Sutherland Retail

Sutherland Storecast

Identifying untapped sales potential for each store and the operational drivers to unleash it generating incremental sales and margin

SUTHERLAND

Retail is right-sizing while it is transforming

Retail industry has always been at the forefront of transformation adapting to shifts in market dynamics and consumer behavior. The pace of this disruption is driving the Digital-first mindset as both Retailers & Consumer-focused industries push to survive and thrive in the Amazon-dominated world.

Retail bankruptcies timeline
A timeline of select retail bankruptcies from 2015 to 2018 YTD (3/19/2018)

www.cbinsights.com

Retailer's stores face challenges with an ever evolving and often fickle omni-channel consumer

- Retailers are struggling to understand their stores' role in the omni-channel customer journey

- Diminishing store traffic continues to dominate the headlines and remains the most frequent reason cited for lackluster store performance. But, its only part of the story.

- *The other part of the story is many brick-and-mortar retailers track store traffic and measure conversion, but they do virtually nothing to optimize their conversion rates

- Experiences such as BOPIS and showrooming are a few examples of what makes conversion difficult as they are seemingly impossible to predict

*Mark Ryski, CEO and founder, HeadCount Corp.

Converting traffic to monetary transactions is an often ignored growth imperative available to traditional retailers

"The most loyal 20% of customers satisfy, on average, less then 50% of their requirements at any one particular retailer, the remaining 80%, under 15%. The potential for any one given retailer to convert even a fraction of this untapped potential is significant."

Mark Ryski, Author, CEO & Founder of HeadCount Corporation

"Every retailer can improve conversion rates and deliver better financial results by focusing on shoppers already in their stores. Conversion Rate Optimization is proven but largely untapped by the vast majority of brick and mortar retailers"
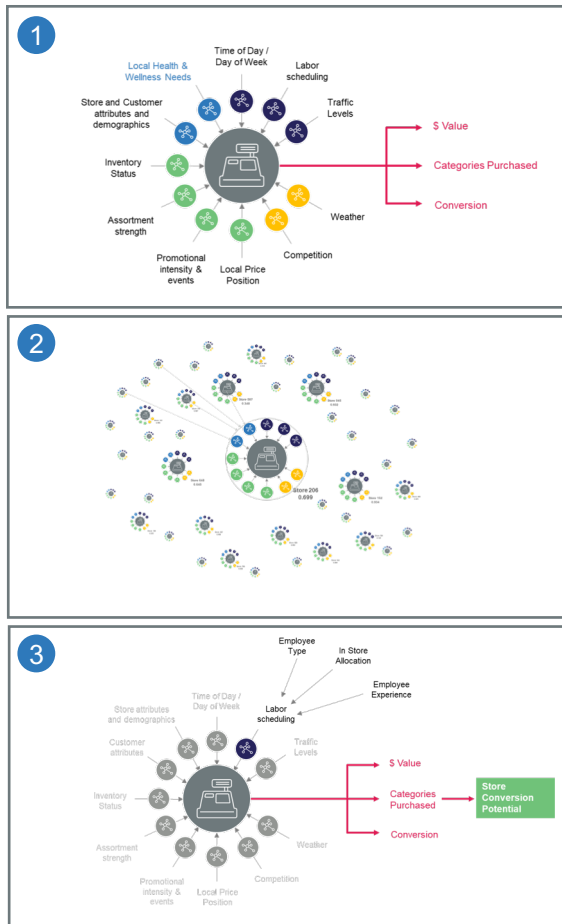
Sutherland Storecast

Sutherland has developed a digitally transformative solution to help retailers optimize in-store sales conversion rates

1. Storecast provides a highly differentiated Sutherland-branded KPI (Store Conversion Potential - SCP) that calculates incremental sales potential for a given time horizon for each and every store within a retailer's enterprise

2. Storecast then evaluates the impact of defined sales conversion drivers (store actions/operations) to identify - in real time - the best directives each store should implement to capture untapped revenue while achieving an optimal ROI

3. Through direct coaching and a robust testing process - we validate the impact of each conversion driver and directive has on revenue; We then support a rollout program to optimize and maximize SCP for each targeted store.

Sutherland Storecast is enabled by latest developments in machine learning

- Storecast is different; both to existing approaches for identifying potential and to existing mix modelling techniques.

- Storecast uses Artificial intelligence that allows for the detection and evaluation of relationships that can't be quantified through traditional modelling techniques.

- Storecast leverages deep learning to create multi-dimensional models for each store at the individual transaction level – creating predictions based on millions of observations.

- Identifying similarities and differences between these models across multiple dimensions requires comparisons of billions of combinations, and is only possible through deep learning approaches.

Storecast models are built at the individual transaction level for each store

Local Health & Wellness Needs
Time of Day / Day of Week
Labor scheduling
Store and Customer attributes and demographics
Traffic Levels
Inventory Status
Assortment strength
Weather
Promotional intensity & events
Local Price Position
Competition

$ Value

Categories Purchased

Conversion

Example metrics

- Multiple models determine the impact of hundreds of metrics and attributes on every transaction

- Storecast then uses multi dimensional predictive modelling on this data to identify the impact of each metric and attribute in causing store traffic to be converted into purchases and in causing purchases to be converted into larger purchases and to capture a greater share of customer potential.

Conversion potential is established by comparing each store with every other store

- A complex similarity calculation compares each store against every other store to determine potential.

- This potential is measured through the SCP KPI.

- SCP can be measured for every month, week or day for a store.

Week Commencing 07/07/2018

	SCP Score	As % of Revenue	$$$
206	0.805	19.8%	$16,566
648	0.645	12.4%	$9,048
587	0.348	6.3%	$4,068

Example

The impact of each store operations metric on the potential is then evaluated

Employee Type

In Store Allocation

Employee Experience

Labor scheduling

Time of Day / Day of Week

Local Health & Wellness Needs

Store and Customer attributes and demographics

Inventory Status

Assortment strength

Promotional intensity & events

Local Price Position

Competition

Weather

Traffic Levels

$ Value

Categories Purchased

Conversion

Store Conversion Potential

- Using these models, Storecast determines the drivers of conversion, the sensitivity of each one, and the optimal mix for each driver to drive the greatest ROI given the store's characteristics and the shoppers that shop there.
- For labor, this will show how much changes in scheduling will impact the ability of the store to convert customer potential into $

Model outputs can be leveraged at multiple levels
Sales Conversion Drivers: Full List

Inventory

- Add inventory by category
- Reduce inventory by category
- Move inventory to certain area in store
- Change assortment by category
- Change labor stocking
- Change labor in aisle
- Change labor front of store
- How much product to keep in store to maximize revenue
- Which brands, flavors, and colors to offer to drive most revenue

Pricing

- Lower price
- Increase price
- Loss leaders
- Loyalty points

Personalization

- Direct product to segment or individual
- Direct promotion to segment or individual
- Direct pricing opportunity to segment or individual

Promotion

- Promote category
- Promote product
- Address market (selects email template per customer and content)
- Floor sales
- General marketing/ advertising (recommends advertising in geographical areas)
- Promotional activity in-store to drive increased basket and/or revenue

In-store Experiences

- Which services to offer at which part of the day
- Hours services should be offered to result in increased revenue
- When to offer samples
- When to offer in-store demonstrations
- Which products to offer or demonstrate

Traffic

- Which promotions or offers to drive more in-store traffic
- Which customers to target to improve response, revenue and/or ROI

Merchandising

- Remerchandise this product
- Remerchandise this product category
- Recommends specials/promotions
- Catalogs
- Product bundles
- Focus stocking efforts by product, category or aisle
- Where to place products to drive revenue
- What time of day to focus on stocking or merchandising staff to drive most revenue

Labor

- Which function Which day
- How many of each function
- When to schedule breaks
- What actions or tasks result in increased revenue

Digital

- Which content – messages, offers or promotions – to send to drive traffic or revenue to a specific store
- Which digital channel – website, ads/sites and/or email – to leverage to drive revenue, traffic and/or ROI

Initial model outputs can be leveraged against labor & promotion

- Which stores to invest additional labor budget, and those to disinvest from to optimize conversion across the fleet

- Where to prioritise staff training to increase conversion

- Improved scheduling of labor for each store, ensuring staff are staffed to their potential

- Better allocation of staff within a store to ensure staff are where they will make the biggest difference to the bottom line

Storecast changes the way retailers think about promotion
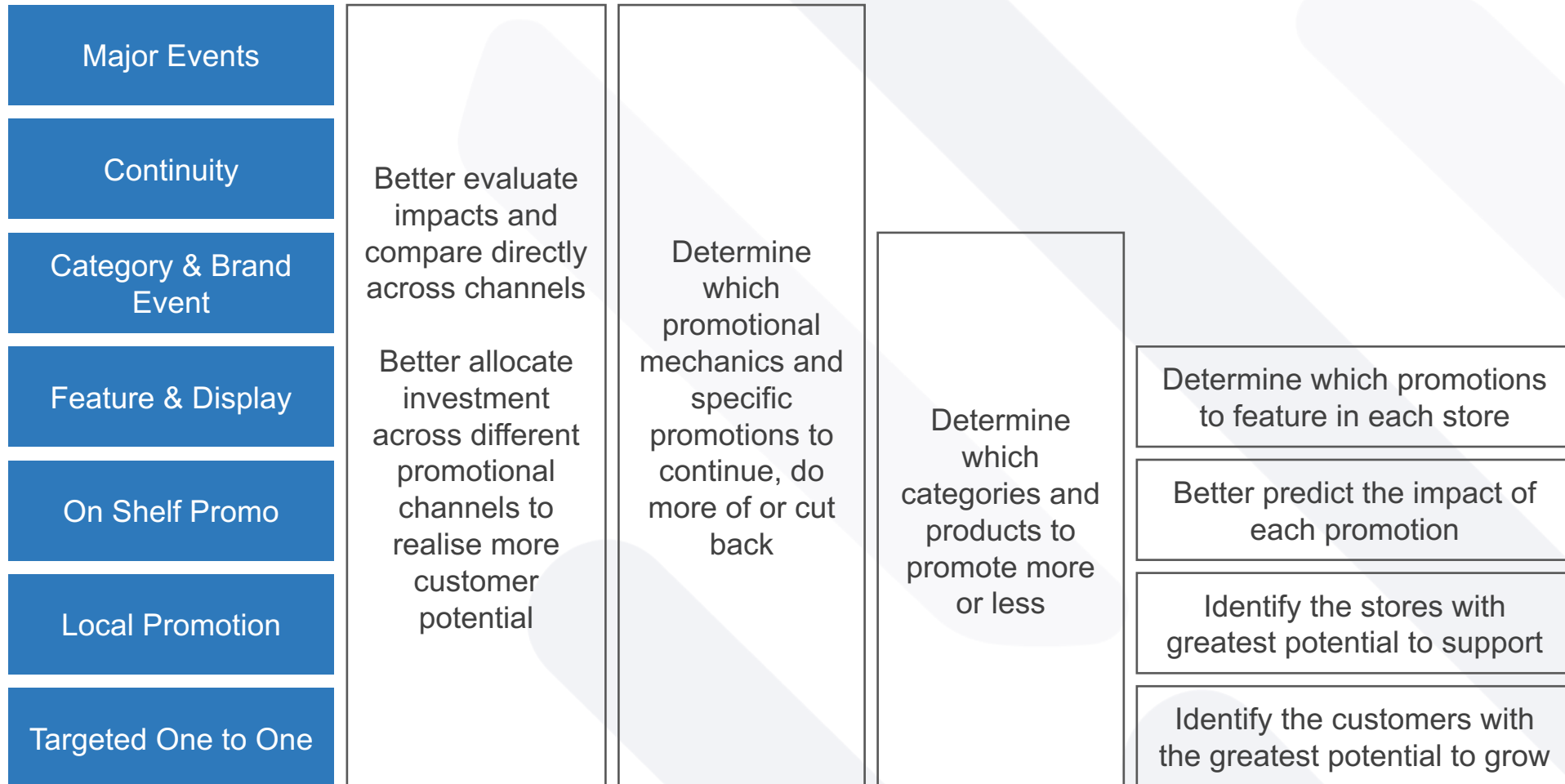
FROM

- Evaluating the impact of each product promotion, but not understanding the combined impact of that promotion.

- Struggling to quantify the real impact of promotional events.

- Measuring the impact of targeted, product, local and event promotion in isolation, not understanding the right mix, or even which really delivers a better ROI.
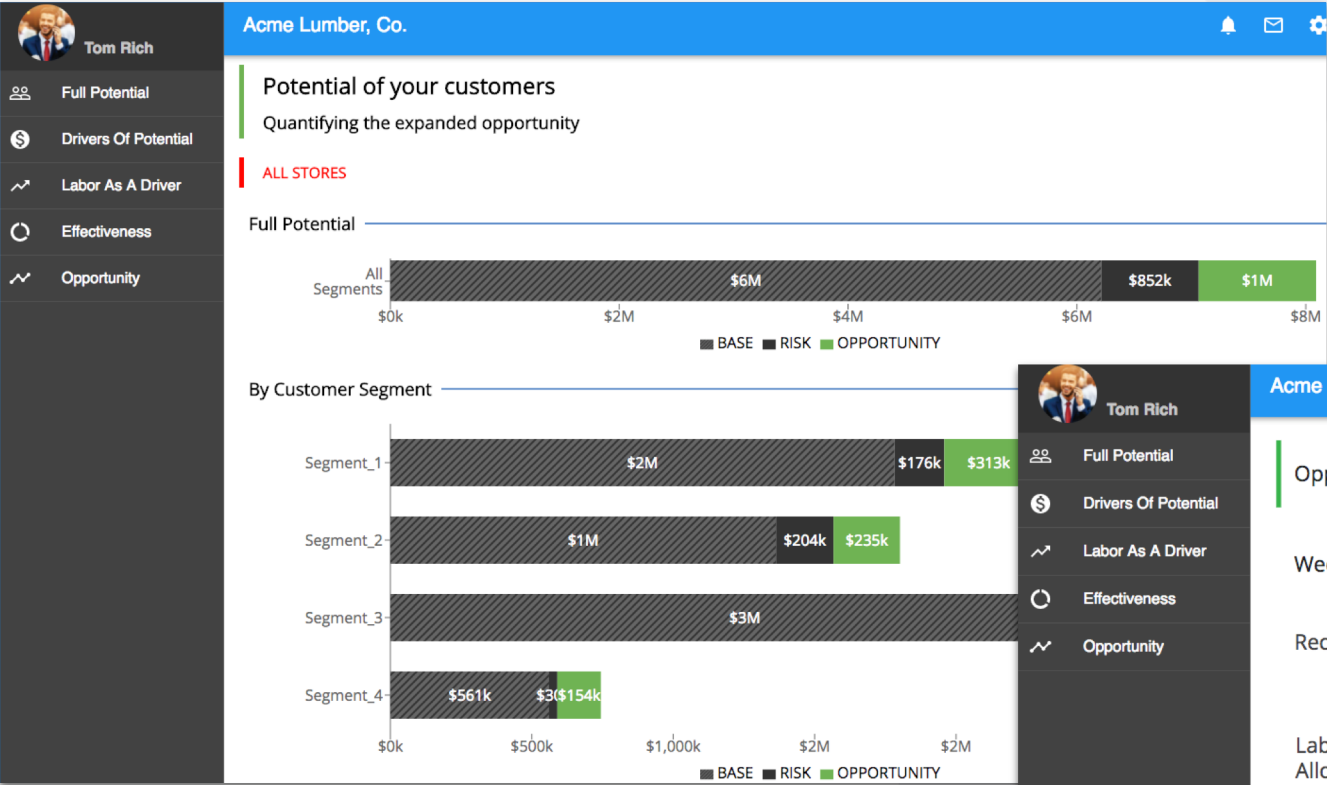
TO

- Measuring the impact of every promotion, whether targeted, product, local or event on every transaction.

- Quantifying how much each promotion contributed to the conversion and growth of the transaction.

- Picking promotions to continue, do more of or cut back on based on their impact on customer potential

- Identifying opportunities to realise more potential and drive more ROI by shifting promotional investment between channels
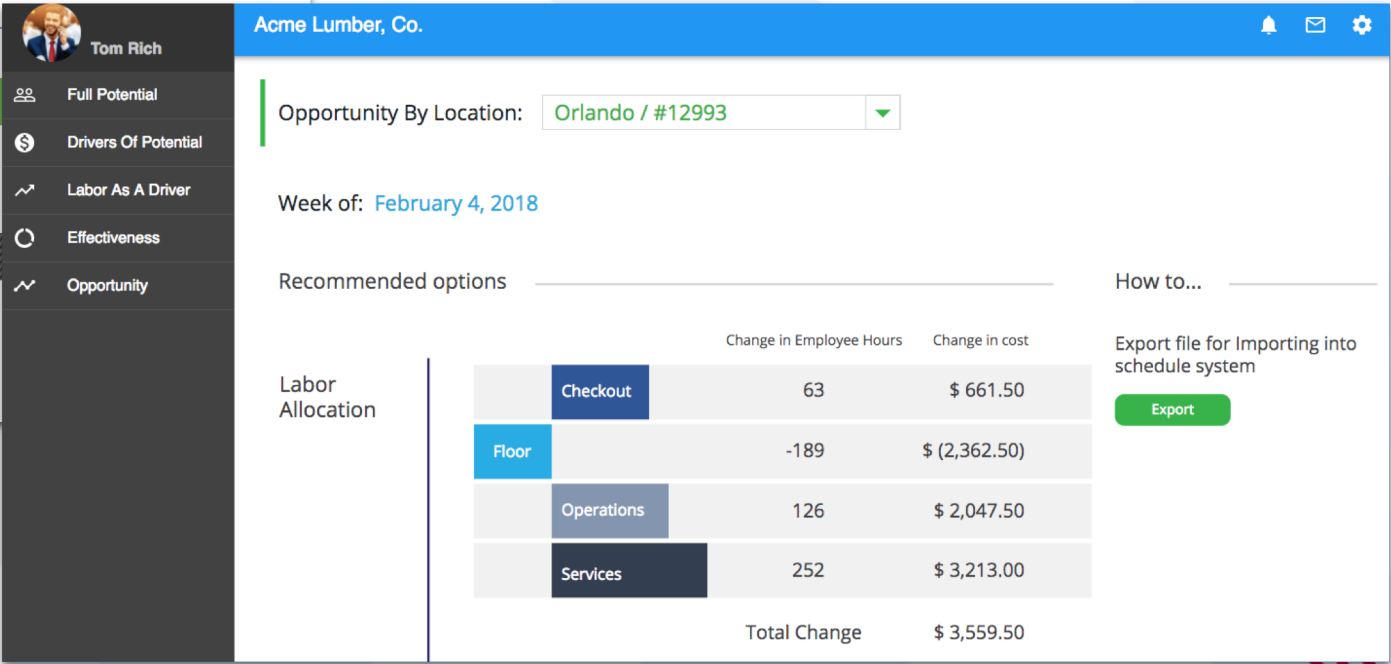
Storecast can impact across many types of promotional activity

| Major Events |
| Continuity |
| Category & Brand Event |
| Feature & Display |
| On Shelf Promo |
| Local Promotion |
| Targeted One to One |

Better evaluate impacts and compare directly across channels

Better allocate investment across different promotional channels to realise more customer potential

Determine which promotional mechanics and specific promotions to continue, do more of or cut back

Determine which categories and products to promote more or less

Determine which promotions to feature in each store

Better predict the impact of each promotion

Identify the stores with greatest potential to support

Identify the customers with the greatest potential to grow

We deliver insights and optimized operational directives via cloud-based dashboards as well as integrations directly in to your store systems
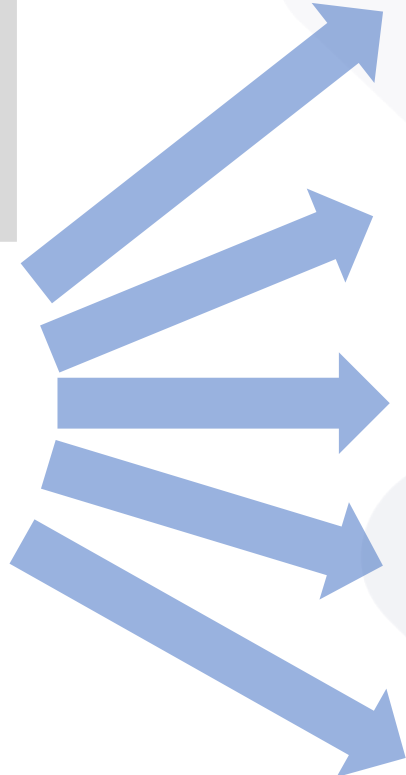
Example of Storecast dashboard

Example of store-level labor allocations

In addition to providing insight and directives, we provide additional opportunities to maximize revenue through our coaching services

$1.6MM forecasted potential in next month

↑ **2.4%**

Sutherland Coaching Services

1 Consult management regarding the store's potential and the best actions to capture the associated revenue

2 Support store's implementation efforts, providing guidance and insights

3 Deliver performance results and feedback to deliver incremental improvements

4 Oversight of continual store-level optimization efforts; *Expand from initial drives to other drivers to capture more*

5 Help to manage Anomaly detection alerts to prevent impacts to performance

We require minimal data to start…
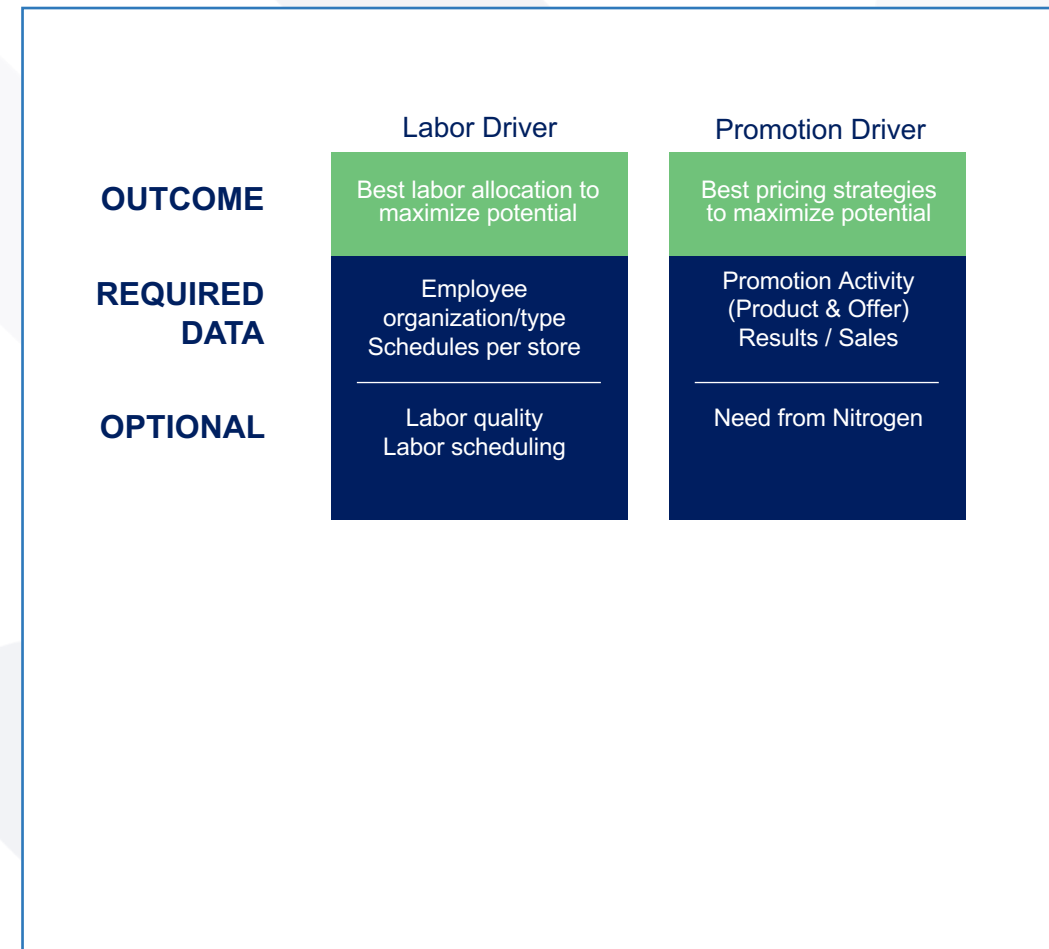
To calculate each store's SCP:

Retail Provided

Transaction
Store Master
Product Master
Store Traffic

Retail Optional

Digital-Clickstream
Digital-Transaction
Promotions
Loyalty

Sutherland Provided

Location	Product
Weather	Social Media
Census, Competitor	Digital Trends
Pricing, Promotion and	

Store Conversion Potential

- Stores with greatest/least engagement potential
- Categories with greatest and least potential at individual store

To identify a store's sales conversion drivers:

	Labor Driver	Promotion Driver
OUTCOME	Best labor allocation to maximize potential	Best pricing strategies to maximize potential
REQUIRED DATA	Employee organization/type Schedules per store	Promotion Activity (Product & Offer) Results / Sales
OPTIONAL	Labor quality Labor scheduling	Need from Nitrogen

And can execute a Proof of Concept in 90 days

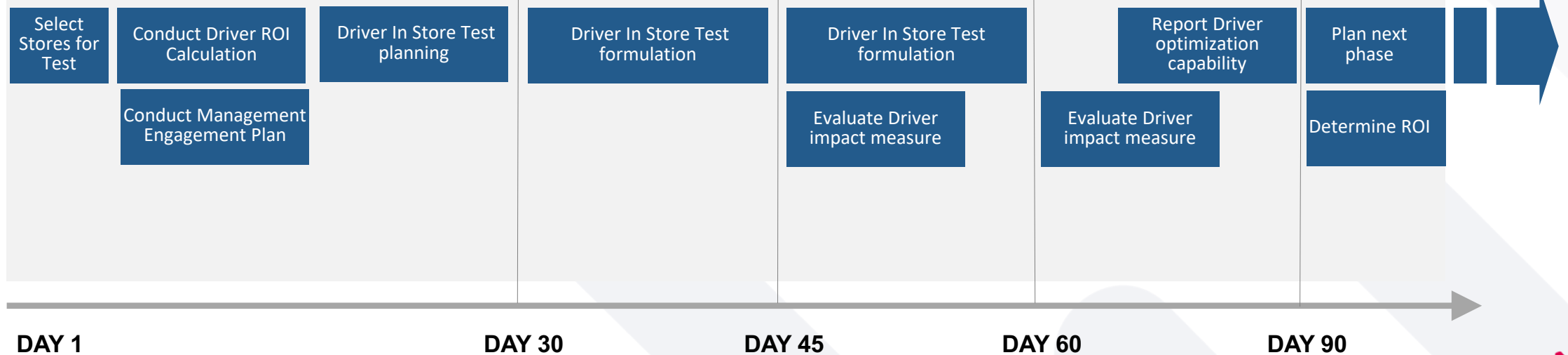|	
Duration	90 days
Test	SCP calculation; Labor and Promotion driver categories
Recommended scope	10 stores
Data required	6 Months Transaction data Product Master Store Master Store traffic and/or Pharmacy Transactions Optional: Omni-channel, Loyalty Profiles, Planogram
Format	3 scenario tests (testing directives as they have probabilities – test quality of model)
Deliverables	Dashboard with 'real-time' conversion calculations Conversion Directives Optimization likelihood trajectory scored (how well models are working and how to tune them based on testing scenarios) ROI calculation

Example POC engagement

SCP Calculation

	1st Driver Manipulation Test	2nd Driver Manipulation Test	3rd Driver Manipulation Test	Evaluate and Plan Roll-out

Load data

Load Store Location data — **Calculate SCP** — **Review Driver KPI's** — **Produce Driver/SCP report**

Calculate SCP — **Produce Driver/SCP report**

Calculate SCP — **Produce Driver/SCP report**

Calculate SCP — **Produce Driver/SCP report**

Report optimization capability

Conversion Drivers

Select Stores for Test — **Conduct Driver ROI Calculation** — **Driver In Store Test planning**

Conduct Management Engagement Plan

Driver In Store Test formulation

Driver In Store Test formulation

Evaluate Driver impact measure

Report Driver optimization capability

Evaluate Driver impact measure

Plan next phase

Determine ROI

DAY 1   **DAY 30**   **DAY 45**   **DAY 60**   **DAY 90**

What to expect after 90 day Proof of Concept

After 90 days of executing the program –and implementing the recommended directives – and leveraging deep learning AI – the Storecast model will deliver analytics and an actionable rollout strategy. The retailer will receive for each store:
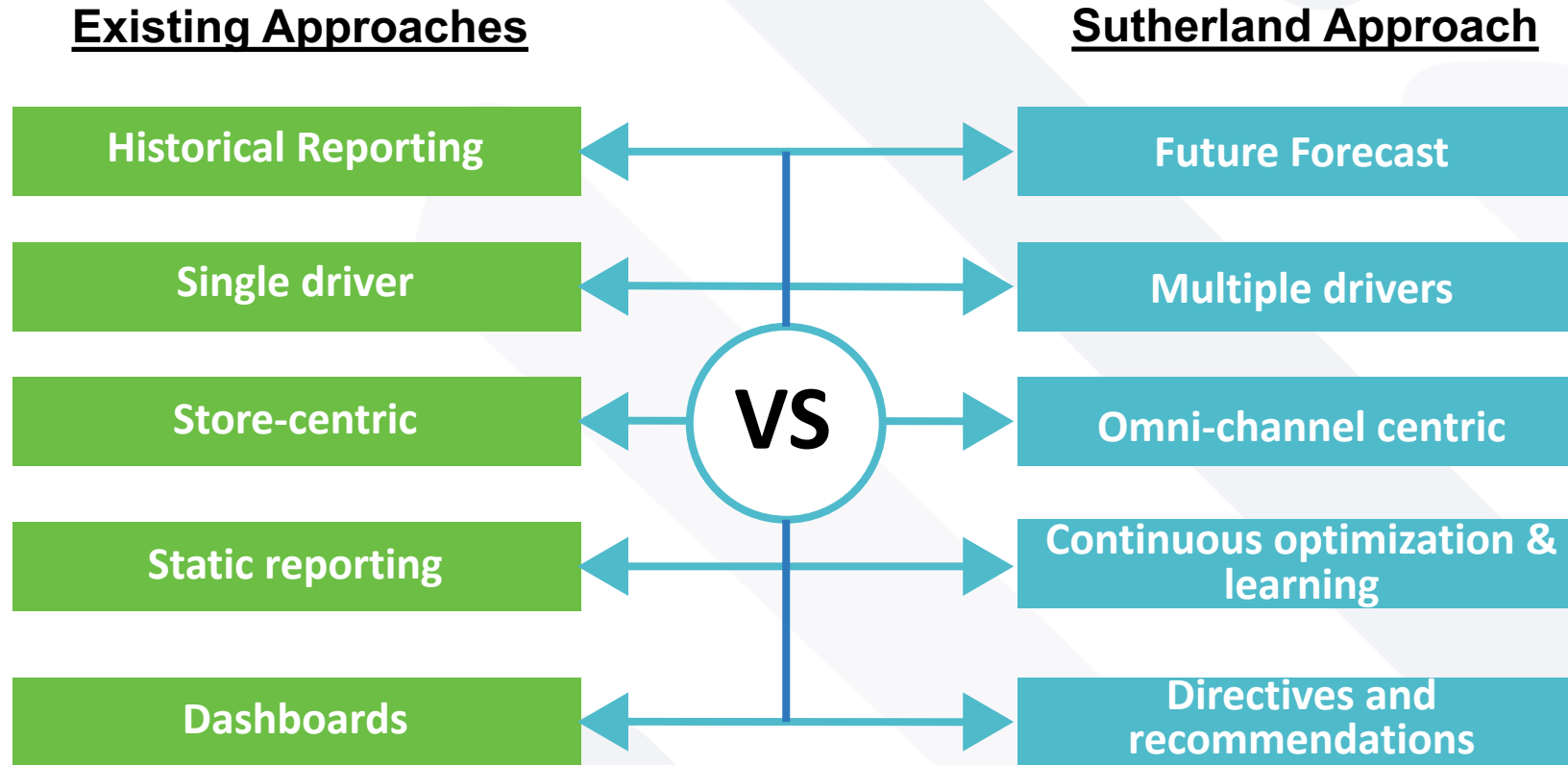
- A quantifiable metric of each store's conversion (or latent) potential over a specific time horizon
- The percentage of potential that each store can realistically expect to capture
- What each driver contributes to efforts to convert customer potential to revenue
- The direct impact specific directives has on converting customer potential to revenue
- A baseline ROI - at the store and enterprise level
- A forecast as to the impact of a enterprise-wide rollout; and a projection for impact over time
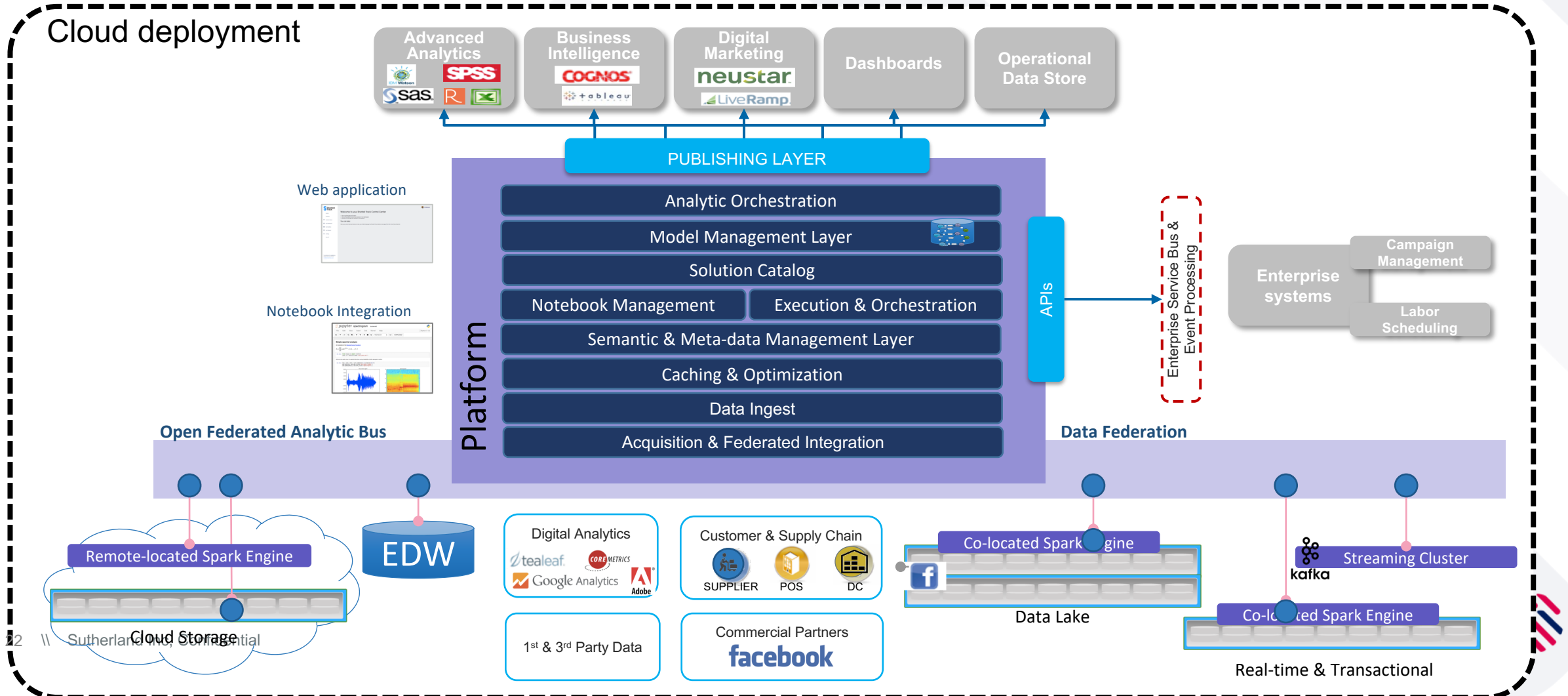
Appendix

Our approach is unique to other software platforms and methodologies

Existing Approaches

Sutherland Approach

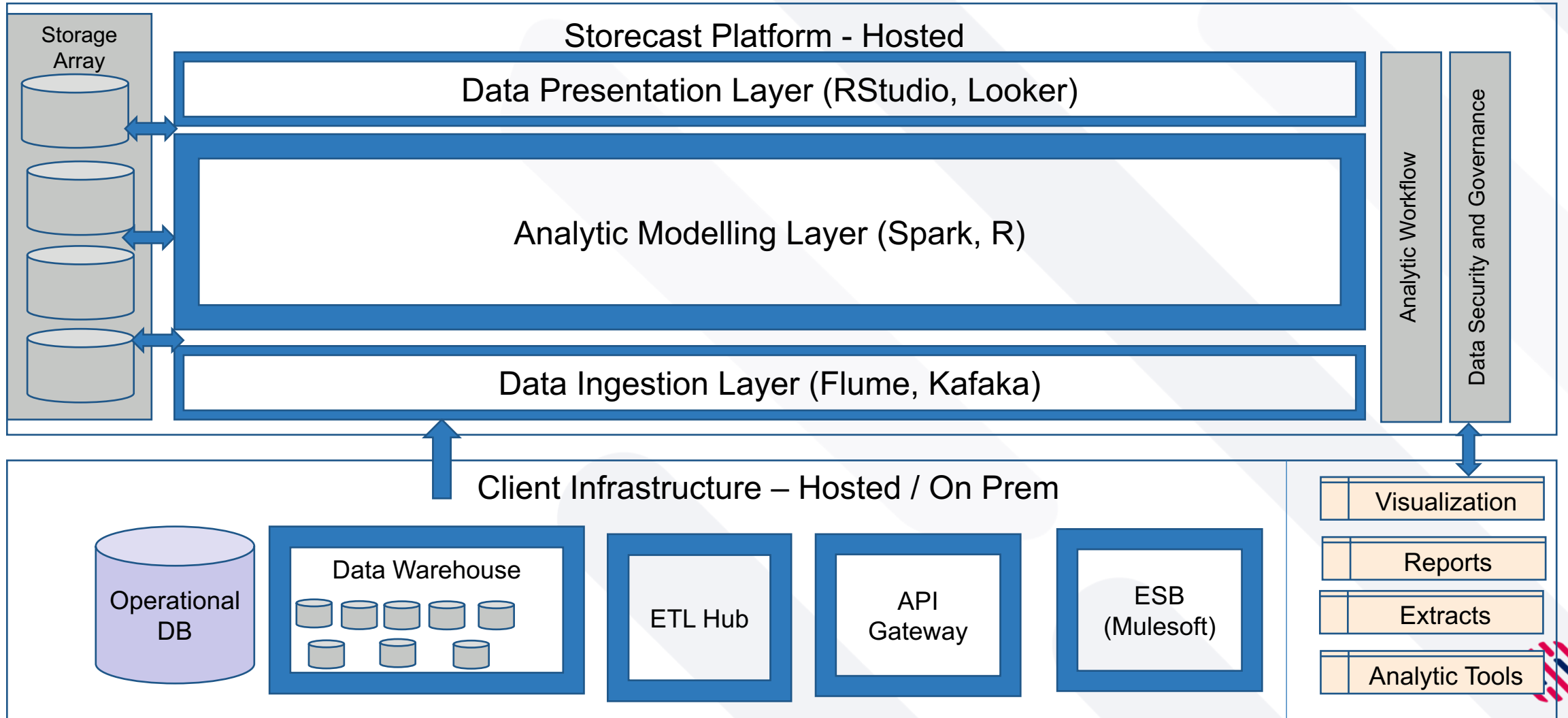| Existing Approaches		Sutherland Approach
Historical Reporting	← VS →	Future Forecast
Single driver	← →	Multiple drivers
Store-centric	← →	Omni-channel centric
Static reporting	← →	Continuous optimization & learning
Dashboards	← →	Directives and recommendations

Storecast is a more comprehensive and valuable offering because it consumes more omni-channel signals, forecasts in real-time, and simultaneously optimizes the right mix of conversion drivers allowing retailers to respond faster and smarter to the dramatic real-time shifts that occur in retail today

Systems Integration Conceptual Model

Cloud deployment

Advanced Analytics

Business Intelligence

Digital Marketing

Dashboards

Operational Data Store

PUBLISHING LAYER

Web application

Notebook Integration

Platform

Analytic Orchestration

Model Management Layer

Solution Catalog

Notebook Management | Execution & Orchestration

Semantic & Meta-data Management Layer

Caching & Optimization

Data Ingest

Acquisition & Federated Integration

APIs

Enterprise Service Bus & Event Processing

Enterprise systems

Campaign Management

Labor Scheduling

Open Federated Analytic Bus

Data Federation

Remote-located Spark Engine

EDW

Digital Analytics

Customer & Supply Chain

SUPPLIER   POS   DC

Co-located Spark Engine

Streaming Cluster

Cloud Storage

1st & 3rd Party Data

Commercial Partners

facebook

Data Lake

Co-located Spark Engine

Real-time & Transactional

Illustrative Data Architecture

Storecast Architecture

Cloud Infrastructure (Azure)

Data → Azure Storage → Azure DocumentDB →

Shortest Track
- Distributed Data Processing
- Algorithm Execution
- Data Management
- Solution library
- Algorithm Management and Execution
- Solution Managemnt
- Data Access

Azure Docker VM

Azure VMs

→ Azure API Management / Azure Managed Cache →

Dashboard

System

Data