

Under The Employer's Eye: Electronic Monitoring & Surveillance in Australian Workplaces

By Troy Henderson, Tom Swann and Jim Stanford
Centre for Future Work at the Australia Institute

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Summary and Key Findings

Each year the Centre for Future Work at the Australia Institute conducts a public survey of Australian working hours, as part of our annual “Go Home on Time Day” (GHOTD) initiative. Findings from the survey regarding hours worked, preferences for more or less hours, and the incidence of unpaid overtime are reported in a companion study.¹ This year, our survey also included a special section focusing on the forms, prevalence, impacts and implications of electronic and digital monitoring and surveillance in Australian workplaces. Our goal was to investigate a secondary dimension of the time pressure facing Australian workers. It is not just that work is being *extended* into greater portions of our days (through unpaid overtime, the use of mobile phones and computers to reach workers at any time, pressure to not fully utilise annual leave, and similar trends). In addition, even *within* the work day, time pressure is *intensified* with the expectation that every moment of work time must be used for productive purposes – an expectation that is increasingly reinforced through omnipresent systems of monitoring, performance measurement, and surveillance. The result of these twin forces is an overall inability for people to escape from the demands of work: neither at the workplace (even for short periods), nor away from it.

Part I of this report begins by describing the main forms of modern electronic monitoring and surveillance (EMS) that have placed more Australian workers “under their employer’s eye.” These methods include the use of location tracking technologies, monitoring of emails and social media content, the “gamification” of work, digital methods of performance monitoring, and even electronic systems for employee discipline and dismissal. Following sections examine the various purposes of modern EMS systems, and the extent of their application. This is followed by a brief description of the legal and regulatory system governing EMS in Australia; current regulations limiting employers’ use of these systems are sparse and inconsistent. The last section of Part I discusses the direct and indirect consequences of these new forms of monitoring and surveillance for workers. It argues that the impact of omnipresent surveillance in workplaces may be contributing to the slower wage growth which has so concerned Australian economists and policy experts in recent years; because it is now easier and cheaper to monitor and “motivate” employees through surveillance and potential discipline, employers feel less pressure to provide positive economic incentives (such as job security, promotion, and higher wages) to elicit loyalty and effort from their workforces.

¹ Please see “Excessive Hours and Unpaid Overtime: 2018 Update”, by Troy Henderson and Tom Swann (November 2018), available at https://www.futurework.org.au/go_home_on_time_day_2018.

Part II of the report then reports the findings of our original survey data regarding the forms, extent and impacts of EMS systems in Australian workplaces, and the attitudes of Australian workers towards these technologies and trends. We surveyed 1,459 people between 26 October and 6 November 2018, using an online survey methodology, conducted by Research Now. The sample was nationally representative with respect to gender, age and state and territory.

The key findings of our report include:

- Modern information and communication technologies (ICT) facilitate omnipresent and low-cost electronic monitoring and surveillance – not just in the workplace, but often outside of it, as well.
- Employers can harness the reach and diversity of new technologies to enhance the scope and detail of their knowledge of employee behaviour, attitudes and performance.
- A central motivation of EMS is to enhance the degree of knowledge and control of employers regarding the activities of their employees when they are on the job – and, in some cases, when they are not.
- Digital EMS techniques can also directly accelerate production and heighten productivity, for example by controlling the speed at which workers are digitally assigned new tasks.
- In some cases, digital and electronic surveillance may serve more positive functions, such as contributing to safety and security in workplaces.
- There is no comprehensive data available regarding the extent of EMS systems in Australian workplaces today. There is no doubt, however, that the number of workers being digitally monitored, and the range of techniques through which this monitoring occurs, have expanded rapidly over the last two decades.
- Australia’s patchwork system of privacy and workplace laws has, to date, provided only minimal protection to Australian workers against modern EMS.
- Among Australians currently working, 70% said their workplace uses one or more methods of electronic or digital surveillance. On average, this group reported 3.2 different types of surveillance being used. This confirms that digital forms of monitoring are widely used in Australian workplaces.
- Only 20% of respondents in work said their workplace did not use any form of digital or electronic surveillance. The remaining 10% did not know.
- The most common forms of digital surveillance were employer monitoring of web browsing (43%), followed by monitoring the contents of emails (38%).
- 18% of all workers experience digital surveillance by their employers outside of their workplace.

- 10% of all workers said they had been personally penalised or disciplined as a result of digital or electronic surveillance.
- There was overwhelming agreement (92%), and majority strong agreement (59%), that employers should notify employees when any form of surveillance is being used. And almost three-quarters (73%) thought there should be legal restrictions limiting how employers can use these technologies.
- Nearly three-quarters of workers (71%) believe these technologies reduce privacy for workers, and 60% said it reduces trust between workers and employees.
- A majority of workers (52%) believe that the use of EMS reduces the quality or pleasure of work.
- Only a third agreed they are a good way to make workers more efficient and work harder (37%); most disagreed (53%) with that sentiment.
- Only about one-third of workers (35%) said they would prefer to work in a workplace that uses EMS technologies. Nearly half (46%) disagreed with that sentiment.

The report concludes with several broad recommendations for responding to concerns about electronic and digital monitoring and surveillance in workplaces. These include more consistent legal protections across Australia, better measures to protect workers' privacy, assurance that normal employment security rights and processes are respected (not solely reliance on digital tracking and monitoring), and supporting workers' efforts to negotiate the terms of digital monitoring and performance evaluation through collective bargaining.

Part I: Electronic Monitoring and Surveillance of Workers Today

A. INTRODUCTION: THE LABOUR EXTRACTION IMPERATIVE

Monitoring and surveillance of workers by employers has been an integral aspect of the waged employment relationship for centuries. Employers generally hire labour in units of *time*: a certain payment per hour, per day, or per week. But employers actually desire something different: productive expended labour *effort* by those workers. The distinction between what they are paying for, and what they want, gives rise to an ongoing preoccupation (some might say *obsession*) with converting time as fully and completely into expended effort as possible. Marglin (1974) and Bowles and Gintis (1982a, 1982b), among other scholars of the labour process, discussed this “labour extraction” problem, and described its various dimensions (including economic incentives, the freedom and cost of employer monitoring and discipline, and the availability of alternative income opportunities for workers).

Wage labour became the dominant form of work (at least in the formal monetary economy²) with the advent of capitalism; in this context, employers are pressed by both the lure of enhanced profitability and the pressure of competition from other businesses (each seeking to expand their own market and profits) to maximise the intensity and success of their own labour extraction efforts. Finding ways to manage paid labour to elicit maximum effort and productivity, and hence reduce unit labour costs of production, is thus a central and lasting priority for employers. Various techniques are invoked to meet that goal, including:

² Non-waged labour occurs in many parts of the economy, including the unpaid labour performed by people (disproportionately women) in homes and communities; the own-use production of small farmers and other small producers; and the work of business owners. The longer-run trend in most economies, including Australia, is for wage labour to grow relative to other forms of work, as a result of many factors: including agricultural depopulation, the concentration of production among larger firms (and consequent long-run erosion of self-employment), and the commercialisation of tasks (ranging from child care to cooking) once performed on an unpaid basis within the home.

- The use of technology to directly control the pace and intensity of work.³
- The use of positive incentives (sometimes called an “efficiency wage”) to elicit superior dedication, retention, and effort.⁴
- A desire by employers, expressed through their influence in the policy-making process, to strictly limit the availability of income support programs (especially those available to working-age adults), in order to reinforce motivation and discipline among waged labourers (who are consequently all the more reliant on keeping their job).⁵
- Investments by employers in monitoring and supervision systems – which, so long as employers retain the ability to sanction and dismiss workers deemed unsatisfactory, provides them with greater capacity to impose discipline and extract labour effort.

The nature and intensity of this latter dimension of labour extraction – monitoring and surveillance – has varied over history in response to technological, economic, and regulatory factors. Technology determines the ability of employers to impose particular quantitative and qualitative standards in production, and to gather and wield information gathered about production. Economic conditions determine the relative ease with which employers can attract and retain a suitably compliant workforce – and they affect the relative desperation of workers to hold onto their current job (workers are always more compliant when alternative employment opportunities are scarce⁶). The legal and regulatory context (including constraints on employer actions that may be imposed by labour law and/or collective agreements) determines how and where employers can collect information of employees; and what they can do with it. More specifically, strong employment security provisions in labour law or collective agreements limit the ability of employers to sanction or discharge

³ As emphasised famously by Braverman (1974) and the subsequent labour process literature (for example, Buroway 1979 and Thompson 1989).

⁴ Key contributions to this literature include Shapiro and Stiglitz (1984) and Akerlof and Yellen (1986). Stiglitz (1985) stresses the importance of imperfect information about workers’ attributes and attitudes on the part of employers as motivation for their willingness to pay superior, above-market-clearing wages; this practice thus also helps to explain the existence of equilibrium unemployment at the macroeconomic level.

⁵ In the terminology of economists such as Weisskopf, Bowles and Gordon (1983), discipline over labour effort is stronger when the “cost of job loss” is higher – resulting from a combination of greater ability of employers to fire unsatisfactory workers, weaker income security programs, longer duration of unemployment, and a greater gap between the existing wage and the wage rate likely to be earned in alternative forms of unemployment. This approach places the idea of “efficiency wages” in a broader context of unequal labour market power.

⁶ This disciplining effect of unemployment on behaviour and relationships in the workplace has been emphasised by many theorists, from Marx’s “reserve army” to Kalecki’s theory of the business cycle (1943).

workers they deem uncompliant, and hence limit the effectiveness and value of intense surveillance.

Throughout the history of wage labour, therefore, a myriad of monitoring and surveillance techniques have been utilised by employers as part of their ongoing effort to extract maximum work effort (and hence generate maximum potential profit) from their employees. At the simplest level, employers can hire supervisors to watch the work effort of workers and impose sanctions when discipline and intensity are deemed (from the employer's perspective) unsatisfactory. However, human supervisors must be paid, even though they do not directly contribute to production, and this reduces profitability. Moreover, the disciplining value of human supervisors may be less-than-perfect: supervisors themselves need to be supervised, they may be unaware of what their underlings are doing, and they may even come to sympathise with or befriend the workers they are monitoring. Other more sophisticated techniques to organise work activity consistent with maximum labour extraction incorporate socio-psychological techniques (ranging from the Ford Motor Company's early "sociology" experiments with its workers,⁷ to modern sophisticated team-building and "loyalty" programs). Work organisation techniques such as assembly lines, time and motion studies (inspired by Taylor's vision of "scientific management"⁸), and modern "total quality management" and Kaizen strategies pioneered by Japanese firms, also create a more controlled and disciplined context for production. Meanwhile, employers have often aimed to extend their capacity to monitor and influence worker behaviour beyond the workplace, to monitor and control their workers' activities and attitudes at all times: in previous times even including monitoring the moral, religious, and political activities of workers.

B. ELECTRONIC AND DIGITAL FORMS OF MONITORING, SURVEILLANCE AND DISCIPLINE

In this historical context, the modern use of electronic and digital monitoring, surveillance and discipline strategies by employers is simply an extension of their age-old desire to extract labour effort, and construct a disciplined, profitable working environment. It can also be understood as one more dimension of the inherent struggle for control over workers' time – which is the implicit theme of our annual Go

⁷ Harvey, 1990, Ch. 8.

⁸ Taylor, 1911.

Home on Time Day activities.⁹ Employers seek to extend the dominion of paid work over more of the day, including through overtime work (much of it unpaid, as our companion research has documented); irregular scheduling and rostering systems (which require workers to be ready to work much of their lives, without necessarily getting paid); reductions in breaks for meals or rests during the work day; reductions in paid holidays, or encouraging workers not to take paid holidays; and more.¹⁰ Another aspect of this preoccupation by employers is to intensify the degree to which time spent actually on the job is “productively” used in direct production. By seeking to ensure that every minute of paid work time is dedicated to production, and minimising “non-value-added” time wasted on things like rest periods (formal or informal), conversations and interactions with colleagues, toilet breaks, and other “non-productive” activities, employers are intensifying their control over their workers’ time. Digital and electronic monitoring and surveillance systems contribute to both dimensions of employers’ efforts to control workers’ time: extensive (ensuring work time takes up a greater proportion of all time) and intensive (ensuring that as much work time as possible is associated with value-added productivity). As in the past, this effort can extend beyond the boundary of the workplace and the paid work day.

What sets contemporary methods of monitoring and surveillance apart from this long-standing tradition is the degree to which modern information and communication technologies (ICT) facilitate omnipresent and low-cost electronic monitoring and surveillance (EMS) – again, not just in the workplace, but often outside of work, as well. Several contemporary methods of EMS are summarised in Table 1 (in alphabetical order). They range from relatively mundane technologies such as electronic time-stamp systems to record worker attendance, to extreme and dystopian proposals to implant microchips right into the bodies of workers, in order to generate an instantaneous and constant flow of information regarding a worker’s whereabouts and activity.¹¹ Many forms of workplace surveillance are now encompassed within employees’ use of ICT in their jobs – such as systems which automatically monitor web, email, social media, and text activity. Other strategies involve the application of dedicated surveillance systems such as GPS and closed circuit video equipment.¹²

⁹ Our companion report, “Excessive Hours and Unpaid Overtime: 2018 Update” (by Troy Henderson and Tom Swann), reports annual survey results regarding Australian workers’ hours of work, their attitudes toward working hours, and the incidence and extent of unpaid overtime.

¹⁰ The lines between work and non-work, in both time and space, are being blurred by the advent of technology which “follows workers home,” and endemic requirements to perform unpaid overtime (as documented in our companion study).

¹¹ Kollewe, 2018.

¹² The frequency of use of several of these methods is reported in the survey results presented in Part II of this report.

Table 1
Diverse Forms of Electronic Monitoring and Surveillance

Automated systems to collect consumer ratings and staff evaluation
Biometrics (such as finger scans, facial recognition, retinal scans)
Closed Circuit Television (CCTV) surveillance
Digital badges to track location, tone of voice, frequency and content of conversation
Digital performance and quality management in production systems
Digital profiling and social media history compilation and screening
Electronic time-stamp and attendance systems
Gamification: use of game-like techniques to boost attendance and work effort
Global Positioning System (GPS) tracking in vehicles, ID cards, etc.
Location tracking for off-site contractors and other mobile workers
Microchipping employees to track location and activity
Monitoring email content
Monitoring keystrokes
Monitoring telephone calls
Monitoring social media content
Monitoring web browsing
On-call systems operationalised through text, mobile phone, or e-mail
Radio Frequency Identification (RFID) tracking
Swipe cards to track attendance and location
Time-motion data compilation to track output and activity
Wearables (such as Fitbit or chip implants) to track activity and location
Source: Authors' compilation from Ball, 2010, deWinter and Kocurek, 2014, Dudley-Nicholson, 2016, Gabrielle, 2018, Kidwell and Sprague, 2009, Kollewe, 2018, Manokha, 2017, Nelson and Crockford, 2018, Novak, 2018, Sander, 2018, Scheiber, 2017, West and Bowman, 2016.

These modern forms of EMS affect workers at every stage of the employment relationship: from hiring, to work performance, to potential dismissal. As Kirstie Ball puts it:

‘The information collected by monitoring employees is used in a number of ways. Conclusions can be drawn about employees’ performances which have implications not just for their behaviour inside the workplace, but sometimes for their lifestyle outside it. The range of techniques used varies from computer and telephone logging

to drug testing, mystery shopping, closed-circuit television, mobility tracking and electronic recruitment. The widest range of monitoring techniques is found in the service sector, although manufacturing and some primary industries also monitor their employees.¹³

Employers can harness the reach and diversity of new technologies to enhance the scope and detail of their knowledge of employee behaviour, attitudes and performance. Melissa Gregg notes that these technologies, together with the ubiquitous use of social media platforms in society, 'allow work to invade spaces and times that were once less susceptible to its presence.'¹⁴ She argues that when 'the office exists in your phone,' the dividing line between work and non-work becomes fuzzier; the 'always-present potential for engaging in work' places new demands, pressures and expectations on modern workers.¹⁵

New digital businesses – often referred to as the “platform” or “gig” economy – have developed some particularly invasive, though often subtle, forms of modern EMS. Companies use a diversity of digital and app-based technologies to track their workers' location, activity, and output. Sophisticated digital tools also aim to motivate (some might say manipulate) workers on a psychological level.

A new strategy called gamification is one interesting component of modern EMS. Gamification aims to make 'work...more like play...while opening the door to make play into productive work;' this 'drastically broadens both the amount of time and the ways in which one can be productive.'¹⁶

Vincent Gabrielle argues that:

'The modern gamified workplace enables control beyond Taylor's wildest dreams. Games are sets of rules prescribing both actions and outcomes. A gamified workplace sets not just goals for workers but precisely how those goals can be achieved. Managers don't need to follow workers with stopwatches. They can use smartphones or apps. It's micromanagement with unprecedented granularity.'¹⁷

We will consider in more detail the cases of two large digitally-based businesses which constitute innovative but worrying examples of modern applications of EMS strategies: the ride-share company Uber, and the on-line retailer Amazon. Both companies have

¹³ Ball, 2010, p. 88.

¹⁴ Gregg, 2011, p. 3.

¹⁵ Gregg, 2011, pp. 3, 14.

¹⁶ deWinter and Kocurek, 2014, p. 3.

¹⁷ Gabrielle, 2018.

attracted great public attention and enormous stock-market valuations.¹⁸ But the two companies have very different workforce strategies. Uber has tried to constitute most of its workers as independent contractors (claiming they are not “employees” at all¹⁹), in order to avoid costs and risks associated with a more traditional employment relationship (such as minimum wage, paid leave, or severance obligations). Most workers in Amazon’s facilities, in contrast, are hired under traditional wage labour arrangements (either directly by Amazon or by contacting or labour hire suppliers); but Amazon has deployed many modern digital technologies, including EMS strategies, to maximise work intensity and productivity within the context of that traditional waged status.

Researchers have noted that Uber uses a combination of computer game techniques together with insights from behavioural economics to monitor drivers and “nudge” them to increase their work effort – even when the economic benefits to drivers may be marginal at best. This effort is shaped by the fact that as nominally independent contractors, Uber drivers are not required to stay on the job for specific hours.²⁰ How then does Uber ensure an adequate supply of drivers, particularly during peak hours, in order to meet demand in a timely and profitable way?²¹ Digitally-managed incentives, encouragement and game-like strategies are part of the response. Elements of this approach have been adopted by some of Uber’s competitors, as well as by some other platform companies. Uber’s methods have included:²²

- Automatically offering new jobs to drivers just before current jobs are completed, to reduce the chance that drivers will log off.
- Reminding drivers how close they are to reaching earnings targets when they try to log off.
- Using computer graphics (such as a gauge illustration representing how close a driver is to reaching an incremental but arbitrary income threshold).
- Offering digital “badges” to drivers who meet various performance criteria that have no material benefit.

¹⁸ At time of writing Amazon has a market value of over \$1 trillion U.S., exceeding Apple as the world’s most valuable publicly-traded business; Uber’s market value was estimated at \$120 billion U.S. (Hoffman et al, 2018), even though it has never made a profit.

¹⁹ That claim is being challenged in court actions in several countries; see, for example, Davies (2017) and Farivar (2018). Uber’s staffing strategy and fiscal model is described further in an Australian context in Stanford (2018).

²⁰ Economic compulsion, of course, is a background force that keeps Uber drivers on the job – all the more so given the low realised hourly incomes of this type of work (see Stanford, 2018).

²¹ The reverse problem, of having more drivers available than needed for demand, is not a concern for Uber since its drivers are not paid when they do not have active fares.

²² Scheiber, 2017.

- Not revealing a passenger destination before drivers accept a new (perhaps unprofitable) job.

In sum, Uber's sophisticated use of app-based psychological monitoring and performance strategies helps the company maximise worker attendance, even in a context whereby drivers have the nominal right to log off work at any time:

'Because [Uber] mediates its drivers' entire work experience through an app, there are few limits to the elements it can gamify. Uber collects staggering amounts of data that allow it to discard game features that do not work and refine those that do. And because its workers are contractors, the gamification strategies are not hemmed in by employment law.'²³

Psychological and behavioural research has indicated that rewards and incentives, even with small or zero monetary value, can have disproportionate influence over workers' attendance and productivity. Even when rewards are small in relation to overall compensation, research on goal-seeking and cognitive fixation suggests that workers can become disproportionately attracted to and motivated by reward objects, including non-monetary awards (like in-kind prizes, recognitions and awards).²⁴ The motivational power of incentives, even modest ones, is reinforced through the deliberate construction of a group culture within workplaces that publicizes, promotes, and enforces the quest for rewards – overlapping again with game culture.

In contrast, other dimensions of Uber's digital surveillance and discipline strategies rely more on compulsion than on these token positive incentives. Of particular note here is the company's use of consumer ratings, collected via the company's booking app, to evaluate and discipline drivers. Consumers are asked after each ride to evaluate their driver's performance using a star system. Drivers who receive repeated consumer ratings below company targets or benchmarks can be disciplined, up to and including removing access from the app (tantamount to dismissal from the work). Traditional legal rights of employees to discovery, progressive discipline and representation are non-existent in this system. Research has indicated that on-line systems of evaluating performance are not reliable indicators of true service quality, and are vulnerable to various forms of bias.²⁵ The fact that Uber can "deactivate" workers on the basis of negative customer reviews imposes a significant vulnerability on drivers: the pressure to maintain customer ratings places Uber drivers in a subservient position relative to customers who may be harassing or abusive, and compels drivers to provide various

²³ Scheiber, 2017.

²⁴ Examples of this research include Hur and Nordgren (2016) and Adler (2017).

²⁵ See, for example, Leong (2014), Edelman et al. (2017), and Kane (2015).

“extras” to their passengers (such as drinks and snacks) at their own expense – eating further into their already-low net incomes.

Amazon has also attracted critical attention for its intensive and extensive monitoring and surveillance of its workforce. The company’s practices in its warehouse facilities in the US, UK and Australia all reveal a similar story of constant electronic monitoring, including through the use of handheld scanners that determine the pace of work.²⁶ The company’s recently established warehouse operations in Australia provide a powerful case study of how the combination of economic power, insecure work and electronic monitoring can impact on employees’ experiences in the workplace. According to one recent report,²⁷ most Amazon workers at the company’s Melbourne and Sydney facilities are casual employees engaged by a labour hire firm, referred to by Amazon as “associates.” A process that combines intensive EMS with elements of gamification (for example, the “countdown” facing each worker as they pick each item) ratchets up the pressure on Amazon workers. The process has been described as follows:

‘As soon as one item is scanned, a solid bar on the bottom of the screen immediately starts to count down, showing how much time they have to reach their next item, which could be anywhere in the 24,000-square-metre warehouse. If an item is not scanned within the required time, the worker’s “pick rate” is marked down. At the centre in Dandenong South, pick rates are handed out to workers once or twice a day, and those falling below benchmark targets have to explain to their managers why.’²⁸

Workers reported feeling under extreme pressure to meet their benchmark pick rates, with some avoiding taking bathroom or water breaks for fear of falling behind and, potentially, losing shifts. Worker advocates, health and safety experts, and union leaders have widely criticised the company for these practices.²⁹ These pressures are only likely to intensify with Amazon having patented a new wrist band for employees which ‘would use ultrasonic tracking to identify the precise location of a worker’s hands as they retrieve items. One of the patents outlines a haptic feedback system that would vibrate against the wearer’s skin to point their hand in the right direction.’³⁰ It is unclear the extent to which Amazon intends to utilise this patented technology.

²⁶ Sander, 2018.

²⁷ Hatch, 2018.

²⁸ Hatch, 2018.

²⁹ Hatch, 2018; Powell, 2018.

³⁰ Solon, 2018.

Another US technology company, Three Square Market, garnered global attention when it implanted microchips into over 70 (purportedly volunteer) workers at its headquarters in Wisconsin. The chips, the 'size of a grain of rice,' allow employees to 'to open security doors, log on to computers and make payments at the company's vending machines.'³¹ These innovations can seem attractive – even “cool” to tech-savvy Millennials – but there is obvious danger with such technologies: the information stored on the chips can be used by employers (or even government) in ways detrimental to employees' interests. Similar EMS technologies have been used in UK and China, using helmets and wristbands to monitor activity and fatigue among workers.³² As discussed further below, these EMS systems can be motivated by goals that may appear benign (such as worker convenience or safety), but there is clearly a dual potential for these forms of modern EMS to become coercive and punitive.

Platform companies are of course not the only employers to deploy new EMS technologies and strategies. Michel Anteby and Curtin Chan's study of surveillance of Transport Security Administration (TSA) workers in the US found increased surveillance of employees to be counterproductive. Their research, based on 89 interviews with managers and employees, found that the experience of being constantly and closely watched led workers to engage in 'invisibility practices' such as 'going to the restroom a lot or taking a bit longer to walk through unmonitored areas between assigned tasks.'³³ The surveillance measures were initially introduced in 2011 in an attempt to reduce baggage theft, but became in the eyes of employees a form of extreme and coercive surveillance. As Anteby and Chan put it:

'There is an irony of these invisibility practices: Employees engaged in them to seek some respite from what they interpreted as coercive surveillance. But the more they did so, the more managers could potentially recognize that employees were trying to escape the monitoring systems. And because it was harder for managers to get to know their employees as individual people, mistrust spiralled out of control. As a result, added monitoring measures were seen as justifiable by management.'³⁴

UPS is another company that uses modern EMS systems, in this case tracking sensors, to monitor its drivers. According to the company, this is for safety reasons and the company will 'not discipline our personnel based on the sensor information we

³¹ Saner, 2018.

³² Saner, 2018.

³³ Anteby and Chan, 2018, p. 1.

³⁴ Anteby and Chan, 2018, p. 1.

collect.³⁵ Toll Transport, an Australian company, was recently given approval to expand the use of cameras and infrared fatigue monitoring systems in driver cabins for long-haul and liquid tanker vehicles, after a Fair Work Commission finding that these forms of EMS were ‘neither unsafe nor unreasonable.’ This was despite the Transport Workers Union raising concerns about the intrusive and potentially anxiety-inducing effects of infrared light.³⁶

Some scholars have argued strongly in favour of modern forms of EMS. For example, Lamar Pierce, Daniel Snow and Andrew McAfee analysed theft and sales data from 392 restaurant locations that adopted theft-monitoring information technology (IT) systems. They concluded that the ‘observed productivity results represent substantial financial benefits to both firms and the legitimate tip-based earnings of workers.’³⁷ This optimistic interpretation assumes, like neoclassical economic models, that enhanced productivity will be reflected in higher earnings for workers – thus giving workers a “pay-off” from increased surveillance and intensification of work. Critics point to the lack of real-world empirical link between productivity growth and real wages, to cast doubt on this optimistic assertion.

These are just some examples of major employers that are deploying sophisticated and intense methods of EMS to elicit discipline, attendance, and performance. The consequences for workers include heightened stress on the job, potential safety issues (related to workload, repetitive strain and other risks), and the extension of the realm of work into greater areas of general life.

C. PURPOSES OF ELECTRONIC MONITORING AND SURVEILLANCE

Potential rationales for the implementation of modern EMS systems are many and varied. A central motivation is to enhance the degree of knowledge and control of employers regarding the activities of their employees when they are on the job – and, in some cases, when they are not. Digital EMS techniques can also directly accelerate production and heighten productivity, for example by controlling the speed at which workers are digitally assigned new tasks. In some cases, digital and electronic surveillance may serve more positive functions, such as contributing to safety and security in workplaces.

³⁵ Miller, 2018.

³⁶ Workplace Express, 2018.

³⁷ Pierce *et al*, 2014, p. 1.

Table 2**Purposes of Electronic Monitoring and Surveillance**

Disciplining employees (cautions, reduced responsibilities, reduced shifts, dismissal)
Improving employee conduct (using surveillance technologies and monitoring employee communications and social media activity)
Improving employee and customer health and safety (for example, monitoring hygiene standards, maintenance of machinery and equipment)
Improving employee performance
Improving employer performance (in relation to security, accountability and liability)
Improving human resource management (through more accurate information and less biased decision-making)
Improving training methods and outcomes
Improving workplace environments (through use of better information, reducing bullying, harassment, etc)
Increasing employers' control over their employees and the workplace (reinforcing the managerial prerogative)
Increasing expectations that employees should be available for contact by employers at any time (via email, mobile phones and social media)
Increasing employee productivity
Making productivity "fun" (through data analysis and gamification)
Protecting corporate proprietary information and commercial advantages (by reducing data theft, hacking, etc)
Rationalising the organisation of work and production
Reducing use of work time for personal digital activities (employees using phones, internet, social media, etc. for personal purposes on work time)
Reducing the cost to employers of monitoring and surveillance (replacing human supervisors with "electronic supervisors")
Tracking employee attendance
Tracking employee location
Sources: Authors' compilation from Ball, 2010, deWinter and Kocurek, 2014, Gregg, 2011, Kidwell and Sprague, 2009, Leonard, 2014, West and Bowman, 2016.

Table 2 provides a compendium of some of the varied motivations for modern EMS systems. The legitimacy of these varied purposes obviously depends on the interests and perspectives of those on either side of the "eye": those being monitored, as compared to those doing the monitoring. From an employer perspective, EMS 'may make sense from productivity, efficiency, and liability standpoints,' but its deployment

‘raises other legal, regulatory, and ethical questions as well as issues of cultural appropriateness and the psychological reactions...[it] may cause.’³⁸

Tracking the attendance and location of employees is one stated purpose of modern EMS systems. These goals have always been central to the wage labour relationship: from direct physical surveillance of workers by supervisors, to the use of punch cards to monitor arrivals and departures each day. In the digital era, the use of swipe cards, CCTV, GPS, radio monitors and apps have made it easier (and cheaper) for employers to collect detailed real-time information on their workforce throughout the day, whether onsite or offsite.

Tracking employees is closely related to another underlying purpose of EMS: monitoring workers’ output and performance. New technologies and strategies provide employers with an enormous quantity and diversity of data regarding their employees on which to base decisions regarding productivity targets and employee performance. These performance criteria may then be applied to an entire workforce, groups of workers, or individual employees.

The purposes of surveillance and monitoring of employees’ communications are several. Alongside assessing employee performance, this form of EMS may also assist employers in ‘maintaining records of business transactions and client or customer relationships;’ in some cases, they may be useful ‘in detecting and investigating any employee misconduct (such as, fraud, sexual harassment, theft of confidential information and diversion of business opportunities) and ensuring the safety of employees.’³⁹

Failure to meet certain performance criteria – or breaches of company policies and expectations regarding attendance, location and communications – may result in disciplinary actions against employees. While this is not a new feature of the employment relationship, modern EMS technologies expand the potential scope and detail for such sanctions to be enforced, because of the larger amounts of data collected, and the speed with which it is available. Disciplinary actions may range from minor cautions, to written evaluations and sanctions, to reduced responsibilities, the loss of shifts and ultimately dismissal.

The combination of the new technologies discussed above with the pervasiveness of email, mobile phones and social media points towards another purpose of modern EMS in relation to employment relations. These technologies enable employers to be in contact with their employees, not just when they are offsite, but after their working

³⁸ Kidwell and Sprague, 2009, p. 195.

³⁹ Leonard, 2014.

day or working week has finished. This phenomenon blurs the distinction between being at work and the rest of an individual's life. It has been called 'presence bleed'⁴⁰: a term which captures the difficulty many workers encounter in creating boundaries between their paid work and the rest of their lives.

As with performance, location and attendance criteria, failure to meet expectations regarding being "always available" to employers may result in negative consequences for employees. It should also be noted that the proliferation of technologies that permit this additional level of employer EMS can, under some conditions, benefit employees. For example, they may allow flexible working arrangements, such as working from home, that enhance workers' employment experience. The problem is not the technology itself, therefore, but rather the power relations and regulatory environments within which they are used and implemented.

The general goal of the "gamification" strategies discussed above can be summarised as an attempt to "make productivity fun." In turn, this overarching purpose can, according to Jennifer DeWinter and Carly Kocurek, be disaggregated into the following specific goals:

'Rationalisation through standardisation of processes via algorithmically defined procedures; compulsion to play-work to generate data, giving data to management and businesses about a wide range of player actions or traits; and articulation and eventual collapse of values between play and work and the agency of player/worker.'⁴¹

Gamification, as with communication technologies and social media, may not always operate to the detriment of employees. Games may function as useful training vehicles in some circumstances (such as flight simulators, simulating welding equipment or online interactive modules). But again, it is also true that gamification enhances the ability of employers to influence the pattern, intensity and duration of work.

D. THE EXTENT OF ELECTRONIC MONITORING AND SURVEILLANCE

There is no comprehensive data available regarding the extent of EMS systems in Australian workplaces today. There is no doubt, however, that the number of workers being digitally monitored, and the range of techniques through which this is taking place, have expanded rapidly over the last two decades. In part, this reflects the rapid

⁴⁰ Gregg, 2011.

⁴¹ Dewinter and Kocurek, 2014, p.3.

pace of relevant technological change. The internet, mobile phones, social media and innovations like GPS have become both ubiquitous and relatively inexpensive, and the range of applications of these technologies for EMS purposes expands with every innovation.

This brief section summarises some published evidence regarding the extent of EMS technologies in workplaces, primarily based on U.S. experience. This survey provides only a partial picture of the extent of modern EMS practices, but certainly confirms their growing application.

From the early days of the internet and email, between 1997 and 2000, the proportion of US companies that ‘monitored employee communications and activities at work...doubled to 73.5%.’⁴² A 2007 study found that nearly 50 percent of US firms with a turnover of more than US\$10 million monitored email and over 60 percent monitored employee internet activity.⁴³ A contemporaneous study of nearly 300 US corporations ‘found that more than a third with 1000 or more workers employed people to read through other employees’ outbound email in search of rule-breaking.’⁴⁴ Similar studies looking at changes in EMS in the first decade of the 21st Century identified increases in management’s monitoring of employees’ computer files and social media activity.⁴⁵

More recently, some companies have moved towards the use of “wearables” for employees (devices that monitor workers’ health as well as their activity level). For example, ‘BP America...introduced Fitbit bracelets in 2013’ and by ‘2015 at least 24,500 BP’s employees were using them and more and more US employers have followed suit.’⁴⁶ Those companies include IBM, Bank of America, Barclay and Target.⁴⁷ This latter trend, towards surveillance and monitoring of the health and fitness of employees is particularly concerning given the possibility it opens up for discriminating against particular individuals – and groups of the workers – on the basis of putatively objective data. The idea of “workers’ wellness schemes” may sound superficially attractive. But they could become a backdoor to excluding – or dismissing – workers who fall short of company-mandated health criteria (including on matters normally considered private).

In a global economy characterised by transnational production networks and dominated by large multinational firms, it is inevitable that the prevalence – and

⁴² West and Bowman, 2016, p. 629.

⁴³ Kidwell and Sprague, 2009, p. 197.

⁴⁴ Ball, 2010, p. 88.

⁴⁵ West and Bowman, 2016, p. 629-630.

⁴⁶ Manokha, 2017.

⁴⁷ Saner, 2018.

variety – of these EMS technologies and strategies will grow in coming decades. The question for law-makers, the judiciary, trade unions and workers is how to regulate the “employer’s eye” in the 21st century. The pressing need to address this question is highlighted in the next section of this report, which outlines the shortcomings of Australia’s legal protections in relation to modern EMS.

E. REGULATION OF ELECTRONIC MONITORING AND SURVEILLANCE IN AUSTRALIAN WORKPLACES

Technological change has affected how Australians work and how Australian workers are monitored and surveilled in contemporary workplaces. These changes are manifest in many ways, including:

‘The fact that employers can now have ready access to medical or financial records when screening job applicants; can test employees in various ways during their employment...can maintain surveillance of workers in and around the workplace; and can compile and retain large amounts of personal information about current and former employees.’⁴⁸

Australia’s patchwork system of privacy laws has, to date, provided only minimal protection to Australian workers against these practices. In general, ‘Workplace surveillance in most Australian jurisdictions is regulated by general surveillance statutes which prohibit the use of listening, optical or tracking devices except in specified circumstances, but which do not expressly apply to email monitoring.’⁴⁹ There is a lack of ‘consistency and uniformity’ in relation to how ‘the type of the devices regulated; the nature of the offences; and the nature of the defences and exceptions.’⁵⁰

In public sector workplaces, employees are afforded some recourse to verify the accuracy – and legitimacy – of information held regarding them under Commonwealth privacy legislation. The *Privacy Act 1988* (Cth) includes the Australian Privacy Principles that ‘regulate the collection, storage and use of “personal information” – that is, information and opinion about a named or identifiable person.’⁵¹ Individuals must be granted the opportunity to access and verify information held regarding them and to

⁴⁸ Stewart *et al*, 2016, pp. 708-709.

⁴⁹ Leonard, 2014, p. 116.

⁵⁰ Leonard, 2014, p. 116.

⁵¹ Stewart *et al*, 2016, p. 709-710.

report any possible breaches to the Privacy Commissioner.⁵² The *Privacy Act 1988* (Cth) has also applied to some private sector companies (above a certain turnover threshold) since 2000. This extended coverage includes some exemptions which impact the application of EMS systems. For example, monitoring personal emails sent from company computers is permitted. The Australian Law Reform Commission has made proposals to extend the application of the *Act* to apply nationally to all firms, and to enhance the privacy protections afforded employees; these recommendations have not been implemented.⁵³

At the State and Territory level, New South Wales and the Australian Capital Territory are the only jurisdictions which have passed statutes explicitly regulating electronic monitoring and surveillance of employees. The key characteristics of – and moderate differences between – the two laws are described below:⁵⁴

The NSW Workplace Surveillance Act (2005) covers optical surveillance, computer surveillance and tracking surveillance. Surveillance cannot occur without notice to employees. Surveillance is prohibited in sensitive areas (like change rooms, toilets, or showers). Surveillance cannot be imposed on employees outside of their work. Covert surveillance is generally prohibited (without approval from police or equivalent authorities). This Act also limits how employers can restrict access by employees to email and internet facilities while at work.

This Act Workplace Privacy Act 2011 also applies to optical devices, tracking devices and data surveillance devices; it does not cover listening devices. Employers must provide specified notice to employees when surveillance is in use in the workplace; they are also required to consult with employees in advance of such systems being put in place. Covert surveillance is permitted only with court approval, and then only in relation to perceived illegal activity. The ACT Act also prohibits surveillance in personally and culturally sensitive areas (toilets, change rooms, nursing rooms, first-aid rooms, and prayer rooms), and generally prohibits surveillance of employees outside the workplace.

The provisions of the ACT and NSW acts are fairly consistent. However, the absence of similar legislative protections in other states and territories gives rise to huge inconsistency in the legal treatment of workplace surveillance. In other states and territories, for example, legal experts believe employers have the right to monitor employee actions and communications (potentially even on their personal mobile

⁵² Stewart *et al*, 2016, p. 709.

⁵³ Stewart *et al*, 2016, 710.

⁵⁴ This discussion is based on material in Australian Law Reform Commission, 2014, Leonard, 2014, and Stewart *et al*, 2014.

phones) without notice.⁵⁵ The Australian Law Reform Commission has proposed the introduction of uniform workplace surveillance laws across Australia.⁵⁶

There are other Australian laws bearing on the right to privacy that are also relevant to concerns over EMS.⁵⁷ Some legal scholars have also suggested that unions should play an increasing role in safeguarding employee privacy in relation to EMS. Andrew Stewart, Anthony Forsyth, Mark Irving, Richard Johnstone and Shay McCrystal argue:

‘It seems clear that matters such as surveillance, security checks and random drug testing could not be dealt with by a modern award, but it seems equally clear that such issues ‘pertain’ to the employment relationship employer and employee to enable them to be dealt with in enterprise agreements. It must be said that unions did not accord a priority to these kinds of issues in the past. However, that has changed – most notably in relation to drug and alcohol testing, but in other contexts as well.’⁵⁸

A key conclusion regarding the protection of employees in relation to modern EMS in Australia is the inconsistency and inadequacy of current laws at the Commonwealth and State/Territory levels. There is a clear need for legal reform along the lines proposed by the Australian Law Reform Commission – and also room for unions to place greater emphasis on these issues as part of their collective bargaining strategies.

The unfair dismissal provisions of the Fair Work Act regulate the ability of employers to utilise data gathered from workplace monitoring systems to discharge workers. The Fair Work Ombudsman has also published “best practice guidelines” regarding workplace privacy issues, although the legal force of those recommendations is sketchy.⁵⁹

F. CONSEQUENCES OF WORKPLACE SURVEILLANCE FOR WORKERS

Digital monitoring and surveillance in the workplace presents both opportunities and risks for workers. To be sure, a primary motivation for deployment of EMS systems in Australian workplaces is the age-old desire of employers to have more knowledge and

⁵⁵ See Dudley-Nicholson, 2016.

⁵⁶ Australian Law Reform Commission, 2014, Ch. 13.

⁵⁷ See Leonard, 2014, pp. 118-119, and Stewart *et al*, 2014, p. 712.

⁵⁸ Stewart, *et al*, 2016, p. 712.

⁵⁹ See Fair Work Ombudsman (n.d.).

control over their employees' whereabouts and activities, as part of their general effort to extract maximum labour effort from their workers for minimum cost. Workers need to understand that core motivation: they are being watched by their employers, primarily in order to get them to work more intensely and constantly. And so one obvious consequence of the growing use of digital surveillance technologies in workplaces is an intensification of work, with consequent implications for stress, the quality of work, and potentially health and safety.⁶⁰ Violations of privacy, and the stress resulting from constant and omnipresent surveillance, can also produce negative consequences. Merely accepting a position of paid employment should not imply that a worker loses all rights to privacy and autonomy at work – simply because they are being paid for their time. Reasonable privacy, freedom from invasive scrutiny, and some ability to control immediate work circumstances (such as being able to use the toilet, or take a personal phone call) are all features of a more pleasurable and less dehumanising workplace.⁶¹

At the same time, there are certainly ways in which digital monitoring systems can enhance the safety and quality of the work environment. Safety and security systems can reduce the risk of intrusion or robbery in workplaces, which impose obvious risks to staff. Monitoring may reduce the risk of various forms of harassment or violence between employees, or between employees and their superiors. Greater ease of communication in work (facilitated by some of the same technologies and equipment used to conduct workplace surveillance) can also enhance the safety and quality of the work experience.

So there are both costs and benefits for workers arising from the use of workplace surveillance systems; enhancing the net impact for workers requires paying attention to enhancing the positive aspects, while curtailing or preventing more negative or unacceptable applications. The latter could be accomplished through measures that specify and limit employers' leeway in conducting surveillance, as well as the uses to which gathered information can be put. Those limits could be defined and implemented through legal statutes, labour standards and regulations, and/or collective agreements. Broad proposals in this regard will be considered in the final section of this report.

The ubiquitous use of electronic surveillance, monitoring, and evaluation technologies has an important macroeconomic implication, through its potential influence on wage determination. As discussed above, employers always rely on a combination of positive

⁶⁰ Surveillance systems and correlated discipline practices could lead workers to work more quickly, or take fewer breaks, than is consistent with good health and safety outcomes.

⁶¹ Ability to exert some autonomy over immediate work circumstances is found to be associated with greater work satisfaction; see, for example, Wheatley (2017).

incentives and negative sanctions to motivate and discipline their waged employees – confronting the fundamental challenge of labour extraction that is endemic to the waged employment relationship. Employers’ decisions about the balance between these dual strategies will be shaped by many factors, including technology, economic circumstances, the expectations of workers, the legal and regulatory context, and more.

An important consideration influencing the choice between “carrots” and “sticks” in employers staffing strategies will be the relative cost and effectiveness of each. We have noted that digital monitoring and surveillance systems have made it cheaper and more effective for employers to compile a detailed and timely portrait of the performance of their workers. They no longer have to pay human supervisors to collect this information; machines are cheaper and likely more reliable. Moreover, we have also noted that existing legislation and jurisprudence in Australia imposes relatively sparse and inconsistent limits on the ability of employers to gather data from EMS systems, and to wield it in disciplining or even discharging employees. When surveillance of employees can be both comprehensive and inexpensive, and when the results of that surveillance can be utilised relatively freely as a powerful tool of workplace discipline, then employers will be more likely to choose intrusive intensification strategies (rather than eliciting effort through positive incentives) in managing their workforces.

The declining cost and growing use of digital surveillance techniques can thus likely help to explain the deceleration of wage growth in Australia’s overall labour market in recent years. Employers are less concerned with motivating and retaining employees on the basis of positive incentives (like job security, promotion, and wage increases). Digital surveillance and freedom to fire give them greater power to elicit compliance in workplaces with the threat of negative sanction. Combined with chronically weak labour market conditions (marked by widespread underemployment, especially among certain groups of vulnerable workers such as migrants and youth), this can compel workers to accept relatively low wages while still meeting desired effort and productivity benchmarks.

Part II: Survey Results on Australians' Experience with Workplace Surveillance

Part I of this report reviewed some economic and regulatory factors that have shaped the growing use of digital monitoring, surveillance, and discipline systems in workplaces. Little formal data is available, however, regarding the extent of these practices in the Australian context. To help to fill that void in information, the Centre for Future Work and the Australia Institute conducted an original survey of Australian adults regarding their opinions and experiences with electronic or digital monitoring of employees in the workplace. Part II of the report presents the results of that survey.

A. METHODOLOGY

The survey of 1,459 people occurred between 26 October and 6 November 2018, using an online survey methodology and conducted by Research Now. The sample was nationally representative with respect to gender, age and state and territory.

All respondents were presented with a list of types of electronic or digital monitoring in the workplace. Those currently employed were asked to select all the types that are currently used (to their knowledge) in their present workplace. Those not in work were asked to select all that were used in their *last* place of work.

Respondents were asked about their industry and occupation. To create more significant subsamples, the usual ABS categories were combined as follows:

Industries:

- Goods-producing (agriculture, mining, manufacturing, utilities, construction)
- Trade, Hospitality and Transport (wholesale, retail, accommodation, transport)
- Other Private Services (IT, finance, rental, professional, administration, arts)
- Public Services (public administration, education, health)
- Other⁶²

⁶² The four preceding industry categories are exhaustive, in that they include all the industries usually reported in ABS statistics. Respondents who chose "Other" as their industry, therefore, likely did not know which of the preceding categories best fit their job.

Occupations:

- Manager
- Professional
- Technician/Machinery/Labourer
- Clerical
- Sales
- Community or Personal Support Worker

B. INCIDENCE OF SURVEILLANCE

Our results indicate that digital surveillance of workers is being conducted in a large majority of Australian workplaces. Among those currently in work, 70% said their workplace uses electronic or digital surveillance. On average this group reported 3.2 different types of surveillance being used. These results confirm that digital forms of monitoring are widely used in Australian workplaces (see Figure 1).

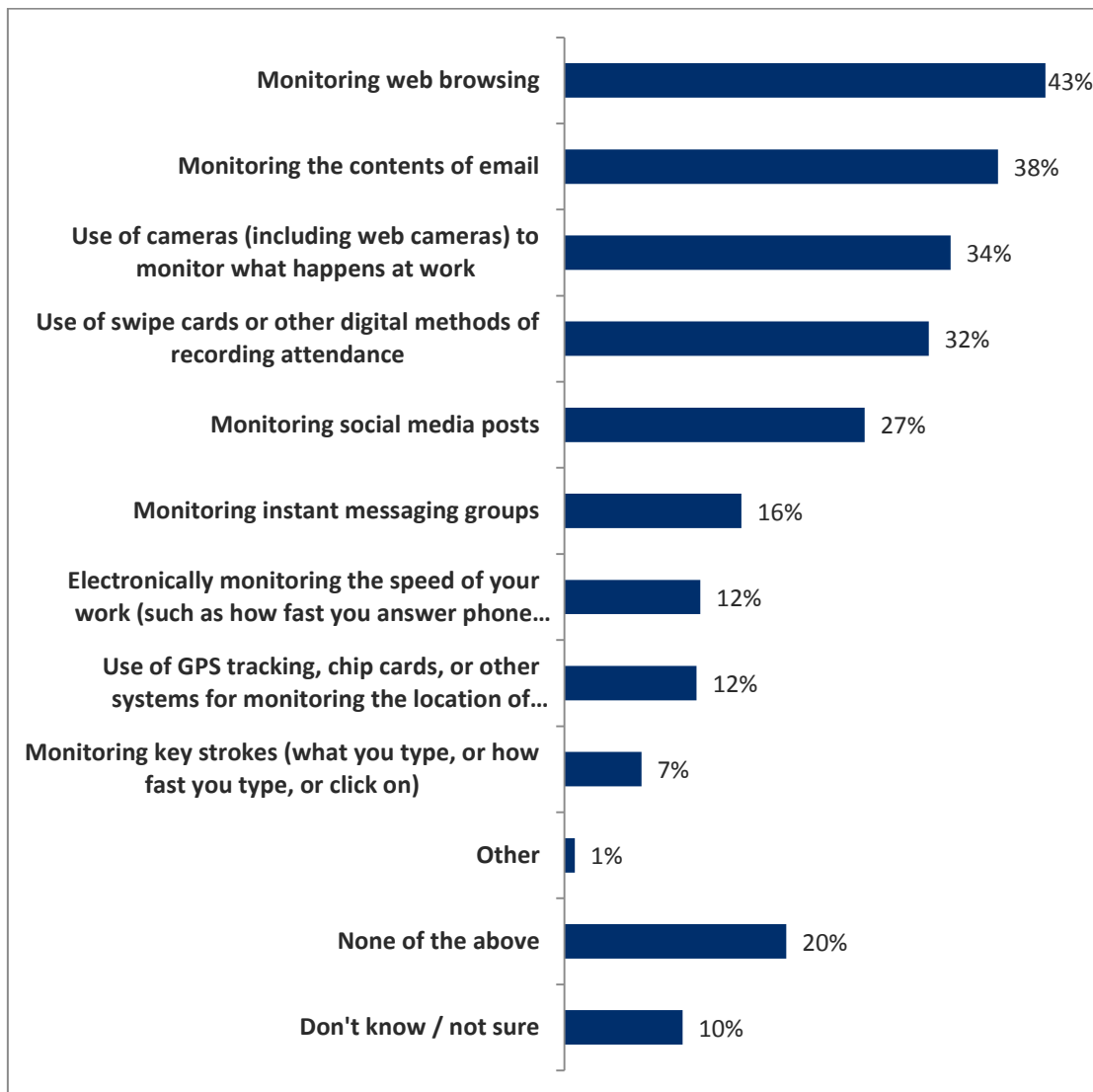
Only 20% of employed respondents said their workplace did not use any form of digital or electronic surveillance. Another 10% said they did not know.

The most common forms of digital surveillance were employer monitoring of web browsing (43%), followed by monitoring the contents of emails (38%). Similarly, social media was monitored in some workplaces (27%), as were instant messaging groups (16%).

About a third of respondents said their workplaces used cameras to monitor what happens at work (34%), and swipe cards or other digital methods of recording attendance (32%).

The use of GPS tracking or other methods to monitor worker location was less frequent although still significant, with 12% of respondents indicating the use of these technologies. Finally, small but significant numbers of respondents indicated their workplace electronically monitored the speed of work (12%) or monitored computer key strokes (7%).

Figure 1: Does your current workplace use the following?



Source: Survey results as described in text.

A Growing Trend

Respondents currently in work were both more likely to indicate that digital monitoring took place in their workplace, and to indicate that more forms of it were in use.

51% of respondents *not* in work (but who had previously worked) said their last workplace had used at least one form of surveillance. These former workers identified an average of 2.8 different methods of monitoring. Therefore, both the reported presence of digital monitoring, and the number of forms in use, are lower than for those currently employed. This indicates that digital or electronic surveillance is indeed a growing trend, since workers currently in the workforce report a higher frequency of its use.

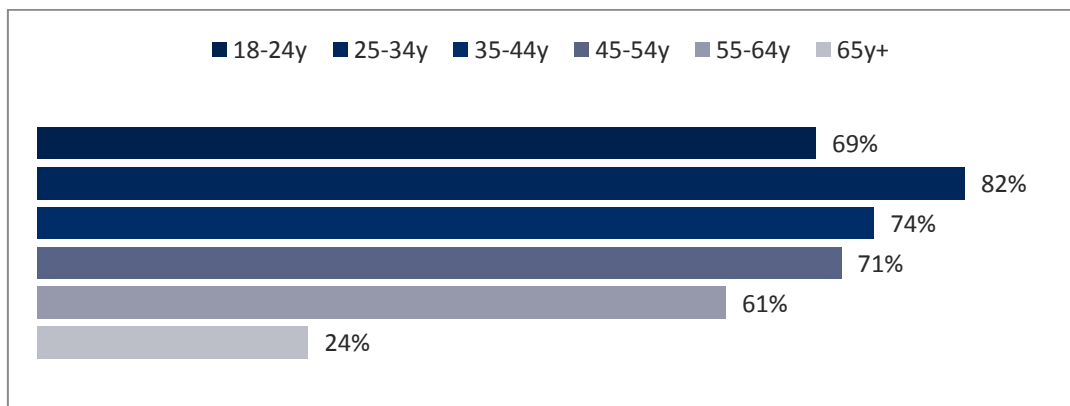
By Age

Most workers in most age groups said their workplaces used some form of digital surveillance. The reported incidence of digital surveillance was highest, however, among young adults (aged 25-34; see Workers older than 65 years reported much lower levels of surveillance.

Figure 2). This may be partly because younger workers are more aware of these technologies, and hence more likely to realise they have been deployed in the workplace.

Workers older than 65 years reported much lower levels of surveillance.

Figure 2: Workplaces using digital surveillance, by age



Source: Survey results as described in text.

By Type of Work

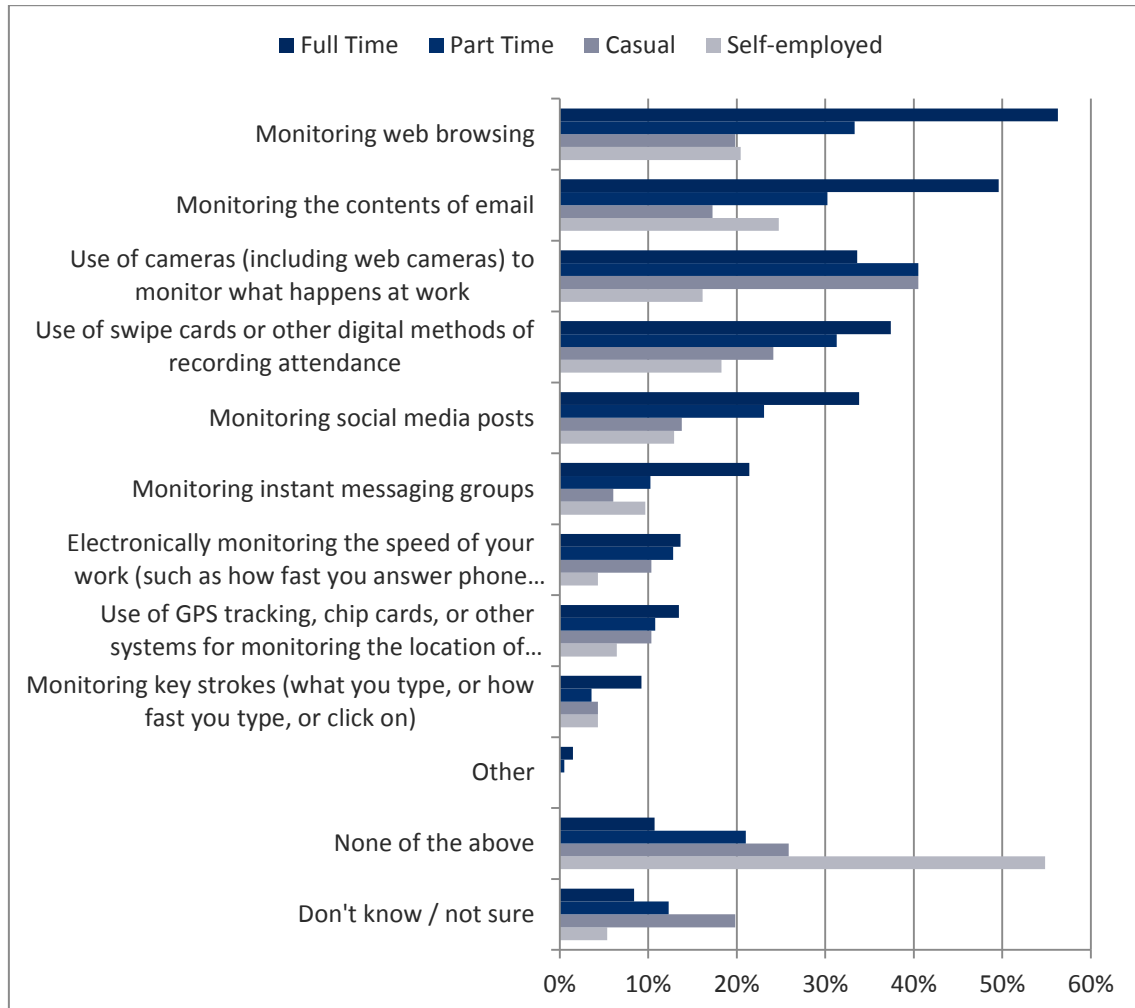
Survey results were also broken down by employment status, industry groups and occupation.

Full-time workers were most likely to report most of the types of surveillance. This was especially dramatic in surveillance relating to internet use: such as web browsing, email, social media, and instant messaging. This trend is likely related to the types of work associated with full-time jobs: full-time workers in our sample were more likely to be managers, professionals or clerical workers, and these are occupations which also experience greater incidence of digital surveillance (discussed below).

Self-employed workers were least likely to experience these forms of monitoring, likely because many are sole traders with relatively scarce resources to invest in these technologies. Also, since self-employed workers, in one sense, “work for themselves,” they have less compulsion to deploy these technologies to supervise work (although

many self-employed workers are also employers, and hence may experience the same motivations to oversee the work effort of their own employees as do larger firms).

Figure 3: Electronic or digital surveillance, by employment status

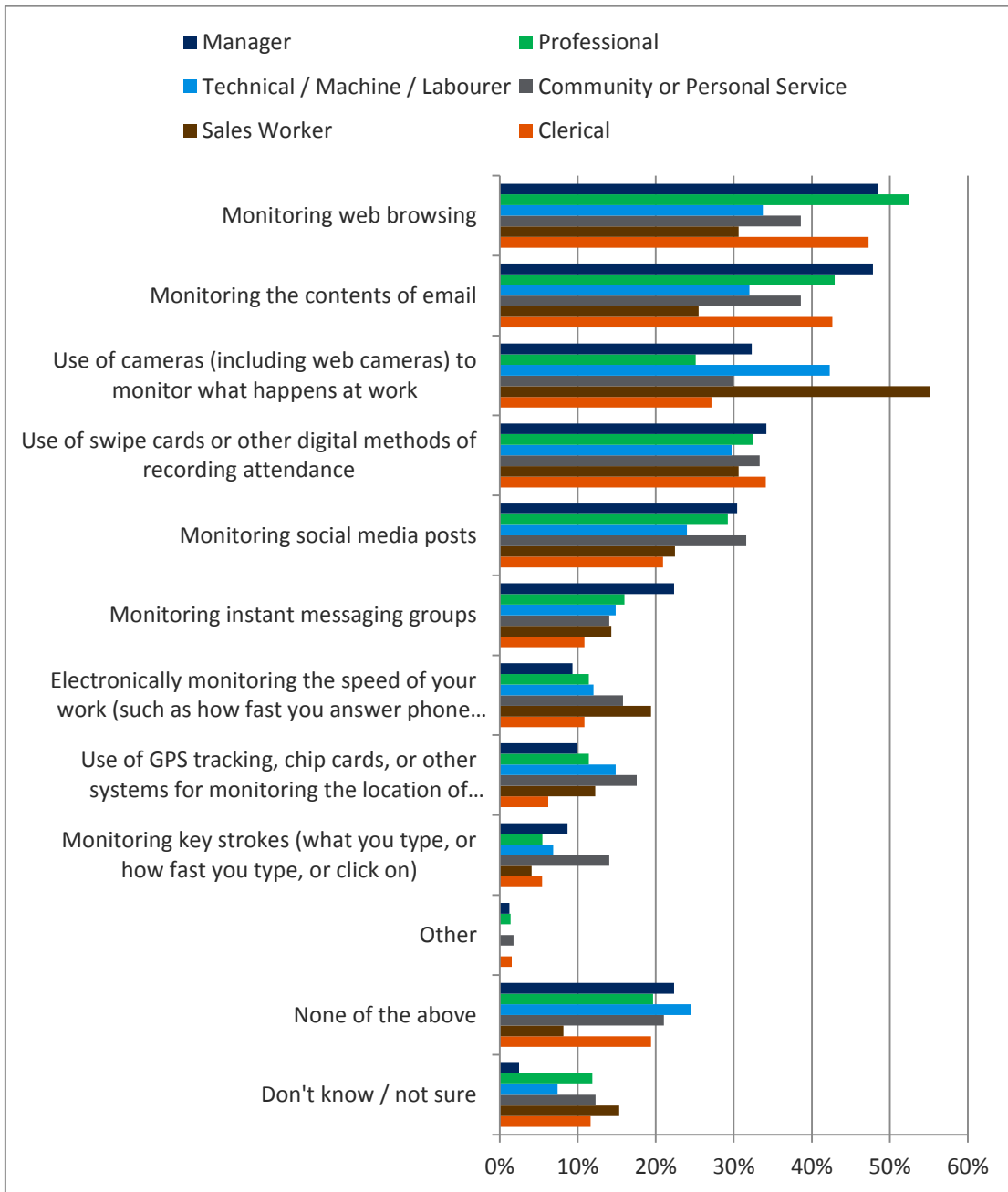


Source: Survey results as described in text.

Respondents were also asked about their industry and occupation, on the basis of standard ABS categories. As noted above, to create larger and more statistically significant subsamples, their responses were combined into composite groupings.

Sales Workers were most likely to report some kind of digital monitoring in their workplaces. (This is visible in the low proportion of Sales Workers reporting “none of the above” in response to the question.) Managers and Technicians, Machine Operators, and Labourers were the least likely to report some form of monitoring.

Figure 4: Electronic or digital surveillance, by occupation



Source: Survey results as described in text.

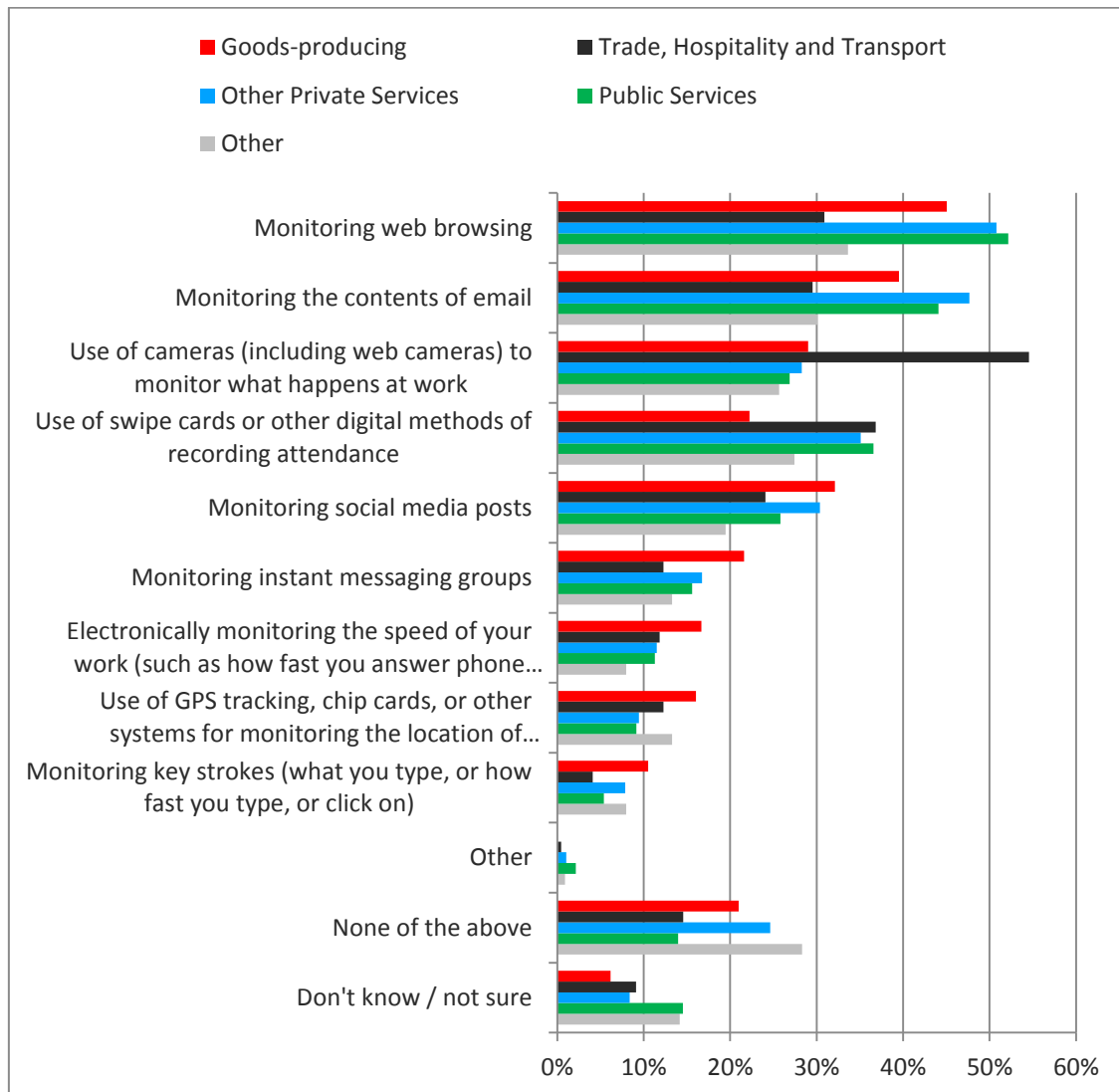
Around half of the Managers, Professionals and Clerical workers reported monitoring of web browsing. More than two in five Managers, Professionals and Clerical workers reported monitoring of email contents, closely followed by Community and Personal Service Workers. Most sales workers reported use of cameras to monitor what happens at work. Sales workers were least likely to report no forms of monitoring.

All occupations reported similar rates of use of swipe cards or other technologies for reporting attendance.

Sales workers were most likely to report monitoring of the speed of their work, followed by Community and Personal Service.

Community and Personal Service workers and Technicians, Machine Operators and Labourers were most likely to report the use of technology to track the location of workers.

Figure 5: Electronic or digital surveillance, by industry



Source: Survey results as described in text.

In terms of the industry breakdown, the industries most likely to experience some form of monitoring were Trade, Hospitality and Transport, and Public Services (including health, education and public administration).⁶³ Workers in trade, hospitality and transportation were almost twice as likely to experience monitoring by camera at

⁶³ Again, the frequency of some form of monitoring is measured as the inverse to the proportion of respondents indicating “none of the above.”

work than other industries, but less likely to experience monitoring of web browsing or contents of email.

Electronic monitoring of the speed of work was most likely in goods-producing industries (like mining and manufacturing). These industries were also least likely to use digital means to track attendance.

C. UNCERTAINTY ABOUT PERSONAL SURVEILLANCE AT WORK

Most workers (70%) reported that their work used some form of electronic or digital surveillance. But 43% of those workers were unsure whether or not their *own work* had been monitored using these technologies. In other words, close to one-third (30%) of *all workers*⁶⁴ reported they knew their workplace used some form of digital surveillance – but did not know if it applied to them personally. This suggests that the process of notifying workers about the presence of workplace surveillance (required by law in NSW and the ACT, but not other jurisdictions) is incomplete at best.

Figure 6 illustrates various categories of workers, broken down by knowledge of surveillance (in general, and of themselves individually) in respondent workplaces.

A third of full-time and part-time workers knew some forms of surveillance were used in their work place, but were not sure if it applied to them personally.

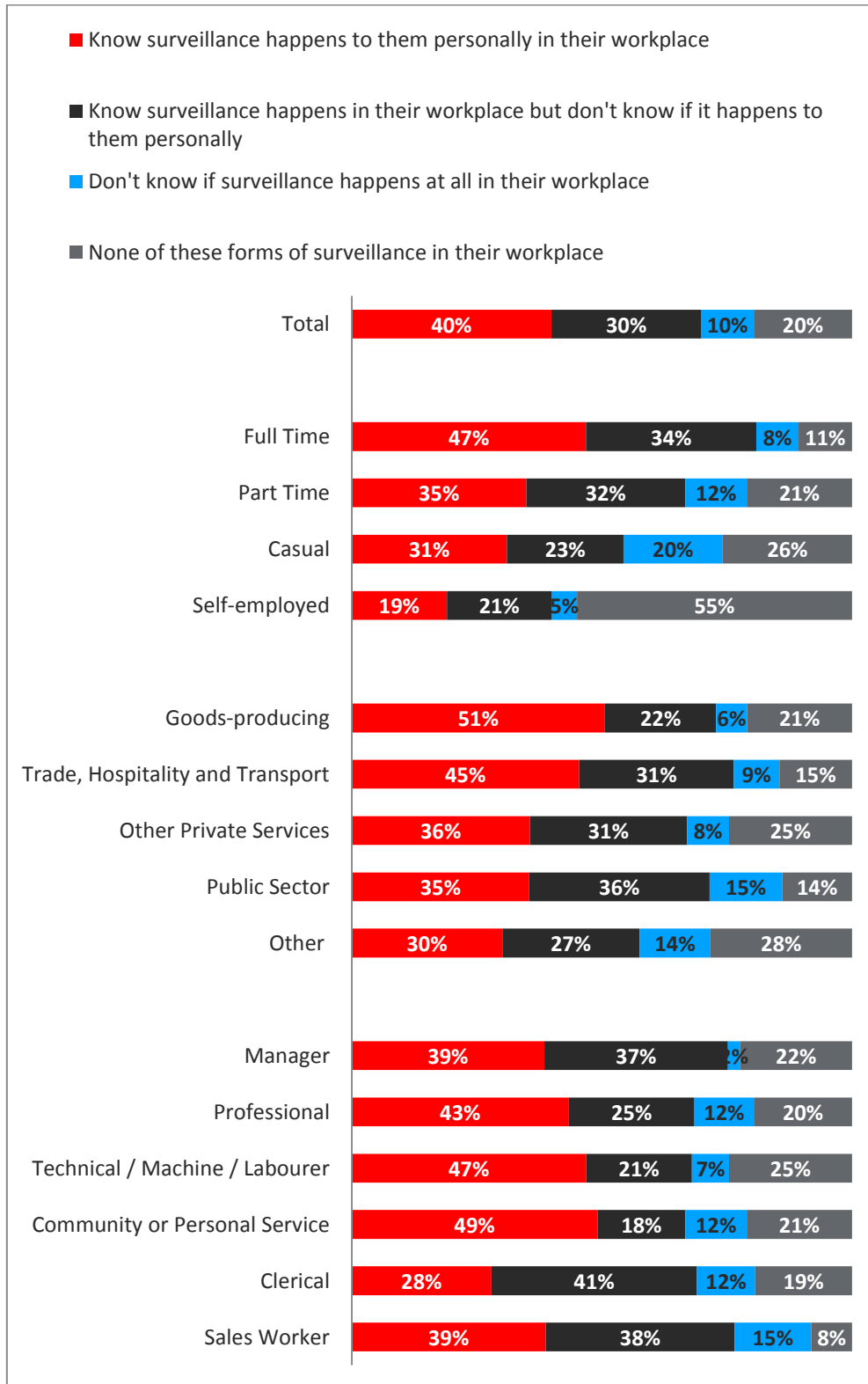
About half of full-time workers (47%) knew it applied to them personally, and about a third of part-time (35%) and casual workers (31%).

People working in Public Services – like health, education and administration – were more likely to be unsure if technologies they knew were used in their workplace also applied to them personally (36%) than other industries. Conversely, workers in Goods-producing industries – like agriculture, construction and manufacturing – had the highest rates of certainty that such technologies were being used on them personally (51%).

Among occupations, Managers (37%), Clerical workers (41%) and Sales Workers (38%) were most likely to be unsure if surveillance they knew was happening in their workplace also applied to them personally. Least likely were Technical, Machine or Labour workers (21%) and Community of Personal Service workers (18%), around half of which in each case knew it applied to them (47%, 49% respectively).

⁶⁴ 70% of 43%.

Figure 6: Knowledge of surveillance in different types of workplaces

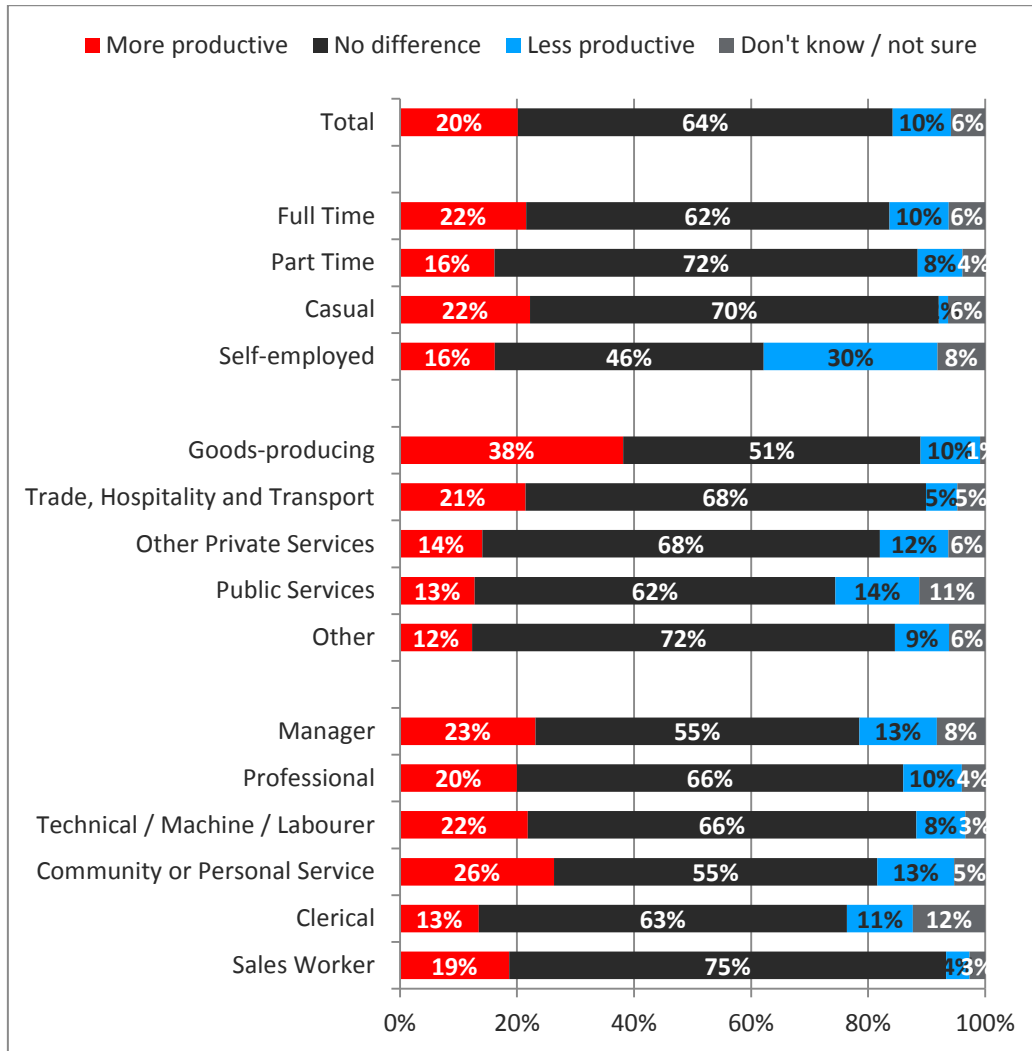


Source: Survey results as described in text.

D. DIGITAL SURVEILLANCE AND PRODUCTIVITY

Those who said their workplace used digital or electronic surveillance were then asked if they felt it made them more or less productive. A strong majority (almost two-thirds) felt that surveillance had no impact on productivity. One-fifth of respondents said it improved productivity, while one-tenth believed it reduced productivity.

Figure 7: Impact of digital surveillance on productivity



Source: Survey results as described in text.

Most workers in all industries and all occupations said EMS made no difference to productivity. Workers in Goods-producing industries were most likely to believe that surveillance increased productivity (38%). In services industries, on the other hand (both public and private), about as many thought it made work less productive as made them more productive. This casts doubt on the efficacy of EMS systems as a method of increasing output, suggesting that employers either do not fully understand the effects of this surveillance, or else have other motivations for implementing it.

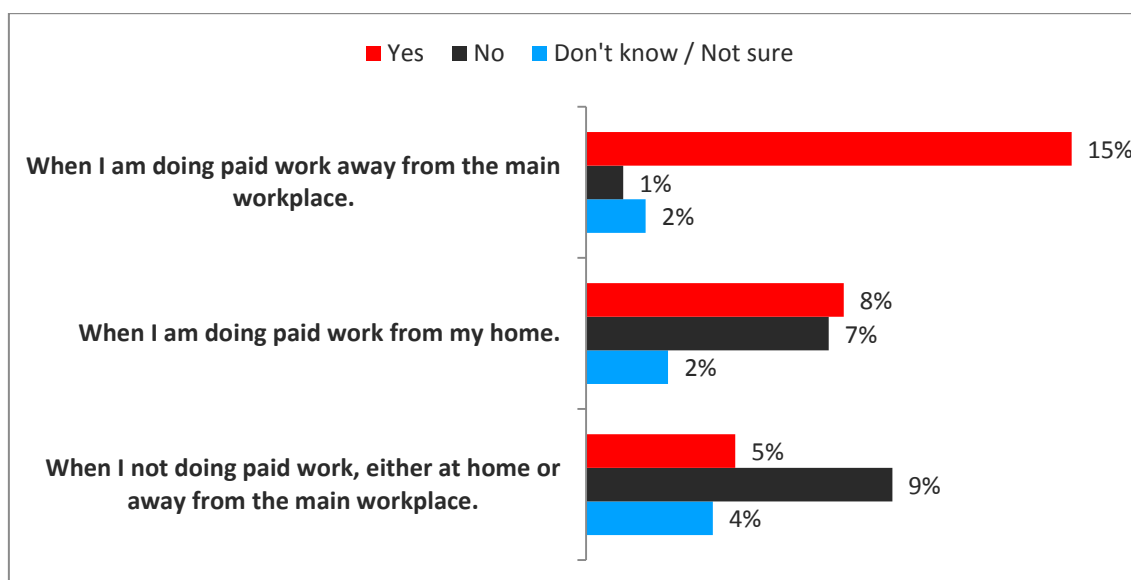
E. SURVEILLANCE OUTSIDE THE MAIN WORKPLACE

The 70% of workers who said surveillance was used in their workplace, were then asked if it ever occurred “when employees are away from the main place of work (such as GPS tracking; mobile phone, e-mail or web browsing; or monitoring the speed of work)?”

One-half (50%) said no. One-quarter said yes (25%). And one-quarter did not know (25%). Adjusted to reflect the entire sample, this suggests that 18% of all workers experience digital surveillance outside of their workplace (equal to 25% of the 70% of workers who experienced surveillance). Another 18% of all workers did not know.

Respondents who said yes were then asked when this occurred. Results are illustrated in Figure 8, as a share of *all* workers in the sample.

Figure 8: When surveillance occurs outside of workplaces, as share of all workers



Source: Survey results as described in text.

In most cases, surveillance occurred when the worker was doing paid work away from the main place of work – affecting 15% of all workers.

Results were much higher in Goods-producing industries, where over one-third of workers said such technologies were used outside of the main workplace (35%). Results were also higher amongst full-time workers (22%), and amongst both Professionals (19%) and Technicians, Machine Operators and Labourers (19%).

8% of all workers said their work used surveillance when they were working from home. And alarmingly, 5% of workers said surveillance even occurred when they were not doing paid work. Another 4% of workers said their workplace used surveillance

away from the workplace, but were not sure if it included when they were not doing paid work.

F. DISCIPLINE OR PENALTIES FROM SURVEILLANCE

Respondents who said surveillance occurred in their workplace⁶⁵ were asked if they have been personally disciplined or penalised as a result of this surveillance.

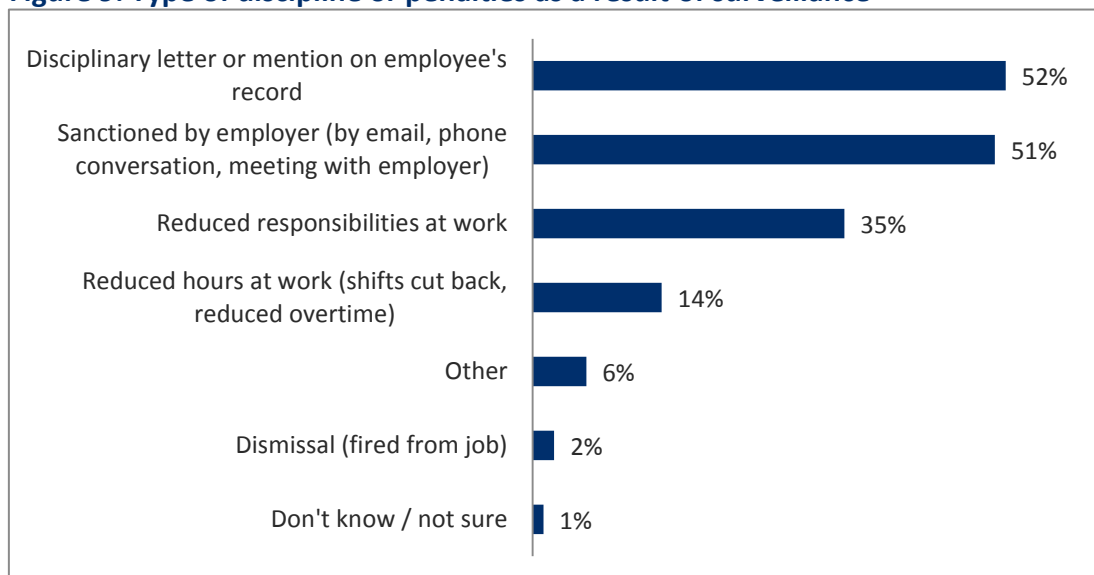
Most said no (83%), but a significant proportion said yes (15%).

Hence, some 10% of all workers in the sample (equal to 15% of the 70% who had reported the presence of surveillance) reported that they had been personally penalised or disciplined as a result of digital or electronic surveillance.

Once again, positive response rates were higher amongst full-time workers (19%), workers in Goods-producing industries (36%), Professionals (20%) and Technicians, Machine Operators and Labourers (20%).

These penalties took a range of forms, as illustrated in Figure 9. Amongst those who had been disciplined, half said this included a disciplinary letter or other form of written or verbal sanction. A third said they had reduced responsibilities as a result, and 14% said they had reduced hours. Very few said they had been dismissed as a result.

Figure 9: Type of discipline or penalties as a result of surveillance



Source: Survey results as described in text.

⁶⁵ Self-employed workers were excluded here.

G. ATTITUDES TOWARDS SURVEILLANCE AT WORK

Finally, all respondents – whether in work or not – were asked about their attitudes towards various statements regarding surveillance at work. Results are summarised in Figure 10 and Figure 11.

There was overwhelming agreement (92%), and majority strong agreement (59%), that employers should tell employees when any form of surveillance is being used.

Three-quarters (73%) thought there should be legal restrictions about how these technologies could be used. By contrast, most (58%) disagreed that employees should be able to use the technologies as they see fit, and only one third (33%) agreed.

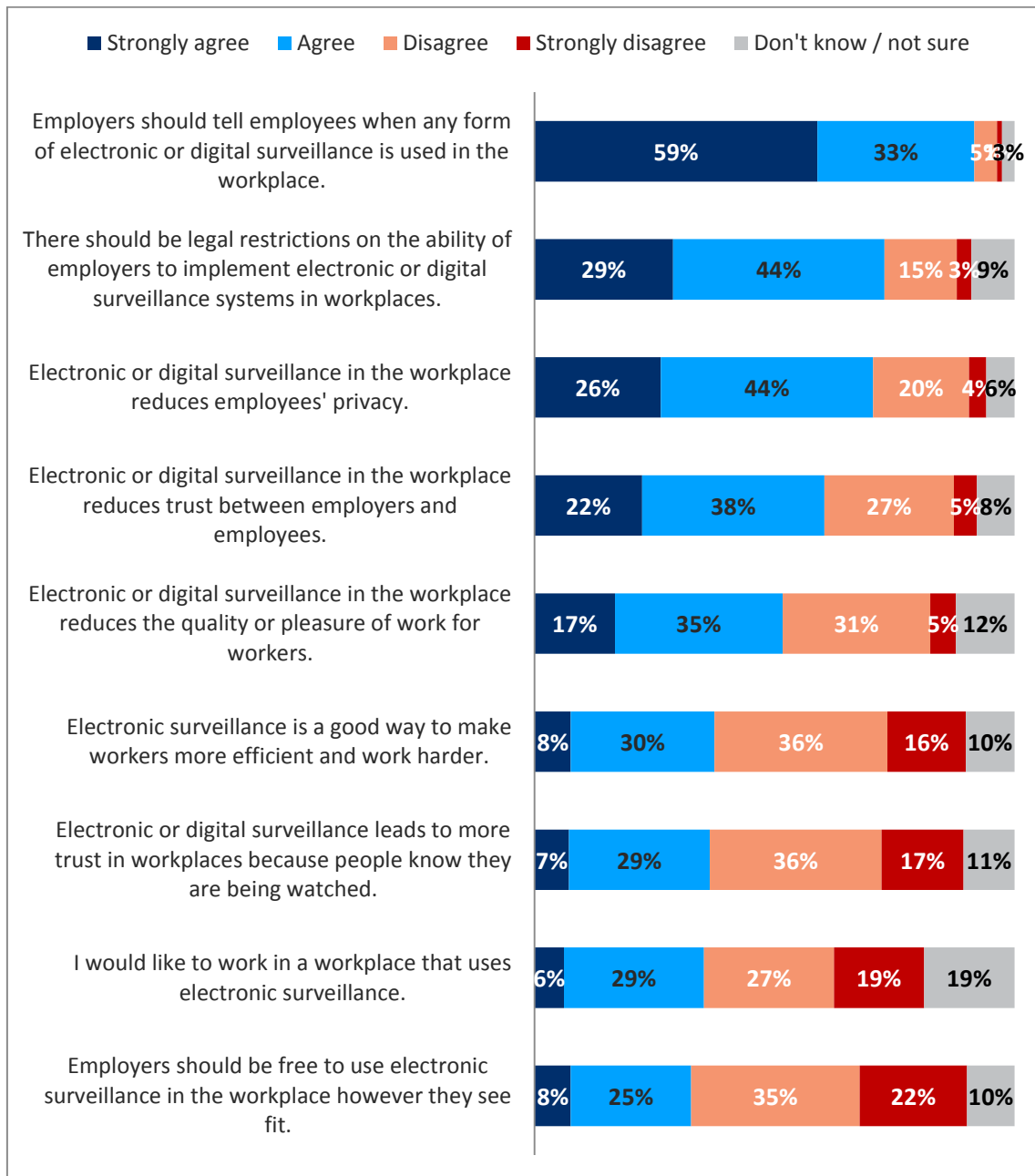
Three-quarters (71%) thought these technologies reduce privacy, while three in five (60%) said it reduces trust between workers and employees. One-third (32%) disagreed they reduces trust.

Most (52%) said they reduce the quality or pleasure in work for workers. One-third disagreed (36%).

Just over one-third agreed that EMS systems are a good way to make workers more efficient and work harder (37%); most disagreed with that statement (53%).

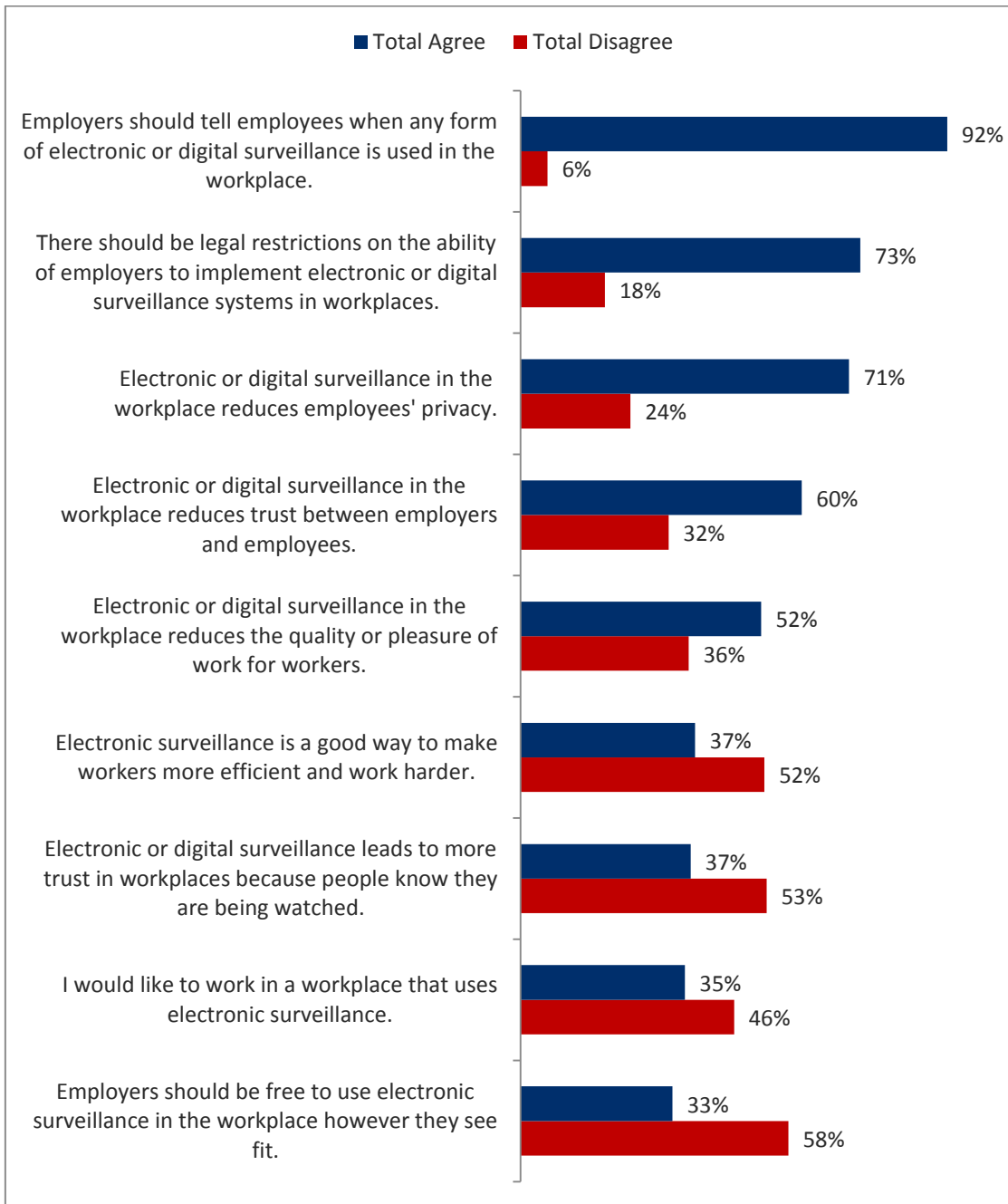
Only one-third (35%) said they would like to work in a work place that uses these technologies. Nearly half (46%) disagreed.

Figure 10: Attitudes towards digital surveillance in the workplace, to what extent do you agree or disagree?



Source: Survey results as described in text.

Figure 11: Attitudes about digital surveillance in the workplace, total agree/ disagree

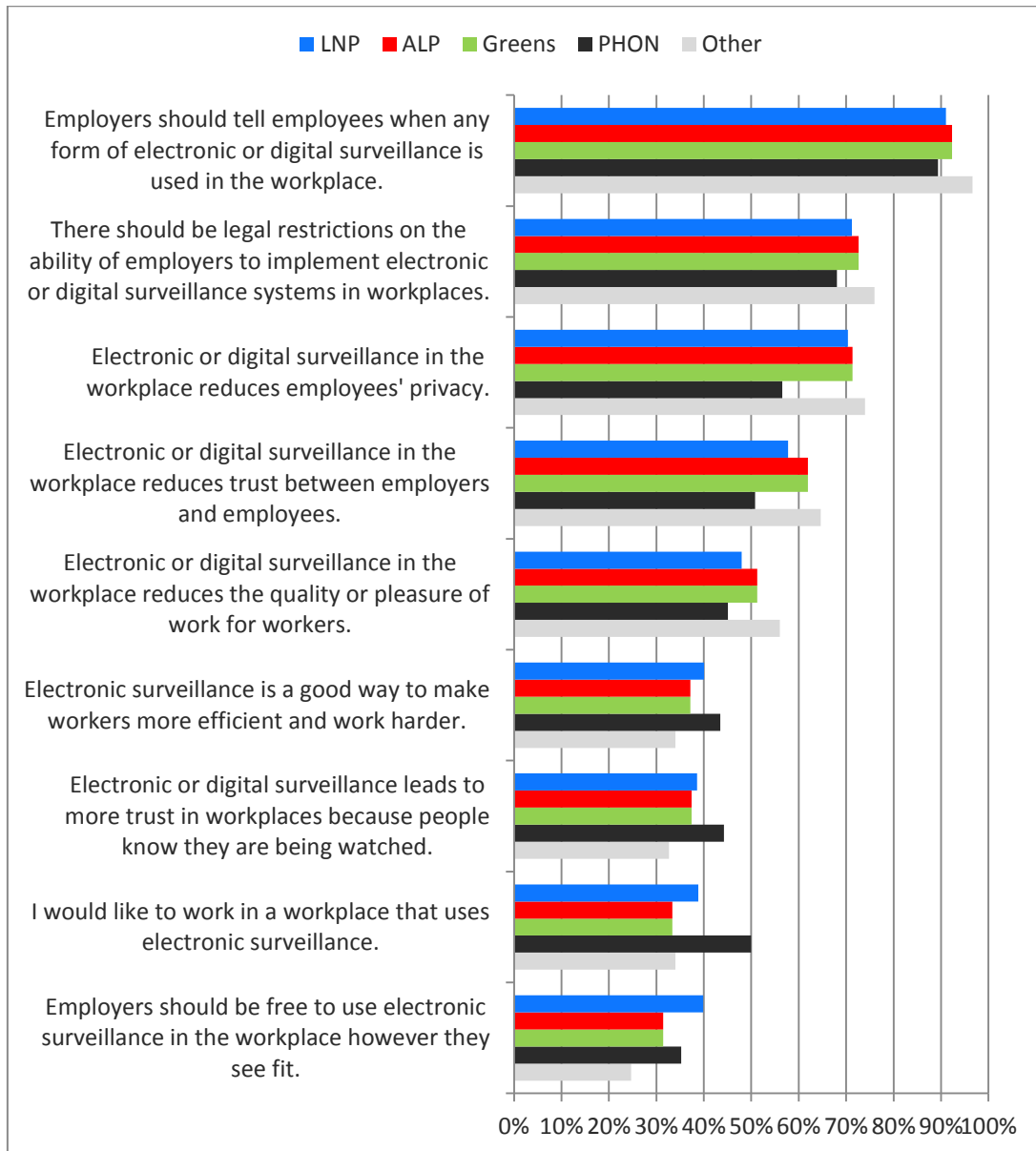


Source: Survey results as described in text.

There was remarkably little variation in attitudes toward electronic workplace surveillance by voting intention (illustrated in Figure 12). Supporters of PHON were somewhat more favourable to the practice of workplace surveillance than other affiliations, and less willing to favour restrictions on employers' right to wield these technologies. But supporters of all other parties (including LNP supporters) were consistent in their strong support for rights of notification, privacy, and regulation of workplace surveillance practices. This suggests that proposals for greater notice,

privacy, and regulation of EMS systems would receive broad and cross-cutting support from across the political spectrum.

Figure 12: Total agree to statements about digital surveillance in workplaces, by voting intention



Source: Survey results as described in text.

Conclusions and Policy Implications

The spread of inexpensive, ubiquitous digital monitoring and surveillance technology is significantly changing workplaces – in all industries and all occupations. New technologies allow employers to monitor the whereabouts, activities and productivity of their employees with unprecedented speed and detail. While there are many potentially positive applications of these technologies (including those that enhance safety, convenience and efficiency), there are obvious risks that these capabilities can be mis-applied and abused. Employers have a natural interest in intensifying the processes of work and production, in order to maximise labour effort, minimise unit labour cost, and enhance their own profits. Their urge to do so must be balanced against the rights of workers to privacy, dignity, and autonomy. The uncontrolled application of digital surveillance techniques, especially when combined with the relatively free rein of employers to wield that information in disciplining workers, could create a workplace in which the quality and security of work is considerably degraded.

The survey results reported in Part II of this paper confirm that a wide range of digital and electronic monitoring systems are now present in most Australian workplaces. The reach of those monitoring systems often extends well beyond the workplace itself – in some cases even to times when employees are not being paid. Legal and regulatory protections against the mis-use of these technologies by employers are sparse and inconsistent. Most states and territories have no specific legislation governing the conduct of workplace surveillance – and even in the two jurisdictions that have such laws (NSW and ACT), it is not clear that their provisions are sufficient.

Australians are doubtful that ubiquitous workplace surveillance systems have any impact at all on real productivity and efficiency. But most believe that clear principles should regulate the use of digital and electronic surveillance in Australian workplaces. There is strong majority support for providing workers with notice of workplace surveillance, and strong support for regulations to limit where and how surveillance can occur; and these strong opinions cut across party affiliations.

The rapid advancement and spread of digital surveillance systems in workplaces – now even including the possibility of implanting sensing devices right inside the bodies of workers – suggests an urgent need for a modern policy and legislative response. The issues are complex, and the costs and benefits of these technologies must be carefully weighed. But some broad directions for reform seem obvious:

- Australia needs a more consistent and comprehensive legal framework governing the use of digital and electronic monitoring systems in workplaces. A consistent set of protections for workers should be developed and applied in all jurisdictions, in line with the recommendations of the Australian Law Reform Commission.
- Workers' privacy should be protected through limits on the location and times of workplace monitoring.
- Employees should not be subject to digital or electronic monitoring practices when not conducting directly compensated labour, and their digital activities while off the job should not generally subject them to punishment and sanction from their employers.
- The application of normal employment security rights and processes (including right to notice, representation, progressive discipline, and protection against unfair dismissal) must not be undermined through the use of digital monitoring systems.
- Workers in contingent, contractor, and "gig" positions should be protected by the same provisions regarding unfair dismissal, even if they are not considered "employees" according to traditional legal definitions. These workers have been especially vulnerable to the mis-use of digital performance management (including effective dismissal from their vocations on the basis of digital data), and must be protected on the same principles as traditional employees.
- Workers need more effective rights to negotiate the terms of digital workplace monitoring and performance evaluation through the collective bargaining process. This will require more attention to these issues from both management and unions – and a resuscitation of collective bargaining capacity for workers, countering the rapid decline of collective agreement coverage (especially in the private sector).

The legal, ethical and economic issues raised by the growing prevalence of digital and electronic monitoring are complex; our suggestions above are intended to only indicate the broad potential direction of future reform. What is already clear, however, is that to prevent these technologies from contributing to a dystopian work culture marked by omnipresent and punitive surveillance, and to ensure that ongoing technological change translates into rising living standards (not just more intense exploitation), these issues should be placed squarely on Australia's labour policy agenda.

Appendix A - Survey Questions

These questions are about electronic surveillance of employees in Australian workplaces.

- Q9. Thinking about your *last* workplace, to the best of your knowledge, did that workplace use any of the following forms of electronic or digital monitoring of employees?

Please select all relevant responses

1. Monitoring the contents of email
2. Monitoring web browsing
3. Monitoring social media posts
4. Monitoring instant messaging groups
5. Monitoring key strokes (what you type, or how fast you type, or click on)
6. Electronically monitoring the speed of your work (such as how fast you answer phone calls, scan groceries at a cashier, or assemble products in a factory, etc.)
7. Use of cameras (including web cameras) to monitor what happens at work
8. Use of swipe cards or other digital methods of recording attendance
9. Use of GPS tracking, chip cards, or other systems for monitoring the location of employees
10. Other [TEXT INPUT]

98. None of the above
99. I have not had a workplace
100. Don't know / not sure

- Q10. To the best of your knowledge, does your workplace use any of the following forms of electronic or digital monitoring of employees?

Please select all relevant responses

1. Monitoring the contents of email
2. Monitoring web browsing
3. Monitoring social media posts
4. Monitoring instant messaging groups
5. Monitoring key strokes (what you type, or how fast you type, or click on)

- 6. Electronically monitoring the speed of your work (such as how fast you answer phone calls, scan groceries at a cashier, or assemble products in a factory, etc.)
- 7. Use of cameras (including web cameras) to monitor what happens at work
- 8. Use of swipe cards or other digital methods of recording attendance
- 9. Use of GPS tracking, chip cards, or other systems for monitoring the location of employees
- 10. Other [TEXT INPUT]

- 98 None of the above
- 99 Don't know / not sure

Q11. To your knowledge, has your employer ever used any of the following forms of surveillance in supervising or monitoring the work and behaviour of **you personally**?

Q12. Does electronic or digital surveillance of employees make you more or less productive at work?

Electronic or digital surveillance in the workplace generally makes me

- 1. More productive
- 2. No difference
- 3. Less productive
- 4. Don't know / not sure

Q13. Does electronic or digital surveillance by your employer ever extend to periods when employees are **away from the main place of work** (such as GPS tracking; mobile phone, e-mail or web browsing; or monitoring the speed of work)?

- 1. Yes
- 2. No
- 3. Don't know

Q14. When does your employer use electronic or digital surveillance away from the main place of work?

My employer uses electronic surveillance

	Yes – employer uses electronic	No - employer uses electronic	Don't know / Not sure
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surveillance	surveillance
When I am doing paid work away from the main workplace.	
When I am doing paid work from my home.	
When I not doing paid work, either at home or away from the main workplace.	

Q15. As a result of electronic or digital surveillance at your workplace, have **you personally** been disciplined or penalised?

1. Yes
2. No
3. Don't know / not sure

Q16. What form did this discipline or penalty take?

Please select all that apply

1. Sanctioned by employer (by email, phone conversation, meeting with employer)
2. Disciplinary letter or mention on employee's record
3. Reduced responsibilities at work
4. Reduced hours at work (shifts cut back, reduced overtime)
5. Dismissal (fired from job)
6. Other
7. Don't know / not sure

Q17. To what extent do you agree or disagree with the following?

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know / not sure
Employers should tell employees when any form of electronic or digital surveillance is used in the workplace.					
Electronic or digital surveillance in the workplace reduces trust between employers and					

employees.
Electronic or digital surveillance leads to more trust in workplaces because people know they are being watched.
There should be legal restrictions on the ability of employers to implement electronic or digital surveillance systems in workplaces.
Electronic or digital surveillance in the workplace reduces employees' privacy.
Electronic or digital surveillance in the workplace reduces the quality or pleasure of work for workers.
Employers should be free to use electronic surveillance in the workplace however they see fit.
Electronic surveillance is a good way to make workers more efficient and work harder.
I would like to work in a workplace that uses electronic surveillance.

Q18. Which of the following is closest to your view?

Greater electronic surveillance in workplaces

1. **tends to increase wages**, because employers have a better idea of how productively their employees are working.
2. **tends to reduce wages**, because employers are less concerned with offering monetary performance incentives when they can monitor their employees more closely.
3. **tends to have no impact on wages.**
4. Don't know / not sure

Q19. Thinking of **your own employer**, do you think greater use of electronic surveillance in your workplace would make it more or less likely that your employer would offer higher wages?

1. More likely
2. No change

3. Less likely Don't know

Q20. What best describes the industry you work in?

1. Agriculture, Forestry and Fishing
2. Mining
3. Manufacturing
4. Electricity, Gas, Water and Waste Services
5. Construction
6. Wholesale Trade
7. Retail Trade
8. Accommodation and Food Services
9. Transport, Postal and Warehousing
10. Information Media and Telecommunications
11. Financial and Insurance Services
12. Rental, Hiring and Real Estate Services
13. Professional, Scientific and Technical Services
14. Administrative and Support Services
15. Public Administration and Safety
16. Education and Training
17. Health Care and Social Assistance
18. Arts and Recreation Services
19. Other Services
20. Don't know / not sure

Q21. Which of the following best describes the kind of work you do?

1. Manager
2. Professional
3. Technician or Trades Worker
4. Community or Personal Service Worker
5. Clerical or Administrative Worker
6. Sales Worker
7. Machinery Operator and Driver
8. Labourer
9. Don't know / not sure

Appendix B - Sample Distribution

	N=	% sample
Total Employed:	880	
Male	472	54%
Female	408	46%
Age:		
18-24 years	116	13%
25-34 years	196	22%
35-44 years	197	22%
45-54 years	198	23%
55-64 years	123	14%
65 years or older	50	6%
Employment Status:		
Yes, full-time	476	54%
Yes, part-time	195	22%
Yes, casual	116	13%
Yes, self employed	93	11%
Occupation		
Manager	161	18%
Professional	219	25%
Technician or Trades / Machine / Labourer	175	20%
Community or Personal Service Worker	57	6%
Clerical or Administrative Worker	129	15%
Sales Worker	98	11%
Industry		
Goods-producing (agriculture, mining, construction, manufacturing, utilities)	162	18%
Trade, Hospitality, Transport	220	25%
Other Private Services (professional, IT, financial, rental, administration, arts)	191	22%
Public Services (health, education, admin and safety)	186	21%
Other	113	13%

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