LEGION

Demand Forecasting

Manual forecasting methods such as spreadsheets may suffice when you have a single site or even a few sites. However, they struggle with the scale and complexity of an organization with numerous sites or omnichannel operations, where each site has its own characteristics, such as products for sale, foot traffic patterns, channels like drive-up, buy online, pick-up in-store, or geographical considerations like proximity to local attractions. Manual methods make it nearly impossible to analyze external data that can impact demand, like local events or weather.

Businesses do not know which channels are surging or not on any given day and can't react quickly enough to changes. Discrepancies often lead to lost revenue, lower productivity, higher payroll costs, and employee attrition.

THE LEGION SOLUTION

Legion's AI-powered Workforce Management (WFM) Platform automatically predicts demand across all customer touchpoints and locations. Legion Demand Forecasting makes it easy to adjust to dynamic business changes and model what-if scenarios, such as adjusting total budget hours, easily changing inputs, and enforcing operating labor models.

Intelligent Automation

Legion has designed a fully automated infrastructure that handles the end-to-end data consumption process, model (re)selection, model (re)training, and forecast generation to help even the largest organizations achieve new precision and accuracy levels.

Legion's fully automated Demand Forecasting is based on mature data science and has been in production for over seven years. The Legion Demand Forecasting engine automatically delivers consistent, accurate forecasts weekly across all sites and channels to increase productivity and profitability across all your omnichannel operations.

Demand Forecasting learns patterns from historical data, predicts future values based on those patterns, and automatically handles your business's scale and complexity.

More Precision Brings Better Results

Legion creates a unique model and forecast for every driver and location, delivering unparalleled precision and accuracy. During the setup phase, our data science experts integrate your specific data through direct API or FTP integrations, including historical sales from POS systems and traffic counters. Our advanced ML approach generates tailored models and forecasts for each driver, enabling you to predict items, foot traffic, sales, transactions, and more by channel and site.

Key Features

- **Intelligent Automation:** Get advanced forecasting technology—productized and automated. Forecasts continuously improve as new data becomes available. Updated forecasts and labor guidance are instantly generated while allowing for human intervention.

- **Precision:** Factor in your unique labor model and staffing policies.

- **Accurate:** Legion's Demand Forecasting engine automatically uses machine learning to compute highly accurate, scalable, and consistent demand forecasts at several levels— for every driver and location, delivering unprecedented accuracy.

- **Training:** External and customer event data are automatically used to train the ML models for the greatest accuracy.

Benefits

- **Increased accuracy:** Forrester Research found that Legion delivers a significant improvement in forecast accuracy, and each 1% improvement in demand forecast accuracy can lead to a .5% reduction in labor costs.

- **Increased revenue:** McKinsey research shows that a 10-20% improvement in labor forecast accuracy could translate into a 5% reduction in inventory costs and yield a 2-3% increase in revenue.

- **Faster decision-making:** Retail demand forecasting provides real-time insights into demand trends, enabling businesses to make faster decisions and instantly create optimized schedules.

- **Increase labor efficiency:** By using advanced analytics and machine learning algorithms to analyze demand data, businesses can optimize their labor efficiency and avoid the financial impact of overstaffing and understaffing.

- **Operate with greater agility:** Develop what-if scenarios for new channels, deployment strategies, and other demand drivers.

There's no need to worry about model selection; Legion handles it automatically. By measuring the predictability of each driver, Legion provides a precise demand forecast, ensuring you receive accurate predictions without having to set or manage the forecast algorithm.

Industry Leading Accuracy

Forecasting models that lack true machine learning (ML) can often only learn a few patterns and rely on manual adjustments to accommodate other patterns.

Legion's advanced ML-based forecast engine automatically learns many time-based patterns in historical data and adjusts automatically for seasonality and holidays. Legion Demand Forecasting uses an ensemble of supervised machine learning and several statistical and unsupervised models. That results in a permutation of several hundred options and the best set of ensembles is then selected based on accuracy. The selected models are then customized for your unique data sets. Forecast results are monitored and compared with projections to retrain the ML model and continually improve it.

A predictability score, derived through advanced statistical procedures, is provided for each driver. The score evaluates and conveys the predictability of a specific data set. For example, a predictability score of 85 would mean a data set could be predicted with 85% accuracy. This level of detail enables users to gauge the inherent predictability of data to facilitate more informed decision-making and strategic planning.

Legion Demand Forecasting continuously learns, improves, and adapts to deliver highly accurate results in changing conditions. As new data is available throughout the week, labor is recomputed to compare an improved forecast and labor plan to what was published. By continuously reforecasting and regenerating labor guidance, you can adapt and react quickly to business changes. And, with Legion, forecast editing can be done at a manager level or centrally to combine human judgment with Legion's AI.

Pre-Integrated External Events

Legion WFM synthesizes historical and current information about how customers buy. Weather and local events are automatically syndicated and pre-integrated, so you don't have to run complex calculations, pay high data fees, or use manual processes. External data and customer event data are automatically used to train the ML models for the greatest accuracy. You can also integrate your unique staffing policies and local laws.

The Demand Forecasting proprietary algorithm can use weather forecast data to improve the near-future ML-generated forecasts. These improvements can reduce or increase forecast demand and deliver new levels of accuracy by accounting for unique pattern changes due to weather. This accuracy helps minimize costly over or understaffing.

Demand forecasting ensures you understand the impact of demand influencers by driver, channel, and site so you know exactly what type of labor you need every hour of every week.

Seamlessly Integrate Internal Events

Integrating internal events like promotions into demand forecasts is crucial for retailers to enhance accuracy in predicting customer demand, directly informing labor planning and staff scheduling.

Legion integrates internal event data such as promotions, launch events, sales, and more so retailers have accurate and precise demand forecasts to ensure they have the appropriate staffing levels to handle the surge. Accurate demand forecasting enables data-driven decisions for labor planning, leading to optimized staff schedules, cost efficiency, and a more engaged workforce.

Legion WFM takes the auto-generated, highly accurate demand forecasts and automatically creates an optimal labor plan—no more mapping between labor models used by finance for forecasting and operations for scheduling. With no manual steps or "lost in translation" data issues, Legion creates an optimized labor plan for your business.

What's Different About Legion Demand Forecasting

Legion creates a unique model and forecast for every single driver and location, delivering unprecedented precision and accuracy. Legion's approach to demand forecasting includes highly specific forecast models tailored to each dataset, and it uses external data within our automated and scalable infrastructure. You get much higher accuracy levels than other methods—and it's all automated. What does this mean for you and your business? With Legion WFM, you can:

- Improve and intelligently automate demand and labor forecasts
- Increase forecast precision so you can create optimal labor plans and better schedules
- Achieve industry-leading forecast accuracy at a data set level by channel.
- Automatically incorporate external data and customer event data for the greatest accuracy

Legion's auto-generated, highly accurate demand forecasts are used to generate optimal labor plans, budgets, and schedules across all touchpoints, freeing managers to spend more time with employees and customers—resulting in happier employees and increased revenue.

And, because the platform is modular, you can tackle specific challenges, like forecasting inaccuracy or unengaged employees, independently and regardless of your current WFM contract so you can gain the accuracy you need immediately. Get up and running in weeks with no rip-and-replace or change management required.

> Ready to compare our forecast accuracy to your existing solution and against predictability scores?
>
> Let us prove what we can deliver for your company by taking our Demand Forecasting Accuracy Challenge.

About Legion

Legion Technologies delivers the industry's most innovative workforce management platform, enabling businesses to maximize labor efficiency and employee engagement simultaneously. The award-winning, AI-native Legion WFM platform is intelligent, automated, and employee-centric. It's proven to deliver 13x ROI through schedule optimization, reduced attrition, increased productivity, and increased operational efficiency. Legion delivers cutting-edge technology in an easy-to-use platform and mobile app that employees love. For more information, visit https://legion.co and follow us on LinkedIn.