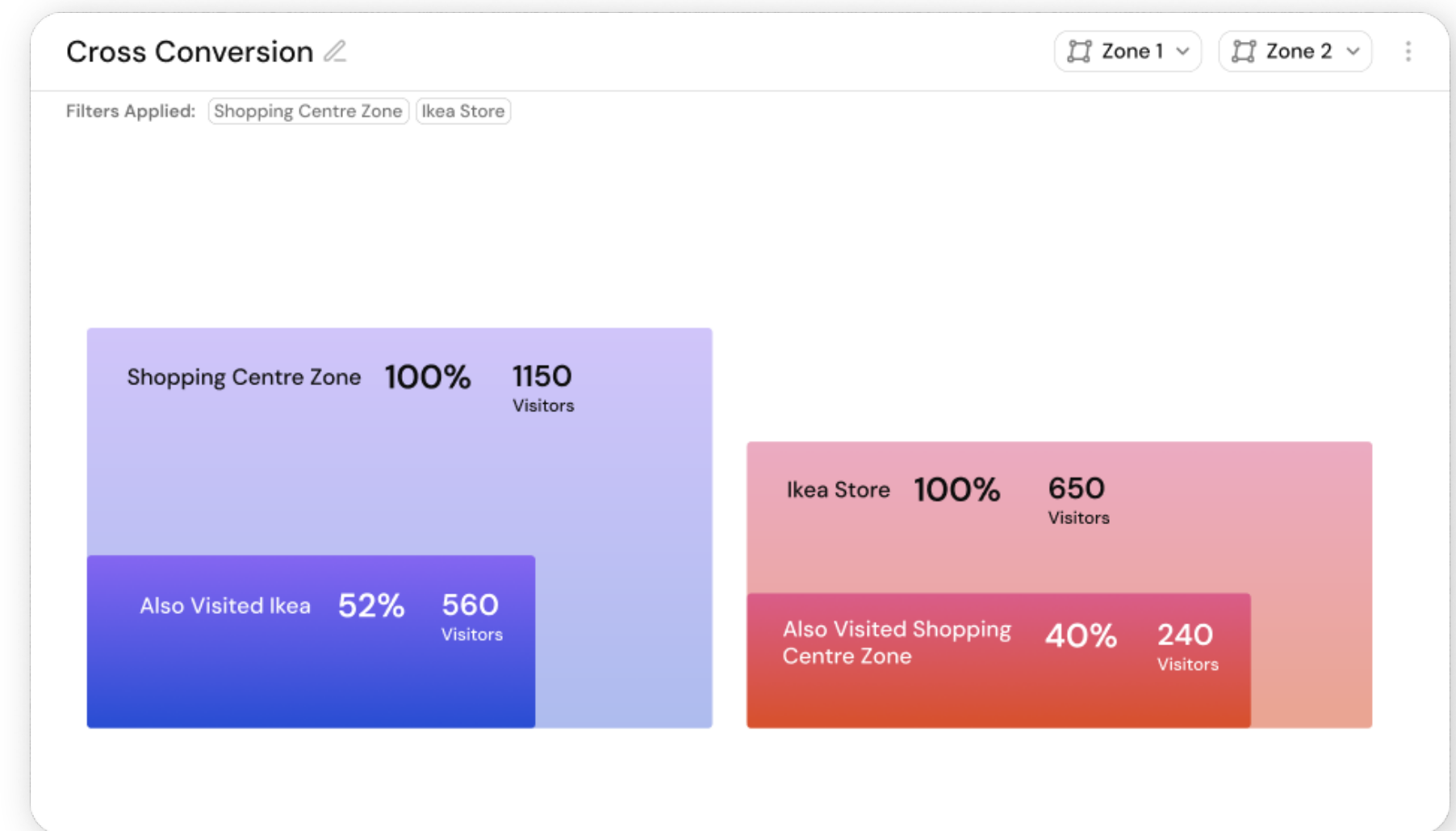
Fast iterations

Integrated processes

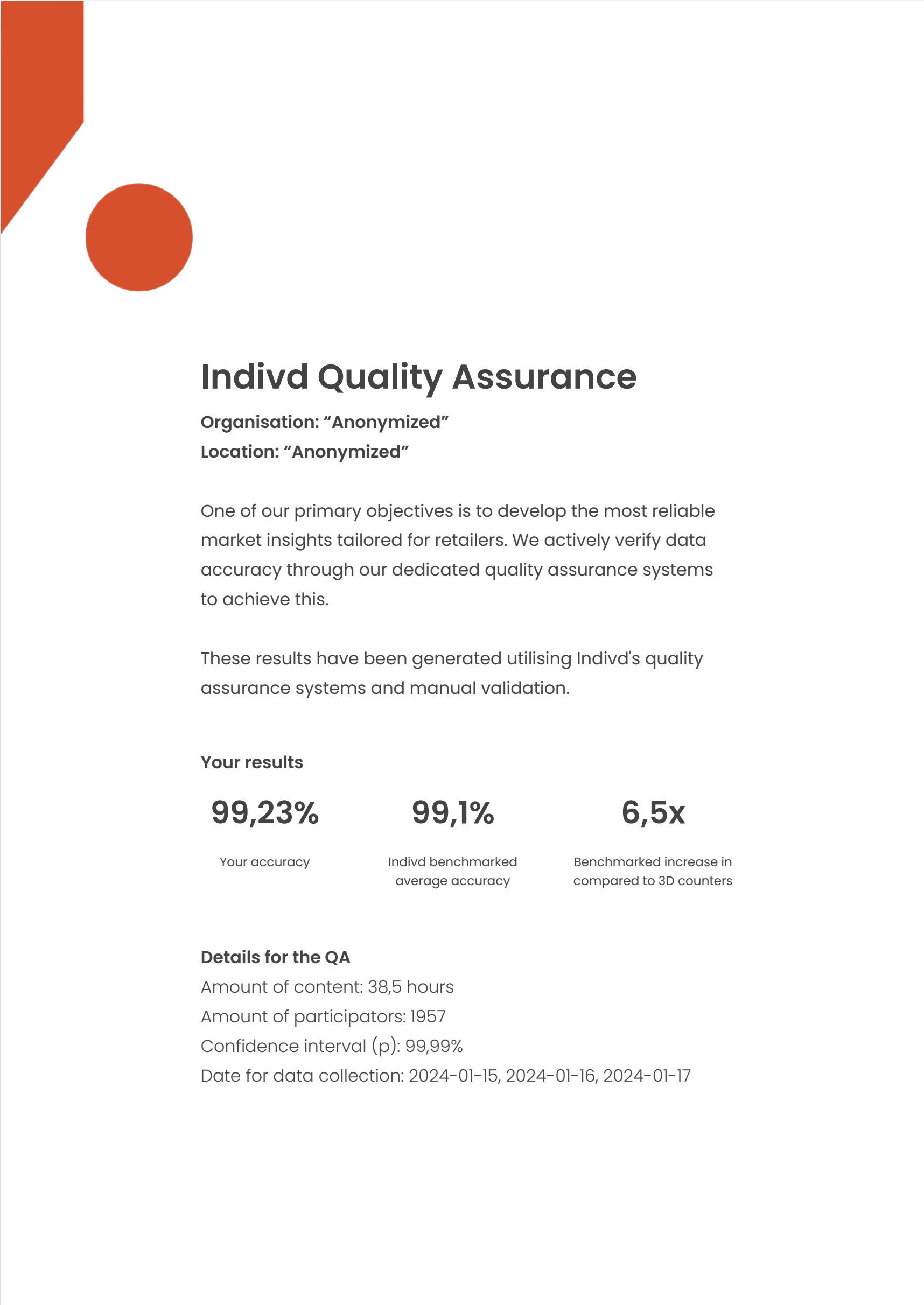
First, we need clearly defined use cases

Use case examples

- Improve store layouts
- Optimize product placements
- Improve conversion rates
- Learn dwell times
- Understand visitor journeys
- Track campaign performance
- Filter out long dwell times e.g. employees



**Then, we need
to know that
we can trust
the data**



Indivd Quality Assurance

Organisation: "Anonymized"
Location: "Anonymized"

One of our primary objectives is to develop the most reliable market insights tailored for retailers. We actively verify data accuracy through our dedicated quality assurance systems to achieve this.

These results have been generated utilising Indivd's quality assurance systems and manual validation.

Your results

| | | |
|---------------|-------------------------------------|---|
| 99,23% | 99,1% | 6,5x |
| Your accuracy | Indivd benchmarked average accuracy | Benchmarked increase in compared to 3D counters |

Details for the QA
Amount of content: 38,5 hours
Amount of participators: 1957
Confidence interval (p): 99,99%
Date for data collection: 2024-01-15, 2024-01-16, 2024-01-17

An example of one of our Quality Assurance Reports for one of our customers.

**And finally, we need defined goals
and fast iterations.**

Week 1

**Define
use case**

Week 1

**Implement
Solution**

Week 2

**Quality
Assurance**

Week 6

**Benchmark
Analysis**

Week 12

**ROI, Actions
& Next Step**



USE CASE STUDY

Elevating Mall Revenue: AMF Fastigheter's Precision Leap



98,2%

ACCURACY WITH INDIVID

252%

DAILY PEAK ERROR BEFORE INDIVID

99,7 MSEK

POTENTIAL ANNUAL REVENUE INCREASE

2000 MSEK

POTENTIAL PROPERTY VALUE INCREASE



PILOT STUDY

Revolution in Retail Analytics: Newport's Leap



97,55%

ACCURACY WITH INDIVID

46,97%

PEAK ERROR BEFORE INDIVID

87%

ANNUAL COST REDUCTION PER COUNTER

11,1 MSEK

ESTIMATED ANNUAL VALUE LOSS BEFORE INDIVID

Key Takeaways

1. AI will change the way retail operate
2. How well can you trust your data?
3. Focus on projects with the highest ROI (Return on Investment)

And two bonuses..

- Employees can be the biggest obstacle
- Digitalization does not only mean new technology