

Banter, focus, and suitable monitoring: Perspectives on virtual team effectiveness

Ashley Woods

School of Business
University of Southern Queensland
Toowoomba, Queensland, Australia
Email: ash.woods@usq.edu.au

Amanda McCubbin

Institute of Education, Arts and Community
Federation University
Ballarat, Victoria, Australia

Abdul Hafeez-Baig

School of Business
University of Southern Queensland
Toowoomba, Queensland, Australia

Abstract

This interpretive study examines how members of virtual teams experience Virtual Team (VT) effectiveness as a socio-technical accomplishment shaped by people, collaboration technologies, and enacted practices. Drawing on 37 semi-structured interviews with Australian IT professionals and analysed using reflexive thematic analysis, we identified three digitally mediated practice domains: temporal structuring (Focus Time), social presence (Workplace Banter), and visibility/control (Monitoring). Participants' accounts suggest each domain can enable or inhibit effectiveness depending on calibration. Focus practices support deep work when protected by shared norms and legitimate signalling; lightweight social presence sustains cohesion and psychological safety when optional and inclusive; and visibility practices support accountability when transparent and outcome-oriented but become counterproductive when experienced as surveillance. Our central contribution is a socio-technical calibration account of VT effectiveness, developed through three specific theoretical contributions concerning calibration, digitally mediated practice domains, and enabling/inhibiting boundary conditions. We show that perceived effectiveness arises not from temporal structuring, social presence, or visibility/control in isolation, but from the ongoing adjustment of these digitally mediated practices in relation to one another. This account explains why similar collaboration technologies can enable effectiveness in some teams while inhibiting it in others. We extend VT scholarship by specifying how platform features and local norms jointly shape attention, cohesion, and trust, and we offer design guidance for focus-friendly, socially connective, and trust-preserving digital work arrangements.

Keywords: Virtual Teams; Team Effectiveness; Semi-Structured Interviews; Thematic Analysis; Australian IT Industry.

1 Introduction

Virtual Teams (VTs) are teams whose members work across geographic, temporal, and organisational boundaries while relying on Computer Mediated Communication (CMC) technologies to coordinate and deliver outcomes (Alaiad et al., 2019; Charalampous et al., 2018; Dulebohn & Hoch, 2017). VTs have become increasingly prevalent as collaboration platforms have matured and, more recently, as the COVID-19 pandemic accelerated remote work adoption (Ferreira et al., 2022). Although prior research reports potential benefits of virtual work arrangements, such as retention and performance effects under certain conditions, it also shows that adoption and outcomes vary substantially by context and by how virtual work is enacted (Harker Martin & MacDonnell, 2012). These variations make it important to move beyond broad claims that “VTs can work” toward clearer explanations of when and how they are effective in practice.

Despite the growing prevalence of VTs, the determinants underpinning their performance remain complex and multifaceted. Prior research on VTs identified several broad factors crucial to success, such as trust among team members, clear communication norms, effective leadership, and appropriate use of technology (Alaiad et al., 2019; Dulebohn & Hoch, 2017; Paul et al., 2021). Furthermore, challenges like social isolation, technology-related stress, and lack of organisational support are seen as inhibitors to VT success (Charalampous et al., 2018; Suh & Lee, 2017). While these determinants of VT performance have been studied across various contexts, there remains value in examining how they are experienced in specific occupational and national settings, including Australian IT work, where knowledge intensity, digital tool reliance, and professional autonomy may shape how virtual practices are interpreted.

A central reason VT effectiveness remains difficult to explain is that virtual teamwork is a socio-technical phenomenon. Work is mediated by collaboration infrastructures that shape what becomes visible, how responsiveness is interpreted, how attention is protected, and how relationships are sustained. From a technology-in-practice perspective, collaboration technologies do not determine outcomes by themselves; rather, their effects emerge through situated enactment, local norms, and interpretation rules (Orlikowski, 2000; Orlikowski & Scott, 2008). Platform affordances such as visibility, persistence, and association can shape coordination and control, but their consequences depend on how they are enacted in organisational practice (Treem & Leonardi, 2013).

This study examines how platform-enabled visibility and connectivity reshape temporal, social, and control practices in virtual work, for example presence signals, persistent chat, and traceability. This lens speaks directly to an Information Systems (IS) audience by specifying how technology features and local norms jointly shape everyday work. Prior VT scholarship consistently identified trust, communication quality, leadership, and coordination as foundational (Dulebohn & Hoch, 2017; Paul et al., 2021). Two under-specified issues remain salient for an IS audience. First, although prior research recognises the importance of technology, many accounts provide less detail on how every day IS-mediated practices, such as calendar blocking, presence signalling, notification regimes, persistent chat, and traceability features, become configured into conditions that enable or inhibit effective work (Lane et al., 2024; Safadi, 2024). Second, the research under-specifies boundary conditions, particularly around visibility and control, helping explain why similar toolsets yield divergent outcomes.

The overarching contribution of this study is a socio-technical calibration account of VT effectiveness. Rather than treating temporal structuring, social presence, and visibility/control as separate determinants, we show how these digitally mediated practice domains interact and must be continually adjusted in relation to one another. This central contribution is developed through three specific theoretical contributions. First, we conceptualise VT effectiveness as an outcome of socio-technical calibration rather than isolated success factors. Second, we specify three practice domains through which calibration occurs: temporal structuring, social presence, and visibility/control. Third, we identify boundary conditions under which these practices shift from enabling to inhibiting effectiveness.

To examine VT effectiveness as an enacted socio-technical configuration, the study addresses the following research question:

How is socio-technical calibration enacted across temporal structuring, social presence, and visibility/control practices in virtual teams, and what boundary conditions shape whether these practices enable or inhibit effectiveness?

2 Literature Review

This review synthesises research on VT effectiveness with two aims: to summarise what is well established about the determinants that influence VT outcomes, and to surface how everyday digitally mediated practices and platform features become configured into enabling or inhibiting conditions in practice (Lane et al., 2024; Safadi, 2024).

2.1 Socio-technical framing

This review is anchored in a socio-technical view in which virtual teamwork outcomes arise from the interdependence of people, digital collaboration technologies, and the practices and norms through which those technologies are enacted. A socio-technical view highlights that outcomes depend on how collaboration tools are configured and enacted in practice, including the norms that develop around their use (Orlikowski, 2000). Platform features can shape coordination, attention, and interpersonal dynamics, but these effects depend on local interpretations and managerial expectations (Begemann et al., 2024; Lane et al., 2024). In IS terms, “virtual teamwork” is accomplished through technology-in-practice: configurations of tools, defaults, and norms that structure everyday action.

2.2 Trust and psychological safety in Virtual Teams

One of the most consistently cited enhancers of VT performance is interpersonal trust among team members (Alaiad et al., 2019; Breuer et al., 2020). High trust reduces uncertainty, facilitates cooperation, and improves coordination in VTs (Alaiad et al., 2019; Breuer et al., 2020). Breuer et al. (2020) found that trust is even more critical for performance when teams are geographically or organisationally dispersed. Frequent and transparent communication, responsiveness, and knowledge-sharing behaviours help build “swift trust” and sustain it over a longer period of time (Alaiad et al., 2019). Conversely, a lack of trust, whether in teammates or in the technology, undermines knowledge sharing and overall team effectiveness (Breuer et al., 2020).

Alongside trust, team cohesion and psychological safety also affect VT success. Studies have found that strong cohesion, team commitment, collective efficacy, building a supportive environment, and empowerment all predict better VT performance (Handke et al., 2024). High cohesion and a supportive climate can even offset some challenges of virtual work (Bentley et

al., 2016). Psychological safety is particularly relevant in digital contexts where misinterpretation risk can be higher and where surveillance or visibility features may affect willingness to speak up (Kirkman & Stoverink, 2021).

2.3 Communication and coordination

Because VTs rely on technology-mediated interaction, communication quality is another determinant of their effectiveness. Effective VTs can excel at both task-related communication, such as ensuring clarity of goals, roles, and progress, and socio-emotional communication, like building rapport and addressing team morale (Garro-Abarca et al., 2021; Shockley et al., 2021). Empirical findings suggest that teams benefit from upfront agreements on communication norms, such as which media to use for which tasks and how quickly to respond, to prevent confusion (Karl et al., 2022; Lechner & Tobias Mortlock, 2022; Shockley et al., 2021).

Researchers have also observed that poor communication can lead to misunderstandings, delays, and conflict in VTs (Froese et al., 2025; Morrison-Smith & Ruiz, 2020). Geographical and temporal dispersion can also slow coordination and reduce communication effectiveness, making it vital for VTs to adopt deliberate strategies to synchronise work (Froese et al., 2025). Geographical and temporal dispersion are important structural factors. Highly dispersed teams, where team members are spread across many locations or time zones, face coordination hurdles and risk forming subgroups that erode unity (Prasad et al., 2017). Time zone differences create asynchronous work cycles, which may speed up task completion by enabling round-the-clock work, but may also impair real-time coordination and output quality if not managed (Froese et al., 2025).

Effective coordination in virtual settings typically necessitates explicit structure. Without the benefit of co-location, teams often require increased coordination of schedules, defined roles, and tracking of tasks more deliberately, with clear goal setting (Leonardi et al., 2024; Malhotra et al., 2007). Teams that formulate shared goals early and outline structured workflows perform better, as this reduces ambiguity (Schaubroeck & Yu, 2017).

2.4 Temporal structuring and boundary management

Virtual teamwork makes time and attention explicit coordination objects: calendars, messaging tools, and presence indicators shape meeting density, interruption patterns, and expectations of responsiveness. Research on remote and technology-mediated work links high meeting and message load, rapid context switching, and constant connectivity to strain and reduced detachment, with downstream risks for sustained attention and well-being (Charalampous et al., 2018; Karl et al., 2022; Ohly & Bastin, 2023; Shockley et al., 2021; Suh & Lee, 2017). These effects are not merely individual self-management problems; they are produced through socio-technical configurations, including response-latency norms, meeting discipline, notification defaults, and leader modelling (Safadi, 2024).

Recent IS work on digital boundary management further highlights that temporal structuring is not simply an individual time-management issue, but a socio-technical accomplishment shaped by communication infrastructures and organisational expectations. Chamakiotis, van Zoonen, et al. (2025), for example, show how email boundaries are managed in a boundaryless world, where digital communication can blur expectations around availability, responsiveness, and detachment. This is directly relevant to VTs because calendars, messaging platforms, status indicators, and email systems jointly shape when workers are expected to be reachable and how non-responsiveness is interpreted. Temporal structuring therefore

involves not only blocking time but also legitimising boundaries around attention and availability.

Temporal structuring is therefore a collective coordination challenge: teams must maintain coordination reliability without converting availability signalling into constant interruption or after-hours reachability (Ohly & Bastin, 2023; Shockley et al., 2021). In practice, teams implement temporal structuring through explicit artefacts and norms, calendar blocking, focus indicators, “quiet hours,” and agreed response expectations, whose effectiveness depends on shared interpretation and legitimacy (Safadi, 2024). Where norms are ambiguous or routinely overridden, focus practices risk becoming performative, increasing fragmentation and frustration rather than protecting deep work (Karl et al., 2022).

2.5 Social presence and digital visibility

Virtual teamwork can weaken informal relational cues that support cohesion, belonging, and psychological safety, making deliberate social presence practices more consequential than in co-located teams (Begemann et al., 2024; Bentley et al., 2016; Handke et al., 2024). Teams can sustain social presence through lightweight, optional, tool-mediated interaction, informal chat channels, brief personal check-ins, and ambient co-presence, that can support cohesion and quick help-seeking without requiring high meeting overhead (Dulebohn & Hoch, 2017; Handke et al., 2024). However, social connection is not automatically beneficial: where informal interaction feels compulsory, exclusionary, or misaligned with task demands, it can constrain engagement and undermine inclusion (Begemann et al., 2024).

Recent work on dynamic Global VTs also shows that effective virtual collaboration depends on deliberate practices that support socialisation, role clarity, and relational connection. Chamakiotis, Panteli, et al. (2025) highlight the importance of onboarding practices in dynamic Global VTs, where members may need to establish connection, expectations, and working norms without the benefit of stable co-presence. This reinforces the view that social presence in VTs is not merely a relational extra, but part of the infrastructure through which members learn how to coordinate, seek help, and interpret one another’s behaviour.

A related socio-technical dynamic concerns digital visibility and control. Collaboration platforms make activity and availability more legible via status indicators, traceability, recordings, and analytics, enabling accountability but also creating conditions for perceived surveillance (Vitak & Zimmer, 2023). Evidence suggests monitoring can support coordination and performance when transparent and outcome-oriented, yet erode autonomy, trust, and psychological safety when experienced as intrusive or punitive (Kirkman & Stoverink, 2021; Siegel et al., 2022). Recent work on remote monitoring further indicates that perceived “being under watch” can reduce psychological safety and learning behaviours (Andrade et al., 2025). Self-Determination Theory suggests autonomy is a basic psychological need, and controlling visibility regimes can undermine motivation and well-being (Deci & Ryan, 2000; Van den Broeck et al., 2016).

2.6 Team composition, leadership, and organisational context

Team size and expertise are also considerations for VTs, as their nature allows for the inclusion of a wide range of experts, though larger teams can become unwieldy and tend to suffer more coordination and communication issues (Alnuaimi et al., 2010). Additionally, individual attributes like members’ self-motivation, tech-savviness, and personality can influence team dynamics. Teams composed of members who are comfortable with digital collaboration cope

better with virtual work demands (Gamero et al., 2021). Because VTs face unique challenges, like lack of face-to-face supervision and increased autonomy, effective leadership behaviours are important to keep teams aligned and motivated (Lisak & Harush, 2021). Empowering leadership approaches tend to yield positive results in virtual contexts (Handke et al., 2024). Leaders who mentor team members, articulate clear responsibilities, and encourage shared decision-making promote greater collaboration and, indirectly, better performance in VTs (Froese et al., 2025).

The team composition can significantly influence VT performance. In particular, Roehling (2017) suggests that diversity is a key determinant that can act as a double-edged sword, whereby it can introduce challenges but also generate higher performance if managed well. Cultural differences between VT members have been linked to reduced communication effectiveness and more frequent conflict (Froese et al., 2025; Schaubroeck & Yu, 2017). However, diversity can be beneficial for creativity and problem-solving once a supportive climate is established. Gibson and Gibbs (2006) found that a psychologically safe team climate allowed global VTs to leverage their national diversity as an advantage, turning what is potentially a liability into improved innovation outcomes.

2.7 Literature synthesis

The literature review was conducted as a narrative conceptual synthesis rather than a systematic review. The purpose was not to exhaustively map all VT research, but to synthesise established findings relevant to VT effectiveness and identify where practice-level IS mechanisms remain under-specified. Sources were selected to cover four overlapping areas: VT effectiveness, socio-technical and technology-in-practice perspectives, temporal structuring and boundary management, and digital visibility/social presence in remote work. Searches were conducted across major scholarly databases including EBSCOHost, Scopus, and Web of Science, using combinations of terms including “virtual teams”, “VTs” “remote work”, “team effectiveness”, “digital collaboration”, “technology-in-practice”, “social presence”, “electronic monitoring”, “visibility”, “temporal structuring”, and “boundary management”, which were identified from relevant keyword searches on scholarly articles. Priority was given to peer-reviewed journal articles, highly cited conceptual papers, and review articles that helped explain how digital technologies shape coordination, trust, attention, visibility, and work practices. Table 1 summarises this conceptual synthesis by distinguishing what is relatively well established from what remains under-specified for an IS account of VT effectiveness.

Taken together, the literature shows that VT effectiveness is shaped by a broad set of determinants. However, this body of work is less explicit about how these determinants are enacted through everyday digitally mediated practices, and how the same platform capabilities can generate competing effects in practice. In particular, prior research often acknowledges tensions around responsiveness, visibility, interruption, and social connection, but leaves under-specified the mechanisms through which teams convert platform signals into shared expectations and workable routines. This creates an opportunity for IS research to more precisely explain why similar collaboration tools can produce divergent experiences of effectiveness across teams and settings.

Area	Known	Under-explored
Socio-technical view of VTs	Effectiveness depends on people, digital tools, and enacted practices	How routine digital practices, not just “technology use”, shape effectiveness in day-to-day work
Temporal structuring	Dispersion, meetings, interruptions affect coordination and productivity	How teams practically protect attention (availability norms, signalling, meeting discipline)
Social presence & cohesion	Cohesion and belonging support collaboration; isolation is a common VT risk	How teams legitimise and bound informal interaction, so it supports work rather than distracts
Digital visibility & control	Monitoring can support accountability but can erode trust and autonomy when intrusive	Where VT members draw the boundary between “acceptable visibility” and “surveillance,” and how behaviour changes
Beyond “factor lists”	Prior work identifies many determinants, like trust, leadership, communications, technology	How determinants interact as a configuration with trade-offs, how do they improve one or harm another

Table 1. Literature synthesis: established insights and under-specified mechanisms

3 Conceptual framing

This study defines socio-technical calibration as the ongoing, situated adjustment of platform configurations, digital signals, and shared interpretation rules in response to experienced tensions or breakdowns in virtual work, with the aim of sustaining coordination while protecting attention, cohesion, autonomy, and trust. In this framing, the key issue is not simply whether a tool or practice exists, but how teams make it workable in context through the meanings, expectations, and routines that develop around its use (Orlikowski, 2000).

We treat socio-technical calibration as an empirically grounded sensitising concept rather than as a fully formalised new construct. It is related to, but distinct from, several established traditions in IS and organisation theory. Appropriation perspectives foreground how users adapt technologies in practice (DeSanctis & Poole, 1994); sociomaterial perspectives emphasise the inseparability of social and material arrangements (Orlikowski & Scott, 2008); and mutual adjustment highlights coordination among interdependent actors (Thompson, 2003). Calibration builds on these insights but differs in its focal emphasis. It directs attention to how virtual teams continually balance competing socio-technical demands across multiple digitally mediated practice domains: attention and responsiveness, connection and interruption, visibility and autonomy, and accountability and trust. Accordingly, calibration is used here as a sensitising concept and exploratory mechanism. It is sensitising because it directs analytical attention to the adjustments participants described when digital work practices created tensions or trade-offs. It is exploratory because this qualitative study does not seek to measure calibration as a variable, but to specify how it appears in participants’ accounts of VT effectiveness and to identify the boundary conditions under which calibration succeeds or fails.

A calibration perspective is necessary because many of the same platform capabilities that support coordination, can also generate countervailing pressures. Features intended to improve responsiveness may increase interruption load; visibility mechanisms intended to support accountability may be experienced as surveillance; and informal social channels intended to sustain cohesion may become distracting, exclusionary, or misaligned with task

demands (Ohly & Bastin, 2023). Virtual team effectiveness therefore depends not only on the presence of particular tools or practices, but on how teams continually adjust their use so that gains in one area do not unintentionally undermine another (Safadi, 2024).

Calibration may be triggered when participants experience breakdowns in workflow, attention, trust, or inclusion, for example when responsiveness expectations begin to fragment concentration, when monitoring suppresses learning or informal interaction, or when social channels become another source of interruption (Begemann et al., 2024). Calibration may be undertaken by individual workers, teams, or managers, depending on where the tension is experienced and who has authority to adjust the relevant routines, expectations, or platform settings. In practice, calibration can occur through actions such as renegotiating response expectations, legitimising or tightening focus protections, re-bounding informal interaction, clarifying how visibility data will be interpreted, or changing how collaboration tools are configured and enacted (Orlikowski, 2000).

This calibration perspective also connects with recent IS work on boundary work in hybrid and digitally mediated settings. Chamakiotis et al. (2024) show how contemporary boundary work involves agentic interplay between hybridity and liminality, highlighting that boundaries are not fixed but are actively negotiated through everyday work practices. This insight is relevant to virtual teams because boundaries around focus, availability, social presence, and monitoring are similarly unstable. Workers and managers must continually negotiate when availability is expected, when unavailability is legitimate, when informal interaction is appropriate, and when visibility becomes excessive. Socio-technical calibration therefore extends boundary work perspectives by specifying how such negotiations occur across interdependent digital practice domains.

Successful calibration occurs when teams re-establish a workable balance across attention, coordination, cohesion, autonomy, and trust, such that one practice domain supports rather than destabilises the others. Failed calibration, by contrast, occurs when tensions remain unresolved or are addressed in ways that intensify trade-offs, for example when focus protections become performative, informal interaction becomes another stream of interruption, or visibility practices increase self-consciousness and digital presenteeism. In this sense, calibration is not a one-off intervention but an ongoing socio-technical accomplishment through which teams continually negotiate how work should be organised and interpreted (Orlikowski, 2000).

Drawing on this calibration lens, this study adopts a socio-technical sensitising framework that foregrounds three recurring domains in digitally mediated teamwork: temporal structuring, social presence, and digital visibility/control. These domains are used as theoretically motivated areas of attention to organise interpretation of how VTs enact effectiveness through everyday technology-mediated practices; they are not presented as a priori findings, but as analytic lenses for interpreting recurring tensions and adjustments in participants' accounts. Although informed by the literature as sensitising concepts, these domains were co-constructed through reflexive thematic analysis as the researchers iteratively interpreted participants' accounts in dialogue with the socio-technical framing, rather than being either wholly deduced in advance or purely induced without theoretical guidance.

The rationale for focusing on these three domains is analytical rather than exhaustive. Temporal structuring, social presence, and visibility/control were selected because they represent recurring socio-technical interfaces through which virtual work is organised and

interpreted. Each domain sits at a comparable analytical level: it refers to a digitally mediated practice domain in which platform features, local norms, and participant interpretations intersect. Temporal structuring concerns how attention, availability, interruption, and responsiveness are mediated through calendars, meetings, notifications, and status signals. Social presence concerns how relational connection, informal coordination, belonging, and psychological safety are sustained through digital interaction. Visibility/control concerns how traceability, monitoring, accountability, and autonomy are enacted through platform-enabled visibility.

These domains are analytically distinct but mutually conditioning. Visibility/control practices shape whether focus signals are treated as legitimate; social presence shapes whether unavailability is interpreted as avoidance or as normal coordination; and temporal structuring affects whether informal interaction is experienced as connection or interruption. Other determinants such as leadership, trust, task interdependence, and communication quality remain important, but in this study, they operate primarily as conditions shaping whether the three focal domains are calibrated in enabling or inhibiting ways.

Temporal structuring captures how teams use schedules, norms, and digital signals to protect attention and coordinate across boundaries. Social presence captures how teams use informal channels and ambient connectivity to sustain cohesion, belonging, and psychological safety. Visibility/control captures how traceability, status visibility, and monitoring arrangements shape autonomy, trust, and behavioural adaptation (Begemann et al., 2024; Safadi, 2024). Taken together, these domains provide a way of examining VT effectiveness as an interacting configuration rather than as a set of isolated determinants.

These concepts sensitised the study to potential temporal, social, and visibility/control tensions in virtual work. They were not used as a fixed coding framework; rather, they provided conceptual points of reference that were refined through reflexive engagement with participants' accounts.

4 Methodology

This study adopts an interpretivist qualitative design to examine how Australian IT professionals make sense of VT effectiveness as a socio-technical accomplishment. A qualitative approach is appropriate because the phenomenon of interest is not a single variable outcome but the meanings, boundary conditions, and trade-offs through which digitally mediated practices become enabling or inhibiting in context (Ryan, 2018; Walsham, 2006). Semi-structured interviews were used to elicit rich accounts of day-to-day practices enacted through collaboration technologies, and to surface how participants interpret the coupling among focus, social presence, and visibility/control in their teams (Kvale & Brinkmann, 2009; Patton, 2002).

4.1 Sampling

The Australian IT sector was selected as a suitable empirical context for examining the research question because it provides a concentrated setting where knowledge-intensive work, digital collaboration tools, professional autonomy, and distributed teamwork intersect. Australian IT work provides a useful empirical context in which the tensions central to socio-technical calibration are visible: workers must coordinate through digital platforms, protect attention amid meetings and notifications, sustain informal connection without co-presence, and

interpret visibility or monitoring practices in relation to autonomy and trust. The inclusion of both local Australian organisations and Australian-based staff in multinational organisations further allowed the study to capture variation in how virtual teamwork was enacted across different organisational arrangements.

To capture a wide range of perspectives, purposive sampling was used to recruit Australian-based IT professionals with direct experience of virtual teamwork, seeking variation in organisational size, role, seniority, and team structure (Miles et al., 2013; Patton, 2014; Saunders et al., 2023). An initial pool of 70 target organisations was generated using industry databases including MarketLine and IBISWorld, filtering for organisations where virtual teamwork was likely to play a role in operations. Organisations were required to have staff who resided in Australia and performed their job functions within Australia. Organisations did not need to be solely Australian-owned or Australian-operated, as large multinational organisations were included where Australian-based staff met the study criteria.

Potential participants were contacted through publicly available organisational contact details and, where relevant, through organisationally mediated circulation of the study invitation. Staff from 13 of the 70 contacted organisations ultimately participated in the study. Because recruitment involved both direct outreach and, in some cases, onward circulation of the invitation within organisations, a precise individual-level response rate could not be calculated. We therefore report the organisation-level recruitment yield transparently rather than presenting an artificial individual response rate.

The final sample comprised 37 Australian-based IT professionals. The sample included 23 men and 14 women. Participants had a median age of 40 years and a median of 18 years of work experience. Participants worked across roles including software development, project management, IT consulting, network engineering, management, and executive leadership.

Category	Definition	n	%
Role lens			
Individual Contributor (non-managerial)	No direct reports; accountable for specific deliverables/work packages	16	43%
Manager / Team Lead	Mid/senior manager; leads a team of ICs and/or managers	18	49%
Executive / C-Level	Leads a significant cohort or holds C-suite responsibility	3	8%
Organisation type			
Local Australian	Organisation's operations are primarily based in Australia	7	19%
Multi-National	Australian entity is part of a global organisation	30	81%

Table 2. Participant role lens and organisation type

The sample included a higher proportion of participants from multinational organisations. This was not an intended weighting in the sampling design; rather, multinational organisations and their staff were more likely to respond to the recruitment process. We treat this as an important feature of the realised sample. Participants from multinational organisations were often embedded in distributed, cross-site collaboration arrangements, making them well positioned to comment on the socio-technical practices examined in this study.

To clarify participants' interpretive lenses, we classified each interviewee by role lens and organisation type in Table 2. Role lens captures the standpoint from which participants described virtual teamwork. Organisation type distinguishes participants working in primarily Australian firms from those employed in Australian subsidiaries of multi-national organisations. In reporting the findings, quotes from participants are tagged with identifiers alongside role lens. In reporting the findings, quotes from participants are tagged with identifiers alongside role lens. Participant quote labels reflect anonymised transcription codes assigned during analysis and are non-sequential; the numeric portion does not indicate sample size or ordering.

4.2 Data Collection

Interviews were conducted via Microsoft Teams video calls, aligning the research setting with the digitally mediated work practices under study. Each interview lasted 20–45 minutes ($M = 31$ minutes). Interview length varied according to participants' availability and the concision or depth of their responses. Shorter interviews tended to be more focused and were retained where they provided directly relevant accounts of concrete VT practices. During analysis, these interviews were assessed for their contribution to the developing thematic account. They generally confirmed, qualified, or sharpened existing patterns rather than introducing extensive new mechanisms. Longer interviews typically provided richer elaboration of boundary conditions and cross-domain interactions. A semi-structured interview protocol comprising eight open-ended questions was used, see Appendix A. Questions covered perceived enhancers and inhibitors of VT effectiveness, the role of collaboration technologies, well-being strategies, skills for virtual collaboration, experiences of organisational monitoring, and participants' views on what enables a successful VT experience. To support recall without leading responses, the researcher displayed each question on a shared screen; with probing and follow-up questions used to clarify meanings and elicit concrete examples of practices and boundary conditions.

4.3 Data Analysis

Interview transcripts were analysed using reflexive thematic analysis, following the Braun and Clarke (2022) framework. Reflexive thematic analysis was appropriate because the study sought to interpret how participants made sense of digitally mediated work practices rather than to measure the frequency of predefined variables. The reflexive dimension was important because themes such as calibration, focus, social presence, and monitoring were not treated as self-evident categories waiting to be discovered. Instead, they were developed through iterative engagement with participants' accounts, the socio-technical framing, and the researchers' interpretive judgements. Reflexivity therefore supported attention to how meanings, boundary conditions, and tensions were constructed in the data, while also requiring the researchers to examine how their assumptions shaped theme development.

Analysis proceeded iteratively through familiarisation, initial coding, theme development, and refinement. First, the primary researcher read and re-read transcripts to develop close familiarity with the dataset, documenting early impressions and interpretive assumptions in analytic memos. Second, the researcher generated initial codes by identifying segments relevant to the research purpose and assigning concise labels capturing the meaning of each extract. NVivo was used to support systematic organisation of coded segments, facilitate retrieval of extracts, and maintain an evolving record of coding decisions. Third, themes were developed by examining patterns of similarity and difference across codes, clustering

conceptually related codes, and drafting working theme descriptions. Fourth, themes were reviewed and refined through repeated comparison against the dataset, with attention to internal coherence, external distinction, and coverage. Co-authors reviewed candidate themes, questioned whether theme boundaries were sufficiently distinct, examined exemplar extracts, and challenged interpretations that appeared under-supported or overly broad. Where disagreements, ambiguities, or overlaps were identified, the primary researcher returned to the transcripts, refined code boundaries and theme definitions, and documented analytic decisions in memos. During this refinement, some themes were merged, re-specified, or re-labelled, and illustrative extracts were selected to represent the analytic claims. Finally, themes were defined and named in a manner that both reflected participants' accounts and aligned with the study's socio-technical framing, ensuring that theme definitions addressed the research question rather than functioning as descriptive topic labels.

To support transparency, Appendix B provides an excerpt of the thematic-analysis table showing illustrative links between selected data extracts, semantic codes, and latent interpretive themes. This table is not presented as a separate analytic method; it provides examples of how the reflexive thematic analysis moved from close engagement with participants' accounts toward broader interpretive patterns relevant to socio-technical calibration.

4.4 Saturation

Recruitment and interviewing continued until additional data no longer generated new interpretive insight for the study. This was assessed using a reflexive thematic analysis, considering the specificity of the sample, Australian IT professionals with direct VT experience, the relevance and depth of the dialogue, and the focused analytic aim of explaining calibration across three socio-technical domains (Braun & Clarke, 2022). After an initial benchmark of approximately 15–20 interviews, recruitment continued to broaden coverage across role lenses and organisational contexts and to capture less prevalent yet analytically consequential perspectives. On this basis, the final sample ($N = 37$) was judged to provide sufficient information power to support a stable and credible interpretive account.

5 Results

The analysis generated three empirical themes that participants used to describe perceived VT effectiveness: Focus Time, Banter, and Monitoring. These labels foreground participants' accounts while also connecting to the broader practice domains developed in the literature review: temporal structuring, social presence, and visibility/control. Sections 5.1–5.3 present each theme separately for analytical clarity, while Section 5.4 synthesises how the themes operate as a coupled socio-technical configuration. Although presented separately for clarity, participants frequently described these domains as interdependent, for example, negotiated focus protections depended on shared interpretations of availability signals; informal social presence shaped psychological safety and the ease of coordination; and visibility/traceability influenced whether workers felt comfortable signalling “busy” or engaging in learning behaviours. Where reported, percentages indicate descriptive salience within this dataset ($N = 37$), not population prevalence or causal importance.

5.1 Focus Time: protecting attention through legitimate availability signals

The first theme, Focus Time (temporal structuring and attention management), was discussed in 16 of 37 interviews (43%). Participants highlighted the importance of structuring the workday to include periods of uninterrupted, high-concentration work. In a virtual setting, especially for teams spread across different time zones, finding the optimal time for collaborative versus individual work was crucial. Many participants mentioned that scheduling meetings or intensive collaborative tasks during common overlapping hours helped maximise everyone's alertness and engagement. One team leader described deliberately moving important meetings to earlier in the day:

"The other thing that I've done is [for] meetings where I as a leader or as a manager have to be super engaged, particularly with staff and clients, I've moved those to the morning when [people are] most alert and most engaged, so I'm not trying to do two or three different things as well as talk to someone." (P18, Manager).

This strategy was seen as enhancing performance by aligning with natural energy peaks and minimising multitasking. Deliberate planning of specific activities in a workday was echoed by another leader who stated that "you have to be much more intentional about what your day looks like and planning your day and your week ahead... I have had it reinforced to me to block out two hours in your day..." (P6, Manager). P26 (Manager) took a similar approach, whereby "if it's a busy day... I'll block out half an hour... so no one else books the time..."

In addition, participants also noted that working virtually often blurs the line between work and personal time, which can inadvertently extend work hours. Without the physical cues of an office, like colleagues leaving for lunch, some found themselves working longer or forgetting to take breaks.

"You sometimes tend to start earlier and finish later, or you don't go out for lunch because you don't have anybody else saying 'Hey, let's go out for lunch.' This happened to me – sometimes it's already 2:00 PM and I haven't eaten anything yet." (P49, Individual Contributor).

This comment reflects that virtual work can blur temporal boundaries and reduce natural break cues that would normally occur in co-located settings. While dedicated focus periods may support productivity, regular breaks and non-work time need to be protected to prevent inadvertent overwork.

Participants also described temporal structuring as counterproductive when focus periods were treated as a rigid rule rather than a negotiated norm. Some reported that "focus time" was routinely overridden by ad hoc meetings, urgent requests, or implicit expectations of rapid responsiveness, producing frustration and workflow fragmentation. One participant that was part of a large client-facing organisation stated, "I have four screens in front of me. That's nuts, and I'm constantly being pinged on one of them... I think that we're not able to concentrate as well on one thing and get to one specific objective now because of how much technology we've got available." P19, Individual Contributor) and "...because I'm sitting in this tool, I'm constantly being interrupted by updates from [the other] 25—sorry, probably 125—chat sessions that I'm attached to" (P5, Individual Contributor). Others noted that fixed "quiet hours" could create misfit with role demands, time-zone coordination, or individual work rhythms. These accounts suggest Focus Time enables effectiveness when collectively protected and flexibly interpreted, but inhibits effectiveness when it becomes performative, routinely violated, or imposed without role-sensitive adaptation. These challenges in setting Focus Time

were highlighted by this quote, *"Some things are too difficult because then your whole organisation keeps the same time zone but others outside of this still have demands..."* (P33, Manager). The calibration implication is that focus time was not effective simply because it was scheduled. It became effective when availability signals were socially legitimate, when interruptions were bounded, and when visibility/control practices did not pressure workers into performative availability.

5.2 Banter: bounded informal interaction as low-friction coordination

The second practice domain, Banter (digital social presence and informal coordination), was explicitly foregrounded in 7 of 37 interviews (19%). Although Banter was explicitly named in 7 interviews, informal social connection practices were present in many more accounts but were not always labelled as "banter" by participants. We therefore treat Banter as an analytic category capturing a set of relational practices that participants linked to cohesion, help-seeking, and relational repair. In keeping with reflexive thematic analysis, salience is indicated not only by explicit naming frequency but by interpretive centrality and cross-domain coupling in participants' explanations. As one participant explained, *"Yeah, we just have a call that runs all day from morning to when we finish work, and it just feels like we're in the same pod."* (P20, Individual Contributor). This continuous virtual presence allowed team members to talk freely, ask quick questions, or simply work *"side by side"* in silence, mimicking the co-location experience.

Another approach involved using separate chat channels or apps for non-work topics. In two organisations, participants described the use of WhatsApp or dedicated Slack channels to share jokes, personal updates, or discuss common interests unrelated to work tasks. This was done outside official company tools in some cases, as it was informal. One participant likened their team's online social space to a gaming community forum:

"We look at the online gaming world... we try to model [our virtual workplace] like that. Your workplace is just another online gaming forum, and when we have a community, you'll talk together, you'll banter, help each other out..." (P55, Manager).

Such initiatives were aimed at replicating the camaraderie and spontaneity of the lunchroom chatter in a virtual format.

The importance of banter is also evident in how its absence was described. One participant noted that even if a lack of social chat did not immediately hurt task completion, it affected team enjoyment and long-term cohesion:

"When I'm in a virtual team I feel like I don't know what's going on. People have conversations and everyone chats... it doesn't necessarily detract from performance... but it detracts from enjoyment in being in the team." (P53, Individual Contributor)

Negative and deviant cases also shaped the interpretation of this theme. Several participants did not foreground banter or informal interaction as central to VT effectiveness. These participants tended to describe effective virtual work in more task-focused terms, emphasising autonomy, reduced distraction, efficient communication, and the ability to concentrate without unnecessary social overhead. Their accounts qualify the claim that banter is beneficial. The finding is not that all teams require more informal interaction, but that bounded social presence can become consequential where teams rely on quick help-seeking, relational repair, and informal sensemaking. When informal interaction was experienced as compulsory,

distracting, exclusionary, or dominated by louder voices, it inhibited rather than enabled effectiveness.

Participants also noted that social presence practices could become inhibiting when informal interaction felt compulsory, exclusionary, or poorly timed relative to task demands. Some described “always-on” rooms or persistent chat as distracting during cognitively demanding work, while others indicated that humour, in-jokes, or dominant voices could marginalise quieter members. One participant stated, “you have Slack messages coming up again and again... then there will be another channel popping up about things that are completely irrelevant and it’s a distraction” (P2, *Individual Contributor*). Furthermore, another participant highlighted that in a virtual setting some team members need to be encouraged to participate “some people need to be invited into the conversation... you sort of call them out to contribute... whereas others... you just know their mouth is open before the line connects” (P6, *Manager*). These accounts suggest Banter supports effectiveness when it is optional, inclusive, and bounded, but can undermine focus and perceived fairness when it becomes an expectation or a source of social pressure.

Importantly, Banter’s analytic significance lies less in how often the term appeared and more in how often participants described relational ease as a prerequisite for fast coordination and safe help-seeking. Across role lenses, participants linked lightweight informality to smoother coordination by lowering the interactional barrier to initiating contact and supporting early help-seeking and relational repair, suggesting Banter functions as a coordination mechanism, not only a morale practice. The calibration implication is that social presence supported effectiveness when it reduced coordination friction without becoming another source of interruption. Its value therefore depended on how it was bounded in relation to focus demands and how safe participants felt engaging informally under prevailing visibility/control norms.

5.3 Monitoring: legitimate visibility versus surveillance

The third practice domain, Monitoring (digital visibility, traceability, and control), arose in every interview, but participants’ interpretations diverged. Some described visibility features as neutral or helpful for coordination, while others experienced them as surveillance-oriented and behaviour-shaping. Descriptively, 14 of 37 participants (38%) reported that monitoring/visibility did not affect their behaviour, 18 (49%) reported that it did, and 5 (13%) were unsure. These descriptive tallies are included only to indicate variation in perceived behavioural effects, not to imply measurement precision or generalisability. The key issue was not whether visibility existed, but whether it was experienced as transparent and outcome-oriented versus granular, ambiguous, or punitive. In VTs, managers often rely on digital tools to oversee work progress, which can range from benign tracking to more invasive surveillance. Participants expressed a wide spectrum of comfort levels with these practices. Many participants viewed aggregated or anonymised visibility data as legitimate, particularly when framed as supporting security, resourcing, or collective improvement rather than individual policing. Concerns escalated when visibility shifted toward individual-level behavioural inference like interpreting websites visited or minute-by-minute status changes as performance proxies. As one participant noted, “meeting recordings are unproblematic, but individualised scrutiny of browsing activity would feel intrusive and unhelpful” (P48, *Individual Contributor*). This distinction illustrates the domain’s central boundary condition: the same technical capability can support coordination and shared awareness when

explainable and proportionate, yet inhibit effectiveness when it produces self-consciousness, stress, or “digital presenteeism. As one participant reasoned:

“...When people record meetings... I’ve never found that to be a problem... If it came down to my employer saying, ‘I see you’ve spent 45 minutes on your banking website today, we need to talk about your performance’... I’d call that intrusive and not helpful.” (P48, Individual Contributor).

Participant 48’s perspective was echoed by others who felt that monitoring is tolerable when used for collective improvement but becomes an inhibitor of performance when used punitively or to micromanage individuals. Specifically, P1 stated that relying on monitoring for punitive measures is an indicator of management failures “that’s on you for hiring bad employees or training them incorrectly...” (P1, Individual Contributor).

Other participants mentioned that they personally would not be affected by monitoring “I don’t think it will affect the way I work...” (P18, Manager), and another one would only worry “...if you have something to hide...” (P24, Manager), but they acknowledged that the practice could alter their colleagues’ behaviour or stress levels. P2 was an example of the discomfort and change in behaviour due to the scrutinising monitoring in place. They stated “...I will often go to YouTube to look up a tutorial for how to use a specific type of technology... but if they’re just seeing I’m going on YouTube for half an hour... are they going to think I’m not working... what happens is a really big impedance on... the type of information people access to get their job done...” (P2, Individual Contributor). Similarly, P1 noted “...You’ve got your status [indicator] when you’re online and when you’re offline and I think some people watch that like a hawk and really get quite stressed about it...” (P1, Individual Contributor). Whereas others like P21 felt that “... statuses on your [Microsoft] teams to say you’re available or that you’re busy... I think they’re really great indicators... I like to use the statuses as a boundary thing as well...” (P21, Manager). The calibration implication is that monitoring was not inherently enabling or inhibiting. Its effect depended on how visibility data were interpreted, whether workers perceived the practice as proportionate, and whether monitoring norms supported or undermined focus signalling, help-seeking, and informal coordination.

5.4 Calibrating the configuration across themes

This final results subsection synthesises the three themes to show how participants described them operating as an interdependent socio-technical configuration. Although presented separately for clarity, participants frequently described Focus Time, Banter, and Monitoring as a coupled socio-technical configuration rather than independent levers. In particular, interpretations of availability signalling were shaped by the local trust climate and by whether visibility/traceability felt supportive or surveillance-oriented. Where monitoring was perceived as punitive or overly granular, participants described being more cautious about signalling unavailability and about engaging in learning behaviours, which in turn weakened focus protections and reduced willingness to ask questions. Conversely, where teams sustained lightweight, inclusive social presence, “busy” signals and focus blocks were more often interpreted as legitimate rather than avoidant, making temporal structuring more effective. Finally, when visibility practices were transparent and outcome-oriented, participants reported less pressure for performative “always-on” availability, enabling autonomy in how time was structured. For example, “So you know if you’re in an office for example, and you’re getting to know someone... that water cooler type of conversation where

that I think would drop quite a lot if you felt like you were being monitored and you couldn't just send a message to people that was not work related." (P2, *Individual Contributor*).

This table summarises the empirically derived boundary conditions.

Theme	Enables effectiveness when...	Inhibits effectiveness when...	Calibration risks / cross-theme effects
Temporal structuring (Focus)	Participants described greater ease protecting focus time when colleagues respected calendar blocks and status indicators, and when meeting times and response expectations were agreed in advance.	Participants described focus time as less effective when blocked periods were routinely interrupted, when "quiet hours" did not fit role or time-zone demands, or when constant messages and meetings fragmented attention.	Intrusive visibility/monitoring can reduce willingness to signal "busy"; weak social climate can cause focus signals to be read as avoidance.
Social presence (Banter)	Participants linked informal interaction to smoother teamwork when it was optional, inclusive, and lightweight, and when ambient connection made it easier to ask quick questions or repair misunderstandings.	Participants described informal interaction as unhelpful when it felt compulsory, distracting, exclusionary, or dominated by louder voices.	Surveillance climates suppress non-work talk; poor focus norms make informal channels feel like "noise" rather than connection.
Visibility/control (Monitoring)	Participants were more comfortable with visibility practices when they were transparent, limited in scope, and framed as supporting shared work, resourcing, or collective improvement rather than policing individuals.	Participants described monitoring as inhibiting when it was granular, ambiguous, punitive, or when visible activity was treated as a proxy for performance.	Surveillance pressures produce digital presenteeism; learning behaviours and help-seeking decline; trust erosion weakens both banter and focus protections.

Table 3. Boundary conditions and calibration risks

Figure 1 presents the emergent interpretive synthesis developed from the findings. Rather than representing a pre-specified framework applied to the data, it summarises how participants' accounts connected Focus Time, Banter, and Monitoring through the broader process of socio-technical calibration. The arrows indicate interpretive synthesis rather than tested causal relationships. The figure shows how each empirical theme was interpreted as enabling or inhibiting perceived VT effectiveness depending on boundary conditions and cross-domain effects.

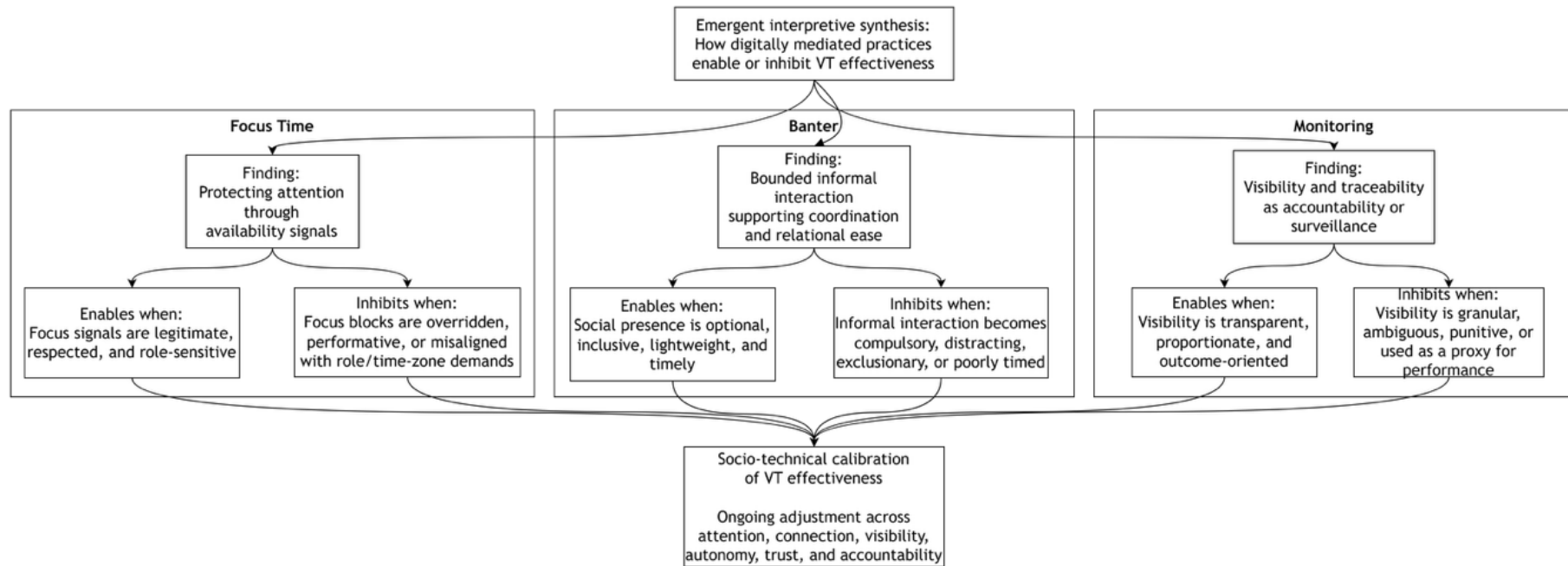


Figure 1. Emergent interpretive synthesis of socio-technical calibration in virtual team effectiveness

6 Discussion

The central theoretical contribution of this study is a socio-technical calibration account of virtual team effectiveness. Rather than adding Focus Time, Banter, and Monitoring to an existing list of VT success factors, the findings show how temporal structuring, social presence, and visibility/control operate as interdependent digitally mediated practice domains. Their effects depend on how they are interpreted, bounded, and adjusted in relation to one another. VT effectiveness therefore emerges not from any single practice, but from the ongoing calibration of practices that shape attention, cohesion, autonomy, accountability, and trust. This positioning strengthens the paper's contribution to IS scholarship by showing how collaboration technologies and local norms jointly shape attention, cohesion, and trust in everyday virtual work (Lane et al., 2024; Safadi, 2024).

The central insight is configurational: participants described how focus, banter, and monitoring interact as an interdependent arrangement. Rather than adding another determinant to a factor list, this study proposes calibration across temporal structuring, social presence, and visibility/control as an exploratory mechanism that helps explain why similar technologies and practices produce divergent outcomes across teams.

6.1 Calibration as an exploratory mechanism

Prior VT scholarship often examines enhancers and inhibitors in isolation (Dulebohn & Hoch, 2017; Handke et al., 2024; Lane et al., 2024). Participants' accounts suggest many breakdowns arise not from one practice being inherently "bad" but from how practices interact. For example, surveillance-oriented monitoring reduced willingness to engage in informal interaction and learning behaviours, which weakened psychological safety and increased impression management. This, in turn, undermined the legitimacy of "busy" signals and focus blocks, making temporal structuring less effective. Conversely, where social presence was legitimate and inclusive, participants described greater ease in negotiating focus protections, because "busy" signals were interpreted as normal coordination artefacts rather than avoidance. These interaction effects help reconcile inconsistent findings in VT research by showing that determinants operate as coupled practices rather than independent levers.

This mechanism perspective also reframes common VT "determinants" as mutually conditioning rather than additive. For instance, responsiveness norms that improve coordination can simultaneously increase interruption pressure and weaken sustained attention (Charalampous et al., 2018; Karl et al., 2022; Ohly & Bastin, 2023). Visibility regimes that support accountability can suppress learning behaviours and informal interaction if interpreted as surveillance; and weak social presence can reduce the legitimacy of "busy" signals, making temporal protections harder to sustain. Treating these domains as coupled helps explain why prior VT studies can report mixed or context-dependent effects for similar practices and technologies.

Together these dynamics illustrate why calibration offers a useful explanatory lens. It captures how effectiveness emerges not from isolated practices, but from an ongoing relational tuning in everyday virtual work.

6.2 Collaboration platforms become coordination/control infrastructures

This study contributes to IS by specifying how collaboration technologies shape VT effectiveness: platform features can become coordination and control infrastructures through

enacted norms and interpretation rules (Lane et al., 2024; Safadi, 2024). Participants repeatedly emphasised that the key issue was not the existence of visibility, but how visibility was interpreted and used. When visibility practices were transparent, proportionate, and outcome-oriented, participants described them as supportive of accountability and coordination. When visibility enabled granular behavioural inference or punitive evaluation, participants described increased self-consciousness, digital presenteeism, and suppressed learning/help-seeking, diverting attention from task performance and eroding trust (Siegel et al., 2022).

Monitoring remote employees requires consideration of both productivity and respecting autonomy to avoid inhibiting performance. This theme ties into Self-Determination Theory where autonomy is a core need, with overly controlling environments undermining intrinsic motivation (Van den Broeck et al., 2016). Foundational Self-Determination Theory work further emphasises autonomy as a basic psychological need, which helps interpret why surveillance-oriented monitoring was described as corrosive to trust and learning behaviour (Deci & Ryan, 2000). In VTs, where direct supervision is absent, technology-mediated monitoring can become a substitute in some companies. When done transparently and focused on aggregated signals and outcome-based evaluation, these practices can enhance performance by aligning team efforts and catching problems early. However, monitoring that is used to single out individuals or punish minor lapses risks shifting the environment toward control and eroding trust.

This aligns with IS accounts of technology-in-practice and socio-technical interdependence, where the organisational consequences of a platform are not produced by features alone but by the interpretive rules, norms, and control arrangements through which features are enacted. In this view, platform signals, become coordination/control infrastructures only when teams and managers stabilise shared meanings around what counts as acceptable responsiveness, legitimate unavailability, and fair visibility.

6.3 Banter as coordination infrastructure

Participants' accounts suggest that bounded informal interaction can function as a coordination mechanism. Informal interaction lowered the interactional barrier to initiating contact, supported early problem surfacing, enabled relational repair after misunderstandings, and increased willingness to seek help, especially for quieter members or newcomers. In this sense, banter operates as "glue" that helps the VT run smoothly, rather than an optional extra that sits outside performance. Banter mattered not only for cohesion but also for coordination, because it lowered the interactional barrier to initiating contact and supported help-seeking and repair.

This reframing moves beyond "water-cooler chat" as a peripheral benefit by positioning banter as part of the coordination infrastructure of virtual work (Begemann et al., 2024; Dulebohn & Hoch, 2017; Lechner & Tobias Mortlock, 2022): it reduces initiation friction, supports rapid clarification, and enables relational repair that prevents minor coordination breakdowns from escalating. The contribution is therefore not that banter is universally beneficial, but that bounded, inclusive social presence can support effective coordination.

This finding also extends recent work on practices for effective onboarding in dynamic Global VTs. While onboarding research emphasises how members are introduced into virtual collaboration arrangements, our findings show that the underlying socialisation challenge continues beyond initial entry. Bounded informal interaction helps sustain the relational

familiarity and interpretive context that make everyday coordination easier. In this sense, banter and other forms of lightweight social presence are not simply affective practices; they help maintain the shared context required for ongoing virtual collaboration.

7 Implications

7.1 Theoretical contributions

The overarching theoretical contribution of this study is a socio-technical calibration account of VT effectiveness. We develop this contribution through three specific contributions to IS and VT scholarship.

Our first contribution is to conceptualise VT effectiveness as an outcome of socio-technical calibration rather than as the result of isolated success factors. Prior VT research has identified important determinants of effectiveness, including trust, communication quality, leadership, coordination, cohesion, and technology use (Alaiad et al., 2019; Dulebohn & Hoch, 2017; Paul et al., 2021). Recent IS work has also shown that digitally mediated work involves ongoing boundary management around availability, communication, and hybrid work arrangements (Chamakiotis et al., 2024; Chamakiotis, van Zoonen, et al., 2025). Our findings extend this work by showing how such boundaries are calibrated across interdependent practice domains in virtual teams. Temporal structuring, social presence, and visibility/control are not separate issues; they interact in ways that shape whether attention, connection, autonomy, and trust are sustained or undermined.

Our second contribution is to show how collaboration platforms become coordination and control infrastructures through local norms and interpretation rules. Prior IS research has shown that technologies do not determine organisational outcomes by themselves; rather, their effects emerge through situated use, enactment, and interpretation (Orlikowski, 2000; Orlikowski & Scott, 2008). Our findings extend this perspective in the VT context by showing how calendars, persistent chat, status indicators, recordings, and traceability features become consequential through shared understandings of what they mean. These features create affordances such as visibility, persistence, and association, but their effects depend on local norms and interpretation rules (Safadi, 2024; Treem & Leonardi, 2013). For example, a “busy” status may operate as a legitimate focus signal in one team but be interpreted as avoidance in another, while monitoring data may support coordination when transparent and proportionate but become a source of digital presenteeism when interpreted as individual surveillance (Siegel et al., 2022; Vitak & Zimmer, 2023). This contribution specifies how platform features are converted into everyday coordination and control arrangements in virtual work.

Our third contribution is to reframe social presence, including banter, as coordination infrastructure rather than merely as a morale or cohesion practice. This extends recent work on dynamic Global VTs and onboarding practices, which highlights the importance of deliberate practices for establishing connection, role clarity, and shared expectations in virtual settings (Chamakiotis, Panteli, et al., 2025). Our findings show that this socialisation challenge is not limited to onboarding. Bounded informal interaction continues to matter in ongoing virtual work because it lowers the barrier to asking questions, surfacing problems, repairing misunderstandings, and seeking help. This contribution helps explain why relational practices matter for performance in VTs: they shape the ease with which work can be coordinated under conditions of distance and digital mediation.

Taken together, these contributions shift explanation of VT effectiveness away from static lists of success factors and toward a configurational account of digitally mediated work. The study shows that the same practice can enable or inhibit effectiveness depending on how it is interpreted, bounded, and combined with other practices. Focus time supports effectiveness when protected and legitimate but becomes performative when routinely overridden. Social presence supports coordination when inclusive and lightweight but becomes distracting or exclusionary when compulsory or poorly bounded. Visibility supports accountability when transparent and outcome-oriented but undermines trust and autonomy when experienced as surveillance. These boundary conditions provide a more dynamic account of VT effectiveness and offer a basis for future IS research on socio-technical calibration in digitally mediated work.

7.2 Implications for practice

These implications reflect the socio-technical calibration mechanism identified in this study: organisations must actively tune temporal, social, and visibility practices so that improvements in one domain do not unintentionally undermine another. The practical implication is therefore not simply to introduce more policies or more tools, but to continually shape how digital practices are configured, interpreted, and enacted in everyday work.

First, organisations should make focus protections both visible and legitimate. This requires explicit team norms for response latency, meeting discipline, and the use of calendar blocks or status signals. However, the findings suggest that tools alone are insufficient; organisations and team leaders also need to shape the interpretive norms around those tools. For example, “busy” should be reinforced as a legitimate focus signal rather than interpreted as avoidance or disengagement. Leaders can support this by modelling protected deep-work windows, respecting blocked time, and using asynchronous updates where appropriate to reduce interruption pressure.

Second, organisations should sustain social presence without converting it into obligation. Lightweight, opt-in spaces for informal interaction, such as low-friction chat channels or brief social check-ins, can support belonging, help-seeking, and relational repair. At the same time, these spaces need to be bounded and inclusive so that they do not become another stream of interruption or a source of exclusion for quieter team members. The practical challenge is therefore one of calibration: enough informal interaction to support coordination and cohesion, but not so much that it weakens focus or creates social pressure.

Third, organisations should keep visibility practices transparent, limited, and clearly interpreted. If monitoring or traceability tools are used, workers need clarity about what is being collected, why it is collected, who can see it, and how it will be used. The findings also suggest that organisations must actively shape the meanings attached to visibility signals. Presence indicators should be treated as coordination aids rather than performance metrics, and legitimate digital work practices, such as consulting online resources, professional networks, or training materials, should not be misread as disengagement. This reduces the risk of digital presenteeism and helps preserve trust, autonomy, and learning behaviour.

These findings also imply a need for manager capability development. Managers may require training and support to interpret visibility signals appropriately, model healthy temporal boundaries, negotiate response norms, and create optional and inclusive social spaces.

Without this capability, there is a risk that well-intended tools or policies will be enacted in ways that intensify rather than reduce socio-technical tensions.

More broadly, organisations should treat collaboration platforms as socio-technical infrastructure, not merely as neutral productivity tools. This means designing and governing platforms in ways that align defaults, permissions, and local norms with the practical requirements of calibrated work. Across the findings, three design principles are especially salient: make focus visible but not punishable; make social presence available but not compulsory; and make visibility useful for coordination but not a proxy for individual worth or effort.

Taken together, these recommendations suggest that effective VT management depends less on maximising any single practice than on maintaining a workable balance across attention, cohesion, visibility, and autonomy. In practice, organisations must continually revisit and adjust digital norms as teams, tools, and hybrid arrangements evolve.

8 Limitations and Future Research

Although this study advances understanding of VT dynamics in the Australian IT context, several limitations warrant acknowledgement and, in turn, motivate directions for future research. In particular, as an interpretive study, the aim is theoretical and provides practical insight into mechanisms and boundary conditions rather than population estimates. The recruitment process also creates a potential self-selection limitation. Although 70 organisations were contacted, staff from 13 organisations ultimately participated. Organisations and individuals willing to engage with a study on VT effectiveness may have had stronger, more developed, or more distinctive experiences of virtual work than non-participants. In addition, the realised sample included a higher proportion of participants from multinational organisations, not by design but because these organisations and their staff were more responsive to recruitment. This may mean the findings more strongly reflect virtual work in larger, distributed, or digitally mature organisational settings.

First, the use of purposive sampling and a focus on Australian IT professionals limits the generalisability of the findings. As an interpretive study, the aim is not population representation but theoretical insight into mechanisms and boundary conditions. Nevertheless, future studies could examine whether the calibration dynamics identified here operate similarly across smaller local organisations, other industries, and other national contexts.

Second, the data is based on self-reported perceptions and qualitative interpretation. While the semi-structured interview method allowed for the exploration of depth and meaning, it is susceptible to biases such as selective memory or social desirability. This was attempted to be mitigated by assuring anonymity of responses and encouraging honest reflections, and by looking for consistency across different participants' accounts. However, future research could complement interview-based insights with quantitative data. Surveys could measure team outcomes in the form of performance ratings, turnover rates, or job satisfaction scores and correlate them with the presence of practices such as scheduled focus time or social chat frequency. Additionally, digital trace data, such as log data from collaboration tools, might offer an objective look at communication patterns or work rhythms in VTs. Analysing such data before and after interventions, like introducing an "always-on" chat channel, could provide causal evidence of their impact.

Third, our study was cross-sectional, essentially a snapshot in time of participants' experiences. VT dynamics can evolve, especially as teams go through various stages of development, or as external conditions change. Longitudinal research would be valuable in this domain. Following a VT over an extended period or conducting a before-and-after study around a specific change, such as the implementation of a new monitoring policy, could reveal how enhancers and inhibitors of performance interact over time. A longitudinal approach could also capture the impact of turnover, when team members or leaders change, on the established norms of focus time or social interaction.

Fourth, while our interviews uncovered three prominent themes, they do not represent an exhaustive list of determinants influencing VT performance (Alaiad et al., 2019). Our focus was on underexplored themes within the Australian context of knowledge-based workers, but future research could explore how existing determinants interact with those newly identified in this research. For example, employing a mixed-methods approach or structural equation modelling in a larger sample could help identify inter-determinant relationships. Future research could employ intervention-based designs. Building on the present findings, organisations could implement targeted changes and evaluate their effects on team performance and employee well-being. Such field trials would enable stronger causal inference, test the practical utility of the identified factors, and inform evidence-based implementation guidance.

Finally, a further limitation concerns interview length. Although the average interview length was 31 minutes, some interviews were approximately 20 minutes. These shorter interviews provided relevant accounts of VT practices but may have generated less depth on more nuanced issues such as psychological safety, monitoring, and socio-technical calibration. Future research could use longer interviews, repeat interviews, or longitudinal qualitative designs to explore how calibration processes develop over time and how participants interpret boundary conditions in greater depth.

9 Conclusion

This study shows that VT effectiveness is not produced by any single practice in isolation but emerges through the ongoing calibration of three interdependent socio-technical domains: temporal structuring, social presence, and visibility/control. Drawing on interviews with Australian IT professionals, the findings demonstrate how these domains interact in practice, such that they can reinforce or undermine one another. In particular, participants' accounts show how visibility norms shape whether focus signals are treated as legitimate, how relational ease supports coordination and help-seeking, and how interruption pressure or surveillance concerns can erode both sustained attention and trust. In this way, the study shifts explanation of VT effectiveness away from static lists of determinants and toward a configurational account of how digitally mediated practices operate in combination in everyday work.

The study contributes to IS research by showing how collaboration platforms become coordination and control infrastructures through locally negotiated interpretation rules, rather than operating as neutral communication channels. It further positions socio-technical calibration as the mechanism through which teams continually balance attention, connection, and autonomy in virtual work. From a practical perspective, the findings indicate that organisations need to actively shape both norms and tool configurations: making focus

protections credible, sustaining social presence in ways that are optional and inclusive, and ensuring visibility practices remain transparent, bounded, and proportionate.

Although the study is situated in the Australian IT context, the calibration dynamics identified here offer a broader lens for understanding VT effectiveness across digitally mediated work settings. Future research could examine how these dynamics operate across other industries, organisational environments, and cultural contexts, and could further explore how longitudinal designs and digital trace data might clarify how calibration unfolds over time. Overall, this study shows that effective virtual teamwork is not an automatic consequence of technology adoption, but a socio-technical accomplishment that depends on continuous, collective adjustment.

Ethics Statement

Ethical approval was provided by the corresponding authors institution.

Data Statement

Requests for data can be made to the corresponding author, with reasonable requests considered in line with ethical restrictions and anonymity.

Statement on Generative AI

The authors used generative AI tools for language refinement, including grammar, syntax, and stylistic improvements.

References

- Alaiad, A., Alnsour, Y., & Alsharo, M. (2019). Virtual teams: Thematic taxonomy, constructs model, and future research directions, *IEEE Transactions on Professional Communication*, 62(3), 211–238. doi.org/10.1109/TPC.2019.2929370
- Alnuaimi, O. A., Robert, L. P., & Maruping, L. M. (2010). Team size, dispersion, and social loafing in technology-supported teams: A perspective on the theory of moral disengagement. *Journal of Management Information Systems*, 27(1), 203–230. doi.org/10.2753/MIS0742-1222270109
- Andrade, M. D., Martínez-Córcoles, M., Fialho, P., & Guimaraes, M. (2025). The effects of being under watch: The impact of electronic monitoring on remote workers' psychological safety. *Journal of Management & Organization*, 1–18. doi.org/10.1017/jmo.2025.10039
- Begemann, V., Handke, L., & Lehmann-Willenbrock, N. (2024). Enabling and constraining factors of remote informal communication: a socio-technical systems perspective. *Journal of Computer-Mediated Communication*, 29(5). doi.org/10.1093/jcmc/zmae008
- Bentley, T. A., Teo, S. T. T., McLeod, L., Tan, F., Bosua, R., & Gloet, M. (2016). The role of organisational support in teleworker wellbeing: A socio-technical systems approach. *Applied Ergonomics*, 52, 207–215. doi.org/https://doi.org/10.1016/j.apergo.2015.07.019
- Braun, V., & Clarke, V. (2022). Thematic analysis. In F. Maggino (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 1–7). Springer International Publishing. doi.org/10.1007/978-3-319-69909-7_3470-2
- Breuer, C., Hüffmeier, J., Hibben, F., & Hertel, G. (2020). Trust in teams: A taxonomy of perceived trustworthiness factors and risk-taking behaviors in face-to-face and virtual teams. *Human Relations*, 73(1), 3–34. doi.org/10.1177/0018726718818721 %U
- Chamakiotis, P., Panteli, N., & Pérez-Arechaederra, D. (2025). Practices for effective onboarding in dynamic global virtual teams. *Organizational Dynamics*, 54(1), 101076. doi.org/10.1016/j.orgdyn.2024.101076
- Chamakiotis, P., Symon, G., & Whiting, R. (2024). Agentic interplay between hybridity and liminality in contemporary boundary work. *Information Systems Journal*, 34(1), 261–283. doi.org/https://doi.org/10.1111/isj.12477
- Chamakiotis, P., van Zoonen, W., & Lee, J. Y.-H. (2025). Managing Email boundaries in a boundaryless world. *Australasian Journal of Information Systems*, 29. doi.org/10.3127/ajis.v29.6089
- Charalampous, M., Grant, C., Tramontano, C., & Michailidis, E. (2018). Systematically reviewing remote e-workers' well-being at work: a multidimensional approach. *European Journal of Work and Organizational Psychology*, 1–23. doi.org/10.1080/1359432X.2018.1541886
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. doi.org/10.1207/S15327965PLI1104_01
- DeSanctis, G., & Poole, M. S. (1994). Capturing the complexity in advanced technology use: adaptive structuration theory. *Organization science (Providence, R.I.)*, 5(2), 121–147. doi.org/10.1287/orsc.5.2.121
- Dulebohn, J. H., & Hoch, J. E. (2017). Virtual teams in organizations. *Human Resource Management Review*, 27(4), 569–574. doi.org/10.1016/j.hrmr.2016.12.004

- Ferreira, P. G. S., Pinheiro de Lima, E., Eduardo Gouvea da Costa, S., Monteiro, N. J., & de Castro e Silva, A. (2022). Key performance measurement capabilities for managing distributed teams [Article]. *Total Quality Management & Business Excellence*, 1–25. doi.org/10.1080/14783363.2022.2155512
- Froese, F. J., Blay, T., Gibson, C. B., Shaffer, M. A., & Benitez, J. (2025). Global virtual work: a review, integrative framework, and future research opportunities. *Journal of international business studies*, 56(6), 691–719. doi.org/10.1057/s41267-025-00775-1
- Gamero, N., González-Anta, B., Orengo, V., Zornoza, A., & Peñarroja, V. (2021). Is team emotional composition essential for virtual team members' well-being? The Role of a Team Emotional Management Intervention. *Int J Environ Res Public Health*, 18(9). doi.org/10.3390/ijerph18094544
- Garro-Abarca, V., Palos-Sanchez, P., & Mariano, A. (2021). Virtual teams in times of pandemic: Factors that influence performance. *Frontiers in Psychology*, 12, 624637. doi.org/10.3389/fpsyg.2021.624637
- Gibson, C. B., & 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.
- Handke, L., Costa, P., & O'Neill, T. A. (2024). Virtual teams: Taking stock and moving forward. *Small Group Res*, 55(5), 671–679. doi.org/10.1177/10464964241274129
- Harker Martin, B., & MacDonnell, R. (2012). Is telework effective for organizations?: A meta-analysis of empirical research on perceptions of telework and organizational outcomes. *Management Research Review*, 35(7), 602–616. doi.org/10.1108/01409171211238820
- Karl, K. A., Peluchette, J. V., & Aghakhani, N. (2022). Virtual work meetings during the covid-19 pandemic: The good, bad, and ugly. *Small Group Res*, 53(3), 343–365. doi.org/10.1177/10464964211015286
- Kirkman, B. L., & Stoverink, A. C. (2021). Building resilient virtual teams. *Organizational Dynamics*, 50(1), 100825.
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the Craft of Qualitative Research Interviewing*. SAGE Publications.
- Lane, J. N., Leonardi, P. M., Contractor, N. S., & DeChurch, L. A. (2024). Teams in the digital workplace: Technology's role for communication, collaboration, and performance. *Small Group Research*, 55(1), 139–183. doi.org/10.1177/10464964231200015
- Lechner, A., & Tobias Mortlock, J. (2022). How to create psychological safety in virtual teams. *Organizational Dynamics*, 51(2), 100849. doi.org/https://doi.org/10.1016/j.orgdyn.2021.100849
- Leonardi, P. M., Parker, S. H., & Shen, R. (2024). How remote work changes the world of work. *Annual review of organizational psychology and organizational behavior*, 11(1), 193–219. doi.org/10.1146/annurev-orgpsych-091922-015852
- Lisak, A., & Harush, R. (2021). Global and local identities on the balance scale: Predicting transformational leadership and effectiveness in multicultural teams. *PLoS One*, 16(7), e0254656. doi.org/10.1371/journal.pone.0254656
- Malhotra, A., Majchrzak, A., & Rosen, B. (2007). Leading virtual teams. *Academy of Management Perspectives*, 21. doi.org/10.5465/AMP.2007.24286164
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications.

- Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: a literature review. *SN Applied Sciences*, 2(6), 1096. doi.org/10.1007/s42452-020-2801-5
- Ohly, S., & Bastin, L. (2023). Effects of task interruptions caused by notifications from communication applications on strain and performance. *J Occup Health*, 65(1), e12408. doi.org/10.1002/1348-9585.12408
- Orlikowski, W. J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404–428. doi.org/10.1287/orsc.11.4.404.14600
- Orlikowski, W. J., & Scott, S. V. (2008). 10 Sociomateriality: Challenging the separation of technology, work and organization. *The Academy of Management annals*, 2(1), 433–474. doi.org/10.5465/19416520802211644
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage Publications.
- Patton, M. Q. (2014). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. SAGE Publications.
- Paul, R., Furner, C., Drake, J., Hauser, R., & Kisling, E. (2021). The moderating effect of virtuality on team trust and effectiveness, *IEEE Transactions on Professional Communication*, 64(2), 185–200. doi.org/10.1109/TPC.2021.3064393
- Prasad, A., Derosa, D., & Beyerlein, M. (2017). Dispersion beyond miles: configuration and performance in virtual teams. *Team Performance Management: An International Journal*, 23(3), 186–204. doi.org/10.1108/TPM-06-2016-0026
- Roehling, M. (2017). The important but neglected legal context of virtual teams: Research implications and opportunities. *Human Resource Management Review*, 27(4), 621–634. doi.org/10.1016/j.hrmr.2016.12.008
- Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse researcher*, 25(4), 41–49.
- Safadi, H. (2024). Balancing Affordances and constraints: Designing enterprise social media for organizational knowledge work. *Management Information Systems Quarterly*, 48(1), 347–374. doi.org/10.25300/misq/2023/16499
- Saunders, M., Lewis, P., & Thornhill, A. (2023). *Research Methods for Business Students*. Pearson Education, Limited.
- Schaubroeck, J., & Yu, A. (2017). When does virtuality help or hinder teams? Core team characteristics as contingency factors. *Human Resource Management Review*, 27, 635–647. doi.org/10.1016/j.hrmr.2016.12.009
- Shockley, K. M., Allen, T. D., Dodd, H., & Waiwood, A. M. (2021). Remote worker communication during COVID-19: The role of quantity, quality, and supervisor expectation-setting. *J Appl Psychol*, 106(10), 1466–1482. doi.org/10.1037/apl0000970
- Siegel, R., König, C. J., & Lazar, V. (2022). The impact of electronic monitoring on employees' job satisfaction, stress, performance, and counterproductive work behavior: A meta-analysis. *Computers in Human Behavior Reports*, 8, 100227. doi.org/10.1016/j.chbr.2022.100227
- Suh, A., & Lee, J. (2017). Understanding teleworkers' technostress and its influence on job satisfaction. *Internet Research*, 27, 140–159. <https://doi.org/10.1108/IntR-06-2015-0181>
- Thompson, J. D. (2003). *Organizations in Action: Social Science Bases of Administrative Theory*. Routledge. doi.org/https://doi.org/10.4324/9781315125930
- Treem, J. W., & Leonardi, P. M. (2013). Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Annals of the*

International Communication Association, 36(1), 143–189.

doi.org/10.1080/23808985.2013.11679130

Van den Broeck, A., Ferris, D. L., Chang, C.-H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 42(5), 1195–1229. doi.org/10.1177/0149206316632058

Vitak, J., & Zimmer, M. (2023). power, stress, and uncertainty: Experiences with and attitudes toward workplace Surveillance During a Pandemic. *Surveillance & Society*, 21, 29–44. doi.org/10.24908/ss.v21i1.15571

Walsham, G. (2006). Doing interpretive research. *European journal of information systems*, 15(3), 320–330. doi.org/10.1057/palgrave.ejis.3000589

Appendix A. Interview protocol

The following table contains all eight interview questions asked during the semi-structured interview process.

ID	Interview Question
1	What are the advantages of working in a VT?
2	What are the disadvantages of working in a VT?
3	How does technology play a role in improving Virtual Team performance?
4	How does technology play a role in inhibiting Virtual Team performance?
5	What can virtual team members do to maintain their well-being?
6	What specific skills are required to work in a virtual team?
7	How can intrusive monitoring from employers alter the way in which you work?
8	What is necessary to have a successful virtual team experience?

Table A1. Semi-structured interview protocol

Appendix B. Illustrative thematic-analysis table

Table B1 provides illustrative examples of how selected participant extracts were interpreted through reflexive thematic analysis. The table is provided for transparency and does not represent a separate coding methodology. The examples show how semantic codes were developed from close engagement with the data and how these codes informed latent interpretive themes related to socio-technical calibration.

Selected data extract	Semantic code	Latent interpretive theme
"When your interstate knowing... you have support from your manager... literally a click away... the engagement becomes a lot easier now."	Digital channels lower the barrier to seeking help and contacting managers	Banter/social presence as low-friction coordination infrastructure
"I have four screens in front of me... I'm constantly being pinged..."	Notification load fragments concentration and makes sustained attention difficult	Focus Time as temporal structuring requiring legitimate protection
"If they're just seeing I'm going on YouTube for half an hour..., are they going to think I'm not working..."	Visibility data can make legitimate learning activity feel risky	Monitoring as visibility/control that may inhibit learning and autonomy
"Statuses on your Teams to say you're available or that you're busy... I like to use the statuses as a boundary thing..."	Status indicators can support boundary signalling when interpreted appropriately	Calibration of visibility and focus through shared interpretation rules

Table B1. Illustrative links between data extracts, semantic codes, and latent themes

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