

Teleworking post-Covid-19 and implications for Directors



**Dr. Turlough F. Guerin*

The jury is still out on the environmental benefits of teleworking but there is mounting evidence that professional organisations can no longer ignore, indicating that there are more than financial benefits from this type of working. A review of the literature, and a comparative lifecycle assessment, was undertaken to determine the environmental impact of teleworking compared to office-based work in a corporate setting. For example, teleworking was demonstrated to have lesser environmental effects than office-based working, but only under certain conditions. By the numbers, teleworking was more beneficial if an employee travels ≥ 30 km each work day, and the more the energy efficient the employer's buildings are, the lower the environmental value of teleworking. One of the major criticisms of the sustainability benefits of teleworking is the rebound effect. This study shows that its contribution is insignificant under common conditions that were modelled. The objective of this article is to highlight how current developments in remote working translate into practical corporate policy, and what they mean to governance professionals.

Background

The COVID-19 pandemic has been, among other things, a global-scale trial in teleworking. Innovative organisation of work through teleworking, if the task at hand allows for it, has been adopted by many organisations in response to the COVID-19 pandemic. The pandemic has also shown that many work roles can be delivered via remote working including health services and numerous service-oriented roles, as well as non-work related activities such as recreational training or professional coaching.

Teleworking and its variations (Table 1) is also a trend on the

rise. In an Australian context, there has been a large increase in the proportion of employees working from home as a result of COVID-19, with some reports stating that up to 88% of employees are working from home.

There are benefits associated with teleworking. However, the literature reveals that these are neither consistent nor clear, and it depends on numerous variables and under what scenarios it is being deployed. Due to the complexity of this working arrangement and the accompanying technology used, and due to other effects of information communications technology (ICT), such as rebound and induction effects, the net benefits of teleworking cannot be assured.

A mini-review of the literature was undertaken to gain insights into the benefits of teleworking as part of an in-depth, company-focused study on teleworking. It demonstrated that there are positive outcomes from teleworking including for management and employees, as well as the environment including from commuting and commercial building efficiency outcomes. There are, however, unintended and negative consequences. These include the challenges associated with measurement (of benefits), articulating the business case, and designing and implementing organisational policies.

Many of the proposed benefits arise from transportation and commuting outcomes, and it is transport savings that are commonly recognised as the dominant factor. These include reduced congestion, reduced pressure on transport infrastructure, lowered pollution emissions and lessening work travel fuel consumption, and delivering improved air quality. There are, however, complexities associated with capturing and claiming these benefits. Researchers have found that the benefits of teleworking appear to be dependent on commuting

patterns, induced energy usage (rebound effects) and characteristics of office and home space and equipment use.

Table 1. Definitions

<p>Teleworking: Often referred to as remote working in Australia, is an overarching term that can be defined as a method of performing work away from the company offices.</p>
<p>Occasional Teleworker: In the current study design, this is a teleworker with dedicated office space (of 2 days per week).</p>
<p>Frequent Teleworker: In the current study design, this is a teleworker with hot-desk arrangements (of 4 days per week).</p>
<p>Non-teleworking: Performance of work within the company office.</p>
<p>Home Working: In this study the work is performed in the teleworker's home (or home office) in a space referred to as the home office. This space may be a separate room or a space set aside within a multifunctional room.</p>
<p>Distributed Working: Refers to companies that have one or more employees who work in different physical locations. This blended work model may comprise on-site teams at one or more office locations as well as remote employees who work from home, co-worker spaces or public spaces or who are on “the go”.</p>
<p>Flexible Working: Workplace flexibility can be defined as the ability to have some control over when, where and how work is accomplished. This broad definition accommodates the various ways in which working arrangements can be made flexible. Flexible work is more than access to leave and flexible working hours.</p>
<p>Decentralised Working Hubs: Working areas where employees (or contractors) can work. These are distributed away from company offices.</p>
<p>Hot-Desking: The practice in an office of allocating desks to workers when they are required or on a rota system, rather than giving each worker their own desk. It usually assumes individuals will bring their own devices for working on e.g. computer hardware. It enables optimal use of office space and is effective only when used in conjunction with teleworking.</p>

From an environmental and financial perspective, building costs and energy use can be reduced with teleworking. Specifically, teleworking helps to cut employer's office capital and operational costs. Energy use in employer's buildings, and in particular shifting from high energy consuming commercial buildings to more energy efficient residential buildings, is

significant. Containing the capital cost requirements for offices (i.e. minimised need for office building construction) and the need for proportional office expansion (i.e. entering into leases as an organisation grows), is also a claimed benefit.

There are Unintended Consequences

These include the lack of realisation of environmental benefits and challenges from increasing work-life flexibility. What is apparent is that there are benefits to employees compared to employers, but they vary depending on the specific arrangements related to transport, office and non-office (residential) setup, working arrangements, and energy sources and amounts of energy used.

In terms of the rebound effect, this introduces complexity in assessing benefits and disbenefits. The relationship between resource efficiency and resource demand is such that, for each unit of value, each personal computer manufactured, fewer resources and less energy are required. Because significantly more units are produced, the overall result is likely to be, not a decline in the demand for energy and resources, but a continuously high level of demand. Or as these same authors suggest, could even cause an increase in material and or energy use. This is the rebound effect and applies to teleworking. In the current study, rebound effects were considered and factored into the modelling. It is necessary to consider rebound effects as there are synergies between commuting and other activities such as dropping off and picking up children from school. Teleworking has a rebound effect on home lighting in the family room and kitchen, as it is assumed employees use this space more because they are remote working. Also, the usage of general home appliances such the TV, stereo, dishwasher and washing machine increases when teleworking. Rebound effects were minimal in the scenarios modelled in the current study indicating that this does not significantly diminish the sustainability benefits of telework.

The Key Drivers are From Energy Sources, Building Energy Efficiency and Commuting Fuel

Overall, energy usage from transport and from the home office and company office environments are the key contributors to its environmental impact. The sensitivity analysis for “Global Warming Impact” – a specific impact category in the software model used which is directly related to energy and carbon emissions - demonstrates that the most sensitive parameters are:

- Percentage of employees commuting to work by car;
- Average kilometres travelled by employees, by car to get to and from work;
- Overall home office energy usage variation;
- How much office consolidation occurs as a result of

teleworking (through hot-desking)

The analysis shows that the environmental effects associated with teleworking become greater than non-teleworking when less than approximately 60% of the workforce commutes to work by car, or an employee commutes less than 30 km a day, or an employee uses more than 1,212 kWh per year of energy in the home office.

When the energy consumption level at home is increased by around 30%, the global warming impact for teleworkers becomes greater than the effect associated with teleworkers. On the contrary, if energy consumption in the home can be reduced by 20 or 40%, achievable and not impossible, then the environmental benefits of teleworking double and triple, respectively. The study also showed how important it is for environmental performance when office space is saved when employees use hot-desking. If 50% of the space originally occupied by teleworkers is immediately consolidated due to a combination of frequent and occasional (i.e 4-day and 2-day) teleworkers using hot-desking, then up to 1,624 kg CO₂e could be saved. To put this in perspective, over an organisation of 40,000 employees, this can lead to savings of up to 10,000 t CO₂e. This is an important finding as it provides an actionable benefit for organisations that are or can offer teleworking to employees or contractors. Teleworking can therefore be good for management, employees, the company and the environment.

“Remote work isn't a privilege or a special accommodation. It's a way of working, and that's a strong statement for some people. It shouldn't be a question of rewarding top performers with the ability to work remotely” — Nickie Bellington, Head of Remote Talent Programs at Atlassian

Implications for Organisations

Implementing a teleworking policy can reduce environmental impacts. While the results are robust and the conclusion remains true in most cases covered in the sensitivity analysis, the following parameters greatly influence the size of the environmental benefits from teleworking. These can be considered as rule of thumb benefits of teleworking:

- The longer the commuting distance, the greater the overall environmental benefits;
- The more efficient the company buildings are, the lesser the overall environmental benefits;
- The more energy efficient the home office set up, the greater the overall environmental benefits;
- The more the home office is relying on clean and/or renewable energy sources, the better (for example gas for heating rather than electricity from coal), and electricity from solar vs coal powered grid electricity; and
- The more real estate space can be saved within company offices from hot-desking, the greater the environmental and economic benefits (for the organisation or corporation).

Under specific conditions, teleworking can deliver environmental benefits for an organisation. As a result, there are recommendations that can come from the study as there are many variables that can effect the environmental outcomes of teleworking and that are actionable.

Specific Policy Recommendations

- Arrangements should be made to establish policies to ensure teleworking employees adopt hot-desking when they are in the corporate (commercial) office. This should be going beyond making it an option but rather to make hot-desking part of the culture so that it is seen as “this is the way we do things around here”. By enabling hot-desking, organisations can, at least for a certain capital investment period, lock in a baseline level of building energy consumption related to their operating business model.
- Workers should be encouraged to have their home offices set up as energy efficient as possible. For example, they should rely as much as possible on natural lighting and/or utilising energy efficient lighting and they should use the most efficient heating/cooling devices and home appliances. Organisations can enable this through supporting low energy or low emissions procurement programs for employees so they can be incentivised (by offering subsidies) to purchase more energy efficient home office equipment.
- Organisations should consider contributing to energy efficient home office set-ups by providing an energy efficiency “kit” for teleworkers which could include products such as energy efficient lighting and guidance on how to undertake an energy efficiency audit of the home. Emphasis and incentivisation of energy efficient behaviours would be of value in this regard and could be enhanced through gamification or other relevant motivational mechanisms, adapted to individual organisational cultures. For example, employees should be made aware of the impacts of rebound effects and encouraged to restrict the amount of lighting or heating and cooling they use in their home office environment—.
- Finally, if acceptable and practicable, employees commuting the longest distance should be prioritised to take up teleworking. The use of distributed working hubs, as long as they are scalable and shared venues with other organisations and are able to demonstrate overall sustainability benefits, that is social, environmental and economic benefits, then these could be secured and offered

by organisations.

Implications for Directors

Governance and risk professionals are in an important position to ensure organisations get the maximum value out of remote and flexible working opportunities. This is especially true now that the working world has experienced the most widespread use of teleworking through the COVID-19 pandemic.

The following are questions that this cohort of professionals should now be asking of their organisations:

- As an organisation, have we considered and evaluated the benefits and risks of teleworking and its variants for our workforce? What policy changes should we be putting in place (or further reinforcing) based on our most recent experience of telework? Do we have sufficient evidence for the business and if not, what other proof points do we need?
- Do we have sufficient evidence and data to support changes we are or should be proposing because of teleworking? For example, do we have plans to consolidate office space to capture the full environmental and cost reduction benefits of teleworking? Is that decision within our control?
- What is the board's appetite for taking on the risks from teleworking? If it lies within the bounds of our company's risk appetite statement, how do we overcome institutional barriers that limit the widespread adoption of teleworking and flexible working practises across the organisation?
- How conscious are we as an organisation of deliberately leveraging the benefits from remote working? Have we considered the risks of not enabling it and promoting it? How could we better measure and manage this way of working?
- Are our safety, wellbeing, and IT systems sufficiently robust enough to enable success with our remote workforce? Do we have effective mitigation controls in place and how effective are these in a remote working context? What constitutes the right balance of teleworking versus conventional working for our organisation?
- How will we as an organisation capture the wider benefits of teleworking in our reporting dashboard? Why wouldn't we do this now (emerging from COVID-19) given that our workforce is more prepared for remote working? ■

**Dr. Turlough F. Guerin is a Fellow of the Governance Institute of Australia and a Graduate Member of the Australian Institute of Company Directors. He is also Chair Ag Institute of Australia, and of the Board of Advisers at the business think tank, Climate Alliance Limited. This article is based on a recent study by the author to be published in full in Environmental Innovation and Societal Transitions (Elsevier) during 2021.*