

FREE GUIDE

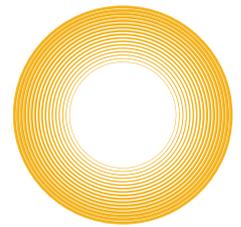
PROCESS MINING TRENDS IN 2020



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A decision maker's guide to Process Mining in 2020.

Where we are now and where we're going next
as an industry, technology, and community.



minit

FREE GUIDE
PROCESS MINING TRENDS IN 2020

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Introduction

If Process Mining were a caterpillar, we'd not yet be a butterfly, but we'd be well beyond the infantile stage of larva.

Will 2020 be the year of the Process Mining butterfly?

Not quite yet ... but you could say we're busy at work in our chrysalis-perfecting techniques, moving beyond Robotic Process Automation (**RPA**), and maturing into a Business Process Management (**BPM**) tool poised at taking a big chunk from the Digital Transformation pie!

Process Mining as a concept is simple: let process data (**event logs**) show exactly how a process works in order to make that process work better. In practice, Process Mining takes a lot of teamwork, attention to data security and data extraction, and the right technology partners.

Process Mining helps companies achieve the two most common business goals which transcend industry, location, business model, or company size:

1
Make better, faster
business decisions

2
Operate to the fullest
potential

Realization of these universal business goals means rock solid processes and data-driven decisions.

This guide starts by looking at the Current State of Process Mining in 2019, and moves onto what we can expect from Process Mining technology in 2020.



Current State of Process Mining

#1 Top Industries Using Process Mining ↘ #2 Top Processes Where Process Mining Is Applied ↘ #3 Core Process Mining Use Cases ↘ #4 Current Level of Investment ↘

#1

Top Industries Using Process Mining

Retailers, Telcos, and Finance companies have reaped the most benefits from Process Mining in 2019. Early adopters like Stora Enso, BDO, or FiberCorp were quick to innovate and have already saved millions thanks to learnings mined from process data.

While we believe Process Mining is for every business, in every industry, these three fields have made the most strides to date.



RETAIL



TELCO



FINANCE

Retail

Retailers use Process Mining to further optimize areas of expertise (**fast Order to Cash or seamless Customer Experience**) or to strengthen areas of weakness (**on-time delivery**). Effective inventory management, purchasing strategy, and swift delivery of product innovation are all process-oriented.

THINK FASHION COMES BEFORE PROCESSES IN RETAIL?

See [what happened to ASOS](#) when processes at a warehouse fell apart leading to a nearly 70% plunge in profits.

Telecommunications

Telcos are in a constant mode of change. Their industry requires rapid innovation and fast response to consumer demands and technology trends. [They grabbed Process Mining as a solution in an instant](#). Client acquisition, sales and billing management, and service procurement are the top processes most commonly optimized with Process Mining.

Finance

Finance, particularly banking and insurance, are highly regulated businesses, always in need of strong compliance management. [Process Mining helps identify upsell and cross-sell opportunities](#), while also uncovering risks and optimizing fraud management. Among the typical processes analyzed, you can find loan approval, risk and investment management, and selling and consultancy.

#2

Top Processes Where Process Mining Is Applied

Order to Cash (**OTC**) and Procure to Pay (**P2P**) still dominate in terms of the most commonly scrutinized processes under the lens of Process Mining. The efficiency by which a company converts orders into cash, and their ability to smartly procure inputs needed to deliver their own product or service is highly representative of their ability to hold a long term competitive edge.

Order to Cash ↘

Procure to Pay ↘

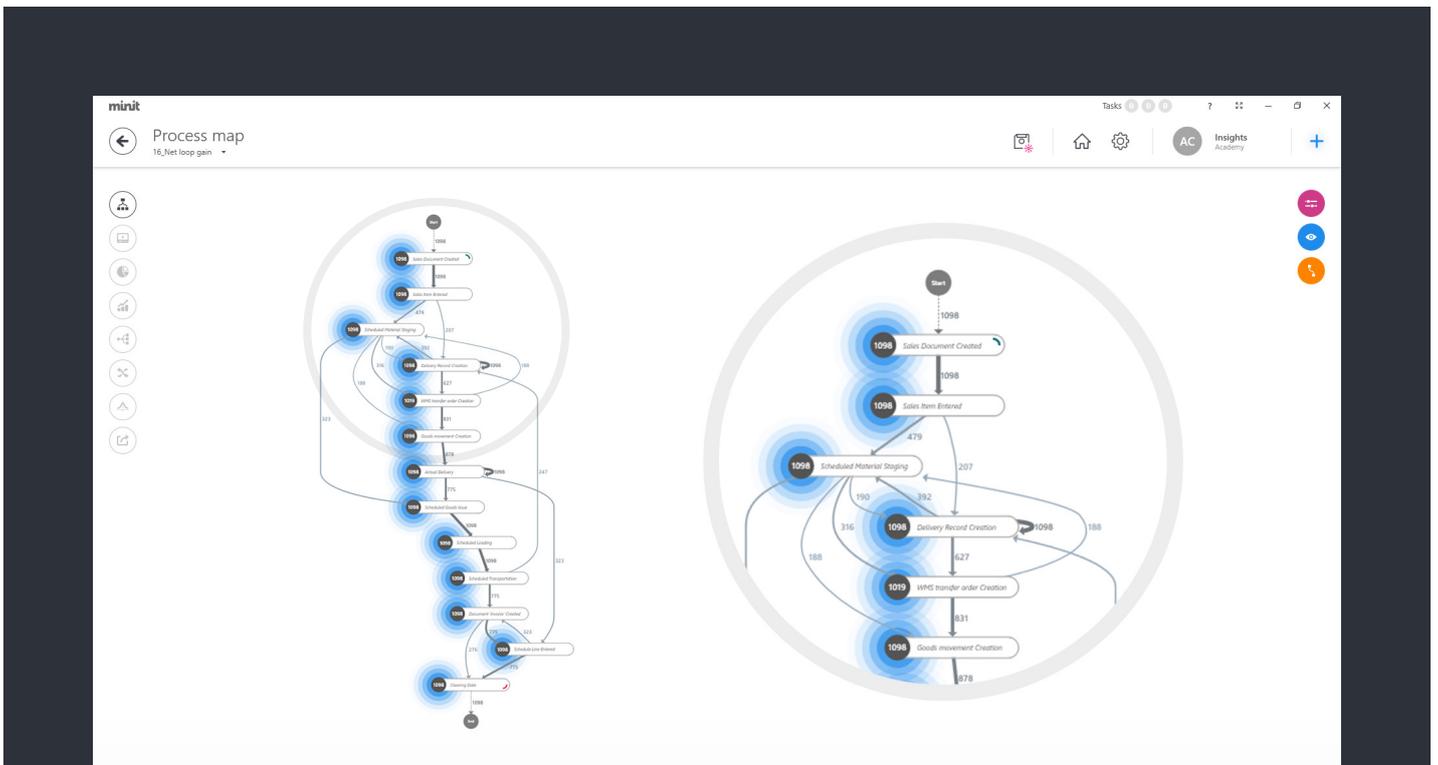
Core Process Mining Use Cases ↘

Order to Cash (OTC)

Converting orders into cash is mission critical. This is often one of the first and most important processes for Process Mining to optimize. From hidden revenue streams to costly rework, Process Mining transforms the OTC process from a risk to a competitive advantage.

An inefficient OTC process can lead a company towards revenue and customer loss, or reputation damage. Even an OTC process which is well documented, follows regulations, and adheres to company standards has room for process improvement. If bots are employed at any stage of OTC, continuous monitoring of processes is a must.

If bots are employed at any stage of OTC, continuous monitoring of processes is also necessary.



Order to Cash process map in Minit Process Mining software

OTC: KEY AREAS OF OPTIMIZATION

- > Eliminate rework by identifying duplicate efforts and optimize workload distribution
- > Reduce return orders due to poor communication or wrong product shipment
- > Improve delivery performance with on-time orders
- > Reduce order changes by identifying the root cause of such instances
- > Visualize how process execution differs from expectations (**conformance checking**)
- > Use scarce resources more effectively to save costs
- > Standardize process to avoid deviations, identify stages ready for RPA

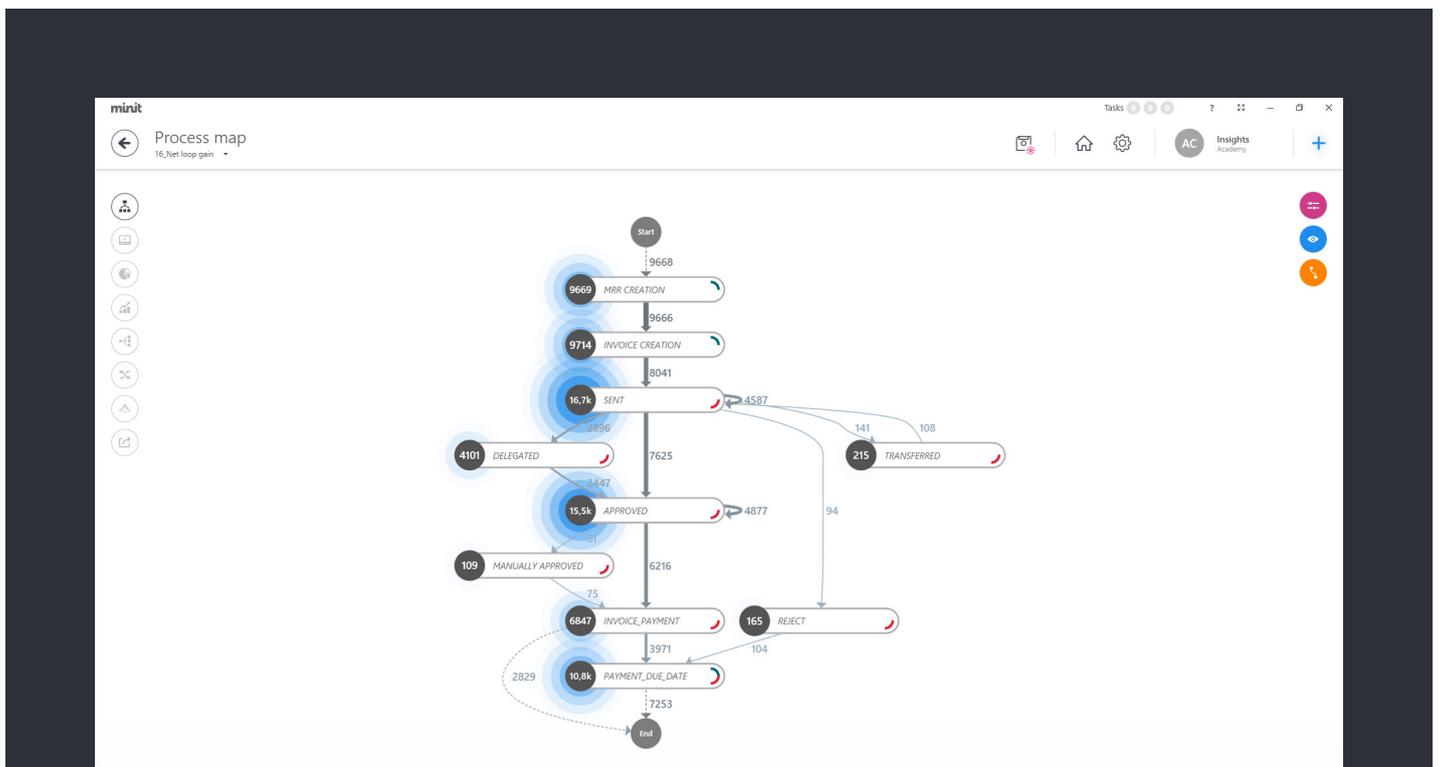
Success Story [Chemical Manufacturer Saves \\$1.2M by Optimizing OTC with Minit.](#)
Learn [how your order to cash can be improved.](#)

Procure to Pay (P2P)

No company stands alone in bringing a product or service to market. From the computers your team works on, to the sugar used as input to a beverage, all businesses rely on other businesses to operate.

Acquiring such inputs needed for successful business operations is called Procure to Pay (**or Purchase to Pay**) and it's one of the most common processes scrutinized by Process Mining.

Stop leakage, protect profits, and break through performance barriers with an airtight P2P process. Company-wide visibility of the procurement process is an ongoing challenge. Process Mining helps visualize a fragmented system and supports buyers in achieving a single, transparent view of global operations.



Procure to Pay process map in Minit Process Mining software

P2P: KEY AREAS OF OPTIMIZATION

- > Streamline, highlight, and enable your company's global best practices across departments, branches, and countries
- > Reverse losses stemming from complexity, inefficiencies, payment errors, and fraud
- > Reduce maverick spending by implementing controls across the enterprise on the number of ways purchases can be transacted
- > Manage supplier risk, minimize errors, and improve business relations
- > Align category spend with the optimal channel, eliminate supplier non-compliance to contract, and avoid late payment penalties
- > Simplify and optimize current processes before implementing automation, and monitor the performance of new processes and technology

Success Story [Telco Giant Saves \\$5M on Purchase to Pay with Minit Process Mining.](#)

#3

Core Process Mining Use Cases

While 2020 is predicted to bring [unconventional Process Mining use cases](#), three core applications of Process Mining software will still be applied most often:

- Process Discovery** ↘
- Conformance Checking** ↘
- Performance Optimization** ↘

Each Process Mining use case casts a broad net over business needs. This means most of the new applications will still fit within these general categories being used today.

Process Discovery

When processes are unknown or have deviated from process design, process discovery remaps the as-is process. This use case is applied across all industries and all process types. No prior knowledge of the process is needed as Process Mining software reconstructs the process map from process traces stored in information system event logs.

Conformance Checking

Compare process expectations to process reality. Conformance or compliance checking is critical for those bound by internal or external audits. Process Mining software tests key controls such as segregation of duties and analyzes how closely a process runs in accordance to the law or company regulations.

Performance Optimization

Process Mining is one of the fastest, easiest, and most cost-effective methods for process improvement. By gaining a baseline understanding of how day-to-day processes function, managers can make data-based decisions for process improvement.

#4

Current Level of Investment

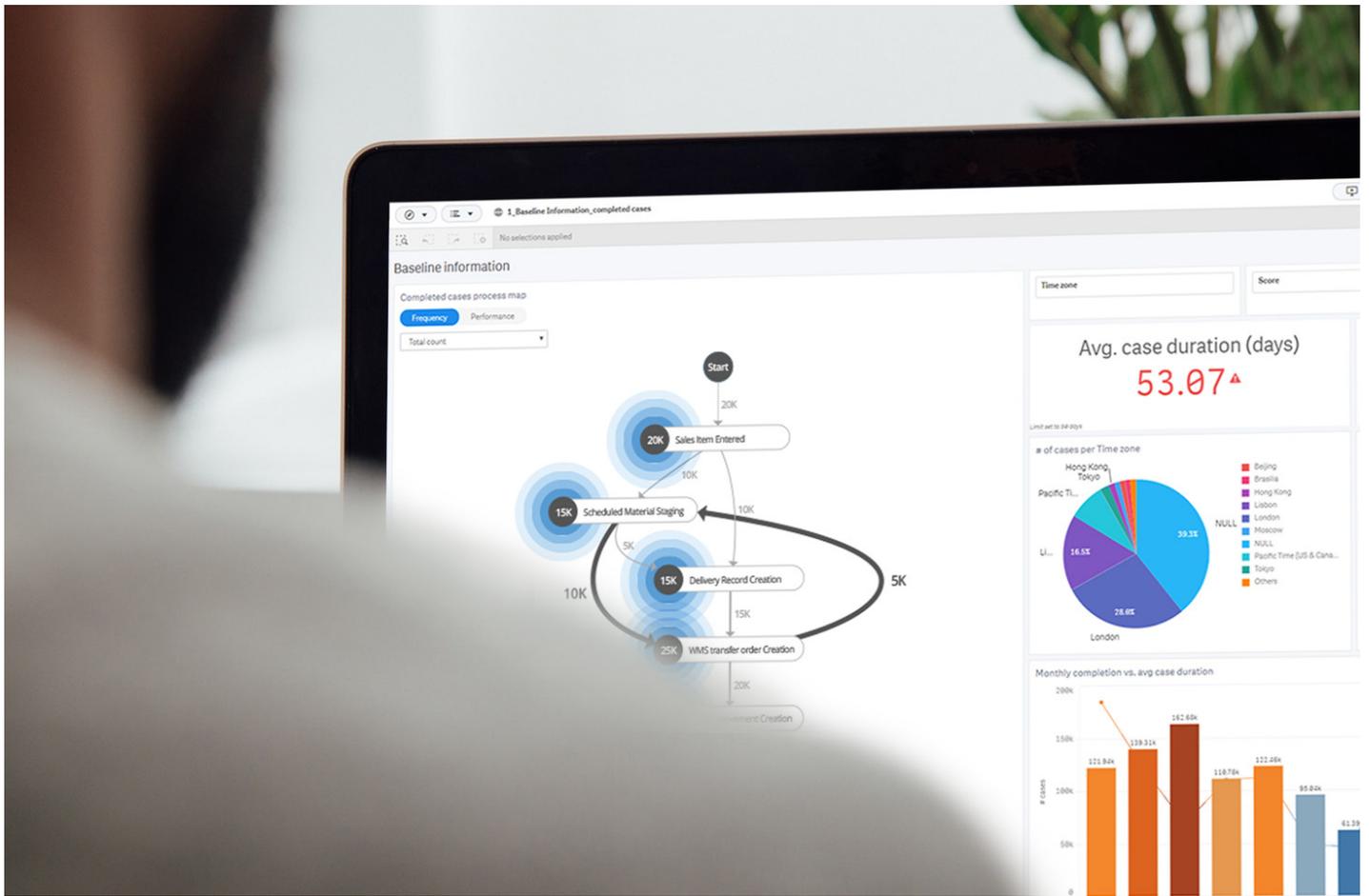
The story of the commercial use of [Process Mining](#) is only beginning to be written.

According to [MarketWatch](#), “the global process analytics market size is expected to grow from \$185.3 million in 2018 to \$1.42 billion by 2023, at a Compound Annual Growth Rate (**CAGR**) of 50.3% during the forecast period.”

\$185.3M → \$1.42b

Couple this data with the predicted growth for the Digital Transformation market at large — [\\$2.2 trillion by 2023](#) — and Process Mining is set to skyrocket.

Introduced as a concept only in the 1990s, Process Mining is relatively new compared to other BPM technologies and methods. The fast adoption of Process Mining suggests a high ROI for companies who were quick to utilize this technology.



2020 Process Mining Trends to Watch

- #1 Digital Transformation Spending Shift to Process Mining ↘
- #2 Non-Traditional Industry Usage ↘ #3 Unconventional Use Cases ↘
- #4 Short Term Gains to Long Term Strategy ↘

#1

Digital Transformation Spending Shift to Process Mining

To find the trends, follow the money.

Worldwide, companies poured over \$1 trillion into digital transformation (DX) efforts in 2019 (IDC). That spend is predicted to double to \$2.3 trillion by 2023, and DX budgets — for the first time ever — will account for the majority (53%) of all Information and Communication Technology (ITC) spending (IDC).

| Industry | Top Use Cases |
|---------------------------|--|
| Discrete Manufacturing | Autonomic Operations |
| and Process Manufacturing | Robotic Manufacturing |
| | Root Cause Analysis |
| Retail | Omni-Channel Commerce Platforms |
| | Omni-Channel Order Orchestration |
| | Omni-Channel Order Fulfillment |
| Professional Services | Intelligent Building Energy Management |
| Transportation | Freight Management |

Nowhere does the forecast mention Process Mining specifically. You must read between the lines, because each industry is heavily process-oriented.

Whether an automotive manufacturer wishes to produce a car with more automation, a food manufacturer aims to integrate organic products with precision, or a retailer to deliver a seamless customer experience, operational excellence is the fundamental piece.

Process Mining is one such tool which begets and promotes operational excellence. As DX spending increases, so too will Process Mining spending.



USA



WESTERN EUROPE



CHINA

Furthermore, the IDC study predicts that in all three top regions (**USA, Western Europe, China, respectively**) the biggest “DX spending priorities will be smart manufacturing and digital supply chain optimization,” both of which heavily depend on big data and processes.

#2

Non-Traditional Industry Usage

According to the father of Process Mining Wil van der Aalst, "any organization can use Process Mining, and the prerequisites are minimal" ([SearchCIO](#)).

The minimum requirements for Process Mining relate to viewing data from a process perspective, and most IT systems contain the following information by design: Case ID, Activity Name, and Time Stamp. This basic nature of process data means any organization which has digitized data can benefit from Process Mining.

| Emerging Industry | Case ID | Activity | Timestamp |
|-------------------|------------------------|-----------------|-------------|
| Healthcare | Patient going through | Administer | 4/23/2020 |
| | diagnosis or treatment | medicine | at 1:03 AM |
| Manufacturing | Handling of one | Received goods | 7/21/2020 |
| | purchase order | at warehouse | at 11:15 AM |
| Logistics | A specific service | Request invoice | 8/20/2020 |
| | request number | from supplier | at 12:26 PM |

Healthcare

Digitizing data was no easy feat for the healthcare industry, but progress has been made. Now the industry will be looking at how to best utilize this data to better map the patient journey, improve their experience, and optimize the way hospitals function.

Manufacturing

A key goal of most manufacturers is to reduce overhead costs. Process Mining can track down and eliminate gaps or redundancies in the production environment, by streamlining procurement procedure, and by helping determine the optimal mix of make-to-stock versus build-to-order for your production facility.

Logistics

Optimizing throughput times and improving on-time delivery are clear goals in the logistics industry. The Process Mining analysis will include processes from ordering, purchasing, to storage shipments, import/export and customs up to internal process stream of materials.

#3

Unconventional Use Cases

Along with more industries exploring the benefits of Process Mining, 2020 will see new innovative ways to apply the technology.

Everything that consists of steps leading from one point to the next, is in fact a process. Even though we might not call it exactly that, at first.

Analyzing data from a process perspective has the potential to answer all sorts of new questions:

Why are trains late? ([mine railway traffic control logs](#))

How do first-person shooter games impact the brain? ([mine logged gaming behavior](#))

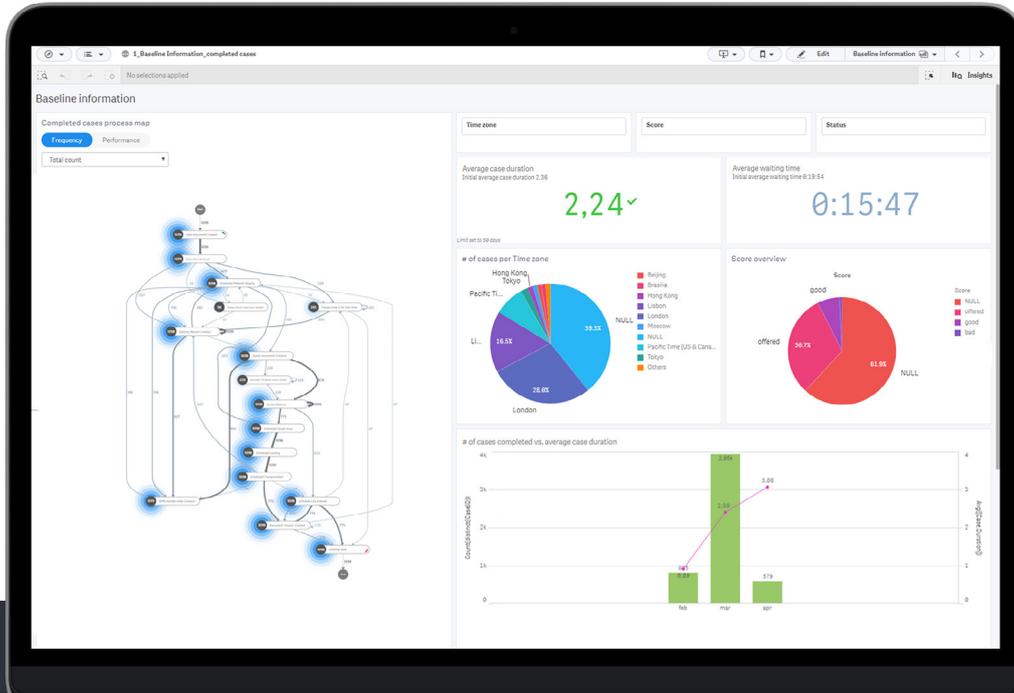
Why are Reefer containers arriving with spoiled goods? (**mine Track and Trace milestones**)

In the example above, a logistics Controls Manager could not solve the riddle of spoiled goods. With no technical malfunction found in their refrigerated containers, they were baffled as to why shipments arrived with spoiled goods due to lack of refrigeration along the journey.

By mining event logs procured from Track and Trace systems, they discovered truck drivers were turning off the engine during breaks to reduce fuel consumption,

which in turn, temporarily disrupted the temperature of goods due to lack of climate control.

While the majority of Process Mining use cases in 2020 will remain connected to the OTC and P2P cycles, look out for innovative and sophisticated applications.



Minit Analyst & Minit Dashboards by Minit Process Mining software

#4

Short Gains to Long Term Strategy

Process Mining is in it for the long run.

Companies fearful of diving into the deep end of Process Mining may wade in the waters of [Process Mining simulation](#). Process simulation helps managers see the results of changes applied to a process before going live in production.

Some will stay in these simulation waters, but others will forge ahead to make Process Mining part of an ongoing operational excellence strategy. Process Mining at its best is continuous monitoring of everyday operations which will immediately identify new patterns or activities which stray from the happy path.

2020 will see managers gaining confidence to move beyond process discovery, into process change and RPA implementation. This makes the need for continuous monitoring even more significant, because bots deployed via RPA initiatives require continuous monitoring.

It's 5 steps forward, 1 step back in terms of automation. Just because a process stage becomes automated (**5 steps forward**) doesn't mean it can be left completely unattended (**1 step back**).

As part of this long term strategy, businesses will prioritize meaningful solutions over sheer number of bots. It's not just a numbers game. Process Mining will shake its hype as a shiny new piece of tech and prove itself as a real business solution.

#5

Process Mining on Larger Scale

Here is where we see a split in 2020 — scale of implementation, from simulation to all in.

But top Process Mining thinkers are calling for Process Mining to be approached “on a larger scale and not as a small toy project. [**It must**] be done continuously and for many processes rather than as a pilot project doing one analysis on one process at a given time” ([SearchCIO](#)).

Process Mining simulations can be used as the first stage of a large scale implementation. However, this indicates an overall atmosphere of hesitation towards Process Mining.

If simulation is to be used, be sure it fits into a larger change management strategy where the technology is not viewed as a “toy project” and data extraction serves more than one purpose.

2020 will see companies confident enough to roll out Process Mining across multiple departments and processes.

// Since data extraction is time-consuming, one should do this only once but do it in such a way that it can be applied continuously using the latest event data.

-Wil van der Aalst

#6

Humans & Bots Coexist (Hybrid Process Integration)

A generation raised on Star Trek, Clockwork Orange, and The Terminator is sure to produce some fanatical ideas of what it means to have robots as colleagues.

Software robots used along with Process Mining technology and hardware robots like the Rumba used to tidy up your floors are two very different beasts. So when we talk about Robotic Process Automation or chat bots, we're really talking about non-tangible written code.

Even with the current workplace sometimes [spanning 5 generations](#), 2020 will see this basic understanding and acceptance of such bots as colleagues or “digital workers”, not some far-out, scary, physical presence.

Because, ready or not, software bots in the workplace are set to increase by over 50% in the next two years. There will be a fundamental shift towards human and machine collaboration worldwide. ([IDC](#))

This will play out in the form of increased hybrid process integration. Process bots only take part of a job, not all of it. They don't work

end-to-end. Bots rely on human intelligence to bridge the gaps and make final decisions, recommendations, and approvals.

The need for humans and bots to coexist in the workplace will lead to a wave of retraining programs. Employees will need to learn new skills in order to effectively manage robots and shift more time to tasks which require human empathy and decision making.

#7

Robotic Process Automation (Yes, Even More)

Robotic Process Automation (RPA) had its time in the limelight in 2019. Well, it's not done shining yet.

[Deloitte's survey](#) from May 2019, based on 523 executives from 26 countries, stated that “organizations are not only continuing to use RPA but are moving beyond it by increasing deployment of intelligent automation. 58% of the surveyed executives report they have started their automation journey.”

***2020 will see deeper
tool integration between
Process Mining and RPA.***

The connection between RPA and Process Mining is clear — Process Mining acts as the predecessor to RPA which nominates tasks for automation.

However, RPA can act alone, with some shortcomings.

RPA without Process Mining will capture the low hanging fruit — annoying process steps which users can identify on their own. These steps, however, may not be the most valuable in terms of automation. As businesses progress on their automation journey, they will rely more on data-nominated process steps rather than the human-nominated alternative.

Process Mining reveals the connections between systems and stages of which human users may not be aware, enabling the technology to have the best insight into areas ripe for automation.

#8

Data Context is King

Lose context, lose the story, and thus, value.

If data is mined from a system, passed to an analyst who doesn't work with the process itself, and stripped of context along the way, the analyst will be left with a pigeon-holed view of a subset of data.

The next trend in Process Mining will be to keep or add rich context to the pulled data — or better — never take the context away in the first place. Using event logs (**data**) as input for Process Mining software is step one.

The next step is to get context around the data. This usually comes from people working on the process, such as business analysts and process owners.

The better an organization can keep or add context to the extracted data, the better they will be able to make smart decisions.

#9

Compliance in Connection to Tariff Tensions

What came first? The flood of confusing tariffs or the need for global enterprises to use dedicated compliance software?

Whichever the chicken and egg, companies are amidst hard-to-predict tariffs. These regulations impact their ability to operate effectively and legally across geographical markets. In seeking operational excellence and perfect compliance, organizations will also be looking to smartly operate within their legal box.

The old way of process compliance, which the majority of international enterprises still employ, is to keep compliance controls regional, and thus, separate. Each office in each country is responsible for their own local terms, residing in different IT systems.

This approach is risky and leaves room for big compliance gaps. Companies are bypassing this risk by investing in centralized, dedicated compliance software systems: a databases, where compliance rules and processes can be programmed and integrated into the process workflow.

Dedicated compliance software will be the latest system for Process Mining tech to mine.

#10

Data Security, Privacy, Consent as a Political Trend

Last year (**and the year before that**) we all prepared for GDPR, the regulation in EU law on data protection and privacy.

Now, companies must stay on their toes with further calls for data protection, privacy, consent, and a piece of the profit pie.

“Data is the new oil,” says Andrew Yang, the American entrepreneur, philanthropist, lawyer, and 2020 presidential candidate. [He wants](#) individuals to be able to make money off their own data by making it their personal property. While this may simply be a political stunt to get attention, the trend for consumer rights and deeper data protection is very real.

Preparing data for RPA and Process Mining must adhere to strict data protection and privacy protocol. Not sure where to begin? Checkout [this guide](#) designed to help you avoid pitfalls when preparing data for RPA.



2020 Success With Minit

Our industry is going through a new stage of maturity, growth, and application in 2020. We're excited about the future of Process Mining and where Minit, together with our clients, will go.

Let us help you make data-driven decisions and propel your business to the next level of operational excellence. Because all businesses want to make better, faster decisions, and operate at their fullest potential.

[Get in touch](#) with our team of passionate Process Mining heroes to see how Minit can work together with you in 2020 and beyond.

Minit Process Mining Academy

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Weekly insights into Process Mining trends, how-to articles, and real success stories from your industry.



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