Getting Value From Employee Productivity Monitoring Technologies for Remote and Office-Based Workers

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Initiatives: Digital Workplace Program and 1 more

Some leaders turn to employee productivity monitoring tools for fear that remote work leads to lost productivity. Others seek to improve individual and team productivity. While aiming to reap benefits from these tools, application leaders for the digital workplace must also avoid ethical pitfalls.

Overview

Key Challenges

- Employee monitoring for the purpose of improving productivity is rife with ethical challenges. It can easily cross the “creepy” line and can create a toxic work culture, and can land an organization in news articles decrying poor practices.

- Employees can evade or rebel against the use of employee productivity monitoring technologies, seeing them as both highly invasive and demeaning. However, during a crisis such as the COVID-19 pandemic, employees may be more accepting of temporary monitoring of work conducted remotely.

- The concept of “productivity” is highly context-specific. Therefore, it is extremely difficult to quantify.

- While efficiency and productivity benefits can be gained from employee productivity monitoring, poorly implemented and communicated rollouts can set an organization back significantly by losing worker trust.

Recommendations

Application leaders focused on the digital workplace should:

- Inform their investment decisions through careful inquiry about data sources, user experience design and the initial use case intended for tools that can support employee productivity monitoring.

- Ensure that the technology is being implemented ethically by testing it against a key set of human-centric design principles. Mitigate risks through a careful communication strategy. In the case of COVID-19 response, align messaging to the enterprise response to the pandemic.
Use a checklist to ensure that the purpose and scope of data collection is in line with how it will be used and supports employees doing their best work.

**Introduction**

Employee productivity monitoring is not a new discipline. For example, supervisors in 19th-century factories monitored workers to ensure they were keeping pace. And employee productivity monitoring continues today, albeit in a much different fashion. The digitalization of work has enabled a much greater scale for monitoring the productivity of many kinds of workers who use technology to communicate and to get work done. Add to this a stark increase in employees working remotely, and the interest in scaling employee productivity monitoring technology follows. The 2019-2020 context of the global COVID-19 pandemic pushed substantially more employees to work remotely at very short notice. They did not have the chance to redesign their work tasks to better fit remote work. This leads to renewed interest in monitoring workers.

The cited reasons for implementing employee productivity monitoring technologies, whether for office-based or remote workers, include:

- Ensure work is getting done as expected.
- Double check that people are actually working.
- Detect and provide support to workers who are facing challenges in completing work tasks.
- Ensure that the technologies they are using are working effectively for them.
- Track hours of hourly workers to be sure that claims for overtime are warranted.
- Detect opportunities to improve processes or technologies in order to increase overall productivity.
- Ensure remote employee experience is not impacted as a result of moving from office to home, or it does not deviate significantly.
- Ensure that remote workers who may have safety concerns (such as remote health workers, remote engineering and maintenance crews) continue to be monitored and that no issues have developed.

Employee productivity monitoring technologies use data to answer one or more of the following key questions:

- What amount of time is being spent on which tasks? What percentage of time is being detected as idle time? Are there any trends in time spent on different tasks?
Employee productivity monitoring technologies are built to collect data from multiple sources and generate reports, recommendations and analytics based on what is detected. These may be distributed at the individual, team, department or process level (see Figure 1).

**Figure 1: Employee Productivity Monitoring Data Sources and Analysis**

<table>
<thead>
<tr>
<th>Time Clocks</th>
<th>Meetings</th>
<th>Chat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biometrics</td>
<td><strong>Individual and Team</strong></td>
<td>Workstation</td>
</tr>
<tr>
<td>Physical Workspace</td>
<td>Devices</td>
<td>Applications</td>
</tr>
</tbody>
</table>

Source: Gartner 2020

Employee productivity monitoring technologies are built to collect data from multiple sources and generate reports, recommendations and analytics based on what is detected. These may be distributed at the individual, team, department or process level (see Figure 1).

The majority of employees are comfortable with their employers collecting and tracking information about who they collaborate with and what collaboration takes place, where they are working, and how they are using technology to get their work done. Only 10% of workers are unwilling to share where they are working and how they are using technology. Only 9% are unwilling to share their collaboration data. \(^1\) While the majority agree with data collection in the workplace, we still see that one in 10 workers is not willing to share data in this way with their employers.

The collection of data is only part of employee productivity monitoring. Employees may be comfortable with the collection of it, but frequently are not comfortable with how it gets used. The implementation of automated tracking tools and the analytical insights derived from the data collected can backfire. Recent news stories include “Barclays Forced to Stop ‘Big Brother’ Employee Tracking System After Backlash” and “How Amazon Automatically Tracks and Fires Warehouse Workers for ‘Productivity.’”

Gartner, Inc. | 723038
Gartner has observed a significant increase in client conversations related to supporting remote work over the past 12 months. This is further exacerbated by the COVID-19 pandemic and the need to support many workers working from home, whenever that is possible. One potential outcome of this exceptional situation is an increased acceptance of remote work and adoption of remote work policies in many more organizations than prior to the pandemic. Using the results from the 2019 Gartner Digital Workplace Consumer Survey, Gartner established five different segments based on employees’ preferences of allocation of time across different locations. The group of workers that prefers working most of the time from home represents 10%. In contrast, the segment that prefers working most of the time in corporate offices with one to two days working from home represents 32% of all workers. When it comes to working from home, the size of that group varies significantly across geographies. Less than 4% prefer working from home in countries like China (3.5%) and India (2.6%). This contrasts with Singapore (12.0%), the U.K. (14.9%) and the U.S. (23.2%). France (8.7%) and Germany (9.4%) are closer to the overall average of survey participants.² The forced shift for many to completely work from home during the COVID-19 pandemic is likely to have long-ranging impacts on these preferences.

Enabling remote work frequently raises the question of productivity and leads to a conversation around employee monitoring. Employee monitoring may be related to corporate information security concerns. IT security professionals report concerns over how data is handled when used remotely. This can include high-value assets with significant impact if disclosed. One example is a small studio that exposes artwork for the latest superhero blockbuster movie. Information leaks in this domain can lead to being ostracised and unable to find work in the future.

Employee monitoring may also focus on productivity. Leaders may fear declines in productivity for remote workers, despite a number of studies showing that remote working can lead to increased productivity.³ For example, going back to 2010-2011, a Ctrip study in China showed that remote workers were more productive than those working in the office (see “Evidence From a Chinese Experiment on Working From Home”). Time will tell what impact the massive numbers of remote workers due to the COVID-19 outbreak will have on productivity across more types of work and in more enterprise contexts.

The biggest challenge for employee productivity monitoring is that the concept of “productivity” is highly context-specific.

This concept applies whether work is done in an office, at a worksite or from within the worker’s home. Most often, what is detectable is time spent on tasks and how those tasks vary. More routine work already has defined labor standards, or the ideal time to be spent on a given task, optimized for both quality and volume of output. Some types of work are already heavily
monitored, such as warehousing and logistics workers, drivers, frontline workers in manufacturing, and customer contact center workers. Where it’s possible for such workers to work remotely in, for example, the context of COVID-19, new approaches are often needed to monitor workers in their new work environment.

Nonroutine work does not have such standards for measuring productivity. In that case, time spent on tasks and task volume are often used as a proxy for productivity. However, without information from the broader work context, this proxy does not always translate into impact. Within the context of the COVID-19 response and sharp increase of remote work, the best information will only show how different task volumes and time spent have shifted. Additional contextual analysis would have to be done to show whether that translates into a subjective sense of improved worker productivity or an objective impact on organizational results.

The same set of recommendations in this research apply whether application leaders are seeking to implement employee productivity monitoring for office-based, worksite-based or remote (home-based) workers. While some attention is given to the exceptional COVID-19 situation with a marked increase in needing to support remote work, the advice would apply across all contexts including best-practice contingency planning. Implementations can backfire, negatively impacting employee morale and the organization's employer brand. Noncompliance with privacy regulations and employment agreements with labor organizations can also result. However, it is possible to gain useful insights that can help improve employee experience and productivity.

Analysis

Conduct Careful Inquiry About Data Sources, User Experience Design and the Aim of Employee Productivity Monitoring Tools

Most tools that can be used for employee productivity monitoring were not initially built for that purpose. Many, but not all, solutions on the market today were collecting data with other use cases in mind. As technology providers sought new ways to leverage that same data, the use case about measuring employee productivity emerged. It is imperative for application leaders evaluating such tools to carefully evaluate what data is collected, in what way, and for what original purpose (see Table 1).

<table>
<thead>
<tr>
<th>Application Category</th>
<th>Initial Use Case</th>
<th>Types of Data</th>
<th>Types of Reports</th>
<th>Sample Vendors</th>
</tr>
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</table>

Table 1: Types of Technology With Employee Productivity Monitoring Use Cases
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<th>Types of Reports</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Employee Monitoring</td>
<td>Security and risk, detection of fraudulent or high-risk activities</td>
<td>Endpoint usage, file shares, web activity, social media posts</td>
<td>Activities in lists, with category detected and assigned</td>
<td>See “Market Guide for Employee-Monitoring Products and Services”</td>
</tr>
<tr>
<td>Digital Experience Monitoring (DEM)</td>
<td>Application, IT infrastructure performance monitoring, endpoint management</td>
<td>Endpoint usage and activities, application logs, infrastructure logs</td>
<td>Activities, detection of bugs or other issues impacting work or user experience</td>
<td>See “Market Guide for Digital Experience Monitoring”</td>
</tr>
<tr>
<td>Digital Adoption Solutions (DASs)</td>
<td>Provide assistance and in-context training, nudging and gamification to increase adoption of applications</td>
<td>Application logs, endpoint activity data</td>
<td>Activity volumes, drop-off rates, impact of training documentation and support for process completion</td>
<td>See digital adoption solutions in “Hype Cycle for the Digital Workplace, 2019”</td>
</tr>
<tr>
<td>Employee Productivity Monitoring</td>
<td>Endpoint/Mainframe work tracking</td>
<td>Endpoint screen usage, which applications, in what order</td>
<td>Activity volumes, categories. Time management advice</td>
<td>Sapience, WorkMeter, ActiveOps</td>
</tr>
<tr>
<td>Workplace Analytics/Organizational Network Analysis (ONA)</td>
<td>Mapping of communication patterns, find top “connector” employees</td>
<td>Application data from collaboration tools, email and calendar, instant messaging</td>
<td>Individual productivity advice, time management</td>
<td>Microsoft Workplace Analytics, TrustSphere, StatusToday</td>
</tr>
</tbody>
</table>
When looking to invest in employee productivity monitoring solutions, application leaders must evaluate the following points:

- **Data:** When inferring productivity by the detection and analysis of activities being performed, and the amount of time spent on them, it is essential to know what kinds of data will be used to reach that conclusion. No system can detect all activities that can improve employee productivity. Often, data collection strategies will miss detecting context that could better explain why an employee is organizing or conducting work tasks differently than per the standard.

- **Analytics and reports provided:** Activity and time spent does not always correlate with impact. Reports that focus primarily on laying out time spent on different activities do not give much information related to how impactful an employee will be on delivering business results. Some solutions focus on tagging time as “idle” and reporting the amount of time spent this way. This analysis may reflect gaps in the way the employee productivity monitoring solution is configured to detect work rather than true underutilization of resources. Care must be taken in interpreting reports.

- **User experience and user personas:** The type of advice provided should be proportional to the kind of data being analyzed and the metrics being calculated. It is also important to consider which types of users will consume which insights presented in which way. Such analytics provide a powerful message to employees about what matters to an organization. Telling employees that their managers are tracking the amount of time they spend being idle doesn't communicate a positive or supportive message. Rather, it tells employees that what matters most of all is the appearance of being busy. This can translate into a culture of busywork. With

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</tr>
</thead>
<tbody>
<tr>
<td>Time Tracking</td>
<td>Detection of work patterns to automate time recording</td>
<td>Endpoint screen usage, applications</td>
<td>Automated time recording</td>
<td>Workpuls</td>
</tr>
<tr>
<td>AI-enabled Leadership Productivity Advice</td>
<td>Detect activities and patterns, measure productivity, and personalize recommendations to leaders on what to do to improve team productivity</td>
<td>Application data, logs, infrastructure usage, endpoints</td>
<td>Productivity scoring, support</td>
<td>enable</td>
</tr>
</tbody>
</table>
the massive scale shift in the workplace due to the COVID-19 pandemic, it is important for application leaders to understand how activities change from working in an office environment to working remotely. Digital experience management solutions in conjunction with application performance management tools can help understand performance and detect application and digital service bottlenecks that can impact employee productivity.

- **Purpose of actionable insights**: It can be dangerous to approach the question of productivity from the perspective: “We have this data — what else can we do with it? What other services could we be selling?” This means that the concept of “productivity” is frequently only an approximation. The vendor’s concept of “productivity” might be very far from the application or business leader’s target. It often means that the insights are hard to action. In some cases, process design and automation improvements will be the goal. In others, individual employee time management will be the objective. For others, it will be removing friction and improving adoption of digital tools. Finally, other solutions will focus on a use case where managers or supervisors can individually coach — or sanction — employees who are not performing per a given standard. Application leaders need to be clear on their own purpose for employee productivity monitoring tools and evaluate whether the vendor they are evaluating has a similar perspective.

- **Type of work**: Monitoring tools should be aligned to the type of work employees are doing. Certain job contexts include greater proportions of routine work, where such analysis is useful. In job contexts with a significant amount of nonroutine work, employee productivity monitoring may be a poor fit. Care should be taken to think through which worker populations will be in scope of any monitoring efforts and which ones will be excluded.

- **Privacy**: Be deliberate and intentional in your measurements, and especially in the purposes for those measurements. Just because data can be collected does not mean you should use it. Employees require transparency about what is measured and how. Moreover, what is measured must be applied equally to all individuals. There should be no discrimination, and it is ill-advised, and, in many jurisdictions, illegal, to rely on an employee’s consent for measuring and monitoring. In those monitoring activities, it is important to take into account the principles of subsidiarity and proportionality (see “Use These Privacy Deliverables in Every IT Development Project”). Subsidiarity demands organizations ask themselves, “Can we achieve the purpose we set out to achieve with less personal data?” Proportionality dictates that the least-privacy-invasive method is deployed that enables the intended purpose to be achieved. This periodic assessment should be frequently revised, and personal data on employees is best processed in an anonymous state. Where not possible, at least pseudonymous information should be used. Finally, employers would do well to prevent information (e.g., telemetry) from being recorded when such is not deliberately used.

- **Technology**: Be sure to evaluate the technology platforms underpinning vendor solutions. What tools are they using to collect data? What analytics capabilities do they have? Are those native-built analytics and reporting tools, or do they use a third-party partner? To what degree do they
use more advanced statistical analysis or machine learning to generate insights? Especially in the case of a significant increase in infrastructure usage with many more workers working from home, it is important that the monitoring technology not potentially impact or overload the IT infrastructure. Work with teams across IT to evaluate how it fits within your enterprise architecture and with your information security requirements.

Use Human-Centric Design Principles and a Careful Communication Strategy

As noted above, only about one in 10 employees is uncomfortable with sharing data with their employer about who they collaborate with and what collaboration takes place, where they are working, and how they are using technology to do their work. Despite employees generally being comfortable with the data collection, they can and will be impacted by the reports, insights and actions taken based on that data. Organizational change management and communication are perhaps the most critical steps for successful rollout of the technology. Any business leader who has been part of a project implementing tools for employees to record time spent on specific tasks knows that from experience. For more about organization change management, see “Use the ESCAPE Model to Develop Change Leadership.”

As part of organizational change management activities, it is important to recognize the normal fear response employees will have when faced with the rollout of employee productivity monitoring tools. They will likely feel threatened in one or more ways, as described in Figure 2.

**Figure 2: Potential Negative Consequences of Employee Productivity Monitoring Insights on Employees**

**Potential Negative Consequences of Employee Productivity Monitoring Insights on Employees**

<table>
<thead>
<tr>
<th>Reputation</th>
<th>Choice</th>
<th>Mastery</th>
<th>Relationships</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Will I lose face with my peers?</td>
<td>• Does this limit what I get a choice in?</td>
<td>• Do I feel like this will lead to closed off opportunities to develop myself and learn?</td>
<td>• Will this hurt my relationships with my colleagues?</td>
<td>• Is it fair?</td>
</tr>
</tbody>
</table>

Examples of fear or threat response from individual employees include:

- **Reputation:** “I will be seen as a poor performer because some system is arbitrarily saying I’m not being productive.”
There are a number of ways to mitigate these issues. To start, it is essential to recognize that these fear responses are normal and can be triggered differently for different people. Work through each one and work out the degree to which each one has a risk for occurring. In the context of COVID-19, you should also take into consideration the fear and uncertainty that employees may already be feeling as they navigate many changes and sometimes deep anxiety. If work has been done to define personas and employee journeys, align these to each persona and build out an empathy map that reflects these kinds of responses. For more information, see “How to Prevent Customer Journey Maps From Becoming Wall Art.”

Some specific strategies include:

- **Choice:** “This detection tool showing whether I’m at my desk makes me feel like I have no choice but to work there.”

- **Mastery:** “This tool is telling me I’m idle, when in fact I was learning from taking on more challenging cases that don’t fit the process perfectly. Obviously, they prefer that I do the boring work that I can easily perform quickly rather than learn and grow my skills.” Or, “Forget making sure the client is happy by chasing down problems to resolve. According to the new metrics, I should spend that time just taking two more calls.”

- **Relationships:** “I used to be able to build friendships with my co-workers. Now, if we’re not 100% on task, we’re both seen as nonproductive. So, I don’t get a chance to connect with others anymore.”

- **Equity:** “This is not fair. My extra efforts to solve this more complicated case are not being detected. Now I am forced to defend my work. When I go above and beyond, the system is not capturing it.”

Some specific strategies include:

- **Hide all individual data.** Make it available to nobody. Use productivity data to identify and predict what interventions could have the greatest impact on overall productivity. These interventions could be process improvements, automation investments, user experience design improvements or leadership actions. This shifts ownership of improving productivity to organizational leaders. Improving productivity in this case is done through removing organizational barriers. It moves away from the assumption that productivity lies solely within the control of individual workers.

- **Make analytics results available to each individual employee only.** This might not work as well as hiding all individual data, but it can alleviate some reputational fears. It will only work in environments where trust in leadership is already high. Make communication explicit that each employee is the only person to see their own results. Share how HR or management will only see aggregated views for teams. Set the cutoff as high as possible, for example, at a line of business level. Note that many engagement survey providers who seek to protect anonymity of
respondents have a cutoff of at least seven respondents to be included in order to see results. For ongoing monitoring, that number should be higher.

- **Provide transparency on the reason for measurement.** Have a clear communication strategy about the purpose for tracking and analyzing data. Do this before you turn on the tools or make them visible in the office. Be upfront on how data is collected, what information is used and who can access reports. Communicate clearly to employees how the data collection and data usage is intended to benefit them.

- **When used to monitor remote workers, align messaging with the remote work policy.** Many organizations are experiencing or have experienced an unprecedented need to support people working remotely. Managers are often not used to this way of working and might struggle to adapt their management style. Gartner has encountered cases where leaders wanted to have the camera on at all times to make sure that the person who was assigned to the work was actually the one doing it. They may also ask for more extensive reporting on activities directly from employees. Show how the monitoring allows for transparency into worker activities without needing to constantly ask them to be reporting on what work is being accomplished in other forms. Use it as one part of enabling managers to move from evaluating levels of activity to evaluating outcomes (see "Maverick* Research: Monitoring Remote Worker Productivity Is Pointless").

- **Consider using continuous performance feedback and voice of the employee technologies instead of monitoring tools.** A further option is to turn this into improving managers’ capabilities in working with employees to set goals and reflect on performance. Enabling better conversations may be a better option (see EXTech and continuous performance management profiles in the “Hype Cycle for Human Capital Management Technology, 2019”).

- **Do not reduce the idea of productivity to reporting on “not being idle.”** Only do this if the job context is one that demands constant activity to keep pace with the inflow of work. Only consider this possibility for highly routine work that has yet to be fully automated.

Use a Checklist to Ensure That Employee Productivity Monitoring Is in Support of Employees Doing Their Best Work

Rolling out employee productivity monitoring software is not a low-risk and easy project. Backlash from employees can easily occur. Difficult conversations with data protection officers or privacy officers will be necessary (see “Toolkit: Assess Your Personal Data Processing Activities”). For organizations with workers’ councils, negotiation with council members will be a mandatory step. A clear strategy and communication plan will be needed for all stakeholders involved. We therefore propose the checklist in Figure 3 as a useful and simple way to gather information about the employee productivity monitoring technologies. At a minimum, it is essential to have a clear answer to each of these points before moving forward with any implementation of an employee
monitoring technology. Clarity on these points will ease communications with various stakeholders.

Figure 3: Checklist for Rolling Out Employee Productivity Monitoring Technologies

Checklist for Rolling Out Employee Productivity Monitoring Technologies

- Why Measure
- What Question to Answer
- With What Data
- With What Calculation Methods
- For Whom to See
- To Make What Decision
- With What Impact on Employees

You will need to be able to clearly articulate the following:

- **Why measure**: What is the purpose? What value or business impact should be the result of measuring and analyzing employee activities?

- **What question to answer**: What more specifically will you be looking to demonstrate? What is the information you are seeking? What is the analytical question driving this investment?

- **With what data**: What data will you use for it? Is it proportional to the purpose and planned impact?

- **With what calculation method**: What kind of statistics will be used? Is it a black-box model? Are the results of the statistical methods being used explainable?

- **For whom to see**: Who will get to see the results? In which formats?

- **To make what decision**: What kind of decision will the person seeing the results be making? Are those the ones that you intend them to make? Can you imagine decisions that they would make that would not match the intention?
With what impact on employees: What fear responses, as described earlier, might be felt by employees based on all the above? Does that match with the intention behind monitoring employee productivity?

Evidence

1 1Q19 Gartner Global Labor Market Survey, n = 7,401

2 2019 Gartner Digital Workplace Consumer Study: This study was conducted online from March through April 2019 among 7,261 respondents in the U.S., Europe and APAC. Participants were screened for full-time employment, in organizations with 100 or more employees and required to use digital technology for work purposes. Ages range from 18 through 74 years old, with quotas and weighting applied for age, gender, region and income, so that results are representative of working country populations.

Results of this study do not represent global findings or the market as a whole but are a simple average of results for the targeted countries covered in this survey.

The segments were derived through a cluster analysis of responses to a question about what percentage of the time employees would prefer to work in a set of five locations. Cluster analysis identified groups of people based on their pattern of responses to the survey questions being analyzed, which allows us to identify groups of people with specific work location preferences.

The survey question analyzed was:

If you could make the schedule yourself, what proportion of time would you like to spend working...

... in the corporate office

... in a shared/co-working office

... in a public place (such as a café)

... from home

... while traveling or commuting

Cluster analysis revealed five segments:

- Mostly corporate office with one to two day(s) working from home (33%)
- Traditional office workers who prefer to work most of the time in the office (30%)
- Truly flexible workers who would be happy with one day a week in each location (19%)
- Work from home who prefer to work most of the time from home (10%)
Co-working space workers preferring co-working or shared spaces (8%)

n = 6,905

3 “Microsoft Four-Day Work Week Boosts Productivity,” The BBC; and “A New Study Reveals Why Working From Home Makes Workers More Productive,” Inc.

4 “Hacks Rebel After Bosses Secretly Install Motion Sensors Under Desks,” The Register.

5 “How COVID-19 Led to a Nationwide Work-From-Home Experiment,” The BBC.

**Recommended by the Authors**

How to Harness Voice of the Employee Insights for Continuous Employee Experience Improvement

Hype Cycle for the Digital Workplace, 2019

**Recommended For You**

Enterprise IT Governance, Part 2 — Implementing the Framework

Toolkit: Checklist for an S&OP Playbook to Support Stage 3 Maturity

Invest in the Critical Competitive Intelligence Your Product Strategy Needs

Better Inform Product Decisions by Defining an Enterprise Persona

Predicts 2019: Infrastructure Services