The Big Book of EMS Use Cases

Finance & Administration
Customer Operations
Supply & Distribution
Products & Services
Strategic Initiatives

Celonis Execution Management System
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Introduction

At Celonis, we’re in the business of business breakthroughs.

We believe in helping every company break free from the constraints of the rigid and fragmented systems that run their core business processes, so they can maximize their capacity to execute.

For different companies — and for different departments across every company — “execution” means very different things. And the gaps that need to be closed are just as varied.

Take the Accounts Payable process. A key measure of execution capacity here is the touchless invoice rate, which contributes to clerk productivity: the fewer invoices clerks need to touch, the more they can focus on the ones that truly need manual processing. By using intelligent automation to fix discrepancies in invoices’ master data, so that fewer of them need to be reviewed by a human, best-in-class AP departments are climbing north of 85% touchless invoices.

Now, if we look at Order Management, one way we gauge execution capacity is on-time, in-full delivery, or OTIF. A common gap here is long-running credit checks that block orders and delay processing — often for top customers with a history of good credit and paying on time. But a real-time intelligence engine can predict which orders are likely to be delayed due to credit checks, and automatically unblock those orders for customers in great standing. This is one strategy used in industry-leading Supply Chains to keep OTIF high.

Two very different processes, in two very different departments. What do they have in common? They both run on a web of transactional systems like ERPs that make it difficult to close these gaps and increase these KPIs.

Luckily, the Celonis Execution Management System can help you do just that.

In this book, you’ll find more than 70 examples of ways the Celonis EMS can help you increase execution capacity, in over 20 use cases, spanning 5 business areas.

You might ask: “Are these Process Mining use cases?” Yes, they are, since Process Mining is at the core of the EMS Platform. But, as you’ll see in all of these use cases, the EMS goes much further, turning process intelligence into real business outcomes through AI, automation, and other cutting-edge capabilities.

We hope you’ll see the power of this new class of technology and share in our vision that process improvement is not the end game — it’s the first step to maximizing execution across your entire company.

Let’s go!
Leaders in Finance & Administration play an increasingly strategic role in companies today. They must carry the weight of their decisions knowing they can cause potential consequences that greatly impact profits, cash flow, and even the financial wellbeing of the company. It’s time to offload some of that pressure. These leaders recognize the best way to manage the financial and shared services activities of a company is to have optimal transparency, accuracy, and efficiency across every function.

Whether you’re looking to improve budgeting and forecasting, better understand and track your cash flow, minimize resolution cost in your IT Helpdesk, reduce employee turnover, or find new ways to automate cumbersome, manual steps, Celonis can help you measure your performance, identify and visualize the existing execution gaps, and recommend the best course of action. Now, you can remove the constraints in your F&A systems, freeing up your execution capacity and enabling your team and your company to execute to their full potential.
Accounts Payable

Accounts Payable is the backbone of finance operations, and processing invoices productively and paying at exactly the right time can have a huge impact on working capital and operating margins. But execution gaps in invoice processing hamper performance. Celonis helps you optimize DPO, save cash, and increase productivity during invoice processing.

How Celonis helps (Outcome)

- Working Capital
- Save Money
- Increase Productivity

Execution Capacity (KPI)

- Paid on Time Rate
- Cash Discount Realization Rate
- Touchless Invoice Rate

Execution Gap

- Invoices are received late from the supplier.
- Missing documents for processing
- Incorrect invoice fields

Sample Root Cause

- Paper invoices are more likely to be late than paperless invoices.
- A goods receipt (GR) is not completed on time when the goods are received.
- Incorrect or missing fields like currency, VAT, address, or due date can occur because of master data issues and manual errors on the vendor’s side.

Action

- If an invoice is received late, automatically notify the supplier that the invoice may be paid late, and optionally alert the sourcing manager if the issue is systemic.
- Identify invoices with a missing GR and automatically trigger the request for the GR to be posted. Upon receipt, automatically remove the payment block to enable payment processing in time to capture cash discounts.
- Identify discrepancies in invoice fields by comparing the PO, historical data, and the invoice for standard fields like currency/VAT. Automatically update the fields based on the PO and historical data.

Chart Industries leveraged Celonis to realize more than $6M in material purchase price savings through vendor price book compliance and recapture $200K in annual missed cash discounts improvements.
Record-to-Report

Record-to-Report forms provide necessary insights on the strategic, operational, and financial facets of a company’s performance. But execution gaps occur in the complex processes and industry-specific regulations. Celonis helps you close faster by automating manual tasks and proactively helping employees avoid errors.

Process Involved: Record-To-Report
Departments involved: Finance, Accounting

**How Celonis helps (Outcome)**
- **Analyst Productivity**
- **Execution Capacity (KPI)**
- **Execution Gap**
- **Sample Root Cause**

**Action**
- Automate the edit checks where possible and provide the validation to the relevant stakeholders.
- Automate the data feed retrieval process where possible. If automation is not possible, identify chronically late feeds and notify the product processor teams.
- Automate intercompany adjustments where possible based on historical data.

Introduction
**Finance & Administration**
- Accounts Payable
- Record-to-Report
- Accounts Receivable
- Hire-to-Retire
- ITSM

**Customer Operations**
- Supply & Distribution
- Products & Services
- Strategic Initiatives

**Conclusion**
Accounts Receivable

Accounts Receivable departments are focused on getting customers to pay on time. But execution gaps in manual, non-data-driven collections hinder performance. Celonis helps you maximize DSO by prioritizing accounts with the highest likelihood to pay, recommending actions for high-risk accounts, and ensuring a 360° view of your customers.

How Celonis helps (Outcome)

- Working Capital
- Billing Efficiency
- Cost Per Invoice
- Days Sales Outstanding (DSO)
- Time to Invoice
- Perfect Invoice Rate

Execution Gap

- Large numbers of customers are at risk of not paying.
- Invoices are created and sent to customers late.
- Invoices contain an incorrect field such as the wrong bill-to address, customer number, or customer entity.
- Incorrect master data is being used.

Execution Capacity (KPI)

- Customer payment risks are not identified early enough to take meaningful action.
- Invoices are created based on outdated master data rather than when a customer delivery is received.

Sample Root Cause

- Identify and escalate high-risk customers to sales and customer success for support, and flag the escalation in the CRM.
- Trigger the timely creation of the invoice within 24 hours of goods delivery.
- Automatically review contracts and historical data to recommend the appropriate master data updates and either notify the customer master data team or automatically modify the invoice based on confidence level.

Sysmex reduced past-due receivables by 60% in 9 months while decreasing the late payment rate from 61% to 44%, despite the impact of COVID-19.
**Hire-to-Retire**

**Human Resources** departments focus on the ability to hire and grow the right talent. But execution gaps in recruiting, professional development, and manual onboarding impede employee growth. Celonis helps you reduce employee turnover, enhance employee performance, and increase HR productivity by automating manual steps and recommending performance plans.

### How Celonis helps

- **Employee Retention**

### Execution Capacity (KPI)

- **Turnover per Year**
- **Development Opportunities**

### Execution Gap

- **New hires leaving during probationary period**
- **High potential employees are not being presented with development opportunities to keep them engaged and take full advantage of their skill sets.**
- **Managers are not made aware of the dissatisfaction with development opportunities outside of annual reviews.**
- **New employees spend hours of re-work due to missing materials during set up of employee profiles in HRMS.**

### Sample Root Cause

- **New employees are not receiving proper training due to out-of-date training content on learning portal.**
- **Managers are not made aware of the dissatisfaction with development opportunities outside of annual reviews.**
- **New employees spend hours of re-work due to missing materials during set up of employee profiles in HRMS.**

### Action

- **Monitor training portal material date and remind the creator to update on a periodic basis. Enable user of training portal to kick-off automated “out-of-date” alert additionally.**
- **Notify managers of high potential employees that lack recent development opportunities.**
- **Upon new hire, pro-actively send a new employee preparation package of information from HRMS needed to complete the employee profile.**
**ITSM**

**IT Management Service** leaders aim for superior customer service and high agent productivity. But execution gaps in ticket routing, agent skills, and case prioritization are standing in the way. Celonis helps you achieve SLAs and improve ticket handling through routing recommendation, prioritizing tickets, and automating manual tasks.

### How Celonis helps (Outcome)

- **Compliance**
- **Resolution Cost**
- **Team Productivity**

### Execution Capacity (KPI)

- **SLA Compliance Rate**
- **Cost per Case**
- **Agents per Case**

### Execution Gap

- **High resolution times lead to service level agreement (SLA) violations.**
- **Incidents are processed by more costly support tiers.**
- **Large scale problems are not prioritized as they are seen as individual incidents.**

### Sample Root Cause

- **Multi-hops and inefficient agent assignments cause a delay in resolving incidents.**
- **When the issue type is incorrectly classified or key information is missing upfront, certain types of incidents are not intelligently routed to the right team. As a result, they're routed either one level too high or too low.**
- **A sudden influx of cases from one geographical region may be due to a data center outage.**

### Action

- **Use a Machine Learning model to predict the resolution time of incidents, trigger warnings, and escalate the case to a higher priority before it exceeds the SLA.**
- **Automatically assign cases to the right support tier by analyzing previous resolution patterns, the category of the incidents, and the skill level of teams.**
- **Link related cases together and assign them to one agent with highest priority for processing. Notify the service manager of the large scale incident.**

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**CompuCom**

CompuCom is leveraging Celonis to analyze and improve its managed service processes in more than 4 million ServiceNow incidents per year, achieving up to 20% reduction in service ticket volumes.
Customer Operations

Leaders in Customer Operations take the phrase “it’s all about the customer” to heart. They define success by understanding their customers, prioritizing interactions, and keeping a pulse on lead opportunities. They understand customer onboarding experiences can make or break the ongoing relationship their customer has with their product, and they need intelligent tools to enable an exceptional customer experience.

Celonis can help you measure your performance, identify and visualize the existing execution gaps, and recommend the best course of action. Now, you can remove the constraints in your customer operations systems, freeing up your execution capacity and enabling your team and your company to execute to their full potential.
Lead Management

Lead Management leaders focus on driving high quality leads with high ROI campaigns. But execution gaps in lead routing, manual tasks, and poor targeting reduce performance. Celonis helps you improve campaign ROI and lead conversion rates by providing in-process lead routing recommendations, prioritization of accounts for campaigns, and automation of manual tasks.

<table>
<thead>
<tr>
<th>Process Involved:</th>
<th>Lead-to-Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departments involved:</td>
<td>Insides Sales, Business Development</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Introduction</th>
<th>Finance &amp; Administration</th>
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<td>Customer Onboarding</td>
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<td>Order Management (Customer Service)</td>
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<td>Customer Service</td>
<td>Opportunity Management</td>
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<tr>
<td>Supply &amp; Distribution</td>
<td>Customer Service</td>
</tr>
<tr>
<td>Products &amp; Services</td>
<td>Supply &amp; Distribution</td>
</tr>
<tr>
<td>Strategic Initiatives</td>
<td>Products &amp; Services</td>
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<tr>
<td>Conclusion</td>
<td>Strategic Initiatives</td>
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<table>
<thead>
<tr>
<th>How Celonis helps (Outcome)</th>
<th>Execution Capacity (KPI)</th>
<th>Execution Gap</th>
<th>Sample Root Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed up Qualification</td>
<td>Lead to Marketing Qualified Lead (MQL) Time</td>
<td>It takes too long until first touch on a lead.</td>
<td>Improper prioritization and assignment</td>
<td>Use Machine Learning to prioritize and assign leads most likely to become opportunities.</td>
</tr>
<tr>
<td>Increase Quality</td>
<td>MQL &gt; Sales Accepted Lead (SAL) Conversion Rate</td>
<td>Unqualified leads are submitted to become opportunities.</td>
<td>Qualification consists of multiple tasks in various applications, resulting in errors and work-arounds.</td>
<td>Intelligently and conditionally automate manual tasks in the BDR qualification process.</td>
</tr>
<tr>
<td>Improve ROI of Digital Campaigns</td>
<td>Cost per MQL</td>
<td>Campaigns fail to generate leads that convert into MQLs.</td>
<td>Campaigns tactics are targeting the wrong buyer personas and contain the wrong offer.</td>
<td>Use Machine Learning and Analysis to target specific offers to specific personas.</td>
</tr>
</tbody>
</table>
## Customer Onboarding

Customer Onboarding can define the ongoing relationship with your customers. But execution gaps in faulty online portals, manual tasks, and improper compliance get in the way. Celonis helps you delight customers during onboarding by pro-actively avoiding rework, removing redundant steps, and recommending actions to improve compliance.

### How Celonis helps (Outcome)

<table>
<thead>
<tr>
<th>How Celonis helps</th>
<th>Productivity/Decreased Process Cost</th>
<th>Customer Satisfaction</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution Capacity (KPI)</td>
<td>Self-service Onboarding Ratio</td>
<td>Onboarding Cycle Time</td>
<td>Number of Process Violations</td>
</tr>
<tr>
<td>Execution Gap</td>
<td>Sets of customers are unable to complete specific steps in an online portal.</td>
<td>Re-work in process, delaying on-boarding.</td>
<td>Key regulation required steps are completed, but at a low compliance rate.</td>
</tr>
<tr>
<td>Sample Root Cause</td>
<td>Certain steps in the on-boarding process require information.</td>
<td>Late quantity order and/or quantity changes</td>
<td>Background checks and common due diligence steps that require detailed work are completed in haste.</td>
</tr>
<tr>
<td>Action</td>
<td>Proactively alert customers to have certain information ready prior to starting the on-boarding process.</td>
<td>Pro-actively double check order quantity and price with logic and Machine Learning. Then alert customers if there is an inaccuracy.</td>
<td>Alert the onboarding person when a step in the process is completed too quickly or fails to reach quality standards.</td>
</tr>
</tbody>
</table>

### Degussa Bank

Degussa Bank realized a **32% reduction in customer onboarding time**, while increasing their automation rate by **20%**.
Order Management (Customer Service)

Order Management leaders strive to provide exceptional customer experience at effective costs. But execution gaps in order processing due to improper credit checks, EDI blocks, and order changes create havoc. Celonis helps you prioritize critical orders, optimize next-best action recommendations for on-time delivery, and avoid re-work.

**How Celonis helps (Outcome)**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>KPI</th>
<th>Root Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Time Delivery (OTD)</td>
<td>OTD, On-Time and In-Full Delivery (OTIF)</td>
<td>Long running credit checks delay order processing.</td>
<td>Use Machine Learning to predict which customers have a high likelihood to pay on-time, and proactively skip credit checks for those customers.</td>
</tr>
<tr>
<td>Productivity</td>
<td>Cost per Order</td>
<td>EDI blocks create manual steps.</td>
<td>Use Machine Learning to predict EDI blocks and recommend proper shipping conditions for Order Manager to recommend to the customer.</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>Net Promoter Score (NPS)</td>
<td>The same changes in shipping condition and terms are performed on blocked orders repeatedly.</td>
<td>When first receiving the order, identify orders likely to be impacted by the supply chain issues. Automatically update delivery dates and alert the account team to inform customers.</td>
</tr>
<tr>
<td>Execution Capacity</td>
<td>Changes to confirm delivery date post order confirmation</td>
<td>Confirmed delivery dates are based on standard lead times provided by the supply chain. When there are issues in the supply chain, delivery dates are delayed.</td>
<td></td>
</tr>
<tr>
<td>Execution Gap</td>
<td>Sample Root Cause</td>
<td>Frequent customers with +95% history of on-time payment are held on block for nearly five days before having their credit approved +90% of the time.</td>
<td></td>
</tr>
</tbody>
</table>

**Process Involved:** Order-to-Cash  
Departments involved: Order Management, Fulfillment, Accounts Receivable

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**Ascend Performance Materials** reduced their time from order to delivery by 3 days, improving on-time delivery rate by 27% and their automation rate by 43%, all in only 4 months.
Opportunity Management

Opportunity Management is the key to driving increased revenue in B2B sales. Yet, execution gaps in substandard account prioritization, ineffective forecasting, and manual quoting reduce opportunities. Celonis helps you maximize bookings by prioritizing opportunities, providing multi-tiered forecasting, and automating the quoting process.

<table>
<thead>
<tr>
<th>How Celonis helps (Outcome)</th>
<th>Increase Revenue</th>
<th>Improve Selling Efficiency</th>
<th>Improve Sales Predictability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution Capacity (KPI)</td>
<td>Win Rate</td>
<td>Sales Cycle Time</td>
<td>Forecast Accuracy</td>
</tr>
<tr>
<td>Execution Gap</td>
<td>Deals that should be won are being lost.</td>
<td>Configure Price Quote (CPQ) Process takes too long.</td>
<td>Forecast Accuracy outside the current quarter is low.</td>
</tr>
<tr>
<td>Sample Root Cause</td>
<td>Executive time is not being spent on the opportunities with the highest likelihood to close.</td>
<td>There’s a lot of manual steps and human error involved in the quota process that creates rework.</td>
<td>Account Executives lack information and skills to provide accurate forecasts.</td>
</tr>
<tr>
<td>Action</td>
<td>Use Machine Learning to identify the high probability opportunities and recommend Sales Management allocate resources accordingly.</td>
<td>Intelligently automate and remove unnecessary steps in quota processes.</td>
<td>Use bottom’s-up ML-based forecast to suggest forecast for Account Executives.</td>
</tr>
</tbody>
</table>

“Our goal is to give 500,000 hours back to our Sales team of over 30,000 reps. We weren't able to understand the Sales process end-to-end until we brought in Celonis on top of the Dell Sales Application. Now, we understand exactly which steps of our process are the most time-consuming and error-prone, and we are using proactive alerts to drive Sales execution.”

Pranay Jaiswal,
Director of Business Architecture and Digital Transformation, Dell
Customer Service

Customer Service leaders strive to provide superior customer experience while running an efficient contact center. But execution gaps in poor ticket routing, manual tasks, and ineffective self-service portals reduce customer satisfaction. Celonis helps improve the customer experience with ML-based recommendations in routing and customer outreach.

**How Celonis helps** (Outcome)

<table>
<thead>
<tr>
<th>Customer Satisfaction</th>
<th>Resolution Cost</th>
<th>Team Productivity</th>
</tr>
</thead>
</table>

**Execution Capacity** (KPI)

<table>
<thead>
<tr>
<th>Service Level Agreement (SLA) Compliance Rate, Net Promoter Score (NPS)</th>
<th>Self-Service Resolution Ratio</th>
<th>Average Case Resolution Time</th>
</tr>
</thead>
</table>

**Execution Gap**

<table>
<thead>
<tr>
<th>Certain types of cases take a long time to resolve.</th>
<th>Customers are spending time in self-service portals but still calling support.</th>
<th>Multiple related incidents are treated individually by multiple agents, while they could be treated by a single or small group of agent(s).</th>
</tr>
</thead>
</table>

**Sample Root Cause**

<table>
<thead>
<tr>
<th>Lack of proper routing and prioritization for technically hard cases</th>
<th>Certain topics are too challenging to address in the support knowledge base.</th>
<th>A new, difficult case type takes a long time to resolve.</th>
</tr>
</thead>
</table>

**Action**

<table>
<thead>
<tr>
<th>Use a Machine Learning model to predict the resolution time of incidents, trigger warnings, and escalate at-risk cases or change routing.</th>
<th>Proactively contact customers who search knowledge bases for certain topics.</th>
<th>Analyze case types consistently and identify long resolution times, train agents, and proactively route those case types to a specialized team.</th>
</tr>
</thead>
</table>

Uber

Uber reduced their average case handling time by 29% for rider authorization holds, realizing $20M in savings through these efficiency gains.
Supply & Distribution

Today, more than ever, supply chains are fragmented. Leaders in Supply & Distribution know the only way to mend the links is to view the entire supply chain as a strategic asset. They recognize effective management of the whole distribution process is critical to a company’s financial success and longevity.

Whether you’re looking to redesign your distribution network, invest in new resources, fill orders faster and with more agility, accelerate your forecasts, or even reposition products around sustainability,

Celonis can help you measure your performance, identify and visualize the existing execution gaps, and recommend the best course of action. Now, you can remove the constraints in your Supply & Distribution systems, freeing up your execution capacity and enabling your team and your company to execute to their full potential.
Sourcing & Procurement

Procurement leaders recognize spend management and supplier reliability are critical to company performance. But execution gaps due to improper blocks, PO changes, manual steps, and maverick buying hinder performance. Celonis helps you improve execution by removing unnecessary blocks, recommending actions on PO changes, and automating manual steps.

### How Celonis helps (Outcome)

- **Employee Productivity**: Processing time of Purchase Requisitions (PR)
- **Supplier Performance**: Inbound On-time Delivery Rate
- **Compliance**: Compliance Ratio

### Execution Capacity (KPI)

- **High volume of free-text requisitions**
- **Recurring late deliveries of direct procurement materials with respect to internally planned/requested delivery date**
- **Master data around internal planning parameters is incorrect**

### Execution Gap

- **Requisitioners manually create free-text requisitions due to lack of knowledge, negligence, or haste rather than selecting a standard vendor with pre-negotiated terms from a catalog.**
- **Identify confirmed delivery dates that are systematically later than the requested/planned delivery date and then either automatically update these planning parameters or notify the planning team of a potential systemic issue.**
- **Notify purchasing managers of repeat offenders and provide them with the ability to block requisitioner system access, reject maverick purchases, or contact vendors that repeatedly fulfill maverick purchases.**

### Sample Root Cause

- **Use a Machine Learning model to either automatically convert a free-text PR to a PO, or recommend an item from an existing catalog to the operational purchaser.**
- **Identify confirmed delivery dates that are systematically later than the requested/planned delivery date and then either automatically update these planning parameters or notify the planning team of a potential systemic issue.**

### Action

- **Vodafone went from a 73% to 96% Perfect PO rate.**
- **L’Oreal had an 800% increase in touchless orders.**
**Warehouse Operations**

**Warehouse Operations** leaders prioritize improving on-time delivery at minimal inventory levels. But execution gaps in manual processes, order changes, and incorrect data hamper execution. Celonis helps you improve customer satisfaction by proactively optimizing master data, automating manual steps, and automatically prioritizing critical orders.

**Introduction**

**Finance & Administration**
**Customer Operations**
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- Inventory Management
- Replenishment / Drop Shipment

**Products & Services**

**Strategic Initiatives**

**Conclusion**

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**Process Involved:**

**Outbound Logistics**

**Departments involved:**

**Warehouse Management,**
**Logistics,**
**Fulfillment**

---

**Quality checks can fail due**
**to unreliable master data**
**or from an inexperienced**
**picking team that doesn't**
**select the correct item in the**
**right quantity.**

**Identify systemic patterns**
**that result in failed quality**
**checks and either notify the**
**planning team to correct**
**faulty master data or notify**
**the warehouse lead to**
**conduct additional training.**

**How Celonis helps**

**Outcome**

- **Customer Satisfaction**
- **Productivity**
- **Quality Assurance**  

**Execution Capacity**

**KPI**

- **On-Time-Delivery (OTD)**
- **Picks per Hour**
- **Failed Quality Check Ratio**

**Execution Gap**

- **Short picks, failed quality checks, and changed orders**
- **Items are not available in the warehouse.**
- **Quality checks routinely fail.**

**Sample Root Cause**

- **Short picks and quality issues can both be caused by master data issues concerning warehouse availability and item details such as weight.**
- **Warehouse is systematically lacking the correct inventory to fulfill orders.**
- **Quality checks can fail due to unreliable master data or from an inexperienced picking team that doesn't select the correct item in the right quantity.**

**Action**

- **Use a Machine Learning Model to predict which orders have a higher likelihood to not reach the truck before the cut-off time based on each milestone of the picking process. Trigger a resolution workflow based on the specific issue type.**
- **Identify systemic availability issues and notify the planning team to update inventory levels, as well as trigger automatic replenishments.**
- **Identify systemic patterns that result in failed quality checks and either notify the planning team to correct faulty master data or notify the warehouse lead to conduct additional training.**

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**4M€**

**total annual savings potential**

**identified for planned roll-out**

**in warehouses across Europe**

**140K€**

**in total value realized**

**in 12 months**

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**The Big Book of Use Cases:**

**Celonis Execution Management System**
Inventory Management

**Inventory Management** leaders aim to spend less on storage and stock while perfecting customer service. But execution gaps in manual forecasting, poor supplier communications, and unreliable master data hurts performance. Celonis helps you improve inventory management by providing accurate forecasts and enhancing lead-time accuracy through ML models.

**How Celonis helps (Outcome)**

- **Revenue**
- **Net Working Capital**
- **Supplier Reliability**

**Execution Capacity (KPI)**

- **Revenue at Risk**
- **Inventory Value**
- **Inbound On-Time Delivery**

**Execution Gap**

- Inventory reduction is lower than demand.
- Excess and obsolete inventory
- Inability to identify excess inventory due to missing data
- Unrealistic lead times are being requested of the supplier.

**Sample Root Cause**

- Limited insight on impact of inventory reduction
- Low supplier reliability requires an inventory buffer to be built to avoid disrupting the business downstream.

**Action**

- Use a Machine Learning model to predict availability and recommend supplier lead times that are in line with the reality of supplier delivery.
- Use a Machine Learning model to identify outliers and highlight inventory levels that are too high given current supply and demand.
- Use an Machine Learning model to provide recommendations for when inventory should be restocked based on supplier reliability and requested lead times.

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**COMCAST**

- **$125M** in opportunities identified in a 2-month deployment
- **$85M** improvement in asset utilization captured
- **100 Days** in inventory turnover improvement potential
**Replenishment / Drop Shipment**

Replenishment/Drop Shipment is a critical process that can delight customers while minimizing inventory costs. But, execution gaps in poor master data, order changes, and incorrect replenishment limits decrease performance. Celonis helps improve on-time delivery by recommending proper lead times, enhancing master data, and avoiding re-work.

### Process Involved:
- **Drop Shipment**

### Departments involved:
- Supply Chain
- Inventory Management

### How Celonis helps (Outcome)

<table>
<thead>
<tr>
<th>Action</th>
<th>How Celonis helps</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify trends in inventory availability and dynamically adjust the reorder point in the master data with automation.</td>
<td>On-time Delivery (OTD)</td>
<td>Delivery Reliability</td>
</tr>
<tr>
<td>Measure trends in lead time discrepancy and dynamically adjust lead time master data to increase the accuracy of planning parameters.</td>
<td>Delivery date changes are driven by long throughput times at replenishment hubs.</td>
<td>Speed</td>
</tr>
</tbody>
</table>

### Sample Root Cause

- The reorder point is too low or too high, so the goods are either over or under ordered and cannot accommodate quantity changes.
- Lead time master data is inaccurate, causing an over promise and under delivery on orders.

### Execution Gap

- Delivery date changes are driven by long throughput times at replenishment hubs.
- Quantity changes after the PO is confirmed.

### Execution Capacity (KPI)

- **On-time Delivery (OTD)**
- **Inventory Availability, Cost per Order**
- **First-time Right Ratio**
- **Delivery date changes**

### Action

- Identify trends in inventory availability and dynamically adjust the reorder point in the master data with automation.
- Measure trends in lead time discrepancy and dynamically adjust lead time master data to increase the accuracy of planning parameters.
- Recommend informing Hub manager of delays to prevent future delays.

---

Celonis also highlights the following results:

- **15% productivity increase** in replenishment process
- **140K€ in total value realized** in 12 months
Products & Services

Do you remember the last time a product exceeded your expectations? Most don’t. When it comes to quality, it’s all about going above and beyond. Leaders in Products & Services recognize it is increasingly critical to effectively drive productivity, mitigate rework, and ensure quality to stay competitive. In the face of rapidly changing societal preferences, an evolving regulatory environment, and rising costs, it’s more important than ever.

Celonis can help you measure your performance, identify and visualize the existing execution gaps, and recommend the best course of action to optimize and sustain product development efforts. Now, you can remove any constraints, freeing up your execution capacity and enabling your team and your company to execute to their full potential.
Shop Floor / MES

Shop Floor / Manufacturing Execution Systems (MES) ensure effective manufacturing operations and production. But, execution gaps in unplanned downtime, defects in workplace equipment, and material availability diminish impact. Celonis helps you improve operational efficiency by predicting machine downtime and using ML to reduce material outages.

- **How Celonis helps** (Outcome)
  - Increase Productivity
  - Eliminate Rework
  - Ensure Quality

- **Execution Capacity** (KPI)
  - Reactive Maintenance Rate
  - Rework Rate
  - Scrap Rate

- **Execution Gap**
  - Unplanned machine downtime
  - Defect workpiece carriers times

- **Sample Root Cause**
  - Machine maintenance is based on a fixed schedule rather than actual usage.
  - Correlations between used workpiece carriers and overall rework are not tracked - and required maintenance is missed.

- **Action**
  - Measure machine performance and historical trends to identify optimal maintenance windows.
  - Identify workpiece carriers with a striking rework pattern to automatically remove defective ones from the production line and notify shop floor managers.
  - Identify low quality suppliers and recommend the best performing supplier for each corresponding component part based on historical data.
Plant Maintenance

Plant Maintenance achieves minimum breakdown and quality working conditions at the lowest possible cost. But execution gaps in bounce rates, production line blocks, and faulty equipment stand in the way.

Celonis helps you minimize downtime by prioritizing resources based on likelihood of failure and automatically filling in incomplete work orders.

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Supply & Distribution

Products & Services

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Plant Maintenance
Quality Management
Product Lifecycle Management
Strategic Initiatives
Conclusion

Process Involved:
Plant Maintenance
Departments involved:
Maintenance, Procurement

Critical information that helps assign the work order to the right team is missing.

Use a Machine Learning model to detect missing information based on previous requests. Then leverage the ML model to automatically complete the missing information or notify the manager of the work order.

Uniper optimized contractor waiting time on site, for a more punctual start of maintenance work.
Quality Management

Quality Management continuously improves a company’s production processes to enhance customer experience. But execution gaps in delayed batch releases, high rework rates, and inspection blocks stand in the way. Celonis helps you improve quality levels by predicting and avoiding bottlenecks while proactively avoiding rework.

### How Celonis helps (Outcome)

<table>
<thead>
<tr>
<th>How Celonis helps (Outcome)</th>
<th>Productivity</th>
<th>Cash Flow</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution Capacity (KPI)</td>
<td>On-Time Batch Release (OTBR) Rate</td>
<td>Cost of Quality (COPQ &amp; COGQ)</td>
<td>Quality Inspection Turnaround Time</td>
</tr>
<tr>
<td>Execution Gap</td>
<td>A product is made available for use after its planned release date.</td>
<td>Poor quality materials cost time and money to remedy, while cost of quality assurance (e.g. audits or testing) can be expensive.</td>
<td>Slow quality inspection times in between production steps</td>
</tr>
<tr>
<td>Sample Root Cause</td>
<td>An upstream process, such as purchasing, is delayed.</td>
<td>Internal factors include scrap, rework, and reinspection.</td>
<td>Quality inspections are being processed, but not approved quickly.</td>
</tr>
<tr>
<td>Action</td>
<td>Identify bottlenecks within the batch release process and automate/recommend actions for improvement.</td>
<td>Perform root-cause analysis to identify where the highest amount of scrap, rework, and reinspection occurs then notify managers.</td>
<td>Identify where the long-running approvals are occurring and work with the Quality team to identify if there is a training or capacity issue.</td>
</tr>
</tbody>
</table>

### Sample Root Cause

An upstream process, such as purchasing, is delayed.

### Action

- Identify bottlenecks within the batch release process and automate/recommend actions for improvement.
- Perform root-cause analysis to identify where the highest amount of scrap, rework, and reinspection occurs then notify managers.
- Identify where the long-running approvals are occurring and work with the Quality team to identify if there is a training or capacity issue.

---

Vetter Pharma achieved a **15% reduction in cycle time** in their Change & Deviation process and identified **1M+ variants** in their heavily regulated and complex system landscape (Trackwise and multiple SAP systems).
Product Lifecycle Management

Product Lifecycle Management (PLM) leaders prioritize improving quality and time-to-market. But execution gaps in development visibility, ticket management, and faulty quality testing hinder performance. Celonis helps you maximize release times and improve predictability with proactive ticket monitoring and prioritization.

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How Celonis helps (Outcome)

<table>
<thead>
<tr>
<th>Faster Releases</th>
<th>Development Predictability</th>
<th>Development Process Compliance</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Execution Capacity (KPI)

<table>
<thead>
<tr>
<th>Product Velocity</th>
<th>Sprint planning accuracy</th>
<th>Process adherence rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Execution Gap

<table>
<thead>
<tr>
<th>Development tickets are stuck in a code review status.</th>
<th>Development tickets are being highly over or underestimated.</th>
<th>Development tickets are skipping a required initial validation or code review step.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Sample Root Cause

<table>
<thead>
<tr>
<th>Reviewers are not properly informed about ticket priority or aging information.</th>
<th>Features are separated into manageable pieces to accurately estimate.</th>
<th>Developers are trying to push features through without a code review because they didn’t complete development in enough time for a code review to be performed.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Action

<table>
<thead>
<tr>
<th>Notify reviewers when tickets are in a code review status for a certain period of time and surface the highest priority tickets to the top of the review list.</th>
<th>Automatically isolate product areas with consistently missed sprint SLAs and recommend estimated adjustments based on past ticket information.</th>
<th>Automatically identify tickets as soon as these violations occur and inform the corresponding Product Manager. This blocks the ticket in its current status until the violation is lifted.</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

Process Involved: Product Development
Departments involved: R&D, Engineering, Product
Strategic Initiatives

When it comes to enterprise-wide **strategic initiatives**, we are talking about the things that rock the boat. These are the big projects that disrupt your daily routine and are often classified as the thing you do after your “full-time” job. But they are just as important and demand a level of agility and strategy so you can run at full execution capacity. In this section we will focus on where you invest resources dedicated to accomplishing an enterprise-wide objective.

Whether you are facing a major ERP system migration, optimizing your processes to increase speed and automation through your Center of Excellence, undergoing a complex M&A, or tackling an internal audit, Celonis can help. Now, you can remove any constraints, freeing up your execution capacity and enabling your team and your company to execute to their full potential.
System Migration

IT leaders’ goal for system migration is to be on budget and on time. But execution gaps in manual, process mapping, subjective fit gap analysis, and maverick buying are standing in the way. Celonis helps you maximize timeline and budget predictability with automatic data-driven process mapping, instant fit-gap analysis, and proactive user monitoring.

Schlumberger saved $40M and 2 months off their SAP system migration.
Operational Excellence

Operational Excellence leaders recognize the key to success is reducing process variation and waste – from rework to unnecessary costs. But execution gaps in unnecessary delays, manual tasks, and employee errors interfere. Celonis helps you maximize process excellence through data-driven transparency, execution gap identification, and automation.

How Celonis helps (Outcome)

- Increase Speed
- Increase Automation
- Increase Compliance

Execution Capacity (KPI)

- Cycle Time
- Automation Rate
- Number of Process Violations

Execution Gap

- Unnecessary delays between process steps
- Tedious manual steps in the process
- Employees trying to expedite a case by skipping required steps

Sample Root Cause

- Approvals often slow down processes, because the approver is not aware or not focused on the approval in their day-to-day.
- A case within the process needs to be manually sent to the next step in the process, rather than being automatically sent as soon as all requirements are met.
- Employees skip a mandatory customer credit check to close a sales deal faster.

Action

- Alert approvers as soon as approval is needed and continue to send them reminders as long as the approval is outstanding.
- Send cases to the next process step as soon as all of the required action is taken and all necessary information is present.
- Identify cases that are missing process steps and freeze them in real time until the mandatory action has been taken.

SIEMENS

Siemens saves over $10 million annually by eliminating rework activities.

ADP

ADP achieved 400% growth in automation and 70% reduction in rework in the Global Payroll Process.
Mergers & Acquisitions

Successful Mergers & Acquisitions (M&A) are all about value creation. But execution gaps occur when there are too many process deviations and opaqueness in how to merge existing and new processes. Celonis helps you maximize value by improving process design and compliance to eliminate deviations, promote user adoption, and ensure business continuity.

<table>
<thead>
<tr>
<th>How Celonis helps (Outcome)</th>
<th>Improved Process Design and Compliance</th>
<th>User Adoption</th>
<th>Business Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution Capacity (KPI)</td>
<td>Number of Process Deviations</td>
<td>Percentage of users on new system</td>
<td>Number of service desk tickets after go-live</td>
</tr>
<tr>
<td>Execution Gap</td>
<td>Over time, old processes often accumulate waste and inefficiencies.</td>
<td>Moving to a new process often involves employees using a blend of existing and new processes.</td>
<td>Integrations and other processes break after a new system or process goes live.</td>
</tr>
<tr>
<td>Sample Root Cause</td>
<td>A group of employees was not brought in during the design phase.</td>
<td>Rather than asking questions when confused about the new process, employees revert to what they are comfortable with doing.</td>
<td>A critical integration between the sales system and finance system breaks, so all of the sales reps simultaneously file service desk tickets to get this resolved.</td>
</tr>
<tr>
<td>Action</td>
<td>Objectively analyze existing processes using Process Mining to ensure no gaps are missed.</td>
<td>Automatically inform employees when they are going outside of the established process and recommend the correct action in the new process.</td>
<td>Identify trends in service desk tickets and inform responsible parties to resolve the issue. Provide recommendations for similar process steps that may be vulnerable to the same type of issue.</td>
</tr>
</tbody>
</table>
Audit

An Internal Audit is a critical discipline to ensure compliance and process effectiveness. But execution gaps occur in incorrect monitoring, delays in reporting, and incomplete data. Celonis helps you improve audit success by identifying process violations in real-time, providing proactive recommendations, and tracking process conformance.

### How Celonis helps (Outcome)

- Increase Compliance
- Prevent Risk
- Increase speed

### Execution Capacity (KPI)

- Number of material weaknesses
- Number of violations against segregation of duties
- Turnover cycle of audit reports

### Execution Gap

- Reasonable possibility that a material misstatement of the company’s financial statements will not be prevented or detected on a timely basis.
- Segregation of duties is not being practiced or enforced.
- Unnecessary delays between process steps

### Sample Root Cause

- A process is not being executed according to the process description.
- A single person creates and approves a transaction to expedite processing.
- Too many stakeholders are involved in feedback circles that fail to deliver on time. Approvals often slow down processes.

### Action

- Detect material weaknesses before external audit by leveraging Process Mining.
- Automate workflows so that segregation of duties are enforced at the system level.
- Alert approvers as soon as approval is needed and continue to send them reminders as long as the approval is outstanding.
Conclusion

History has shown all of us that breakthroughs in processes lead to breakthroughs in execution. In other words, we know where we’ve been and where we want to go.

Now that you’ve made it to the end of the Big Book, we hope you see the power of the Celonis Execution Management System and share in our vision that process improvement is not the end game — it’s the first step to maximizing execution across your entire company.

Whether you are looking to optimize customer experience, improve supply & distribution management, drive productivity and quality assurance, remove constraints in your shared services departments, or prepare for a major event like a system migration or audit, Celonis can help you maximize your capacity to execute and achieve breakthrough results for your business ... and beyond!