

Virtual Employee Monitoring: A Review on Tools, Opportunities, Challenges, and Decision Factors

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Abstract

There has been a significant reduction in human-to-human contact since the beginning of the COVID-19 epidemic. Many workplaces have taken the initiative to allow staff to work from home. However, monitoring workers and determining whether or not they are executing the tasks assigned to them has proven to be a significant difficulty for all firms and organizations that facilitate Work From Home. Individual workers' hours of work, presence, and active, idle, and break periods are being automatically tracked. To increase accountability, the program may take computer screen captures at random or at predetermined intervals and check the remote team's online activity and analytics in real-time to see how they are spending their time and where they might improve. This research discusses the 4 popular mentoring tools, namely, Virtual time tracking (VTT), Random screen capture (RSC), Tracking of Websites and Apps, and Face Identification/biometrics. We also examined the opportunities these tools offer and the challenges they pose.

Finally, we briefly outlined various decision factors before implanting remote employee monitoring. We argue that a firm must first assess the local legal framework before employing staff monitoring and should assess if their industry is conducive to monitoring. Finally, Employee monitoring will be effective only if the necessary information technology infrastructure is in place.

Introduction

Permanent, full-time, and on-site workers were the main element of the contemporary labor scene. On a typical work day, these workers would travel to a centrally monitored work site. Today, however, there is a steady transition in employment paradigms as businesses and employees become more open to different work models such as telecommuting, job sharing, freelancing, and so on. Remote employment has changed the way people think about work. Work is no longer defined by where workers go, but by what they do, and businesses are now becoming progressively virtual. The COVID-19 pandemic has probably accelerated these changes [1]. More and more companies are understanding the advantages of remote work: increased productivity, cheaper overhead expenses, and happier workers [2]–[4].

Technologies and time management systems have made it possible for company owners to be more productive. It has simplified corporate administration and helped people to remain organized. Employee-monitoring with the use of technology by businesses to track employees' job performance. Monitoring work performance has always been done by managers and executives, and it has been widely recognized since the introduction of collaborative work [5]. Employee monitoring using technology is nothing new in the office, such as the use of GPS and telemetry devices to track business automobile position and speed events, workplace video cameras, and so on. A new generation of sophisticated employee monitoring technology allows for the monitoring of employees' computer activity by using: screen capturing, Keystroke tracking, mouse click as well as movement tracking, and so on [6], [7].

Employee surveillance may take a variety of forms. Managers and owners may simply follow staff behavior by deploying dependable employee monitoring software. There are many apps or methods managers can virtually supervise its employees. Some of the features are discussed briefly in this introduction section. The next section provides detailed discussion about each feature.

One of the most common features is time tracking. The effective time tracking tool makes logging into and out of working simpler, more precise, and more dependable. This feature also enables the user to set their own working times and take intervals as needed. When employees log off, the tracker shows how much time they invested on office work [8], [9].

Another way is taking random screen captures and video clips. The monitoring software's screen capture capability will grab many of arbitrary screen captures of the worker's screens [10]. Managers may review the screen captures at random to monitor the employee's internet activity during work hours. Individual screen captures guarantee that everyone is concentrating on the proper things while doing their assigned tasks [11].

Managers use social media monitoring tool to monitor their workers' activity and use of social media sites during work hours. Managers may get this information by reviewing the

websites visited by employees during work hours. Using keylogging, every keystroke can be monitored and recorded in an accessible file using keylogging [10]. The main goal of implementing this function is to keep employees engaged on office-related activities.

Managers may also track the whereabouts of mobile workers using employee tracking software. Managers may detect where their workers are at any particular minute by putting GPS into business cars and personal gadgets. Businesses automate their operations using a variety of applications and solutions. Monitoring software monitors programs, devices, and their resources to determine their dependability. Aside from the functions described above, employee monitoring application also provides several other options for the supervisors.

Employee tracking has various advantages and disadvantages, despite the fact that it is a vital aspect of controlling workers' productivity.

I. Increased Productivity

Humans are instinctively driven to perform much better if they have a crowd viewing them. This has been proved through scientific investigation. The principle also applies to personnel who are observed by sophisticated monitoring systems. Keeping track of their formal activities helps employees stay focused and motivates them to continue making the best use of their time [12].

II. Greater comprehension

Regular monitoring enables company owners or team leaders to discover possible errors in real time. Monitoring enables businesses to collect reliable evidence of work, allowing them to assess a worker's potential and devotion to the task [13]. Monitoring also allows business to see how long it requires staff to reach key milestones and objectives. Using this data, businesses may determine whether to hire new staff or train the current team.

III. Improved Security

Employee monitoring safeguards company's complete web presence. It protects critical data and personnel information in firm from hostile cyber assaults [14]. When someone attempts to access protected data or engages in questionable conduct from both external and internal sources, monitoring systems issue an alarm [15].

IV. Improved Delegation

For the best performance, employers assign the correct work to the right individual. Using monitoring technologies, corporate leaders may identify their workers' faults and strengths. This advantage enables them to effectively assign work. Employee trust, teamwork, and skill development are all enhanced by effective delegation [16]–[18]. When employees are trusted, they feel respected and satisfied. This improves staff retention and happiness.

V. Smarter Firm Expenses

Staff monitoring is a prudent investment that enables company owners to save money. Monitoring tools provide you with a better understanding of how much your staff cost the organization. It assists in determining how much hours and other corporate resources are being squandered. Early detection of these anomalies minimizes future loss and allows for much-needed time to establish corrective measures.

While worker monitoring system is lauded for its many merits, it does have drawbacks. Some firms are hesitant to utilize the technology due to certain downsides. We highlight the disadvantages and discuss how to reduce the risks.

I. Employee Belief

Trust difficulties are likely to occur when businesses adopt staff monitoring. Some of staff will be dissatisfied. It is natural for them to feel untrustworthy and that their dedication to the organization is being questioned. One way to address this problem of trust is to be entirely upfront about the process. It is a duty that companies owe to their employees [19]. To begin, companies should make it clear that this technology will not be used for snooping. Company owners should demonstrate the advantages of innovation and how it improves efficiency. Employees will be more collaborative if they learn how to improve their responsibility, efficiency, and time management.

II. Employee Dissatisfaction

Many workers believe that surveillance infringes on their privacy right and lowers their spirits and motivation at work [20]. This negative mindset and mistrust cause unnecessary tension, harming their comfort at work. One way to resolve this issue is that every decision of tracking software must be carefully considered. It is critical to select one that is not unduly obtrusive. It should be consistent with firm's workplace culture and goals. When tracking is carried out responsibly, it is more likely to be accepted by employees. It is essential to make certain that every component of the process is disclosed, including its techniques, data gathered, and the way it will be utilized.

III. Legal Consequences

Employee surveillance is not without legal ramifications. Different nations have rules that allow companies to follow workers on their own devices, but only under certain conditions. As a result, organizations can exercise caution while using this technology. Monitoring that is intrusive and deceptive is a breach of the privacy right [21]. It has the potential to create many unwelcome complaints, causing irreparable harm to the company's image. Before adopting any monitoring device, it is effective to ensure that all local, regional, and central monitoring rules are strictly followed. Compliance puts a business on the best behavior and long-term business success while also establishing confidence in the employees [22].

2. Virtual monitoring tools

As disused in the introduction section, Managers of remote personnel may find it challenging to verify that their team in the field is performing to the best of their abilities. Managers are forced to assume what workers are doing throughout the day since they do not have a way to monitor their actions. This section disuses in details the various items employers uses to monitor the teleworkers

2.1 Virtual time tracking (VTT)

The technique of documenting time against activities is known as time tracking. Time monitoring has been around for a long time, but it seems many businesses are just now truly grasping how it may assist their corporate operations [23]. The need for team time

management software is increasing. Hourly workers, contractors, remote teams working on foreign projects, and enterprises such as software development organizations, digital marketing agency, legal firms, or construction firms are the primary users of time trackers today

In the corporate world, time tracking refers to the recording of workers' working time against duties given to them in order to verify that such employees are reimbursed appropriately for their time. It is a subsection of time and attendance, which includes time monitoring as well as other features such as performance, time off, billable hours, and scheduling. Time tracking software offers not only useful tools for documenting time but also analytics and reports that provide insight into personal and group productivity, expenses and profits, time distribution across jobs and projects [24], [25].

The notion of time tracking arose from the need to provide organization, visibility, and transparency to remote teams. While it assists managers in resource coordination, it also allows virtual or remote employees to master their performance. The advent of the time tracking technology has aided in the automated tracking of remote workers' check-in time and working hours. In other words, remote employee time monitoring program that allows employees to concentrate on the tasks for which they were employed.

Additional advantages of time tracking software include the option to include lunch breaks, hourly pay, connectivity with invoicing systems, and many more. Time tracking aids in the organization and consolidation of efforts toward the completion of a difficult undertaking, such as the creation of digital goods.

Staying focused is one of the obstacles for remote employees. The morning journey allows an office worker to change into work mode. When they get at work, the physical trek helps them get down to business.

A telecommuter must shift psychologically as well as physically. The use of remote employee time monitoring software fosters trust. Remote mentoring is based on mutual trust and respect. Some argues that employee time monitoring software does not pose a danger to workers; rather, it fosters employee involvement and offers a safe environment for everybody to manage and optimize their own performance and job efficiency. Anyone using the platform should be able to view their own timesheets, activity time, and project tasks. It's a dependable platform for developing an honest and open working culture, and workers may feel at ease utilizing it.

The impacts of Virtual time tracking (VTT)

I. Handle Budgets Better

It may be difficult to predict how many days, hours, work, and resources will be required to finish a specific project. A manager might presume that initiatives for high-priority customers would need more attention than those for clients with lower revenue, but this isn't the ideal method to allocate cash. Managers may observe how much time a representative generally spends with a certain customer and the sorts of tasks he or she does for that client when personnel monitoring is in place [26]. This information provides managers with a better understanding of the demands of that specific customer and allows

them to allocate finances and human resources appropriately. The more managers understand about client-employee interactions, the better they can allocate organizational resources.

II. Assess Employee Output

Another advantage of monitoring personnel is the opportunity to quantify their production as it occurs. Managers may then check whether the appropriate staff are being allocated to the appropriate projects. For example, if an employee's performance on a certain job is below average, he or she may not be one of the greatest match for that project. This indicator may prompt management to intentionally train that person or, in the worst-case scenario, assign a new representative to the project.

III. Administer Feedback

Managers may more readily provide feedback to workers regarding their performance with tracking tools in place. This is a crucial asset, since many remote workers list a lack of input from management as one of their biggest complaints. Workforce monitoring allows managers to deliver feedback based on particular actions performed by a representative in the field, rather than just commenting about his or her overall performance [27]. Having this skill allows managers to teach workers who are underperforming and acknowledge those who thrive.

IV. Manage Project Timelines Effectively

Before allocating tasks, managers would most likely create a project timeframe. Managers may watch the time workers spend on a project and the sorts of tasks they do using employee monitoring to check whether they are adhering to the suggested timeframe [28]. Insights acquired from this data might allow managers to teach people as required to ensure they are working effectively, or to create a new timetable. Monitoring, in any case, will prevent projects of being delayed due to inefficiencies in the field.

Tracking remote workers' activity assists managers in determining which business procedures are effective and which need improvement. It also enables managers to provide meaningful feedback to staff, both good and negative. Organizations that use employee monitoring might benefit from increased company development and staff engagement.

One of the primary disadvantages of time-tracking is the impression that employees are being observed by superiors. Installing a time-tracking system might be seen as an indication that employers mistrust their workers. This may have a severe influence on employees' well-being, leading to more stress and making them less creative [29].

2.2 Random screen capture (RSC)

The automatic screen capture enables employers to take screen captures of actions conducted on their system at predefined or random time intervals. The screen captures will allow managers or authorized workers to monitor the programs used and the percentage of time spent [30]. These screen capture monitoring capabilities are developed in such a manner that they automatically record the screen of workers' laptops at certain intervals of time. There is a variety of software available that makes it easy for the user to take monitoring screen capture on the computer. There are certain procedures to take to swiftly examine the system, which will aid in the employee-monitoring screen captures.

There are two methods for implementing screen captures, each with its own set of benefits and challenges.

The first method is to take manual screen captures. This approach indicates that supervisors must manually enable this function by choosing the time and employee whose PC they want to capture. Employees are more likely to view this strategy unfair since it is more focused. It is also inefficient if the company needs evidence of work for a big number of workers. However, since managers may choose when to use the function, they have a lower probability of gathering certain sensitive data.

Another kind of employee screenshot monitoring is automated, in which the system captures screen captures at random for a certain set of workers or all of them. This method is obviously more equitable since it is indiscriminate and no single employee is separated and targeted. At the same time, there's a significant risk a company manager captures anything they shouldn't, such as personal communication, account information, and so on.

Though watching someone's computer screen is similar to invading their privacy and may seem criminal. But it has been argued that it is not when it comes to employment. Companies are permitted to monitor the screens of their workers' computers during working hours, and in most countries, this is a legal requirement.

Random screen captures may assist organizations in monitoring any internal issues from the employee's end. While they may also discover about monitoring flaws that evade the notice of the organization's management department. So, to summarize, screenshot monitoring is argued to be a competent approach for tracking staff productivity.

The impacts of Random Screen Capture (RSC)

Automated screen capture technique assists in controlling a remote team. It is very useful for tracking or managing a remote team. Remote teams are compensated for working hours; therefore, it seems necessary to assure productive time with automatic screen captures and maximize the project's time and money.

Automated screen capture technique assists in finding concerns about fraudulent activities. Managers can quickly filter out questionable or ineffective actions. The recorded screen identifies the kind of app used and allows for a better understanding of real-time actions performed by the employee. It aids in the protection of sensitive data.

Automated screen capture technique also helps in paying special attention to some employees. Enabling the auto screenshot option for certain employees or the full team allows to keep track of the uninteresting worker and their sluggish behaviors. It identifies where they fall short in order to remain productive. It can also enhance employee training. Screen capturing is a fantastic tool for providing efficient staff training. It gives a comprehensive image and insight into an employee's performance, which may be utilized for training and performance evaluation.

The challenges in using screen monitoring software

This tracking technique has certain drawbacks, but they are readily overcome when the benefits are so compelling. It reduces the need for in-person monitoring, allowing

managers or team leaders to focus all of their efforts on productive tasks that will help firm become more efficient.

The first challenges are the concerns about privacy. The only significant disadvantage is that companies may utilize screen captures to eavesdrop on workers' personal lives. However, there is a simple solution: workers should not use their social medias or make financial transactions at work.

Employees may suspend monitoring if they need to perform something essential that is not work-related. The monitoring will then be resumed. There will be no screen captures captured, and no time will be logged. Furthermore, screen tracking software does not record every action taken by an employee. It captures screen captures on a regular basis, so critical information is not disclosed.

2.3 Tracking of Websites and Apps virtual employees visit or use

Web monitoring is essentially the collecting and distribution of data about a person's internet activities. This data may range from IP addresses, which establish location, to information on how an employee engage with internet sites, for example how much time an employee stays on a page, to activity across many websites, which enables monitors to know about his/her preferences and browsing patterns.

Managers and executives can keep records of the Websites the workers visit to assure they do not exceed their permitted time. Tracking which websites workers browse and how lengthy they stay on them helps a business not only check if they are overusing certain sites, but also to look for any strange activities.

Table 1. A typical URL/App Mentoring Solution				
Apps	Type	Productivity Score (1-100)	User	Duration (total)
Google docs	Writing	80	Employee 1	1:30 minutes
Facebook	Social media	10	Employee 2	30 minutes
Microsoft excel		90	Employee 1	2 hours
YouTube	Social media	10	Employee 2	40 minutes
ESPN	Sports	0	Employee 3	1 hour

Several programs enable the company and managers to routinely send notifications to staff when a non-productive website is accessed. A pop-up window emerges, alerting the team to avoid distractions and cease wasting time. It enables a business to be informed of the applications or website the remote workers are currently using or visiting and prevent non-work-related pursuits. This allows them to focus more on their duties and hence increase productivity.

Performance analyses provide statistics with actual data, providing with an in-depth view of remote workers' productivity. It is shown on a visual panel, which managers and executives may arrange by user or by all users. It enables them to personalize the efficiency

status of websites and apps for each team, allowing them to produce accurate results that represent that team 's performance. Managers can keep track of the URLs the remote workers visit to ensure they do not exceed the time limit. Tracking which websites workers visit and also how long they dedicate on them helps to not only monitor if they are overusing certain sites, but also to look for any strange activities [31].

Monitoring the kind of websites that the remote workers visit is critical for understanding their online surfing patterns. The URL tracking method simplifies remote employee monitoring by giving a comprehensive summary of the sorts of sites visited throughout the workday.

The URL tracking method offer certain benefits. It lets organizations and managers spend less time examining remote employee monitoring reports and let determine the characteristics of unknown websites without having to personally visit each one. It can filter online tracking data to show websites that violate the organization's appropriate usage regulations, such as obscenity, betting, and hatred. Additionally, it allows managers identify remote workers who are using business time to browse social media and gaming websites, and enhance IT control efficiency by tracking for unfamiliar apps and detecting suspicious desktop app activity.

Moreover, URLs and app tracking method can prevent time Loss in remote remote workers by assuring that the remote staff are active and interested rather than playing video games or surfing social networking sites. Managers can make performance evaluations by keeping traceable data of ineffective software and internet use.

2.4 Face Identification/biometric

The usage of facial recognition in the work has grown in popularity in recent years, and it is currently applied in a variety of contexts. When the Covid-19 pushed millions of workers to work remotely for the first time, it had a significant impact on enterprise security, putting IT security personnel unable to deploy their data protection obligations [32]. To defend their businesses, some have implemented stronger processes to better detect internal dangers, such as using face recognition software to check staff IDs.

Remote employment poses a significant problem for IT security [33], [34]. Employee verification is critical for remote access, in addition to private connection and security protocols. Within the workplace, a username plus password login may be adequate. Access to critical corporate resources must be safeguarded with even greater levels of assurance for remote employees.

Biometrics connects an online identity to a real person. Companies may use face biometrics to authenticate the identification of workers working from home as aspect of the multi-factor user verification. Physical attendance checks are an important aspect of their session management. Facial detection that is seamless and uses common cameras and can be set up without substantial overhead or IT infrastructure investment has wide application and acceptability. Facial detection combined with liveness detection guarantees access control reliability without compromising security.

Traditional attendance monitoring and recording devices are vulnerable to misuse, especially at busy locations. Facial recognition system was widely used in industries such as production and construction, where correct on-site attendance may be difficult to

maintain and the habit of employees clocking in for missing colleagues can be problematic. In recent years, it has also witnessed development in other fields. The program often needs the worker to input a distinct passcode and afterwards appear in front of a webcam while facial recognition system verifies their identity.

One popular monitoring system gives the company access to an employee's webcam and utilizes FRT to detect when the worker is there. It has been observed that an increase in this sort of option during lockdown, which might be due to the frequent worries businesses have about teleworking situations. This has been especially prominent in the finance industry, where information security is a major issue, but companies in other industries examine similar solutions.

Facial recognition system is rapidly being used to control access and verify employees' identities when they enter and depart the workplace or certain sections of the workplace. Businesses are also actively using facial recognition system to help them meet their security and compliance responsibilities. Interestingly, this is particularly common in highly regulated industries, for example the financial industry, where corporations must adhere to tight compliance requirements.

Employees' webcams are used to track absences from their workstations, and they are required to provide a written justification for time wasted.

Challenges in employing face identification

There are certain concerns about accuracy and prejudice while utilizing facial biometric authentication in the work Technology for facial recognition has been questioned as groups and governments reconsider its usage in the aftermath of worldwide demonstrations against racial inequality [35]. There is also possibility of the sexual and skin color bias of face recognition technology, which is prone to misclassifying women with darker skin tones [36].

The expense of establishing such security protocols is increased by high error rates in face recognition accuracy. IT teams face scenarios in which authorized personnel are shut out or unauthorized workers are given access to sensitive data. When face recognition is utilized as an identification as well as entry control system, this may result in decreased remote employees' performance, increased expenses, and decreased effectiveness.

Any organization that manages customer data on staff computers must be able to detect if unauthorized personas are reaching corporate data ports at any time of day, with mechanisms in place to identify suspicious activity and take measures. However, with a change in attitude and a greater emphasis on security, workers are less willing to provide their personal (particularly biometric) details without a compelling cause, necessitating businesses to devise less invasive, more user-friendly means of verifying their identification.

3. Factors to be considered before implementing remote employee monitoring

Organizations with remote employees can assess the benefits and drawbacks of employee monitoring before making a decision. The potential boost in productivity must be evaluated against the danger of data and privacy breach. The following are key variables that will assist firms in determining if the possible benefits exceed the potential hazards.

a. Local legal environment

Before implementing employee monitoring, a company must evaluate the local legal environment. Every nation has its own set of labor and privacy regulations. These regulations may apply differently in the private sector vs the public sector. Furthermore, collective bargaining agreements with unionized personnel will have an influence on privacy standards. The disparities in law emphasize the breadth of privacy protection, and the kind and severity of litigation in the case of a breach. Furthermore, the workforce management technology solution to buy and apply is driven by local statutory needs. For example, if the regulation is a little more liberal and employee-friendly, the selected technology should provide workers more control over the acquired data, such as the option to erase or obscure particular data after collection.

b. Sector

Before implementing any monitoring tool, organizations should consider whether the sector is compatible with monitoring. Employee monitoring tools have traditionally been used in certain sectors and are now widely accepted among workers. GPS trackers, for example, are often placed in business cars in the transportation sector. Workers in other areas, such as high tech and innovative design, may be less open to employee monitoring tools. The level of acceptability by employees must be considered as part of the employer's decision-making process.

c. IT support

Employee monitoring is only successful if the requisite information technology infrastructure is in place. The computer equipment used by remote workers to do their everyday tasks is critical. If remote workers use their own devices, formally known as BYOD, rather than employer-supplied equipment, it has immediate legal consequences in the case of a privacy complaint. Second, the business must have a secure database system in place to store and regulate access to the recorded employee data. Third, infrastructure support encompasses everything from physical hardware to corporate rules. An acceptable use policy must clearly define what workers and employers are and are not permitted to do with business technological infrastructure [37], [38]. Furthermore, an Employee Privacy Policy must explain what information is obtained and how, as well as how and for how long the collected information is retained and utilized. Subject to local government regulations, the information must be safely removed after the agreed-upon expiration date.

d. Suitable technology solution

Employee tracking technology solutions often include screen captures as well as tracking mouse movements and key strokes. It is known that certain type of software exists to avoid staff monitoring by replicating and automating the aforementioned user activity. Furthermore, the technology should be adaptable to the needs of the unique sector and the individual organization. Certain occupations will need the capacity to measure productive hours away from the keyboard in order to account for mental exertion. Monitoring technologies must evolve to meet the increasingly complex challenge of measuring job performance.

e. Productivity objectives

Employee monitoring will provide a massive quantity of data for management to use. The data's utility is determined by what management does with it, especially how managers interpret the data. The main goal of staff monitoring is to measure work performance. To that purpose, a company must establish clear and quantifiable performance objectives that are appropriate for the duties at hand. Employee monitoring will provide the most advantages if the appropriate performance targets are set. Remote employees are more likely to consider monitoring as invasive and a breach of workplace privacy if performance targets are not in place or not being jointly agreed upon.

4. Conclusion

Organizations may fully comprehend how long specific operations take by measuring time, casting light on activities which are time-consuming but may not be actually vital to the organization. As a result, people can choose where their time is best spent. Every employee may see what their coworkers are working on with tracking methods. This may promote cooperation by enabling team members to readily support and collaborate on specific initiatives. A time-tracking system might make sense for certain firms when utilized appropriately as a tool to boost team members' productivity. Time monitoring helps a company to optimize procedures, provide team-based transparency, and identify areas where an employee may need more assistance or training. Tracking workers' time has the danger of making them feel as though they are being watched. This is one of most prevalent concerns expressed by workers when a time monitoring system is deployed as remote employees feel dissatisfied because of the feeling that they are always being observed.

Screenshot monitoring system is a sort of employee tracking software that captures screen captures of employees' desktops to monitor their computer usage. These systems will take screen captures at predetermined intervals, when specified activities are performed on the employee's computer, or when a screenshot is manually captured by an operator.

Many companies claim that their most valuable asset is their workforce. In actuality, a more realistic description would be that high-performing workers are assets, whereas everyone else is a liability to some extent. Knowing which employees are assets and which are liabilities may be difficult for firms with remote staff. Employee monitoring technology allows companies to track employees' productivity by capturing and analyzing their computer desktop activity. To obtain the full advantages of staff monitoring, a company must guarantee several items. First, its employees are adequately educated on the job-related metrics and performance objectives being measured. Second, the employee

monitoring system may be tailored to meet a certain business culture and ethos, as well as to comply with local security and labor laws. Third, there should be an adequate information technology architecture in place to ensure the integrity and security of the collected data from remote employees through tracking systems.

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