

# HELIO: Forecasting Weather Influenced Demand

### Recognized for Data Analytics Storytelling

MARKETING DIVE Deep Dive Opinion Library Events Jobs Topics -

BRIEF

## Diageo, Scotts and more recognized for achievements in data and analytics

Nationwide and Scotts were tied for Data Analytics Storytelling, a category covering achievement in using data to tell enlightening, visually-driven stories. Nationwide developed a Retirement Readiness Report experience for consumers, which resulted in an 11% improvement in retirement readiness scores. Scotts Miracle-Gro used a predictive weather-modeling tool, called Helio, to offer weather-driven demand sales forecasts. The result was historic sales in May 2018 because the company was able to take orders in areas where competitors couldn't keep up with demand.





Experts in Advanced Analytics & measurement



**Drivers of Sales Change** 

2018 vs. YAG Illustrative Example

Total Sales		0.5%
Weather	-1.3%	
Competitive Effects	-0.2%	
Operational Factors		0.3%
Price/Promos		0.4%
Distribution/Assortment		0.7%
Media		0.7%

- What impact does weather have on business performance?
  - How does this vary by LOB, region, time of year, etc.?
  - What are the most meaningful weather profiles?
- How does weather impact marketing effectiveness?
  - What are optimal conditions or thresholds for investing/re-deploying?
  - What are optimal investment levels under various weather profiles?
- ▶ How does weather impact pricing sensitivity?
  - How should I redefine my pricing/promotions under each weather scenario?

### Weather's influence on consumer behavior is complex

- Direct and indirect effect on business performance
  - Can make or break the quarter
  - Helps/hinders marketing and sales efficiency
  - Influences product choice and pricing sensitivity
  - Can lead to out-of-stocks and wasted inventory
- Temperature or Precipitation alone do not accurately reflect how consumers experience weather conditions
  - Requires *combination* and *interaction* of metrics to create meaningful weather profiles







## HELIO: Forecasting Weather Influenced Demand



Media & Marketing

Start dates for media

#### HELIO provides best-in-class weather-influenced demand forecasts

- ► Insights for the whole organization
  - When and where to activate or pull back
- Powerful Forecasting and Visualizations
  - Highly accurate with best-in-class predictive power
- Cutting-Edge Machine Learning
  - HELIO's models capture non-linear relationships, sophisticated interactions and unique dynamics to produce best-in-class predictions



### How are businesses leveraging HELIO?



#### **Near-Term:** Tactical Insights

Marketing Strategy:

Sales & **Supply Chain:** 

- Where to lean in or reduce investment (digital, radio, promos, etc.)
- Dynamic bidding / creatives / pricing
- Top opportunity markets/LOBs for sales, inventory load, promotions, etc.
- Co-op/partner sales stories
- Task planning

Finance / **Other:**  Weekly stand ups

#### Longer-Term: Strategic Insights

- Where/when to invest/shift spend
- Optimize TV start dates
- Optimize pricing/promo calendars
- Season readiness
- Demand fulfillment
- Staffing
- Forecasts & business reviews
- Budgeting decisions

HELIO combines best-in-class data and analytics





- Advanced analytics expertise
- Data infrastructure
- Scalable technology



- Most accurate forecaster
- Robust data
- 7 month weather outlook



#### **Best-in-class Predictive Power**





- Highly accurate
  - advanced machine learning modelling
  - less than 3% monthly forecast error
- Highly sophisticated
  - captures complex and non-linear relationships at a granular level
- Highly scalable
  - award-winning dashboard, custom automated reports and data pipelines
  - deployed to your in-box, database, or other environment



#### Best-in-class Weather Data





- Robust data
  - >25B daily forecast calls
  - 2.2B locations mapped every 15 minutes
  - 400TB data processed every day
- Better accuracy
  - 170 forecasts from world's top models
  - vast personal weather station network provides ground truth
  - machine learning produces best forecast

The Weather Company, an IBM business

Sources: Qliksense internal report, April 2017; The Weather Company internal data





# **Thank You!**