

Demystifying the desktop

What workforce intelligence
reveals about technology
and employee productivity



Build
for
Change[®]

Putting your workforce data to work

You can't manage what you don't measure. Yet we routinely overlook one of the most common manageable entities – the workforce – as a rich source of data. In the United States alone, employee idle time is worth over \$100 billion a year,¹ meaning you can't afford to be unaware of how your workforce is directing its resources. It's no secret that highly engaged employees outperform those who are low-engaged – and companies with highly engaged employees enjoy 140% higher earnings per share than their competitors.²

In collecting and analyzing workforce data, Pega researchers wanted to learn more about people who perform data entry, back-office, or contact center tasks; their work processes; and how technology could inform strategy around this part of the workforce.

Besides looking for opportunities for continuous improvement, we sought to determine how technology could elevate the employee and customer experience and empower true operational excellence. We also explored the hidden complexities and obstacles that make work pathways harder to navigate. Our findings: To improve both customer and worker satisfaction, you need to understand what is happening every day on the desktops of your employees.

¹Brodsky, Andrew, and Teresa M. Amabile. "The Downside of Downtime: The Prevalence and Work Pacing Consequences of Idle Time at Work." *Journal of Applied Psychology* 103, no. 5 (May 2018): 496–512.

²Gallup Report. (2018). The Engaged Workplace. Retrieved from <http://www.gallup.com/services/190118/engaged-workplace.aspx>

How workforce intelligence unlocks new insights

Workforce intelligence applications allow organizations to obtain insight into how employees are working on their desktops. Pega Workforce Intelligence™ uses different technologies and techniques to understand employee capacity, identify hidden challenges, and empower leadership to target areas for improvement. These technologies include:

1

Artificial intelligence (AI)

A workforce augmented with AI can move beyond insight to actionable recommendations that impact operational outcomes and customer experience.

2

Listening bots

Activity trackers for business, these bots work around the clock to collect workforce insights, driving improvements as part of your digital process automation strategy.

3

Machine learning

This technology enhances data mining techniques, continually improves processes, and targets actions to take to maximize the impact of your investment across your organization.

4

Measurement and reporting tools

Ongoing measurement tools and tactics can determine the effectiveness of your workforce; they can also monitor the effectiveness of your improvement efforts based on AI and bot data.

"Utilizing the Pega solutions – both Robotics and Workforce Intelligence – enables our agents to focus on what's important."

– Robin Gomez
Director, Data & Analytics
Radial

It's not just the hours – it's what you do with them

Just because employees are at work doesn't mean all their time is spent on productive tasks. To analyze how employees actually use their working hours, Pega researchers used workforce intelligence to segment work applications and time into the following categories:

1

Structured applications

Specifically created and optimized to support key business processes, these applications are designed to achieve maximum efficiency as well as consistent outcomes that meet customer requirements. A structured application functions much like an assembly line, providing an efficient and repeatable process to ensure consistency and quality. Examples include applications for processing claims, changing addresses, resolving disputes, and many others.

2

Unstructured applications

These applications complete production work but have not been efficiently designed to support key business processes. They often contain functionality that must be tailored by the worker for each task completed, and lack the structure and controls to optimize employee efficiency or consistency of work outcomes and processes. Examples include applications in the Microsoft Office suite, instant messengers, and third party websites.

3

Active work time

The hours when employees use structured and unstructured applications to complete work. In short, it's the duration of the day when critical tasks get done.

4

Away time

Time when employees complete no activity for more than a designated threshold. This can refer to longer durations for meetings, training, meals, and breaks, but can also be short periods caused by employee burnout, lack of available work, and other factors.

Which apps power productivity ... and which don't

After categorizing employees' work time and applications, we measured how much time employees spent in each category. When determining capacity and constraints around the volume of work and how workers were utilized, we considered which applications were used most often and which detracted from getting work done. We also identified the reasons employees left their desks and the periods when employees spent the most time in structured work.

Our top-level findings:

Overall, employees spent only 28 percent of active work time in structured applications.

This means that not only do employees spend the largest amount of time outside of the most productive programs, but structured applications are insufficient for productivity on their own.

Whether or not an application is structured has implications in tracking productivity, which can only be explicitly measured by and attributed to the actions taken in structured applications. Although unstructured applications may aid in completing work, determining attribution is much more subjective. Our data suggests that, although necessary to getting the job done, **unstructured applications are harder to navigate and can even hinder productivity.**

These programs are generally time-consuming to use and have a 50 percent higher input error rate than structured applications.

On average, unstructured applications account for 74 percent of all scrolling, 60 percent of all keyboard activity, and 68 percent of corrections.

Tellingly, workers also need to scroll 2.5 more times to find what they need in these programs, which also account for over 60 percent of copies, but only 51 percent of pastes.

Regarding the most widely used unstructured application – email – it's easy to fall into the "email vortex": people use email to manage tasks, but it doesn't really contribute to production.

On average, email was used during 12 percent of active work time, accounted for 15 percent of users' daily keystrokes, and was checked around 10 times per hour. But for all the time spent in email, employees only spent 34 percent of this time on actual production.

Workers also have the highest error rate – 22 percent – when working in email applications.

Making mistakes? It must be Tuesday.

Our analysis yielded interesting high-level results about what the typical workday looks like for many employees:

On average, **workers type more than 197 million key strokes each week, with Tuesday as the day with most recorded errors.** Shifts are typically longest on Tuesdays and Fridays. The longer an employee's shift, the higher the percentage of errors made: those with longer shifts average 9 percent more mistakes than those with shorter shifts.

The average amount of errors per day hovers around 845, with a mistake occurring in one out of every 14 key strokes.

Moreover, **companies lose one hour of productive work time per employee per day** due to miscellaneous internal meetings, trainings, and other activities that take employees away from helping customers achieve the outcomes they desire.

These kinds of observations can inform managers' decisions about their aggregated workforce. For example, to reduce the prevalence of workplace mistakes, a manager may choose to shorten or redistribute shifts amongst employees. Or managers can use the power of workforce intelligence to identify and address highly repetitive tasks that take up employees' time. Using bots to automate these tasks could help reduce errors and free workers to focus on higher value tasks, such as providing customer service.

Beware the virtual swivel chair

We also used workforce data to understand more about the survey subjects' work environments. It was crucial to understand the complexity of their ecosystems – the amount and types of applications they use, for instance – both in terms of hours and in percentage of total work completed. We factored in the number of unstructured applications an employee used, the prevalence and scope of data integration, and the amount of effort sunk into each application.

One metric we use to analyze applications is “switching” – the virtual swivel chair of the workplace. **Generally, managers and employees alike benefit from reducing the amount of switching between applications**, as less switching means workers find what they need in the applications they use. Our findings on switching revealed some clear patterns:

The users we analyzed switched applications over 1,100 times a day, toggling between as many as 35 applications in each shift.

Each month, each employee uses over 90 distinct applications. Workers using 30 applications or more in a shift have a 28 percent higher error rate than those using fewer apps. Expanded over years, this means hours, and potentially days, of lost time, as well as highly error-prone activity.

Less switching means fewer total errors, as data typically needs to be transferred between applications to make it usable: workers perform an average of 134 copy and paste actions a day.

"We wanted to understand where the problems were, and where the successes were, so we could work both internally and with our clients to improve that process. [Pega Workforce Intelligence] became the perfect opportunity to do that."

– Michael Kempe
Chief Operating Officer
Link Market Services

Productivity is only the beginning

Although organizations use workforce intelligence primarily to identify, target, and act on productivity issues, it can also be a tool for improving employee and customer satisfaction. These experiences are more difficult to measure, but they're essential factors in any workforce analysis.

Application variability and switching is stressful on the workforce, and any added complexity that makes it more difficult to complete a task will reduce overall employee satisfaction. Loss of productive time on the employee end means time taken away from serving customers. The bigger picture? Failing to serve customers means failing to meet key business objectives, with serious implications for revenue and growth.

Workforce intelligence is key to understanding how employees spend their time, how applications impact their experience, and which hidden obstacles are preventing them from delivering value. Targeting these pain points to reduce errors means adding back hours (and, in some cases, days) of productive time spent doing what really matters – serving customers.

Workforce intelligence in the real world

These ideas may sound abstract, but they have real implications for your organization's bottom line. Here's how two companies are using Pega Workforce Intelligence™ to create positive impacts on worker productivity and experience:



Link Market Services, a leading global share registry and financial services provider, started its journey with many unknowns. Its internal operations team had been unable to get to the root cause of various productivity inefficiencies they'd been experiencing. After turning to Pega Workforce Intelligence, Link was able to understand, identify and target these challenges, not only paving the way for organizational transformation, but also allowing the company to turn its focus back to delivering excellent customer service.



Radial, an international business process outsourcer serving hundreds of well-known e-commerce brands, sought to optimize its contact center operations to improve customer experience. Using Pega Robotics and Workforce Intelligence, Radial reduced customer service process time and drove average call handle time down to 30 seconds. First contact resolution increased by 6 percentage points, while reship process time shrank from 2.5 minutes to 30 seconds.

Small changes, big opportunities

When it comes to productivity, it's no longer enough to throw things at the wall and see what sticks. Workforce intelligence demystifies a day in the life of an employee, enabling you to discover how you can improve productivity and worker experience in ways nearly impossible to recognize without it.

At its core, workforce intelligence empowers you to see how people, processes, and technology work together to produce results. The tools you use to gain that knowledge – the metrics, the pathways to success, and the obstacles along the way – can in turn guide you to take the right steps and get results, both today and tomorrow.



Ready to demystify the desktops of your employees?

Take a closer look at **Pega Workforce Intelligence™**. Or sign up now to **try it, free, for 60 days**.

Appendix:

Research methodology

In September 2018, Pega researchers analyzed over 4.9 million hours of Pega Workforce Intelligence™ application data from the first three quarters of the year. Within the Fortune 1000 organizations surveyed, we analyzed workers performing routine back-office, data entry, or contact center tasks.

Survey scope

35 global companies across 11 industries

28 categories of transactional applications

Data aggregated at the user and shift level

Data glossary

Length of shift

Includes lunches and break time

Excludes shifts longer than hours

Work types

Structured, unstructured, away time

Customer category mappings: Productive, unproductive, other work, unknown

User activity

Data integration: Cut, copy, paste

Mouse: Click, wheel

Keyboard: Keypress, error keypress

Window: Scroll, move, resize

Focus switches: Application focus, screen focus

Errors

Error data refers to usage of the “delete” and/or “backspace” keys



We are Pegasystems, the leader in software for customer engagement and operational excellence. Our adaptive, cloud-architected software – built on the unified Pega Platform™ – empowers people to rapidly deploy and easily change applications to meet strategic business needs. Over our 35-year history, we've delivered award-winning capabilities in CRM and digital process automation (DPA), powered by advanced artificial intelligence and robotic automation, to help the world's leading brands achieve breakthrough business results.

For more information, please visit us at www.pegacom