USING PROCESS DISCOVERY TO NAVIGATE THE POST-PANDEMIC WORLD

How businesses and organizations can use data to increase operational efficiency and adapt to new ways of working

Responding to Covid-19 disruption

The Covid-19 pandemic has had an enormous impact on working culture around the world, emphatically emphasized by the dramatic shift of employees working in an office or onsite environments to working from home.

According to Shrikant Deo, associate director of the product management office at EdgeVerve, the considerable impact of Covid-19 has seen the requirements of process excellence change rapidly. This indefinite shift toward remote working has prompted PEX practitioners to change internal processes to accommodate remote-working cultures, as well as optimize operations for a post-pandemic world.

"Covid-19 has been a disruptive force. The way you manage and lead people is different than before," says Luc Nanga, who manages the global process management office for eBay's corporate travel and its automation center of excellence for finance. "While most leaders have experience in managing remote employees, it is very different managing 20 per cent versus 100 per cent of your group that way."

In this PEX Network report, in collaboration with EdgeVerve, we look at the unique challenges facing PEX practitioners in these unprecedented times, while exploring how process discovery – through the collection of data on the task level of processes – can help you navigate the pandemic and post-pandemic worlds.

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Shrikant Deo, associate director of the product management office at EdgeVerve

The unique challenges facing PEX professionals in the pandemic and post-pandemic worlds

Covid-19 has created unparalleled challenges for many organizations that have endured massive business disruption and who need to find new ways to interact with their customers and employees.

How PEX professionals design processes have no doubt changed in recent months, as the need to reduce human contact to avoid transmitting the virus is urging processes to move toward digital and non-contact working patterns.

EdgeVerve's Shrikant Deo says: "An Indian telecoms company used to onboard customers by requesting them to submit their Know Your Customer documents in person, but has now utilized India's National Identify system to completely digitize this process."

PEX practitioners are facing three distinct challenges that result from a disparate workforce: Team management, process compliance and process engineering.

Team management

eBay's Nanga believes Covid-19 has been an accelerator of a revolution that started before the pandemic when eBay employees were already working a maximum of two days a week at home.

"Covid-19 makes us wonder if we will work indefinitely from home and that creates some challenges around the lack of meeting people face-to-face and how impactful it could be," Nanga remarks. Workforce management is the number one priority for Nanga, within which visibility is a key challenge.

"I spend 80 per cent of my time managing my team and helping them be successful, deliver and add value to the organization," he says. "Building trust, communication, and managing people's performances, delivery and effectiveness is more difficult than before as interactions with the workforce do not happen as often as they did in an office environment."

Process compliance

Process compliance has become challenging in a remote-working environment and is another priority at eBay.

Nanga notes: "[Process compliance] matters even more now in a remote-working environment for security reasons, as employees have exposed companies to different levels of hacking through networks, a typical 'cheval de troie' for organizations."

Workforce monitoring, which could help in ensuring process compliance and traditionally conducted in person, cannot be carried out in the same way in a remote-working environment, creating a lack of visibility on internal processes, EdgeVerve's Shrikant Deo says.

"Remote working has made it very difficult for PEX professionals to really understand what is happening on the process side," he adds.

This also creates a challenge for PEX professionals to understand what processes to improve or re-engineer to ensure business continuity during the crisis.

Process engineering

Process engineering and improvement are priorities at eBay and were so prior to the onset of Covid-19. What has changed, however, is how the organization operates during remote-working times.

In the last six-to-nine months, Nanga's team has launched 22 bots for the finance department. Automation is cost effective and more efficient from a process efficiency standpoint as it removes repetitive, manual tasks and enables employees to focus on strategic or value-adding ones instead. This is why Nanga believes it is a disturbing force on how people manage their processes, noting it is only the beginning.

"We live in a world where change is typically exponential and automation is currently on that path – Covid-19 has been an automation accelerator," he adds.

Process engineering and improvement are areas of interests from businesses that Shrikant Deo has also noticed in recent months.

Shrikant Deo says: "We have seen a resurgence of process re-engineering interest and the need for rapid process transformation which needs to become increasingly digital.
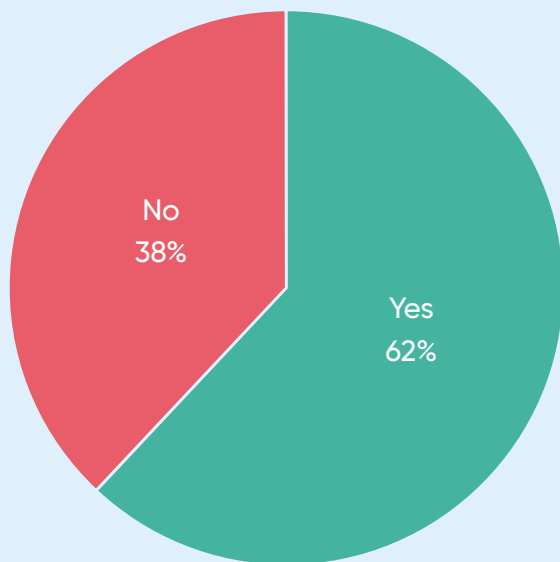
"Traditionally, process transformation was considered a conservative and human-intensive process that required a PEX professional to discuss a process with its users to understand it in detail," he adds. The impact of Covid-19 is changing that, with "pressure on PEX professionals to make process transformation more reliant on technology than people", which Shrikant Deo describes as "a very unique challenge".

"PEX professionals will be significantly busier as compared to the pre-Covid-19 world and what worked in the past will not work anymore," he says, adding there is a need for more unbiased empirical data that PEX practitioners can analyze to make smarter decisions around their processes.
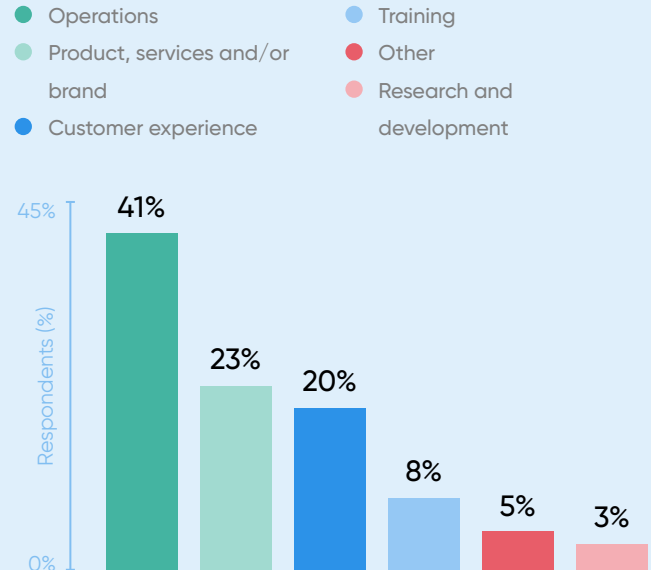
In a recent PEX Network survey, we asked our community of process excellence professionals:

Have your priorities relative to your role changed due to Covid-19?

No 38%

Yes 62%

Which area attracts the most investment for process improvement in your company?

- Operations
- Product, services and/or brand
- Customer experience
- Training
- Other
- Research and development

41%

23%

20%

8%

5%

3%

45%

0%

Respondents (%)

SOURCE: PEX Network

As the results above show, the Covid-19 pandemic has disrupted the role of PEX practitioners in recent months, with two-thirds of respondents seeing a change in their priorities. The focus for process improvement is on operations, affirming that organizations are looking to safeguard business continuity during the crisis and focus on delivering their product, services or brand swiftly to market, while ensuring customer experiences are not negated.

Using process discovery to navigate the post-pandemic world

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Navigating a post-pandemic world with process discovery

To overcome the challenges of the Covid-19 crisis, the PEX industry will need to adapt to a new and ever-changing economic environment. The pandemic has created significant pressures on budget and cost selection, which will impact process initiatives for businesses that need to evaluate their operational and internal costs, and assess if they can reduce them.

Organizations will need to adopt new tools to understand how to improve internal processes to save costs and increase business efficiency, among which process discovery will be one of the most important in their possession.

The first step of process discovery is the capture of data from the activities of every employee's computer. For example, assessing how they are performing a task during their day-to-day job will provide a completely new layer of data insights that organizations previously did not collect because they did not have the right tools to do so.

The data collected across multiple users anonymously is mined to create three types of insights, which allows PEX professionals to look at how the processes are executed on the ground and get a clear view on the state of their processes.

The data provides a process map, a simple visual representation of how a process is being executed. A leading Japanese electronics major wanted to discover any missing or undocumented flow variations for their critical tasks and identify opportunities and areas of process standardization.

The business used EdgeVerve's process discovery tool, **AssistEdge Discover**, to record more than 40 transactions for one task. After being analyzed by artificial intelligence, five variations for the task were uncovered. Business insights were created from the captured task-level data, which found that 50 per cent of occurrences were associated with a single variation, reducing the need for standardization while providing additional nuances. The

average duration for the task was revealed to be around four minutes.

In addition, the data collected by process discovery allows the creation of multiple reports on how a process is being used, how much time people are taking to complete it, what kind of applications they are using and what interactions happen on its applications.

"When we open up the data we capture, we have insights on automation, operational productivity, how a process is changing, process compliance, process transformation and visibility over what the remote workforce needs."

Shrikant Deo, associate director of the product management office at EdgeVerve

The data can also give metrics that allow organizations to prioritize their task from an automation perspective, which some organizations have already benefitted from. A leading US-based financial products company wanted to identify variations for a key process and determine if it was ready for automation. Moreover, it wanted to explore additional value that the business can derive from empirical data collected during the process by capturing it from one key native custom-built application. The data was non-intrusively captured for two key tasks associated with the process, with more than 70 variations highlighted for both of those tasks. Business insights were created from this activity and it was found than more than 10 disparate applications were used in the process,

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as opposed to one that the financial service company had initially indicated. While client data indicated that the average time per process was 15 minutes, AssistEdge Discover found that it ranged from between 10 and 140 minutes. The automation blueprint created from this activity suggested that the process needed re-engineering before it could be automated.

Generally, the main beneficiaries of the data collected by AssistEdge Discover are the operational teams who had to shift to a remote-working environment very quickly to monitor and manage processes from home.

However, the Covid-19 pandemic has uncovered new beneficiaries for the tool, with EdgeVerve seeing an uptake in PEX professionals showing a new interest in gathering data on their processes, as they have not been able to run their office initiatives due to the impact of remote working. This type of data can enable these practitioners to continue many of their process transformation initiatives.

They can also remotely manage the workforce without the need for interaction with the operational users – the biggest change in process discovery usage – that Deo says he has witnessed as a direct consequence of the pandemic.

"When we open up the data we capture, we have insights on automation, operational productivity, how a process is changing, process compliance, process transformation and visibility over what the remote workforce needs," he explains.

One telecom organization based in Europe had to move its operational workforce from the office to a working-from-home environment in a very short period of time during the pandemic, which proved to be a key challenge along with monitoring the workforce. This created issues in understanding how employees were doing processes, what they had access to and the problems they were encountering. AssistEdge Discover provided the organization with a view on how the back-office processes were being performed and what issues have come up; insights are now developed on a daily basis on tasks that need to be actioned.

This data can also enable remote auditing. Shrikant Deo comments: "Some of the clients who have seen this data stream are thinking about this because they cannot remotely audit their process and ensure compliance. Process discovery adds a significant amount of data insights from the process that can help transformation evolve from a conservative human-layer initiative into a digital-layer one."

A business based in Europe is now using data capture to focus on application usage, as employees using their home network while remote working could face potential security risks. The process discovery tool has shown the organization whether or not the usage of the applications is secure, how employees are accessing them, if they are accessing the correct URLs and links, and if there are any compliance issues from the applications point of view that they can quickly act on.

EdgeVerve recently created a partnership with process mining firm Minit to cater to a broader process excellence with a tool that works both at a task level and a broader process level.

"We firmly believe that the combination of process mining and discovery provide a very important technology tool for PEX professionals to target the large process transformation initiatives," says Shrikant Deo.

"Together they can provide end-to-end process view and intelligence, reduce the time it takes to run one process initiative and provide insights around process transformation, compliance automation and framing."

At a time of massive business disruption and disparate workforces, using data to get a clearer view of internal processes is a valuable tool for PEX professionals who are facing unprecedented challenges in workforce management, process compliance and strained budgets.

The next section of this report looks at four concrete ways in which process discovery can help organizations increase workforce's productivity, operating procedures compliance, resolve IT issues and save internal costs.

Process discovery in action:
Four potential use cases for organizations in remote-working conditions

Below, we present four use cases EdgeVerve recommends for process discovery that organizations can implement.

Increasing team productivity

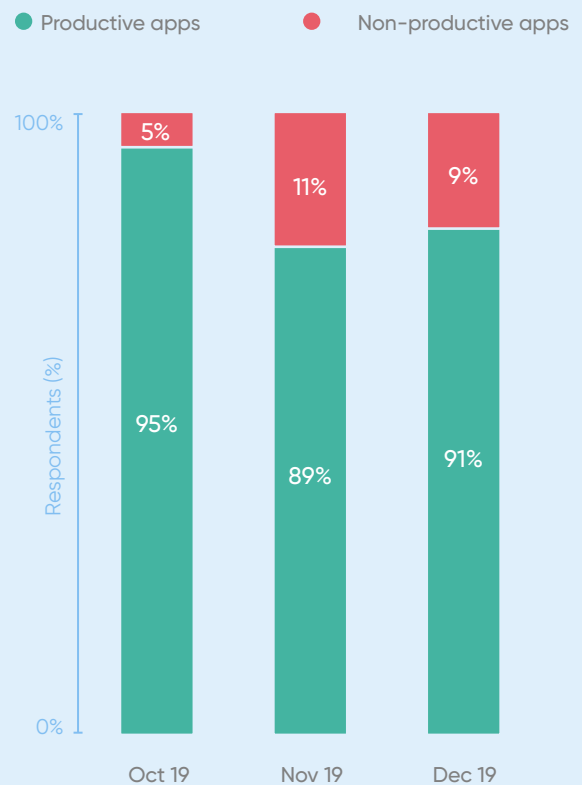Employees are encouraged to achieve three goals:

1. Ensuring adherence to all client commitments and maintain information confidentiality, security and data privacy.

2. Recording the efforts accurately in the timesheet system as per the project plan, which also goes through the manager for approval.

3. Utilizing the time saved by the lack of commuting to reskill, learn a new skill or take up a course in the case of no client deliverables.

Accurately logging the above-mentioned information can prove a burden for each employee and auditing them at an individual level can also be a daunting task for management. Automated process discovery can help to overcome this as it captures all digital interactions such as keystrokes, mouse clicks, and copy and paste data made by an employee with different enterprise and web applications.

The data captured at this granularity forms a base for the necessary audit and adherence reports and automatically helps generate attendance and productivity views of both the departments and the individual employees. Below is a glimpse of a login-logout adherence report and application interactions trend.

User name	Logged in hours	#Tasks handled	AHT
Rodriguez Hope	2h 16m 16s	28	0h 4m 51s
Jennifer Wall	3h 12m 26s	33	0h 5m 49s
Abigail Benne	3h 50m 41s	45	0h 5m 7s
Caleb Black	2h 45m 31s	22	0h 7m 30s
Cooper Dawtel	1h 35m 10s	19	0h 5m 0s
Dothraki Collin	1h 59m 35s	25	0h 4m 46s
Eloise Farrell	3h 39m 55s	41	0h 5m 20s
Kolsquee Lakcer	2h 37m 13s	35	0h 4m 29s

Login-logout adherence

User - Application interactions

Productive apps — Non-productive apps

Oct 19: 95% productive, 5% non-productive
Nov 19: 89% productive, 11% non-productive
Dec 19: 91% productive, 9% non-productive

Application interactions trend

Since these insights and adherence reports are backed up with the empirical nature of the captured data, it will also help accelerate approval efforts, which will ultimately eliminate manual data logging, thus saving employees' time and efforts, remove management overheads in data validation, and allow employees to focus on higher-value work and other client deliverables during such disruptions.

Following standard operating procedures in remote-working conditions

With remote working, there is always the chance that operating protocols and procedures standardized across a business function might not be followed and even if they are, they could result in erroneous transactions and human errors.

Small and medium-sized enterprises (SMEs) can record a particular process for a business function with the help of a desktop recording tool, which will capture every user action across different applications relevant to the process. Moreover, there is scope to address how to handle exceptions by recording processes of different scenarios.

Once the recordings are done and dusted, SMEs can feed it to a neural network algorithm, which will automatically clean the additional noise or events that are irrelevant to the process, and create a holistic map view of the process with different variations. This can be directly exported as a business requirement document, which will help employees connect remotely to gather accurate information on the operating procedures and standards.

The process variations will also help employees understand what actions to perform when they need to handle an exception. This will result in minimal human error, accurate process transactions, and an overall spike in process excellence standards set across a business function and across an entire organization.
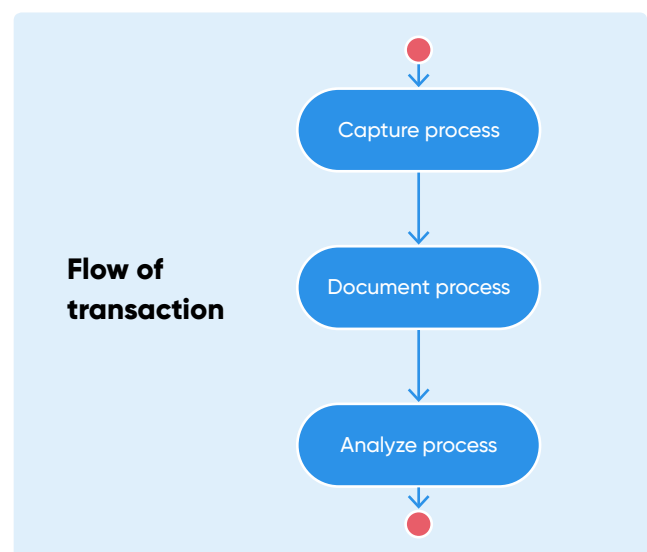
Resolving IT issues in a remote setup

In an office setup, the IT support team can work with the employees to see where they are going wrong. They can even keep an employee's laptop in the IT support lab for inspection and try and recreate the error scenario to identify the root cause. However, remote working no longer allows organizations to carry out such activities. Automated process discovery can help by enabling IT to complete their tickets remotely and much faster.

Process discovery technology can capture all the digital interactions made by the employees on a granular level such as keystrokes, mouse clicks and copy and paste operations.

Details of the exact transaction the user made, each value entered, screen viewed, button clicked and screenshots can be captured. Additionally, it can capture the entire flow of transactions that users have made and all the applications that are being accessed.

Flow of transaction

```
Capture process
      ↓
Document process
      ↓
Analyze process
```

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The data captured is then documented as detailed steps leading to the issue and task flow maps are generated to provide a visual representation of the data. Once the product has provided its outputs, the IT support team needs to go through the outputs to analyze the root cause analysis as quickly as possible and fix the issue.

This will save employees the effort in trying to troubleshoot the issue on their own, sharing umpteen system logs, or getting on a call and continuously sharing their screen to try and resolve the issue.

Overall, it will save both time and crucial infrastructure. Employees can continue to focus on their work without disruptions and get their issues resolved in time, thereby leading to increased employee satisfaction and more productive outcomes.

Mitigating risks and reducing overheads with application usage insights

Virtual mechanisms allow employees to connect and access these applications from anywhere and help organizations reduce overheads, ensure security and rationalize application usage. This can be carried out by monitoring application usage and checking the vulnerability to information leaks by ensuring employees are not using non-secure applications; live usage tracking of critical applications; and gathering insights on licenses utilized across the board.

Monitoring such information can be a challenging task when numerous applications become susceptible to a new network at home. Automated process discovery products, while discovering the day-to-day process steps performed by a user, can also help in application tracking and rationalization in these unprecedented times.

Process discovery products capture key digital interactions that employees make with an enterprise application. This granular level of data captured on interactions across all employees forms the basis of

application usage reporting and provides reports on application usage insights, application version used, usage by secured versus unsecured channels/URLs and license utilization.

Process discovery ensures business continuity and enables transformation

The sudden shift toward remote working has urged many organizations to rethink their processes. PEX practitioners are facing unique challenges and they need to find new ways of working to monitor and communicate with the remote workforce, ensure process compliance and re-engineer their existing processes to ensure business continuity.

Organizations that adopt process discovery models will be able to get a clear view of their processes via the collection of empirical and unbiased data on them. In turn, this paves the way toward process automation and internal cost savings while increasing workforce productivity, guaranteeing operation procedure compliance and even resolving IT issues.

Coupled with process mining, process discovery will provide organizations with an end-to-end process view and intelligence on internal processes – a vital tool for PEX practitioners to progress in their digital transformation journey in a pandemic and post-pandemic world.

Using process discovery to navigate the post-pandemic world

ABOUT PEX NETWORK

PEX Network is a leading process and operational excellence platform that provides premium content and insight from the world's foremost thought leaders online and across our industry-leading events.

With more than 160,000 members, PEX Network is the largest and most established community of process and operational excellence professionals in the world.

If you are interested in becoming a PEX Network contributor, please get in touch with our editor Alice Clochet at **alice@pexnetwork.com**

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EdgeVerve Systems Limited, a wholly owned subsidiary of Infosys, is a global leader in AI and Automation, assisting clients thrive in their digital transformation journey. Our mission is to create a world where our technology augments human intelligence and creates possibilities for enterprises to thrive. Our comprehensive product portfolio across AI (Infosys Nia), Automation (AssistEdge) and AI enabled Business Applications (TradeEdge, FinXEdge, ProcureEdge) helps businesses develop deeper connections with stakeholders, power continuous innovation and accelerate growth in the digital world. Today EdgeVerve's products are used by global corporations across financial services, insurance, retail, consumer & packaged goods, life sciences, manufacturing telecom and utilities.

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