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### Deltaker

Christine Skarbø Nilsen, Helena Solberg

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# Master of Science Thesis

## **Adaptive Leadership in Hybrid Work Models**

An investigation of how adaptive leadership relates to information sharing and team performance in hybrid work models

**Supervisor:**  
Sut I Wong

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*Helena Solberg*  
**Helena Solberg**

*Christine Skarbø Nilsen*  
**Christine Skarbø Nilsen**

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## **Abstract**

Previous research on adaptive leadership indicates that this leadership style is becoming more crucial for managers and administrators as the pace of change affecting organizations increases (e.g., Burke & Cooper, 2004; Dess & Picken, 2000, as cited in Yukl & Mashud, 2010). We advance this research by investigating whether adaptive leadership is positively related to information sharing and team performance in hybrid work models by conducting a cross-sectional study using a self-completion questionnaire. Findings from 165 respondents show that (a) adaptive leadership is positively related to both information sharing and team performance, and (b) the level of a hybrid work model positively moderates the relationship between adaptive leadership and information sharing such that information sharing is highest when adaptive leadership and the level of hybrid work model are high, and lastly (c) the level of a hybrid work model positively moderates the relationship between adaptive leadership and team performance such that team performance is highest when adaptive leadership and the level of hybrid work model are high.

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## 1.0 Introduction

The digital age has changed the nature of work (Barley, Bechky, & Milliken, 2017, as cited in Larson & DeChurch, 2020), and Covid-19 sped up the process where we have experienced rapid growth of digital transformation and technologies (Contreras et al., 2020). New ways of working pose opportunities and challenges for companies and employees to survive and thrive (Chamakiotis et al., 2021). As work in today's organizations becomes increasingly complex and dynamic, there is a growing need for adaptive leadership (e.g., Burke & Cooper, 2004; Dess & Picken, 2000, as cited in Yukl & Mashud, 2010). Adaptive leadership is defined as "the practice of mobilizing individuals to tackle tough challenges and thrive" (Heifetz, Grashow, & Linsky, 2009, p.14), where tackling tough challenges and thriving is conceptualized by three major components: situational challenges, leader behaviors, and adaptive work (Northouse, 2019). Adaptive leadership is a complex process that is needed when challenges along the way are unknown and lack a clear solution (Heifetz & Linsky, 2002). Such challenges might occur now that employees have the flexibility to work from anywhere (Bouziri et al., 2020), adapting to a hybrid work model (Rishi et al., 2021). Adaptive leadership behaviors enable individuals, teams, and organizations to overcome these complex challenges resulting from new ways of working (Schreiber & Carley, 2006; Gilson et al., 2015). Empirical studies have found favorable outcomes of hybrid work, such as job performance (Gilson et al., 2015), and information and communication technologies (ICTs) enable people to work anytime and anywhere (Müller & Niessen, 2019), increasing the speed of information sharing (Cortazello et al., 2019). However, despite the alleged benefits leading in a hybrid work model presents several adaptive challenges (Avolio et al., 2000, as cited in Hambley et al., 2007) and contains possible risks (Boziri et al., 2020; Lambert et al., 2020). Thus, leadership practices cannot be the same in a hybrid work model (Malhotra et al., 2007). An adaptive leader in a hybrid workforce must lead by adopting new and more complex methods for effective leadership (Flood, 2019) and implies an essential change in how leaders and followers relate to each other within the organization (Avolio & Kahai, 2003). Hierarchical forms of leadership are less suitable in hybrid work environments and have limitations in terms of collaboration (Jones & O'Shea, 2004; De Vries et

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al., 2019). Instead, research shows that leadership should be distributed well within the teams in hybrid work models, allowing them to promote the collaborative development of leadership (Schwarz Müller et al., 2018), increasing information sharing and team performance.

Nevertheless, leadership as a field of study has mainly focused on organizations where employees work on-site (Dahlstrom, 2013). With some noteworthy exceptions (Hertel et al., 2005; Huang, Kahai, & Jestice, 2010; Jarvenpaa et al., 1998; Kayworth & Leidner, 2002; Malhotra, Majchrzak, & Rosen, 2007, as cited in Eubanks et al., 2016), comparatively little has been done to explore what effective leadership looks like in a hybrid work model, and its effect on employees (Contreras et al., 2020). Thus, studies on adaptive leadership in hybrid work models are scarce (Dulebohn & Hoch., 2017; Contreras et al., 2020; Waizenegger et al., 2020) and in the early stage of development (Aviolo et al., 2014). Further, research on how adaptive leaders effectively leverage the benefits of increased use of technological tools for information sharing within the team while avoiding the downsides remains understudied (Colbert et al., 2016), and how this increased use of ICTs is changing the relationship between leaders and followers has been modest (Contreras et al., 2020). Additionally, despite the growing body of work, there has been a lack of integration concerning the relationship between specific leader behaviors and team performance. Meta-analyses have examined the relationship between team leadership behavior and affective outcomes (Foels, Driskell, Mullen, & Salas, 2000; Mullen, Symons, Hu, & Salas, 1986, as cited in Burke et al., 2006), but few have sought to integrate the work on leadership behaviors and behavioral or cognitive team performance outcomes (Burke et al., 2006).

The extant literature is limited and fragmented in providing a comprehensive understanding of adaptive leadership in hybrid work models (Liao, 2016). However, given that leadership is viewed as a prerequisite for high-performing hybrid teams (e.g., Contreras et al., 2020; Gilson et al., 2015; Larson & DeChurch, 2020, as cited in Chamakiotis et al., 2021), this present study further examines the topic of adaptive leadership within hybrid work model, and draw connections between recognized themes and challenges facing hybrid teams (e.g., information sharing and team performance) in our attempt to investigate how leadership can be exercised to support hybrid teams. We argue that adaptive



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leadership positively affects information sharing and team performance in hybrid work models. Further, we aim to draw attention to the importance of leaders having an adaptive leadership style (Heifetz & Linsky, 2002). We position that new forms of hybrid team configurations make the rethinking of hybrid leadership practices crucial to enable team leaders to lead effectively in new work environments (Carroll & Conboy, 2020). Additionally, we will increase researchers' awareness of the importance of having an inclusive approach (Schwarz Müller et al., 2018) to improve information sharing and team performance in hybrid teams. In alignment with previous research, our study implies that traditional, hierarchical leadership views are less useful given the complexities of a hybrid work model (e.g., Lichtenstein et al., 2006; DeRue, 2011) and that adaptive leaders should distribute leadership roles within the team to enhance performance (Jefferies, 2017). Further, we will test the moderating effect of hybrid work models on the relationship between adaptive leadership and information sharing. Following, we will test the moderating effect of hybrid work models on the relationship between adaptive leadership and team performance. Although hybrid work models provide the best balance between remote work flexibility and the benefits of working onsite with colleagues and leaders, more evidence is needed (Chamakiotis et al., 2021), which we seek to provide in this study through our hypothesis testing. There is a huge global interest in studying this topic from the perspective of both practitioners and researchers to examine how hybrid work and adaptive leadership and the reasons for success and even for the failure to learn more about how to manage this new way to work (Contreras et al., 2020).

The contribution of our study is three-fold. First, we seek to contribute to the call for more knowledge about how leaders may effectively lead in hybrid teams (Dulebohn & Hoch, 2017; Liao, 2017). We want to extend recent attempts to explore hybrid leadership (Contreras et al.; 2020; Chamakiotis et al., 2021) in the Covid-19 context by investigating how adaptive leadership relates to information sharing and team performance in hybrid work models. By using the Adaptive Leadership Theory (Heifetz, 1994) and the Model of Adaptive Leadership (Heifetz & Linsky, 2002), we conceptualize that the situational challenges indicate that the adaptive leadership behavior selected must be relevant in which situations they are used (Yukl & Mashud, 2010) to facilitate for

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information sharing and team performance in hybrid work model. Second, we contribute to research on adaptive leadership by testing the Adaptive Leadership Questionnaire (ALQ) for research purposes. This questionnaire measures adaptive leadership by assessing six components (get on the balcony, identify the adaptive challenge, regulate distress, maintain disciplined attention, give the work back to people, and protect leadership voices from below) (Northouse, 2019). So far, this questionnaire is not often used for research purposes (Huckabee, 2017), so we contribute to testing the validity of this model. Lastly, the current study might contribute to team leaders in organizations being more aware of the importance of their leadership style and how essential it is to adapt in a hybrid work model, adjusting to the situations in changing circumstances while doing adaptive work. If organizations cannot adapt to new ways of working, they are likely to disappear (Contreras et al., 2020). Adaptive leadership in hybrid work models is a vital trend not merely for the rapid progress in technology and its application in a post-pandemic business environment (Liu et al., 2020) but helps individuals and organizations adapt and thrive in the face of any challenges and to take on the process of change (Yukl & Mashud, 2010).

## **2.0 Theoretical framework**

The following chapter will introduce existing research and theory relevant to the purpose of this study. Initially, we will briefly introduce the literature on adaptive leadership. Further, the theory of information sharing and team performance is introduced in connection with adaptive leadership. Finally, theory of using the hybrid work models in organizations is presented. This chapter represents the central area of our study and provides a context for our research.

### ***2.1 Adaptive Leadership***

Adaptive leadership can be defined as "the practice of mobilizing individuals to tackle tough challenges and thrive" (Heifetz, Grashow, & Linsky, 2009, p.14) and focuses on the adaptations required by individuals in response to changing environments (Northouse, 2019). Selected behaviors must be relevant to the situations in which they are used (Cojocar, 2008), meaning that a leader's behavior must vary in ways appropriate for different tasks and subordinates (Yukl & Mashud, 2010). Adaptive leadership is emerging as a contemporary leadership

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concept, evolving from situational, transformational, and complexity theories (Nastanski, 2002, as cited in Cojocar, 2008). Since Heifetz (1994) first published the book "Leadership Without Easy Answers," this approach has occupied a unique place in leadership literature. The further development of adaptive leadership emerged mainly from the work of Heifetz and his associates (Heifetz & Laurie, 1997; Heifetz & Linsky, 2002; Heifetz & Grashow, & Linsky, 2009).

Adaptive leadership takes a process approach to the study of leadership, meaning that leadership is a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2019). Defining leadership as a process means that "it is not certain traits or characteristics that reside in the leader, but rather a transactional event between the leader and follower." (Northouse, 2019, p. 5). Other leadership theories are often criticized for understating the importance of followership and disregarding the social and contextual embeddedness of leadership in organizations (Grint, 2005; Howell & Shamir, 2005; Marion & Uhl-Bien, 2001; Uhl-Bien, Marion, & McKelvey, 2007, as cited in DeRue, 2011). Contrariwise, in alignment with the process definition of adaptive leadership, this leadership theory emphasizes that leadership is not a linear, one-way event but rather an interactive event (Lichtenstein et al., 2006). Individuals engage in repeated leading-following interactions that evolve as a group needs change, enabling groups to adapt and remain viable in a dynamic context (Hunt & Dodge, 2000; McGrath, 2002; Morgeson, DeRue, & Karam, 2010, as cited in DeRue, 2011).

Due to the pandemic, the forced nature of new ways of working requires alternative leadership practices and focus (Feitosa & Salas, 2020, as cited in Chamakiotis et al., 2021). Adaptive leaders must select leadership behaviors relevant to the situation (Cojocar, 2008), which sometimes means distributing leadership within the team (Hoch & Kozlowski, 2014). Adaptive leadership allows the leader to be amongst the people (Randall and Coakley, 2007, as cited in Jefferies, 2017), and adaptive leaders recognize that they do not always have to be seen as forefront members who control their team (Lichtenstein et al., 2006). Adaptive leaders should support their team, preparing them to tackle change and adapt (Yukl & Mashud, 2010). However, Heifetz's (1994) theory that leadership generates leadership is predicated on the idea that people experience a measure of loss or incompetence to change and might resist change (Cojocar, 2018). Thus,

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leaders must empower employees to assume greater responsibility, involve them in decision-making, and make them feel committed to their work by decentralizing power (Lichtenstein et al., 2006). Nevertheless, without being perceived as too passive as leaders themselves (e.g., laissez-faire leadership) by avoiding legitimate responsibilities (Bass, 1990, as cited in Wong & Giessner, 2018).

### *2.1.1 The Model of Adaptive Leadership*

Since the development of Heifetz's theoretical concepts, adaptive leadership has emerged as a leadership approach that has taken root in the academic and corporate world (Cojocar, 2008). Thus, the "Model of Adaptive Leadership," introduced by Heifetz & Linsky (2002), might be helpful when adjusting to new ways of working. According to this model, adaptive leadership requires that leaders address three kinds of situational challenges: (1) challenges that are primarily technical in nature, (2) challenges that have both a technical and adaptive dimension, and lastly, (3) challenges that are primarily adaptive in nature (Heifetz et al., 2009). First, technical existing organizational procedures. Employees look to the leader for a solution to technical issues and accept the leader's authority to solve the problem (Northouse, 2019). Second, challenges with both a technical and adaptive dimension are clearly defined. However, they do not have distinct straightforward solutions within the existing organizational system, and the responsibility of tackling these problems is often shared between the leader and the followers (Cojocar, 2008). Third, adaptive challenges are central to adaptive leadership (Yukl & Gardner, 2020). Adaptive challenges are problems that are not easily identifiable. These problems are viewed as complex, with many facets, and dynamic in that they can evolve and change and connect to others in a web of relationships (Northouse, 2019). The leader's authority or expertise cannot solve them (Jefferies, 2017). Thus, the leader must encourage the employees to define challenging situations and implement solutions (Lichtenstein et al., 2006). These challenges might be complex since they usually require changes in employees' priorities, beliefs, roles, and values (Heifetz et al., 2009).

Furthermore, six leader behaviors, or activities, play a crucial role in the process of the adaptive leadership model (Heifetz & Linsky, 2002): (1) 'get on the balcony, which is a metaphor for stepping out of the fray and finding perspective

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during a challenging situation (2) identifying the adaptive challenge, meaning differentiating between technical and adaptive challenges (3) regulating distress (Northouse, 2019). Psychologically, we all need consistency, and it is quite normal for individuals to be more comfortable when things are predictable. However, adaptive challenges create the need to change, and the change process might create uncertainty and distress for people (Heifetz et al., 2009). The model suggests three ways leaders can maintain productive levels of stress: First, create a holding environment, meaning a psychological space that is both safe and uncomfortable (Gibson & Gibbs, 2006). Second, provide direction, orientation, conflict management, and productive norms (Northouse, 2019). Lastly, regulate personal distress, which is essential in such changing circumstances adapting to new ways of working (Larson & DeChurch, 2020). (4) maintaining disciplined action, which is about helping people address change and not avoiding it (Northouse, 2019), (5) giving work back to people, meaning empowering people to decide what to do in circumstances where they feel uncertain, expressing belief in their ability to solve their problems, and encouraging them to think for themselves rather than doing the thinking for them (Heifetz & Linsky, 2002). Lastly, (6) protecting leadership voices from below, meaning that leaders should listen and be open to ideas that may come from those on the outside within the team (Northouse, 2019).

Finally, the team must do adaptive work to survive and thrive in new ways of working. Adaptive work requires determining what requires change while rethinking how organizations will adapt and thrive in a new environment (Heifetz et al., 2009; Northouse, 2019, as cited in Bagwell, 2020). Further, adaptive work requires a change in values, beliefs, or behavior (Heifetz, 1994). It requires leaders to lead through conflicting values and eliminate the gap between employees' values and the realities of their lives (Lichtenstein et al., 2006). Adaptive work is the process by which adaptive leaders direct their work (Northouse, 2019). It develops from the communication process between the leader and follower but is primarily the followers' work (Cojocar, 2018). When doing adaptive work, a holding environment is crucial to make employees feel safe (Larson & DeChurch, 2020) while also challenging themselves while adapting. Leaders should direct considerable energy toward establishing and maintaining such an environment (Heifetz & Linsky, 2002).

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## ***2.2 Information Sharing and Adaptive Leadership***

The Model of Adaptive Leadership (Heifetz & Linsky, 2002) raises implications on how adaptive leaders relate to information sharing in new ways of working. Information sharing has been defined as “conscious and deliberate attempts on the part of team members to exchange work-related information, keep one another appraised of activities, and inform one another of key developments” (Bunderson & Sutcliffe, 2002, p. 881). Today organizations are faced with uncertainty and fast-changing environments, and work tasks are becoming increasingly complex (Day et al., 2004; 2006; Morgeson et al., 2010a, as cited in Hoch, 2014). Information sharing is crucial in times of uncertainty (Cojocar, 2008), and adaptive leaders must encourage team members to adapt to new ways of working to thrive and efficiently share information in new circumstances (Heifetz, 1994).

Rapid technological advancements have led to a new paradigm of work and created a new context for leadership and teamwork (e.g., Avolio et al., 2001; Leonard, 2011; Lepsinger., 2011; Marlow et al., 2017). Due to these technological advancements, work can be conducted anytime (Müller & Niessen, 2019), either onsite or remote (Cascio & Shurygailo., 2003, as cited in Hambley et al., 2007). Nevertheless, the adaptive leader must ensure that these organizational systems, structures, and processes take place for the team to share information efficiently (Dahlstrom., 2013; Larsen & DeChruch, 2020). Given the numerous technological advancements (e.g., Priem, Li & Carr, 2012, as cited in Gilson et al., 2015), the team has greatly expanded in how they share information and perform their activities (Agle et al., 2003). However, leaders are essential in facilitating efficient information sharing (Larson & DeChrch, 2020). If the information is not efficiently shared face-to-face or virtually, team members cannot fully capitalize on the informal resources distributed throughout their team (Hoch, 2014). However, norms of information sharing might be challenging to develop in teams, especially if team members are working from different locations and mediums (Morrison-Smith & Ruiz, 2020). Thus, adaptive leaders should stimulate team members to develop norms that guide communication, such as timely information sharing and appropriate responses to virtual communication (Curseu et al., 2008). Promoting a cooperative climate with norms that guide communication is linked to greater use of informational resources by teams (Mesmer-Magnus et al., 2011).

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Information can be shared in teams through unique information sharing or open information sharing, or both. Hinsz, Tindale, & Vollrath (1997) described the uniqueness dimension of information sharing as the "variability in how many group members have access to a piece of information." (Hinsz et al., 1997, as cited in Mesmer-Magnus & DeChurch, 2009, p.535). Employees may hold diverse information due to differences in experience or expertise (Van Hiel & Schittekatte, 1998). Adaptive leaders must recognize these differences team members has in experience or expertise, and empower them to share the unique information they hold with the rest of the team, expressing belief in their ability to solve their own problems (Northouse, 2019). When members of such teams share the information they have, the team can access a larger pool of information than anyone member acting alone (Shaw, 1981, as cited in Dennis, 1996). In turn, the greater breadth and depth of information available to the team through unique information sharing can improve planning, decision-making, and stimulate innovation (Gajedran, 2009), so that the team can make more informed decisions (Hightower & Sayeed, 1996).

In the second subset of studies on information sharing, researchers examined information sharing more broadly, including the amount of information shared independent of initial distribution patterns among team members (Henry, 1995; Jehn & Shah, 1997, as cited in Mesmer-Magnus & DeChurch, 2009). Mesmer-Magnus & DeChurch (2009) refer to these studies as investigations of the openness of information sharing. The openness of information sharing refers to "the extent to which a team is overly sharing information, unique and commonly alike." (Mesmer-Magnus et al., 2011, p. 215). Adaptive leaders must create a holding environment, establishing an atmosphere where people feel safe and trust each other (Heifetz & Linsky, 2002) for employees to share information openly. Within the holding environment, adaptive leaders use their leverage to help team members attend to the issues, orchestrate conflicting perspectives, and facilitate decision-making (Heifetz, 1994). When team members overly share information, this might leads to positive climatic states and increase trust and cohesion, improving socio-emotional outcomes (Beal, Cohen, Bruke, & McLendon, 2003, as cited in Mesmer-Magnus & DeChurch, 2009). In virtual environments, where there are fewer ways to develop cohesion, trust, and affect, the openness of information sharing will be more vital. Open information sharing

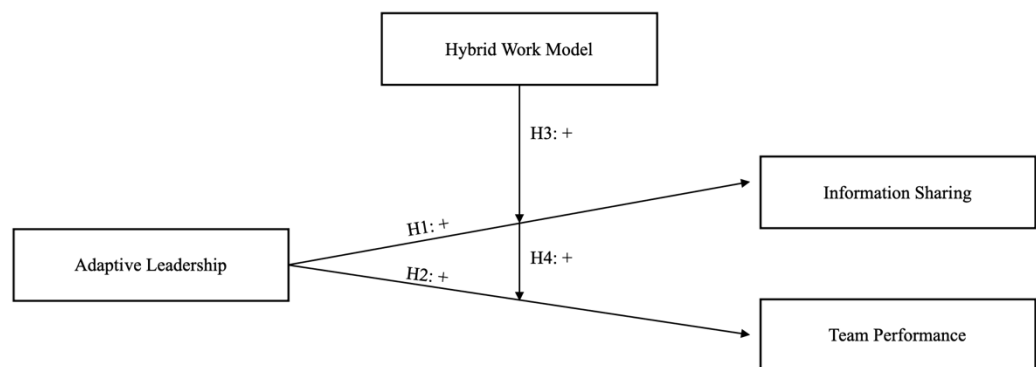
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likely reduces the adverse effects of computer-mediated communication on a virtual team by allowing the team to develop the social structures necessary to maintain positive effects, such as psychological safety, trust, and cohesion among team members (Mesmer-Magnus et al., 2011). Based on the discussion above, we have developed the following hypothesis:

**H1:** Adaptive leadership is positively related to information sharing

### 2.2.1 Conceptual Model for the study

Figure 1 illustrates our conceptual model and summarises our hypotheses.



**Fig. 1:** Conceptual Model

### 2.3 Team Performance and Adaptive Leadership

Team performance can be defined as “an emergent phenomenon resulting from the goal-directed process whereby members draw from their individual and shared resources to display taskwork processes, teamwork processes, and integrated team-level processes to generate products and provide services” (Kozlowski & Klein, 2000; Salas, Stagl, Burke, & Goodwin, 2007, as cited in Salas et al., 2008, p. 906). When discussing team performance, it seems contradictory to also talk about leadership. A longstanding approach to the question of what enables some teams to be high-performing has focused on the effects of leaders on team performance (Mehra et al., 2006). However, Zaccaro et al. (2001) display that few team performance models specify leadership processes as central drivers of team processes (e.g., Hirokawa, 1980; McGrath, 1991). Nevertheless, empirical studies on teams show that leaders influence performance determinants and their relatives



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(e.g., Bell & Kozlowski, 2002; Keller, 2006; Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Kozlowski et al., 1996, as cited in Dionne et al., 2010). Leaders play a vital role in shaping collective norms, helping teams cope with their environment, and coordinating collective action (Mehra et al., 2006). However, the importance depends on team tenure and the situation (Bruke et al., 2006; Hulsheger, Anderson, & Salgado, 2009; Morgeson, DeRue, & Karam, 2010, as cited in Yukl & Gardner, 2020). Prior research has long acknowledged the importance of team tenure, with the common assumption being that teams with greater tenure tend to be more effective (e.g., Finkelstein & Hambrick, 1990; Kozlowski, Gully, Nanson, & Smith, 1999; Marks, Mathieu & Zaccaro, 2001; Tuckman, 1965, as cited in Gonzalez-Mulè et al., 2020). Regarding the situation, adaptive leaders must identify whether the challenges team members face are technical or adaptive (Heifetz, 1994). Adaptive challenges cannot be solved solely by the leader's authority or expertise and require that the leader encourage others to define challenging situations and implement solutions (Heifetz & Linsky, 2002).

Besides identifying the adaptive challenges, leaders should “get on the balcony” to find perspective and see the bigger picture. Stepping away from the conflict to get a complete overview allows the leader to identify value conflicts among people, ways they may be avoiding work (Heifetz & Laurie, 1997), and other dysfunctional reactions to change (Chamakiotis et al., 2021). Adaptive challenges create the need to change (Northouse, 2019), and organizational changes could be a source of considerable stress to employees (Stouten et al., 2018). Thus, to yield team performance, leaders must also regulate distress. Feeling too much stress during change is counterproductive and might decrease performance (Stouten et al., 2018). The adaptive leadership model suggests that creating a holding environment, providing direction, orientation, conflict management, productive norms, and regulating personal distress could help maintain productive stress levels (Northouse, 2019). Establishing an atmosphere where team members can feel safe tackling complex problems is crucial for team performance (Heifetz & Linsky, 2002). Trust allows the team to function with safety in a holding environment (Brown et al., 2004; Germain & McGuire, 2014; Jarvenpaa & Leidner, 1999; Panteli & Duncan, 2004; Panteli & Tucker, 2009, as cited in Chamakiotis et al., 2021), and employees who can rely on and trust their

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leaders have been shown to be more open and ready for change (Rafferty & Simons, 2006, as cited in Stouten et al., 2018). Teams that exhibit trust have also demonstrated a higher level of team performance (Day, Gronn, & Salas, 2004; Marks, Mathieu, & Zaccaro, 2001, as cited in D’Innocenzo et al., 2016). This proposition is built on the logic that trust increases the ability of team members to work together, which in turn increases team performance (Larson & LaFasto, 1986, as cited in Boies et al., 2015). Nevertheless, it is natural to engage in avoidance behavior when the need for change arises in organizations. Thus, adaptive leaders must maintain disciplined attention and encourage employees to focus on the work they need to do for the team to be high-performing (Northouse, 2016).

Furthermore, team members want leaders to provide direction and structure to their work, and a feeling of security is essential (Heifetz, 1994). Nevertheless, they also want to actively participate in problem-solving (Heifetz & Linsky, 2002). In that matter, adaptive leadership is essential to team performance because too much authority can decrease employees' confidence to solve problems on their own and suppress their creative capacities (Lichtenstein et al., 2006). Adaptive leaders must give work back to employees to decide what to do when they feel uncertain, express belief in their ability to solve problems and encourage them to think for themselves. (Northouse, 2016). Therefore, although empirical studies show that leaders influence team performance, this leader-centered perspective may be limited (Mehra et al., 2006). This perspective assumes that there is only one leader in a team and views leadership as an exclusively top-down process between leader and subordinates (Yukl, 1989). Contrariwise, adaptive leadership is more follower-centered, whereas adaptive leaders do not use their authority to control employees. Instead, they interact with them to help them do adaptive work (DeRue, 2011). Thus, leadership in adaptive teams is often distributed across many different individuals rather than residing solely in one person (Mehra et al., 2009).

Such collective forms of leadership are believed to contribute to team performance above and beyond formal individual leadership (Day & Harrison, 2007; Pearce, Conger, & Locke, 2008, as cited in Ali et al., 2020). It embodies joint decision-making and shared influence among subordinates (Koopman &

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Wierdsma, 1998, as cited in Dionne et al., 2010). Pearce and Manz (2005) state that it is difficult for only one leader from above to have all the knowledge, skills, and abilities necessary to lead all aspects of knowledge work (D’Innocenzo et al., 2016). Additionally, Katz and Kahn (1978) suggested that when team members offer leadership, they will bring more resources to the task, share more information, and experience higher commitment with the team, leading to higher team performance (D’Innocenzo et al., 2016). Finally, adaptive leaders must also protect leadership voices from below. They must ensure that all opinions and interests regarding change are considered, protect those who raise tough questions, and challenge team members to rethink the issues at stake (Northouse, 2016). To toss out leadership voices from below is to lose potentially valuable information and discourage a potential leader in the team, decreasing team performance. Giving a voice to everyone is the foundation of a team willing to experiment and learn (Heifetz & Laurie, 1997). Based on the discussion above, we developed the subsequent hypothesis:

*H2: Adaptive leadership is positively related to team performance*

#### ***2.4 The Hybrid Work Model as a Moderator***

The hybrid work model is defined as “the flexibility for employees to work in the office, work from home, work from anywhere, or a combination of all three.” (Rishi et al., 2021, p. 44). However, different labels, including “flexible work arrangements,” “virtual work,” “telework,” “remote work,” “telecommuting,” and “dispersed work,” has been previously used to study hybrid work models (Bartel et al., 2012). There is a widespread agreement among researchers regarding the difficulties of finding accurate or comparable numbers on hybrid workplaces, mainly because of differences in definition between studies and literature (Sullivan, 2003). Thus, the concept of the hybrid workplace is not new. In fact, hybrid work models were popular even before the pandemic (He et al., 2020), and adopting this working style has consequently been relatively easy for some companies (Béland et al., 2020). Nevertheless, although hybrid work models have been around for more than two decades (e.g., Javernpaa & Leidner, 1999), the pandemic has led to a widespread transition into hybrid teamwork (Venkatesh, 2020, as cited in Chamakiotis, 2021). Thus, the workplace, workforce, and future work will be fundamentally different with new practices,

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relationships, and managerial challenges resulting from the pandemic (Kane et al., 2021). In the post-pandemic future of work, most organizations are now embarking on developing their hybrid workplace strategies and thinking through how to carry out a more permanent mix of remote and on-site working (Kumar et al., 2021).

#### *2.4.1 The Moderating Role of Hybrid Work Model: Information Sharing and Adaptive Leadership*

Most existing research on the dynamics between adaptive leadership and hybrid work models builds on the complex adaptive systems (CAS) perspective to investigate the challenges and outcomes of hybrid work models (Zaharie, 2021). The CAS perspective provides a valuable foundation for exploring the dynamics of the hybrid work (Hooigeboom & Wilderom, 2020). In light of the CAS, hybrid work models are viewed as complex systems, dynamic entities composed of multidirectional causal relationships embedded in various contexts (Lichtenstein et al., 2006). The challenges encountered while working hybrid reveal adaptive challenges that require adaptive leadership behavior (Coppola et al., 2004, as cited in Zaharie, 2021). Leadership practices cannot be the same in this new work environment, with flexible work arrangements leading to different ways of sharing information. Leadership practices must adapt to new hybrid work environments for effective leadership (Contreras et al., 2020) and information sharing. Adaptive leadership helps individuals and teams in the organization to adapt and thrive in the face of challenges and new circumstances (Heifetz, 1994). These new ways of working, where some employees are remotely located while others are working on-site, leads to the need for efficient methods for information sharing (Rishi et al., 2021).

Information and communication technologies enable the reconfiguration of work opening up opportunities for work to occur across multiple locations (Halford, 2005). Cloud storage services like Google Drive and Dropbox have made access to files seamless, regardless of where the employee sits. Workplace collaboration technologies, such as Google Meet, Slack, and Microsoft Teams, have enabled information sharing (Rishi et al., 2021). Because of increased hybridity for teams, several digital workplace technologies have advanced from nice-to-have to must-have. Whether on-site or remote, employees can connect

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seamlessly with their teams to share information across workplace channels, including digitally facilitating planned and spontaneous interactions.

However, adaptive leaders must facilitate the best conditions for information sharing so that the team members can handle adaptive challenges through information sharing (Northouse, 2019). Adaptive leaders must ensure that the team can access efficient information-sharing tools that cover their communication needs. If the team experiences a technical challenge, such as software issues that reduce efficiency, the employees look for the leader for a solution. Employees trust the manager to solve the technical problem and accept the leader's authority to do so (Heifetz & Linsky, 2002). If technical issues make information sharing across different platforms challenging, the team cannot fully capitalize on the informational resources distributed throughout the team (Hoch, 2014).

Furthermore, hybrid teams have the advantages of both face-to-face and virtual teams, and the nature of both forms of interaction increase opportunities to share information. However, hybrid teams also possess the disadvantages of both face-to-face (e.g., production blocking, evaluation apprehension) and virtual communication (e.g., lack of warmth, reduced verbal and non-verbal cues, increased possibilities of misunderstandings (Aubert & Kelsey, 2003; Ensher et al., 2003; Straus, 1996, as cited in Mesmer-Magnus et al., 2011). Team members often confirm or deny the understanding of information imparted by nonverbal gestures such as a head nod (Kraut, Lewis, & Swezey, 1982; Yngve, 1970, as cited in Marlow et al., 2018). Knowing whether the information is understood without such gestures may be challenging. Confirmation of the receipt and content of information shared is argued to be critical in ensuring that communication distributes the information required for effective performance (McIntyre & Salas, 1995, as cited in Marlow et al., 2018). Therefore, adaptive leaders must create common forums for ensuring that everyone in the team has understood and received necessary information (e.g., by identifying critical in-person meetings, having regular team meetings, check-ins, or other digital reporting tools). Based on the above discussion, the following hypothesis is developed:

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***H3:** The level of the hybrid work model will positively moderate the relationship between Information sharing and adaptive leadership such that information sharing is highest when adaptive leadership and the level of the hybrid work model are high*

#### *2.4.2 The Moderating Role of Hybrid Work Model: Team Performance and Adaptive Leadership*

Moreover, prior research has focused on the influence of hybrid work models on performance (Bailey and Kurland, 2002; Gajendran and Harrison, 2007; Martínez Sánchez et al., 2007; De Menezes and Kelliher, 2011; Allen, Golden, and Shockley, 2015, as cited in Van der Lippe & Lippèny, 2019). However, the results of this research are mixed. On the one hand, some studies show that working from home leads to increased performance (Vega, Anderson, and Kaplan, 2014; Allen et al., 2015, as cited in Van der Lippe & Lippèny, 2019). On the other hand, others warn that working from home leads to social and professional isolation that hampers performance (Kelliher and Anderson, 2009; Felstead and Henseke, 2017, as cited in Van der Lippe & Lippèny, 2020). However, leadership can contribute to increased team performance (e.g., Bell & Kozlowski, 2002; Keller, 2006; Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Kozlowski et al., 1996, as cited in Dionne et al., 2010). Therefore, leaders must be adaptive when adjusting to new ways of working in a hybrid work model and challenge employees to face complex challenges and changes (Heifetz and Linsky, 2002). Although employees want to actively participate in problem-solving to enhance team performance, they also want leaders to provide some direction and structure to their work (Northouse, 2019). Team coordination is needed for team performance (Mathieu et al., 2000; Salas et al., 1995, as cited in Malhotra & Majchrzak, 2014). Thus, adaptive leaders must ensure efficient coordination of new working methods to increase team performance. Coordination of a team includes integrating and aligning the actions of team members (Rico et al., 2008) and adjusting their activities to meet their changing situational needs (Burtscher et al., 2010). Working in a hybrid work model makes coordination more complex. Teams can vary in their degree of hybridity to which the agreement of individuals or subgroups is structured (Afflerbach, 2019). Consider a team with some members working only from home, some working partly at home and partly at the

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office, while others are only working at the office. Such a work environment is complex, and adaptive leaders must spend considerable effort organizing and facilitating team performance (Van der Lippe & Lippèny, 2020). Adaptive leadership is crucial to ensure that the right employees are interacting with one another in planned and unplanned connections with the right amount of frequency (Rishi et al., 2021) and because successfully managing this complex environment requires multitasking and a variety of skills and behavior (Lichtenstein et al., 2006).

Furthermore, the adaptive leader's ability to not use their authority to control others is fundamental for team performance in hybrid work models (Northouse, 2019). Instead, they interact with employees to help them do adaptive work, and the construction of adaptive leadership is determined when team members both claim their leadership roles and grant other leadership recognitions (DeRue, 2011). The new ways of working make it more difficult for leaders to monitor employees (Sewell & Taskin, 2015). Thus, trust is essential for team performance because it increases the ability of team members to work together, which in turn increases team performance (Larson & LaFasto, 1986, as cited in Boies et al., 2015). Nevertheless, Maznevski and Chudoba (2000) found that regular face-to-face meetings were essential for team performance (Watson-Manheim & Bèlanger, 2000). Therefore, adaptive leaders should make sure to coordinate these meetings. Based on the discussion above, we argue that the hybrid work model positively moderates the relationship between adaptive leadership and team performance. We believe that team performance is highest when adaptive leadership and the level of hybrid work model are high. Hence, the following hypotheses are developed:

***H4:*** *The level of the hybrid work model will positively moderate the relationship between adaptive leadership and team performance such that team performance is highest when adaptive leadership and the level of the hybrid work model are high*

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### **3. Methodology**

Based on the theoretical ground presented, the following chapter will elaborate on the methodological choices and implementation in the study regarding research design, data collection, procedure, and sample. Further, the methodology will be evaluated concerning ethical considerations, data credibility, and measures.

#### ***3.1 Research Design***

We used an explanatory research design to investigate the research question and test the hypotheses presented above. Such a design was most suitable for our study since it examines a situation or a problem and can be conducted through statistical testing (Saunders et al., 2019). Since our research utilizes existing theory to formulate the study goal and objectives, a deductive approach is used to collect and analyze data to test the hypothesis (Bell et al., 2018). A typically associated method with a deductive approach is the quantitative research method. When choosing a quantitative method to test our hypotheses and gather data, we were able to employ self-completion questionnaires (Wilson, 2014), and the responses needed to be quantifiable to draw statistical relationships (Gorman & Johnson, 2013). Further, we used a cross-sectional approach to collect data from a large pool of subjects, comparing differences between groups (Kesmodel, 2018). Additionally, we used a cross-sectional design since we were interested in variation and studied a phenomenon at a single point in time (Bell et al., 2018).

#### ***3.2 Procedure***

To test our hypotheses, we gathered data from leaders and superiors working in collaborative, hybrid teams in an organization. The self-completion questionnaires were administered through a web-based tool named Qualtrics, which BI Norwegian Business School made accessible for us (See Appendix A). The collection period lasted from 10.03.22 until 10.04.22. Participants were found by using quota sampling in which we posted the survey link on LinkedIn and Facebook. Quota sampling is defined as "a non-random sampling technique in which participants are chosen based on predetermined characteristics so that the total sample will have the same distribution of characteristics as the wider populations" (Davis, 2005, as cited in Taherdoost, 2020, p. 22). We gathered participants across industries. However, merely those who met the requirements



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(employed, worked in a hybrid work model, and had a role as either team leader or team member) could participate in the survey. Despite Kahneman & Egan's (2011) suggestion that participants should be able to answer surveys in their first language, we chose to distribute our questionnaire in English. Several companies across the globe have been affected by the pandemic and have adapted to a hybrid work model. Thus, we wanted to target a larger pool of relevant participants across borders and receive a larger sample size, reducing sampling errors and biases (Bell et al., 2018).

### ***3.3 Sample***

Our sample consisted of 165 respondents. Of the 366 individuals who opened the link, 201 were non-respondents meaning we had a non-response rate of 55%. They were excluded from the results due to failure to obtain a measurement on one or more study variables (Hansen & Hurwitz, 1946). This left us with a final sample of 165 survey respondents and a response rate of 45%. The mean organizational tenure was between 1-2 years (2.52), and the mean for team tenure was 3-11 months (2.72). As for the organizational role, 50 survey respondents were team leaders (30,3%), and 115 were team members (69,7%). Regarding task complexity, 77 respondents worked with complex job duties (46,7%), 67 worked in complicated but knowledgeable work duties (40,6%), and only 21 worked with simple, repetitive tasks (12,7%). Further, 87 (52.7%) worked partially in cooperation, while 78 (47.3%) worked fully in cooperation with others. Finally, 34 of the survey respondents had digital meetings 80-100% of the time (20,6%), 84 had digital meetings 40-60% of the time (50,9%), and 14 had digital meetings 20-40% of the time (11,5%).

### ***3.4 Research Ethics***

When conducting research, one should take specific ethical considerations to conform to ethical standards (Johannessen et al., 2016). We contacted the Norwegian Centre for Research Data (NSD) to ensure we followed ethical guidelines and got their approval before processing any data (See Appendix C). Our study primarily focused on two essential aspects of research ethics.

First, the issue of harm to participants was addressed in ethical codes by advocating care over maintaining the confidentiality of records and anonymity of accounts (Bell et al., 2018). The identities and records of individuals were

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maintained as confidential. Additionally, the survey was anonymized, ensuring no identifiable data was available or collected.

Second, the principle of voluntary informed consent seeks to ensure that prospective research participants are given as much information as possible about a study to make an informed decision about whether or not they wish to participate in it (Bell et al., 2018). Informed consent is regarded as a central element of conducting research (Jacobsen, 2015). To ensure informed consent, we added a participation agreement at the survey's beginning. In this participation agreement, where they had to accept or decline whether they wanted to be a part of this study, we informed the participants about the purpose of the research and how we stored and deleted their data before involving them in the project.

### ***3.5 Data Credibility and Measures***

We had to ensure that our data and measures were credible to conduct a valuable study. Data credibility concern the data's reliability and validity (Saunders et al., 2019). Reliability, which is mainly concerned with quantitative research (Bell et al., 2018), can be defined as "the consistency, stability or repeatability of the results of a study" (Johnson & Christensen, 2014, p. 279). We ensured the reliability of our data by using Cronbach's alpha ( $\alpha$ ), now denoted as  $\alpha$ , which is a commonly used internal reliability test (Brown, 2002). It calculates the average of all possible split-half reliability coefficients where a computed alpha coefficient will vary between 1, denoting perfect internal reliability, and 0, denoting no internal reliability. We aimed to gather measures with an  $\alpha$  greater than 0.7, which is considered acceptable (Pallant, 2013). Further, validity refers to "the integrity of conclusions that are generated from a piece of research" (Bell et al., 2018, p. 46). We ensured our data were valid by mainly focusing on face validity for the self-completion questionnaire. The measures reflect the content of the concept in question by measuring what it is supposed to measure (Saunders et al., 2019). In the following sections, we elaborate on the measures used.

#### ***3.5.1 Adaptive Leadership***

Adaptive leadership was measured using Huckabee's (2017) Adaptive Leadership Questionnaire (ALQ), composed of 30 items. It provides 360-degree feedback about adaptive leadership by assessing six dimensions (get on the balcony, identify the adaptive challenge, regulate distress, maintain disciplined attention,

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give the work back to people, and protect leadership voices from below). Based on survey fatigue, item relevance, and the purpose of the survey, we chose to two remove items from the original scale (Brace, 2018). Thus, we used 28 items from the ALQ. We gave the respondents two different questionnaires depending on whether they were team leaders or team members. The participant's scores were further measured using a 5-point Likert scale ranging from 1=" Strongly disagree" to 5=" Strongly agree" and were treated as intervals. The results provided information on how team leaders viewed themselves and how team members viewed their leaders regarding these six dimensions of adaptive leadership. For instance, a sample item from the questionnaire for team members to answer was "My leader has the emotional capacity to comfort others as they work through intense issues." A sample item from the questionnaire for team leaders was "When difficulties emerge, I am good at stepping back and assessing the dynamics of the people involved." The Cronbach's  $\alpha$  reliability for the ALQ scale was .886, which is considered to be acceptable (Pallant, 2013). The scale's validity was measured by performing an EFA (Sekaran & Bougie, 2016).

### *3.5.2 Hybrid Work Model*

Hybrid work models were measured using a construct that aimed to capture the team level of virtuality. Fiol and O'Connor's (2005) determination of virtualness ranges from "less virtual" to "more virtual" on a one-dimensional scale on a 0-100 % continuum. The level of hybridity was measured as the frequency of digital meetings during a work week.

### *3.5.3 Information Sharing*

Information sharing was measured using a six-item scale developed by De Dreu (2007). All of the items provide insight on information sharing in teams regarding communication, reciprocal information, the quality of information exchange, repetition, insights, and ideas within and between teams. Two examples of sample items are "Members of our team inform each other about work-related issues" and "I get new facts, insights, and ideas from my colleagues." The items were rated on a 5-point Likert scale ranging from 1=" Strongly disagree" to 5=" Strongly agree" and were treated as intervals. Two items were removed due to unacceptable  $\alpha$ . After extraction, the Cronbach's  $\alpha$  reliability for the information sharing scale was

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.743, which is considered to be acceptable (Pallant, 2013). The scale's validity was measured by conducting an EFA (Sekaran & Bougie, 2016).

#### *3.5.4 Team Performance*

Team Performance was measured using the Performance Evaluation Scale, a self-evaluation scale developed by Puente-Palacios et al. (2016). The scale is composed of 9 items of descriptive behaviors. Two examples of sample items are "The services/products by our team are considered satisfactory by the people who receive them" and "Our team successfully meets its work targets." We measured Team Performance using a 5-point Likert scale ranging from 1=" Strongly disagree" to 5=" Strongly agree" and were treated as intervals. Some measurement efforts focus primarily on team outcomes (e.g., Thorndike, 1949, cited in Brannick et al., 2020), while other measurements focus more on the process of teamwork, that is, on the moment-to-moment behaviors of individuals in teams that must work together – in other words, coordination (e.g., Foushee, 1984; Siegel & Federman, 1973; Williges, Johnston, & Briggs, 1966, cited in Brannick et al., 1997). It is often the case that particular researchers do not highly emphasize the distinction between process and outcome. Researchers tend to measure what seems useful to the purpose at hand at the study time (e.g., Cannon-Bowers, Tannenbaum, Salas, & Volpe, 1995, cited in Brannick et al., 1997). Consequently, many behaviors are grouped into different labels across studies. It is difficult to define and label a specific set of constructs that should be measured whenever team performance is of interest (Brannick et al., 1997). For our study, we have chosen to focus on team performance as a group result rather than a process, and all items focus on what the team does as a whole and not on individual performance. The Cronbach's  $\alpha$  reliability for the team performance scale was .920, which is considered to be acceptable (Pallant, 2013). The scale's validity was measured by performing an EFA (Sekaran & Bougie, 2016).

#### *3.5.5 Control variables*

We controlled for role, team cooperation, task complexity, organizational tenure, and team tenure to rule out possible alternative explanations and investigate whether they affected the relationships and results. Becker et al. (2016) present central recommendations for treating control variables. Specifically, they highlight “when in doubt, leave them out.” Saunders et al. (2019) argue that

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control variables must be included in the survey to avoid influencing the effect of the independent variable on the dependent variable. All variables were measured as Kirkman and Mathieu (2005) propose that antecedents are likely to lead to lower or higher levels of hybridity, which may affect the outcomes. All control variables were measured using direct questions with ordinal or nominal scales.

## **4.0 Results**

### ***4.1 Analytical Procedure***

The following section provides an overview of all our statistical data analysis results. The process of collecting and analyzing the data was done through several steps, all in which we used the statistics program IBM SPSS Statistics version 28. We started the process by eliminating all observations that had one or more missing values, making sure that there were no potential errors in the data (Bell et al., 2018). Second, we conducted a descriptive analysis with Pearson Correlation to test for internal consistency, stability as well as intercorrelations on each construct (Blackmon & Maylor, 2005). Third, we conducted an Exploratory Factor Analysis (EFA) to ensure that the factors loaded on the factors they should load on (Watkins, 2018). For hypothesis testing, we displayed a multiple regression analysis to test H1 and H2 in SPSS (Sekaran & Bougie, 2016). Lastly, a moderated multiple regression analysis were conducted to test H3 and H4 (Dawson & Richter, 2006), through the extension PROCESS in SPSS (see Table 4). Interaction plot graphs were conducted through SPSS Syntax to explain the changed relation of the hybrid work model as a moderator for H3 and H4 (see Fig.2, Fig. 3).

### ***4.2 Descriptive Statistics and Correlations***

Table 1 presents the descriptive analysis and contains the mean (M), standard deviation (SD), Pearson's Correlation Coefficient, and the alpha coefficients. The variables included in the descriptive analysis had a Cronbach's alpha ( $\alpha$ ) greater than .70, meaning that the average intercorrelations of each construct were high (Sekaran & Bougie, 2016). In the descriptive statistics, we found moderate positive linear correlations between adaptive leadership and information sharing ( $r=.43$   $p<.05$ ) and moderate positive linear correlations between adaptive

leadership and team performance ( $r=.350$   $p < .05$ ). Positive linear correlations were found between team performance and information sharing ( $r=.621$   $p < .01$ ). Multicollinearity was not an issue here since no correlations among predictor variables were greater than .70 (Fatter & Hayes, 2013).

Additionally, the descriptive analysis displays the control variables that could cause potential variations of the outcomes and was held constant throughout all our research (Blackmon & Maylor, 2005). Team cooperation had a moderate positive correlation with adaptive leadership ( $r=.205$ ,  $p < .05$ ), and organizational role (team leader/team member) had a moderate positive correlation with adaptive leadership ( $r=.307$ ,  $p < .05$ ). Further, organizational tenure had a moderate positive correlation with information sharing ( $r = .201$ ,  $p < .05$ ). Organizational role correlates with hybrid work models ( $r = 0.153$ ,  $p < .05$ ), and task complexity correlates with team performance ( $r=0.186$ ,  $p < .05$ ).

**Table 1**

*Results of Descriptive Statistics and Correlations for Study Variables*

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9
1. Adaptive Leadership	3.44	.506	(.886)								
2. Information Sharing	3.76	.734	.432**	(.743)							
3. Team Performance	3.93	.696	.350**	.621**	(.920)						
4. Role	1.3	.461	.307**	.177*	.102	-					
5. Team Cooperation	2.47	.501	.205**	.134	.135	.142	-				
6. Task Complexity	2.34	.694	.016	.150	.186*	.115	.079	-			
7. Organizational Tenure	2.52	1.51	.042	.201**	.034	.297**	.127	.127	-		
8. Team Tenure	2.76	1.71	.011	.076	.072	.245**	.142	.018	.566**	-	
9. Hybrid Work Model	3.21	1.15	.002	.110	.058	.020	.153*	.153*	.052	.031	-

Note. N=165. Alpha Coefficients are in the parentheses on the diagonal

\*  $p < .05$ .

\*\*  $p < .01$ .

### **4.3 Exploratory Factor Analysis**

An EFA was conducted to test for construct validity, aiming to confirm the dimensions of the concepts presented in our research and indicate which items were most appropriate (Sekaran & Bougie, 2016). All items were tested through a principal axis factor with a varimax rotation (Hurley et al., 1997, cited in Hayton et al., 2004). All item communalities were moderate to high (min .466 to max .809) and 9 factors were identified in total (see Appendix D for complete EFA). For the Adaptive leadership items, 6 factors were identified, which align with the

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six dimensions from the established ALQ (Northouse, 2019). We found strong intercorrelations between the 28 items. However, several items did not load on the expected factors according to the ALQ dimensions (see Appendix E).

Further, we removed items that did not relate to other items or cross-loaded on two or more factors (.32 or higher) (Costello & Osborne, 2005). Thus, 13 of the 28 items from the ALQ were removed (see Table 2 for revised EFA). For items related to information sharing and team performance, both scales were high in factorial validity, as intercorrelations were above the factor criteria above .4 (Hayton et al., 2004). We followed the general rule of thumb to retain factors until additional factors accounted for trivial variance (Hayton et al., 2004). The Kaiser-Meyer-Olkin (KMO) measured values of .9 ( $> .5$ ) with a significance level for Bartlett's test of .000 ( $p < .05$ ), which suggests a "marvelous" strength of the partial correlation (Vogt & Johnson, 2011). This indicates that the degree of information among the variables overlapped considerably. After extraction and accounting for factors with eigenvalues greater than one, three factors were identified, which aligned with the theoretical structure we believed existed (Hayton et al, 2004).

Lastly, only three components measured three values on information sharing, which is rather low. Although more indicators are preferable, at least three measured variables are needed for statistically identifying a factor (Child, 2006; Fabrigar & Wegener, 2012; Izquierdo et al., 2014, cited in Watkins, 2018).

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**Table 2**

*Exploratory Factor Analysis of the Adaptive Leadership Questionnaire, Information Sharing, and Team Performance items*

Items	Factor loading		
	1	2	3
<i>Get on the Balcony (s)</i>			
1. When difficulties emerge, this leader is good at stepping back and assessing the dynamics of the people involved	.662		
19. In challenging situations, this leader like to observe the parties involved and assess what's really going on	.740		
25. In a difficult situation, this leader will step out of the dispute to gain perspective on it	.700		
<i>Identify the Adaptive Challenge (s)</i>			
20. This leader encourages people to discuss the elephant in the room	.644		
26. This leader thrive on helping people find new ways of coping with organizational problems	.737		
<i>Regulate Distress (s)</i>			
3. When people feel uncertain about organizational change, they trust that this leader will help them work through the difficulties	.552		
15. This leader has the emotional capacity to comfort others as they work through intense issues	.694		
21. People recognize that this leader has the confidence to tackle challenging problems	.639		
27. People see this leader as someone who holds steady in the storm	.680		
<i>Maintain Disciplined Attention (s)</i>			
4. In complex situations, this leader gets people to focus on the issues they are trying to avoid	.630		
10. During organizational change, this leader challenge people to concentrate on the "hot" topics	.519		
16. When people try to avoid controversial issues, this leader bring these conflicts into the open	.632		
<i>Give the Work Back to the People (s)</i>			
17. This leader encourages his/her employees to take initiative in defining/resolving problems	.607		
<i>Protect Leadership Voices from Below (s)</i>			
18. This leader is open to people who bring up unusual ideas that seem to hinder the progress of the group	.569		
24. This leader has an open ear for people who don't seem to fit in with the rest of the team	.638		



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3. Members of my team inform each other about work-related issues	.466
4. The quality of information exchange in our team is good	.472
5. I get new facts, insights, and ideas from my colleagues	.546
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1. The services/products delivered by our team are considered satisfactory	.741
2. The services of our team are top quality	.799
3. Our team successfully meets its work targets	.809
4. Our team is recognized by top managers for its high performance	.727
5. Our team responds with agility to new demands	.615
6. The work deadlines set by our team are met	.620
7. Our team is productive	.688
8. The established targets are met by our team	.795
9. Other teams recognize the high performance of our team	.684

Note.  $N = 165$ .  $s =$  subconstruct.

Extraction method: Principal Axis Factoring

Rotation Method: Varimax with Kaiser Normalization.

#### 4.4 Hypothesis testing

*H1* predicted that adaptive leadership positively relates to information sharing (see Table 3). We expected a positive correlation between adaptive leadership and information sharing, suggesting that information sharing is highest when adaptive leadership is high. R-square shows the total variation for the dependent variable that could be explained by the independent variables (Sekaran & Bougie, 2016). For *H1*, the value is .24, which means that the variation in adaptive leadership explains 24% of the variation in information sharing. Adjusted R-square shows the generalization of the results. For *H1*, the variation of .22 indicates that 22% of the sample results stand from the population in multiple regression. Although it is advised only to keep  $R^2 > .5$  (Sekaran & Bougie, 2016), we considered a low positive  $R^2$  as adequate due to the number of unexplained variations in our field of study, which would naturally weaken the R-square (Itaoka, 2012). Nevertheless, adaptive leadership was statistically significantly correlated with information sharing ( $r = .62$   $p = .001$ ), and *H1* is supported.

*H2* predicted that adaptive leadership would positively relate to team performance (see Table 3). We expected a positive correlation between adaptive leadership and team performance, suggesting that team performance is highest when adaptive leadership is high. For *H2*, the value is .16, which means that the variation in adaptive leadership explains 16% of the variation in information sharing. The adjusted square of .14 shows that 14% of the sample results stand from the population. Adaptive leadership significantly positively correlated with team performance ( $r = .47$   $p = .001$ ). Thus, *H2* is supported. Although we perceive

our regression models to be adequate, one must keep in mind that the preciseness of our predictions may be questioned due to some variance in R-square.

**Table 3**

*Result of the Multiple Regression Analysis*

Variable	Information Sharing		Team Performance	
	B	SE	B	SE
Role	-.04	.12	-.07	.12
Team Cooperation	.02	.10	.07	.11
Task Complexity	.13	.07	.19*	.07
Organizational Tenure	.09*	.04	-.03	.04
Team Tenure	-.03	.06	.06	.06
Adaptive Leadership	.62**	.10	.47**	.10
$R^2$	.24		.35	
$\Delta R^2$	.22		.14	

*Note.*  $N=165$ .

\* $p < .05$

\*\* $p < .01$

*H3* predicted that the level of hybrid work would positively moderate information and adaptive leadership. As we look at the moderating relation, the Beta Coefficients are unimportant in themselves (Maylor et al., 2017). We're interested in the slopes for adaptive leadership predicting team performance at each level of hybrid work. As Table 4 presents, the overall model was significant ( $F= 11.38$ ,  $p < .001$ ,  $R^2 = .30$ ). For low levels of hybrid work, adaptive leadership gives us .35 higher levels of information sharing ( $b = .35$ ,  $p = .004$ ). For high levels of hybrid work, adaptive leadership gives us 1.23 higher levels of ( $b = 1.23$   $p = .000$ ). There is a effect positive significant interaction effect ( $b = .29$   $p= .000$ ). Further visualization of the change is presented (see Fig. 2). The interaction graph shows an uphill pattern as you move from left to right (Dawson, 2014, 2017), indicating a positive change between information sharing and adaptive leadership when moderated by hybrid work models. Thus, *H3* is supported.

*H4* predicted that the level of hybrid work would positively moderate the relationship between adaptive leadership and team performance. As we look at the moderation effect, we're interested in the slopes for adaptive leadership predicting team performance at each level of hybrid work. As Table 4 presents, the overall model was significant ( $F= 6,8$ ,  $p < .001$ .  $R^2 = .192$ ). For low levels of hybrid

work, adaptive leadership gives us .30 higher levels of team performance ( $b = .30$ ,  $p = .013$ ). For high levels of hybrid work, adaptive leadership gives us .89 higher levels of team performance ( $b = .89$ ,  $p = .000$ ). There is a significant moderation of interaction effect ( $b = .19$ ,  $p = .017$ ). The interaction graph shows an uphill pattern as you move from left to right (Dawson, 2014, 2017), which explains the change between team performance and adaptive leadership when moderated by hybrid work models (See Fig. 3). Thus, H4 is supported.

Finally, we found it noteworthy that in the hypothesis regarding team performance, task complexity was statistically significant at a  $<.05$  level. We interpret this as perceived team performance is highest amongst those who work in highly complex organizations, which may impact adaptive leadership. From the observations of the regression coefficients, there is a substantially stronger relationship between adaptive leadership and information sharing than between adaptive leadership and team performance. Similar observations are found for the moderated regression coefficients. The slopes (Fig. 2., Fig. 3.) appeared to be most favorable when hybrid work models were high in both cases. However, the slopes for the information sharing plot are a bit stronger than for team performance.

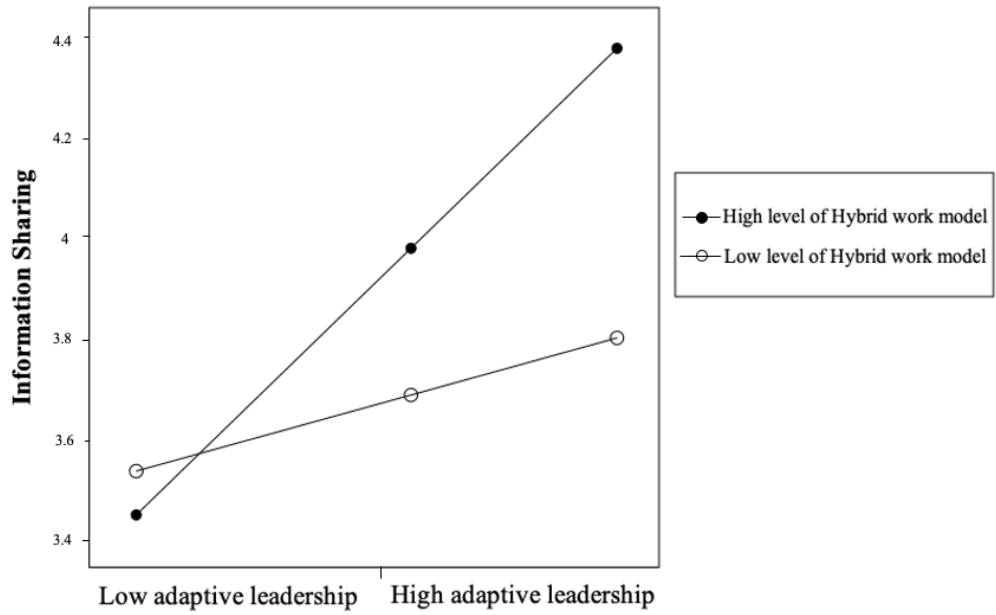
**Table 4**  
*Results of Moderated Multiple Regression Analysis*

Variable	Information Sharing		Team Performance	
	Estimate	SE	Estimate	SE
Role	-.06	.11	-.09	.12
Team Cooperation	-.01	.10	.06	.05
Task Complexity	.08	.07	.16*	.07
Organizational Tenure	.09*	.03	-.02	.04
Team Tenure	-.32	.05	.06	.05
Adaptive Leadership	.73**	.10	.56**	.10
Hybrid Work Model	.08	.04	.03	.04
AL x HWM	.29**	.08	.19*	.08
<i>F</i>	11.39**		6.3**	
<i>R</i> <sup>2</sup>	.30		.19	

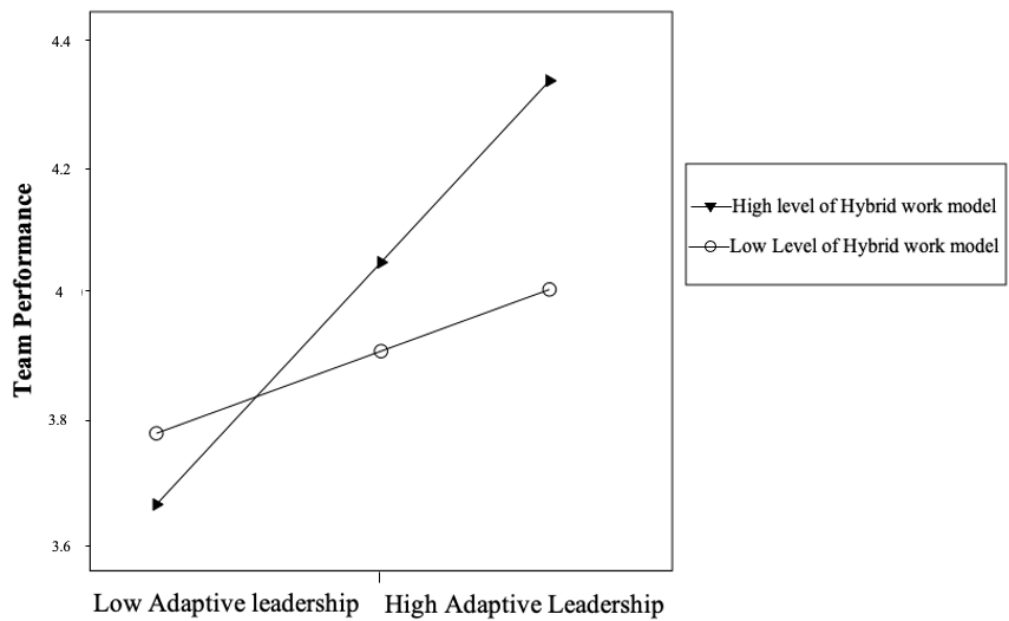
Note.  $N=165$ . AL = Adaptive Leadership. HWM = Hybrid Work Model.

\* $p < .05$

\*\* $p < .01$



**Fig. 2.** Results of interaction plot graph showing the moderating relation of the level of hybrid work model on adaptive leadership and information sharing.



**Fig. 3.** Results of interaction plot graph showing the moderating relation of hybrid work model on adaptive leadership and team performance.

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## 5.0 Discussion

The following chapter will elaborate on and discuss findings from this research project. We will attempt to connect and compare the results with existing and previous theories and research. Further, we will discuss practical implications drawn from our results, study limitations, and, lastly, avenues for future research.

### *5.1 Theoretical contributions*

The overarching theoretical contribution of this study is the contribution to the existing literature on adaptive leadership theory and providing insights on how adaptive leadership relates to information sharing and team performance in hybrid work models. Additionally, few researchers have previously used the ALQ for research purposes (Huckabee, 2017), leaving us with the benefit of being some of the first to test this model in the context of adaptive leadership in the hybrid work model. Using the ALQ provided us with balanced results where we got responses from both leaders and subordinates with different priorities and concerns. From the hypothesis testing, we found evidence that adaptive leadership affects information sharing and team performance. Additionally, we have found evidence that the level of the hybrid work model has a moderating effect such that information sharing and team performance is higher when the level of adaptive leadership and the level hybrid work model is high. The following sections will elaborate on the hypothesis testing and discuss our further theoretical contributions.

*H1* sought to determine whether adaptive leadership is positively related to information sharing, and the hypothesis was supported. Prior research has not investigated the direct relationship between adaptive leadership and information sharing. However, Morrison-Smith & Ruiz's (2020) findings display that norms of information sharing might be challenging to develop in teams, especially if team members work from different locations and mediums. Thus, substantiated by Adaptive Leadership Theory (Heifetz, 1994), adaptive leaders should stimulate team members to develop norms that guide communication, such as timely information sharing (Curseu et al., 2008). For the adaptive leader to be promoting such a cooperative climate with norms that guide information sharing is linked to greater use of informational resources (Mesmer-Magnus et al., 2011).

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*H2* sought to determine whether adaptive leadership is positively related to team performance, and the hypothesis was supported. Although Zaccaro et al. (2001) displayed that few team performance models specify leadership processes as central drivers of team processes (e.g., Hirokawa, 1980; McGrath, 1991), and Burke et al. (2006) display that there is a lack of integration concerning the relationship between leader behaviors and team performance outcomes, our hypothesis is substantiated by the majority of research on the influence leadership has on team performance. Empirical studies on teams display that leaders influence performance determinants and their relatives (e.g., Bell & Kozlowski, 2002; Keller, 2006; Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Kozlowski et al., 1996, cited in Dionne et al., 2010). Accordingly, Bell & Kozlowski (2002) suggested that leaders in hybrid teams not only develop and shape team processes but also monitor and manage team performance.

Further, research suggests that a steeper hierarchy diminished team performance (Lichtenstein et al., 2016; Hoch & Kozlowski, 2014). However, leadership in adaptive teams is often distributed across a number of different individuals rather than residing solely in one person (Mehra et al., 2009), and such collective forms of leadership are believed to contribute to team performance above and beyond formal leadership (Day & Harrison, 2007; Pearce, Conger, & Locke, 2008, cited in Ali et al., 2020) since it embodies joint decision making and shared influence among subordinates (Koopman & Wierdsma, 1998, as cited in Dionne et al., 2010).

*H3* sought to determine whether the level of the hybrid work model positively moderates the relationship between adaptive leadership and information sharing such that adaptive leadership and information sharing is highest when the level of the hybrid work model is high. The hypothesis was supported. Our findings suggest that the higher level of the hybrid work model, the more important is the relationship between adaptive leadership and information sharing. The lower levels of the hybrid work model, the less important is the relationship between adaptive leadership and information sharing. Although prior research has not investigated whether the level of hybrid work model will moderate the relationship between information sharing and adaptive leadership, Contreras et al. (2020) display that adaptive leadership is essential in hybrid work models because leadership practices must adapt to new circumstances for effective leadership and

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efficient information sharing. According to Halford (2005), ICTs enable the reconfiguration of work opening up opportunities for work and information sharing across multiple locations. Thus, consistent with our hypothesis that the level of the hybrid work model positively moderates the relationship between adaptive leadership and information sharing, adaptive leaders must facilitate the best conditions for the team to share information so employees can handle adaptive challenges and thrive (Northouse, 2019) in a hybrid work environment.

*H4* sought to determine whether the level of the hybrid work model will positively moderate the relationship between adaptive leadership and team performance such that team performance is highest when adaptive leadership and the level of the hybrid work model are high. The hypothesis was supported. Our findings suggest that the higher level of the hybrid work model, the more important the relationship between adaptive leadership and team performance. The lower levels of the hybrid work model, the less important is the relationship between adaptive leadership and team performance. Despite the limited research on team performance in a hybrid work model (Burke et al., 2006; Liao, 2016; Contreras et al., 2020), we find similarities between our reported results and Van der Lippe & Lippèny's (2019) argument that adaptive leaders leading in high levels of hybrid work environments must spend considerable effort organizing and facilitating team performance. Additionally, research has found that leaders play an integral role in hybrid team functioning, and hybrid team leaders can help to tackle challenges caused by the virtuality of their teams through different means (Gibson & Gibbs, 2006; Gilson, Maynard, Jones Young, Vartiainen, & Hakonen, 2015, as cited in Larson & DeChurch, 2020), for instance through different leadership behaviors (Northouse., 2019). Evidently, there is an alignment between our results and Rishi et al. (2021), suggesting an increasing need for adaptive leadership to enhance team performance in hybrid work models. Our research supports previous research in which leaders must be adaptive when coordinating and facilitating team performance in hybrid work models.

### ***5.2 Practical Implications***

Hybrid work models have become the norm for many organizations. Our findings contribute to practical implications for adaptive team leaders working with on-site and remote employees. Most scholars agree that managing hybrid teams is more

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complex than managing collocated teams (Davis & Bryant, 2003; Hoch & Kozlowski, 2014, as cited in Dulebohn & Hoch, 2017). Our findings imply that the enforced nature of hybrid work that has arisen due to the pandemic requires alternative leadership practices and focus (Feitosa & Salas, 2020, as cited in Chamakiotis et al., 2021). Organizational leaders of hybrid teams should be adaptive, distinguish between technical and adaptive challenges (Northouse, 2019), and establish what is best achieved on-site versus remote. The hybrid work model presents leaders with several adaptive challenges that are complex and ambiguous in nature (Yukl & Gardner, 2020) due to new ways of working. Our study implies that leaders should be aware that leadership behaviors (e.g., get on the balcony, identify the adaptive challenge) must be according to different situational contexts (Heifetz & Linsky, 2002) because teams must be able to react quickly and accurately to the changing environment (Rosen et al., 2011).

Working virtually is not new (Rishi et al., 2021), and several of the lessons virtual team leaders have learned (e.g., Contreras, Baykal, & Abid, 2020; Gilson, Maynard, Jones Young, Vartiainen, & Hakonen, 2015; Larson & DeChurch, 2020, as cited in Chamakiotis et al., 2021) can be applied to leading a hybrid team. However, creating replicas of older practices may not apply to the post-pandemic context and should be avoided. Instead, our study shows that leaders of hybrid teams should be open to alternative leadership styles (Lichtenstein et al., 2006), where leaders are not seen as the forefront member who must continuously control their team. Instead, they can be within the team and give guidance (Jefferies, 2017). It will be essential for adaptive leaders to acknowledge, for instance, that they do not always have all of the answers when adapting to new ways of working. Leaders must signal to employees that they want to cooperate in designing the future of work. According to Carson et al. (2007), having multiple leaders within the team leads to a higher level of performance (Chamakiotis, 2020).

Further, our results show that adaptive leaders must acknowledge the cruciality of information sharing when working hybrid. They must know that the hybrid work model and its various communication technologies have created a new context for leadership and teamwork (Avolio, Kahai, Dumdum, & Sivasubramaniam, 2001, as cited in Hambley et al., 2017). Leaders must shift their information sharing strategies to embrace a hybrid work model and ensure



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that the right tools are in place to enable employees to communicate internally with the team efficiently and potentially externally with clients. Digital changes and the development of new technological tools are essential in today's business environment when adapting to new ways of working (Colbert et al., 2016). Access to the right resources and tools when sharing information could contribute to higher performance (Mesmer-Magnus & DeChurch, 2009). Our position based on this study is that new ways of working make the rethinking of leadership practices crucial to enable hybrid team leaders to lead effectively in the future of work (Carroll & Conboy, 2020).

### ***5.3 Limitations***

Although this study makes an important contribution to the adaptive leadership literature, and more specifically, how adaptive leadership affects information sharing and team performance in hybrid work models, several limitations may qualify the current conclusions. The ALQ is more often used for practical applications than research purposes (Huckabee, 2017). Although we made sure the questionnaire's psychometric properties (reliability and validity) were established, the scale statements did not capture every single behavior of an adaptive leader. Instead, the scale statements focused on the essence of adaptive leadership (Northouse, 2016). We also used fewer items than in the original scales because of survey fatigue and relevancy, which might have affected the results. However, we ensured that we included sufficient items on all six dimensions of adaptive leadership.

Further, there are limitations to the measurement of team performance which was measured using the Performance Evaluation Scale, a self-evaluation scale developed by Puente-Palacios et al. (2016). The measurement relies on subjective ratings of effectiveness made by subordinates or managers rather than objective measures of team performance (Kaiser et al., 2008; Yukl & Mashud, 2010). Subordinates do not have the same priorities and concerns as managers, and these attitudes and values affect their ratings. Additionally, we used a scale that measures team performance as a result and not a process, which could delimit the validity of our research. Further, information sharing was measured using a six-item scale developed by De Dreu (2007). Unfortunately, we had to remove

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three items when doing our data analysis for the cause of reliability, but we ensured that we had enough items.

Regarding our newly developed measurement of the hybrid work model, we recognize the difficulty we had in controlling all variables that could influence the central construct of the study (Morgado et al., 2017). We merely asked the participants how many percent of their weekly meetings were held digitally, which potentially could cause measurement bias. Additionally, although we gathered insight on the level of digital meetings, which may indicate the level of hybridity, we cannot be sure whether the participants attend meetings digitally remote, onsite from separate meeting rooms, or both.

Another limitation is that we used a self-completion questionnaire, and by doing so, there is always a chance for self-reporting bias, and social desirability, despite the survey being anonymous. With self-completion questionnaires, the ecological validity may be jeopardized since these instruments disrupt the 'natural habit' as Cicourel (1982) put it (Bryman, 2012). Additionally, our cross-sectional design invariably lacks the internal validity that one finds in most experimental research. With a cross-sectional design, it is possible to examine only the relationship between variables, and there is no ordering to the variables since the data on them are collected more or less simultaneously (Bell et al., 2018). In an alternative study, we could have sent the survey in two or three different rounds to draw a more precise line regarding the causality of our research. Hence, we cannot draw any universal conclusions from our results due to a study design with only one data source (Podsakoff et al., 2003). Although a cross-sectional approach was sufficient for our research project and needed due to the time frame, a longitudinal approach could have provided more valuable data on how adaptive leadership affects Information sharing and team performance in a hybrid work model in the long term. For example, when measuring adaptive leadership, our study only examines if the leader uses the behavior, but the effects also depend on the timing of the behavior and how skillfully it was used (Shipper & White, 1999, as cited in Yukl & Mashud, 2010).

Furthermore, another limitation is that we cannot be confident that the respondents understand the questions correctly nor have taken the time to ensure highly accurate data (Rowley, 2014). Respondents may interpret a question in our questionnaire in one way when we mean something else, and this might be

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because of lexical or sentinel miscomprehension for a specific question. The precise wording of questions using terms that will be familiar to and understood by respondents could have improved the validity of our questionnaire (Saunders et al., 2019). We believe that we made our questionnaire easy to understand and follow. However, due to a lack of explanation on specific terms (e.g., hybrid work model, adaptive leadership), we realize that respondents may have misunderstood some questions.

Finally, our research project did not investigate what kind of team the participants were part of (e.g., long-term, project, temporary, and ad hoc teams). It is logical to consider that information sharing in virtual teams would have different effects on newly formed and well-established teams (Walther, 1992; Wilson, Straus, & McEvily, 2006, as cited in Mesmer-Magnus et al., 2011). In fact, results indicate differences in how efficient teams share information sharing based on what kind of team the employee is a part of (Alge et al., 2003).

#### ***5.4 Avenues for Future Research***

Given the encouraging results obtained in the present study, some avenues of research are proposed to develop knowledge further. Several aspects of adaptive leadership in the context of a hybrid work model have not yet been investigated extensively (Aviolo et al.; 2014; Bousa et al., 2017; Van Wart et al., 2019; Liu et al.; 2020; Contreras et al., 2020). Thus, future research is needed on several aspects of adaptive leadership in hybrid work models as the pandemic has increased the need to augment our knowledge on how to lead effectively and build highly functional hybrid teams (Contreras et al., 2020). Based on our findings showing a stronger relationship between adaptive leadership and information sharing and a stronger relationship between adaptive leadership and team performance with a hybrid work model as a moderator, future researchers should aim to validate these findings and further investigate these causal factor's relationships. Additionally, future researchers should seek to validate our results showing that adaptive leadership is more essential for information sharing than team performance in hybrid work models and aim to figure out the potential causes for this phenomenon.

Furthermore, future researchers should test the ALQ for reliability since the scale is mostly used for practical applications (Huckabee., 2017). As shown in

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the completed EFA (see Appendix D), none of the items from the adaptive leadership questionnaire intercorrelated with the subconstructs presented by Heifetz & Linsky (2002). This contributes to the theory in which the internal validity of the ALQ indicates a weak factor correlation. Thus, when using the ALQ in future research, a test re-test estimate of the reliability should be obtained by correlating data collected with those from the same questionnaire collected under as near equivalent conditions as possible (Bell et al., 2018). A good test re-test reliability signifies the internal validity of the ALQ and ensures that the measurements obtained are representative and stable over time (Saunders et al., 2019).

Additionally, the reported limitation of our newly developed measurement scale of a hybrid work model calls attention to the importance of knowing the target construction in detail during the item generation, allowing for all possible and essential variables to be investigated and controlled (Morgado et al., 2018). Thus, future researchers should aim to establish a reliable scale to measure hybrid work models. As previously discussed, hybrid work has many variations, whereas organizations allow employees the flexibility to work on-site and remotely part of the week. Other organizations might have employees working either full-time on-site or full-time remote, while others might allow a combination of these two options. A common definition of working hybrid to create a scale is necessary for future measurement validity and reliability measurements of hybrid work models.

Lastly, more robust research methods are needed to measure adaptive leadership in hybrid work models. Robust theoretical foundations are scarce, and more descriptive or correlational studies are necessary. Additionally, more experimental, quasi-experimental studies and longitudinal studies, and mixed methods for better comprehension of the phenomena are needed (Contreras et al., 2020). Future research should include data collection over time from several sources to improve the causality and validity of the relationship between adaptive leadership and how it affects Information sharing and team performance in a hybrid work model. Additionally, longitudinal studies should be used to capture changes in leader-follower identities and relationships and changes in the group context and environment that would influence or be influenced by the pattern of leading-following interactions (Ployhart et al., 2002; DeRue, 2011). A variety of data collection methods should be used in the longitudinal field studies, including

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observation, interviews, and questionnaires with ability tests (Yukl & Mashud, 2010). In sum, future research should contribute to building a theory of hybrid work models that is common for all researchers on this topic. By doing this, findings across borders can be contrasted, which will contribute to building a solid knowledge of how to lead in hybrid work models (Contreras et al., 2020).

## **6.0 Concluding remarks**

Our study contributes to adaptive leadership theory (e.g., Heifetz & Laurie, 1997; Heifetz & Linsky, 2002; Heifetz & Grashow, & Linsky, 2009), and our findings show that adaptive leadership is essential to managing information sharing and increasing team performance. Nevertheless, our results show that the relationship between adaptive leadership and information sharing and between adaptive leadership and team performance will be even more vital when operating in a hybrid work model. Although there is still a considerable amount to investigate concerning adaptive leadership in a hybrid work model, this study shows that this leadership approach is critical when preparing for challenges that come along with new ways of working. However, despite the study findings that adaptive leadership is essential for implementing successful change, there are limited theoretical grounds for examining the relationship of adaptive leadership in hybrid work models (Aviolo et al.; 2014; Bousa et al., 2017; Van Wart et al., 2019; Liu et al.; 2020; Contreras et al., 2020). Although research on adaptive leadership in hybrid work models is in its initial stages, and our study has several limitations, it provides interesting findings and suggestions for future research. Conclusively, hybrid team leaders may be provided with a more precise idea regarding how to foster both information sharing and team performance in hybrid work models, given their functioning circumstances. Hybrid work models are complex, and leaders must do adaptive work when coordinating and facilitating to reach organizational goals.

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## 7.0 References

- Afflerbach, T. (2019). Hybrid Virtual Teams in Shared Services Organizations. Springer Nature Switzerland AG. *Progress in IS*. (s. 9-14)  
225. <https://doi.org/10.1007/978-3-030-34300-2>
- Alge, B.J., Wiethoff, C., & Klein, H. J. (2003). When does the medium matter Knowledge-building experiences and opportunities in decision-making teams. *Organizational Behavior and Human Decision Processes*, 91(1), 26–37. [https://doi.org/10.1016/S0749-5978\(02\)00524-1](https://doi.org/10.1016/S0749-5978(02)00524-1)
- Ali, A., Wang, H., & Johnson, R. E. (2020). Empirical analysis of shared leadership promotion and team creativity: An adaptive leadership perspective. *Journal of Organizational Behavior*, 41(5), 405–423. <https://doi.org/10.1002/job.2437>
- Avolio, & Kahai, S. S. (2003). Adding the “E” to E-Leadership: How it May Impact Your Leadership. *Organizational Dynamics*, 31(4), 325–338. [https://doi.org/10.1016/S0090-2616\(02\)00133-X](https://doi.org/10.1016/S0090-2616(02)00133-X)
- Avolio, B.J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership: Re examining transformations in leadership source and transmission. *The Leadership Quarterly*, 25(1), 105–131. <https://doi.org/10.1016/j.leaqua.2013.11.003>
- Bagwell, J. (2020) Leading Through a Pandemic: Adaptive Leadership and Purposeful Action. *Journal of School Administration Research and Development*. <https://eric.ed.gov/?id=EJ1301295>
- Bartel, C.A., Wrzesniewski, A., & Wiesenfeld, B. M. (2012). Knowing Where You Stand: Physical Isolation, Perceived Respect, and Organizational

---

Identification Among Virtual Employees. *Organization Science*  
(Providence, R.I.), 23(3), 743–757.

<https://doi.org/10.1287/orsc.1110.0661>

Becker, T.E., Atinc, G., Breugh, J. A., Carlson, K. D., Edwards, J. R., & Spector, P. E. (2016). Statistical control in correlational studies: 10 essential recommendations for organizational researchers. *Journal of Organizational Behavior*, 37(2), 157–167.

<https://doi.org/10.1002/job.2053>

Beland, L.P., Brodeur, A., Mikola, D., & Wright, T. (2022). The short-term economic consequences of COVID-19: Occupation tasks and mental health in Canada. *The Canadian Journal of Economics*, 55(S1), 214–247.

<https://doi.org/10.1111/caje.12543>

Bell, B.S & Kozlowski, S. W. J. (2002). A Typology of Virtual Teams. *Group & Organization Management*, 27(1), 14–49.

<https://doi.org/10.1177/1059601102027001003>

Blackmon, K., & Maylor, H. (2005). Researching business and management. *HM Blackmon, Researching Business and Management. Palgrave MacMillan.*

Boies, K., Fiset, J., & Gill, H. (2015). Communication and trust are key:

Unlocking the relationship between leadership and team performance and Creativity. *The Leadership Quarterly*, 26(6), 1080–1094.

<https://doi.org/10.1016/j.leaqua.2015.07.007>

Bouziri, H., Smith, D. R., Descatha, A., Dab, W., and Jean, K. (2020). Working from home in the time of Covid-19: how to best preserve occupational health? *Occupat. Environ. Med.* 77,

509–510. <https://doi.org/10.1136/oemed-2020-106599>

---

Brannick, M. T., Salas, E., & Prince, C. (Eds.). (1997). Team performance assessment and measurement: Theory, methods, and applications. Lawrence Erlbaum Associates Publishers. <https://doi.org/10.4324/9781410602053>

Brace, I. (2018). Questionnaire design: How to plan, structure and write survey material for effective market research. Kogan Page Publishers.

Brown, J. D. (2002). The Cronbach alpha reliability estimate. *JALT Testing & Evaluation SIG Newsletter*, 6(1). [https://hosted.jalt.org/test/bro\\_13.htm](https://hosted.jalt.org/test/bro_13.htm)

Bunderson, J.S & Sutcliffe, K. M. (2002). Comparing Alternative Conceptualizations of Functional Diversity in Management Teams: Process and Performance Effects. *Academy of Management Journal*, 45(5), 875–893. <https://doi.org/10.2307/3069319>

Burke, C., Stagl, K. C., Klein, C., Goodwin, G. F., Salas, E., & Halpin, S. M (2006). What type of leadership behaviors are functional in teams? A meta-analysis. *The Leadership Quarterly*, 17(3), 288–307. <https://doi.org/10.1016/j.leaqua.2006.02.007>

Burtscher, M.J., Kolbe, M., Wacker, J., & Manser, T. (2011). Interactions of Team Mental Models and Monitoring Behaviors Predict Team Performance in Simulated Anesthesia Inductions. *Journal of Experimental Psychology. Applied*, 17(3), 257–269. <https://doi.org/10.1037/a0025148>

Bosua, R., Kurnia, S., Gloet, M., and Moza, A. (2017). “Telework Impact on Productivity and Well-Being,” in *Social Inclusion and Usability of ICT Enabled Services*, eds J. Choudrie, S. Kurnia, and P. Tsatsou (New York: Routledge), 201. <https://doi.org/10.4324/9781315677316>



- 
- Bryman, A. (2012). *Social Research Methods*. (4<sup>th</sup> ed.) Oxford University Press.
- Carroll, N & Conboy, K. (2020). Normalising the “new normal”: Changing tech driven work practices under pandemic time pressure. *International Journal of Information Management*, 55, 102186–102186.  
<https://doi.org/10.1016/j.ijinfomgt.2020.102186>
- Chamakiotis, P., Panteli, N., & Davison, R. M. (2021). Reimagining e-leadership for reconfigured virtual teams due to Covid-19. *International Journal of Information Management*, 60, 102381–102381.  
<https://doi.org/10.1016/j.ijinfomgt.2021.102381>
- Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal*, 59(3), 731–739. <https://doi.org/10.5465/amj.2016.4003>.
- Cojocar, W.J. (2008). Adaptive leadership: Leadership theory or theoretical derivative? ProQuest Dissertations Publishing.  
<https://www.proquest.com/docview/304832088?pq>
- Contreras, F., Baykal, E., & Abid, G. (2020). E-Leadership and Teleworking in Times of COVID-19 and Beyond: What We Know and Where Do We Go. *Frontiers in Psychology*, 11, 590271–590271.  
<https://doi.org/10.3389/fpsyg.2020.590271>
- Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The Role of Leadership in a Digitalized World: A Review. *Frontiers in Psychology*, 10, 1938–1938.  
<https://doi.org/10.3389/fpsyg.2019.01938>
- Costello, A.B & Osborne, J. (2005). Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis. *Practical Assessment Research & Evaluation*, Vol.10, Article 7.
-

- Curseu, P., Schalk, R., & Wessel, I. (2008). How do virtual teams process information? A literature review and implications for management. *Journal of Managerial Psychology, 23*(6), 628–652.  
<https://doi.org/10.1108/02683940810894729>
- Dahlstrom, T.R. (2013). Telecommuting and Leadership Style. *Public Personnel Management, 42*(3), 438–451.  
<https://doi.org/10.1177/0091026013495731>
- Dawson, J. (2014). Moderation in Management Research: What, Why, When, and How. *Journal of Business and Psychology, 29*(1), 1–19.  
<https://doi.org/10.1007/s10869-013-9308-7>
- Dawson, J. (2017). *Analysing quantitative survey data for business and management students*. SAGE.
- Dennis. (1996). Information Exchange and Use in Group Decision Making: You Can Lead a Group to Information, but You Can't Make It Think. *MIS Quarterly, 20*(4), 433–457. <https://doi.org/10.2307/249563>
- De Dreu. (2007). Cooperative Outcome Interdependence, Task Reflexivity, and Team Effectiveness. *Journal of Applied Psychology, 92*(3), 628–638.  
<https://doi.org/10.1037/0021-9010.92.3.628>
- DeRue, D.S. (2011). Adaptive leadership theory: Leading and following as a complex adaptive process. *Research in Organizational Behavior, 31*. 125–150. <https://doi.org/10.1016/j.riob.2011.09.007>
- D’Innocenzo, K., Mathieu, J. E., & Kukenberger, M. R. (2016). A Meta-Analysis of Different Forms of Shared Leadership–Team Performance Relations. *Journal of Management, 42*(7), 1964–1991.

- Dionne, Sayama, H., Hao, C., & Bush, B. J. (2010). The role of leadership in shared mental model convergence and team performance improvement: An agent-based computational model. *The Leadership Quarterly*, 21(6), 1035–1049. <https://doi.org/10.1016/j.leaqua.2010.10.007>
- Dulebohn, J.H & Hoch, J. E. (2017). Virtual teams in organizations. *Human Resource Management Review*, 27(4), 569–574. <https://doi.org/10.1016/j.hrmr.2016.12.004>
- Eubanks, D. L., Palanski, M., Olabisi, J., Joinson, A., & Dove, J. (2016). Team dynamics in virtual, partially distributed teams: Optimal role fulfillment. *Computers in Human Behavior*, 61, 556–568. <https://doi.org/10.1016/j.chb.2016.03.035>.
- Fatter, D.M & Hayes, J. A. (2013). What facilitates countertransference management? The roles of therapist meditation, mindfulness, and self differentiation. *Psychotherapy Research*, 23(5), 502–513. <https://doi.org/10.1080/10503307.2013.797124>
- Fiol, C & O'Connor, E. J. (2005). Identification in Face-to-Face, Hybrid, and Pure Virtual Teams: Untangling the Contradictions. *Organization Science (Providence, R.I.)*, 16(1), 19–32. <https://doi.org/10.1287/orsc.1040.0101>
- Flood, F. (2019). Leadership in the Remote, Freelance, and Virtual Workforce Era. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, ed. A. Farazmand (Lake Frederick, VA: Springer), 1–5. [https://doi.org/10.1007/978-3-319-31816-5\\_3825-1](https://doi.org/10.1007/978-3-319-31816-5_3825-1)
- Gajendran, R.S. (2009). Leveraging diversity and technology for team performance: The role of variety, disparity, virtuality and knowledge

---

sharing. ProQuest Dissertations Publishing.

<https://www.proquest.com/docview/900690151?pq-origsite=primo>

Gibson, & Gibbs, J. L. (2006). Unpacking the Concept of Virtuality: The Effects of Geographic Dispersion, Electronic Dependence, Dynamic Structure, and National Diversity on Team Innovation. *Administrative Science Quarterly*, 51(3), 451–495. <https://doi.org/10.2189/asqu.51.3.451>

Gilson, L. L., Maynard, M. T., Young, N. C. J., Vartiainen, M., & Hakonen, M (2015). Virtual teams research. *Journal of Management*, 41(5), 1313–1337. <https://doi.org/10.1177/0149206314559946>

Gonzalez-Mulé, S. Cockburn, B., W. McCormick, B., & Zhao, P. (2020). Team tenure and team performance: A meta-analysis and process model. *Personnel Psychology*, 73(1), <https://doi.org/10.1111/peps.12319>

Gorman, K., & Johnson, D. E. (2013). Quantitative Analysis. *The Oxford handbook of sociolinguistics*, 214-240.

Halford. (2005). Hybrid workspace: re-spatialisations of work, organisation and management. *New Technology, Work, and Employment*, 20(1), 19–33. <https://doi.org/10.1111/j.1468-005X.2005.00141.x>

Hambley, L., O'Neill, T. A., & Kline, T. J. (2007). Virtual team leadership: The effects of leadership style and communication medium on team Interaction styles and outcomes. *Organizational Behavior and Human Decision Processes*, 103(1), 1–20.

<https://doi.org/10.1016/j.obhdp.2006.09.004>

Hansen, M & Hurwitz, W. N. (1946). The Problem of Non-Response in Sample Surveys. *Journal of the American Statistical Association*, 41(236), 517–529. <https://doi.org/10.1080/01621459.1946.10501894>

- 
- Hayton, J.C., Allen, D. G., & Scarpello, V. (2004). Factor Retention Decisions in Exploratory Factor Analysis: a Tutorial on Parallel Analysis. *Organizational Research Methods*, 7(2), 191–205. <https://doi.org/10.1177/1094428104263675>
- Heifetz, R.A. (1994). *Leadership Without Easy Answers*. Belknap Press of Harvard University Press.
- Heifetz, R.A, Grashow, A., & Linsky, M. (2009). *The Practice of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World*. Harvard Business Press.
- He, S., Lai, D., Mott, S., Little, A., Grock, A., Haas, M. R., & Chan, T. M (2020). Remote e-work and distance learning for academic medicine: best practices and opportunities for the future. *Journal of Graduate Medical Education*. 12, 256–263. <https://doi.org/10.4300/JGME-D-20-00242.1>
- Heifetz, R.A & Laurie, D. L. (1997). The Work of Leadership. *Harvard Business Review*, 75(1), 124–137.
- Heifetz, R.A & Linsky, M. (2002). *A survival guide for leaders*. Harvard Business Review, 80(6), 65–152. <https://web-p-ebSCOhostcom.ezproxy.library.bi.no/ehost/detail/detail?vid=1&sid=fc8ff342-c16d464a-b98e-1fe530823602%40redis&bdata=#AN=6756407&db=bth>
- Hightower, & Sayeed, L. (1996). Effects of Communication Mode and Prediscussion Information Distribution Characteristics on Information Exchange in Groups. *Information Systems Research*, 7(4), 451–465. <https://doi.org/10.1287/isre.7.4.451>
- Hirokawa, R. Y. (1980). A comparative analysis of communication patterns within effective and ineffective decision-making groups. *Communications*
-

Hoch. (2014). Shared leadership, diversity, and information sharing in teams.

*Journal of Managerial Psychology*, 29(5), 541–564.

<https://doi.org/10.1108/JMP-02-2012-0053>

Hoch, J. E., & Kozlowski, S. W. J. (2014). Leading virtual teams: Hierarchical

leadership, structural supports, and shared team leadership. *Journal of*

*Applied Psychology*, 99(3), 390. <https://doi.org/10.1037/a0030264>.

Hoogeboom, M & Wilderom, C. P. (2020). A Complex Adaptive Systems

Approach to Real-Life Team Interaction Patterns, Task Context,

Information Sharing, and Effectiveness. *Group & Organization*

*Management*, 45(1), 3–42. <https://doi.org/10.1177/1059601119854927>

Huckabee, M. (2017). *Clinical Leadership for Physician Assistants and Nurse*

*Practitioners*. Springer Publishing Company.

Itaoka, K. (2012). Regression and interpretation low R-squared.

In Proceedings of the presentation at Social Research Network 3rd

Meeting, Noosa. Mizuho Information and Research Institute, Inc.

[https://ieaghg.org/docs/General\\_Docs/3rd\\_SRN/Kenshi\\_Itaoka\\_Regressi](https://ieaghg.org/docs/General_Docs/3rd_SRN/Kenshi_Itaoka_RegressionInterpretationSECURED.pdf)

nInterpretationSECURED.pdf

Jacobsen, D. I. (2015). *Hvordan gjennomføre undersøkelser*. (3rd.ed). Oslo:

Cappelen Damm

Jefferies, S.S. (2017). Adaptive Leadership in a Socially Revolving World: A

Symbolic Interactionist Lens of Adaptive Leadership Theory.

*Performance Improvement (International Society for Performance*

*Improvement)*, 56(9), 46–50. <https://doi.org/10.1002/pfi.21741>

Johannessen, A., Tufte, P.A., & Christoffersen, L. (2016). *Introduksjon til*

Johnson, R. B., & Christensen, L. (2014). *Educational research: Quantitative, Qualitative, and Mixed Approaches*. (5th edition). SAGE Publications.

Jones, N., and O'shea, J. (2004). Challenging hierarchies: The impact of e learning. *Higher Education*. 48, 379–395.

<https://doi.org/10.1023/b:high.0000035560.32573.d0>

Kahneman, D., & Egan, P. (2011). *Thinking, fast and slow* (Vol. 1): Farrar, Straus and Giroux New York.

Kaiser, R.B, Hogan, R., & Craig, S. B. (2008). Leadership and the Fate of Organizations. *The American Psychologist*, 63(2), 96–110.

<https://doi.org/10.1037/0003-066X.63.2.96>

Kane, C.G Nanda, R., Phillips, A., & Copulsky, J. (2021). Redesigning the Post Pandemic Workplace. *MIT Sloan Management Review*, 62(3), 12–14.

<https://www.proquest.com/docview/2502929509>

Kesmodel, U. (2018). Cross-sectional studies – what are they good for? *Acta Obstetricia et Gynecologica Scandinavica*, 97(4), 388–393.

<https://doi.org/10.1111/aogs.13331>

Kirkman, B.L & Mathieu, J. E. (2005). The Dimensions and Antecedents of Team Virtuality. *Journal of Management*, 31(5), 700–718.

<https://doi.org/10.1177/0149206305279113>

Kumar, P., Agrawal, A., & Budhwar, P. (Eds.). (2021). *Work from home: Multi level perspectives on the new normal*. Emerald Publishing Limited.

<https://ebookcentral.proquest.com>

Lambert, A., Cayouette-Remblière, J., Guéraud, Élie, Le Roux, G., Bonvalet, C., Girard, V., & Langlois, L. (2020). How the Covid-19 pandemic changed

---

working conditions in France. *Population et sociétés*, 579(7), 1–4.

<https://doi.org/10.3917/popsoc.579.0001>

Larson, L & DeChurch, L. A. (2020). Leading teams in the digital age: Four perspectives on technology and what they mean for leading teams. *The Leadership Quarterly*, 31(1), 101377.

<https://doi.org/10.1016/j.leaqua.2019.101377>

Liao, C. (2017). Leadership in virtual teams: A multilevel perspective. *Human Resource Management Review*, 27(4), 648–659.

<https://doi.org/10.1016/j.hrmr.2016.12.010>

Lichtenstein, B.B., Uhl-Bien, M., Marion, R., Seers, A., Orton, J. D., & Schreiber, C. (2006). Complexity leadership theory: an interactive perspective on leading in complex adaptive systems. *Emergence (Mahwah, N.J.)*, 8(4), 2. <https://web-p->

[ebSCOhostCom.ezproxy.library.bi.no/ehost/pdfviewer/pdfviewer](https://web-p-ebSCOhostCom.ezproxy.library.bi.no/ehost/pdfviewer/pdfviewer)

[vid=0&sid=9c1e4140-8f16-4c7f-9150-61fe4754d855%40redis](https://web-p-ebSCOhostCom.ezproxy.library.bi.no/ehost/pdfviewer/pdfviewer?vid=0&sid=9c1e4140-8f16-4c7f-9150-61fe4754d855%40redis)

Liu, C., Van Wart, M., Kim, S., Wang, X., McCarthy, A., and Ready, D. (2020).

The effects of national cultures on two technologically advanced countries: The case of e-leadership in South Korea and the United States. *Aus. J. Public Administ.* 79, 298–329.

<https://doi.org/10.1111/14678500.12433>

Malhotra, A., Majchrzak, A., & Rosen, B. (2007). Leading Virtual Teams. *Academy of Management Perspectives*, 21(1), 60–70.

<https://doi.org/10.5465/AMP.2007.24286164>

Marlow, S.L., Lacerenza, C.N., Paoletti, J., Burke, C.S., & Salas, E. (2018). Does team communication represent a one-size-fits-all approach? A meta-



---

analysis of team communication and performance. *Organizational Behavior and Human Decision Processes*, 144, 145-170.

<https://doi.org/10.1016/j.obhdp.2017.08.001>

Maylor, H., Blackmon, K., & Huemann, M. (2017). *Researching Business and Management* (2<sup>nd</sup> ed) Palgrave Macmillan.

Mcgrath, J. E. (1991). Time, Interaction, and Performance (TIP): A Theory of Groups. *Small Group Research*, 22(2), 147

174. <https://doi.org/10.1177/1046496491222001>

Mehra, A., Smith, B. R., Dixon, A. L., & Robertson, B. (2006). Distributed leadership in teams: The network of leadership perceptions and team performance. *The Leadership Quarterly*, 17(3), 232–245.

<https://doi.org/10.1016/j.leaqua.2006.02.003>

Mesmer-Magnus, J.R, & DeChurch, L. A. (2009). Information Sharing and Team Performance. *Journal of Applied Psychology*, 94(2), 535–546.

<https://doi.org/10.1037/a0013773>

Mesmer-Magnus, J. R., DeChurch, L. A., Jimenez-Rodriguez, M., Wildman, J., & Shuffler, M. (2011). A meta-analytic investigation of virtuality and information sharing in teams. *Organizational Behavior and Human Decision Processes*, 115(2), 214

225. <https://doi.org/10.1016/j.obhdp.2011.03.002>

Morrison-Smith, S & Ruiz, J. (2020). Challenges and barriers in virtual teams: a literature review. *SN Applied Sciences*, 2(6).

<https://doi.org/10.1007/s42452-020-2801-5>

Morgado, F., Meireles, J. F. ., Neves, C. M., Amaral, A. C. ., & Ferreira, M. E

(2017). Scale development: ten main limitations and recommendations to

---

improve future research practices. *Psicologia, reflexão e crítica*, 30(1).

<https://doi.org/10.1186/S41155-016-0057-1>

Müller, T., and Niessen, C. (2019). Self–Leadership in the Context of Part–Time Teleworking. *Journal of Organizational Behavior*. 40, 883–898.

<https://doi.org/10.1002/job.2371>

Northouse, P. (2016). *Leadership Theory and Practice*. Thousand Oaks, CA: SAGE Publications, Inc.

Northouse, P.G. (2019). *Leadership: Theory & Practice*. (8. Ed). Thousand Oaks. California: SAGE Publications, Inc.

Pallant, J. (2013). *SPSS survival manual*: McGraw-Hill Education (UK).

Puente-Palacios, Martins, M. do C. F., & Palumbo, S. (2016). Team Performance: Evidence for Validity of a Measure. *Psico Usf*, 21(3), 513–525. <https://doi.org/10.1590/1413-82712016210306>

Ployhart, P., Holtz, B. C., & Bliese, P. D. (2002). Longitudinal data analysis:

Applications of random coefficient modeling to leadership research. *The Leadership Quarterly*, 13(4), 455–486.

[https://doi.org/10.1016/S10489843\(02\)00122-4](https://doi.org/10.1016/S10489843(02)00122-4)

Podsakoff, P.M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003).

Common Method Biases in Behavioral Research. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>

Rico, R., Sánchez-Manzanares, M., Gil, F., & Gibson, C. (2008). Team Implicit Coordination Processes: A Team Knowledge-Based Approach. *The Academy of Management Review*, 33(1), 163–184.

<https://doi.org/10.5465/AMR.2008.27751276>

Rishi, S., Breslau, B., & Miscovich, P. (2021). *The Workplace You Need Now* :

---

*Shaping Spaces for the Future of Work*. John Wiley & Sons, Incorporated.

<https://ebookcentral-proquest>

[com.ezproxy.library.bi.no/lib/bilibrary/detail.action?docID=6796383](https://ebookcentral-proquest.com.ezproxy.library.bi.no/lib/bilibrary/detail.action?docID=6796383)

Rosen, M.A Bedwell, W. L., Wildman, J. L., Fritzsche, B. A., Salas, E., & Burke, C.S. (2011). Managing adaptive performance in teams: Guiding principles and behavioral markers for measurement. *Human Resource Management Review*, 21(2), 107–122. <https://doi.org/10.1016/j.hrmr.2010.09.003>

Rowley, J. (2014), "Designing and using research questionnaires", *Management Research Review*, Vol. 37 No. 3, pp. 308-330. <https://doi.org/10.1108/MRR-02-2013-0027>

Salas, E., DiazGranados, D., Klein, C., Burke, C. S., Stagl, K. C., Goodwin, G. F., & Halpin, S. M. (2008). Does Team Training Improve Team Performance? A Meta-Analysis. *Human Factors*, 50(6), 903–933. <https://doi.org/10.1518/001872008X375009>

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8 Ed.). Pearson.

Schreiber, C., & Carley, K. M. (2006). Leadership style as an enabler of organizational complex functioning. *Emergence (Mahwah, N.J.)*, 8(4), 61.

Schwarz Müller, T., Brosi, P., Duman, D & Welppe, I.M. (2018). How Does the Digital Transformation Affect Organizations? Key Themes of Change in Work Design and Leadership. *Management Revue*, 29(2), 114–138. <https://doi.org/10.5771/0935-9915-2018-2-114>

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill Building approach*. John Wiley & Sons.

Sewell, G & Taskin, L. (2015). Out of Sight, Out of Mind in a New World of

---

Work? Autonomy, Control, and Spatiotemporal Scaling in Telework.  
*Organization Studies*, 36(11), 1507–1529.

<https://doi.org/10.1177/0170840615593587>

Stouten, J., Rosseau, D., & De Cremer, D. (2018). *Academy of Management Annals*. Vol. 12, No. 2, 752-788. Doi:

<https://doi.org/10.5465/annals.2016.00995>

Sullivan, C. (2003). What's in A Name? Definitions and Conceptualisations of Teleworking and Homeworking. *New Technology, Work and Employment*. 18. 158 - 165. <https://doi.org/10.1111/1468-005X.00118>

Taherdoost, H. (2020). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management (IJARM)*, 2016, 5.hal-02546796

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3205035](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3205035)

Van der Lippe, T & Lippényi, Z. (2020). Co-workers working from home and individual and team performance. *New Technology, Work, and Employment*, 35(1), 60–79. <https://doi.org/10.1111/ntwe.12153>

Van Hiel, & Schittekate, M. (1998). Information Exchange in Context: Effects of Gender Composition of Group, Accountability, and Intergroup Perception on Group Decision Making. *Journal of Applied Social Psychology*, 28(22), 2049–2067. <https://doi.org/10.1111/j.1559-1816.1998.tb01360>.

Van Wart, M., Roman, A., Wang, X., and Liu, C. (2019). Operationalizing the definition of e-leadership: identifying the elements of e-leadership. *Int. Rev. Administ. Sci.* 85, 80–97. <https://doi.org/10.1177/0020852316681446>

Vries, H., Tummers, L., & Bekkers, V. (2019). The benefits of teleworking in the public sector: Reality or rhetoric? *Review of Public Personnel*

---

*Administration*, 39(4), 570–593.

<https://doi.org/10.1177/0734371X18760124>

Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). An affordance perspective of team collaboration and enforced working from home during COVID-19. *European Journal of Information Systems*, 29(4), 429–442. <https://doi.org/10.1080/0960085X.2020.1800417>

Watkins, M. W. (2018). Exploratory Factor Analysis: A Guide to Best Practice. *Journal of Black Psychology*, 44(3), 219–246.

<https://doi.org/10.1177/0095798418771807>

Watson-Manheim, M.B., & Bélanger, F. (2002). Support for Communication Based Work Processes in Virtual Work. *E-Service Journal*, 1(3), 61–82.

<https://doi.org/10.2979/ESJ.2002.1.3.61>

Wilson, J. (2014). *Essentials of Business Research: A Guide to Doing Your Research Project*. SAGE Publications Ltd.

Wong, S. I., & Giessner, S. R. (2018). The Thin Line Between Empowering and Laissez-Faire Leadership: An Expectancy-Match Perspective. *Journal of Management*, 44(2), 757–783.

<https://doi.org/10.1177/0149206315574597>

Yukl, G. (1989). Managerial Leadership: A Review of Theory and Research. *Journal of Management*, 15(2), 251–289.

<https://doi.org/10.1177/014920638901500207>

Yukl, G. & Gardner, W.L. (2020). *Leadership in Organization* (9th ed). Pearson

Yukl, G & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal*, 62(2), 81–93.

<https://doi.org/10.1037/a0019835>

---

Zaccaro, S.J., Rittman, A. L., & Marks, M. A. (2001). Team leadership. *The Leadership Quarterly*, 12(4), 451–483.  
[https://doi.org/10.1016/S10489843\(01\)00093-5](https://doi.org/10.1016/S10489843(01)00093-5)

Zaharie, M. (2021). Challenges, trust and performance in virtual teams: Examining the role of openness to experience and preference for virtual teams. *Team Performance Management*, 27(3/4), 210–228.  
<https://doi.org/10.1108/TPM-07-2020-0066>

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## 8.0 Appendix

### *Appendix A: Participant Information Sheet*

"An investigation on adaptive leadership: how does adaptive leadership affect information sharing in teams and team performance in hybrid work models?"

#### *Research background and Purpose*

*When teams operate in a dynamic and complex hybrid working environment, their ability to adapt to changing demands is essential for organizational success. The Covid-19 pandemic has changed the way most companies work, and it may seem like the hybrid work model is the future of work. The purpose of our master's thesis is to investigate how adaptive leadership affects information sharing in teams and team performance. We aim to investigate whether hybrid work models have a moderating relationship on this correlation.*

*Why are you being asked to participate, and what does participation involve for you?*

We invite both leaders and subordinates working in a collaborative, hybrid team to participate. If you choose to participate in this project, this will involve you filling in an online survey and will take approximately 5 minutes to complete. The survey includes self-report and peer questions about adaptive leadership and how a hybrid work environment affects you in terms of communication and information sharing within the team. Participation is voluntary and anonymous. If you choose to participate, you can withdraw your consent at any time.

*Who is responsible for this project?*

BI Norwegian Business School is the institution responsible for this project.

#### *Data Protection*

We will only use your personal data for the purpose specified in this information letter and will process your personal data confidentially and in accordance with data protection legislation. Helena Solberg, Christine Skarbø Nilsen, and Sut I. Wong will have access to the information you provide. Your Personal Information (IP address) will not be available to project participants. The information you

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provide through the questionnaire will be stored on hardware belonging to BI Norwegian Business School and will be password protected. The project is scheduled to end 01.07.22, and the information you have provided will then be archived. Based on an agreement with BI Norwegian Business School, Data Protection Services has assessed that the processing of personal data in this project is in accordance with data protection legislation.

### *Questions?*

*If you have questions about the project, please contact:*

Sut I Wong ([sut.i.wong@bi.no](mailto:sut.i.wong@bi.no))

Helena Solberg ([helena.solberg@hotmail.com](mailto:helena.solberg@hotmail.com))

Christine Skarbø Nilsen ([christineskarbo@gmail.com](mailto:christineskarbo@gmail.com))

Data Protection Services ([personverntjenester@sikt.no](mailto:personverntjenester@sikt.no)/+47 53 21 15 00)

### **Consent**

1. Yes, I give consent
2. No, I do not give consent

### **Appendix B: Survey**

#### **Control variables**

1. What role is applicable to you?  
(1) Team member, (2) Team leader, (3) Prefer not to say
2. What level of cooperation do you have in your team?  
(1) No/little cooperation, (2) Partial cooperation, (3) Full cooperation
3. How would you describe your job duties?  
(1) Straightforward, repetitive, few uncertainties, change is infrequent and slow and contribution has low impact  
(2) Complicated but knowable, moderate variation, mostly predictable with some uncertainty, change is regular but manageable, and contribution has low to medium impact  
(3) Complex, high variety, and differentiation of tasks, change is constant, frequent unpredictable events, and contribution has high impact  
(4) None of the above
4. How many employees are in current team?  
(1) 2-3, (2) 4-5, (3) 6-8, (4) 9-10, (5) More than 11 employees



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5. How long have you been working in your current team?

(1) Less than 3 months, (2) 3-11 months, (3) 1-2 years, (4) 3-5 years, (5) More than 6 years

6. How many years have you worked at your current company?

(1) Less than 1 year, (2) 1-2 years, (3) 3-4 years, (4) 5-6 years, (5) More than 7 years

### **Hybrid Work Model**

1. How often are meetings held digitally during a regular work week?

(1) 0-20%, (2) 20-40%, (3) 40-60%, (4) 60-80%, (5) 80-100%

### **Adaptive Leadership**

*Display This Question:*

*If What role is applicable to you? = Team leader*

Answer the following statements on a scale from "Strongly disagree" to "Strongly agree" regarding how you perceive yourself as a leader

1. When difficulties emerge, I am good at stepping back and assessing the dynamics of the people involved

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

2. When events trigger strong emotional responses among employees, I use my authority as a leader to resolve the problem

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

3. When people feel uncertain about organizational change, they trust that I will help them work through the difficulties

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

4. In complex situations, I get people to focus on the issues they are trying to avoid

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

5. When employees are struggling with a decision, I tell them what he/she thinks they should do.

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

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6. During times of difficult change, I welcome the thoughts of group members with low status

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

7. In difficult situations, I sometimes lose sight of the "big picture"

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

8. When people are struggling with value questions, I remind them to follow the organization's policies

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

9. When employees begin to be disturbed by unresolved conflicts, I encourage them to address the issues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

10. During organizational change, I challenge people to concentrate on the "hot" topics

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

11. Listening to group members with radical ideas is valuable to me

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

12. When I disagree with someone, I have difficulty listening to what the person is really saying

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

13. When others are struggling with intense conflicts, I step in to resolve the differences

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

14. I have the emotional capacity to comfort others as they work through intense issues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

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15. When people try to avoid controversial issues, I bring these conflicts into the open

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

16. I encourage my employees to take initiative in defining/resolving problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

17. I am open to people who bring up unusual ideas that seem to hinder the progress of the group

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

18. In challenging situations, I like to observe the parties involved and assess what's really going on

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

19. I encourage people to discuss the elephant in the room

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

20. People recognize that I have the confidence to tackle challenging problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

21. When people come to me to solve problems, I enjoy providing solutions

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

22. I have an open ear for people who don't seem to fit in with the rest of the team

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

23. In a difficult situation, I will step out of the dispute to gain perspective on it

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

24. I thrive on helping people find new ways of coping with organizational problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

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25. People see me as someone who holds steady in the storm

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

26. In an effort to keep things moving forward, I let people avoid issues that are troublesome

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

27. When people are uncertain about what to do, I empower them to decide for themselves

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

28. To restore equilibrium in the team, I try to neutralize comments of out-group members

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

*Display This Question:*

*If What role is applicable to you? = Team member*

Answer the following statements on a scale from "Strongly disagree" to "Strongly agree" regarding how you perceive your team leader

1. When difficulties emerge, my leader is good at stepping back and assessing the dynamics of the people involved

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

2. When events trigger strong emotional responses among employees, my leader use authority to resolve the problem

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

3. When people in the team try to avoid controversial issues, my leader put these conflicts into the open

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

4. When uncertainty about organizational change occurs, I trust that my leader will help them work through the difficulties

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(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

5. In complex situations, my leader gets people to focus on the issues they are trying to avoid

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

6. When I am struggling with a decision, my leader tells me what he/she thinks I should do.

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

7. During times of difficult change, my leader welcomes the thoughts of group members with low status

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

8. In difficult situations, my leader sometimes lose sight of the "big picture"

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

9. When people are struggling with value questions, my leader remind them to follow the organization's policies

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

10. When employees begin to be disturbed by unresolved conflicts, my leader encourage them to address the issues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

11. During organizational change, my leader challenges people to concentrate on the "hot" topics

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

12. Listening to group members with radical ideas is valuable to my leader

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

13. When my leader disagrees with someone, he/she have difficulty listening to what the person is really saying

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(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

14. When others are struggling with intense conflicts, my leader steps in to resolve the differences

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

15. My leader has the emotional capacity to comfort others as they work through intense issues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

16. My leader encourages the employees to take initiative in defining/resolving problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

17. My leader is open for people who bring up unusual ideas that seem to hinder the progress of the group

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

18. In challenging situations, my leader like to observe the parties involved and assess what's really going on

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

19. My leader encourages people to discuss the elephant in the room

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

20. People recognize that my leader has the confidence to tackle challenging problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

21. When people come to my leader to solve problems, he/she enjoys providing solutions

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

22. My leader has an open ear for people who don't seem to fit in with the rest of the team

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(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

23. In a difficult situation, my leader will step out of the dispute to gain perspective on it

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

24. My leader thrives on helping people find new ways of coping with organizational problems

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

25. People see my leader as someone who holds steady in the storm

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

26. In an effort to keep things moving forward, my leader let people avoid issues that are troublesome

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

27. When people are uncertain about what to do, my leader empowers them to decide for themselves

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

28. To restore equilibrium in the team, my leader tries to neutralize comments of out-group members

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

### **Information Sharing**

Answer the following statements on a scale from "strongly agree" to "strongly disagree" regarding how you perceive your team's ability to share information

1. Communication is a problem in our team

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

2. Members of our team inform each other about work-related issues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

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3. The quality of information exchange in our team is well-functioning

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

4. I get new facts, insights, and ideas from my colleagues

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

5. During work meetings we do not exchange new information

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

6. We repeat ourselves during team meetings

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

### **Team Performance**

Answer the following statements on a scale from "Strongly disagree" to "Strongly agree" regarding how you perceive the overall performance of your team

1. The services/products delivered by our team are considered satisfactory by the people who receive them

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

2. The services of our team are top quality

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

3. Our team successfully meets its work targets

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

4. Our team is recognized by top managers for its high performance

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

5. Our team responds with agility to new demands

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

6. The work deadlines set by our team are met

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree



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7. Our team is productive

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

8. The established targets are met by our team

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

9. Other service teams recognize the high performance of our team

(1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree

### *Appendix C: NSD Approval*



## **Vurdering**

### **Referansenummer**

523895

### **Prosjekttittel**

Adaptive Leadership in hybrid work models: An investigation of how adaptive leadership can affect digital information sharing and team performance in hybrid work models

### **Behandlingsansvarlig institusjon**

Handels høyskolen BI / BI Oslo / Institutt for ledelse og organisasjon

### **Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)**

Sut I Wong, sut.i.wong@bi.no, tlf: +4746410723

### **Type prosjekt**

Studentprosjekt, masterstudium

### **Kontaktinformasjon, student**

Helena Solberg, helena.solberg@hotmail.no, tlf: 48421353

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## Prosjektperiode

16.02.2022 - 07.07.2022

## Vurdering (1)

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### 03.03.2022 - Vurdert

#### OM VURDERINGEN

Personverntjenester har en avtale med institusjonen du forsker eller studerer ved. Denne avtalen innebærer at vi skal gi deg råd slik at behandlingen av personopplysninger i prosjektet ditt er lovlig etter personvernregelverket.

Personverntjenester har nå vurdert den planlagte behandlingen av personopplysninger. Vår vurdering er at behandlingen er lovlig, hvis den gjennomføres slik den er beskrevet i meldeskjemaet med dialog og vedlegg.

#### DEL PROSJEKTET MED PROSJEKTANSVARLIG

For studenter er det obligatorisk å dele prosjektet med prosjektansvarlig (veileder). Del ved å trykke på knappen «Del prosjekt» i menylinjen øverst i meldeskjemaet. Prosjektansvarlig bes akseptere invitasjonen innen en uke. Om invitasjonen utløper, må han/hun inviteres på nytt.

#### TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til den datoen som er oppgitt i meldeskjemaet.

#### LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesiell, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake.

Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

#### PERSONVERNPRINSIPPER

Personverntjenester vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i

personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke behandles til nye, uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lenger enn nødvendig for å oppfylle formålet

#### DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), og dataportabilitet (art. 20).

Personverntjenester vurderer at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

#### FØLG DIN INSTITUSJONS RETNINGSLINJER

Personverntjenester legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1 f) og sikkerhet (art. 32).

Ved bruk av databehandler (spørreskjemaleverandør, skylagring eller videosamtale) må behandlingen oppfylle kravene til bruk av databehandler, jf. art 28 og 29. Bruk leverandører som din institusjon har avtale med.

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og/eller rådføre dere med behandlingsansvarlig institusjon.

#### MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til oss ved å

oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: <https://www.nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema>

Du må vente på svar fra oss før endringen gjennomføres.

#### OPPFØLGING AV PROSJEKTET

Personverntjenester vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

## Appendix D: EFA

Items	Factor loading								
	1	2	3	4	5	6	7	8	9
19. In challenging situations, this leader like to observe the parties involved and assess what's really going on	<b>.748</b>								
26. This leader thrive on helping people find new ways of coping with organizational problems	<b>.737</b>								
25. In a difficult situation, this leader will step out of the dispute to gain perspective on it	<b>.713</b>								
18. This leader is open to people who bring up unusual ideas that seem to hinder the progress of the group	<b>.701</b>								
3. When people feel uncertain about organizational change, they trust that this leader will help them work through the difficulties	<b>.649</b>								
15. This leader has the emotional capacity to comfort others as they work through intense issues	<b>.649</b>								
20. This leader encourage people to discuss the elephant in the room	<b>.612</b>								
27. People see this leader as someone who holds steady in the storm	<b>.606</b>								
1. When difficulties emerge, this leader is good at stepping back and assessing the dynamics of the people involved	<b>.548</b>								
24. This leader has an open ear for people who don't seem to fit in with the rest of the team	<b>.538</b>								
10. During organizational change, this leader challenge people to concentrate on the "hot" topics	<b>.501</b>								
17. This leader encourage my employees to take initiative in defining/resolving problems	<b>.478</b>								
7. In difficult situations, this leader sometimes lose sight of the "big picture"					<b>.743</b>				
5. When employees are struggling with a decision, this leader tell them what he/she thinks they should do. (R)					<b>.676</b>				
13. When this leader disagrees with someone, he/she has difficulty listening to what the person is really saying					<b>.583</b>				
4. In complex situations, this leader gets people to focus					<b>.491</b>				
4. In complex situations, this leader gets people to focus on the issues they are trying to avoid					<b>.491</b>				
8. When people are struggling with value questions, this leader remind them to follow the organization's policies (R)					<b>-.490</b>				
16. When people try to avoid controversial issues, this leader bring these conflicts into the open	.456	.482							
29. When people are uncertain about what to do, this leader empower them to decide for themselves	.491		.512						
2. When events trigger strong emotional responses among employees, this leader use their authority as a leader to resolve the problem (R)					<b>.671</b>				
14. When others are struggling with intense conflicts, this leader step in to resolve the differences (R)					<b>.668</b>				
23. When people come to me/my leader to solve problems, this leader enjoy providing solutions (R)					<b>.781</b>				
21. People recognize that this leader has the confidence	.508				.513				
to tackle challenging problems									
9. When employees begin to be disturbed by unresolved conflicts, this leader encourage them to address the issues					<b>.595</b>				
12. Listening to group members with radical ideas is valuable to this leader	.422				.496				
6. During times of difficult change, this leader welcomes the thoughts of group members with low status					<b>.461</b>				
28. To keep things moving forward, this leader let people avoid issues that are troublesome (R)					<b>.630</b>				
30. To restore equilibrium in the team, this leader tries to neutralize comments of out-group members (R)					<b>.821</b>				
3. Members of our team inform each other about work-related issues					<b>.663</b>				
4. I get new facts, insights, and ideas from my colleagues					<b>.517</b>				
5. The quality of information exchange in our team is good					<b>.516</b>				
1. The established targets are met by our team									<b>.795</b>
2. Our team successfully meets its work targets									<b>.836</b>
3. The services of our team are top quality									<b>.808</b>
4. Our team is recognized by top managers for its high performance									<b>.789</b>
5. Other service teams recognize the high performance of our team									<b>.766</b>
6. Our team is productive									<b>.743</b>
7. The services/products delivered by our team are considered satisfactory									<b>.738</b>
8. The work deadlines set by our team are met									<b>.723</b>
9. Our team responds with agility to new demands									<b>.705</b>

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## Appendix E: ALQ Scoring

### Scoring

Get on the Balcony—This score represents the degree to which you are able to step back and see the complexities and interrelated dimensions of a situation.

To arrive at this score:

Sum items 1, 19, and 25 and the reversed (R) score values for 7 and 13 (i.e., change 1 to 5, 2 to 4, 4 to 2, and 5 to 1, with 3 remaining unchanged).  
\_\_\_\_ 1 \_\_\_\_ 7(R) \_\_\_\_ 13(R) \_\_\_\_ 19 \_\_\_\_ 25 \_\_\_\_ Total (Get on the Balcony)

Identify the Adaptive Challenge—This score represents the degree to which you recognize adaptive challenges and do not respond to these challenges with technical leadership.

To arrive at this score:

Sum items 20 and 16 and the reversed (R) score values for 2, 8, and 14 (i.e., change 1 to 5, 2 to 4, 4 to 2, and 5 to 1, with 3 remaining unchanged).  
\_\_\_\_ 2(R) \_\_\_\_ 8(R) \_\_\_\_ 14(R) \_\_\_\_ 20 \_\_\_\_ 26 \_\_\_\_ Total (Identify the Adaptive Challenge)

Regulate Distress—This score represents the degree to which you provide a safe environment in which others can tackle difficult problems and to which you are seen as confident and calm in conflict situations.

To arrive at this score:

Sum items 3, 9, 15, 21, and 27.  
\_\_\_\_ 3 \_\_\_\_ 9 \_\_\_\_ 15 \_\_\_\_ 21 \_\_\_\_ 27 \_\_\_\_ Total (Regulate Distress)

Maintain Disciplined Attention—This score represents the degree to which you get others to face challenging issues and not let them avoid difficult problems.

To arrive at this score:

Sum items 4, 10, and 26 and the reversed (R) score values for 22 and 28 (i.e., change 1 to 5, 2 to 4,

Give the Work Back to the People—This score is the degree to which you empower others to think for themselves and solve their own problems.

To arrive at this score:

Sum items 11, 17, and 29 and the reversed (R) score values for 5 and 23 (i.e., change 1 to 5, 2 to 4, 4 to 2, and 5 to 1, with 3 remaining unchanged).  
\_\_\_\_ 5(R) \_\_\_\_ 11 \_\_\_\_ 17 \_\_\_\_ 23(R) \_\_\_\_ 29 \_\_\_\_ Total (Give the Work Back to the People)

Protect Leadership Voices From Below—This score represents the degree to which you are open and accepting of unusual or radical contributions from low-status group members.

To arrive at this score:

Sum items 6, 12, 18, and 24 and the reversed (R) score value for 30 (i.e., change 1 to 5, 2 to 4, 4 to 2, and 5 to 1, with 3 remaining unchanged).  
\_\_\_\_ 6 \_\_\_\_ 12 \_\_\_\_ 18 \_\_\_\_ 24 \_\_\_\_ 30(R) \_\_\_\_ Total (Protect Leadership Voices From Below)