RESEARCH ARTICLE

How leaders can manage the disruption caused by the pandemic
[version 1; peer review: awaiting peer review]

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Abstract
Organisations have over time adopted conservative, structured and controlled processes to manage and achieve goals set with their stakeholders. Contrary to that, an environment of disruption has emerged, that being a faster, less predictable and less certain environment than the previous fifty or more years. This environmental difference has emerged due to the interconnectivity of trade formed out of globalisation, technology, internet and social media. The historical organisational decision models and structures are perhaps too slow and conservative for a faster less certain new age. Whilst pandemic was considered but one disruption to consider for the new age, more guidance is required for those leading and managing organisations through the current specific Covid-19 pandemic, into the pending recovery and beyond. Whilst wide-scale jobs may be lost in this new future, new opportunities for entrepreneurs, creativity and skills will likely emerge. This article will research how disruption, pandemic in particular, is changing leadership and management practices. Additionally, this article recognises that many of the organisational structures and processes of today were originally designed over thirty to forty years ago, so may no longer be appropriate. The design aspects or organisations, decision models and dealing with stakeholders will likely need to change in a pandemic, so this paper will recommend new and modified ways for organisations to operate. This research will offer a theoretical solution to assist management and leaders adjust their business and decision models in a pandemic. The past operating organisational models may lack the creativity and flexibility necessary for a world that has locked down, works from home or have closed without notice at once. Leading and managing is so different in a pandemic, especially when so much has changed so quickly, so this article will contribute by recommending new organisational principles to work to.

Keywords
pandemic, disruption, management, leadership, organization

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Research approach
A literature review of the organisational structures and processes was firstly undertaken by this research in order to explore and critique the current organisational structures with respect to the significant changes that have been brought on by the Covid-19 pandemic. A review of the leadership topic has also been conducted as part of that literature review as it is considered that the pandemic may require alternate leadership skills due to its sudden and unpredictable impacts. This theoretical research has been undertaken as a means to discover and recommend new organisational design and leadership in the context of a specific pandemic disruption that emerged in 2020.

Due to the time and context of this research it has not reviewed real cases, nor has it involved survey or interview of organisations to see what may be happening during the pandemic. It is considered that any benefits of real case studies and survey will not be fully understood until later in the pandemic so were not appropriate at this early stage.

This research is aimed at providing the reader with relevant theoretical guides towards organisational management that may be used during and post the pandemic. Organisations working through social distancing, government restrictions, unemployment and customers under cash stress in 2020 may find that it is not possible to return to their pre-pandemic operations, where this research may provide useful information and insights to be used in organisational recovery efforts. This research began with a review of the literature so as to understand the topics with respect to the recent research, as a way to provide the insights for those managing organisations of the future.

Literature review
A review of leadership1 was conducted over the literature as a means to understand the topic of change, leadership and management more deeply and as a way of critiquing the current practices against the backdrop of a pandemic type disruption. Pandemic planning has been recommended for those seeking to modernize and prepare their organisation for fast moving, sudden and unpredictable disruptions (Donald, 2019). The nature of this literature review is important as any disruption, especially a pandemic, has the potential to significantly disrupt the traditional organisational models (Basile & Faraci, 2015; Donald, 2019). Past research below has reviewed business systems, organisational environments, processes and structures, in the pursuit of understanding the future of organisational models in a disruption.

Organisations may need more agility to operate in a disruption environment (Denning, 2018; Donald, 2019) as many of the traditional business systems may slow and inhibit adaption. Change is no longer a one-off event, rather is now an almost continuous process (Burnes, 2004; Král & Králová, 2016), where the ability to adapt may be a survival necessity in the future (Donald, 2019). It may no longer be appropriate to imagine change as a staged process as once was the case in early resistance research (Lewin, 1945). Organisational structure variations may even be a measure of change (Král & Králová, 2016). Whilst communication is considered one important element of change (Král & Králová, 2016), where it is but one of at least seven other change factors (Donald, 2017; Donald, 2019).

One may consider that corporate controls are often supported by various corporate structures, the controls may also need to be adjusted as organisations change (Maciejczyk, 2016). Many of the current organisational structures used by business have goals of improving outcomes and supporting strategy. The common matrix structure, for instance, originated as one to improve the functional and operational variability (Peters, 1993). Various factors including strategy, environment, technology and organisational size influence organisational structures (Daft, 2012; Král & Králová, 2016), where these may influence even technological innovation (Hu, 2014). Structures are not standardized, allowing significant variation between organisations, so some may be centralized yet allow decentralisation in various operational matters (Romelaer & Beddi, 2015). There is great variation across country of origins and those operated globally (Heenan & Perlmutter, 1979; Perlmutter, 1969; Romelaer & Beddi, 2015). It is recognised, despite the variability, that there are several common structure types, including matrix structure, divisional structure, product structure and area structure (Romelaer & Beddi, 2015; Stopford & Wells, 1972; Williams et al., 2016).

There is no fixed business structure, where they can vary over time and inside markets along the structures of functions, departments, regions, product or matrix (Williams et al., 2016), or even functions, divisions and matrix (Maciejczyk, 2016). Structural design often varies based on management and market environment (Maciejczyk, 2016; Williams et al., 2016) or even management philosophy and perspective. Other control systems that management use to run their organisations include that of job descriptions, pay rates and authorities (Guadalupe et al., 2013).

Interconnected trade, otherwise named as globalisation, can emerge as unstable or chaotic (Roome, 1998; Roome, 2011), with great uncertainty and risk (Donald, 2019). Even sectors that were once the domain of government alone have changed since the emergence of globalisation (Roome, 2011). In a market response, prompted by increased efficiencies and profits, some organisations have outsourced their non-core efforts (Sarmiza, 2010). It is now clear that globalisation benefits have not been uniformly distributed, where there has been increases in world migration and refugees (Roome, 2011).

The benefits of globalisation appear to have presented in the larger, more powerful brands (Roome, 2011), including those that own systems rather than products and assets (Roome, 1998; Roome, 2011). Work practices have also divided in globalisation where there has been a divergence between worker rights, split between those full time employed and the growing casualization of the work force (Ekberg et al., 2016; Virtanen et al., 2005). It is clear that competing on a global basis that casuals have been utilized in the pursuit of flexibility (Blanck, 2014; Schur et al., 2013; Virtanen et al., 2005).

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1Research key words used were leadership, innovation, business structures, business processes, matrix, product structure, departmentalisation, disruption.
The modern multinational structure is complex, including many interconnected relationships (Ghoshal & Westney, 1993; Romelaer & Beddi, 2015). Organisational design elements of power, control, strategy and knowledge are inadequate, so a broader model with increased elements may be required (Romelaer & Beddi, 2015). The matrix structure may be too slow (Anderson, 1994), despite its broad appeal and use in technical organisations (Anderson, 1994; El-Najdawi & Liberatore, 1997; Kuprenas, 2003). Other replication models, like IKEA, allow modifications through a process of learning and local variations derived from regional differences (Jonsson & Foss, 2011). To achieve an expansive model with replication, organisations use process codification and detailed instructions (Jonsson & Foss, 2011).

Corporate social responsibility (CSR) and ethics may harm business models (Albac, 2005; Albac, 2007), or be quite be contrary to capitalism (Friedman, 1970), yet CSR and ethics may be an essential for globalisation (Pies et al., 2010). Staff may be more appropriately guided with ethics when change is constant and written rules are redundant (Donald, 2019). Despite the debate, CSR is not yet an agreed concept as it has many definitions (Carroll, 1999; Dahlsrud, 2008; Guthey & Morsing, 2014). Whilst CSR may be characterised with elements of adaptability and resilience (Guthey & Morsing, 2014), others portray this as being useful to challenge dilemmas and trade-offs, where any divergent may be useful for society (Guthey & Morsing, 2014; Margolis & Walsh, 2003).

A pandemic, or other changing environment, may increasingly challenge management, so requiring new relationships with flexibility and credibility (Juras et al., 2014), or where creativity and innovation may enable create flexibility and credibility (Donald, 2019). Informal systems may be useful for startups, yet control systems are often adopted as organisations grow (Davila & Foster, 2007), where startup Chief Executive Officers may find the traditional control systems too restrictive (Davila & Foster, 2007). Traditional organisations may use gating systems to control and improve project success, yet may need amending to cope with a faster organisational speed or adaptability (Cooper, 2017). So in a pandemic, with great changes in government policy over time, an iterative rather than a fixed model, may be more useful with unison multiple cycles that are no longer sequential (Cooper, 2017).

Organisations are made up of more than merely control systems and structures, where other factors may need to be included, where authority and accountability alignment may be beneficial (Arya et al., 2007; Bedford et al., 2016; Giraud et al., 2008; Jevtić et al., 2018; Merchant & Otley, 2006). Beyond the mere structures and processes of an organisation it is clear that leadership is a significant change factor (Donald, 2016; Donald, 2017; Donald, 2019) with others. Leadership can have positive organisational effects, where improving management skills may influence competition and co-operation (Lado et al., 1997; Stres et al., 2016). Organisational formalisation is associated with positive effects, yet centralisation may yield negative effects and co-operation or competition may yield improved financial results (Luo et al., 2006; Stres et al., 2016).

This literature review indicates that the controls and structures may be overly controlling for a faster, more unstable pandemic environment. The future organisational platforms may need a redesign if organisations are to respond to the post pandemic environment that has emerged from globalisation, the internet, technology and social media (Donald, 2019). The following section discusses the gaps identified from this literature review.

**Gaps in the literature**

Many of the past organisational models are based on a management control or power basis, each aimed at delivering consistency, quality or growth. Whilst original change research by Lewin (Lewin, 1945) assumed management control, the linear change assumption in Lewin’s work may be too simple for this more complex environment (Dent & Goldberg, 1999; Donald, 2019). Whilst control may have been essential to the structures of the past, centralisation may have negative effects, while co-operation and competition may improve results (Luo et al., 2006; Stres et al., 2016). Multiple structural types exist and may be altered regularly irrespective of the design being that of the matrix, the divisional, functional, the regional or product (Maciejczyk, 2016; Williams et al., 2016). Whilst structures may allow flexibility (Maciejczyk, 2016; Williams et al., 2016), they have been used for control, power, or for expansion (Jonsson & Foss, 2011). There appears to be insufficient research using broader organisational criteria, as much of the existing research has been based on control or flexibility (Stverkova & Pohludka, 2018).

Performance measures are widely used in business, so there is potential to research using those metrics in future research over alternate structures and processes (Kuprenas, 2003) in a post pandemic environment. As the post pandemic environment is faster and more unpredictable, future research may find it useful to adopt and compare alternate criteria such as adaptability, creativity and speed (Donald, 2017; Donald, 2019). Whilst formalisation may yield benefits to an organisation, centralisation does not (Luo et al., 2006), in a variable setting of a pandemic it may be useful to compare differences and effects of formalisation versus centralisation.

Whilst a gating system may have traditionally been used to control projects, it may be too formal and slow for almost constant change, the organisational models may need to adapt to the increased pace and adaptability (Cooper, 2017), especially during a pandemic. There appears to be little modern research around how organisations may already be emerging to respond to the new pandemic age environment. Additional criteria to analyse and measure organisations in this pandemic environment may be useful.

**Research criteria and limitations**

Organisational design has been researched with assumptions around management control based on their power, control and status. The new age business environment that is faster, more uncertain, less predictable and consequentially more risky than previous times (Donald, 2019), including a pandemic, perhaps is no longer appropriate for this new age. This research has not performed case studies or survey, rather it has removed management centrality, seeking to recommend a new business model, one more
useful for the post pandemic new age. It is possible, due to their controls and rules base, that traditional management models may have limited creativity, critical thinking and flexibility. It may be important to remove the management control and power in order to enable an organisation to adjust for the pandemic environment.

Based on the literature review above this research has contemplated criteria that will be useful for future research as well as for the practitioner. Organisational design is usually not standard, often defined based on the circumstance, market position or by specific management criteria, each varying over time. No two organisations are likely to be the same at any point in time, even if they compete and exist in the same market, so this research has sought factors that may be useful in the pandemic new age, including its fast pace with great uncertainty. The following findings and related model are based on the literature review above, where the proposed framework is based on principles that may be tested and trialled by academics and practitioners alike in the future.

Findings
The above research has discussed how the past array of organisational structures and processes may no longer be appropriate for a globalised, disruptive environment (Donald, 2019). Whilst some organisations already allow local cultural and customer differences in regions (Jonsson & Foss, 2011), most policies, processes and structures are premised on reductions in variation and to control (Maciejczyk, 2016). Whilst efficiencies may result from control and standardisation, the mechanisms of control have the potential to restrict creativity and critical thinking. The new age of pandemic with its faster, less uncertain and unpredictable nature may require deeper thought, broader ideas and multiple opinions as the situation is new and untried. It may be imperative for organisations to deploy a range of issue identification and assessments when change is unpredictable and uncertain.

Organisational structures may be assessed during times of change based on their openness, including elements of vision and innovation (Nisar et al., 2016). As was seen across the world in March 2020, even large successful organisations can quickly reduce size and value in such disruption. An example from the last twenty years is that where Kodak changed from a world picture printer to that of almost no value through the digitisation of photography (Donald, 2019). A key contributor to the loss in Kodak value may have been structure, process strategy and management strategy.

As discussed earlier, global diverse organisations may allow individualised strategies based on local sales, structures, finance and marketing influences (Alford & Greve, 2017; Porter, 1996; Stverkova & Pohludka, 2018), yet the structures are a choice of management (Romelaer & Beddi, 2015) and may vary based on adaptability, innovation and scale (Kim & Utterback, 1983). Whilst control may be the primary objective of structures, it has also been linked to quality (Gokpinar et al., 2010). New sources of data analysis over organisational models may be required as the old tools may be too restrictive when executives have changing needs (Cheung & Babin, 2006), especially in a pandemic when rules vary regularly between countries and regions.

Future organisational control systems understanding may be improved if there is authority and accountability alignment (Arya et al., 2007; Bedford et al., 2016; Giraud et al., 2008; Jevtić et al., 2018; Merchant & Otley, 2006) in improving organisational results (Daft et al., 2010; Jevtić et al., 2018; Khandwalla, 1973; Mintzberg, 1979; Simons, 2005; Simons, 2013). A cohesive overriding force may enable adaptive and fluid organisations to perform with reliability and reduce issues in organisational change (Grabowski & Roberts, 2011). Whilst some structures may change in response to customer circumstances (Homburg et al., 2002), others may question the classical product and geographic models (Gebauer & Kowalkowski, 2012). Whilst structure may be important to stability and control, it is worth remembering in a disruption that too many changes may lead to instability and reduced organisational effectiveness (Rapoport, 1989), or loss of trust in leaders (Donald, 2019).

Whilst many the primary corporate goal may be that of financial returns (Beets, 2011), there is a variety of secondary goals (Beets, 2011; Friedman, 1970; Grubbs, 1998; James & Rasske, 2000; Kamani, 2010; Manne, 2008; Silver, 2005). In the emergence of larger organisations tensions have often grown between the responsibilities of functional and operational management (Quail, 2008), that may need resolution in new models of the future. A comprehensive model of the multinational, with more elements is likely to be required for complete understanding of the modern organisation (Romelaer & Beddi, 2015).

Traditional organisational structures may have served business well over the past fifty or more years, yet they are not without criticism or issues. Despite the perceived benefits, many matrix structures still result in confusion over roles and responsibilities (Johns, 1999; Kuehn et al., 1996), slower results and conflict (Kuprenas, 2003), and ambiguity or low efficiency (Goold & Campbell, 2003). Power and responsibility can occur in a matrix structure, despite the perceived benefits of that structure (Anderson, 1994). Disruption (Donald, 2019) may result in a revolution of a kind, resulting in a complete adjustment to corporate structures if they are to survive and adapt (Stverkova & Pohludka, 2018). The past structures may be inadequate to resolve the emerging issues over economic distribution, power and the environment (Roome, 2011), and even a pandemic, and whilst structure may be important to stability and control, it can lead to instability and reduced organisational effectiveness (Rapoport, 1989).

The matrix organisation appears to suffer less issues than the alternate structures despite its relatively higher complexity, potentially due to the way processes are varied (Rapoport, 1989). So a key challenge for management is to design a structure that meets the organisational strategy and returns whilst seeking to reduce the negative effects from any change (Rapoport, 1989). It has been argued that goal orientated functional organisations may be more able to adjust structures with relative stability (Rapoport, 1989). Knowledge and technology sharing can assist in developing innovative business models (Guan & Huang, 2014), so innovation can be achieved if training is included (Hu, 2014). As discussed above, ethics, society and community in future organisations may
improve or reduce traditional organisational power (Beets, 2011), while training may also improve matrix structures (Kuprenas, 2003). In a changing environment some have argued that new governance is required (Donald, 2019; Roome, 2011), so it may too be useful in a pandemic that is dictated by ever changing government policies and rules.

The business leader should not be exclusively considering structure for improvements in a pandemic as flexible working arrangements also assist in the pursuit of efficiency, arising from additional flexibility and cross-skilling (Ekberg et al., 2016), where efficiency is also linked to the choice of structure and design (Basile & Faraci, 2015). In the current pandemic, organisations may be incapable of keeping up the old control processes like documentation and training, so in a faster disruption environment higher level advice systems like ethics may be more useful (Donald, 2019). CSR may be useful with its connection between organisation and society values, combined with its elements of adaptability and resilience (Guthey & Morsing, 2014).

As the world has had little experience in pandemics of recent times, new creative solutions may be required to survive and thrive, where innovations include new ways of working (Basile & Faraci, 2015; Hamel, 2006), new processes and structures (Basile & Faraci, 2015; Vaccaro et al., 2012), including administration (Damanpour, 1987; Pisano, 1996), management (Basile & Faraci, 2015; Birkinshaw & Mol, 2006; Hamel, 2006; Markides, 1997) and even organisation (Basile & Faraci, 2015; Damanpour, 1987; Damanpour & Aravind, 2011; Damanpour & Evan, 1984).

The traditional risk registers used by organisational management were useful in preparing for reasonably predictable risk, yet in a pandemic risk and options are hard to predict, so may transcend markets and industries, where even the unlikely can occur suddenly (Donald, 2019). The proliferation of the internet, email and social media now transmits information instantly around the world without filtering or analysis in many cases. The old risk register does not appear to be appropriate when pandemics emerge, rather more creative and critical thinking is required in disruption (Donald, 2019).

As discussed above any new organisational model should not be based on management power, control or even efficacy, as the unpredictable nature in a pandemic may require frequent inefficient adjustments in order to survive and thrive. Any new model needs to be flexible, as pandemic policies will be variable, so any new model should not prescribe structures and processes or even roles. The goals of organisations may remain with their financial requirements yet may need to attempt to achieve societal goals with additional innovation, speed and adaptability. This research proposes that a new model proposed should emerge with an expanded notion of CSR. Flexible adaptation criteria may be better at measuring organisational success than merely the old financial systems, as any strategy and long-term goal can quickly be made redundant in pandemic changes. Even the product or service being offered may quickly be fundamentally changed when unpredictable pandemic changes arise, so it may be unfair or inappropriate to measure and reward merely on financial or strategic grounds.

Innovation, speed and organisational adaptability are proposed as two additional measures for any new organisational models. In the new model, the traditional manager and leader roles will likely require new skills to be able to influence and change an organisation quickly, yet not lose the trust or engagement of its key staff and broader stakeholders. Organisations may not currently measure and value organisational innovation, speed and adaptability, yet those measures may be more important in the pandemic future than merely financial outcomes alone. Essentially investors exist to achieve returns, where the fixed measure of budget or market forecast may no longer be an appropriate measure of their performance when changes are interconnected beyond the control of the management.

Furthermore, a new model is proposed for the post pandemic age, one that seeks to list key criteria for the achievement of four business measures of this new age. The achievement of innovation may be critical to find solutions that are different or superior to competitors, so will require creativity with flexibility in order to react and adapt to ongoing change, especially if not within the control of management. Whilst management should be responsible for identifying new, sudden and unpredictable change, any notion of fixed goal achievement is unlikely in a pandemic as government policy is so variable and unpredictable. It may be that skills for management of the future should include early change identification, options and critical thinking. The new organisational model proposed in this research is shown in Figure 1.

This new model in Figure 1 does not prescribe processes, structures or governance, leaving the exact form to management to decide based on their requirements and situation. Remaining with the traditional strategy, hierarchical structures, written processes and financial targets may simply be too prescriptive and limiting in a pandemic, as change is so uncertain, unpredictable and risky. For flexibility it is argued that roles and responsibilities should not be overly prescriptive either, as large documents may often not be used anyway (Goold & Campbell, 2003), so it may be more important to show the purpose of a role (Goold & Campbell, 2003; Merton, 1968), or an understanding of disruption (Donald, 2019). The new organisational model proposed in this research sets the measures for organisational success yet allows for flexibility within the model to achieve those goals, as in disruption, like a pandemic, structures, processes and stakeholder involvement may be under constant change. It is perceived that more creative solutions may emerge if roles and responsibilities, accountabilities less defined in the new age.

**Practical applications, future study**

This research has proposed a new organisational model that allows for diversity and creativity, where the practitioner is allowed flexibility in design but remains responsible for the model and its measures, albeit the measures expanded for the new age. The model proposed in Figure 1, emerged out of the literature review, formed as an early proposal for organisations wishing to adapt to a very risk and unpredictable post
pandemic world business environment. The traditional models of setting strategy, annual budgets and financial measures appear to be too rigid, lacking flexibility and creativity when unpredictable pandemic and post pandemic policies emerge. Entrepreneurs may have the requisite creativity to design new solutions, yet they need to still engage stakeholders with close staff relations, trust and engagement as each has been linked to change success (Donald, 2019).

Traditional organisational models rely upon governance through reporting of deviations and inefficiencies, yet governance is often retrospective and slow in larger organisations, occurring well after any decision-making process. This is not to push governance into the irrelevant, rather it may hold higher relevance counter the creativity and risk profiles of the creative and entrepreneurial (Donald, 2019). Governance may need to be closer to decision making timing, where it is involved in the development of options and their critical assessment before decisions are made (Donald, 2019). Of course, if governance is to be closer to decision makers their independence can be compromised. Although there are benefits of real time independent advice that may outweigh independence issues as closer governance, in real time may be beneficial in avoiding the illegal or unethical actions. The measures for organisational success are no longer purely financial in this proposed model, rather ethics and society value need to also balance with the creative and innovation. Governance should not be limited to pure financial audits, rather it should provide independent advice against all four of the measures proposed in this new model (Figure 1).

For managers and leaders trained in past times it may be confronting or quite difficult to contemplate a model without management centricity, power and control. The traditional model was based on expectations that the business environment was reasonably predictable and controllable, where the manager was in control with great knowledge to solve and propose solutions. In the new age with its faster, less uncertain and riskier environment, management is unlikely to be all knowledgeable, nor be the source of all the creativity and best options. Management will need the support and skills of staff and the broader stakeholders if they are to quickly identify issues and best fit solutions, management may now be the facilitator of the flexible and the adaptive rather than merely being the controller of the financial outcomes.

Furthermore, the new model removes the notion that management make decisions independently, where they merely seek to consult or communicate after decisions are made. The old process is considered to be too slow and may inhibit trust, so it may be advantageous to share the environment and broader business issues before decisions are made in this new age. Inclusion and consultation occurring as decisions are made may be more engaging, as staff, customers and suppliers are allowed to have more information and understanding of the issues. Of course, these new relations need to be genuine, where staff and others are allowed to give negative feedback or make suggestions and assessments without fear of retribution or criticism. Trust and engagement have both been closely linked to a number of other change factors (Donald, 2017; Donald, 2019), so in constant change a broad set of factors should be included in the new processes.

It is important to consider how divergent this proposed model will be for those trained in leadership and management in past times. Managers and leaders trained in the past may not fully appreciate the pandemic age as it is fast paced, uncertain and risky, where they may ignore the pandemic and continue to operate using power and control modes of the past. Organisations that do not seek to inform, train and increase knowledge on disruption, pandemic in particular, may find their staff disillusioned,
resistant towards the goals and operations of a new model. Innovative business models have been associated with knowledge and training (Guan & Huang, 2014), and innovation may improve efficiency and novelty models where training is included (Hu, 2014). Organisations should seek to modernise and adapt in a pandemic, seeking to be faster and more creative than they may have been in pre-pandemic times.

A pandemic, whilst full constant change (Donald, 2019), is not all pessimistic and poor, as new transactions, new tools and opportunities will likely emerge to solve social distancing, poorer economics and unemployment that has resulted. Such new opportunities will likely emerge with new technology, artificial intelligence and a continued broadening interconnectedness from globalisation. A broad and multiple dimension change approach is more likely required to cover all the issues that may arise, as shown in Figure 1, the new model is not prescriptive. Organisations that are unable to adapt or transition to a new creative and innovative model may find their competitors adapting and innovated more often and earlier than the traditional models.

**Contribution to pandemic preparedness**

The new age of pandemic is faster, more unpredictable and more uncertain than in the past, where new situations, new transactions and new possibilities may emerge with little predictability (Donald, 2019). Organisational survival may depend on managers with skills in early identification of change issues, good at analysis with critical thinking of a range of options. Management and leadership of the future will be challenged like never before as technology moves from the change itself to the enabler of faster and more uncertain change that may be necessary as the pandemic evolves.

Management centric models of power and control may now be redundant as future managers are unlikely to be knowledgeable on all organisational effects. Risk identification is no longer the domain of management, rather they will now be more dependent on their staff, customers and suppliers to identify risks and opportunities and solutions. Organisations of the future will need to foster skills of creativity, inclusion, openness and ethics in their teams, skills that may not have been as important in the past power and control models.

The case for less management centric organisational models has been made in this research, a new model is proposed to produce faster adaptation to risks and opportunities. The model proposed in this research, includes new measures beyond a mere financial outcome, so arguing for flexible adjusting targets over a more traditional fixed budget. It is recommended by this research that all stakeholders be included in decision making as a way to create new ideas, improve trust and to build understanding and engagement. The pandemic environment is like no other in the past one hundred years, so management are unlikely to be prepared and experienced for the new uncertain world ahead, where a new adaptive and creative model may be just the improvement required to survive and thrive in this new age.

**Data availability**

All data underlying the results are available as part of the article and no additional source data are required.

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