celonis

2024 Report

Adapting Life Sciences for the Next Normal

How Pharma and Life Sciences operations are staying ahead of evolving demands

Contents

From new normal to next normal

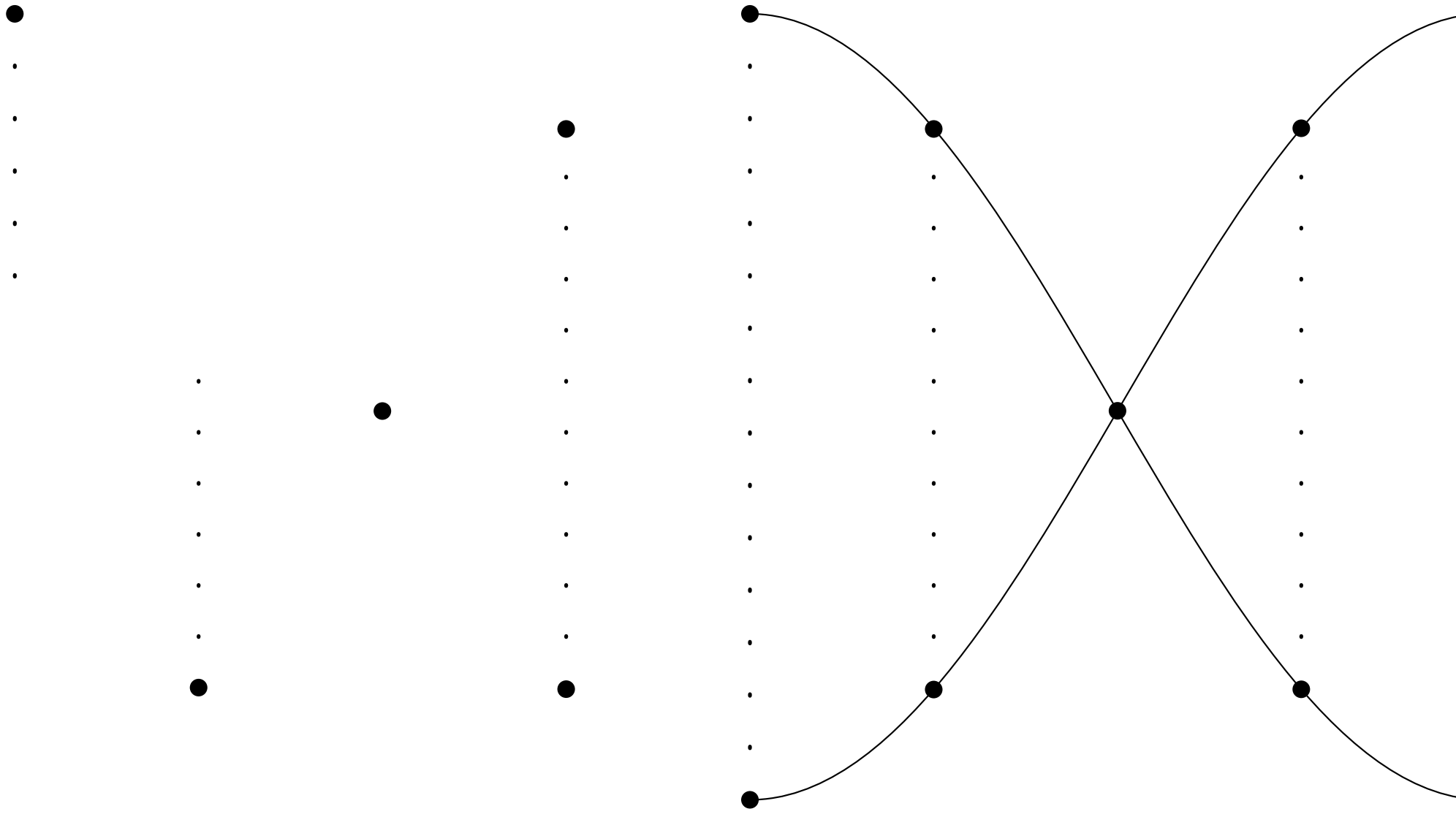
Pharma and life sciences companies are operating in a world of volatility.

The widely predicted “new normal” never came. Instead, the industry continues to change rapidly in response to macroeconomic shifts, regulatory changes, altered expectations, increasing data volumes, strong competition, and a move towards personalized care.

Rather than the “new normal”, life sciences organizations need to prepare for the “next normal”. And the one after that. And the one after that... Adaptation is critical to stay competitive in this changeable world, and business processes hold the key to that adaptation.

To get a real understanding of what’s happening on the ground, we surveyed almost 50 senior decision makers from the pharma and life sciences industries. We asked about their strategic priorities, the processes they feel are currently a burden on resources, and the technologies they believe will help them optimize those processes.

You’ll find their responses throughout this guide, along with insights from other sources and real-world stories that illustrate how pharma and life sciences organizations are using processes to adapt for the next normal.

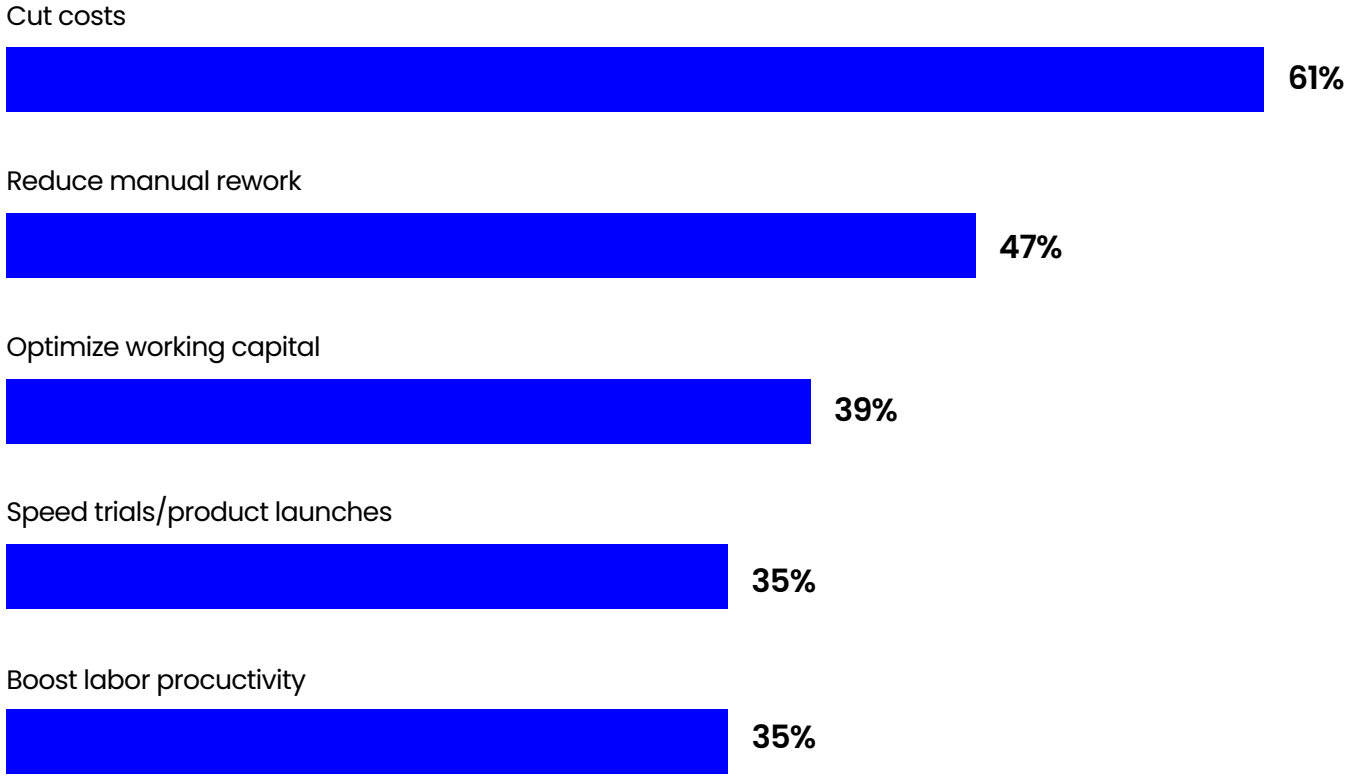


The process improvement imperative

To find out what's driving transformation and process improvement in the life sciences industry, we asked the senior decision makers that took part in our survey to identify their top strategic priorities for the next 18-24 months.

Their biggest concern is cost cutting, which 61% agree is a primary strategy. Other priorities that made the top five include reducing manual rework, optimizing working capital, increasing the speed of trials and product launches, and boosting labor productivity.

Top five strategic priorities for life sciences leaders



Let's take a look at these top-five priorities in more detail, and explore how process improvement is helping pharma and life sciences organizations achieve them.

Priority 1:

Cutting costs

Inflation and fluctuating interest rates combine with rising prices for raw materials, manufacturing and distribution to increase costs in the life sciences industry.

Higher costs impact profitability and financial performance, and ultimately slow innovation by hindering the ability to invest in research and development.

By improving underlying business processes, organizations can uncover almost endless opportunities to boost efficiency and cut costs. For example, they can make better use of cash discounts, reduce bad debt through real-time data driven credit limits, or surface orders that haven't yet been invoiced.

Merck saves $7 million

Merck, a leading science and technology company in the pharmaceutical industry, used process optimization to save $7 million from working capital improvements, automation and risk reduction.

"Value is not always about efficiency. We need to automate and we need to scale. There's a value with that. We have to meet our strategic KPIs and combine them with our company goals of working capital management and customer satisfaction."

— Verena Schwobe, Director, Global Solution Owner Process Mining at Merck

Read Merck's story

Priority 2:

Reducing manual rework

While the life sciences industry is gradually embracing automation, there's still a lot of resource-heavy manual rework which can cause bottlenecks. This might include manual verification of blocked orders, or transferring data from one system to another.

Improving business processes can resolve root causes of manual rework, such as outdated master data that leads to unnecessary credit or delivery blocks.

DSM cuts cycle times

DSM is dedicated to advancing health, bioscience and nutrition. It transformed its Order-to-Cash (O2C) process after realizing the team spent too much time on manual interventions.

After just three months, DSM decreased both delivery blocks and manual changes to sales orders by 10%. It also reduced cycle times for blocked orders by several days, resulting in decreased O2C lead times and multi-million-dollar savings.

Read DSM's story

Priority 3:

Optimizing working capital

Freeing up working capital is vital for ongoing investment in research and development. But improving cash flow is tough.

Life sciences organizations face similar challenges to everyone else – including increasing complexity, and siloed teams and technologies. But data and processes in life sciences are often more sensitive than in other industries, and the margin for error is smaller.

Improving business processes is the low-risk, high-impact route to working capital improvement. By optimizing Days Sales Outstanding (DSO) and Days Payable Outstanding (DPO) businesses can improve the overall cash conversion cycle and generate rapid cash impact.

Take a look at our ebook, **Taking the work out of working capital**, to find out more.

Download the ebook

Priority 4:

Speeding up trials and product launches

The drug approvals process has always been complex. It includes clinical trials as well as safety and efficacy assessments that are overseen by regulatory bodies and must meet stringent standards.

Traditional timelines for trials and development were slashed during the COVID-19 pandemic, which permanently shifted expectations about how quickly products could be brought to market.

Streamlining the processes behind drug trials and launches can help life sciences companies meet these new expectations. It can help them get their products approved and launched ahead of their competitors, while still meeting regulatory requirements.

Priority 5:

Boosting labor productivity

Pharma and life sciences were hit hard by the “Great Resignation”.

Even though that now appears to be over, attracting and retaining talent remains a challenge. As a result, organizations need to increase labor productivity without overburdening employees.

We’ve already touched on how process improvement can reduce manual rework, but it can make the workforce more productive in a variety of other ways too. By identifying automation opportunities – like touchless invoices or purchase orders – it can free employees from repetitive tasks that are sucking up their time and allow them to focus on tasks that drive value.

Strategies for process improvement

Achieving strategic goals such as cost cutting, reducing manual rework, and optimizing working capital will require improvement in data and process management. And many of the pharma and life sciences leaders that took part in our survey are already aware that they need to invest in this area.

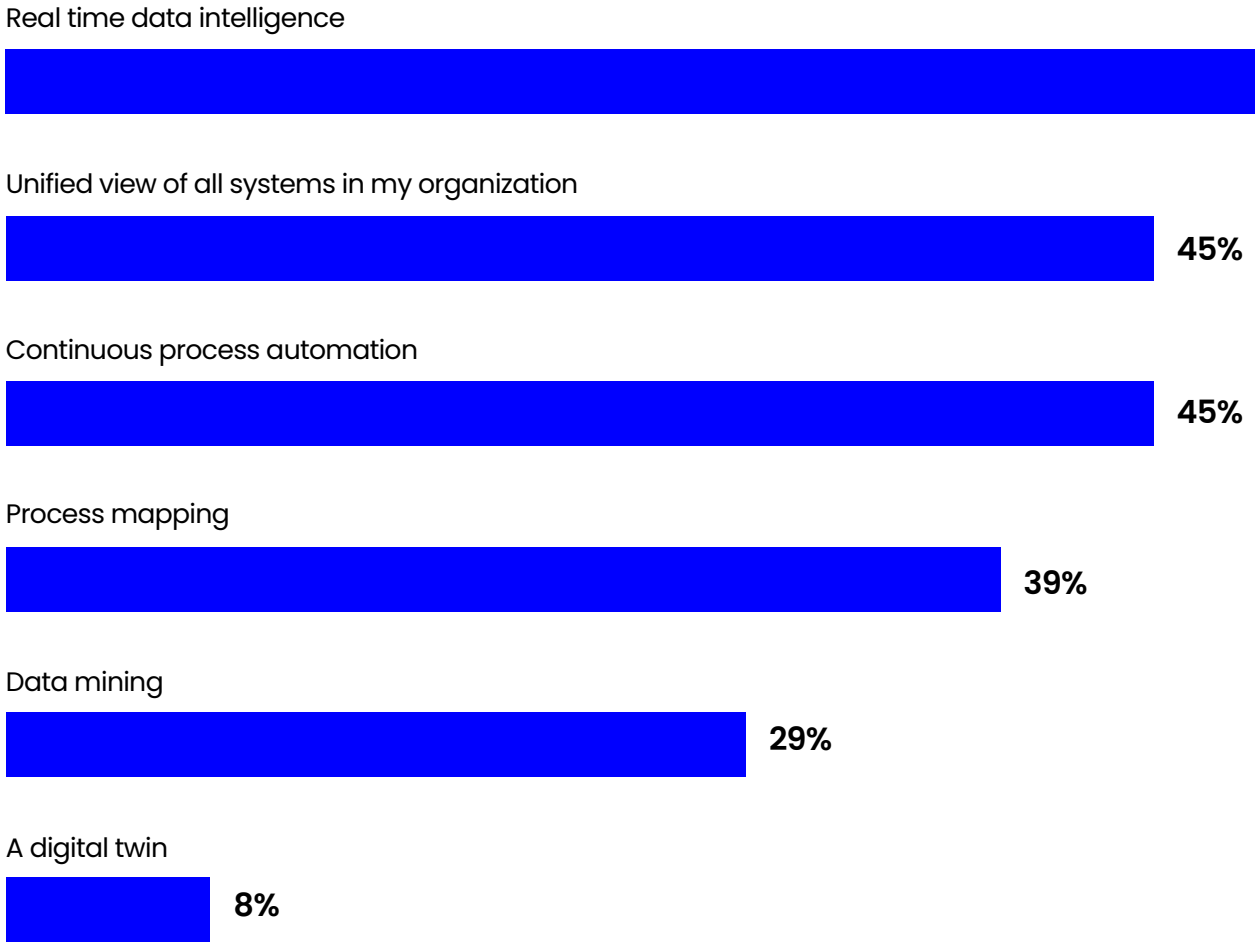
Only a third (33%) believe their existing data and process management tools support their strategic goals.

So, what tools and techniques are they looking at for process improvement? We asked what additional technology capabilities they think they need in order to optimize business processes moving forward:

33%

Only a third believe their existing data and process management tools support their strategic goals

Perceived requirements for process optimization



Techniques to increase process visibility

Reassuringly, many pharma and life sciences leaders already appreciate the need for increased visibility.

When asked what they need to optimize business processes, almost half (49%) say they require **real-time data intelligence.** This will help them understand what's actually happening in the business, rather than relying on assumptions, hearsay or gut feel.

In addition, 45% say they need a **unified view of all systems** in the organization. With the industry still depending heavily on siloed legacy technology, the ability to extract and centralize data from all systems to gain a single view will be game changing.

Increasing visibility into business processes is the first step in making improvements that will help organizations become more adaptable for the next normal.

49% say they require real-time data intelligence

45% say they need a unified view of all systems in the organization

Tools for process automation

Process automation will also help life sciences organizations become more adaptable. So it's positive that 45% of our survey respondents recognize the need to adopt **continuous process automation**.

However, jumping in with an advanced technology like workflow AI or automation can be high-risk if organizations haven't first addressed their underlying processes. Getting business processes aligned and in sync before applying automation technologies is critical to transforming operations safely and effectively.

45% say they need continuous process automation

"Organizations in the life sciences industry often struggle to realize the desired results from their digital investments. All too often, they implement digital solutions such as AI, analytics, and automation without thoroughly understanding their business processes and, thus, fail to meet their digital transformation goals or achieve any tangible Return on Investment (RoI). Additionally, this lack of process understanding can exacerbate inefficiencies across the life sciences value chain."

Everest Group RESEARCH

—The Everest Group

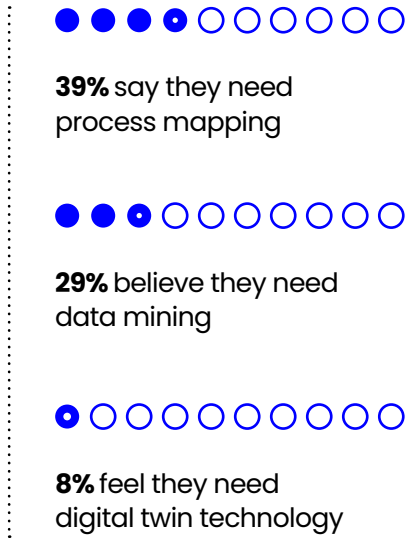
Technologies for process optimization

As we've seen, a significant proportion of life sciences leaders identify real-time data intelligence, a unified view of all systems, and continuous process automation as necessary to improve business processes. However, it seems fewer currently recognize the role specific process-optimization technologies like data mining and digital twins play in enabling these capabilities.

Almost four in ten (39%) say they need process mapping – a very basic method of process discovery that is quickly being replaced by more reliable and scalable techniques like process mining. But only 29% believe they need data mining, and just 8% feel they need digital twin technology.

These figures suggest a greater understanding of these process optimization technologies may be required across the pharma and life sciences industry to increase awareness of their benefits, drive adoption, and enable organizations to drive real value from business processes.

Here are simple definitions of a few key process-optimization terms:



39% say they need process mapping

29% believe they need data mining

8% feel they need digital twin technology

Technology	Definition
Process mapping	Process mapping is a visual representation of how work happens – or at least how people perceive it happens. It often takes the form of a process flowchart or value stream map. It is a helpful first step for bringing visibility to existing workflows, and can help guide basic decision making for core processes.
Data mining	Data mining is the process of analyzing large volumes of raw data to discern trends and patterns that can help solve business problems. The data may be fed into predictive models to identify future trends and enable more informed business decisions.
Process mining	Process mining is used to model, analyze and optimize business processes. It works by extracting data from event logs in information systems, enabling every process variation to be visualized in real time. Process mining provides businesses with a living, breathing picture of how their end-to-end processes actually run.
Digital twin	A digital twin is a digital representation of a real-world (often industrial) entity or system. In life sciences, digital twins are often used to simulate biological processes within the human body. Digital twins of entire organizations can also be created, with enterprise maps including everything from business processes and customer journeys to enterprise architecture and organizational structure.
Process Intelligence	Process Intelligence combines the data from process mining with standardized process knowledge, AI and advanced modeling, to deliver an end-to-end understanding of how a business flows. It allows digital process twins to be created for entire organizations, replicating how processes work and relate to each other across every department and system, while revealing improvement opportunities.

Process mining in life sciences

Life sciences organizations are already using process mining to get a better understanding of how their processes currently run, where there are value opportunities, and what actions they should take to capture them. Connecting their process data across various source systems (from ERP to CRM) gives them a common language for how their businesses run across teams and departments, enabling them to see where value is hiding and how to realize it.

Adoption of process mining is growing steadily in the life sciences industry, according to an **Everest Group report.**

> **"As awareness increases and best practices are established, it is expected that more enterprises will incorporate process mining into their operations to stay competitive and achieve scalable transformation."**
>
> **—The Everest Group**

Process mining in the life science value chain

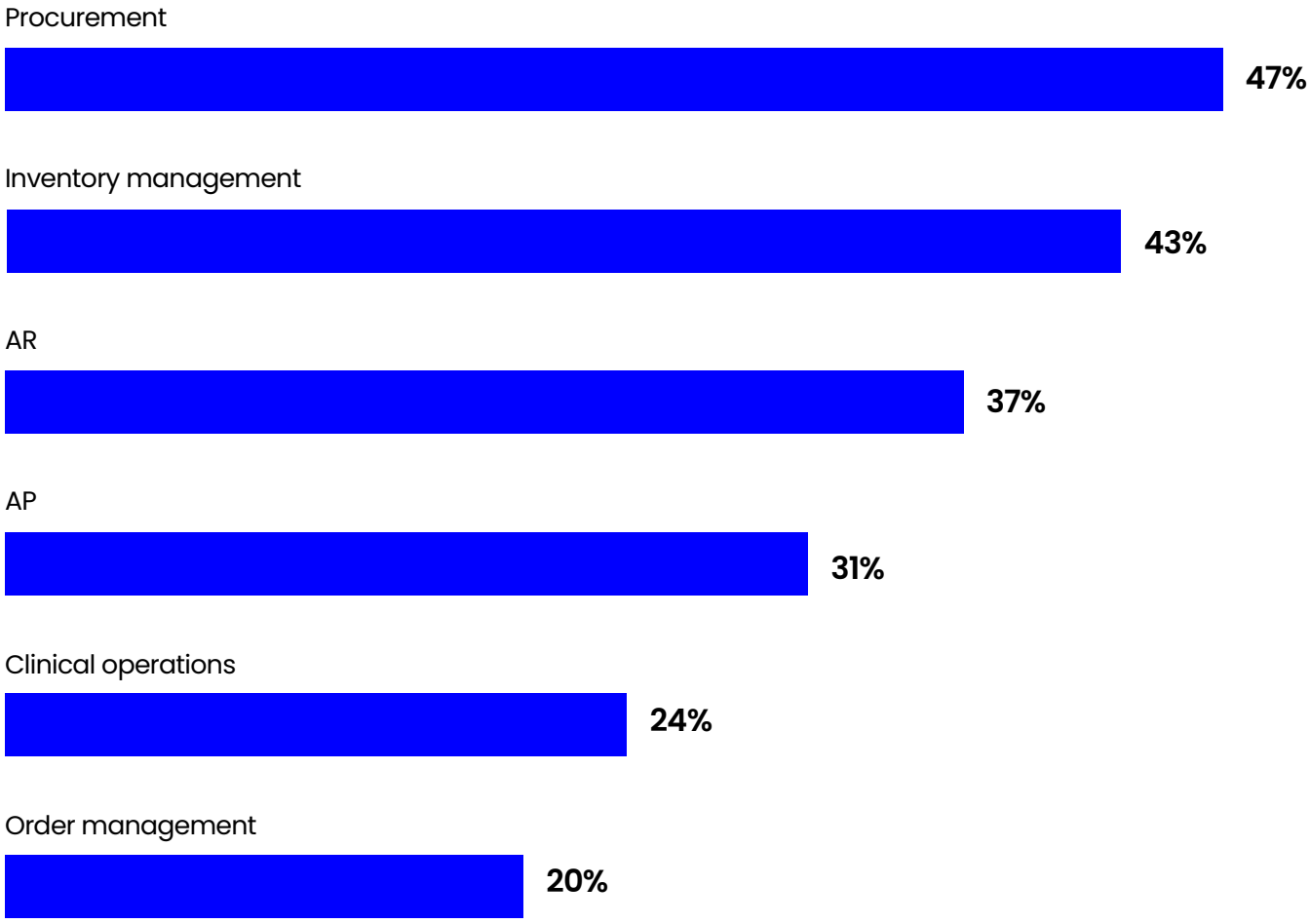
Area of use	High-adoption examples	Medium-adoption examples
Drug discovery, research, and preclinical trials	Lead optimization Safety assessment	Data management
Clinical trials	Patient recruitment Patient scheduling Protocol design Protocol development	Clinical data management Site management Trial monitoring
Manufacturing, supply chain, and distribution	Resource planning Demand planning Supply planning Distribution support Logistics support	Procurement management Vendor management
Marketing and sales	Sales support Salesforce effectiveness	Patient access Support programs Marketing support Marketing effectiveness
Pharmacovigilance	ADR intake capture ADR complaint capture Case processing Complaint processing Reporting	Signal management Risk management Regulatory affairs Medical affairs

Where to start with process optimization

It's easy to talk about overhauling processes to enable life sciences organizations to adapt to the next normal. But with so many complex and interconnecting processes running at every stage of the life sciences value chain, which process should they start with?

We asked the life sciences leaders that responded to our survey which processes they think currently take more time and resources than they should.

Resource-heavy processes in life sciences organizations



Most life sciences organizations will start their process-optimization journey with process mining, which is perfect for developing an objective baseline for how all these processes operate today, and for identifying value opportunities within them.

But Process Intelligence – which goes a few steps further than process mining by combining process data with process knowledge, AI and **advanced modeling** – is the real force multiplier that will help them envision their ideal future state, and orchestrate continuous actions to realize it.

Read on to discover how Process Intelligence can be applied to the core processes identified in the survey.

Improving Procurement

The quality of any organization's Procurement processes impacts its exposure to costs.

Optimizing Procurement processes can help manage spend under management (SUM) more effectively. It can, for example, improve supplier performance, or increase contract usage to ensure purchase requisitions always use the negotiated contract terms.

Learn about improving Procurement processes

Streamlining Inventory Management

The life sciences sector has complex supply chains that involve multiple processes and stakeholders. Some companies are still facing inventory bloat following the COVID-19 pandemic, while others are dealing with acute shortages.

Process Intelligence helps pharma and life sciences organizations regain control of their supply chains. It can help accelerate slow moving inventory, reduce excess inventory, and identify potential material shortages.

Learn about streamlining Inventory Management

Optimizing Accounts Receivable (AR)

Accelerating collections in accounts receivable (AR) helps organizations optimize DSO and improve free cash flow.

With Process Intelligence, AR teams can increase touchless invoicing, automate dunning notices, and prioritize customers by their likelihood to pay. They can also use it to identify unbilled orders to accelerate invoicing, and prevent underpayments by revealing where customers are taking cash discounts too late.

Sysmex recovers $3.4 million

Sysmex is a global leader in hematology diagnostics and testing. It wanted to optimize working capital by improving cash collection. With Process Intelligence, Sysmex recovered $3.4 million in overdue service contracts in just 30 days. Since then, cash flow has improved by $10 million and the late payments rate has reduced from 61% to 44%.

Read Sysmex's story

Refining Accounts Payable (AP)

Using Process Intelligence in Accounts Payable (AP) helps pharma and life sciences organizations optimize DPO, which once again improves free cash flow.

It can ensure payments are made at the right time to take advantage of cash discounts and avoid late payment penalties, without being paid unnecessarily early.

Vetter realizes cash discounts

Vetter is a service provider for the global pharmaceutical and biotech industry. It has its own Process Excellence department to identify and eliminate waste in the company's core processes. AP is just one area where it has achieved impressive outcomes, increasing cash discount realization from 80% to 99%.

Read Vetter's story

Accelerating clinical operations

There are complex clinical operations processes involved in designing, planning and physically running clinical trials. These processes require accuracy and speed so a drug can get to market as soon as possible, making them the perfect candidates for optimization.

Patient recruitment is one example where Process Intelligence can be used to monitor and improve key metrics, such as enrollment rate, protocol adherence, and patient retention rate, to minimize trial duration.

Discover more about process innovation in clinical trials

Upgrading order management

By gaining full visibility of orders and intelligently prioritizing and handling them, Process Intelligence helps to reduce cycle times and improve customer satisfaction. It can resolve blocked orders more quickly, increase touchless orders, prevent rejections and returns, and improve on-time delivery.

Johnson & Johnson improves on-time delivery

Johnson & Johnson has a process center of excellence (CoE), with global templates that can be used across different teams, regions and sectors. The LATAM team used a slightly customized template to improve order management, resulting in a 30% reduction in touch time, a 40% reduction in price changes, and a 12% increase in on-time delivery.

Johnson & Johnson

[Read Johnson & Johnson's story]

Uncovering high-value opportunities

While just about any business process can be optimized, Process Intelligence will help pharma and life sciences organizations identify the opportunities with the greatest value potential. It will also reveal the low-hanging fruit – the opportunities to quickly and (relatively) easily realize value from process improvement.

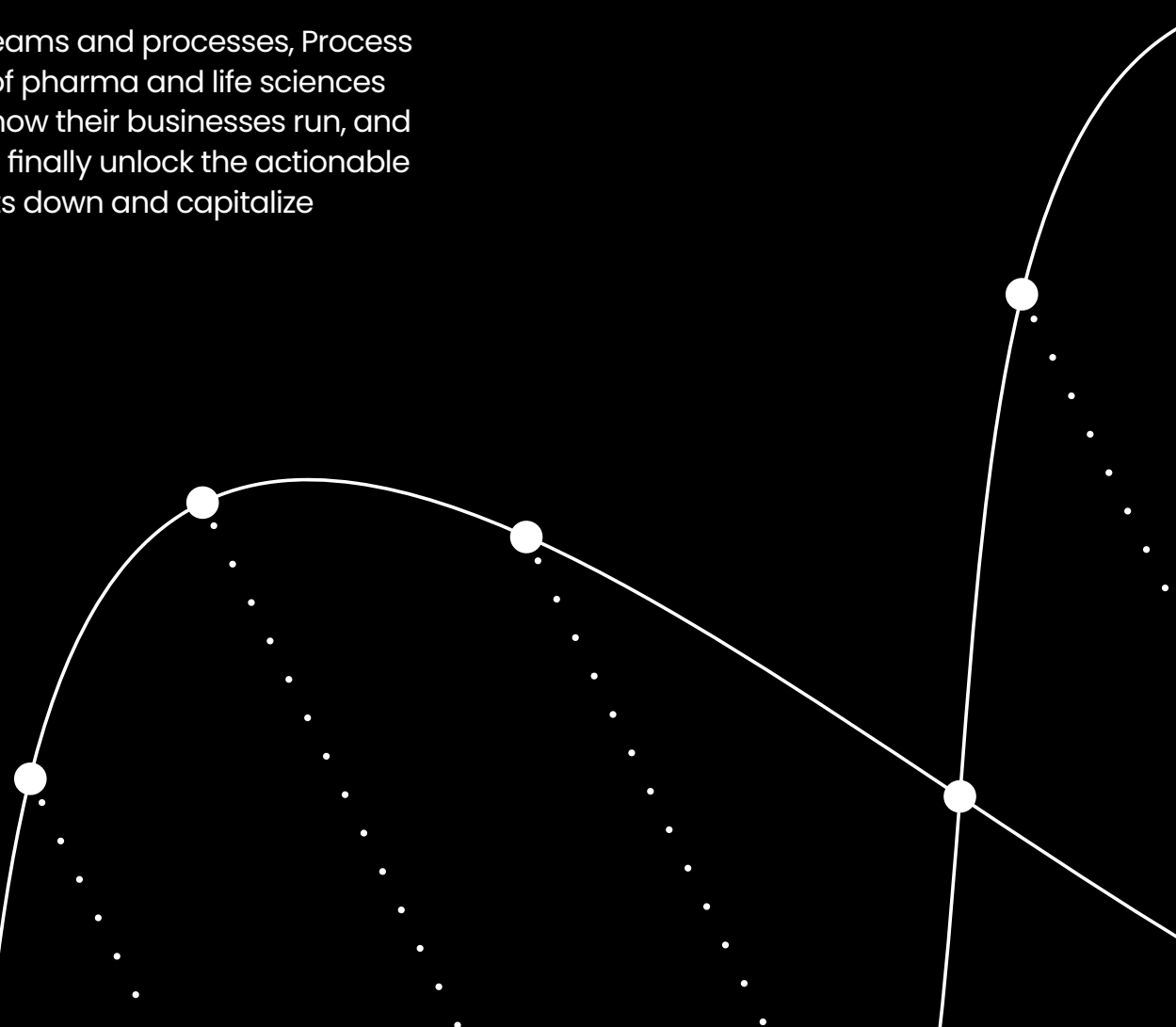
The most effective approach is often to start with a single process, within a single department, and then grow from there, moving onto more complex interconnecting processes that span multiple functions.

Specialty chemical manufacturer Hexion is a prime example. Its process mining journey started in Order-to-Cash, one of its most complex processes. Now, the company uses Process Intelligence to maximize execution across Order-to-Cash, Procure-to-Pay, AP, AR and production planning.

> **"With Celonis, we can reduce disruption and changes across our entire process landscape and achieve leaner supply chain operations. And that impacts key KPIs like productivity, margins, and ultimately customer satisfaction."**
>
> HEXION™
>
> — Javier Invernizzi, VP of Global Supply Chain, **Hexion**

By connecting previously siloed departments, teams and processes, Process Intelligence is becoming the connective tissue of pharma and life sciences organizations. With a shared understanding of how their businesses run, and a clear vision of their ideal future state, they can finally unlock the actionable insights needed to boost productivity, keep costs down and capitalize on the next normal.

Let's talk

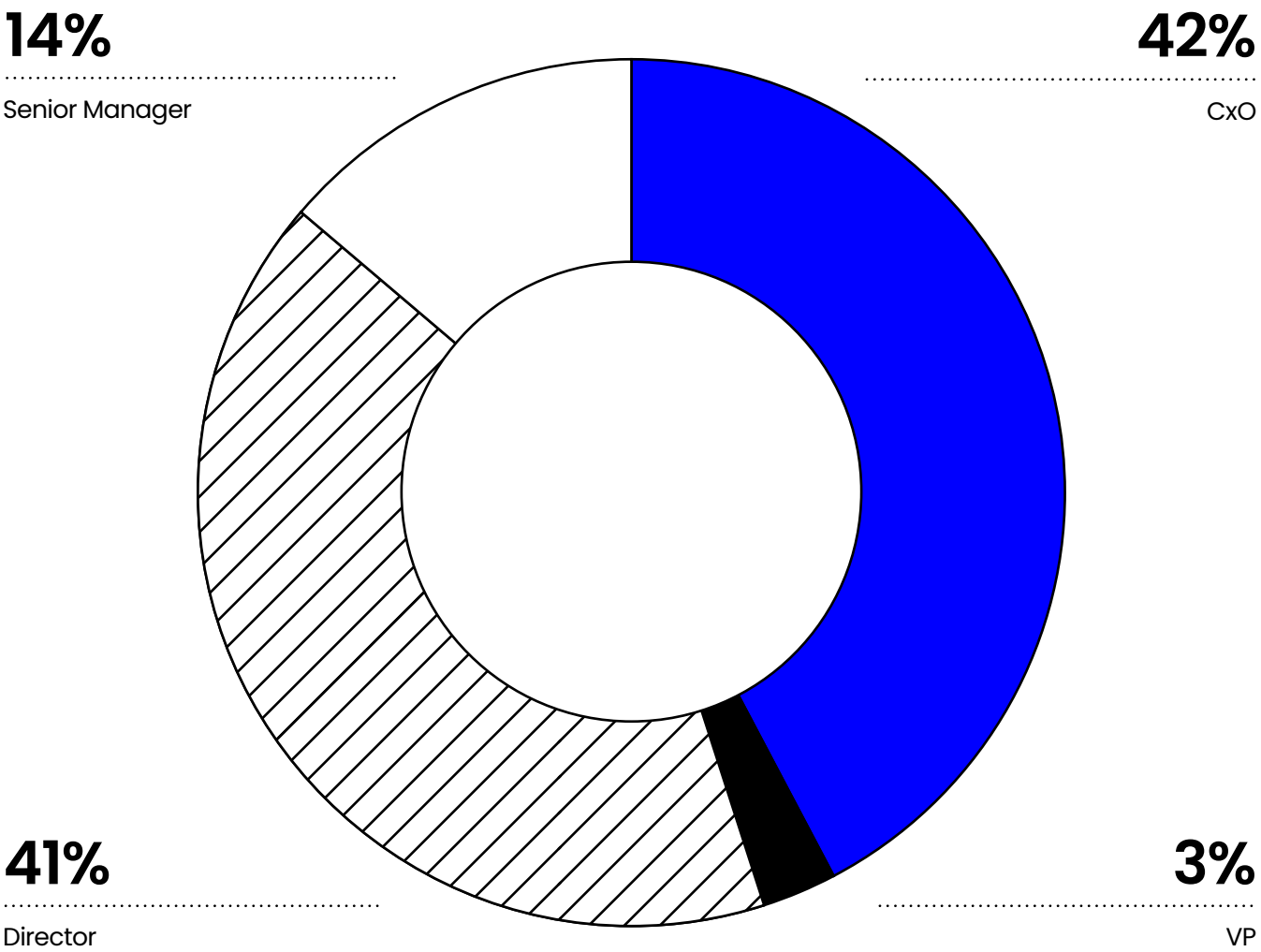


Survey methodology

Between October and December 2023, Gatepoint Research invited selected executives to participate in a survey themed Business Process Optimization Strategies in Life Sciences, on behalf of Celonis.

Candidates from the life sciences industry were invited via email and 49 executives have participated to date. All are senior decision-makers:

Respondents' job level



About Celonis

Since 2011, Celonis has helped thousands of the world's largest and most esteemed companies yield immediate cash impact, radically improve customer experience, and reduce carbon emissions.

Its Process Intelligence platform uses industry-leading process mining technology and AI to present companies with a living digital twin of their end-to-end processes. For the first time, everyone in an organization has a common language for how the business runs, visibility into where value is hiding, and the ability to capture it. Celonis is headquartered in Munich, Germany and New York City, USA with more than 20 offices worldwide.

Find out more at celonis.com

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