

# Individual Situations Matter: What Shapes Hybrid Work Preferences in Agile Software Engineering?

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**Abstract.** Hybrid work has become the norm post-pandemic, yet many agile companies struggle to implement effective hybrid work strategies and policies. Effectively organizing hybrid work in agile software engineering requires understanding how individual and contextual factors shape preferences. This study examines these preferences through a survey of 65 agile practitioners. According to our respondents, software engineering practitioners wish for a flexible policy regarding office attendance, but not full-time remote work. While they prefer fully flexible policies, many respondents reported a desire for fixed or ad hoc coordinated team office presence. Members of small or medium size teams slightly favored individual choice for office presence, while larger teams leaned more toward coordinated team presence, either ad hoc or fixed. Social interactions, however, still anchored people to the office; nearly all respondents rated in-person gatherings as highly beneficial for collaboration and relationship-building. Meeting behavior revealed another layer of hybrid work complexity. Cameras were used primarily for visibility and social presence, not because of organizational policy. Multitasking was mostly work-related, and managerial roles did slightly more of it, especially in communication tasks like reading and writing emails or chatting with colleagues.

**Keywords:** Hybrid work · agile software engineering · survey.

## 1 Introduction

Hybrid work, which refers to a work arrangement in which “*some team members work mostly or completely from home, others mostly or completely from the traditional office, and others in some combination of the two*” [8], has gained popularity post-pandemic. Indeed, several studies suggest that hybrid work is likely

to remain a long-term norm in software development [27, 25, 18]. However, hybrid work in agile software engineering environments is challenging. This challenge is reflected in studies reporting reduced team cohesion [15], impaired collaboration [25], and a diminished sense of belonging [12] within software engineering teams working in a hybrid setup.

Prior research has shown that organizational adaptation to hybrid work and work-setting issues remain central to research agendas in agile software engineering [5]. Many companies still struggle to implement effective hybrid work strategies and policies [5]. In agile software engineering, organizing hybrid work effectively requires a clear understanding of how individual and contextual factors shape work-related preferences. Therefore, this study investigates the research question: *How do individual and contextual factors influence work-related preferences for hybrid work in agile software engineering environments?*

To address this question, we adopted an exploratory research design, using an online survey, and analyzed the 65 responses using descriptive statistics.

## 2 Related Work

Within the context of hybrid work in agile software development, several studies have explored the reasons behind employees' preferences for workspace (e.g., [26, 13, 23]). Behavioral and social reasons, such as interaction with colleagues [26, 13, 23] and the presence of team members [26], have been found to encourage office work, while established habits of remote work promote work from home [26]. In addition, practical considerations, including long commutes [26, 13], easier management of personal routines [26, 23], and better time management [13], favor work from home, while the need to separate work and personal life or fatigue from working at home motivates office attendance [23].

Work environment and equipment-related reasons also shape preferences; employees often favor working from home when they can focus better or have superior setups [26, 13, 23], whereas inadequate home-office conditions or distractions drive them to the office [13, 23]. Task-related aspects further influence these choices; collaborative tasks encourage office presence [26, 23], while focused individual work and schedules filled with virtual meetings support work from home [26, 13, 23]. Notably, similar underlying reasons can lead to opposite preferences depending on individual factors [13]. Some achieve better work-life balance and productivity at home, while others find the office more conducive to focus and boundary maintenance.

Individual factors also influence work location preferences. For instance, commute time was reported as the strongest predictor of working from home [24, 15, 6]; those living farther from the office tend to work from home more often. Similarly, age and tenure influence office presence, with older employees showing a stronger preference for office work compared to younger ones [6, 15, 24]. While women exhibit a slightly higher degree of remote working, the reported difference is not statistically significant [6], showing that the role of gender is

minimal. Moreover, same-gender dyads were observed to coordinate office days more often than mixed-gender pairs [15].

Beyond individual factors, contextual factors also matter. Several studies have shown that organizational role influences workspace choice and managers are generally less likely to work from home than engineers without managerial responsibilities [6, 24, 31]. The type of meeting also affects location choice; some agile teams hold status meetings virtually to preserve office time for spontaneous collaboration [28]. Planning and retrospective meetings are often preferred in the office [31]. However, [16] highlights the need for a deeper understanding of team-wide agile practices such as retrospectives and reviews as their results indicate that many developers prefer conducting these practices remotely.

This study extends research on hybrid work in agile software engineering by examining factors beyond location preferences, including camera use and multitasking behaviors. We also consider individual characteristics, such as the presence of children in the household, and contextual aspects like team size and distribution, to better understand what shapes employees' work location preferences.

### 3 Research Design

This study adopts an exploratory research design, using a cross-sectional online survey [29] to investigate the factors influencing individuals' work-related preferences for hybrid work in agile software engineering. The survey method was chosen as it allows systematic and standardized data collection [11], is suitable for describing trends and opinions within a population [9], and is appropriate for identifying influencing factors in software engineering contexts [29].

The questionnaire consisted of both closed and open-ended questions, which were informed by prior research on hybrid and remote work in software engineering [10, 20, 17, 22, 21]. It covered various aspects of hybrid work, such as meeting practices, camera use, multitasking, productivity, well-being, hybrid work arrangements, and expectations for future arrangements. The survey instrument<sup>4</sup> was created in LimeSurvey and was pilot-tested and reviewed by two senior researchers with survey design expertise to ensure alignment with best practices.

To collect responses, a non-probabilistic convenience sampling approach was employed, whereby responses were obtained from individuals who were willing and available to participate [19]. The survey was first distributed at the 25th International Conference on Agile Software Development (XP 2024) on June 4 via a QR code and through the conference Slack channel. It was then further advertised on LinkedIn through two posts published in July, from which the majority of responses were received. Data collection remained open until September 20, 2024. In total, 65 complete responses were obtained and retained for analysis. All respondents provided informed consent and confirmed in the questionnaire that they were software practitioners working with agile methods in hybrid work

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<sup>4</sup> Survey instrument: <https://figshare.com/s/0fc15683b3f0e25cbeba>

Table 1: Demographics of the 65 survey respondents

Gender	43 men (66%)   18 women (28%)   1 non-binary (1%)   3 non-disclosed (5%)
Age in years	8 under 30 (13%)   44 between 31–45 (68%)   13 over 45 (19%)
Household size	35 with at least 3 people (54%)   30 with up to 2 people (46%)
Children in home	44 without children (68%)   21 with children (32%)
Country	31 from Finland (48%)   12 from Denmark (19%)   6 from India (9%) 4 from Italy (6%)   12 from others (18%)
Role <sup>5</sup>	20 Managers (31%)   16 Team members (25%)   15 Agile leaders (23%) 14 Specialists (21%)
Job experience	38 Seniors with 10 plus years (58%) 27 Juniors and mid-levels with up to 10 years (42%)
Commute time	30 with up to 30 minutes (47%)   31 with more than 30 minutes (47%) 4 with no commute (6%)
Team size	37 in small or medium with up to 9 members (57%) 25 in large with at least 10 members (38%)   3 not in team (5%)
Team distribution	32 in same country, different city (49%)   23 in different country (36%) 10 in same city (15%)

settings. Participation was anonymous, so no personally identifiable information was required. The respondents’ demographics are summarized in Table 1.

For this study, only the survey responses from seven closed-ended questions related to hybrid work arrangements, future expectations for hybrid work, meeting practices, camera use and multitasking, along with demographic information, were included in the analysis. Descriptive statistics, including frequencies and percentages, were used to summarize responses, following the reporting guidelines of Kitchenham et al. [14]. This approach is well-suited for identifying and presenting patterns in the data without the distributional assumptions required for larger samples. Inferential analyses were not conducted, as the study sought to provide an exploratory overview of trends rather than statistical generalization, and the sample size was insufficient to support reliable inferential testing.

## 4 Results

### 4.1 Hybrid Work Policies and Team Arrangements

The respondents’ present and preferred hybrid work policies and team arrangements for office presence are depicted in Figure 1. While 27 respondents worked under a *fully flexible* policy, where employees choose how often they work from the office, an even larger number (n=36) reported this as their preferred policy. In contrast, fewer respondents preferred *remote-first* policies, highlighting a shift

<sup>5</sup> Roles were categorized hierarchically: managerial over leadership, leadership over specialist, and development-only as team members.

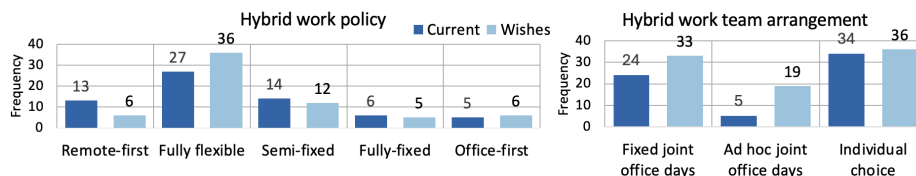


Fig. 1: Hybrid work policies and team arrangements.

toward *fully flexible* options rather than predominantly remote work. Notably, of the 13 respondents currently working under remote-first policies, 7 preferred a fully flexible policy.

The present and preferred policy requiring work from the office two to three days per week (*semi-fixed*) showed only minimal differences between them. Similarly, preferences for policies which required that employees work from the office on specific days (*fully-fixed*), and that dictate the office as the main location with occasional remote work (*office-first*), remained low and showed little difference relative to present policies. Interestingly, while respondents reported a desire for more flexibility, they did not prefer remote-first policies, suggesting that most practitioners value autonomy in choosing their work location, but still see benefit in maintaining some presence in the office.

At the team level, fewer respondents worked with fixed joint office days with their team members (n=24) compared with the number of responses indicating a preference for this arrangement in the future (n=33). It is important to note that the present and preferred team arrangements are not directly comparable, as the present arrangements were measured with a single-choice question, whereas preferred arrangements allowed multiple selections. Individual choice, where team members independently decide when to work from the office, was the most common practice. However, while it remained the most popular preference, it was slightly less dominant when looking at the respondents' preferences. In contrast, ad hoc joint office days, where team members coordinate attendance informally as needed, were rare in respondents' present arrangements (n=5), yet appeared more frequently among their preferences (n=19). A notable pattern in these results is that although teams presently rely heavily on individual autonomy for office presence, many responses indicate a desire for more coordinated team presence in the office, whether through fixed or ad hoc joint office days.

**Variation in policy preferences:** The differences in hybrid work policy preferences across varying situations are shown in Figure 2. While fully flexible policies were the dominant choice across all groups, the *differences between women and men* were relatively small. Of the 43 men, 24 selected this option, compared to 9 of the 18 women, who did however report slightly higher preferences for remote-first arrangements. These differences suggest only minor variations in the hybrid work preferences of men and women. The 21 respondents *with children in the home* showed a clearer pattern, with 14 reporting a stronger preference for fully flexible policies compared to semi-fixed or fully-fixed policies,

suggesting that family responsibilities may shape preferences toward greater autonomy. Notably, none of the respondents with children selected an office-first policy.

*Commute time* did not notably affect the preferences. Those with longer and shorter commutes displayed very similar patterns across all hybrid work policies. Interestingly, when we examined the data more closely, we found that 21 out of the 30 respondents with commutes under 30 minutes worked in teams whose members were located in different cities or countries. This could explain why shorter commute times did not translate into a stronger preference for office work. For these respondents, the value of being in the office was lower, as their teammates were not physically present, suggesting that the perceived benefit of commuting is closely tied to opportunities for physical co-presence and collaboration rather than the length of the commute itself. Among the 38 *senior* practitioners, 25 preferred remote-first and fully flexible policies compared to *junior or mid-level* practitioners, where 17 of 27 shared similar views. Overall, these results highlight how demographic and contextual factors can shape what individuals view as the best hybrid work policy; however, the small sample size underscores the need for further investigation.

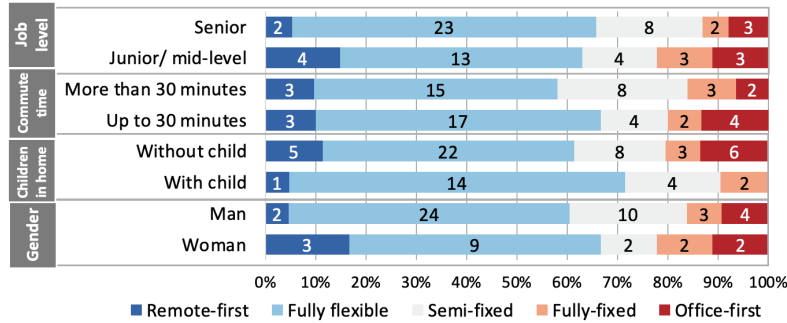


Fig. 2: Hybrid work policy preferences segmented by demographic characteristics.

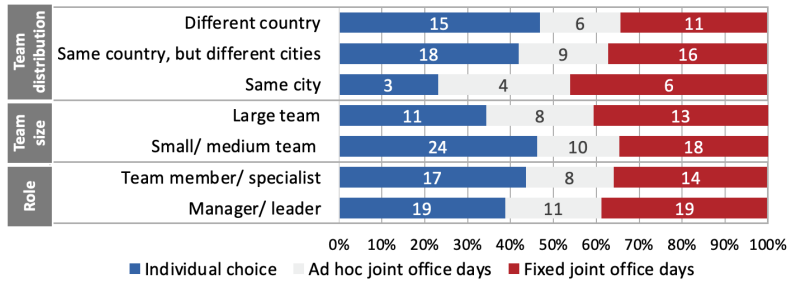


Fig. 3: Team work arrangement preferences segmented by demographic characteristics.

**Variation in team arrangement preferences:** Figure 3 shows how preferred hybrid work team arrangements vary across different roles, team sizes, and team distributions. Responses from *managers and leaders* showed a slightly more preference for coordinated office days (n=30), specifically fixed and ad hoc joint office days, compared with those from *team members and specialists* (n=22), likely because leadership roles involve more collaboration, supervision, and in-person coordination. In contrast, the responses from team members and specialists indicated a greater preference for individual choice, which may reflect the more task-oriented nature of their work, which can often be performed independently.

Responses from *members of small or medium-sized teams* with up to nine members showed a preference for individual choice (n=24) compared to responses from *members of larger teams* with more than ten members (n=11), perhaps because smaller teams can maintain cohesion and communication with less need for synchronized office presence. Conversely, responses from larger teams leaned slightly more toward fixed office days, possibly to facilitate coordination and shared planning. Responses from *teams distributed across countries* favored individually chosen arrangements, whereas responses from *team members located in the same country*, especially those in the same city, were more likely to prefer fixed or ad hoc joint office days, aligning with the greater feasibility and perceived value of in-person collaboration.

#### 4.2 Office Attendance For Meetings

Respondents' perceptions of which agile meetings benefit from having all attendees together at the office are shown in Figure 4, excluding responses from individuals who did not attend the respective meeting type. Social get-togethers were seen as the most beneficial to have all attendees together, with 59 of 65 respondents rating them as extremely or very beneficial. Brainstorming followed closely (n=42), highlighting the value of in-person interaction for creative and

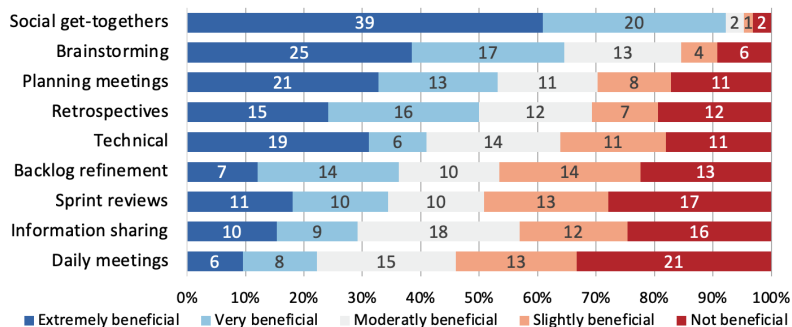


Fig. 4: Degree to which meetings benefit from having all attendees together at the office.

discussion-based meetings. Planning meetings and retrospectives occupied a middle ground, with roughly half of respondents rating them as extremely or very beneficial.

In contrast, routine meetings such as daily stand-ups, information-sharing sessions, and sprint reviews were most often rated as not beneficial to have all attendees together, with 21, 16, and 17 responses, respectively. This likely reflects their structured and information-sharing nature, which can be effectively managed through virtual communication without requiring physical co-presence. Overall, these findings show that our respondents value in-person interaction most for collaborative, brainstorming, and relationship-building activities, and suggest that routine or structured meetings can be conducted remotely.

### 4.3 Using Cameras in Virtual Meetings

Respondents' self-reported reasons for having their cameras on or off during meetings in hybrid environments are shown in Figure 5, based on response frequencies. Most responses indicated turning cameras on for socially driven reasons, primarily to maintain or improve relationships, when acting as key speakers, or to demonstrate engagement. Many responses also noted keeping cameras on to set an example for colleagues or to align with other attendees. These patterns suggest that visibility and social presence are key motivations for camera use in meetings. Conversely, responses showed that cameras were often turned off due to situational or personal factors, such as moving around, eating, commuting, or experiencing poor bandwidth. Interestingly, many responses marked factors such as company policy, team agreements, and self-consciousness about appearance as not relevant, suggesting that these considerations typically play a minimal role in decisions about camera use.

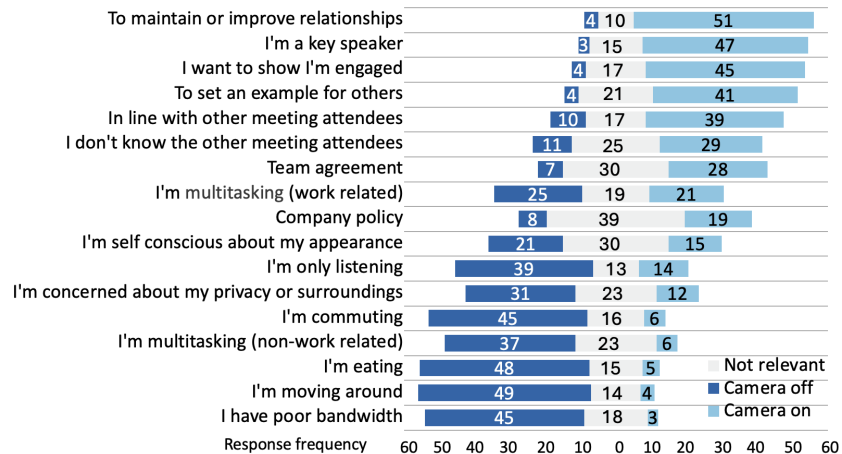


Fig. 5: Reasons for having the camera on or off in meetings.

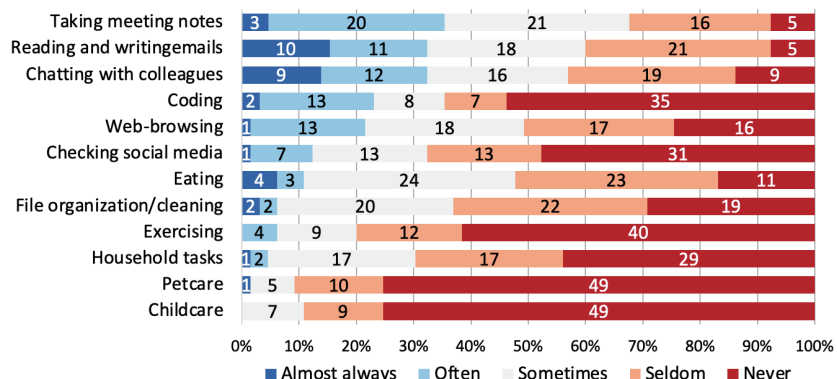


Fig. 6: Multitasking activities performed during virtual meetings.

#### 4.4 Multitasking in Virtual Meetings

Figure 6 shows how frequently respondents reported engaging in multitasking activities during virtual meetings. The most common concurrent activities were taking meeting notes, reading or writing emails, and chatting with colleagues, which are generally work-related and may reflect attempts to stay productive or manage multiple communication channels during meetings. Non-work-related multitasking, such as web browsing, eating, or performing household tasks, was also present but occurred less frequently. Activities requiring more physical engagement, such as pet care, exercise, or childcare, were rarely performed.

Figure 7 shows how frequently respondents from different genders reported engaging in multitasking activities during virtual meetings. Overall, women reported multitasking during meetings slightly more frequently than men across most activities, for instance, taking meeting notes, checking social media, household tasks, childcare, pet care, and eating. However, men were more likely to mul-

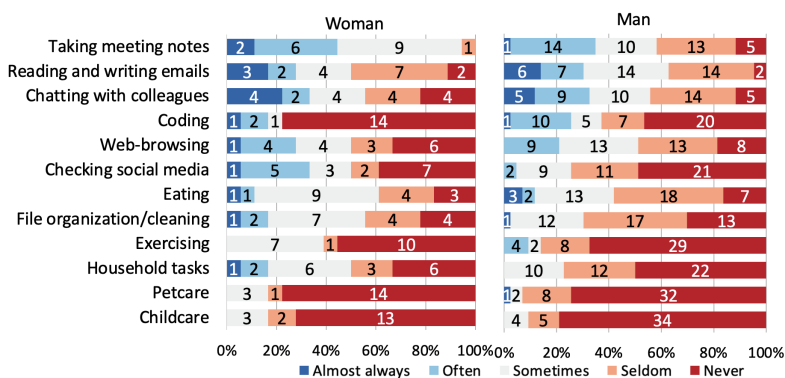


Fig. 7: Multitasking activities performed during virtual meetings across genders.

task by coding during virtual meetings. Other activities, such as web browsing and chatting, were reported at similar levels across genders. Further examination of the data revealed that many of the women in our sample held managerial roles, i.e., 13 of the 18 respondents, which likely explains why they reported coding less frequently than men.

Figure 8 shows how frequently respondents reported engaging in multitasking activities during virtual meetings for different roles. Managers and leaders differ from team members and specialists in how often they multitask during remote meetings. Managers and leaders reported a bit higher frequencies of multitasking across nearly all activities, particularly reading and writing emails, chatting with colleagues, and taking meeting notes, reflecting their simultaneous coordination and communication responsibilities.

In contrast, team members and specialists showed more focus on task-related multitasking, especially coding and note-taking, indicating engagement in hands-on work rather than managerial coordination. Non-work-related multitasking, such as checking social media, eating, or household tasks, appeared somewhat common in both groups but remained more frequent among managers, possibly due to longer meeting loads and cognitive fatigue. Overall, these patterns suggest that role responsibilities shape multitasking behavior; managers and leaders juggle communication and oversight tasks, while team members and specialists multitask for technical activities.

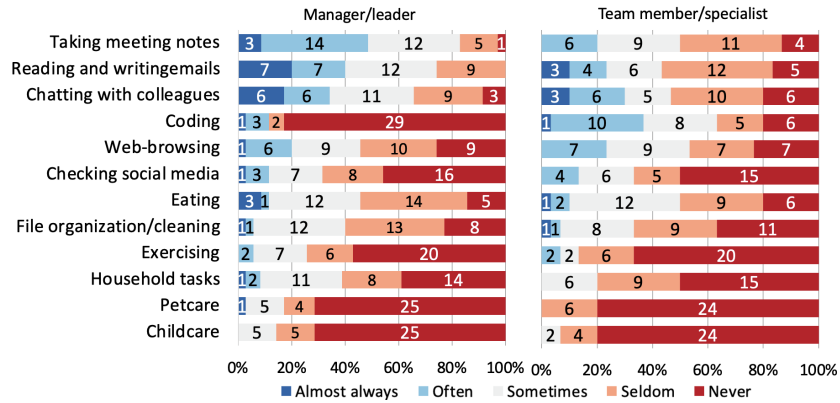


Fig. 8: Multitasking activities performed during virtual meetings across roles.

## 5 Discussion and Conclusions

In this section, we discuss our results in relation to prior work, note key threats to validity, and outline directions for future research.

**Hybrid work policy preferences:** Our results show that *while respondents valued flexibility, they did not generally prefer remote-first policies, indicating a desire for autonomy for office attendance alongside the benefits of some office*

*presence.* Prior research supports this pattern, showing that although many employees preferred working fully from home, most still chose to come to the office at least once per week [30, 16]. In addition, software engineers reportedly preferred being in the office more than half the week despite flexible policies [6]. Together, these findings suggest that in-person work remains important for many software practitioners.

Similar to previous studies (e.g., [16, 24]), we found that employees have various preferences for working from home. We found that job experience and parental situation influence hybrid work policy preferences. Unlike prior studies which found that employees with long commutes tend to prefer more flexible policies [26, 24, 30, 6], *our results show no meaningful differences between those with shorter and longer commutes.* A likely explanation is that many respondents with short commutes work in geographically distributed teams, reducing the value of being in the office regardless of travel time.

*Senior professionals favored fully flexible policies slightly more than juniors and mid-levels.* This aligns with prior research, which found that younger engineers prefer office work more, likely for socialization and learning, while senior professionals, being more independent and often balancing family responsibilities, prefer flexibility [6, 24]. However, an opposite pattern was reported by Moe et al. [15], who noted that older employees preferred coming to the office more often, suggesting that age and seniority level may influence preferences differently in different organizational contexts.

Women in our study showed a slightly stronger preference for remote-first policies, though this difference was small. This aligns with previous research which reports negligible gender effects on remote-work preferences [6, 15, 24], except in cases related to childcare responsibilities [24]. In our sample, however, the women preferring remote-first did not share such circumstances, leaving no clear explanation. Overall, *our findings reinforce that gender has a limited influence on hybrid work policy preferences. Respondents with children favored fully flexible policies, with none expressing a preference for office-first policies.*

**Team preferences for co-presence at the office:** *We found that although teams often rely on individual autonomy for office presence, many respondents preferred some shared, either ad hoc or fixed, office days.* This aligns with the recommendation that teams collectively discuss and negotiate their arrangements rather than rely solely on individual decisions [16]. However, coordination does not guarantee higher office presence, nor does presence ensure meaningful interaction [15], underscoring that scheduling alone is insufficient for effective personal contact.

We found that *managers and leaders were slightly more supportive of coordinated office days than team members or specialists,* likely due to the collaborative and supervisory demands of their roles. This aligns with previous studies, where it was reported that managers prefer office work more than team members for Scrum events [31], and that managers are less likely to work remotely because office presence increases their perceived availability [6]. Together, these results

suggest a consistent pattern in which managerial roles place greater value on physical co-presence.

Team characteristics further shaped preferences: *members of small or medium-sized teams leaned slightly more toward individual autonomy for office presence, whereas larger teams favored fixed arrangements*, which may stem from the higher coordination demands and communication overhead in larger groups. However, the difference was small. We did not find any previous studies on this topic. *Internationally distributed teams preferred individually chosen arrangements, while team members located in the same city were more open to shared office days*, possibly because coordinated in-person collaboration is more feasible for them.

**Agile meeting preferences:** Our results show that office attendance is valued most for social get-togethers and brainstorming meetings, where relationship building and creative exchange benefit from being in person. Previous studies echo this pattern, noting that social interaction is a major driver of office attendance [26, 13, 30, 23], and recommending that social events [16] and discussion-heavy meetings [7] occur in the office. Together, this reinforces that *the primary value of being at the office at the same time lies in supporting social connection and collaborative problem-solving*.

We found *routine meetings, such as daily stand-ups, and information-sharing were viewed as less dependent on in-person presence*. This insight aligns with research showing information-sharing meetings work well when conducted virtually [7], and status-reporting meetings are best kept virtual so that office time is freed for unscheduled collaboration [28]. However, *our results show planning and retrospective meetings occupied a middle ground, with respondents acknowledging some advantages of being present at the office but not viewing in-person participation as essential*. In contrast, other studies suggest that these meetings clearly benefit from being held in person [1, 31]. One possible explanation is that, after several years of hybrid work, teams have become accustomed to conducting these structured coordination and reflection activities remotely, developing practices and shared understanding that make them work effectively also in a virtual format.

**Behaviors in virtual meetings:** Prior research has less frequently investigated the behaviors of individual agile software engineering professionals in virtual meetings, such as camera use and multitasking. While some studies have recommended using cameras for their benefits in hybrid work environments [2, 1, 3], the underlying reasons for respondents' camera choices have remained less explored. Our findings contribute by clarifying the motivations behind these choices. We found that respondents mainly turned cameras on for social reasons, including maintaining relationships, showing engagement, or speaking, confirming that visibility supports social presence. Conversely, cameras were turned off mostly for practical reasons such as moving, eating, commuting, and bandwidth issues. *Overall, camera use appears to be driven more by situational constraints and social dynamics than by formal expectations*.

According to Balogova and Brumby [4], common multitasking activities during online meetings include checking emails, messaging colleagues, completing

work tasks, note-taking, and web browsing. Similarly, we found *respondents frequently multitasked with work-related activities such as note-taking, emailing, and chatting, while non-work multitasking was far less common*. Gender, role, and personal circumstances shaped these behaviors: women reported a bit more multitasking overall, especially household and care-related tasks. Similarly, managers and leaders multitasked slightly more, particularly performing communication-related activities, while team members and specialists multitasked less, and when multitasking, they did more technical tasks, such as coding. *These patterns highlight that multitasking in virtual meetings is not random or incidental, but a structured behavior shaped by individuals' roles, gendered responsibilities, and personal circumstances.*

### 5.1 Threats to Validity

Several measures were taken to mitigate validity threats [29], though some limitations remain. Misinterpretation of concepts and self-report limitations threaten *construct validity*. To mitigate these threats, we included only respondents with confirmed agile and hybrid work experience, grounded survey items in prior literature, provided definitions in the questionnaire, pilot-tested the instrument, and ensured anonymity to limit social-desirability bias. Regarding *internal validity*, our study is exploratory and used a cross-sectional survey design, allowing descriptive but not causal interpretation. Therefore, temporal order cannot be established, and unmeasured factors like team maturity and leadership style may still influence responses. Concerning *external validity*, generalizability is limited by convenience sampling, and a relatively small sample size. In addition, distributing the survey via LinkedIn in Nordic networks resulted in responses mainly from Nordic countries and predominantly from men, reflecting the gender composition of software professionals. To support transferability, we report detailed contextual characteristics and frame our findings as indicative rather than representative. Finally, limited sample size and uneven subgroups constrain *conclusion validity*. We rely, therefore, on descriptive statistics only, avoid inferential claims, and report counts alongside percentages to ensure transparency.

### 5.2 Future work

As an exploratory study, these findings motivate further research with larger and more diverse samples. Future work should examine how much remote work is suitable across different companies and contexts, and investigate the reasons behind employees' preferred work policies and arrangements. Broader, globally distributed samples would help assess whether these patterns generalize and guide organizations in improving hybrid work strategies and policies.

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