TELLUSANT

Streamlining Corporate Decision Making

Introduction to Tellusant 2025

Strategic Forecasting facilitates **corporate strategic decisions** based on **quantitative predictions** that are **harmonized across an organization** and **directly relevant to decision makers**

STRATEGIC FORECASTING PRINCIPLES

A. Base forecasts on science

↗ Use academically robust methods that are reliable for 10+ years, not homemade solutions.

↗ Do not use methods from tactical or operational forecasting such as S&OP forecasting methods.

B. Use one base approach with the subsidiarity principle

↗ Strive for comparability in findings across business units

↗ Create the forecasts at the local level, within the whole-organization approach

C. Build forecasts with mindset of implications

↗ Integrate the building, reviewing, and discussing forecasts into planning and strategy

↗ Maintain forecasts on a regular basis based on new information and changing strategies

Getting strategic forecasts right result in major resource allocation savings

TELLUSANT RECENTLY CONDUCTED A MAJOR RESEARCH EFFORT ON THE COST OF FORECAST ERRORS

First. we analyzed 5-year strategic forecasting errors in 53 industries using three methods.
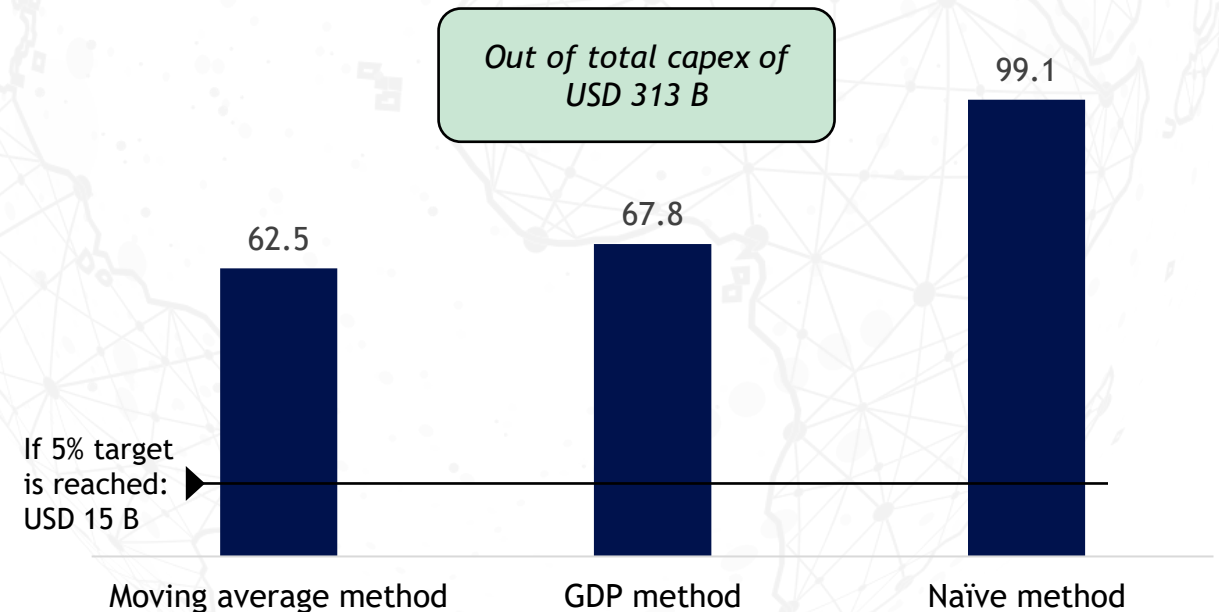
We express the total errors as MAPE* (mean absolute percentage error)
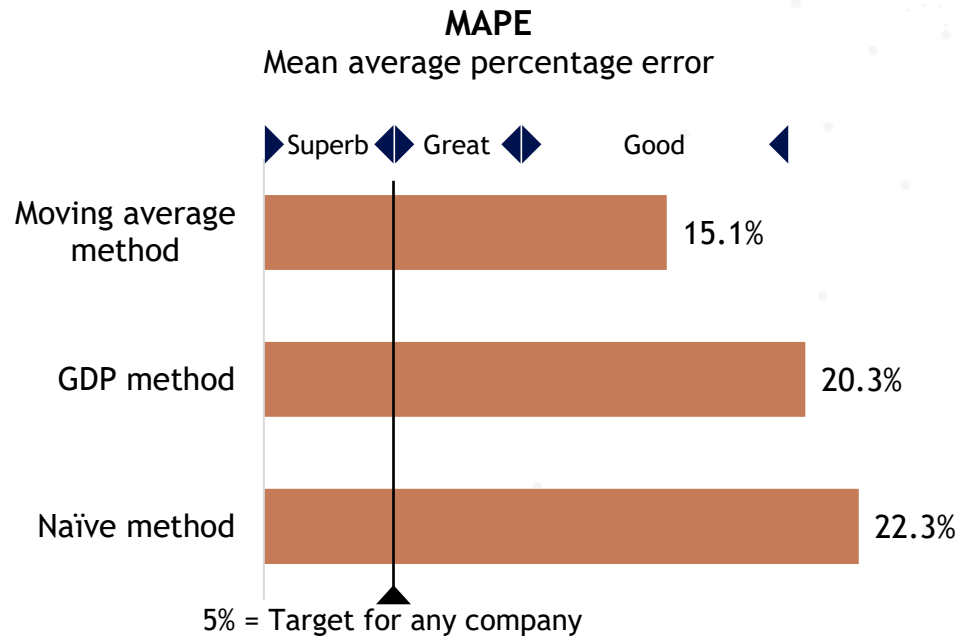
Second, we applied each method to the 40 largest US companies capital expenditure at the start of the 5-year forecast period.

This capital may or may not be at risk, but the analysis shows what is at stake and how robust forecasting capabilities are crucial.

MAPE
Mean average percentage error

Superb ◆ Great ◆ Good ◀

Method	MAPE
Moving average method	15.1%
GDP method	20.3%
Naïve method	22.3%

5% = Target for any company

CAPITAL EXPENDITURE AT RISK IN ONE YEAR (2018)
40 largest U.S. companies; USD billion

Out of total capex of USD 313 B

Moving average method: 62.5
GDP method: 67.8
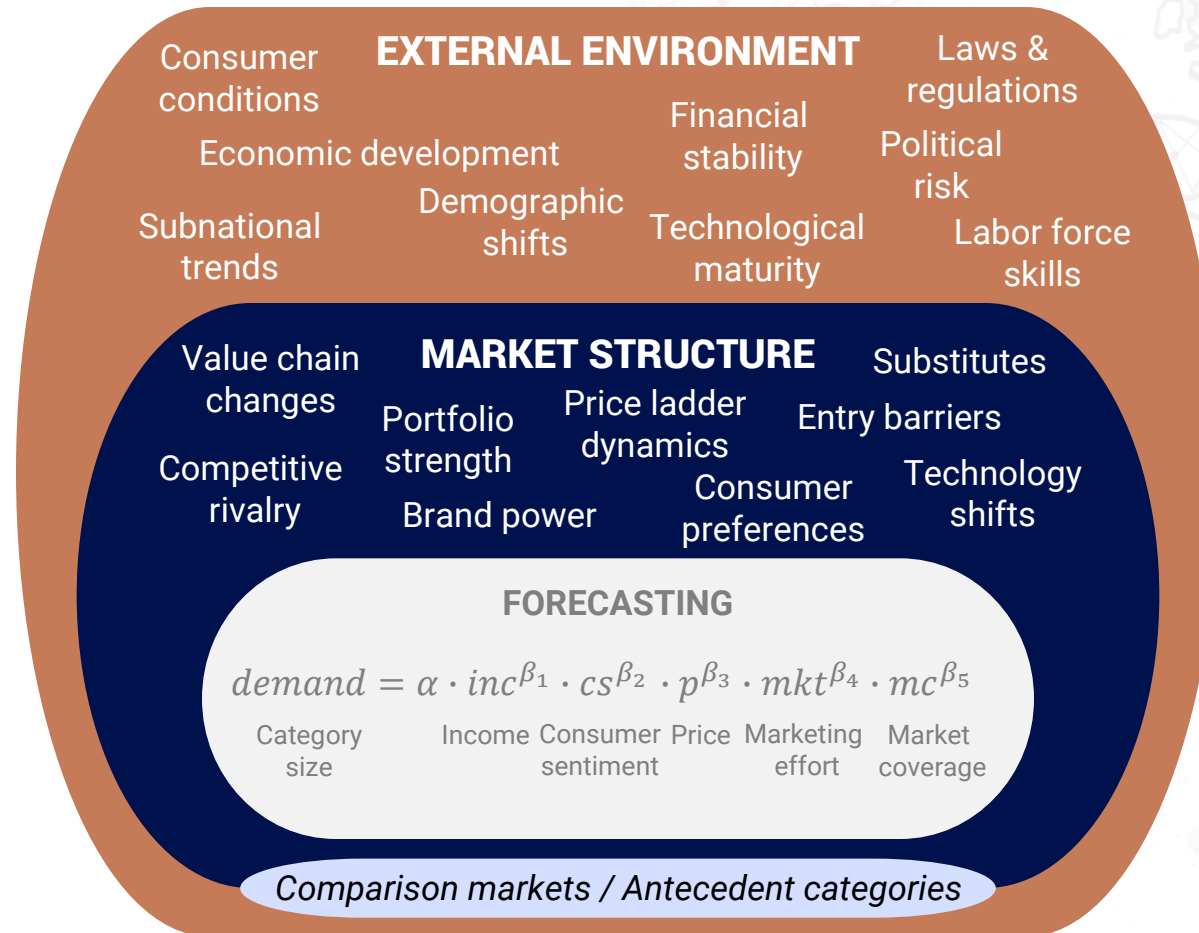Naïve method: 99.1

If 5% target is reached: USD 15 B

* MAPE is adjusted for the well-known "right skew problem to avoid excess errors
Source: Tellusant (2025): The Cost of Strategic Forecasting Errors
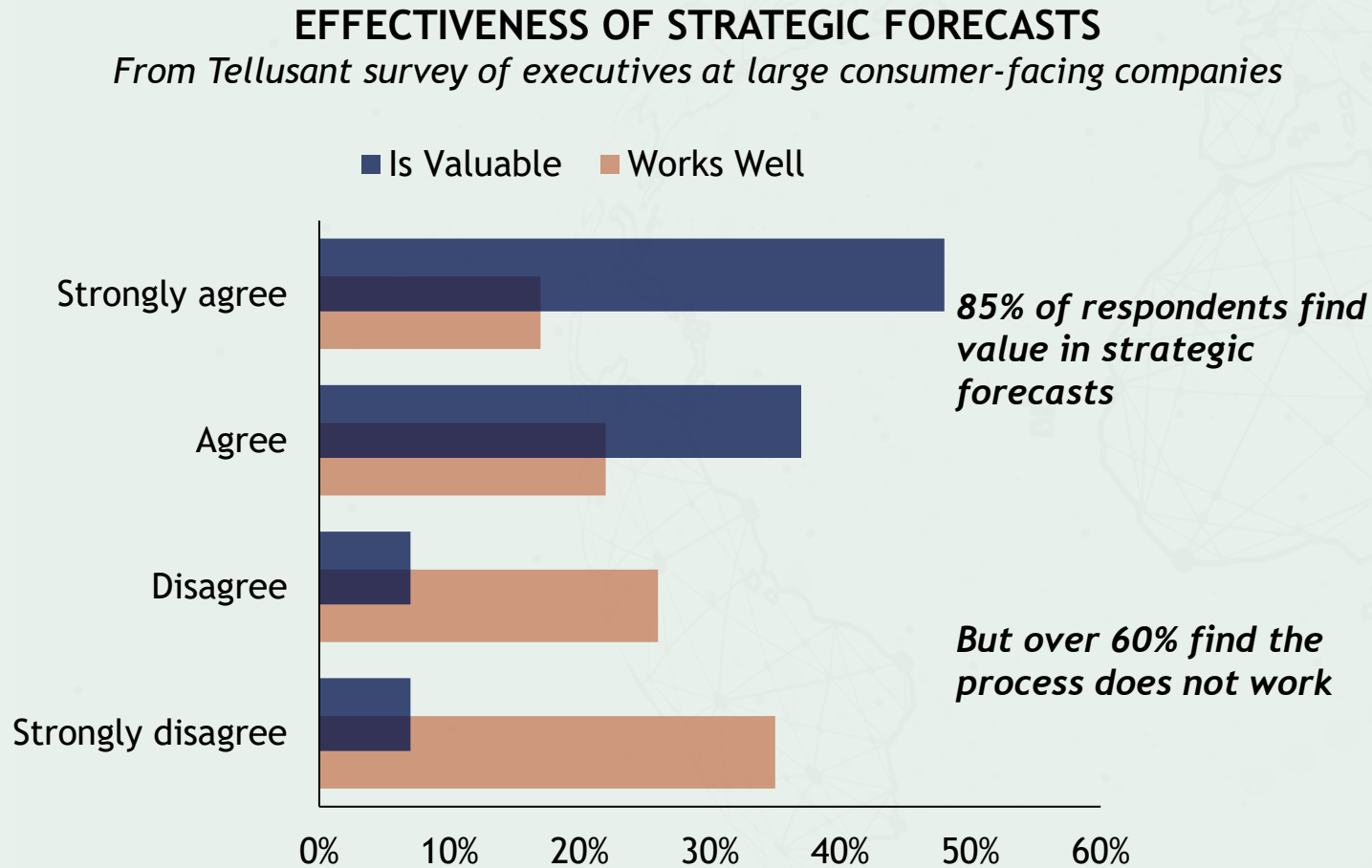
For appendix if we need to explain what we did

1. **The average forecasting method**: Past 5 years industry growth predict next 5 years

2. **The GDP forecasting method**: The next 5 years industry growth will track past GDP growth

3. **The naïve forecasting method:** Tomorrow will be like to today. That is, zero growth over the next 5 years

Strategic forecasting builds future views of demand with a holistic view of why demand is changing

EXTERNAL ENVIRONMENT

Consumer conditions

Laws & regulations

Economic development

Financial stability

Political risk

Subnational trends

Demographic shifts

Technological maturity

Labor force skills

MARKET STRUCTURE

Value chain changes

Substitutes

Portfolio strength

Price ladder dynamics

Entry barriers

Competitive rivalry

Brand power

Consumer preferences

Technology shifts

FORECASTING

$$demand = \alpha \cdot inc^{\beta_1} \cdot cs^{\beta_2} \cdot p^{\beta_3} \cdot mkt^{\beta_4} \cdot mc^{\beta_5}$$

Category size

Income

Consumer sentiment

Price

Marketing effort

Market coverage

Comparison markets / Antecedent categories

Source: Tellusant thought

Strategic forecasting is critical to success but works poorly

EFFECTIVENESS OF STRATEGIC FORECASTS
From Tellusant survey of executives at large consumer-facing companies

■ Is Valuable ■ Works Well

Strongly agree

Agree

Disagree

Strongly disagree

0% 10% 20% 30% 40% 50% 60%

85% of respondents find value in strategic forecasts

But over 60% find the process does not work

PoluSim

> "
> **Most of executives' time is spent on checking the analysts' numbers rather than thinking about the issues**
>
> – Head of Strategy at $40 B company

> "
> **Today each unit harmonizes and forecasts data it in a way that makes it look good. There is not one version of the truth"**
>
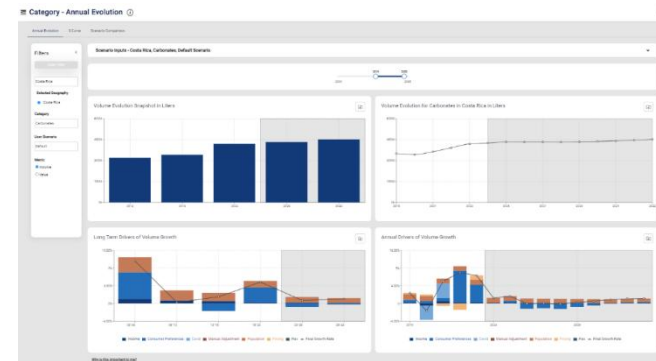> – CFO of US business unit with 60,000 employees

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PoluSim makes strategic forecasting effective and efficient

Get robust, explainable forecasts with customizable drivers, allowing users to review forecasts, refine assumptions
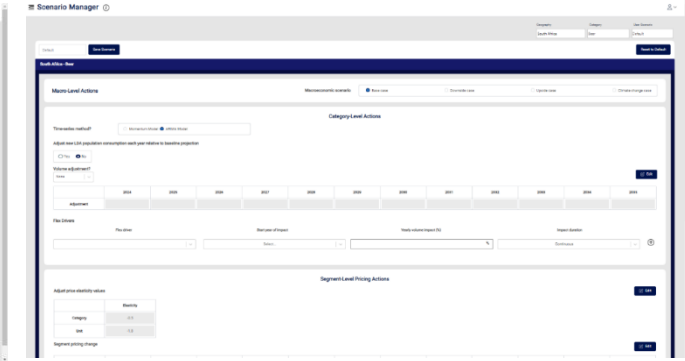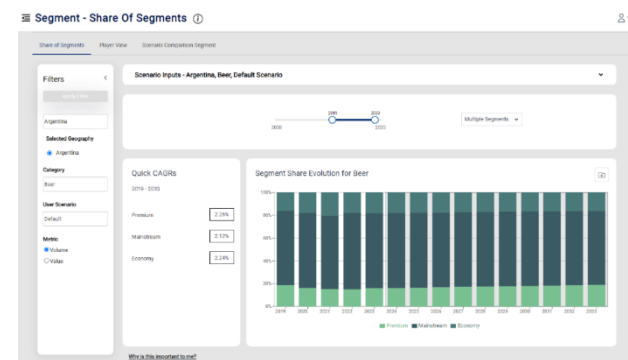
So you can focus on strategic implications
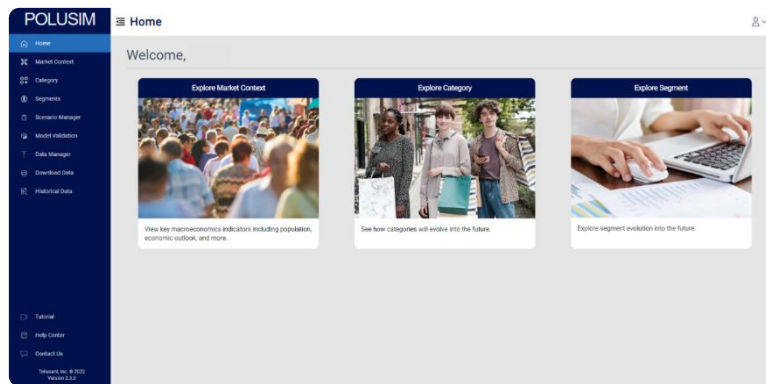
Backed by

TelluBase
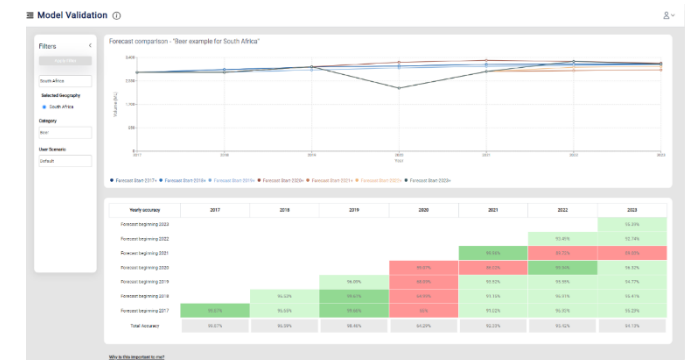The Subnational Consumer Classes Hub

See forecasts and the reasoning for shifts in demand
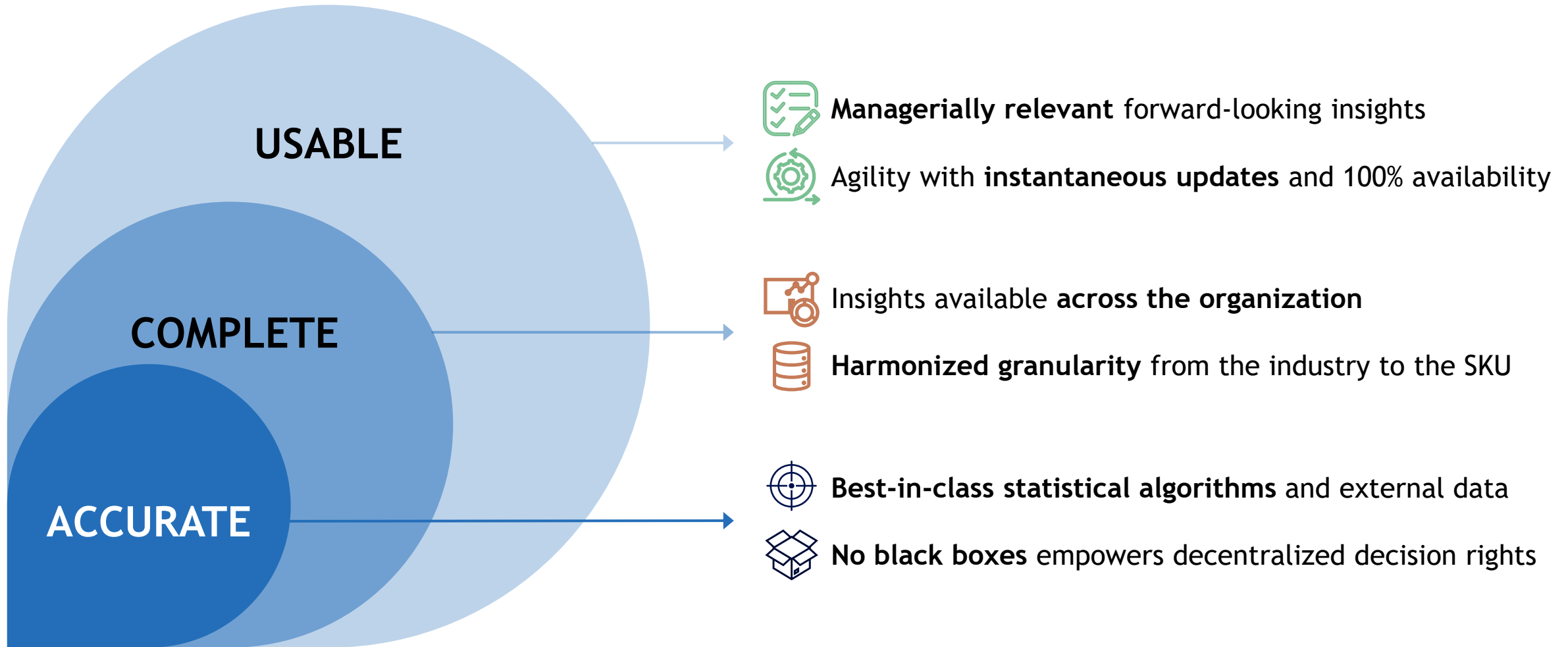

Make customizable adjustments to forecasts

Understand trends at a subcategory and brand level
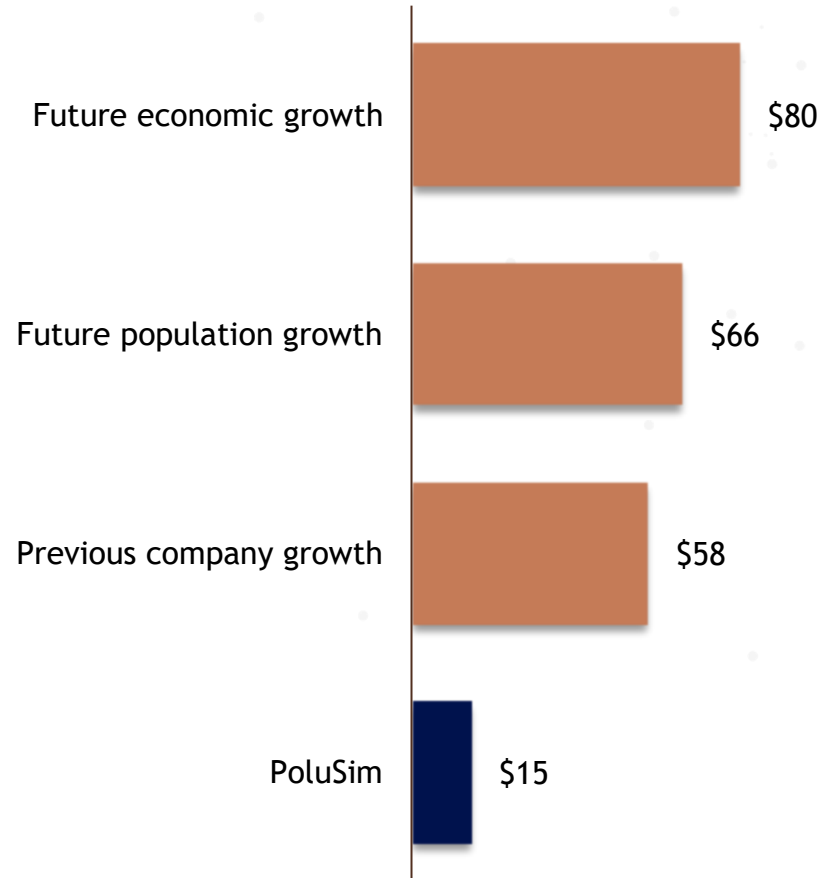

Evaluate historical forecast performance

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PoluSim is the tool to achieve strategic forecasting

USABLE

- **Managerially relevant** forward-looking insights
- Agility with **instantaneous updates** and 100% availability

COMPLETE

- Insights available **across the organization**
- **Harmonized granularity** from the industry to the SKU

ACCURATE

- **Best-in-class statistical algorithms** and external data
- **No black boxes** empowers decentralized decision rights

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PoluSim can deliver millions in improved forecast accuracy

ERROR OF VARIOUS FORECAST METHODS
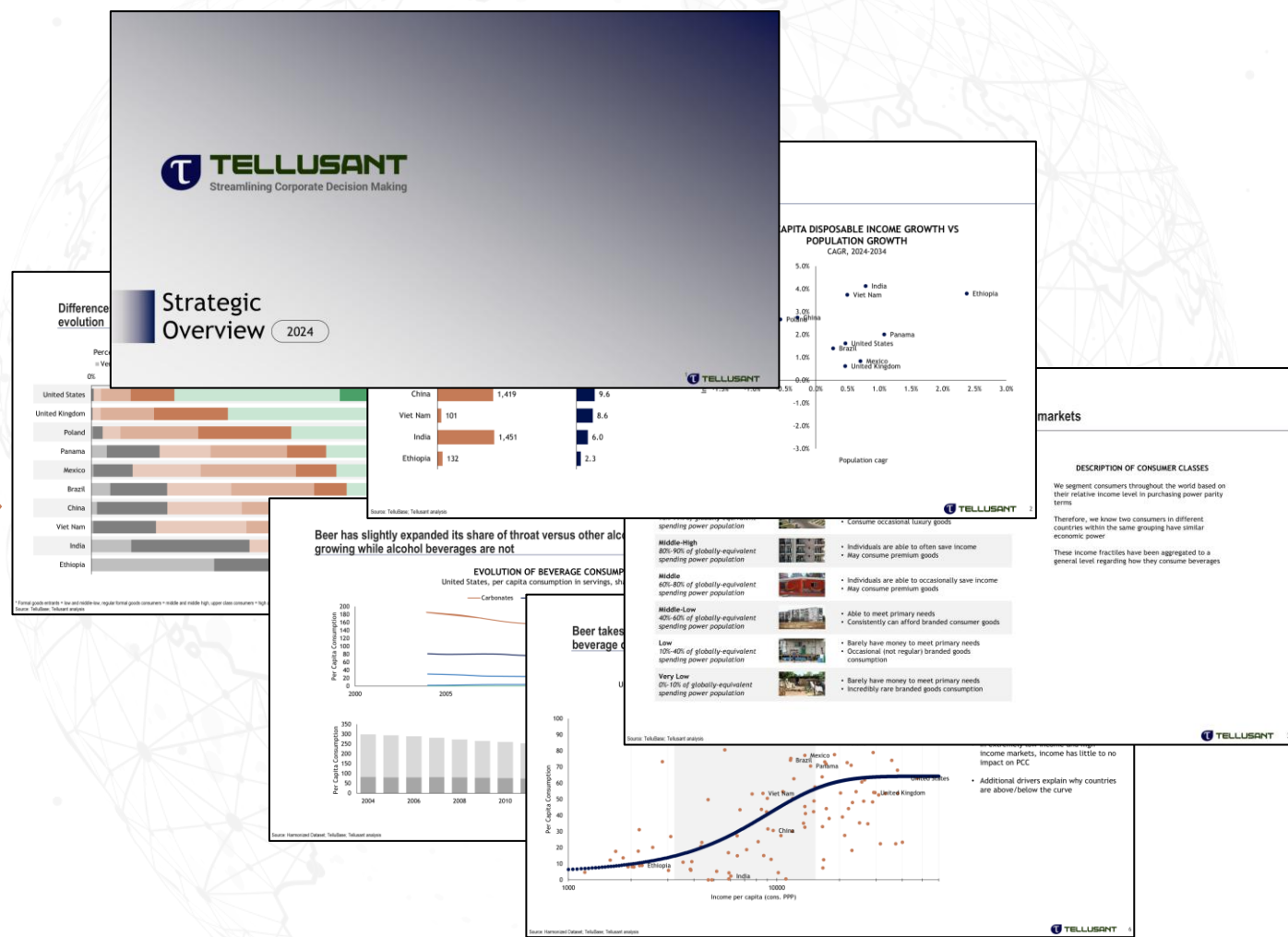Five-year period per $1 billion in revenue, from Tellusant work

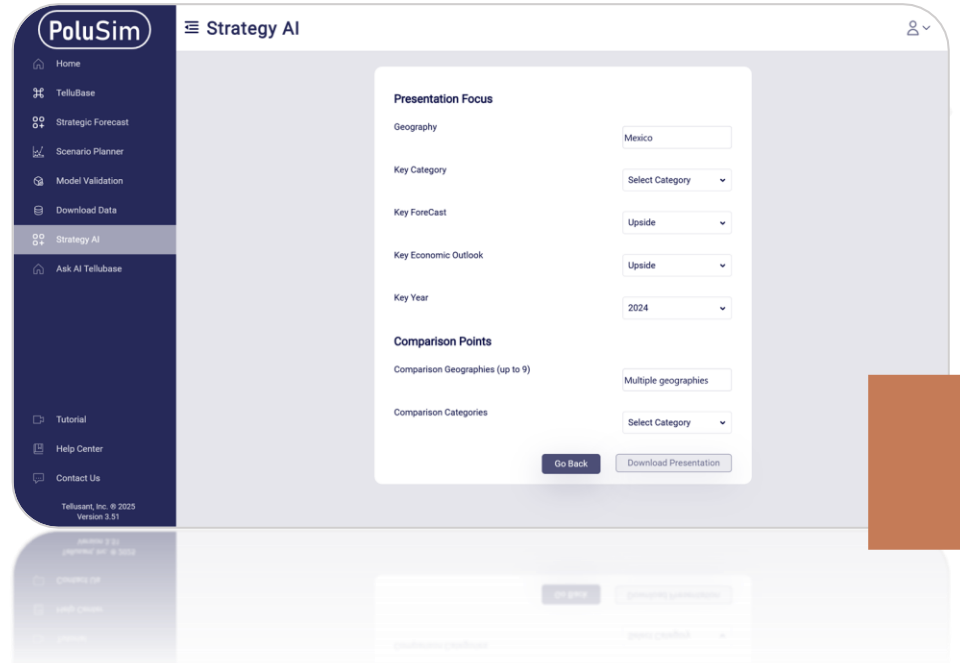| Method	Error
Future economic growth	$80
Future population growth	$66
Previous company growth	$58
PoluSim	$15

1 Methods always incorporate **internal data**, **external factors**, and blended model with **statistical** and **machine learning algorithms**

2 Every driver is explained, quantified, and adjustable within consistent confines

3 Customizable restrictions across users for adjusting and viewing information

We are flexible to work across timelines, details, and by integrating with other internal models

DETAIL	TIMELINE		
	1 year (monthly)	3 year	10+ year
Geography (optional subnational)			
Category	Internal operating forecast models	PoluSim	
Segment			
Channel	Or		
Player	PoluSim	PoluSim	
Brand		*Optional detail*	
SKU			
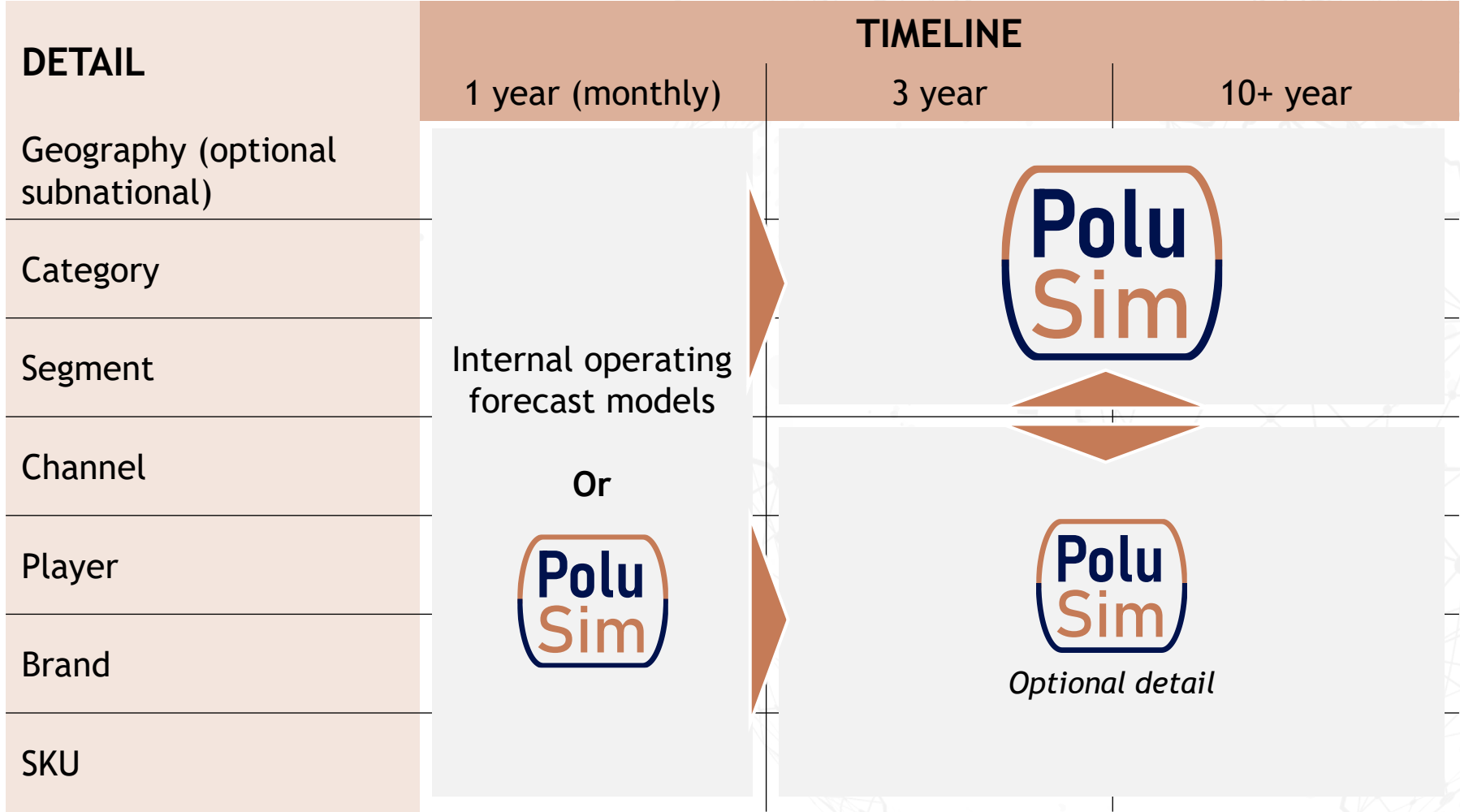
Outcomes focus on insights with fully customized presentations available instantly

Strategic forecasts answer questions across the value chain

Firm Infrastructure	• What do I expect will happen to my company and industry? And why • How can I streamline my strategic planning process?
Human Resource	• How are employee salary expectations likely to chain in each of my locations? • How can I better tie recruiting goals to future expectations of company?
Technology Development	• PoluSim drives companies toward better technology and use of it • Where should I focus on R&D given changing consumer preferences?
Procurement	• What regions should we focus on most to expand or decrease sourcing? • What will be the company's needs for new materials over the next 3, 5, 10 years?

Logistics	Operations	Marketing & Sales	Service
• What would be the impact of regulatory changes on my business? • What would happen if I increase distribution for my products?	• Are my operational forecasts in line with strategic forecasting outcomes? What are the risks? • How will production utilization change based on company plans and expectations?	• What will be the impact of levers on marketing and pricing? • How can I better react to competitor actions in the market?	• How can my service needs be optimized with the rest of my business?

Direct cost benefits provide minimum 4x ROI

The average company using PoluSim has seen direct cost savings of

430%

on a three-year basis

❝

"We transitioned all strategic forecasting to PoluSim, which empowered each of our business units to build forecasts quickly and with sound judgement"

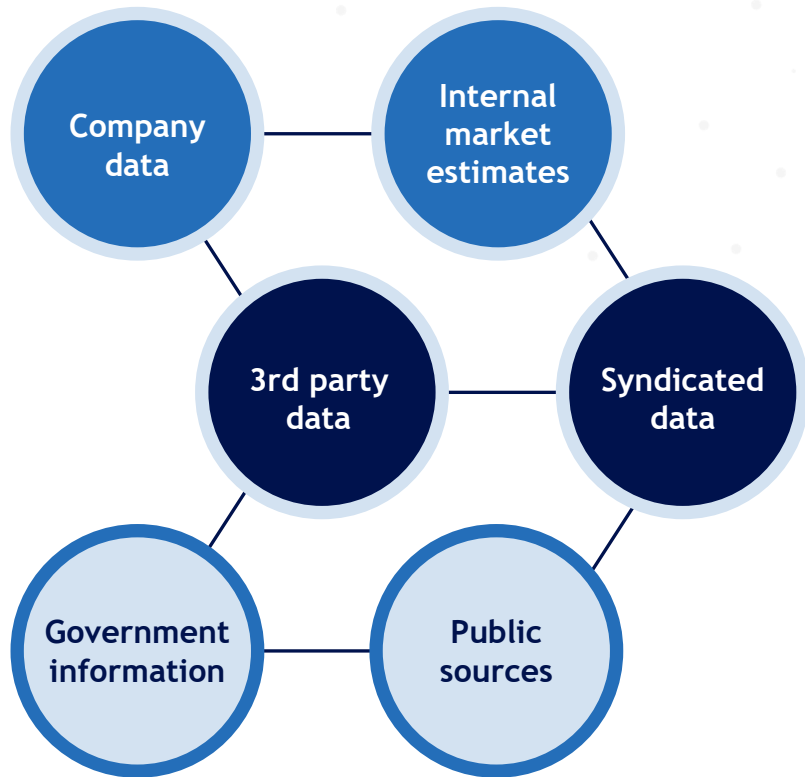- Chief Marketing Officer, $800 million food company
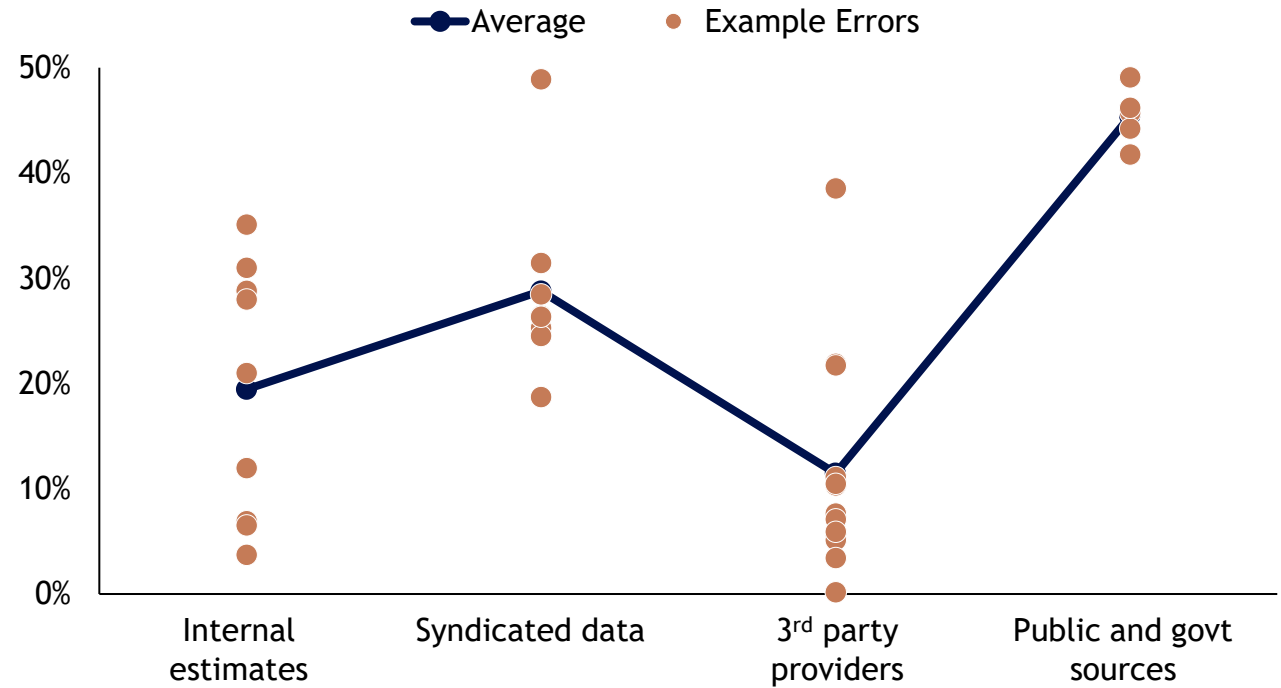
PoluSim enables best-in-class strategic forecasting

↗ Facilitates precise prediction of product performance trends

↗ Ensures a consistent understanding of performance metrics across business units

↗ Helps identify growth opportunities and integrate them into strategic planning

↗ And more

We work with you to harmonize data and improve accuracy by at least 20%

PoluSim

We build customized harmonization setups depending on availability and trust in data

- Company data
- Internal market estimates
- 3rd party data
- Syndicated data
- Government information
- Public sources

ERROR IN SOURCES VS FINAL SOURCE OF TRUTH
Absolute average error across 11k category data points of volume and value data

Legend: —●— Average   ● Example Errors

Y-axis: 0%, 10%, 20%, 30%, 40%, 50%

X-axis categories:
- Internal estimates
- Syndicated data
- 3rd party providers
- Public and govt sources

TELLUSANT

Tellusant delivers three tiers of benefits from its products

Streamlined decision making

Upgraded strategic forecasting process

Products without change in processes

BENEFITS

Be agile and precise with strategic decisions
Tellusant's long-term vision

Become a strategic forecasting leader

Gain direct cost benefits
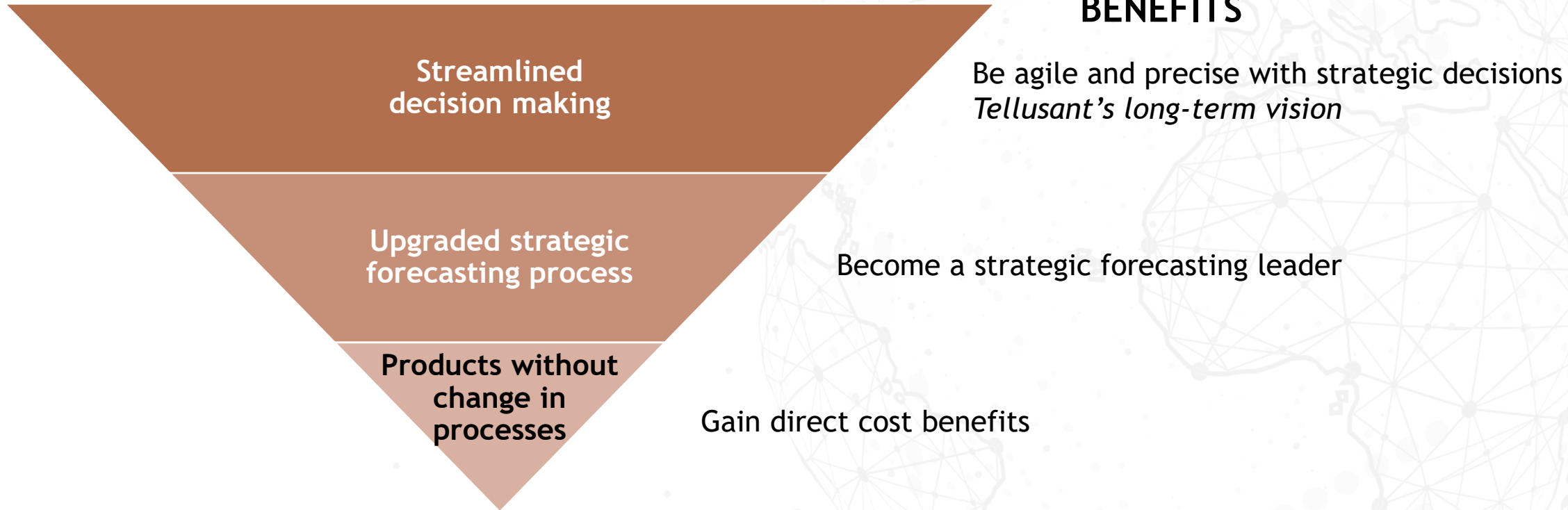
Our initial involvement typically starts with a basic installation, evolving as client satisfaction and ambitions grow

Five key steps to strategic forecasting with PoluSim

Base Forecasts

↗ Based on consistent, proven demand drivers
↗ Updated 2-4x per year

Managed by Tellusant
Aligned with company
Always available in PoluSim

Forecast Enhancements

↗ Tellusant updates to forecasts and PoluSim
↗ Updates not required

Scenarios

↗ Baseline scenarios provide realistic ranges
↗ Based on economic conditions, consumer trends (customized)

Fully Custom Forecasts
Updated anytime

Baseline Forecasts

Company Alignment

↗ Adjustments transparent to all

Managed by company
Support available from Tellusant

Teams Add Adjustments

↗ Determine most realistic scenarios
↗ Add flexible adjustments

Success Stories: Leveraging PoluSim across varied business needs

PoluSim Focus	Company Revenue and Reach	Rationale for PoluSim	Outcomes
Strategic Forecasting	$40bn, Global, 40 business units (BUs)	Data team forecasts were unreliable, not trusted by any business units	• Forecast error reduced by over 50% versus in-house solution
	$20bn, Global, 100 BUs	Desire to become a leading strategic forecasting company to better plan	• PoluSim tool increased use of forecasts across business units by 75% • Forecasts now used across all internal strategic initiatives and projects, saving costs and time internally and with other external providers
	$9bn, USA, 3 BUs	Need to upgrade forecasting to be state-level and capture consumer trends	• Visibility into state-level outlook and scientific forecasting 50% accuracy improvement versus previous forecasting • Developed forward-looking drivers explaining 80% of demand, now used in investor communications
Strategic Decisions	$2bn, Global, 15 BUs	Strategic project to determine future category evolution Followed by PoluSim access	• Forecasting revealed a driver company could positively influence via government interaction, leading to higher category growth
	$750m, Latin America, 5 BUs	Component of effort to advance capabilities in strategic planning	• Company aligned on 10 growth initiatives, using PoluSim to test and optimize in which BU to focus on each initiative
	$500m, Mexico, 1 BU	Strategic project to find market opportunities. PoluSim provides subnational insights	• Subnational forecasts lead to shift in strategy to segment portfolio by region

How to get started with us

A. Conduct a deep dive to assess the opportunity for strategic forecasting within your organization

B. Begin the implementation of PoluSim

C. Engage in strategic projects specifically tailored to strategic forecasting

D. Work alongside our consultants, who are experts in strategic forecasting, to enhance your strategic processes

E. Discuss with us how we can best support your goals

Option A: Our recommended path

Start with a Four-Week Deep Dive and workshops

Guaranteed deliverables:

Strategic Assessment:
Thorough evaluation of your current forecasting capabilities.
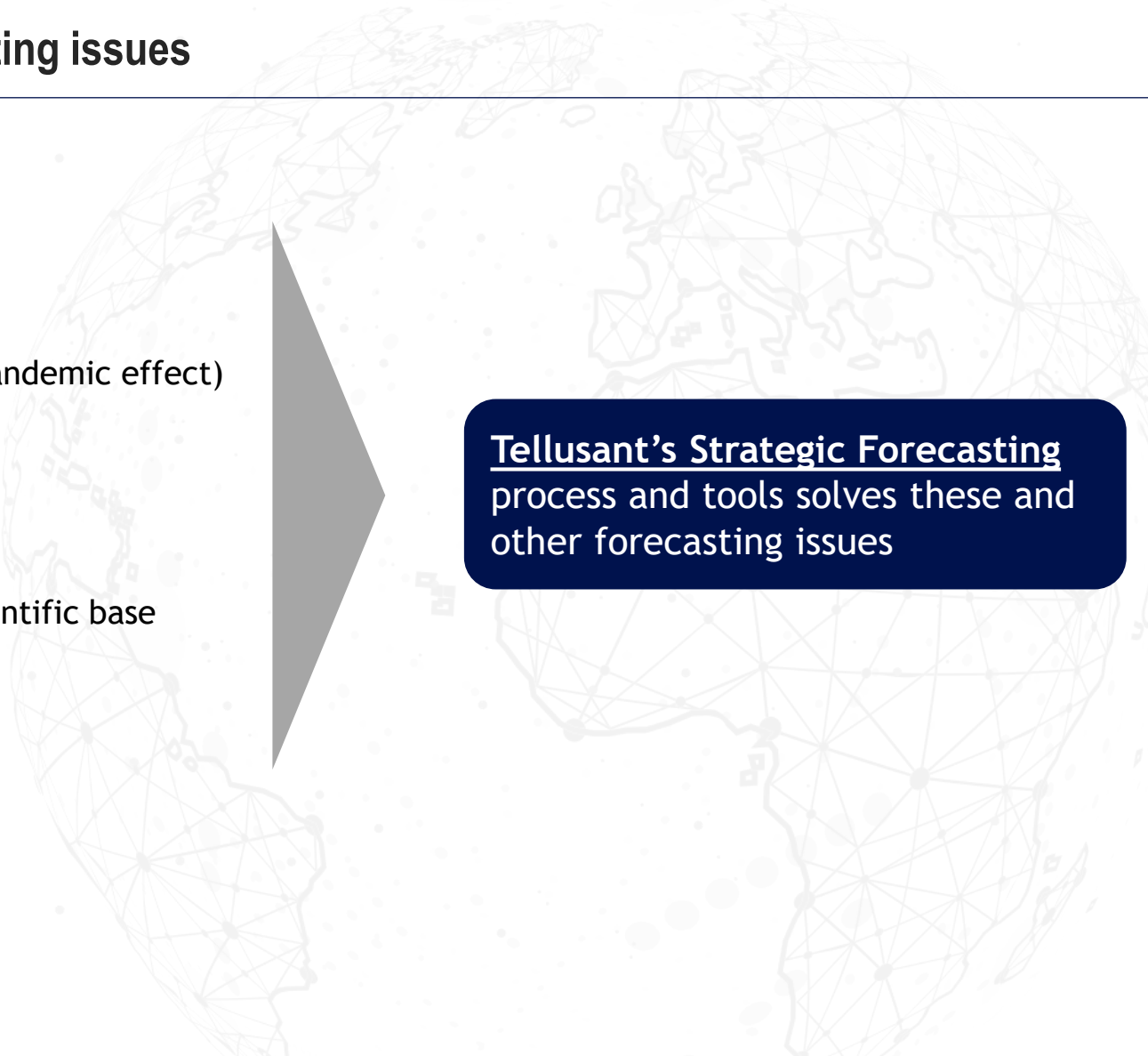
Leadership Workshop:
A one-day session with Tellusant's experienced leaders in strategic forecasting.

Recommendations:
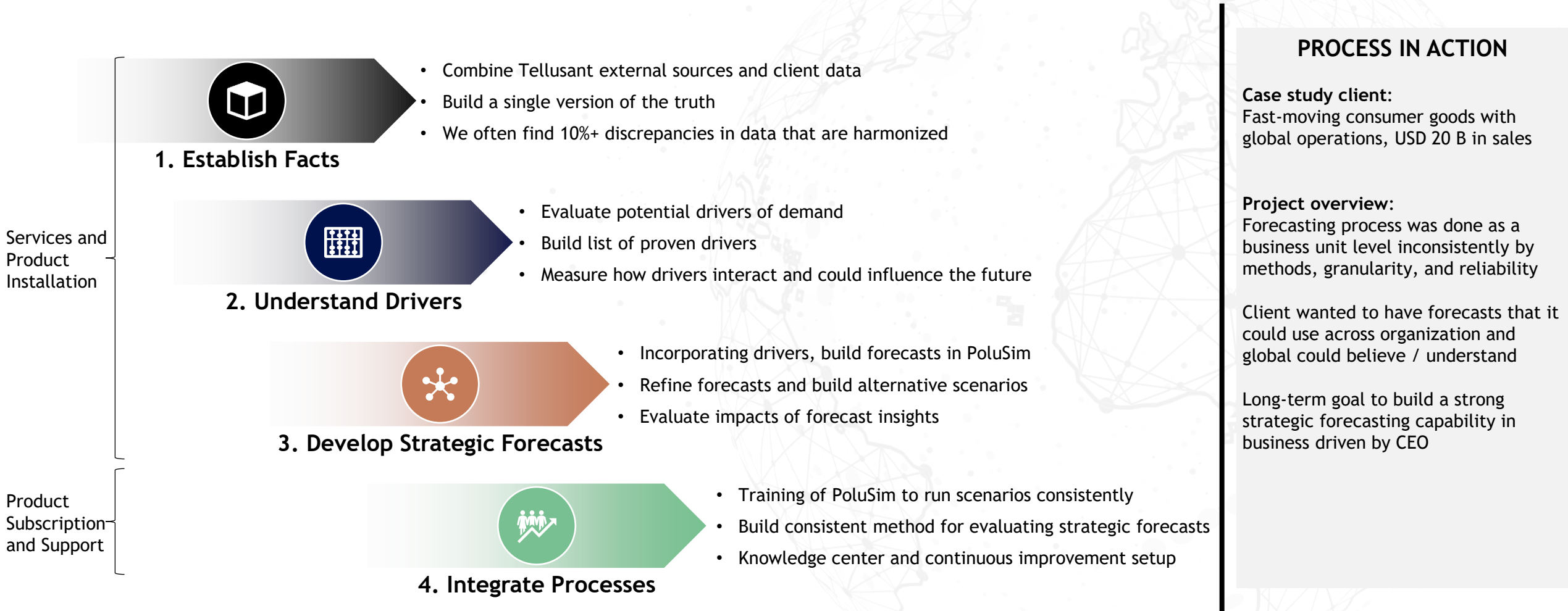Strategies to enhance your forecasting effectiveness.

Companies today struggle with many forecasting issues

1. GDP growth predicts next few years

2. Next few years will be like past few years (taking out pandemic effect)

3. Predictions by syndicated data providers

4. Own growth projected without regard to total category

5. Many drivers fine-tuned by a specialist, but without scientific base

6. Inconsistent methods across business units

Tellusant's Strategic Forecasting process and tools solves these and other forecasting issues

We develop strategic forecasting excellence in 4-phases

Services and Product Installation

1. Establish Facts

- Combine Tellusant external sources and client data
- Build a single version of the truth
- We often find 10%+ discrepancies in data that are harmonized

2. Understand Drivers

- Evaluate potential drivers of demand
- Build list of proven drivers
- Measure how drivers interact and could influence the future

3. Develop Strategic Forecasts

- Incorporating drivers, build forecasts in PoluSim
- Refine forecasts and build alternative scenarios
- Evaluate impacts of forecast insights

Product Subscription and Support

4. Integrate Processes

- Training of PoluSim to run scenarios consistently
- Build consistent method for evaluating strategic forecasts
- Knowledge center and continuous improvement setup

PROCESS IN ACTION

Case study client:
Fast-moving consumer goods with global operations, USD 20 B in sales

Project overview:
Forecasting process was done as a business unit level inconsistently by methods, granularity, and reliability

Client wanted to have forecasts that it could use across organization and global could believe / understand

Long-term goal to build a strong strategic forecasting capability in business driven by CEO

TELLUSANT

Our rigorous and data-driven process measures demand

- Drivers of consumption span across economic, consumer, and player action driven factors, which vary by time and as markets evolve

- We organize the variables through a Golder Tellis predictive framework:

Economics & Demography	Industry & Trade	Consumer Insights

Golder Tellis Forecasting Model

$$demand = k \cdot (di)^{\beta_1} \cdot (cs)^{\beta_2} \cdot (p)^{\beta_3} \cdot (ms)^{\beta_4} \cdot (mp)^{\beta_5} \cdot e^{\varepsilon}$$

Volume | Disposable income | Consumer sentiment | Price | Marketing spend | Market presence (distribution)
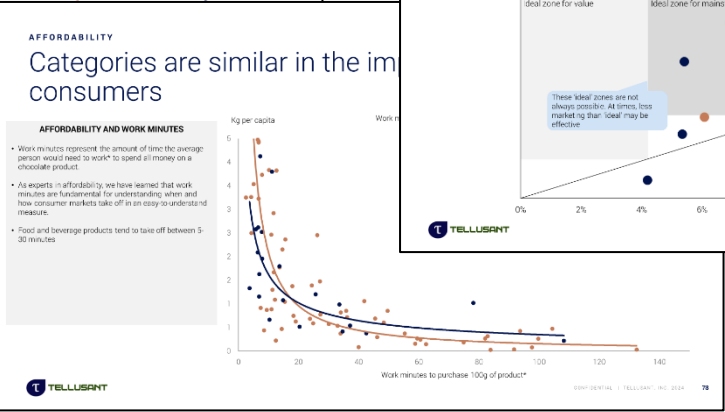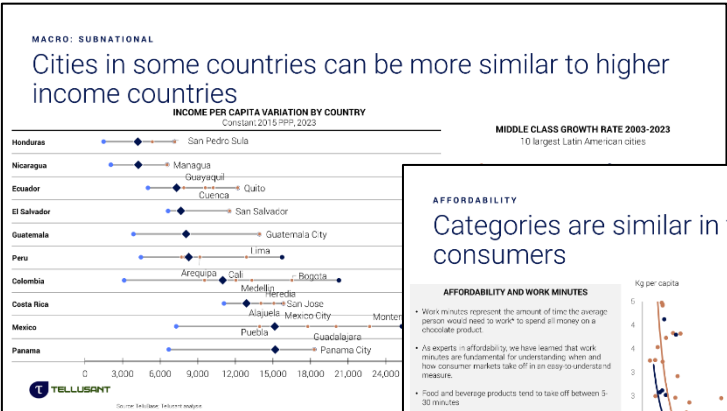
—— External —— —— Internal ——

PROCESS IN ACTION
From case-study client

We identified 5 key drivers that explain >95% of demand and a total of 15 relevant drivers

Impact and relevance of drivers is explained and can be used across organization

Using TelluBase, several business units started viewing markets subnationally (by region / city) in terms of drivers and forecasts
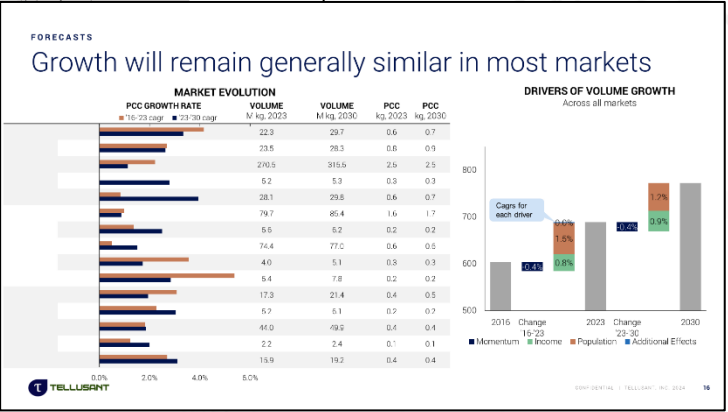
PoluSim allows clients to continuously update insights

- Forecasts updated as new information comes in and managed across local, regional, and global teams in an accountable and consistent manner

- Insights tied with templates for use within presentations

- PoluSim serves as a hub for data-driven decision making
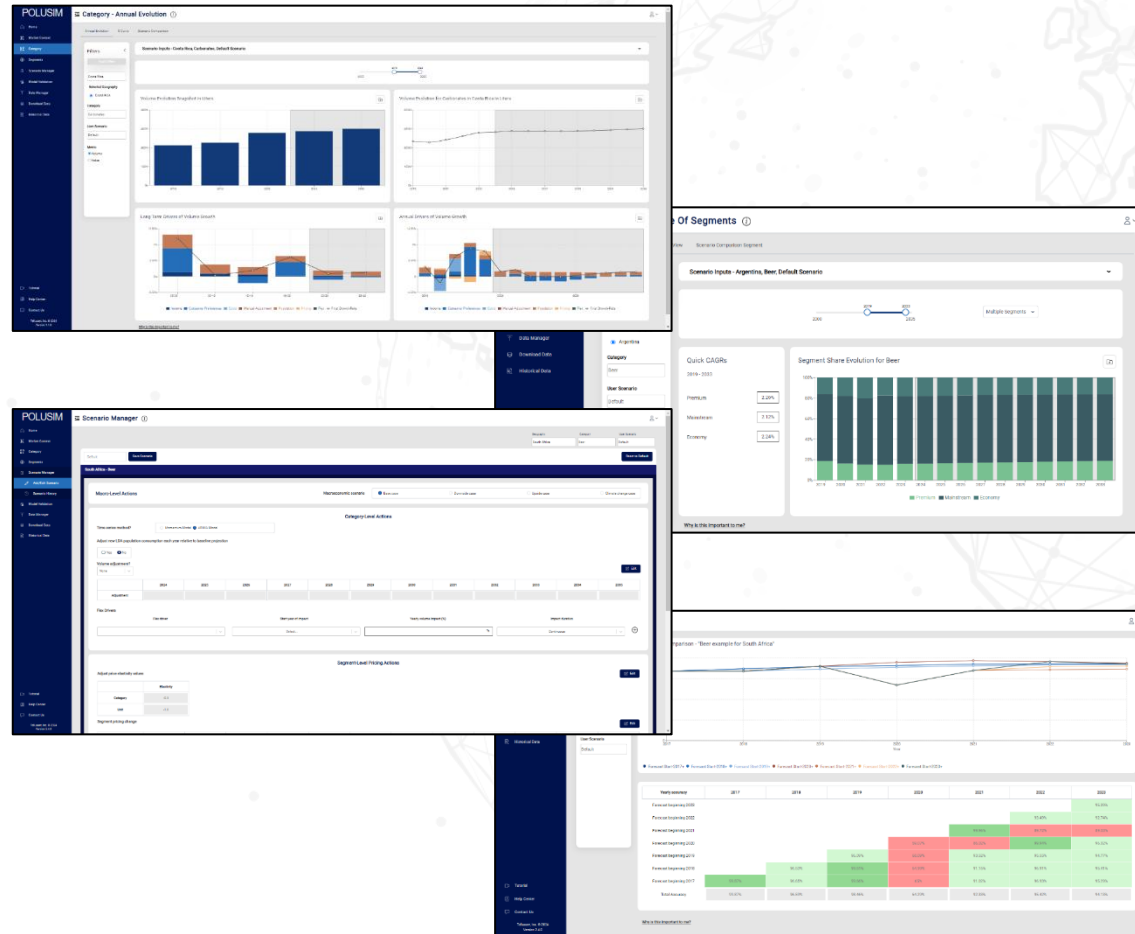
PROCESS IN ACTION
From case-study client

PoluSim provides unlimited flexibility in building scenarios for alternative and unforeseen shifts

Training, installation, and integration process took place over 6 months

PoluSim access provided to 1-2 team members per business unit and headquarter functions

Outcomes increase decision efficiency and lower costs

IMPACTS

1. **Ability to understand future trends in markets**

   Know why trends are happening

   Explain what is causing trends

   Consistent view of key dynamics related to consumer demand

2. **Ability to make rational adjustments in forecasts based on market factors and strategic decisions**

   Tool provides scenario management

   Transparency in adjustments increases believability

3. **Clear connection to tie forecasts with strategy**

   Forecasts tie directly with strategic planning, strategy development

   Consistency across business units drives comparability and effectiveness for leadership

IMPACT IN ACTION
From case-study client

1. Data accuracy increased significantly. Most sources used had 5-10% inaccuracy that was fixed during effort

2. Time to build forecasts for strategic planning is reduced by 75%

3. Forecast accuracy increased by 50%

4. Additional strategic initiatives launched due to new access to information and insights within PoluSim