Prepare Yourself for the Future of Workforce Management

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The market for workforce management is going through a period of transformation. Existing vendors are replatforming, new entrants are bringing innovation, and workers expect new consumer-grade apps to support flexibility. Application leaders can use this note to help prepare for the future of WFM.

Overview

Key Findings

- Major workforce management (WFM) and human capital management (HCM) suite vendors have recently announced a new generation of cloud-first WFM applications.
- The latest generation of WFM applications have the capability to transform, augment and disrupt WFM.
- The growth of the contingent workforce has created new demands for WFM.
- Organizations have traditionally invested less in WFM applications than in other HCM applications, such as functions of talent management and core HR.

Recommendations

Application leaders responsible for transforming WFM as part of a broader HCM transformation should:

- Work with operations, finance, procurement and HR leaders to ensure that their organization's WFM requirements reflect an updated and holistic perspective that incorporates the needs of workers, managers, administrative staff and executives.

- Create a plan to migrate any on-premises WFM applications to cloud solutions within the next two to three years in order to gain access to the latest capabilities and, where applicable, leverage early-bird migration discounts.
- Assign a stakeholder for WFM applications to prioritize and oversee investment.
- Recognize the potential of these emerging WFM capabilities and develop a business case for a pilot deployment to quantify the ROI, and to justify wider roll-out of the initiative.

Strategic Planning Assumption

By 2023, at least 95% of sales of new workforce management (WFM) applications will be deployed on the cloud.

Analysis

WFM has traditionally been a function of administration and operations, with the core capabilities being time and attendance, absence management, and scheduling.

The average life span of a WFM application deployed on-premises is between eight and 10 years. WFM applications can be difficult to configure and integrate due to the potentially complex work rules. Integration with various other business applications, as well as integration with hardware such as time clocks, access control systems, and/or point of sale systems, add complexity and cost. Hence, as long as the current WFM application meets existing business requirements, it can be difficult to justify investment in a new/upgraded one. Furthermore, in smaller organizations there may be no obvious owner or stakeholder of the application, making it difficult to raise the profile of WFM or make a case for investment. Among all HCM functions (such as recruitment and performance management) WFM is second only to payroll in terms of being least frequently invested in.

The latest generation of WFM applications include capabilities and features that can augment, transform and disrupt most industries that operate with a large proportion of hourly-paid workers (such as in retail, manufacturing, healthcare and the public sector). These capabilities include:

- **Automation of manager experience** — A set of capabilities that automates the decision process originally completed by a manager or supervisor.

- **Employee experience**— A new set of capabilities designed to enhance the employee experience including, but not limited to, scheduling flexibility and preferences, communications, learning, assessments, rewards and recognition, surveys, and collaboration.
- **Flexible workforce** — The ability to support both employees and contingent workers on the same application.
- **Virtual assistants (VAs)** — A personable, semi-intelligent interface allowing users to interact with the application via bidirectional voice or text commands.
- **New platforms**— Applications built on cloud-first platforms with the latest architecture and more robust frameworks for developing and managing APIs.

Readers should note that there is some cross-over between these five trends: VAs directly impact the employee experience, some functions of employee experience are tied to automation of the manager experience, and many of these new trends are available via new platforms. For the purposes of this research, the authors find it useful to distinguish between these trends, as it is expected that their impacts will differ in nature (disrupt versus augment versus transform), as will their adoption timeframes.

Figure 1 plots these five trends by time and by nature of impact on WFM.

Figure 1. The Future of Workforce Management Trends

Source: Gartner (February 2018)

The following definitions were used for Figure 1:

- **Disrupt** — Completely changes the mode and method of WFM. With a disruptive technology, Gartner assumes that the competitive market will also be disrupted and that existing vendors will not be agile enough to anticipate the disruption and react accordingly, so that they do not lose market share.
- **Augment** — Provides functionality and capability to support or incrementally improve existing WFM processes. For the competitive market, this usually means relatively short-lived areas of differentiation while slower vendors catch up.
- **Transform** — Adds new functionality to the extent that existing WFM processes evolve and/or new processes are introduced. Again, this will mark an area of more pronounced, medium-term differentiation for WFM vendors rather than a major area for disruption.

The following sections provide further detail on the five key trends in WFM.

Automation of Manager Experience

New technology platforms are evolving the capabilities of WFM solutions from those that provide sophisticated recording, compliance and reporting to those that further improve time and employee tracking and better optimize the WFM processes through more extensive task automation. New features promoted by providers are ostensibly targeted at all user types — frontline employees, line managers, administrators and upper management. Often, however, the ultimate aim is to allow managers to strategically manage the workforce rather than tactically manage it by spending many hours on administering and "feeding" the WFM system (see examples below).

Currently, most new technology offerings focus (and rightly so) on the simple, yet time-consuming, tasks often owned at the line manager level. These tasks do not inherently generate business value, but are crucial for accurate payroll and scheduling.

The following examples highlight two key tasks that are prime for enhanced automation:

Task: Approving time off

How: Some offerings today allow the WFM system to automatically approve or deny time off requests without manager intervention. The system does this by ensuring that the employee submitting a time-off request has accrued enough time off and that the

time taken does not compromise shift coverage, safety requirements or "blackout" periods. Commonly, these systems will provide the requestor with some visibility on who else has approved time off to set expectations and/or provide a visual hint as to whether they should pick another time-off slot, or not before formally submitting their request.

Benefit: Many line managers dislike "simple admin" such as checking if a given shift or day is adequately staffed before approving or denying a time-off request. Having the system do this for them can add up to many minutes in a week and collectively many hours/days across a large organization. This is valuable time that can be used for more productive purposes.

Task: Intra-day management

How: The best-laid schedules are often upset by unscheduled absences (due to illness, accident or other circumstance). Many newer WFM solutions help managers overcome these challenges by delivering to their smartphones or tablets a list of available and suitable replacements for the absent worker. Simply selecting which workers to notify results in them being contacted via their preferred means (such as text, email or automated phone notification), and the first worker that responds gets the shift. Automation can speed up this process by not only providing a list of most suitable candidates, but also deciding which are most suitable and generating the message to send to the employees. Thus, all that the manager has to do is confirm the selection to trigger the process.

Benefit: This process enables the supervisor to quickly get a replacement, which should: reduce the disruption to customers due to the absence of the employee; improve the employee experience, as employees can pick up more free shifts more quickly; and also reduce the time managers have to spend administrating the WFM system in response to the absence.

Moving forward, and when combined with more sophisticated analytics and machine learning, the level of automation described above will become standard in WFM. Automation will focus on more sophisticated use cases that still require manual intervention; for example, systems being aware of employee productivity metrics or being aware of team and individual dynamics and then using this information to create optimum work schedules. These particular scenarios are still mostly determined by line managers who then manually adjust schedules to ensure their most productive individuals are

available at certain times, and more disruptive individuals are reassigned to other tasks most suited to their productivity and/or attributes.

Gartner anticipates that demand for the automation of the manager experience will be driven primarily by the retail sector, where optimizing staffing costs is a key priority. The recent announcements by Tesco and Sainsbury's, two of the largest supermarket retailers in the U.K., that they will reduce the number of managers and restructure is a prime example of this in action. [1]

For WFM buyers that prioritize optimizing staffing costs, the level and sophistication of automation will thus be a key differentiator between WFM vendors. Buyers should note that industry specialization is a key characteristic to look for to get the most proactive and applicable solution for your requirements. In relation to automation, the first level of automation described above is likely to become a commodity; but the second level — where there is consideration of task assignment and individual employee attributes — will likely be better served by industry specialists versus generic scheduling and absence management applications.

Employee Experience

Gartner defines employee experience as "the employees' perceptions and related feelings caused by the one-off and cumulative effect of interactions with their employer's customers, leaders, teams, processes, policies, tools and work environment" (see "Designing for 'Employee Experience' Will Increase Engagement and Business Impact of IT Projects"). It goes beyond user experience, which Gartner defines as "the sum of the effects caused by a person using a digital solution" (see "Defining a Good User Experience With the Gartner User Experience Model"), although an application's user experience should certainly be treated as one element contributing to the overall experience, particularly if the application is used frequently (generally from multiple times per day to at least weekly). For many worker types (particularly hourly, contract and project-based) WFM applications fall into this category of frequent usage, and thus can dramatically affect the overall employee experience — for better or for worse.

In response to the rising expectations of hourly workers (particularly those in retail, hospitality and transportation), WFM solutions developed over the past five years have included the delivery of business processes via mobile devices as a fundamental design tenet. This has freed workers from the constraints of traditional desktop, kiosk and point-of-sale devices, and has enabled features that enhance the employee experience of many traditional WFM processes:

- Time capture and approval — Some leading organizations have enabled geolocation so that workers can easily check in for their shift on their mobile device based on proximity to their normal work area and without having to queue to use a time clock. Usually, business rules are configured to prevent early check-in (or "store" workers' requests until the actual shift begins and then punch them in automatically if they are still within proximity). Notifications can be set up to remind workers of required breaks, as well as to ensure proper end of shift ("You have reached the end of your scheduled shift time — press OK to end your shift"). Not only does this enhance the employee experience of the workers, but it also reduces the workload of the supervisor, who is able to quickly review and approve time and has to resolve far fewer time-punch errors.
- Labor scheduling — While demand-driven scheduling optimization has been a requirement for certain industries (particularly retail, hospitality and healthcare) and has been delivered by a number of advanced WFM solutions over the past decade, organizations have come to realize that it is not enough for a schedule to be optimal only from a business standpoint. The tightening labor markets in these industries has resulted in a drive to improve scheduling visibility, flexibility and fairness, with the goal of an improved employee experience due to better work-life balance and better retention over time. The following are representative capabilities:
  - Preferences — Workers are able to indicate preferred shift days and timings, as well as any days where they do not wish to be scheduled, and can regularly update preferences based on their changing needs.
  - Visibility — Workers are able to quickly and easily view schedules for the upcoming weeks to spot any potential issues.
  - Flexibility — Workers can resolve any scheduling issues by trading/swapping shifts based on adherence to defined business rules (such as the suggested replacement having the proper training, schedule availability and seniority), with little to no need for involvement by the supervisor.
  - Transparency — Some of the newer WFM solutions enable workers to rate their schedules on a weekly basis, and that feedback becomes part of the input driving the scheduling optimization engine, with the goal of incrementally improving the number of "5 star" schedules for both the workers and the organization.
- Shift swapping — Most WFM solutions have the capability for employees to swap shifts, and some now offer the capability to automate the process of employee shift swapping

with little or no manager approval. Once a schedule has been created and distributed, depending on the seniority/rights of the employee and consideration of other factors — for example, peak period coverage requirements and/or skills/seniority required — the employee may request to swap their assigned shift with another individual. In this instance, the system will search for eligible candidates and inform those concerned or allow the individual to provide a preference for who should cover them. Through automating this process, employees should be more quickly informed whether or not the shift swap has been approved, and also enable those employees that want to pick up extra shifts to do so more efficiently, providing employees with greater work flexibility.

In addition, some solution providers have gone beyond the traditional WFM processes to incorporate a broader set of basic capabilities from other HCM domains (including learning, assessments, rewards and recognition, performance management check-ins, and collaboration) in an attempt to deliver all that workers might need for their day-to-day work life in a single application on their mobile devices. Gartner calls this a "worker engagement platform" (see "Hype Cycle for Human Capital Management Software, 2017") and emerging vendors (WorkJam, Snagajob and PeopleMatter) can dramatically improve the employee experience for early adopters (readers should note that most vendors in this space specialize in specific industries, and not all industries are catered for). In this scenario, a worker would likely use this app to interact with their schedule, request PTO for the following month, quickly recognize an associate for their work on a task, view a short learning video on a new product for their location, and conduct a regular performance check-in with their manager.

These emerging solutions certainly go well beyond the boundaries of more traditional approaches to WFM, and therefore organizations considering them should be prepared for substantial internal change management (often more from the existing staff functions that must think beyond existing HCM applications boundaries than from the workers themselves, who view this collection of capabilities as sensible). However, these solutions can also exist as a sort of "overlay" to an existing WFM solution (for example, WorkJam partners with Kronos) that delivers an improved employee experience, and a hybrid implementation of this sort will reduce the level of change management needed.

Flexible Workforce

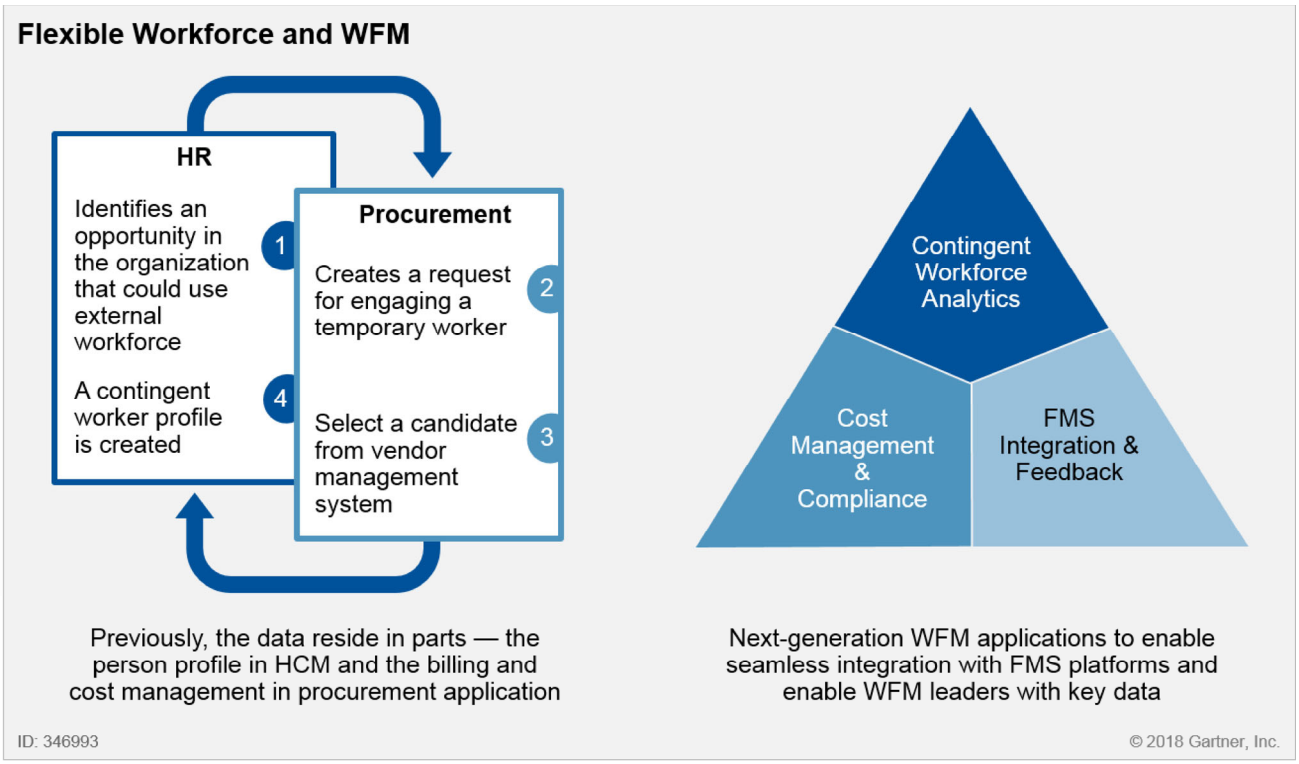
As the percentage of contingent workers grows in the total workforce, their involvement has matured from just operational and administrative to more strategic and business-crucial roles. Yet, most of the WFM platforms currently do not provide any insights

regarding the deployment of contingent workers. A few HCM applications and vendor management system (VMS) platforms do allow some amount of data interchanges, but application leaders are still left with the following challenges:

- HR leaders traditionally have not been involved in hiring and billing of contingent workers, limiting their knowledge about if they are disproportionally affecting overall workforce costs.
- Since their time and attendance data is not captured on the same application as hourly-paid employees, it can be cumbersome to determine if contingent workers finish their tasks at a faster rate/are more punctual than regular employees.
- As contingent workers are not included in the formal performance cycle, feedback on the quality of their work or their experience with the organization is often not well-documented. HR leaders often do not know if they are improving or detracting from overall workforce productivity.

Figure 2 presents the current and predicted future states of applications that manage the flexible workforce.

Figure 2. Flexible Workforce and WFM



Source: Gartner (February 2018)

Gartner anticipates that the next-generation WFM applications will support time and attendance data capture and evaluation for the contingent workforce, and over time will ultimately support contingent billing and payments. What follows is a representative list of expected additional functionalities that should be included.

Contingent Workforce Analytics

Workforce metrics and KPIs that include views that both incorporate freelance workers for comprehensive workforce planning, as well as isolate them to determine their impact on the business.

FMS Integration and Contingent Worker Feedback

Allowing real-time integration with freelance management system (FMS) platforms. A tool to capture quick multirater feedback from completed projects in order to identify the best-performing freelancers and include them in succession planning.

Spend Analysis

HR application leaders will have a deeper look at the cost incurred for each FMS partner and ROI perceived, and decide whether any FMS has been particularly cost-effective or exorbitant for the skills rendered.

Recommendations for WFM leaders supporting contingent workers include the following:

- Engage in a conversation with the current WFM vendor (and VMS vendor, if applicable) to understand the roadmap to include flexible workforce management support in their offering.
- Scrutinize workforce analytics data to understand the best alignment of the new emerging FMS providers for different skills requirements.
- Define a broad, unified set of common WFM practices that can be applicable to contingent workers and employees alike. This will improve the overall workforce sentiment and help bridge the gap arising from differences in business and regulatory compliance requirements.

Virtual Assistants

Virtual assistants (VAs) present a new approach for workers and managers to interact and engage with a WFM application.

Gartner defines a VA as: *"a conversational, computer-generated character that simulates a conversation to deliver voice- or text-based information to a user via a web, kiosk or mobile interface. A VA incorporates natural-language processing (NLP), dialogue control, domain knowledge and a visual appearance (such as photos or animation) that changes according to the content and context of the dialogue. The primary interaction methods are text-to-text, text-to-speech, speech-to-text and speech-to-speech."* (Source: Gartner IT Glossary)

The important component for WFM is not the computer-generated character, but the use of natural-language processing (NLP) and the integration of WFM data with domain knowledge. Through this, VAs have the potential to improve the following functions of WFM:

- User friendliness — An application with which you can interact via natural language should be innately user-friendly (assuming the NLP component has been sufficiently tested and developed). Gartner estimates that application training accounts for approximately 5% of annual recurring SaaS and training costs for WFM applications. Hence, any way that WFM applications can become more user-friendly and intuitive can potentially reduce the need for training support, and reduce recurring costs for WFM applications. There is also an added benefit in that interactions between users and the application may become faster, reducing the time taken for administrative tasks, although it is currently difficult to quantify to what extent this may improve operations or reduce costs.

- Unplanned absences — Absences can occur for multiple reasons and may take a variety of forms. A worker with a dynamic shift pattern may easily forget when and where their next shift is. Alternatively, a worker commuting may find their travel disrupted and so miss the start of their shift. Absences will always occur; however, with VAs we have the potential to do more about them. For example, a VA-enabled WFM application can remind workers of upcoming shifts ahead of time, or can proactively alert workers and managers if a worker will likely be late for a shift based on their location. It is perhaps tempting to feel that this application may be too invasive and crosses the "creepy line" (see "Workplace Analytics Needs Digital Ethics"), and this may well be true if the technology is misused. However, if used appropriately, and if the privacy of workers and managers is safeguarded, VAs applied to WFM could help organizations reduce the impact of unplanned absences.

- Scheduling and task management — Similar to unplanned absences, VAs could facilitate more effective swapping and assignment of shifts. While many WFM applications today have the capacity to alert workers to open shifts, through a VA and more personable

communication, as well as a more user-friendly system, more open shifts could be filled more quickly. Furthermore, as well as assigning schedules, VAs could also communicate tasks to workers and track completion of tasks (an example of a vendor offering this type of solution is Theatro). Again, task or activity management is not new for WFM, but by communicating it on a personal level increased productivity could be achieved, as well as greater insight into labor operations.

- Clock-ins — Workers forgetting to clock in or out is one of the most common reasons for managers having to spend time administrating exceptions in the WFM application. A VA mobile WFM application can prompt workers to clock in and out when entering and leaving work, and then send a reminder if the prompt goes unnoticed. Taken a step further, a VA mobile WFM application in conjunction with some form of technology to determine worker presence (most likely either a Bluetooth beacon, geolocation, or some form of physical security equipment such as an access control system or video surveillance camera), could automatically clock a worker in and out and then prompt that worker to affirm that the time entry is correct via the mobile WFM, if employee attestation is necessary. This use of a VA in conjunction with WFM could save managers time in administrative tasks, make the workers' lives easier as they no longer have to queue up to use a time clock, and may mean that no physical time clock is needed, thereby reducing the cost of a WFM solution (the average time clock costs $2,000 to $3,000 to purchase per unit, while service and maintenance costs vary from $250 to $500 per clock, per year).
- Reporting and analytics — Properly analyzed, WFM data contains the potential to improve operations. However, it relies on managers being trained and to regularly review data reports in order to have a meaningful impact throughout the organization. A potential VA use case would be to use VA as a delivery mechanism for data reporting and analytics. Doing so could make it easier to make use of data reports and analytics, as VAs could be used to alert managers to a new trend or issue identified by the analytics. Although the VA would not be the technology piece doing the heavy lifting here (that is done by the reporting and analytics tools), it would provide easier access to the results, meaning that managers wouldn't have to spend as much time training to use these tools, or browsing through potentially boring data.

A barrier to VA use will be workers who don't have access to smartphones, or who do not wish to use their own devices to run such an application. This barrier is not insurmountable. The future of WFM is tied to mobile and to VAs, so this is a case of "when," rather than "if," it happens. In such instances there are workarounds, such as providing these workers with

mobile devices, or providing a kiosk or time clock for self-service (although to get the true value proposed here each worker will need access to their own mobile device hosting the VA WFM application).

A more immediate barrier is the limited number of vendors that are developing and providing VAs in conjunction with WFM. Of the larger WFM vendors with which Gartner is familiar, we presently only know of two that offer VA technology with WFM — Ramco Systems, via the Ramco Chia product, and Verint, which has embedded a VA in the Verint Workforce Management product for contact center operations. One potential solution to this challenge would be for other WFM vendors to partner and integrate with specialist VA vendors, such as IP Soft, Amazon, Apple, Microsoft and Google.

Application leaders who can see the potential for VAs with WFM should make a business case for a pilot deployment to quantify the benefits, and to justify wider roll out of the initiative.

New Platforms

Gartner believes that new technology platforms will evolve to support the cloud-only future that we predict. The new platforms will be cloud-native, mobile-native, and real-time data-driven, have in-memory data processing for faster operating speeds, will constantly be updated with new innovative functionality, and will be easy to extend and integrate with other systems.

At present, it is the quality of being cloud native that Gartner uses to distinguish between past/legacy and present/future WFM platforms. A cloud-native platform is designed from the outset to be deployed and used in a cloud environment, whereas noncloud-native platforms originally were designed to be deployed on-premises and then were brought to the cloud typically via a single tenant architecture.

Vendors benefit from cloud-native platforms as there are operational efficiencies gained in administrating a cloud-first product, which mostly comes from the fact that the application will almost always be multitenant rather than single-tenant. It costs less to administer one instance of software used by multiple clients than a separate instance of software for each client, so the vendors will stand to save from improved operational efficiency. At least part of the money saved will be invested back into improving product functionality, system performance, and customer service. So it is also beneficial to the customers to be on a cloud-native platform. Furthermore, as Gartner anticipates that almost all vendors will migrate to a cloud-native architecture by 2027, any client that remains on a noncloud-native platform may find that their WFM vendor spends less resources on updating their legacy

platforms, and will eventually be forced to migrate once the vendor has announced end of support for that platform.

We have recently seen two of the largest WFM vendors announce the development and testing of new WFM platforms. In November 2017, at its customer conference, Kronos announced the launch of a new product called Workforce Dimensions (WFD). Simultaneously, ADP announced the launch of a new product called ADP Workforce Manager. Readers should note that this is not a case of coincidence. ADP resells Kronos' Workforce Central (WFC) product as ADP eTIME (called RealTime in Europe) and is set to continue this partnership with WFD. We expect further new offerings over the coming years as existing and new entrants to the WFM market invest in their platforms.

Gartner recommends that any organization with a noncloud-native WFM application should plan to migrate to a native cloud platform within the next 12 to 24 months, in order to take advantage of the innovation delivered by new WFM platforms. If the existing vendor has a cloud-native offering, the customer organization should consider migrating to that platform, as many vendors are offering attractive commercial terms to incentivize migration, as well as to protect against customer attrition. However, organizations should also take the opportunity to assess other vendors to ensure they select the WFM solution that is the best fit for their requirements, as well as to ensure competitive pricing.

As the competitive market heats up, and as established vendors test and develop their new platforms, there is some potential for disruption. Buyers should not assume that they are best-served only by the largest vendors — see "Market Guide for Workforce Management Applications" for WFM vendors to consider.

Acronym Key and Glossary Terms

WFMT&A	Workforce Management Time and Attendance
APIVAVMSFMS	Application Programming Interface Virtual Assistants Vendor Management System Freelancer Management System

Evidence

The authors of this research have conducted more than 700 Gartner client inquiry on the subject of WFM, and have attended many WFM vendor briefings and conferences.

[1] "Thousands of Jobs at Risk at Sainsbury's," (http://www.bbc.co.uk/news/business-42791079) BBC.