

# WHY RPA WILL SUCCEED IN MANUFACTURING



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# BOTTOM LINE

By providing manufacturers greater visibility and control across their operations, Robotic Process Automation (RPA) drives greater revenue growth while reducing operating costs and risks.

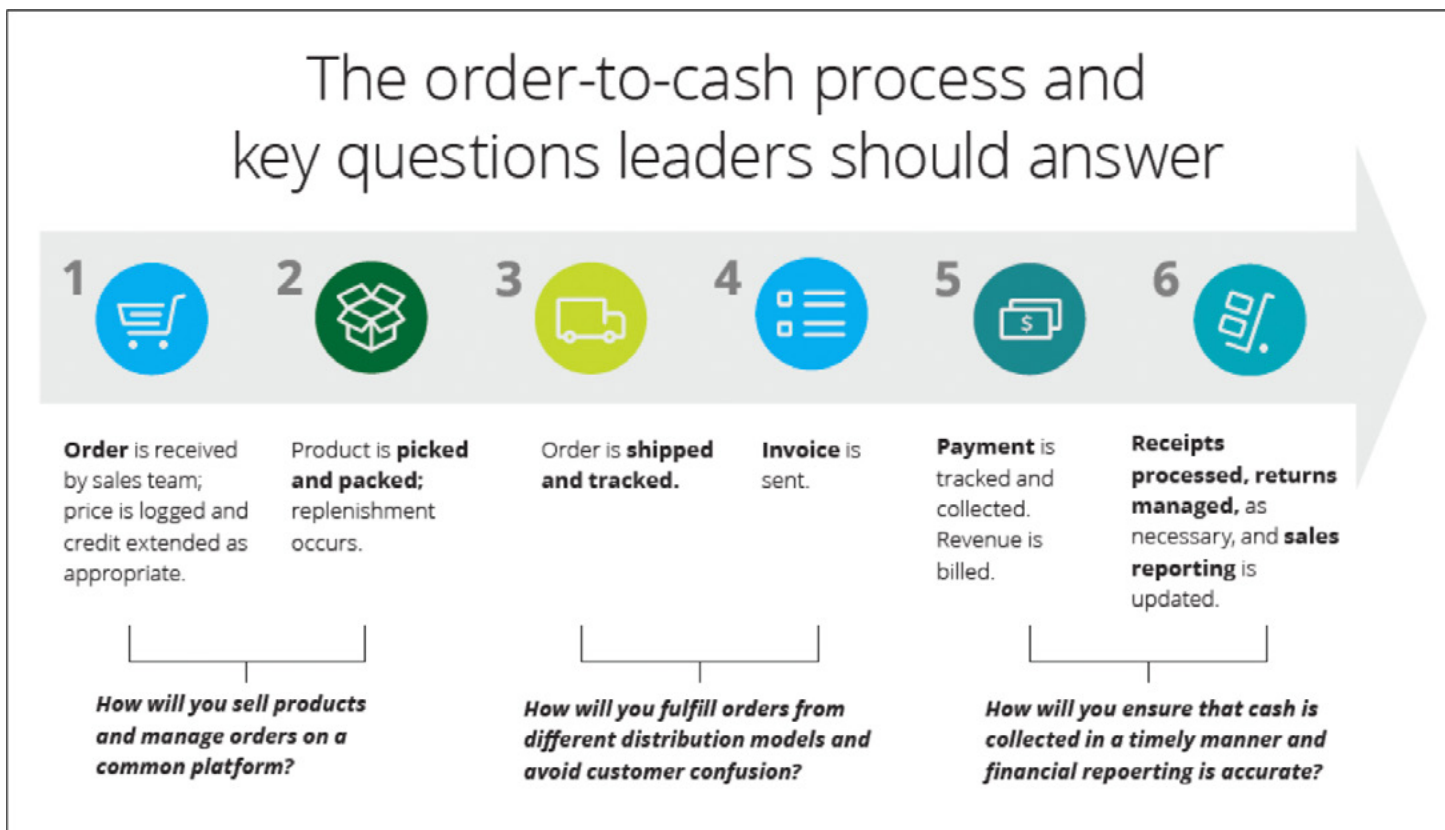
Manufacturers need the insights and process scale advantages RPA is delivering across their industry today if they are going to improve production efficiency, reach revenue goals and reduce costs. Manufacturing systems are built for transaction speed and scale first – not process insights. Enterprise Resource Planning (ERP), Manufacturing Execution Systems (MES), Quality Management systems, and many others excel at increasing transactions' speed, scale, and velocity. None can deliver the insights needed to re-engineer and improve Order-To-Cash on their own.



# WHY RPA IS THE FUTURE OF SMART MANUFACTURING

Capturing data using ERP Process Mining techniques to map out Order-to-Cash provides manufacturers with an accurate, as-is state of process performance. Applying RPA techniques to reduce wasted cycles by process step, close process gaps, and improve operating performance is the goal. RPA provides the needed insight to capitalize on the massive amount of transaction data and permanently improve processes. Gartner's many client inquiry calls and interviews with manufacturers successfully implementing RPA have led them to predict the global [robotic process automation \(RPA\)](#) software revenue is projected to reach \$1.89 billion in 2021, an increase of 19.5% from 2020. Gartner observes that COVID-19's impact on accelerating digital transformation continues to also uplift RPA's growth rate through 2024 in their forecast models.

According to [APQC](#), "Order-To-Cash (O2C) is a series of end-to-end processes that involve receiving and fulfilling customer requests for goods and services and getting paid for them. That is, the process includes all the steps an organization will carry out from the time it receives an order to the point the organization receives payment for the order." Order-to-Cash is the economic engine that keeps manufacturers in the business. The following graphic from Deloitte's report, [Cashing in on order-to-cash: Accelerating the deal's revenue growth potential](#), provides a clear view of the most important questions manufacturers have to answer when optimizing the order-to-cash process. Automating Order-to-Cash with RPA removes the roadblocks between the six steps below and delivers invaluable data to measure performance.



Source: Cashing in on order-to-cash: Accelerating the deal's revenue growth potential, Deloitte

# MANUFACTURERS TRUST RPA TO DELIVER MEASURABLE RESULTS

The bottom line is that RPA delivers data at an accuracy, speed, and volume level that manufacturers have needed for decades to attain true real-time visibility and control. When RPA is based on ERP process mining data, manufacturers gain a true 360-degree view of their shop floors for the first time. They can

also immediately know how scheduling, operations, or cost decisions on the shop floor impact their financial statements. For many manufacturers running on thin margins due to supply chain shortages and dealing with uncertain product demand, RPA delivers the data insights they need to grow revenue.

## RPA HELPS MANUFACTURERS DECIDE WHICH METRICS MATTER MOST

The urgent need to know how the many decisions on the shop floor impact financial results are forcing manufacturers to adopt RPA to gain the insights they need to manage daily operations better. All smart manufacturers share the common attribute of aggregating and providing real-time insights into how each phase of the manufacturing process reduces costs or improves customer experiences. RPA-based insights also make it possible for manufacturers to achieve the following:

- Track financial metrics that are based on real-time data monitoring from the shop floor
- Improve customer responsiveness and satisfaction metrics
- Increase supplier and product quality metrics
- Gain new insights into why specific efficiency-based metrics fluctuate
- Streamline New Product Development & Introduction (NPD) time-to-market performance

RPA is also being used by Operations teams today to designing their smart factory IT and Operations Technology (OT) systems to capture real-time data when possible on the following types of metrics:

- Asset and maintenance metrics, including preventative metrics
- Inventory management, turns, and velocity
- Compliance metrics

# RPA IMPROVES METRICS ACCURACY

Every manufacturer's Order-to-Cash process is different as they have a different business model, customer base, and approach to doing business. What all of the shares, however, is the urgent and constant need to measure production efficiency. RPA is proving effective for removing roadblocks, and extraneous data from the most important metrics manufacturers rely on today. Think of RPA as a recursive process for improving reporting – because, with a true RPA platform with automated ERP process mining, that's exactly what it does.

Manufacturers recently spoken with say these metrics are seeing accuracy and auditability improvements based on RPA's streamlining effects on Order-to-Cash. The metrics include the following:

- **Carrying Cost Of Inventory** – Combines the most challenging costs to capture for managing inventory, including put-away labor and storage costs, costs of obsolescence, and how effective warehouse management is at reducing logistics and fulfillment costs. Carrying inventory costs is a must-have because it's invaluable in tracking how much working capital is allocated to inventory.
- **Customer Satisfaction Levels** – Measured through periodic customer satisfaction audits, customer satisfaction scores are a metric that needs to be designed to measure end-to-end manufacturing process performance. Manufacturers building smart factories rely on creating their customer satisfaction metrics, factoring in order delivery times.
- **Demand Forecast Accuracy** – A must-have metric to determine if the supply chain planning, procurement, production scheduling, and fulfillment systems are synchronized with each other. Demand Forecast Accuracy also indicates the variation in real or actual demand and what is forecasted at the factory level.
- **Fill Rate Effectiveness As a Percent Of All Orders** – Another excellent metric for measuring the level of collaboration between supply chain operations, planning, and production, Fill Rate Effectiveness as a Percent of All orders directly reflects how well supply chains are providing smart factories with the materials they need to fulfill orders.
- **Gross Contribution Margins by Product, Production Facility, and Business Unit** – An essential metric for measuring the financial outcomes of manufacturing decisions, every smart factory pilot I've been involved with tracks Gross Contribution Margin (GCM) performance levels by product, region, and production center or factory.
- **Inventory Turnover** – Defines how many times a given plant's inventory is consumed to build salable products and replaced them in a specific period. Inventory Turns are most often calculated using the Sales by Average Inventory factoring for specific accounting periods. The second approach is to divide the Cost of Good Sold (COGS) by the average inventory level for a specific accounting period.
- **Order Cycle Time** – Defined as the total elapsed time it takes from when a customer places an order to when they receive it. Order Cycle Time is an excellent metric for determining how collaboratively the entire production team is working. Smart factory pilots using this metric attempt to quantify the contribution of inventory management, supply chain, manufacturing, and fulfillment performance levels.
- **Order Pick, Pack, and Ship Accuracy** – An essential metric for measuring how effectively the main functions of an inventory management system are performing and how well integrated they are to fulfillment systems. By definition, pick, pack & ship is the logistics process of locating inventory and packing items for shipment to customers.
- **Perfect Order Performance** – Measures how effective a production facility is in delivering accurate, damage-free orders to customers at or before their delivery date. It's often defined as the (Percent of orders delivered on time) \* (Percent of orders complete)\* (Percent of orders damage free)\* (Percent of orders with accurate documentation)\* 100.
- **Supplier Quality Index** – A useful metric for determining how integrated inventory management, quality, and compliance systems are and how effectively they can isolate supplier quality problems before they impact production. In regulated industries, it's required to track supplier quality and compliance, often to the lot and vendor level. Medical products manufacturers need to provide this level of visibility to comply with the U.S. Food and Drug Administration mandate, 21 CFR Part 11.



## Conclusion

Manufacturers need more insight, visibility, and control from the shop floor to the top floor of their operations. RPA is the digital compass manufacturers need to navigate the continued uncertainty of the global markets while understanding how their decisions on the shop floor impact financial metrics – in real-time – on the top floor. Manufacturers have long struggled to gain greater visibility and control across operations. With RPA, they've found a platform that can deliver process gains while bringing new levels of insight and performance improvements.

# NebulOS.io

Founded in 2018, NebulOS™ is the leading provider of business process mining and robotic process automation (RPA) solutions for enterprise resource planning (ERP) applications.

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