Envisaging regenerative futures through Good Work Design

Elise Crawford¹, Sara Pazell^{1,2} & Nektarios Karanikas³

¹CQUniversity Australia, ²ViVA Health at Work, Australia, ³Queensland University of Technology, Australia

ABSTRACT

As we move towards a fifth industrial revolution, concerns about the future of work are heightened. To answer the call for *work that we all want*, this paper extends the concept of Good Work Design (GWD) introduced by the Human Factors and Ergonomics Society in Australia in 2020. Following an overview of GWD, we present a list of respective features with the purpose to advance a human-centred design-led approach to workplace strategy that reconciles business success with worker health. Moreover, we argue that effective design practice should be regenerative, expanding capacity and capability for design throughout the organisation, while supporting sustainable futures. The goal of this paper is to stimulate ongoing debate, research, and practice in good work design.

KEYWORDS

Good Work Design; Ergonomics; Health; Wellbeing; Sustainability

Introduction

The ongoing globalisation of economies has transformed and continues to remodel the nature of work. As we move towards the fifth industrial revolution, concerns have been raised about emerging types of work. While earlier predictions viewed big-picture thinkers, collaborators, and people who can empathise with others as the twenty-first century skills (Pink, 2006), later positions suggest that today's global challenges require highly skilled workers with solid cognitive, interpersonal, and problem-solving abilities (Manyika et al., 2012). Indeed, new ways of working require new skill sets, but changes to working conditions are also taking a toll on worker health and wellbeing (Peters et al., 2022). On the one hand, there are calls for improved work conditions and opportunities to learn and grow at work, and, on the other hand, we experience an era of an increasing focus on strict compliance that stifles worker growth and development (Stein & Allcorn, 2020).

For instance, safety management systems based on a philosophy of achieving control by generating prescribed work procedures and commanding strict adherence to rules and regulations, neglect that the lack of worker input renders 'work as imagined' by managers incongruous to 'work as done' (Dekker, 2014). Admittedly, this approach may seem attractive to large and multi-national companies to ensure that businesses and workers comply with work health and safety regulations. However, imposed job designs have an infantilising impact on workers, which stifles motivation and personal development. Infantilisation has been found to lead to passivity and an overreliance on others and is limited to short-term gains (Alvesson & Spencer, 2017). Skills needed in crucial activities such as hazard identification and risk assessment are likely to diminish under these conditions, as with any personal motivation to innovate. A top-down approach opposes contemporary safety paradigms that explicitly encourage worker participation (Hollnagel et al., 2006) and more adaptive work processes (Provan et al., 2020).

Similarly, new ways of working, such as crowdsourcing and app-based work have led to the birth of web-based enterprises that support the gig economy but ushered in a new working class, labelled the 'Precariat' (Standing, 2016). The Precariat have less job security, earn less money, and have little to no health and safety provisions. These work conditions undermine the focus on sustainable development as per the UN's (2023) agenda items to *ensure healthy lives and promote well-being for all at all ages* [Goal 3] *and promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all* [Goal 8]. Priorities for worker health and wellbeing are also evidenced by the growth in resources on this topic (e.g., US-OSG, 2022). Furthermore, negative work impacts have prompted industrial leaders to call for work design reform; for example, at the World Day for Safety and Health at Work 2019, respective discussions culminated in calls for a future of *work (that) we all want* (Mosier & Hiba 2019, p. 2).

To understand the impact of work design theory on management thinking and policy, Parker et al. (2017) conducted an extensive literature that revealed five distinct work design perspectives, namely Sociotechnical Systems Thinking and Autonomous Work Groups, Job Characteristics Theory, Job Demand-Control Model, Job Demand-Resources Model and Role theory. Moreover, their review indicated that work design is a key antecedent of most major focal areas of psychology and management, such as productivity, job satisfaction, wellbeing, absenteeism, presenteeism, organisational commitment, and creativity. Work design is found to play a mediating role among process and context variables, (e.g., leadership, downsizing, lean production, employment contracts) and business outcomes (e.g., productivity through job crafting) (Parker et al., 2017).

Another finding from the specific review was that traditional language used by academics (e.g., job design, work design, or job characteristics) was not used in daily practice. In industry, preferred terms may include job flexibility, collaboration, multidisciplinary teams, empowerment, future work, etc. and focus on addressing contemporary matters such as sustainability, globalisation, and ways to engage millennial staff (Parker et al., 2017). Additionally, the review of practical-oriented studies revealed mixed results, the sociological analysis of which suggested a rising trend towards more standardised work and lower decision-making autonomy in professional contexts.

Last, Parker at al. (2017) proposed a multilevel model of work design to bring the five work design perspectives together and address emergent issues arising at the individual level, social/system-level, and macro-level such as globalisation. Similarly, the Taylor's review on modern working practices in the UK also called for responsible business that not only keeps pace with technology advancements and economic change, but also designs work that brings out the best in people and where work is founded on enduring principles of fairness (Taylor et al., 2017, p. 6). The need for good work has become a pressing matter of importance, heightening the demand for work design skills within the workplace that can aptly respond to current calls for work reform. The concept of Good Work Design (GWD) introduced by the Human Factors and Ergonomics Society of Australia (HFESA, 2020; Karanikas et al., 2021) responds to these calls for work reform.

Good Work Design: Overview

Design has been recognised worldwide, mainly through product design that improves life. In addition to Good Design® (2023) founded in Chicago in 1950, several countries have a Design Council or similar organisation such as the UK Design Council established in 1944 (UKDC, 2023) and Australian Design Council founded in 1958 (ADC, 2023). Albeit these and other organisations encourage quality designs through awards programs for physical items or structures, design is much more than that. For instance, the UK Design Council's mission is "to make life better by design by working with people to create better processes, all of which lead to better performance." (UKDC, 2020, p. 1). Also, the review by Parker et al. (2017) showed that although most countries have work

design as a policy agenda item, government policies need to refocus from a mere emphasis on skill development to a greater emphasis on skill use within the workplace to achieve good work design.

This exact idea of *working with people to create designs that enhance their performance* is mirrored in and drives the concept of GWD: workers (including managers and employers) facilitated by human factors and ergonomic professionals or other specialists in work design, encouraged by management, supported by the organisation and educated by qualified experts to contribute to the design of their work, and continually build design literacy and capability within and across the organisation. Towards the end of 2019, this idea brought together a group of work design enthusiasts who formed a project committee within HFESA to craft a position on Good Work Design (HFESA, 2020). In alignment with the multidisciplinary nature of human factors and ergonomics, collectively, the committee represented ten discipline areas, namely the health sciences, social sciences, safety sciences, design science, psychology, engineering, legal services, education, human factors, and ergonomics, including representatives from Good Design Australia and the industry.

In principle, GWD is conceptualised as a fundamentally human-centred design-led approach that focuses on making good work available to all workers. 'All workers' extends from top executives to front-line workers, from maintenance staff to cleaners. Everyone in the organisation is there to do work, and hence, all are central to the success of the business. 'Good work' means that fundamental business objectives are realised while optimising human health and performance. The term 'good' denotes that there is no single endpoint of perfect work that can accommodate everything and everyone to the maximum, without trade-offs, especially within the reality of dynamically changing natural, socio-political, socio-technical, and organisational environments. 'Work design' does not follow a solid and rigid design process or outcome but it helps to ensure that the system of work is not a randomly and stochastically arranged and interacting set of agents. The term 'design' in GWD denotes the opportunity to continually co-conceive, co-create and redesign work in anticipation of and response to internal and external, systematic or random effects.

Achieving GWD involves three phases that are iteratively enacted and constantly adjusted as necessary: Discovery, Design, and Realisation (HFESA, 2020; Karanikas et al., 2021). In the Discovery phase, early engagement of individuals and teams is paramount. This includes those who drive design, those who co-design, subject matter experts, and those who may benefit from good work; often, these are the co-designers, but may include maintainers, and end users, like customers, or those within the supply chain. During the discovery stage, it is also necessary to study and comprehend the context, job, task, technology, equipment, and social interactions involved, so that problems can be defined, and opportunities noted. The Design phase involves collaboration, ideation, and facilitated solutions to problems, or the co-creation of opportunities for improvement. Activities may include simulations, prototype iterations, trials and reviews, the identification of trade-offs and negotiations. The Realisation phase refers to the tangible outcomes, deliverables developed as well as learning about their effectiveness, and optimisation levels. This phase seeks a balance between employee health and safety, productivity and other business outcomes. Figure 1 provides an overview of the GWD approach.

Good Work Design Features

Although the concept and elements of good work can be found in several publications, we advocate that GWD integrates, reconciles, and extends those. For instance, in the Australian context, literature has advocated for the design of good work to promote worker health (Kanse & Fruehn, 2022; SWA, 2020; AFOEM, 2011). Safe Work Australia (SWA) explains that good work means to manage risks and promote productivity and health (SWA, 2020), suggesting that by addressing worker health, productivity improves, and this supports the achievement of work objectives.

Although from the SWA's perspective this stands true and is supported by studies, in our view of GWD, healthy individuals and healthy businesses are equally important. In an elaborated vision of GWD, business objectives must be defined and met in tandem with worker health and wellbeing needs rather than the former objectives being a by-product of healthful work situations.



Figure 1: Good Work Design phases (HFESA, 2020)

Thus, while acknowledging that current published materials can be adequate if they match their targeted context and audience, we believe that there is space for a broader perspective that is more strongly oriented in design circles, compelled by human factors and ergonomics initiatives, and aligned with these practices. As such, and subject to ongoing discussions within and between academia and industry, we propose several provisional GWD features outlining what GWD is, what it acknowledges and appreciates, what GWD needs and does, and what it creates (Table 1).

We do not provide the list as an exhaustive checklist-type catalogue of features. Instead, we aim to stimulate further research and debate and, hopefully, poke those in positions of influence to apply +this holistic design framework to their organisational strategies. We appreciate that, in isolation, several of the features listed in the Table may mirror some ideas used in other literature or arise from a different orientation. However, contemplating, organising, and bringing all these features together under a unified, inclusive, design-oriented and discipline-agnostic GWD framework is innovative. Collectively, the GWD phases (Figure 1) and features (Table 1) represent a unified way to advance the agenda among different business units and their ontological framework or professional stance.

Table 1: Provisional	list of Good	Work Design	features
----------------------	--------------	-------------	----------

Good Work Design		
a framework for undertaking workplace (re)design		
IS	human-centred	
	propped by human factors and ergonomics approaches	
	regenerative because it builds design capability (skills and resources) and capacity (ability	
	to host and support design projects) throughout the organisation and the supply chain	
	the evolutionary and ecological aspects of variable human performance	
	the "just right" balance of "joy work" and "work-work"	
	'design-in-use' or the applications and spontaneous adaptations of work design in business	
APPRECIATES	the role of humans in highly automated systems	
	that the design process is as important as the outcomes	
	the positive emotional experiences associated with creation through design versus the	
	fear associated with needs to contain all that can go wrong	
	facilitation by a work design strategist	
	support by subject matter experts	
	collaboration with 'conventional' designers	
NEEDS	resilience engineering strategies to inform and test work designs	
	access to successful 'work arounds' or 'near rights' (versus 'near misses) to leverage on	
	design-ready changes	
	systems of transparent and defensible decision making in work governance	
reconciles the varieties of human work		
	designs for diversity	
	more than 'consider business needs'; it realises business objectives in a competitive,	
	pioneering, and sustainable manner while maintaining and promoting worker health and	
	performance	
	involves discovery, (iterative) design, and realisation of good work	
	implements effective change management practice to test ideas, manage iterative trials,	
DOES	and launch progressively larger and more ambitious design campaigns throughout an	
	addresses safety-critical material unwanted high-consequence and other types of	
	unfavourable events (what is not wanted) but also focus on design for what is wanted for	
	human performance across a spectrum of needs	
	prospects new design opportunities on an ongoing basis	
	tolerates a degree of fallibility to promote innovations	
	focuses on storytelling to promote shared learning and tacit knowledge in a business	
	enables cross-industry learnings and continual insights about a changing world of work	
	celebrates design successes in a resounding way	
	a visibly human-centred organisation	
CREATES	unified business strategies among departments	
	positive experiences of work, the effects of which extend beyond work	
	a sense of coherence, meaning, and manageability to work	
	a culture of innovation	
	design that either works well or stands out because it is magnificent	
	tacit knowledge about design to enable self-efficacy while building confidence to ideate,	
	experiment, and innovate design-related change in supported or structured ways	

The next steps

There are several opportunities to facilitate and support the implementation of the GWD approach. Although in this section we list the ones that we believe are most important currently, we remain confident that each reader, whether a scholar or an industry professional, can identify additional opportunities within their context. First, work design theories and studies need to become increasingly trans- and inter-disciplinary instead of viewing work from a mono-disciplinary or limited angle. Indicative necessary disciplines include, but are not limited to, design and safety sciences, human factors and ergonomics, operational engineering, business management and organisational psychology, appropriately complemented by experts from other disciplines depending on the work context.

Another opportunity regards industry-based projects that follow all three GWD phases from discovery to realisation and share best and poor practices. Instead of advertising only wins and great results, we must understand how compromises are made and what challenges arise. We need to gain honest and transparent insights through various channels (e.g., industry forums, conferences, publications, networking) as for example the successful and failed cases shared by authors from several countries and industries in two recent publications (Karanikas & Chatzimichailidou, 2020; Karanikas & Pazell, 2022). Implementing and testing the GWD phases across diverse work contexts will gradually build a crucial mass of knowledge to allow refinement of the GWD features and revisit its business value and merits.

To achieve the above, researchers need to design with the industry studies that go beyond crosssectional surveys that collect perceptions or evaluate situations. We do not see GWD as another construct that represents, moderates, or mediates cause-effect relationships to be tested through hypotheses. GWD is about actioning its phases based on evidence- and practice-informed decisions, collecting data from the whole journey, and sharing all small and great struggles and wins. On this front, we must also improve the communication among practitioners, designers, researchers, and industry by presenting material in the language of the intended audience directed at contemporary concerns, so that audiences comprehend the relevance.

Conclusion

The approach to Good Work Design (GWD) through the extended concept presented in this paper responds to calls for better and fresh ways to design and manage work. The GWD features listed above illustrate our vision, but, most crucially, mean to advocate an informed, balanced, reconciled, and human-centred design-led approach to workplace strategy. We posit that this will enable business success and promote worker health and wellbeing. We promote GWD as a regenerative design practice that expands capacity and capability for design throughout the organisation and, thus, leads to sustainability in organisations. Nonetheless, we invite everyone to debate and challenge the content of this position paper and each other's views with the hope that the list of GWD features we have proposed will mature and advance GWD theory and practice.

References

ADC. (2023). Home. Australia Design Council. Available at: https://australiandesigncouncil.org/ AFOEM. (2011). Position Statement: Realising the health benefits of work. Australasian Faculty of

Occupational and Environmental Medicine. Available at: www.healthbenefitsofwork.com.au Alvesson, M., & Spencer, A. (2017). The stupidity paradox: The power and pitfalls of functional stupidity at work. London: Profile Books.

Dekker, S. W. A. (2014). The bureaucratization of safety. Safety Science, 70(1): 348-357. https://doi.org/10.1016/j.ssci.2014.07.015

- Good Design (2023). GOOD DESIGN® the oldest and the most prestigious awards program, Available at: https://www.good-designawards.com/about.html
- HFESA. (2020). Good Work Design. Human Factors and Ergonomics Society of Australia Available at: https://www.ergonomics.org.au/goodworkdesign/
- Hollnagel, E., Woods, D. D., & Leveson, N. (2006). Resilience engineering: concepts and precepts. Aldershot, UK: Ashgate Publishing.
- Kanse, L., & Fruhen, L. (2022) Work design. In Australian Institute of Health & Safety (AIHS). The core body of knowledge for generalist OHS professionals (2nd ed.). AIHS.
- Karanikas, N., & Chatzimichailidou, M. M. (eds.) (2020). Safety insights: Success and failure stories of practitioners, Boca Raton: Routledge.
- Karanikas, N., & Pazell, S. (eds.) (2022). Ergonomic insights: Successes and failures of work design, Boca Raton: CRC Press.
- Karanikas, N., Pazell, S., Wright, A., & Crawford, E. (2021). The what, why and how of Good Work Design: The perspective of the Human Factors and Ergonomics Society of Australia. In Rebelo, Francisco (Ed.) Advances in Ergonomics in Design: Proceedings of the AHFE 2021 Virtual Conference on Ergonomics in Design. Springer, Cham, Switzerland: 904-911.
- Manyika, J., Lund, S., Auguste, B., & Ramaswamy, S. (2012). Help wanted: The future of work in advanced economies. McKinsey Global Institute. March.
- Mosier, K., & Hiba, J. C. (2019). The essential contribution of Human Factors/ Ergonomics to the future of work we want. International Labor Organization. Available at: https://www.ilo.org/global/topics/safety-and-health-at-work
- Parker, S. K., Morgeson, F. P., & Johns, G. (2017). One Hundred Years of Work Design Research. Journal of Applied Psychology, 102(3): 403-420. https://doi.org/10.1037/apl0000106.
- Peters, S. E., Dennerlein, J. T., Wagner, G. R., & Sorensen, G. (2022). Work and worker health in the post-pandemic world: a public health perspective. The Lancet Public Health, 7(2), e188–e194. https://doi.org/10.1016/s2468-2667(21)00259-0
- Pink, D. H. (2006). A whole new mind: why right-brainers will rule the future. New York City, New York: Riverhead Books.
- Provan, D. J., Woods, D. D., Dekker, S. W. A., & Rae, A. J. (2020). Safety II professionals: How resilience engineering can transform safety practice. Reliability Engineering & System Safety, 195: 106740. https://doi.org/10.1016/j.ress.2019.106740
- Safe Work Australia. (2020). Principles of good work design. Available at: https://www.safeworkaustralia.gov.au/
- Standing, G. (2016). The Precariat: the new dangerous class. London: Bloomsbury Academic.
- Stein, H. F., & Allcorn, S. (2020). The Psychodynamics of Toxic Organizations. 103–119. https://doi.org/10.4324/9781003009559-6
- Taylor, M., Marsh, G., Nicol, D., & Broadbent, P. (2017). Good Work: The Taylor review of modern working practices. Available at: https://www.gov.uk/government/publications/goodwork-the-taylor-review-of-modern-working-practices
- UKDC (2021). Design perspectives: design skills. Design Council, UK. Available at: https://www.designcouncil.org.uk
- UN (2023). The 17 goals. Sustainable Development. United Nations. Department of Economic and Social Affairs. Available at: https://sdgs.un.org/goals
- US-OSG (2022). Workplace mental health & well-being. Office of the U.S. Surgeon General, Available at: https://www.hhs.gov/surgeongeneral/