



# Predictive Supply Chain Application

*Leveraging Artificial and Business Intelligence to enable Culture Change, and Drive Performance and Productivity Improvements.*



Irvine, California



[www.oqsie.com](http://www.oqsie.com)

# What We Do

*Using real-time predictive analytics, we help improve performance, productivity, and facilitate culture change.*

*We have codified the approaches, tools and techniques that have proven successful in our work with clients over the past 30 years.*

- Help you keep your finger on the pulse of what's happening with actionable information in real time.
- Send alerts (text or email) when something significant is predicted to occur, as the situation begins to develop.
- Enable a supportive and collaborative culture.
- Seamlessly align operational priorities across functional groups.

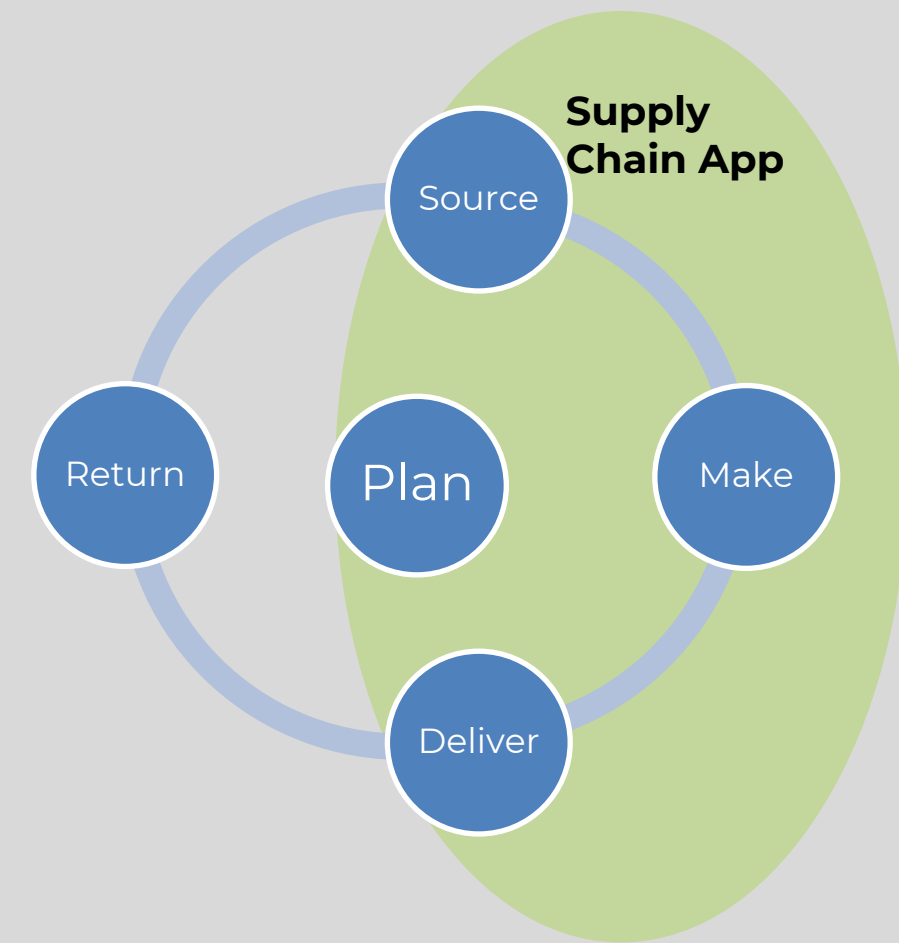
*We offer a suite of applications that can be implemented **independently** or **fully integrated** with the Supply Chain application.*

*We leverage **artificial** and **business intelligence** to help you anticipate and intervene before major issues arise – no more crises and fighting fires like before.*

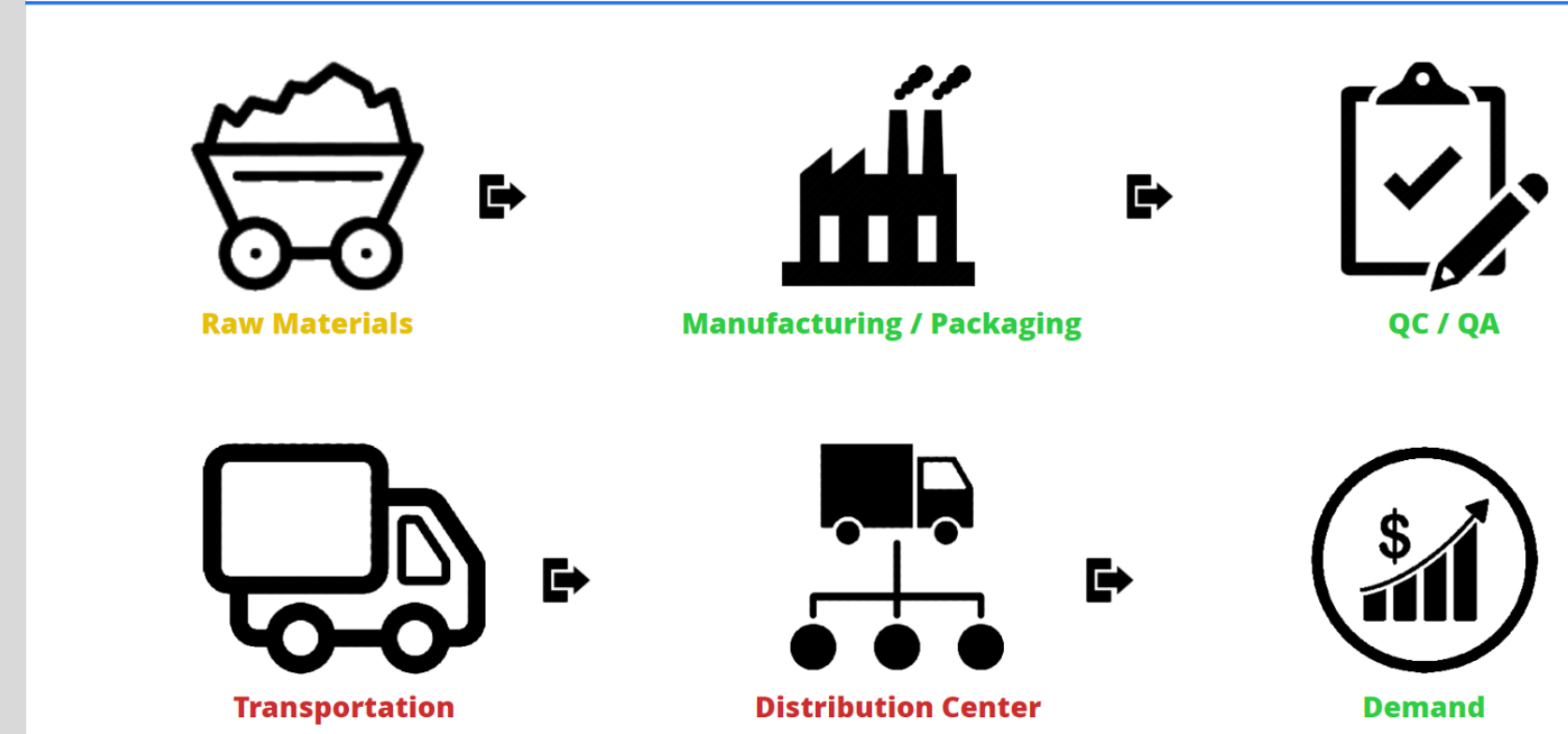
- Connect and integrate data from all available resources (MES, ERP, QMS, LIMS, databases, spreadsheets, etc.)
- Minimal resources required to implement from client's end
- Deploy an automated alert and escalation system using text and/or email messages to communicate developing issues and accelerate response to performance-impacting events.
- Apply advanced algorithms to your data to predict when a batch will be available for sale and identify potential product availability issues
- Signal when cumulative demand exceeds a threshold over a defined period of time meaningful to your supply system
- Signal when a production batch/lot is not progressing as expected or needed

# Real-Time Supply Chain Status

- A deep understanding of performance and variability patterns for demand and supply is at the heart of our Predictive Supply Chain Status application.
- An event that is likely to cause product availability issues, triggers a “colored flag” on the status view, alert and escalation messages are issued to designated team members and leaders, e.g.
  - Demand that exceeds the capability of the supply chain to support, including planned safety stock levels, triggers the demand chevron to turn red
  - “Shortages” anywhere in the supply pipeline triggers a change in color in the chevron of the step causing the shortage

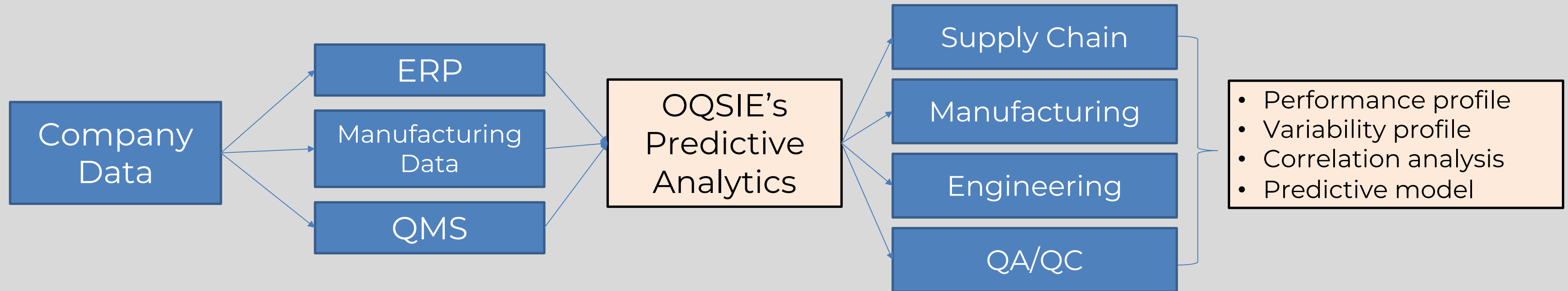


SUPPLY CHAIN - PREDICTIVE STATUS





# Predictive Supply Chain Platform



## 1. Leverage your data to understand implications of variability

- ✓ Understand and track actual demand and variability patterns in “real time”
- ✓ Understand and track performance and variability patterns for each step of your supply chain in “real time”

## 2. Use rules and triggers to alert when management intervention should be considered

- ✓ Implement an automated alert and escalation system that drives actions on issues that may impact product availability or business performance, whether on the demand or supply side.
- ✓ Align priorities across the organization.

# Alerts and Escalation System

- ✓ **If one of Joe's SKUs is at risk of stocking out, he should know it as soon as possible. His manager should know too, so she can help, for example:**
  - ✓ An investigation that, based on its characteristics after the first 5 days, is projected to be closed in 75 days instead of the expected 30 days
  - ✓ A batch that is delayed coming out of the 2nd step of manufacturing, which historically has translated to a 60 day delay in release date
- ✓ **We use rules to implement an automated alert and escalation system that drives collaboration, alignment, and accountability, in addition to enabling proactive steps to prevent significant issues:**
  - ✓ Supply or demand issues
  - ✓ Performance



# Examples of Alerts and Escalation



**Demand for Prod-128 over the last 8 weeks just exceeded the thresholds established.**

**In order to avoid stocking out, you need to launch additional batches as soon as possible and expedite them through the supply chain.**

- ✓ **Text and email messages sent to Janet, Production Planner, Maria, Head of Manufacturing, and Helen, Director of Sales.**
- ✓ **Message was triggered by two large orders received in the previous three days.**

**Batch # 3140902 for Prod-125 needs to be expedited through the QA/QC process.**

**There is a risk of having a supply issue with the current pipeline inventory that has been approved.**

- ✓ **Text and email messages sent to Janet, Production Planner, and Tom, QA Manager.**
- ✓ **Message was triggered when inventory level at and in-transit to DCs dropped below the established threshold for that part of the process.**

**You need to expedite in-process batches of Brite Stock # Prod-021, pipeline inventory is below target levels.**

**Shortage of the Brite Stock may impact product availability of several finished goods.**

- ✓ **Text and email messages sent to Barb, Production Planner and John, Head of Brite-Stock Manufacturing**
- ✓ **Message was triggered by a lower than target pipeline level, including Brite-Stock, for several finished goods that use that Brite-Stock.**

# Examples of Alerts and Escalation (cont.)



Mark now has 12 investigations in process, historically when Mark has more than 10 investigations in process, one or more of them will require multiple extensions.

Others on the team appear to have capacity to take over some of these investigations.

- ✓ Text and email messages sent to Jennifer, Mark's supervisor, anticipating potential issues with investigations assigned to Mark.
- ✓ Text and email messages had been sent to Mark when the 11<sup>th</sup> investigation assigned to him was detected, suggesting he raise a flag with Jennifer.

Deborah needs her team's help defining a CAPA for investigation #2039891. Root cause was captured 8 days ago.

Historically 80% of investigations that take more than 7 days in the CAPA definition step, end up taking more than 20 days to complete this step and require extensions.

- ✓ Text and email messages sent to John, Manufacturing Manager of area involved in this investigation, anticipating potential delay with this investigation.

3 'Documentation Error' investigations associated with your group have been launched in the last 3 days.

Historically, this has led to more than 10 additional investigations being launched in the following 2 weeks.

- ✓ Text and email messages sent to Jonathan, Manufacturing Manager responsible for this group, highlighting the need to take corrective action across this group.
- ✓ Follow up text and email messages were sent to Jonathan's supervisor after the 5<sup>th</sup> investigation was launched 2 days later.



*Dramatically accelerate your improvement curve and quickly experience better results and lower costs.*

- Lower variability in Supply Chain = better service levels
  - Lower inventory levels = better cash flow
  - Higher productivity = lower costs
  - Constant alignment on priorities = collaborative culture
  - Quick implementation time (2-3 months) = faster path to better performance and lower costs
- ✓ We guarantee, in writing, that you will recover your small investment in the first year, and that software license fees will be covered by tangible cost reductions of at least 4 times larger.

# Work With Us



*Leverage our 30+ years of experience leading operational performance improvement and quickly benefit from **lower costs** and **better results**. We are so confident in our ability to deliver results that we guarantee, in writing, a short payback period and ongoing financial benefits.*

## CONTACT:

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