

Innovations that Will Change Supply Chain Planning During Your Career

Optilon Supply Chain Conference

September 4, 2014

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Powerfully Simple

Five Innovations

- 1 In a dynamic world, leveraging additional data will allow us to understand demand, despite its volatility

What has changed for Demand Forecasting

SUPPLY CHAIN

Stable distribution networks

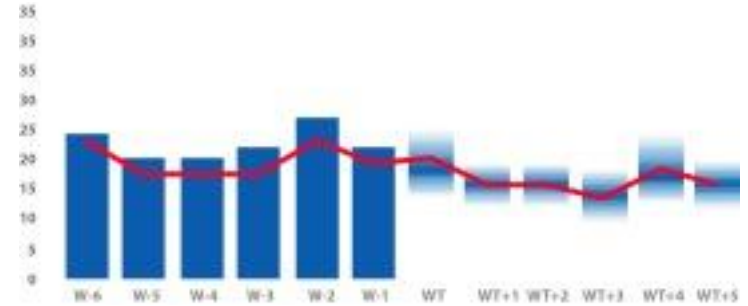
Limited product range and NPI

“continuous” advertising

Limited promotions



DEMAND FORECASTING

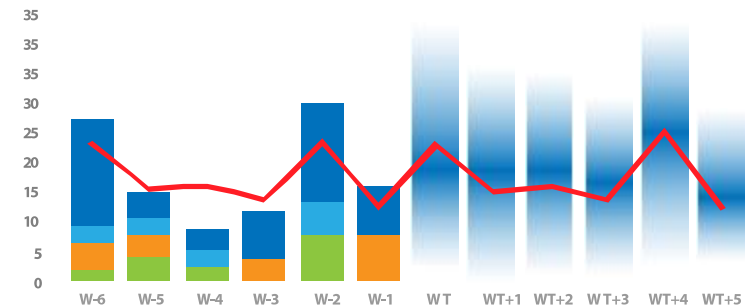
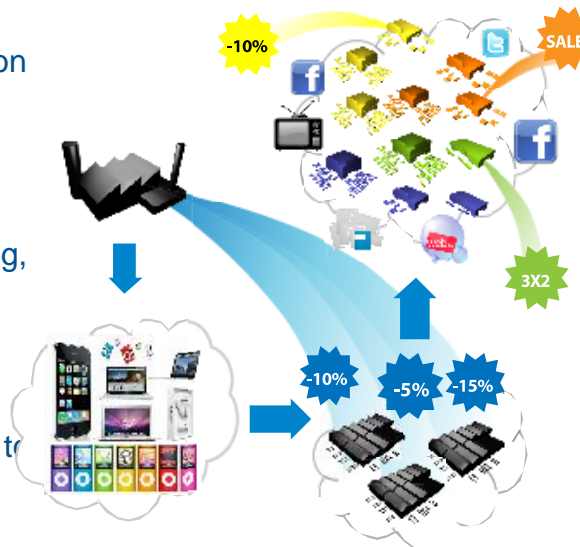


Traditional time series approach worked

Dynamic demand allocation

Internet drives:

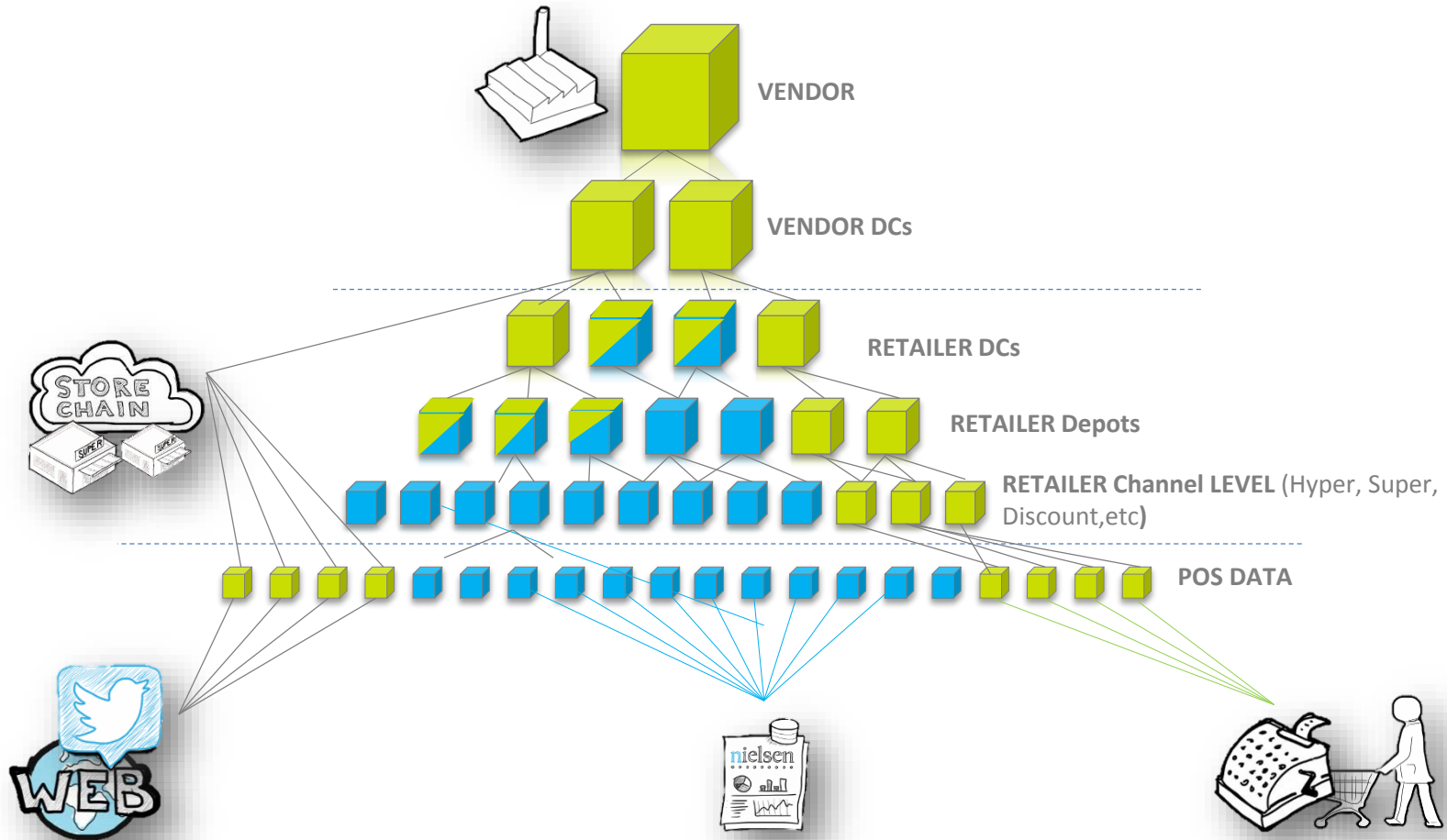
- intense demand shaping,
- extended of product offering and NPI
- accelerated trends due to social media



Time series approach doesn't work anymore due to the high volatility and the high relevance of market variables

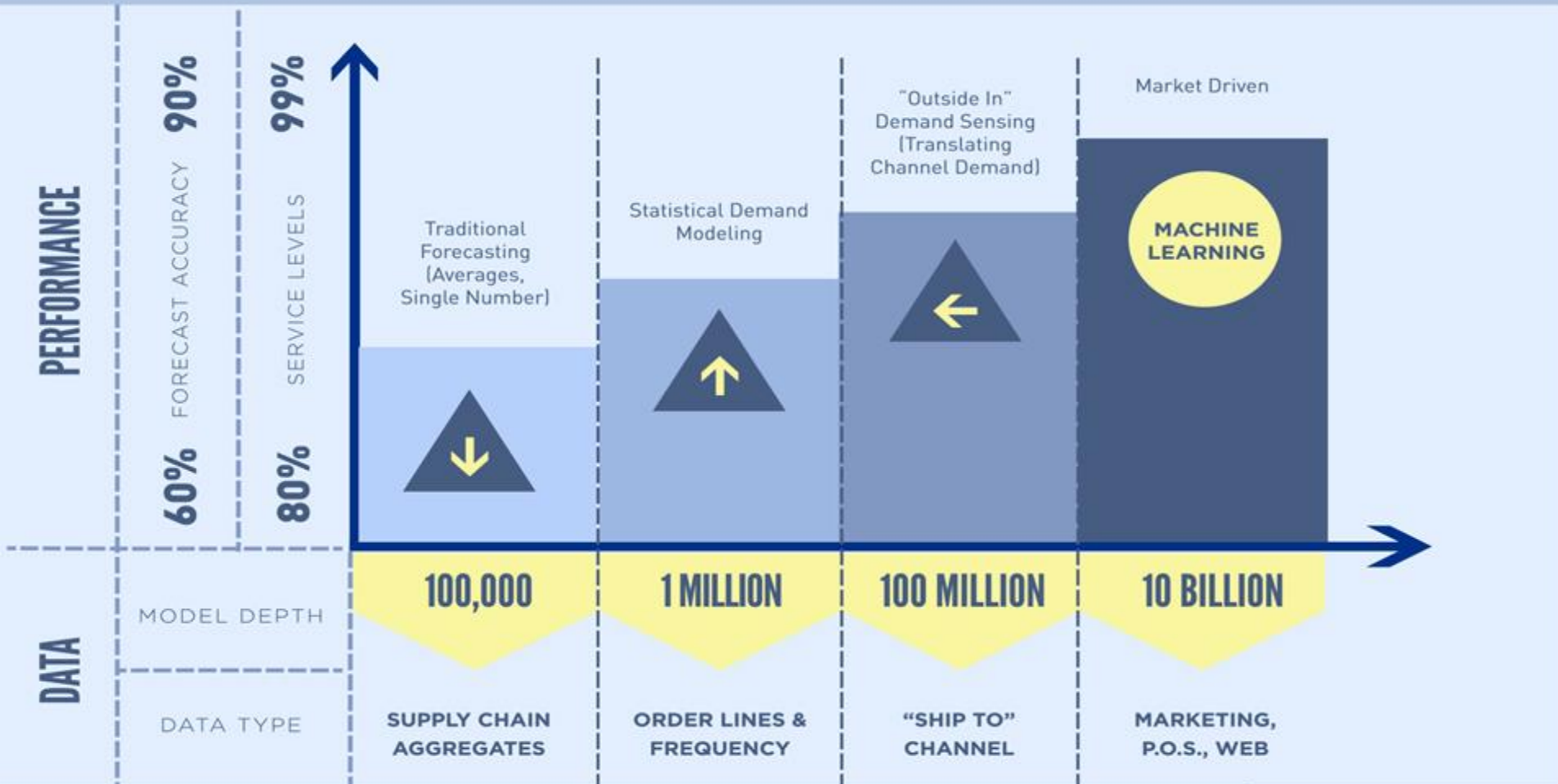
Understanding demand

Processing related data closer to the consumer



Leveraging Downstream and Marketing Data

THE FOUR STAGES OF FORECASTING



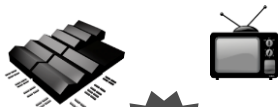
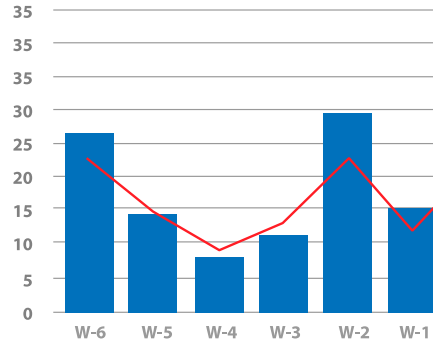
Why Demand Forecasting should be automated

Multi-Channel intensified Marketing

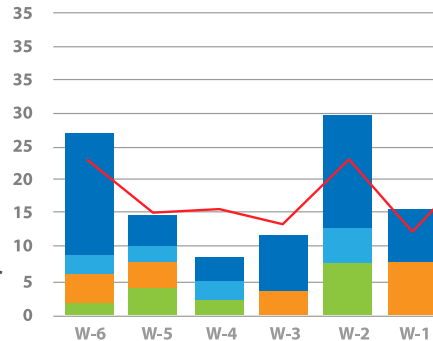
Supply Chain Responsiveness



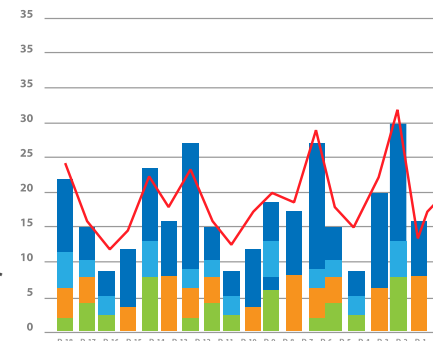
Low Attributes Number
Low Frequency



High Attributes Number
Low Frequency



High Attributes Number
High Frequency



Today's Demand:

- impacted by high number of marketing variables and indicators
- managed as close as possible to the end-customer
- Must be calculated at high frequency

Scale + frequency



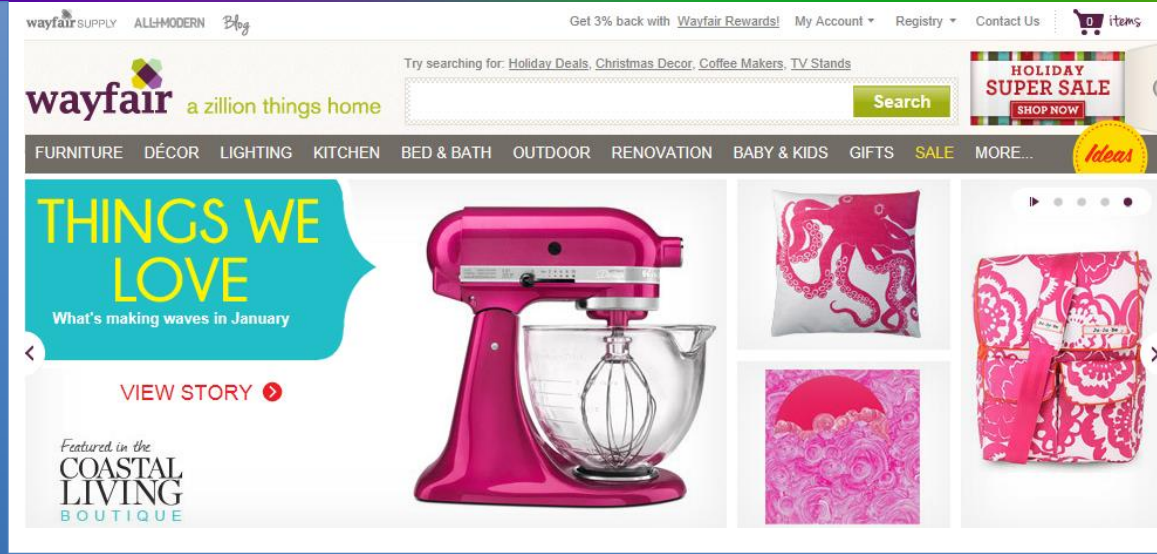
Automation to provide:

- ✓ Timely a reliable mid/long-term forecast for S&OP collaboration
- ✓ Robust short term forecast to drive a responsive SC.

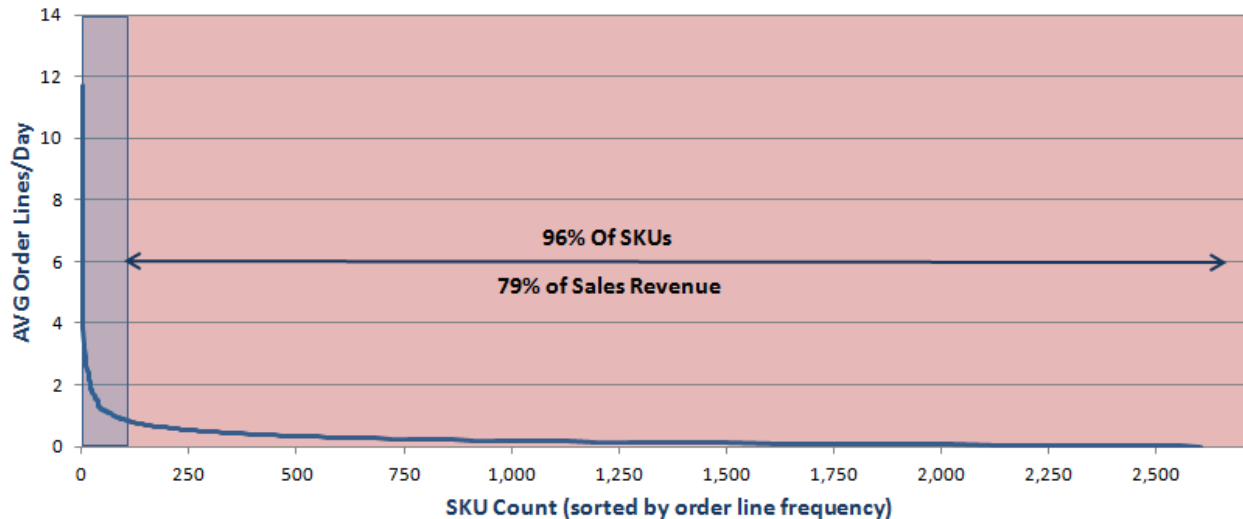
Five Innovations

- 1 In a dynamic world, leveraging additional data will allow us to understand demand, despite its volatility
- 2 The “long tail” will continue to get longer in most industries – but again data will address the problem

Example of long tail in e-commerce

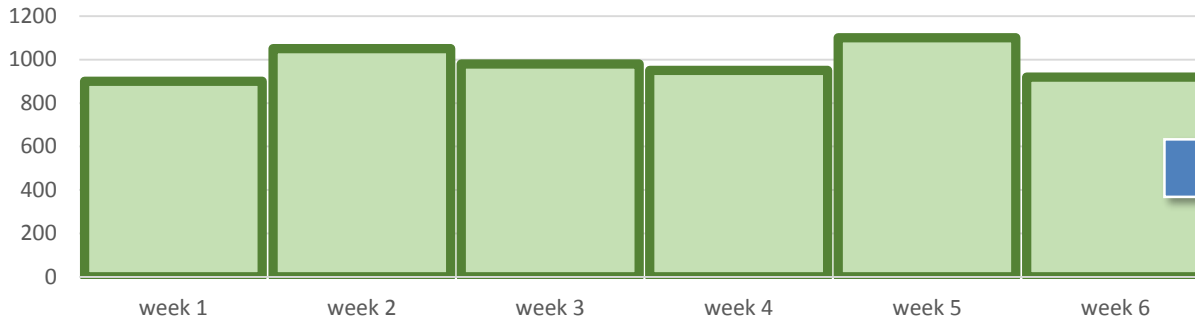


Average Order Lines By SKU



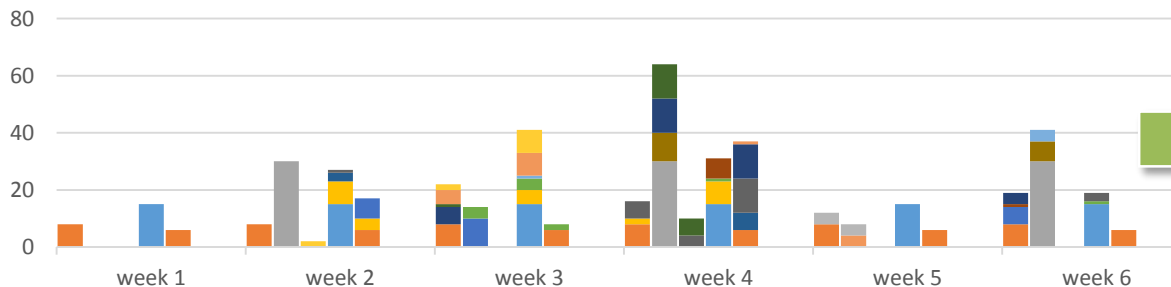
Also the control frequency increases the long tail

What You See:

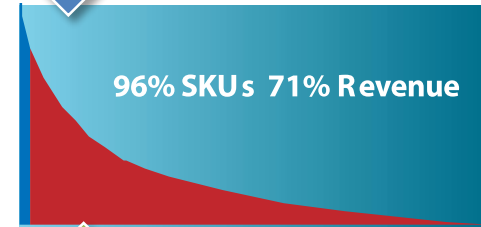


Weekly forecast by Product and Region (Thousand Island dressing, US North-west)

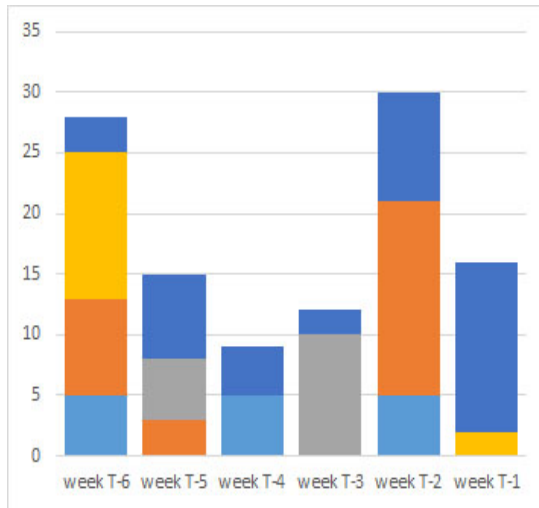
What Your Supply Chain Sees:



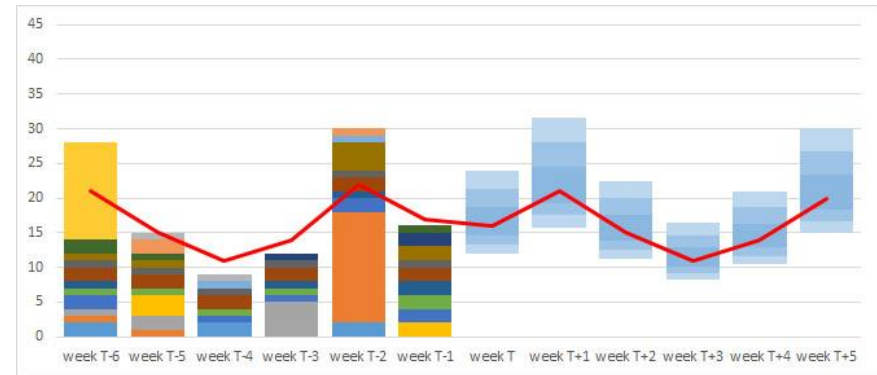
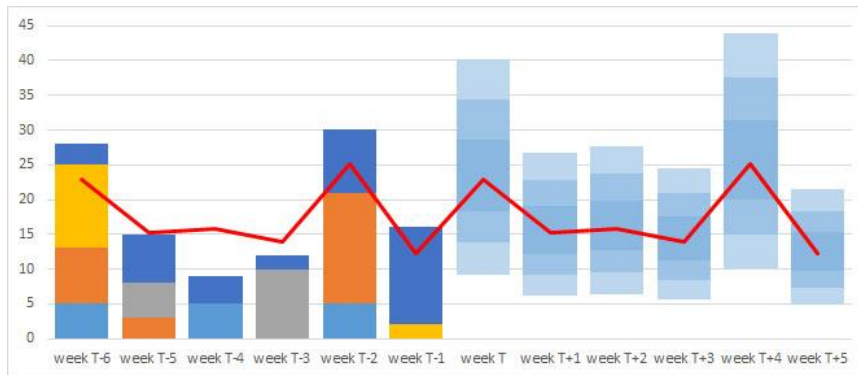
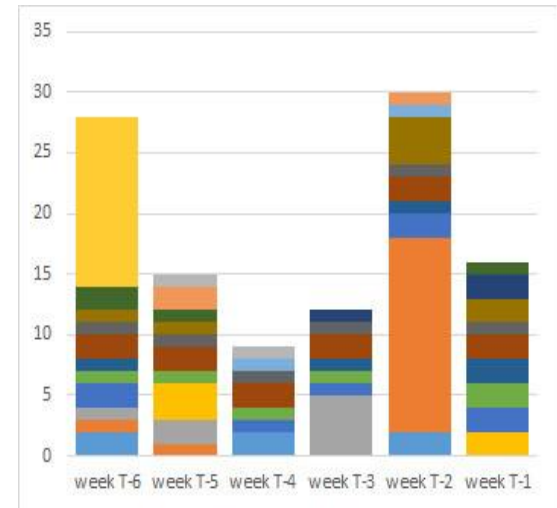
Daily Requirements by SKU and Warehouse (SKU 034512, Tacoma warehouse), colors are individual customer orders



Line orders: example of data that should be used



Two “identical”
demand streams ...
... yield two different
forecasts of
uncertainty...

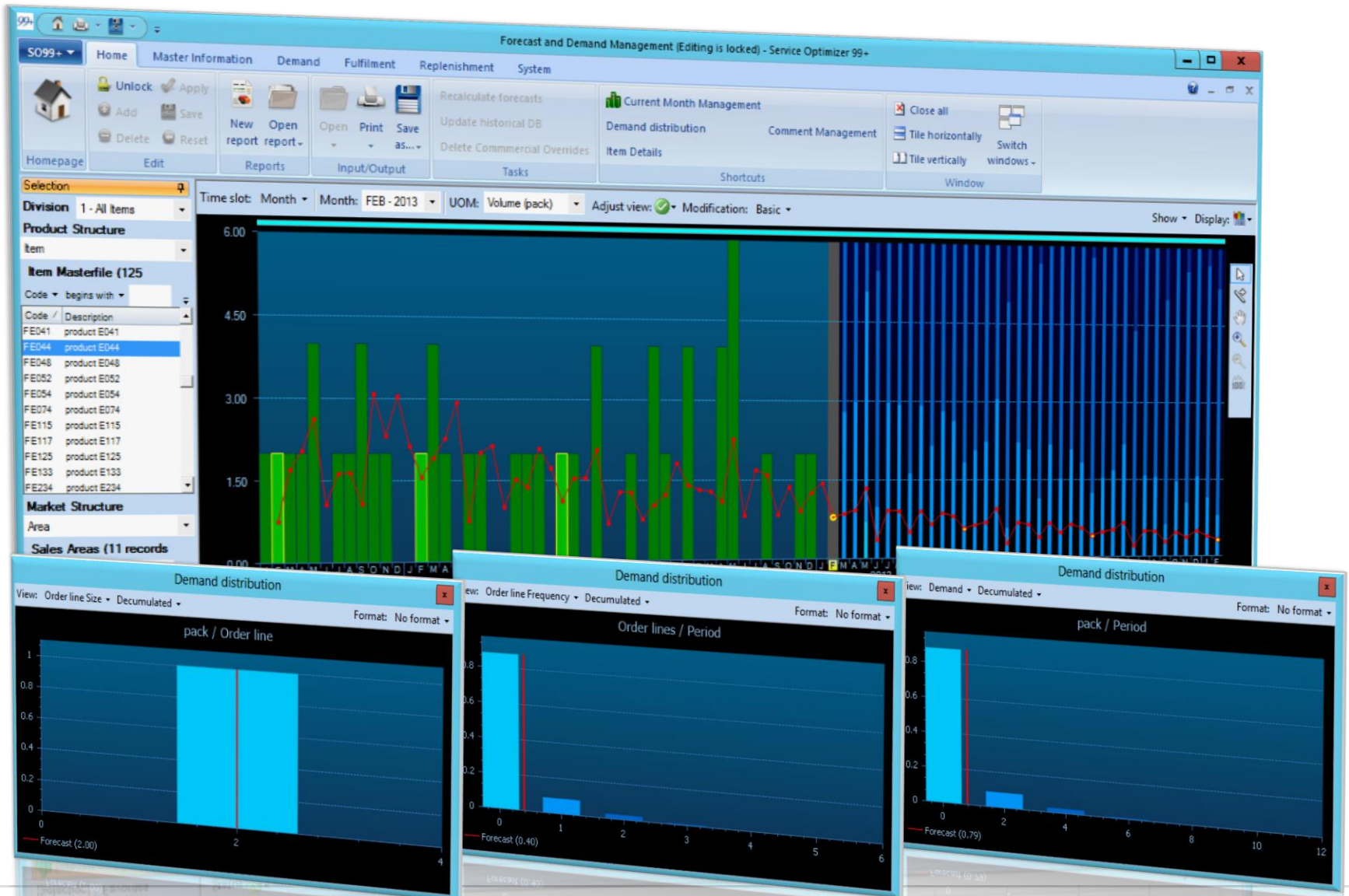


... requiring twice the safety stock on the left to provide the same level of service.

Fast-Moving Item

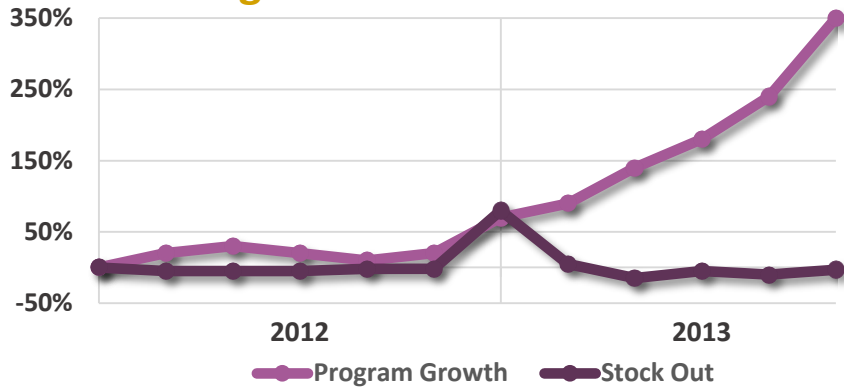


Slow-Moving Item

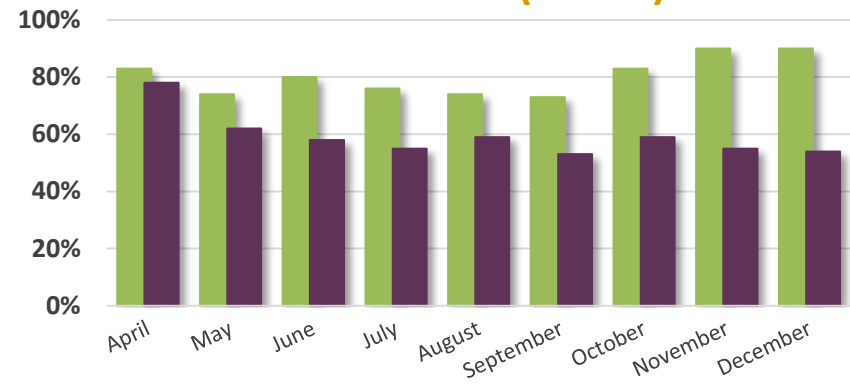


Case study: e-commerce

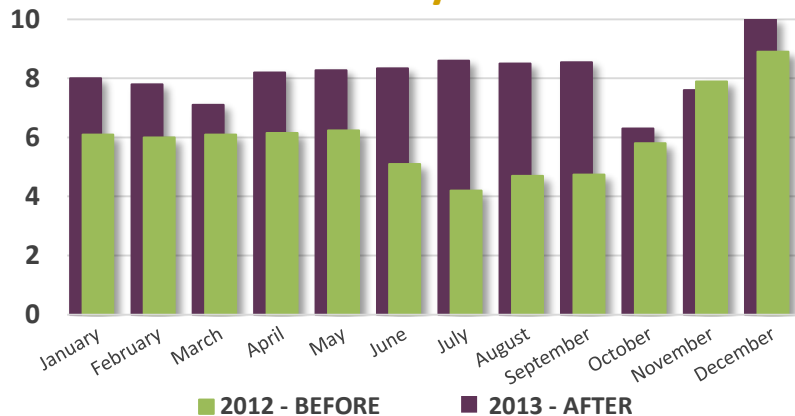
Program Growth vs Stock Out



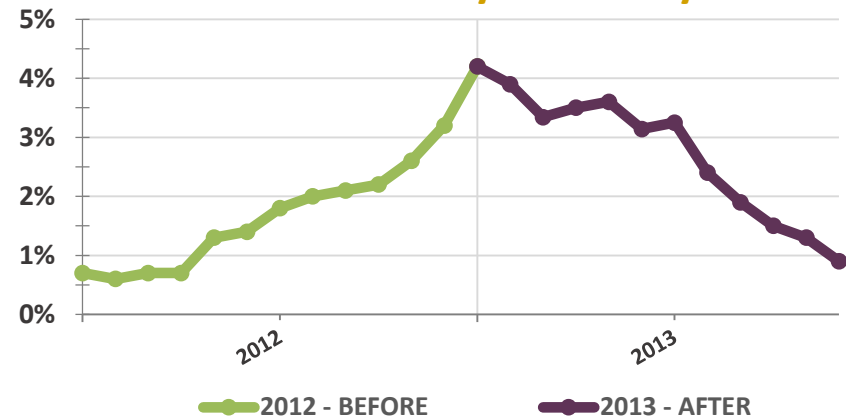
Forecast Error (MAPE)



Inventory Turns



Unhealthy Inventory



Increased Efficiency as their Business Grows Exponentially

Andrew Page: A leading aftermarket distributor in the UK



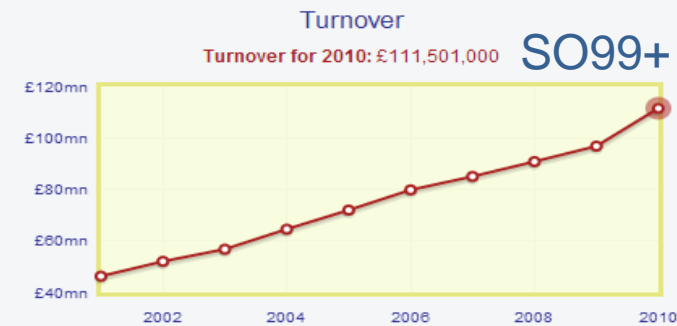
SO99+

- 2 tier network
- 13 hubs, 67+28 depots
- 384k items supplied, about 100k stocked.
- Daily replenishment orders for 20m sku/l's
- calculated nightly
- SO99+ automatically decides to stock,
- cluster or de-cluster

Results & Benefits

- Increased growth rate
- Increased profitability

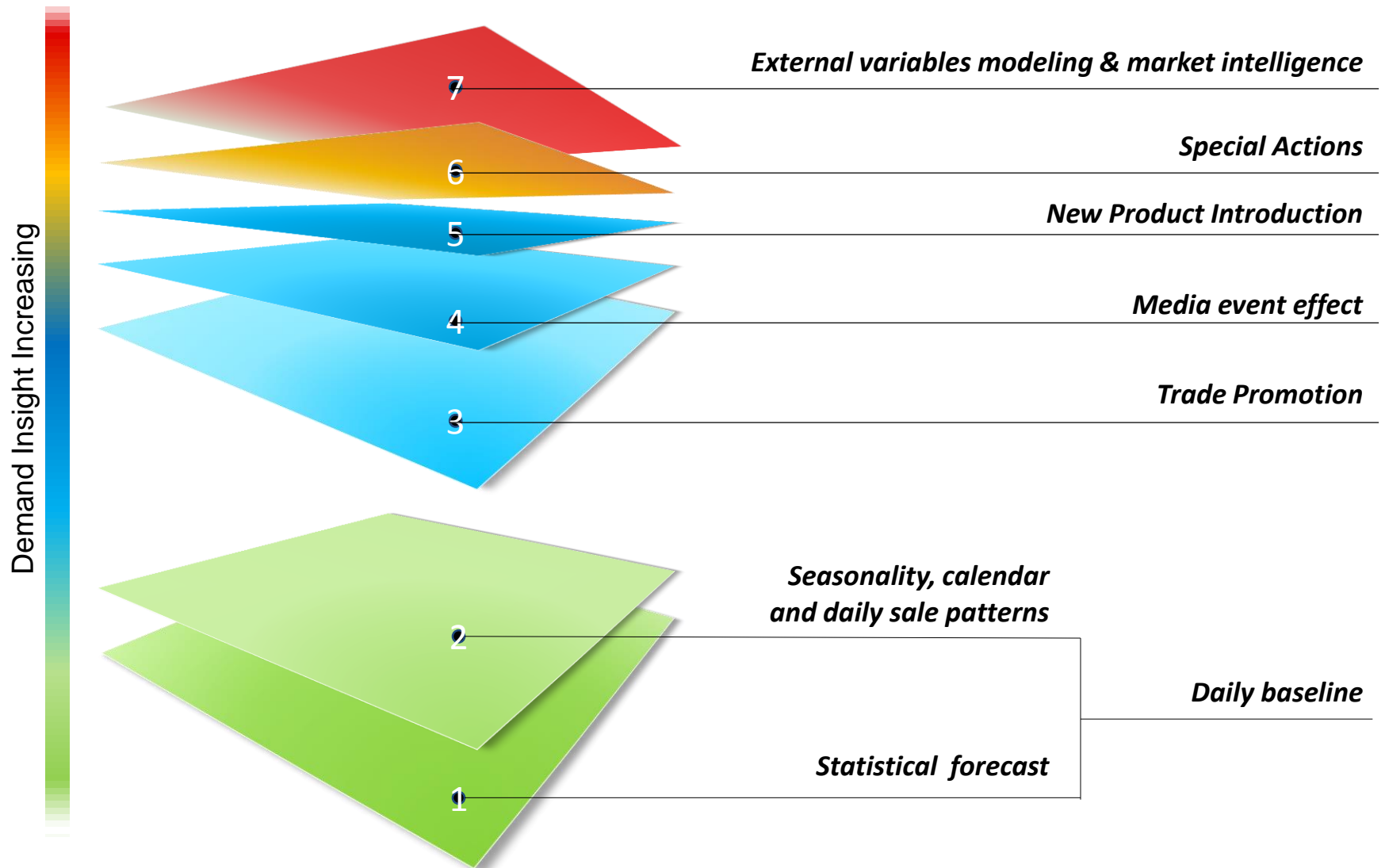
Historical accounts



Five Innovations

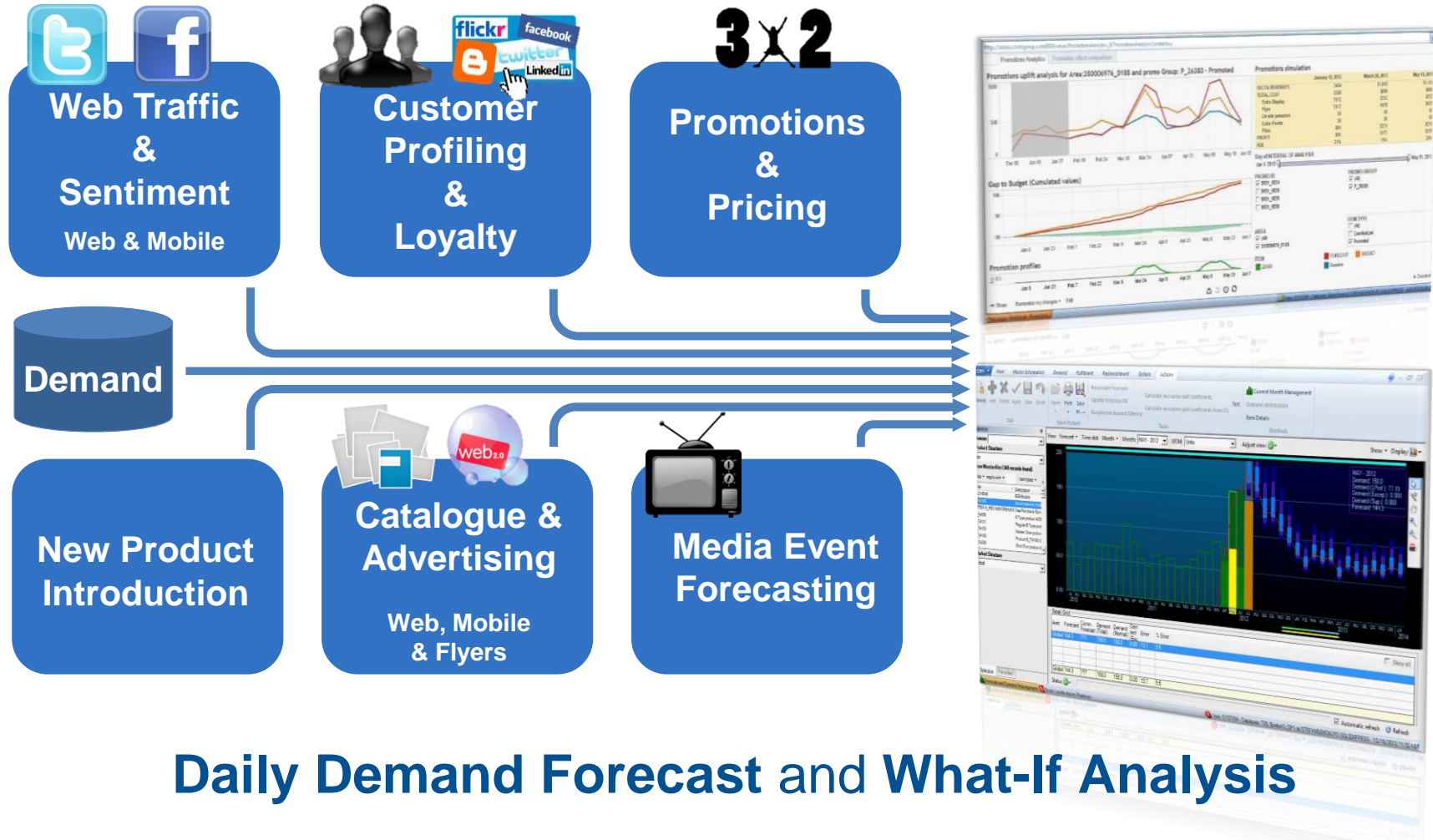
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- 3 New technologies, such as machine learning, will also enhance forecasting and demand management

Improved Forecasting from Demand Analytics



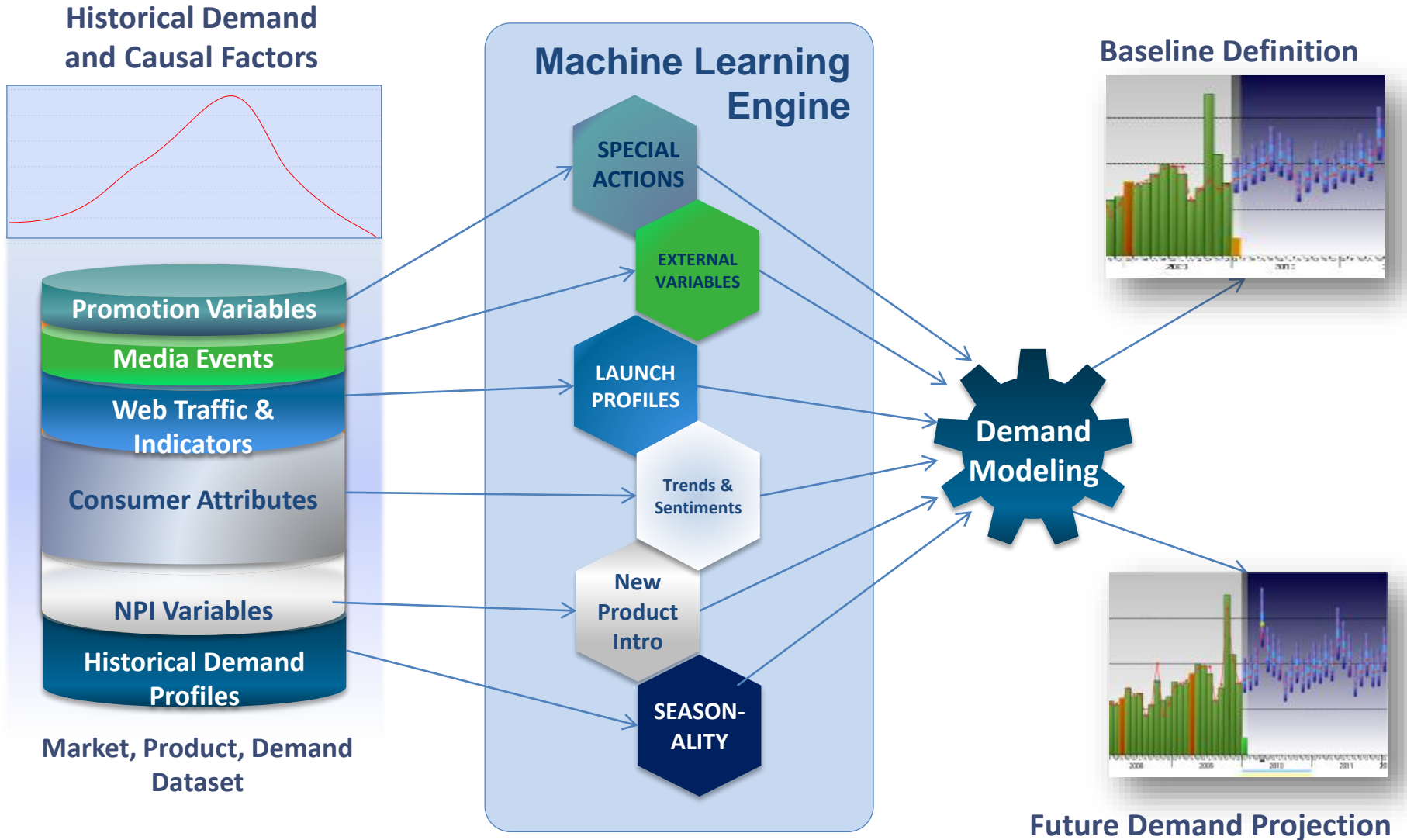
Demand Planning – Modeling Marketing actions require new technologies: “Machine Learning Technology”

Machine Learning and Big Data drive Demand Shaping



Daily Demand Forecast and What-If Analysis

Embedded Machine Learning Technology in SO99+



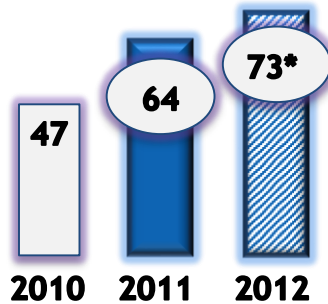
DEMAND SHAPING “NEW NORMAL” Results AND Performance

DEMAND SHAPING KPIs (PROMO)

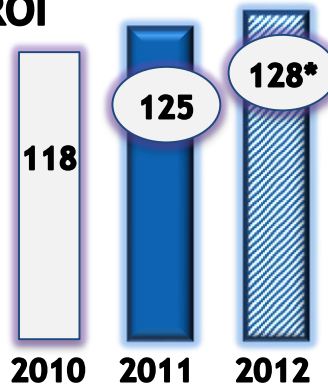
“TRADITIONAL” SUPPLY CHAIN KPIs

...BEYOND NUMBERS...

Net UPLIFT %



Net ROI



FORECAST
ERROR



LOST SALES
(SELL IN)



FG
OBSCOLESCENCE



- ROBUST FOUNDATION OF A VALUE DRIVEN S&OP
- CONTINUOUS OPTIMIZATION OF INVESTMENT EFFICIENCY
- CONSISTENT BUSINESS STEERING CYCLE
- FLEXIBILITY AND RESPONSIVENESS TO BUSINESS OBJS SHIFTS

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- 4 Supply chains are becoming so dynamic that even tactical models will become time-phased

Time-Phased Supply Chain of bathing-suits

Alternative Sourcing

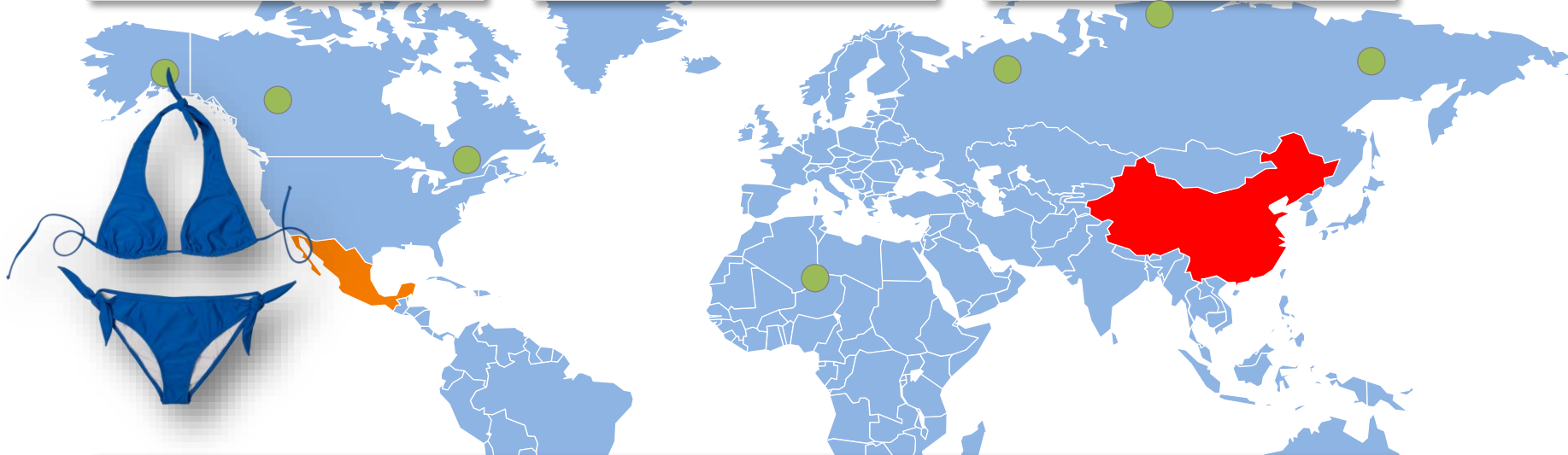


Sourced from China



Sourced from Mexico

Product Reallocation within the network



Dynamic Distribution

Pre Season



Multi-Channel Metropolitan areas

During Season



Increased demand in holiday locations

Late Season



Outlets

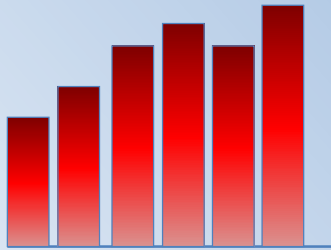
Supply chain evolves



Production and Distribution are tailored to serve local demand from local warehouses and factories



Supply chain evolves



**Exceptional demand
(i.e. Summer)**

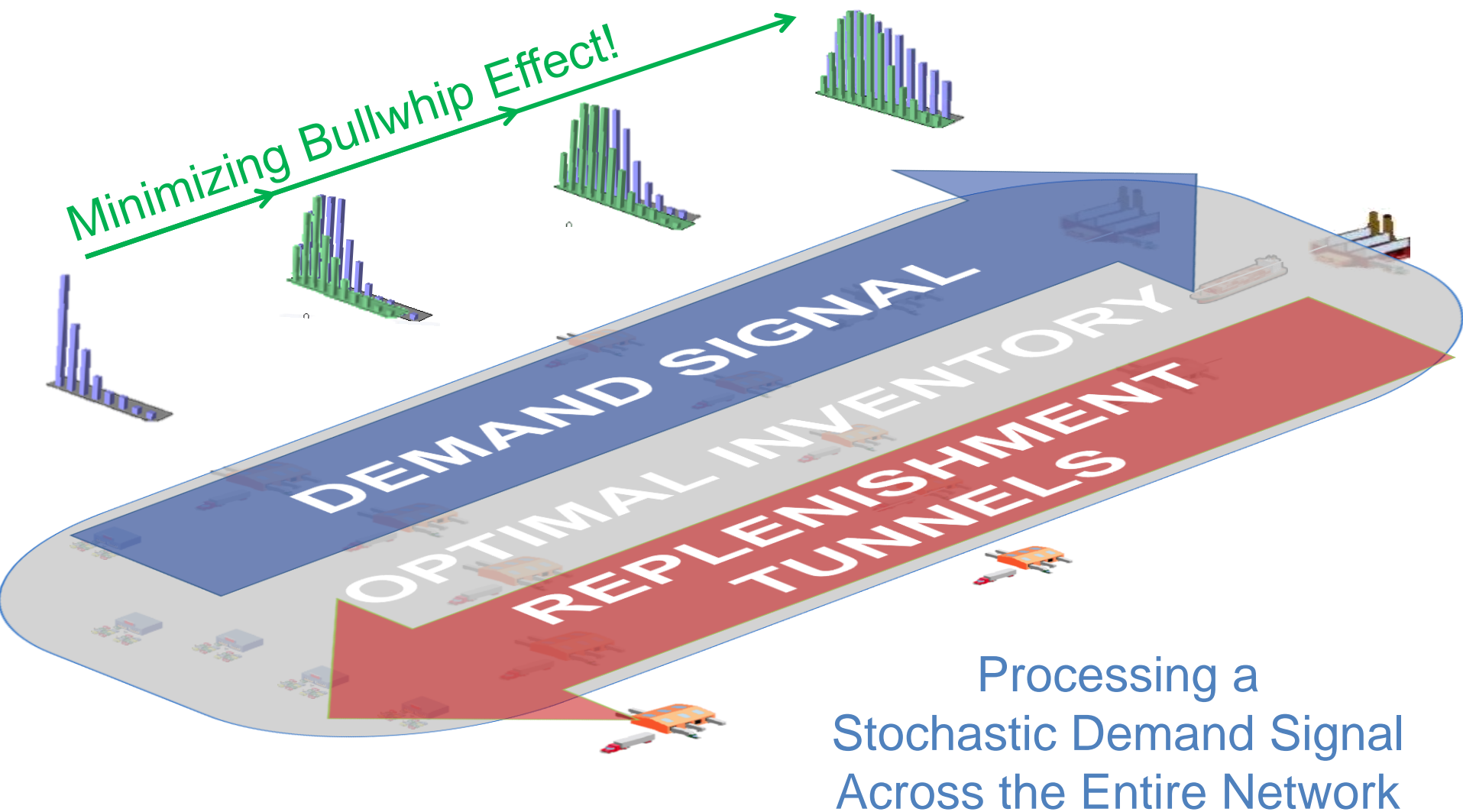
To satisfy seasonal demand peak, the Croatian market is also served by Italy in the period June-August, with implications on lead-time and replenishment policy



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- 4 Supply chains are becoming so dynamic that even tactical models will become time-phased
- 5 Supply Chain Planning and execution will converge, with many benefits, including reduced latency

Drive an Integrated End-to-End Demand Signal and Replenishment Response across the Supply Chain



Costa Express

PREDICTIVE COMMERCE AT COSTA EXPRESS



3x growth in business without adding headcount



3X

Reduction in logistics cost



30%

Reduction in field stock



20%

Increased customer loyalty through improved service



10%



Award winning

HAPPY CUSTOMERS

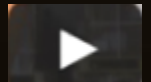
MILLIONS OF CUPS OF COFFEE PER YEAR

3000 KIOSKS

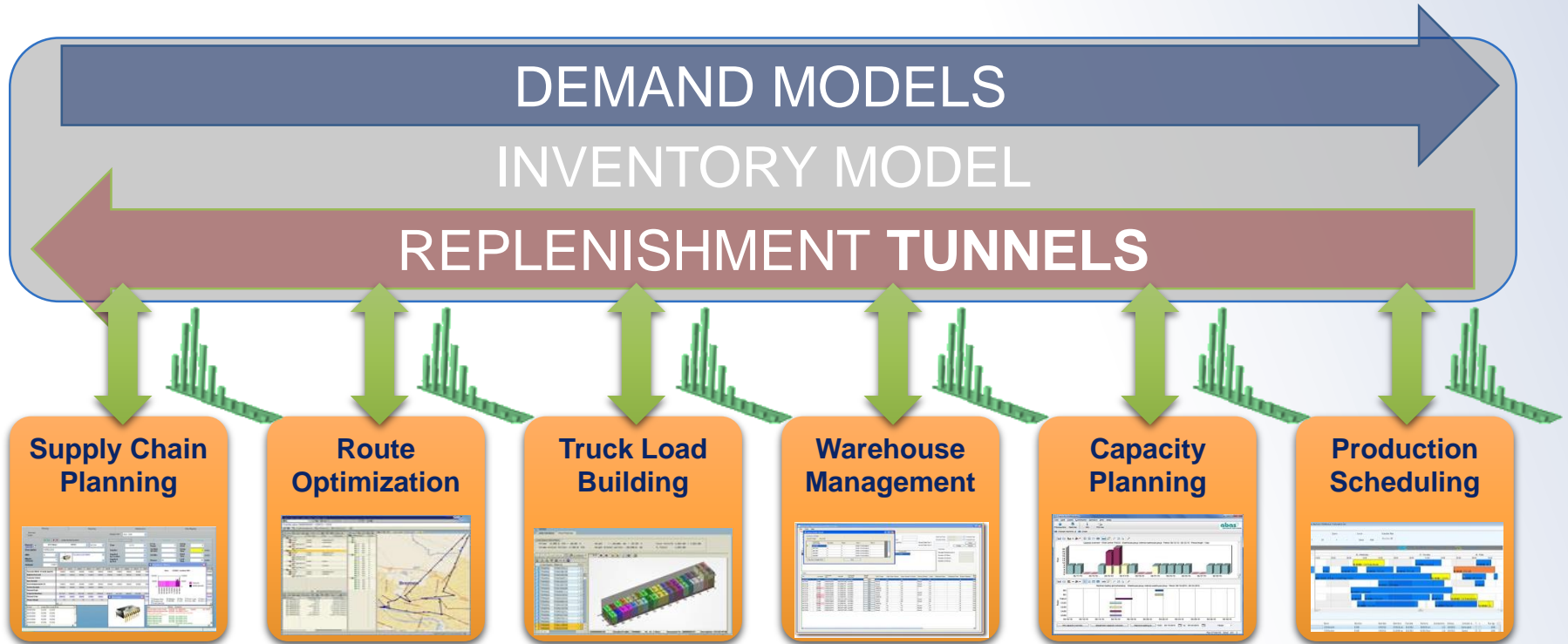


Costa Express

- 20% reduction in field inventory
- 50% fewer delivery refusals
- Centralized stock holding locations reduced from nine to one
- 30% reduction in annual logistics operating costs



Dynamic Replenishment across the Operational Backbone



ToolsGroup - Accelerating Business Performance



- Market-driven demand analytics and supply chain optimization
- Business-focused, technology-enabled
- Armed with precise modeling for deep insight into demand signals, inventory behaviors and supply chain volatility
- Leverages data to improve forecast accuracy, mitigate volatility and increase supply chain certainty
- Optimized replenishment

The Convergence of Supply Chain Planning and Execution

Market-Driven Demand > Optimization > Process > Exceptions

