

(AI)ming For Harmony: Designing Future AI Teammates for Human Conflict Resolution

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Figure 1: Through cross-cultural speculative design workshops (Germany/Japan), we surface boundary conditions for AI teammates in conflict: when an AI may step in, how visible it should be, and what mandate it may hold without overriding human agency. The storyboard illustrates one episode: (a) a dispute escalates, (b) an embedded AI flags rising tension and proposes conflict resolving prompts, and (c) it offers a concise evidence summary (e.g., simple charts) to ground trade-offs as the team records a decision.

Abstract

Conflicts are inevitable in collaborative work and can harm team outcomes when poorly managed. While AI is increasingly envisioned as a third party in teamwork, potentially acting as a customizable and knowledgeable mediator, its design and role in such situations remain unclear, especially regarding cross-cultural expectations. To explore these expectations, we conducted five speculative design workshops in Germany and Japan and synthesized scenarios, sketches, storyboards, and reflections. We use these materials as speculative probes into acceptable AI involvement in team conflict, identifying recurring intervention patterns around when AI should step in, which roles it may take, and what actions are appropriate. We also reveal cross-site differences: German participants more often envisioned low-salient AI guiding resolution, whereas Japanese participants imagined brief, bounded interventions by embodied AI. From these insights, we derive design lenses for AI-supported conflict mediation that preserve human agency and reflect on implications for cross-cultural Research through Design.

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CCS Concepts

• **Human-centered computing** → **User studies; Empirical studies in HCI; Collaborative interaction**; Empirical studies in collaborative and social computing; *Computer supported cooperative work*.

Keywords

Conflict Resolution, Human-AI Teaming, Research Through Design, Cross Culture, Design Recommendations

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1 Introduction

Conflict is a routine part of collaborative work. Even in well functioning teams, disagreements arise around priorities, responsibilities, values, and interpersonal dynamics [20, 28, 41]. When mismanaged, these conflict episodes may undermine trust, psychological safety, and longer-term collaboration [1, 2, 14, 28]. To resolve conflicts, interventions may be initiated by the involved parties or by a third party such as a mediator, colleague, or supervisor [23]. Yet what counts as an appropriate intervention varies across situations and social contexts. Norms around directness, autonomy, harmony, and face shape when intervention is welcomed, who is seen as

entitled to step in, and how disagreement can be addressed without escalation [22, 34, 38]. Intervention in conflict is therefore not only a practical challenge but also a normative one.

As AI becomes increasingly embedded in collaborative work, it shapes how teams communicate and coordinate, also in moments of disagreement through prompts, summaries, and other team-facing interventions [21, 39, 47]. AI therefore acts as AI teammate, here defined as an AI system that participates in collaboration through communicative or coordinative contributions, rather than functioning only as stand-alone decision aid [16, 21, 39, 47]. In such situations, the same AI action may be interpreted as helpful support or as illegitimate interference depending on when it occurs, how it is framed, and what local norms shape expectations of autonomy, harmony, and third-party involvement [11, 38, 40]. AI involvement can therefore shape not only conflict dynamics but also perceptions of procedural fairness [35, 46, 49]. This makes AI conflict intervention a design question of timing, authority, justification, and contestability. It is therefore important to examine when AI involvement is considered legitimate, which forms are acceptable versus harmful, and what boundaries and safeguards designers should build as such systems enter everyday teamwork.

Studying such expectations in high-stakes conflict is difficult. These situations are ethically and practically challenging to reproduce, existing AI mediation support remains limited, and in situ intervention can introduce new risks in already sensitive interpersonal settings [11, 18]. We therefore use speculative design to elicit situated, normative expectations about plausible near-future AI teammates and to examine what people think such systems should do, should not do, or might do when conflict emerges [7, 8, 33]. We selected Germany and Japan to run matched workshops under the same protocol, enabling a cross-site comparison. These sites are often discussed in cross-cultural communication research as differing in tendencies toward explicit versus context-dependent disagreement management, which can shape what feels like legitimate intervention during conflict [22, 38]. We use this comparison as a design probe to surface differing expectations for when and how an AI teammate should intervene, without claiming that these sites represent broader regions.

Across five workshops in Germany and Japan, participants created near-future teams, imagined conflict scenarios, and developed ten narrative AI concepts for workplace conflict. They also articulated hopes and fears about these systems. We treat these participant-generated materials as speculative probes for reasoning about acceptable AI intervention in conflict.

Against this background, this paper makes three contributions. First, we identify intervention patterns for AI teammates in workplace conflict, showing when participants expected AI to step in, what roles it could take, and what forms of action were considered acceptable. Second, we present situated cross-site differences from matched workshops in Germany and Japan, showing how groups differed in preferred visibility, embodiment, mandate, and intervention boundaries. Third, we derive design lenses from these patterns and contrasts to support the design of AI teammates for conflict-sensitive collaboration.

2 Related Work

2.1 Conflict Episodes and the Perceived Appropriateness of Intervention

Intragroup conflict involves disagreement among members regarding goals, activities, or how work should be carried out [41]. Jehn's model distinguishes relationship conflict, which stems from interpersonal incompatibilities, task conflict, which concerns disagreement about content or goals, and process conflict, which concerns disagreement about how work is coordinated and executed [28]. While conflict can sometimes surface useful differences, it often undermines satisfaction and performance—especially when it becomes relational or disrupts coordination over time [2].

Beyond outcomes, conflict episodes also differ based on how they are resolved. Conflict resolution is not only about whether disagreement is resolved, but also about what form resolution takes and whether intervention feels legitimate, including who is entitled to intervene, when intervention is appropriate, and how reasons are expressed without escalating face threats or undermining agency [38]. Synthesizing classic models from traditional conflict research, a set of six behavioral conflict resolution styles for the involved parties can be described, covering integrating, compromising, obliging, avoiding, dominating, and emotion expression [6, 42, 44, 51, 51, 52]. When third parties become involved to resolve the conflict, mediation and related process support can shape how disagreements unfold. Besides mediation approaches that aim to facilitate the resolution while disputants decide the outcomes, inquisitorial strategies (i.e., mediator controls both process and outcome, leaving disputants with minimal influence), motivational (i.e., mediator steers resolution via pressure or incentives such as rewards or threats), educational (i.e., mediator resolves conflict by appealing to common values and norms), and rapport-building strategies (i.e., mediator fosters or restores relationships to enable smoother negotiation and more harmonious interaction) exist that can differ based on what they target: the process of conflict resolution or structural aspects that initiated the overall conflict [52].

However, these frameworks were developed for human–human conflict and offer limited guidance for how an AI teammate should participate during an unfolding conflict episode. In particular, they do not specify interactional questions that become central once an AI intervenes [16], such as when an AI may speak, how it should frame or justify its contribution, and what authority boundaries preserve human agency, including who can trigger or override the AI. While we use the well-known categories as vocabulary for describing the kinds of intervention an AI teammate might be expected to take according to human-only conflict resolution (e.g., reframing positions as a educator, or offering summaries as a mediator), this motivates our focus on expectations about appropriate and inappropriate AI participation during conflict, including which third-party styles people welcome and which they reject.

2.2 AI in Collaboration: When Ordinary Features Become Conflict-Relevant

Human–AI teaming research increasingly frames AI as a teammate rather than a passive tool, emphasizing trustworthiness, contextual awareness, and interactional competence [21, 39]. In collaborative

systems, everyday AI-mediated features such as summaries, recommendations, and prompts shape what is foregrounded, how reasons are framed, and whose contributions gain visibility [4, 30]. In conflict, these contributions can acquire social meaning and may be interpreted through concerns about face and legitimacy, including as taking sides or constraining agency [38].

Work in dispute and mediation contexts provides more direct evidence of this sensitivity. For example, MediationBot structures multi-party conflicts through procedural mechanisms such as turn-taking and consent [45]. Complementing this, clients' acceptance of AI in mediation is strongly task- and timing-dependent. People tend to accept AI support for preparatory or documentation-oriented activities, while expressing stronger resistance to in-the-moment involvement during emotionally sensitive phases [11]. Design fiction studies on digital personal assistants similarly show how assistant interventions become value-laden and authority-charged in everyday life, motivating speculative methods as a means to elicit expectations about appropriate AI involvement in sensitive interactions [48]. This motivates synthesizing participants' expectations into design lenses for AI teammates in conflict, clarifying unclear design questions of timing, trigger, neutrality, and accountability.

2.3 Culture and the Social Meaning of AI Intervention in Conflict

Conflict resolution is deeply normative: what counts as respectful disagreement, appropriate intervention, and effective repair varies across contexts. In detail, cultural models shape tendencies around autonomy, harmony, and face, influencing how disagreement is expressed and how third-party involvement is evaluated [34, 38]. Accordingly, cross-cultural HCI reports differences in what people want from AI systems. For instance, whether they prioritize user control and autonomy or prefer systems that help build connection and shared influence [5, 19]. In conflicts, these preferences can shape expectations for intervention. While some may prefer an intervenor that stays neutral and minimally influential, others may welcome more active support for restoring connection and reaching alignment [19]. Beyond these interaction preferences, expectations about AI are also shaped by culturally situated aspects, including popular narratives and local institutions that frame AI as either a threatening intruder or an acceptable helper [48, 54].

AI systems are hence not culturally neutral. Their default ways of speaking and intervening reflect training data and deployment settings, which may not match local norms for legitimacy and face [40]. At the same time, cultural fit is not something that can be "set" once but is negotiated through interaction, framing, and local practice [10]. These issues become especially salient during conflict as interventions there are inherently normative. Particularly, an AI in a collaborative tool does not simply inform but may enact a stance by deciding what counts as relevant, which viewpoints receive emphasis, and how strongly the interaction is guided toward convergence [25, 45]. Although comparable design fiction studies have examined intimate, value-laden relationships with digital assistants in general [48], we still lack comparative accounts of how culture shapes what people consider appropriate AI intervention during workplace conflict episodes.

Overall, the reviewed literature reveals interrelated gaps. First, while conflict research offers rich taxonomies of resolution strategies, it provides little guidance on how these translate to AI teammates and their design. Second, while human–AI collaboration studies show that ordinary AI features can become socially and normatively charged in situations of conflict, current work leaves unresolved when, by whom, and under what legitimacy AI should intervene during conflicts. And third, while cultural research demonstrates that expectations for intervention, agency, and face vary systematically across cultural context, we lack comparative accounts of how cultural differences shape judgments of appropriate versus inappropriate AI interventions as a third-party role in conflict episodes.

3 Methods

We used co-created design workshops as a speculative and interpretive form of research-through-design (RtD) to examine normative expectations about AI teammates in workplace conflict [8]. Rather than testing behavioral effectiveness in live conflict, we aimed to surface what kinds of AI intervention participants considered acceptable, inappropriate, or conditional in plausible near future teams. Participant-generated materials function as speculative probes that help make assumptions, tensions, and desired boundaries.

Across five workshops in Germany and Japan, participants developed ten participant-generated AI concepts situated in team conflict situations in 2035. Running comparable workshops across the two sites including researcher-prepared scaffolding material allowed us to compare expectations around visibility, mandate, consent, and intervention boundaries while still allowing participants to express locally situated discussion of authority, harmony, and fairness in their generated materials. We selected Germany and Japan as a bounded cross-site comparison. These sites are often contrasted in communication research regarding disagreement, face, and intervention in group settings (see e.g., [26, 37]). We use that contrast as a design probe rather than as a representative cultural comparison. Accordingly, findings should be read as situated insights, not claims about national populations. The study was conducted jointly by Institute A and Institute B with ethics approval from Institute B.

3.1 Speculative Research-Through-Design Approach

Our approach pursues the goals of speculative and interpretive traditions in RtD to explore and critique potential futures, while employing workshop methods to generate tangible, fictive, narrative stories that were inspired by design fiction as a complimentary practice, as proposed by [8]. In this view, generated scenarios, sketches, storyboards, and reflections are not treated simply as outputs to present, but as analytic materials and speculative probes that reveal assumptions, values, tensions, and normative boundaries around emerging technologies [15, 17]. Following RtD accounts, we therefore treat the resulting scenarios and related materials as research materials for reasoning about implications and boundaries rather than as commercial product proposals [8, 15, 17, 50].

Rather than centering the contribution on the finished outputs, this approach uses participant-generated narratives and visual materials to explore hopes and fears while uncovering assumptions, tensions, and expectations in discussion with participants [15, 17]. Methodologically, the contribution lies in the interpretive synthesis of these materials, and this synthesis should be understood as provisional and situated rather than comprehensive [17].

We align with prior work using design fiction or speculative design in HCI to make near-future socio-technical arrangements in collaborative settings discussable through concrete scenarios and interaction sequences [13, 48, 50]. In detail, we designed scaffolding material as researcher input, while participants generated the substantive narratives and visual materials that later served as speculative probes to elicit hopes, fears, and imagined boundaries around AI intervention.

3.2 Participants

We ran five workshops with $N = 28$ participants (self-reported gender, 14 women and 14 men). Workshop sizes were DE $n = 12$ across two sessions (6 and 6) and JP $n = 16$ across three sessions (7, 5, and 4). Recruitment was designed to include both student and industry perspectives. Participation was voluntary with informed consent and sessions were audio-recorded for transcription. Participants received a modest local incentive. Table 1 summarizes key demographics. One participant’s workshop audio was not recorded due to a recording error. Their contribution is excluded from transcript-based cross-checking but retained where written artifacts were available. Participants reported frequent AI use (private $M = 3.74$, $SD = 1.13$, professional $M = 3.56$, $SD = 1.25$, 5-point Likert) and limited prior design fiction experience ($M = 1.78$, $SD = 1.05$ past workshops). The two sites differed demographically, with the German workshops including more students and early-career participants and the Japanese workshops including more mid-career professionals. This difference may have shaped imagined AI roles and conflict preferences, so cross-site contrasts should be read cautiously as situated findings rather than as cultural effects.

3.3 Researcher Scaffolds and Participant Outputs

A key part of the workshop design was the use of facilitation scaffolds that provided a shared starting point while still allowing participants to diverge, reinterpret, and elaborate. Table 2 separates materials prepared by the researchers from outputs generated by participants and shows how each later informed analysis.

This distinction matters because the researchers designed the scaffolds, while the substantive scenarios, names, sketches, storyboards, and their narrative details were produced by participants during group work and discussion. The scaffolds were designed to balance comparability and openness. Shared prompts, worksheet stages, and scenario seeds gave the German and Japanese workshops a common frame and helped groups enter the design space quickly. At the same time, participants were explicitly allowed to diverge from the initial prompts and develop their own narratives, sketches, and storyboards. This balance was important because a more open format would have made cross-site comparison difficult,

Table 1: Summary demographics by site.

Site	n	F/M	Age: Mean (SD)	Primary roles (examples)
Germany (DE)	12	6/6	25.00 (2.61, 1 missing)	Mostly students / working-students with internships (software testing, data analysis, mech. eng./IT)
Japan (JP)	16	8/8	39.63 (10.79)	Mid-career professionals (engineering, admin, sales, product planning, gov./health insurance)
Overall	28	14/14	—	Mixed student-industry sample across sites

Recruitment channels: DE—university mailing lists. JP—Cross Marketing Group Inc. panel.

while a more fixed format would have constrained the range of imagined AI interventions.

We therefore treat the scaffolds as elicitation devices that shaped the discussion space, while treating participant-generated materials and discussion as the primary basis of the interpretive findings.

3.4 Workshop Design and Procedure

Each workshop lasted about three hours and followed the same staged structure across sites, as indicated in Table 2. Materials were translated and localized, and sessions were led by bilingual facilitators. The first session was co-facilitated by all authors to calibrate delivery across sites. We also worked as a mixed author team with lived experience in the German and Japanese contexts and collaborated throughout analysis to support culturally situated interpretation. Prior to conducting the workshops, pre-tests were made with different setups of material and levels of scaffolding to ensure a coherent and comprehensible workshop flow. For instance, the pre-tests revealed the need to describe a specific persona representing a future team member at the beginning of the future framing activity, as participants in earlier iterations found it difficult to imagine what an ordinary future workday might look like without such grounding. All researcher-driven scaffolding elements were introduced through these pre-tests and further refined through discussion within the workshop team and with speculative design experts before the reported workshops were conducted.

To support participants in moving between idea generation and collective interpretation, facilitators explicitly introduced two working modes throughout the workshop as light-weight scaffolds: an imaginative mode for generating and externalizing possibilities, and a conversational mode for sharing, discussing, and consolidating ideas. It helped to understand when the task was to expand the working material through speculative thinking and when the task was to compare, and share emerging ideas together. In this way, the two-mode framing supported both openness and comparability across groups without prescribing the content of the scenarios.

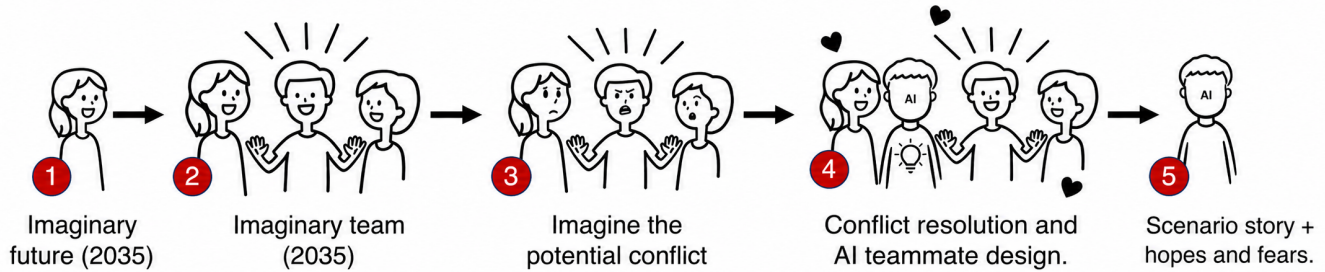


Figure 2: Overview diagram shown to participants to communicate the scaffolded workshop progression. The five numbered steps indicate 1 imaginary future in 2035, 2 imaginary team in 2035, 3 potential conflict, 4 conflict resolution and AI teammate design, and 5 scenario story, hopes, and fears.

Table 2: Workshop flow across stages, showing researcher prepared scaffolds, participant-generated outputs, and analytic use. Worksheet examples are provided in Appendix A.

Stage	Description	Researcher-prepared	Participant-generated	Analytical use
Introduction, 10 min	Introduced workshop goals and concept, and reiterated the two modes and discussion first principle.	Presentation	None	None
Imagined future in 2035, 15 min, Worksheet 1	Groups imagined the work related daily routine of a fictive persona, Ann, in 2035 as a future oriented reflection adapted from prior practice [7].	Shared 2035 framing, worksheet prompts, facilitation script	Notes on workday activities, votes of plausible and desirable futures	Context for how participants framed future teamwork and AI
Imagined team in 2035, 20 min, Worksheet 2	Building on the future setting, groups constructed Ann's 2035 team and mission and documented concrete attributes, such as role, strengths, working style, and interpersonal dynamics.	Worksheet structure for roles, mission, and work setting	Team descriptions, role distributions, workplace context	Basis for reading later conflicts and AI roles in context
Conflict scenario, 25 min, Worksheet 3	Facilitators introduced conflict types, task, process, and relationship. Groups generated plausible team conflicts and triggers, clustered ideas, and selected one focal conflict.	Conflict background, scenario prompts, conflict elicitation questions	Conflict narratives, situational details, escalation points	Conflict framing, trigger conditions, legitimacy concerns
Conflict resolution and AI teammate design, 45 min, Worksheet 4	Groups generated future oriented resolution ideas for the focal conflict and specified an AI teammate that participates in the episode. Groups integrated the team, conflict, resolution, and AI teammate into a scenario story.	Design prompts, sketching sheets, storyboard template	AI names, sketches, behaviors, storyline, intervention logic	Primary material for intervention patterns and exemplar cases
Scenario story, hopes, and fears, 35 min	Groups presented their scenarios in a whole group discussion with facilitator questions and articulated hopes and fears at the level of team, organization, and society.	Hopes and fears prompts	Written and spoken hopes and fears	Supporting evidence for perceived benefits, risks, and boundaries
Post workshop feedback, 20 min	Participants completed the post workshop feedback form and closed the session.	Survey	Written feedback	None

Participants moved through several stages, including five activity stages covering future framing, imaginary team, imagined future conflict scenario, conflict resolution and AI teammate design, and reflection producing hopes and fears. Across these stages, groups

produced worksheets, sticky notes, posters, and short scenario stories. Details are shown in Table 2. The worksheet packet provided a common structure for the workshop, but groups remained free

to reinterpret prompts, move beyond the initial seeds, and elaborate their own narratives and artifacts. Figure 2 summarizes this. Appendix A shows worksheet examples and facilitation artifacts.

3.5 Data Corpus

Each group completed worksheets and produced a shared poster summarizing the future setting, team, conflict, resolution pathway, AI teammate, and scenario story. Sticky notes generated during ideation were retained in the final materials. All workshop materials were digitized and organized on a shared Miro board with site labels preserved. We photographed the final posters and worksheet arrangements and organized them by group so they could be analyzed together with transcripts and group share out discussions where available. Figure 3 illustrates one localized worksheet scaffold and clarifies which parts were researcher-prepared prompts and which parts were participant-generated content. Post workshop feedback suggested that participants generally found the instructions clear and the activities supportive of future oriented thinking. Japanese and German notes were translated into English; bilingual researchers proofread translations to reduce nuance loss. We cross-validated sticky-note content against workshop transcripts and recordings of group share-outs where available.

The atomic unit of analysis was a sticky note ($N = 217$), linked to its scenario context (conflict story, resolution story, AI design profile, and hopes/fears reflections). We did not perform additional researcher-side aggregation at this stage because groups had already consolidated and prioritized ideas through dot-voting during the workshop. The scenarios and storyboards also served an analytic role in the next step. In line with speculative and interpretive RtD, we treated them not simply as workshop outputs but as materials through which participants made assumptions about legitimacy, timing, visibility, and acceptable AI authority explicit.

3.6 Analysis and Coding

We conducted a hybrid deductive–inductive thematic analysis [9] in MAXQDA, coding each sticky note while preserving links to its originating material location and storyline context. To keep the analysis legible without reproducing full codebooks in the main paper, we summarize the high-level coding framework in Table 3, organizing codes into the code families and coded dimensions. Multi-label coding was allowed when a single note contained more than one codable element (e.g., multiple trigger clusters, or an intervention note that specified both who the AI addressed and what it did).

Codebook development. We developed the codebook iteratively. One researcher seeded theory-informed code families, and a second researcher inductively derived dataset-specific subcodes. We then reconciled and piloted the codebook on a subset of DE/JP materials, refining operational definitions and adding brief examples to reduce ambiguity. A primary coder applied the finalized codebook to the full corpus. For traceability, we maintained an index linking each coded unit to its material location (region and sticky-note ID).

Reliability. We estimated inter-coder reliability on stratified subsets coded independently by the primary coder and a reliability coder masked to site labels (unit = sticky note). Cohen's κ was 0.93 for *imagined conflict* ($N = 45$), 0.86 for *final resolution story*

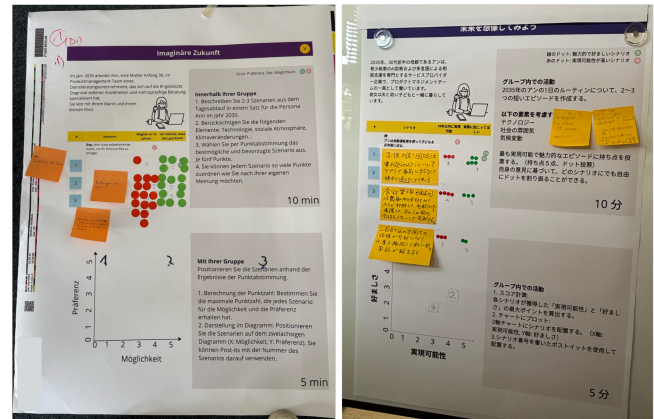


Figure 3: Localized Activity 1 worksheet used in Germany (left) and Japan (right) to generate and select short 2035 routine scenarios via dot-voting, then map selected scenarios by desirability (y-axis) and feasibility (x-axis). Dot voting describes the possibility (red dots) and preferability (green dots) of this future scenario. Text printed on the worksheet (i.e., overall description of the persona, task instructions, voting mechanism and dimensions) are researcher-driven scaffolding elements, while the described scenarios itself as well as their evaluation are created by the participants.

($N = 30$), 0.61 for *hopes* ($N = 70$), and 0.56 for *fears* ($N = 72$) [12]. For multi-label families, labels were binarized (present/absent) per note and κ was macro-averaged across labels. Lower agreement on hopes/fears is expected given open-ended statements and boundary ambiguity between consequence themes. Disagreements were adjudicated by a third researcher; decision rules were back-propagated, affected items rechecked, and traceability reconfirmed.

Second-pass synthesis for design lenses. Speculative design elicits normative expectations rather than observed effectiveness, so we synthesized what the participant-generated materials indicated an AI teammate should do during conflict and what made those interventions acceptable. After coding the sticky notes, we treated each AI concept as a unit of comparison and created a case-level comparison matrix. For each participant-generated AI concept, we linked coded notes and worksheet entries to the final narrative and storyboard through the traceability index, then summarized the conflict framing, management approach, AI teammate design, and normative expectations. When the materials did not state an element, we marked it as not specified rather than inferring it.

Our analysis moved from local materials and utterances to higher-level interpretive claims in two steps: First, we coded participant-generated materials at the level of scenarios, sketches, storyboard episodes, and hopes and fears statements. Second, we compared these coded materials across workshops to identify recurring intervention patterns, recurring boundaries, and recurring contrasts between the two sites.

In practice, a single sticky note or sketch element did not become a finding on its own. It contributed to a finding when similar ideas reappeared across multiple materials within or across workshops.

Table 3: Coding framework overview: coded dimensions and subcodes.

Code family	Coded dimension	Subcodes / values
Conflict framing <i>Grounding:</i> [28, 41]	Type Triggers (cluster)	Task; process; relationship Value & belief misalignment; strategic & procedural misalignment; expectation & role misalignment; relational & emotional tension; fairness & threat perceptions; structural breakdown; expertise & evaluation gap
AI intervention move for conflict resolution <i>Grounding:</i> [43, 51]	Episode placement Addressed unit Intervention act Employed Conflict Resolution Strategy <i>Third-party</i> <i>Behavioral</i>	Early disagreement; escalation; deadlock; post-hoc repair Individual; both parties; whole team Intervention behavior described in the note Mediation; inquisitorial; motivational; educational; rapport-building Integrating; obliging; dominating; avoiding; compromising; rapport-building; emotion expression
AI teammate design <i>Grounding:</i> [4, 21, 30, 39]	Positioning I/O <i>Inputs</i> <i>Outputs</i> Capability <i>Perception & interpretation</i> <i>Information handling</i> <i>Team & domain knowledge</i> <i>Reasoning & foresight</i> <i>Interaction support</i> Personality cue <i>Warmth & support</i> <i>Emotion & relational stance</i> <i>Professional stance</i> <i>Adaptivity & agency</i>	AI role: mediator; peer; supporter; tool; analyst; assistant Voice; data/file uploads; personal information; management information; universal input; conflict-based signals Policy-guided output; emotion-mode switching Reads mental/emotional states; listens Information extraction from uploads; knowledge from previous communications; information synthesis Knowledge of team structure; legal knowledge Simulation ability of conflict; analytical & decision-making abilities; risk management; select solutions; provide scenarios Translation; mediator function; adaptive reactions; person-oriented reasoning; personalisation & support functions; emotional & social intelligence Warm & humble; friendly & supportive; trustworthy Emotionally intelligent; motivating/playful Professional & competent; objective/neutral Adaptive/personality-mirroring; proactive & engaged
Normative expectations <i>Grounding:</i> [7, 29]	Hopes Fears	People & team gains; process/capability/performance improvements; external value & adoption drivers Model/data integrity & security risks; interaction & agency risks; governance/fairness/strategy risks; people & culture harms; work & market disruptions

For example, repeated combinations of brief AI appearance, conflict-focused summarization, and concerns about interruption supported a broader pattern of bounded intervention. Likewise, combinations of explicit fairness language, procedural guidance, and evidence displays supported a pattern of procedural AI support.

Because agreement on hopes and fears coding was moderate, we use those materials as supporting evidence rather than as the sole basis for the strongest comparative claims. The main contrasts reported below are therefore grounded in the broader synthesis across scenarios, sketches, storyboards, and discussion, as common in RtD using interpretation to synthesize findings.

We derived the design lenses by applying constant comparison across the ten design story summaries and their accompanying narratives, focusing on participants' stated rationales for why a given intervention would be acceptable, intrusive, risky, or helpful

(i.e., perceived legitimacy of participation, process, and justification) [32]. Recurring rationales clustered into cross-cutting lenses across the design story dimensions above. We report descriptive cross-site patterns in Findings and present the four lenses in Discussion.

4 Findings

We organize the findings around the strongest analytic story rather than the workshop sequence. We first outline the imagined team and conflict settings that shaped expectations for AI intervention. We then present the AI teammate design concepts as individual cases and identify recurring intervention patterns across them, followed by situated cross-site contrasts and the normative boundaries participants placed on AI involvement. Hopes and fears are

treated as supporting evidence for interpreting the cases and patterns and for informing the design lenses, rather than as a separate comparative layer.

4.1 Team and Conflict Settings

Across the ten design stories, participants imagined 2035 teamwork as distributed, tool mediated, and closely intertwined with AI. The scenarios varied mainly in how the AI was positioned within collaboration. Groups framed it as an analyst, supporter, mediator, thinker, influencer, or as a more embedded feature of everyday coordination. Even when stories used leadership language, the imagined interventions usually supported human deliberation by structuring discussion, retrieving evidence, or rewriting messages rather than enforcing decisions. Decision authority was rarely specified explicitly and was treated as unspecified when not stated.

Participants also imagined conflicts spanning task, process, and relationship issues, with one mixed case in the final set of design stories. A focus on task conflicts was visible in JP (11/18 conflicts), while both process and task conflicts were frequently mentioned by DE participants (9 times both). Comparable conflict triggers appeared across both sites, but their relative mentions differed, as visible in Figure 4. Across the workshops, DE groups more often framed conflict around expectation/role misalignment and expertise/evaluation gaps (e.g., unclear ownership, overload, mismatched standards), while JP groups more often framed conflict around value/belief misalignment, especially concerning AI use, data use, and competing priorities. These differences provide context for the intervention patterns that follow.

4.2 AI Teammate Intervention Patterns Across the Ten AI Concepts

We next examine AI teammate intervention patterns across the ten design stories. We begin with three exemplar cases as narrative walkthroughs of participant-generated design storylines that were created using researcher-scaffolded templates. Their purpose is to show how an imagined conflict unfolds, when the AI teammate enters the episode, what it does, and how others respond. These exemplars are included to make the intervention patterns concrete within individual cases, not to summarize the full set of AI concepts. An overview of all storylines can be found in Supplementary Material.

We then shift to a cross-case synthesis of the ten AI concepts in Table 4. The table serves a different purpose from the exemplars. Rather than retelling individual stories, it aligns all cases along the same analytic dimensions: how conflict is framed, what intervention approach is imagined, what assumptions are made about AI teammate design, and what hopes and fears are attached to that design. Together, the exemplars show how imagined interventions unfold within individual AI concepts, while the table shows recurring patterns across cases.

Unless otherwise noted, exemplar names, story content, and intervention logic derive from participant-generated AI concepts. Each concept combines an imagined conflict situation, a proposed AI role, and a narrative sequence of how the AI would intervene. We used these concepts as comparative cases in the cross case synthesis,

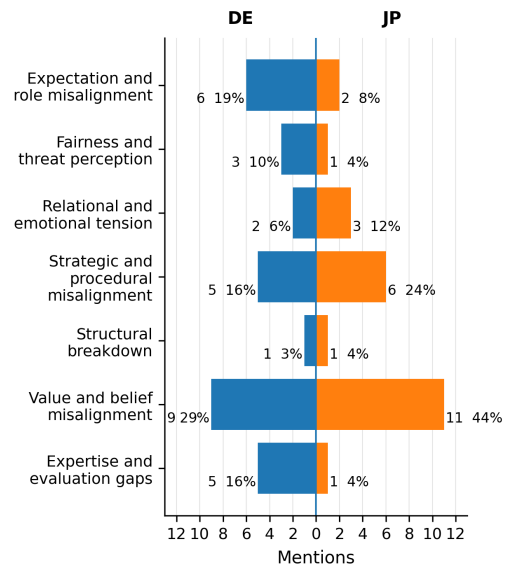


Figure 4: Conflict triggers show different emphases across sites. Value & belief misalignment is most frequent (DE 9/31, 29%; JP 11/25, 44%), driven mainly by AI/data-use and priority disagreements in JP. DE comparatively emphasizes Expertise & evaluation gaps (5/31, 16%) and Expectation & role misalignment (6/31, 19%). Mirrored horizontal bars show raw counts by trigger cluster (DE left, JP right).

linking them to the underlying workshop materials to derive the intervention patterns discussed below.

4.2.1 Design Story 1: Roland (DE1). Roland was imagined by participants as a friendly, emotionally intelligent AI teammate that treats conflict as an opportunity for learning rather than as a problem to suppress immediately. The participant-generated storyline centers on a product management team in 2035 and unfolds in six steps.

1. Team collaboration. Hannah, Ben, Ann, and Phillip are shown as an established product management team working together in a future workplace.

2. Conflict emergence. A relationship conflict begins when Hannah criticizes Ann's use of robotic childcare.

3. Conflict escalation. Other teammates attempt to intervene, but their involvement worsens the tension and leaves Ann feeling judged and unsupported.

4. AI assistance. Roland appears as the team's conflict support assistant, designed not to impose an immediate solution but to support reflection on the episode through simulation.

5. Conflict management support. Hannah later engages with Roland through a projected timeline and alternative outcome scenarios, using simulation based reflection to reconsider the situation and possible responses.

6. Conflict resolution. After this reflective exercise, Hannah approaches the situation differently, and the tension between her and Ann is eased.

Figure 5 shows a researcher-redrawn visualization of this participant generated sequence. In our analysis, Roland was coded

as addressing a relationship conflict triggered by personal sentiment, coded as relational and emotional tension. Roland is placed at a moment of escalation, addressing both parties. The AI intervention to resolve the conflict combined educational support with mediating forms of third-party involvement, and behaviorally it was interpreted as encouraging emotion expression, compromising, and integrating. We coded the participants' description of Roland's positioning as a supporter and mediator role. Inputs were coded as personal information and conflict-based signals as inputs and policy-guided outputs. Participants also attributed capabilities that were exemplarily coded as perception, for instance Roland's ability to read mental/emotional states, ability to reasoning and foresight, such as conflict simulation, Roland's team and domain knowledge coded as legal and policy knowledge, and interaction support coded as emotional and social intelligence, and person-oriented reasoning. Furthermore, Roland's personality can be described and coded as emotionally intelligent, friendly & supportive, proactive & engaged, and trustworthy.

The case also shows how participants connected AI conflict support to both hopes and fears. On the hopeful side, Roland was associated with expected gains for people and team functioning and for process improvement, which we coded as *people & team gains* and *process, capability & performance improvements*. On the fearful side, participants raised concerns about governance, fairness, and strategy risks, as well as possible harms to interpersonal and cultural dynamics, which we coded as *governance, fairness & strategy risks* and *people & culture harms*. In this sense, Roland was not imagined simply as a helpful assistant, but as a situated intervention whose value depended on how reflective support, policy guidance, and team norms were balanced in practice.

4.2.2 Design Story 2: Tommy (DE2). Participants envisioned Tommy as a silent, embedded AI layer within text-based communication platforms that mediates conflict by reshaping messages in real time. The participant-generated storyline centers on a digitally coordinated product management team in 2035 and unfolds in six steps.

1. Team collaboration. Hannah, Ben, Ann, and Phillip work together as a product management team in a shared digital workspace.

2. Conflict emergence. A process conflict begins when Phillip, who is overloaded and relying on AI support for coding, messages Hannah about his situation, while Hannah insists on fully human coding and expects him to maintain a high level of productivity.

3. Conflict escalation. Phillip becomes increasingly frustrated because Hannah does not understand his situation, while Hannah becomes frustrated because Phillip does not meet her expectations, and the exchange intensifies.

4. AI assistance. Tommy appears as a nearly imperceptible conflict support layer embedded in the communication platform rather than as a visible teammate.

5. Conflict management support. During text-based interaction, Tommy analyzes outgoing messages in real time and reformulates them so that the recipient sees wording adapted to their communication preferences and sensitivities.

6. Conflict resolution. By translating messages into forms that feel less accusatory and more constructive, Tommy reduces misunderstanding and helps ease the tension between Phillip and Hannah.

Figure 6 shows a researcher-redrawn visualization of this participant generated sequence. In our analysis, Tommy was coded as addressing a process conflict triggered by perceived unfairness in workload and expectations, coded as expectation and role misalignment. Tommy is placed at the early disagreement state and addresses both parties. The AI intervention to resolve conflict can be coded as combined rapport-building with inquisitorial forms of third-party support, and behaviorally interpreted as encouraging obliging and, at times, avoiding by reducing direct confrontation through reformulation. Participants positioned Tommy as an invisible mediator and tool with an objective, adaptive style that mirrors recipient preferences. They also attributed inputs such as personal information, voice data, and broader contextual cues coded as universal input, while its output took the form of rewritten chat messages aligned with stored preferences for tone and sensitivity, coded as emotion-mode switching. Tommy's personality was coded as adaptive and agentic, including adaptive / personality- mirroring, and professional, including being described by participants as objective, and non-personified. Capabilities were described to encompass translation, mediation functions, and adaptive reactions coded as interaction support.

This design also shows how participants connected AI conflict support to both hopes and fears. On the hopeful side, Tommy was associated with expected gains for people and team functioning and for process improvement, which we coded as *people & team gains* and *process, capability & performance improvements*. On the fearful side, participants raised concerns about model and data risks, reduced agency in interaction, governance and fairness problems, and possible harms to workplace relationships, which we coded as *model/data integrity & security risks, interaction & agency risks, governance, fairness & strategy risks, and people & culture harms*. Taken together, Tommy was not imagined as a neutral communication aid, but as a low visibility intervention whose value depended on whether adaptive rewriting could reduce friction without becoming overly controlling or opaque.

4.2.3 Design Story 3: Anpanman (JP3). Participants envisioned Anpanman as a proactive, policy-guided mediator that structures discussion and provides legally grounded recommendations for sensitive issues such as disputes about AI and data use. The participant-generated storyline centers on a product management team in 2035 and unfolds in six steps.

1. Team collaboration. Hannah, Ben, Ann, and Phillip are shown as an established product management team working together in a future workplace.

2. Conflict emergence. A process conflict begins when Hannah and Ben disagree about how data should be processed, particularly in relation to ethical concerns and data protection.

3. Conflict escalation. As the disagreement continues, the issue becomes harder to resolve as the team lacks a shared basis for judging what is acceptable, leaving policy and responsibility unclear.

4. AI assistance. Anpanman appears as a visible conflict support assistant within the team, taking the form of an embodied mediator rather than an invisible background system.

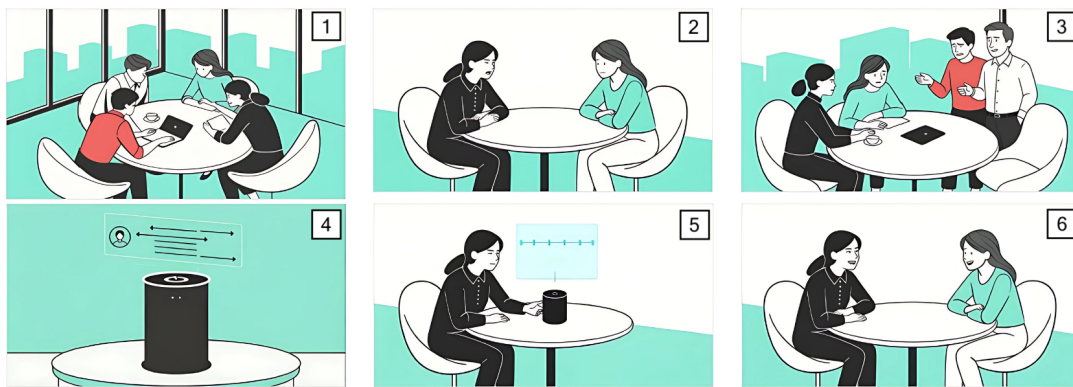


Figure 5: Participant-generated Roland storyline, redrawn by the researchers for readability, illustrating a visible AI teammate that supports conflict reflection through simulation based guidance.



Figure 6: Participant-generated Tommy storyline, redrawn by the researchers for readability, illustrating a low visibility AI teammate that mediates conflict through adaptive message reformulation.

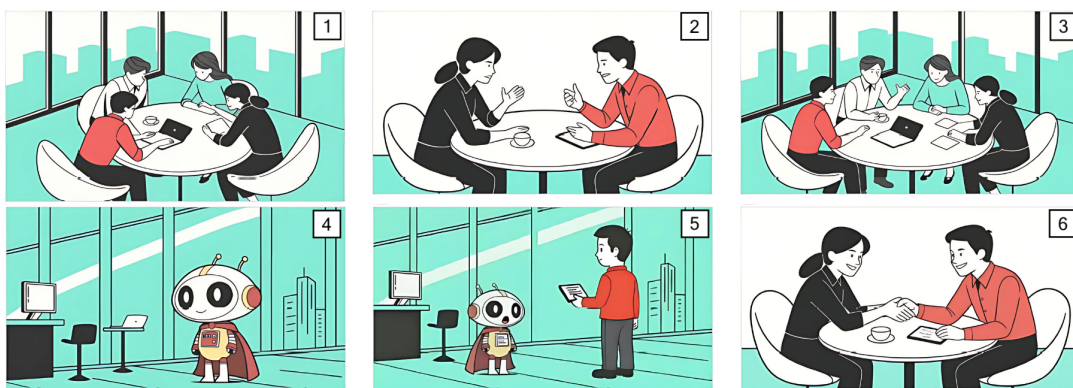


Figure 7: Participant-generated Anpanman storyline, redrawn by the researchers for readability, illustrating a visible AI mediator that structures discussion and provides policy-guided support.

5. Conflict management support. Ben engages with Anpanman by voice and provides relevant files and contextual information. Anpanman extracts the relevant points, presents legally and organizationally grounded considerations, and helps structure the discussion.

6. Conflict resolution. With this support, the team reaches a clearer decision about how to proceed, and the disagreement is eased through a more structured and informed negotiation.

Figure 7 shows a researcher-redrawn visualization of this participant generated sequence. Anpanman was coded as addressing a

Table 4: Cross-case synthesis of the ten design stories across conflict framing, conflict resolution approach, AI teammate design, and associated hopes and fears. Detailed codes are presented in Supplementary Material.

Legend: Conflict Task Process Relationship Mixed AI Visible Embedded
Conflict resolution approach Third-Party Intervention Behavioral Strategy Norms H:Hopes... F:Fears...

Design	Conflict framing	Conflict resolution approach	AI teammate design	Hopes and fears
Roland (DE1)	Relationship A relationship conflict triggered by a negative reaction to Ann’s use of robots for childcare.	Education Emotion expression Compromising Integrating Structured dialogue supports emotion expression and helps the team move toward compromise and integration.	Visible A visible mediator uses personal data, conflict cues, and policy context to provide timely, emotionally intelligent support.	H:People and team gains H:Process, capability and performance improvements F:Governance, fairness and strategy risks F:People and culture harms Hopes stress teamwork and efficiency; fears stress governance and cultural harm.
Tommy (DE2)	Process A process conflict triggered by workload pressure, high productivity expectations, and disagreement about Martin’s use of AI.	Rapport Building Inquisition Integrating Obliging Avoiding Translation and message adaptation reduce escalation and support smoother coordination.	Embedded An embedded mediator-translator adapts communication in real time using contextual and preference information.	H:People and team gains F:Model/Data integrity and security risks F:Interaction and agency risks F:Governance, fairness and strategy risks Hopes stress smoother collaboration; fears stress security, agency loss, and governance.
R2D2 (DE3)	Mixed A mixed conflict triggered by ambitious expansion goals that disrupt role distribution and create tension over responsibilities.	Education Rapport building Inquisition Integrating Compromising Predictive suggestions structure arguments and support weighing pros and cons toward clearer trade-offs.	Embedded An embedded analyst uses member-related information to provide objective decision support.	H:People and team gains F:Interaction and agency risks F:Work and market disruptions Hopes stress better coordination; fears stress agency loss and work disruption.
Jarvis (DE4)	Relationship A relationship conflict triggered by uncertainty about role importance and replaceability in comparison with a faster robot doctor.	Mediation Motivation Integrating Obliging Emotion expression Empathetic structured dialogue reduces tension and supports open communication and motivation.	Visible A visible listener-advisor-mediator uses personal and management information to support respectful dialogue.	H:People and team gains F:Interaction and agency risks F:People and culture harms Hopes stress teamwork; fears stress agency loss and cultural harm.
Ninomiya-kun (JP1)	Process A process conflict triggered by a mismatch between the desired release date and actual development progress.	Education Integrating Information gathering and summarization support integrating through operational guidance and decision support.	Embedded An embedded assistant uses management data and regulatory information to refine unstructured discussion into clear summaries.	H:Process, capability and performance improvements H:External value and adoption drivers F:Model/Data integrity and security risks F:Interaction and agency risks F:Governance, fairness and strategy risks Hopes stress speed and adoption; fears stress privacy, agency, and governance.
Doraemon (JP2)	Process A process conflict triggered by the absence of a clear decision-making framework, creating disagreement about how decisions should be led.	Education Integrating Compromising Objective analysis and decision support help the team integrate and compromise around procedure alignment.	Embedded A tool-analyst uses historical and team-related information to support objective coordination and option generation.	H:Process, capability and performance improvements F:Model/Data integrity and security risks F:Interaction and agency risks F:Work and market disruptions Hopes stress process improvement; fears stress security, agency loss, and disruption.
Anpanman (JP3)	Process A process conflict triggered by perceived unfairness in workload distribution between remote and on-site team members.	Mediation Education Integrating Active participation in meetings and group chat supports communication, coordination, and decision-making around difficult topics.	Visible A visible peer teammate uses legal resources, personal data, and work plans to support risk-aware coordination.	H:People and team gains H:Process, capability and performance improvements F:Interaction and agency risks F:Work and market disruptions Hopes stress clarity and compliance; fears stress agency loss and work disruption.
Moses (JP4)	Task A task conflict triggered by disagreement over whether sales priorities should outweigh ethical and privacy compliance concerns.	Education Mediation Integrating Case-based analysis supports integrating while identifying legal, compliance, and risk implications.	Embedded An embedded analyst synthesizes legal databases, internal resources, and other materials to summarize positions and advise options.	H:Process, capability and performance improvements F:Governance, fairness and strategy risks F:People and culture harms Hopes stress informed decisions; fears stress governance concerns and cultural harm.
Hello Kitty (JP5)	Task A task conflict triggered by disagreement over whether further work to reduce false positives is worth the added cost.	Rapport building Inquisition Dominating Integrating Emotion expression Emotion-aware leadership supports communication and decision-making under disagreement.	Visible A visible leader uses emotional cues, personalities, past cases, and reference materials to guide decisions.	H:Process, capability and performance improvements F:Interaction and agency risks F:Governance, fairness and strategy risks Hopes stress faster decisions; fears stress agency loss and governance concerns.
Omega-chan (JP6)	Relationship A relationship conflict triggered by disagreement over attitudes during brainstorming, leading to strong mutual criticism.	Mediation Rapport building Integrating Emotion expression Humor and lighthearted mediation help steer the conversation back on track and support emotional repair.	Visible A visible mediator uses emotion and personality cues to provide playful, timely support for turning and tone adjustment.	H:People and team gains F:Interaction and agency risks F:Governance, fairness and strategy risks Hopes stress calmer interaction; fears stress agency loss and unclear oversight.

process conflict triggered by disagreement over AI and data governance, coded as strategic and procedural misalignment. Anpanman

was placed at the escalation to deadlock episode and addressed the

both conflicting party units. The AI intervention to resolve the conflict was coded as mediating and educational forms of third-party support, and behaviorally it was interpreted as encouraging integrating by structuring turn-taking, presenting relevant constraints, and supporting decision clarity. Participants positioned Anpanman as a supporter and mediator with a professional, competent, and trustworthy personality, coded as warm and professional. They also attributed capabilities such as legal knowledge coded as team and domain knowledge, as well as risk management, and analytical decision support coded as reasoning and foresight. Described inputs span data files, personal information, and management information, and outputs were framed as policy-guided recommendations for team-level agreement.

This scenario also links AI conflict support to both hopes and fears. On the hopeful side, Anpanman was associated with expected gains for people and team functioning and with broader perceived usefulness, which we coded as *people & team gains* and *external value & adoption drivers*. On the fearful side, participants also raised concerns about reduced agency in interaction, possible harms to workplace relationships, and broader work related disruption, which we coded as *interaction & agency risks*, *people & culture harms*, and *work & market disruptions*. Taken together, Anpanman was imagined not simply as a helpful source of policy knowledge, but as a visible and authoritative intervention whose value depended on whether structured guidance could support agreement without displacing human judgment.

Across the ten participant-generated concepts presented in Figure 4, the two sites also differed in the kinds of AI support they emphasized. In the German workshops, mediator or supporter roles appeared in 3 of the 4 concepts, and conversation structuring appeared in 3 of the 4 concepts. In the Japanese workshops, tool or analyst roles appeared in 4 of the 6 concepts, while decision support or guidance appeared in 5 of the 6 concepts and referential retrieval appeared in 3 of the 6 concepts. These descriptive contrasts suggest that the German concepts more often imagined AI as shaping the interaction process itself, whereas the Japanese concepts more often framed AI as providing informational and decision-oriented support during the conflict.

4.3 Cross-Cultural Hopes/Fears and Procedural Expectations

Figure 8 summarizes the hope and fear notes used in our cross-site comparison (DE: 29 hopes, 31 fears; JP: 27 hopes, 25 fears; unit: coded note). These counts aggregate the hopes and fears coded across the ten design stories in Table 4. Across both sites, hopes centered on similar benefits but with different emphasis, whereas fears differed more in which risks participants treated as most constraining for acceptability.

On hopes, DE participants more often emphasized *People & Team Gains* (21/29, 72%), whereas JP participants more often emphasized *Process, Capability & Performance Improvements* (14/27, 52%). On fears, DE participants more often raised *People & Culture Harms* (15/31, 48%), while JP participants more often raised *Interaction & Agency Risks* (8/25, 32%) and *Model/Data Integrity & Security Risks* (3/25, 12%; vs. DE 1/31, 3%). Together, these patterns suggest a

shared aspiration for supportive AI mediation in conflict, but different thresholds for what would render such mediation unacceptable in practice.

Hopes: shared benefits, different emphasis. Across both sites, participants imagined that AI teammates could reduce the interpersonal and procedural burden of conflict in two recurring ways: (i) supporting the interaction in the moment (e.g., structuring turn-taking, summarizing positions, prompting reflection, flagging points of misunderstanding) and (ii) reducing coordination and follow-through work around the meeting (e.g., consolidating prior context, retrieving relevant information, documenting decisions, supporting execution). These hopes commonly appeared in scenarios where the AI was positioned as a mediator/supporter and where outputs were framed as facilitative aids rather than binding decisions (Table 4).

The main cross-site difference was how value was justified. DE participants more often framed benefits in relational terms (e.g., smoother dialogue, less interpersonal strain, better collaboration), whereas JP participants more often framed benefits in procedural and capability terms (e.g., clearer decision steps, faster access to relevant information, more reliable documentation and execution). This contrast reflects different priorities rather than opposing goals: in both sites, participants emphasized that any AI support should leave responsibility for resolution with the human parties.

Fears (DE): relationship harm and unclear authority. In DE, fears most often concerned potential erosion of human relationships and communication, especially when the AI was imagined to operate inside the exchange (e.g., filtering or rewriting messages, shaping how disagreement is expressed, nudging conversational moves). Participants also raised governance concerns about who the system serves and who has the authority to accept, reject, or contest its interventions, along with worries about fairness and decisions becoming difficult to challenge. These concerns were typically sharper when interventions were framed as implicit or hard to override, and less acute when support was optional, reversible, and clearly attributable to a human choice (Table 4).

Fears (JP): control during live intervention and data protection under integration. In JP, fears more often centered on maintaining control during live interaction: participants worried about interventions arriving at the wrong moment, pushing too strongly, or shifting tone in ways they did not endorse. Participants also raised privacy and security concerns when scenarios assumed broad access to personal data, management information, or integrated files and services. When similar features were proposed (real-time facilitation; connected data access), acceptability was frequently framed as contingent on explicit boundaries for what is captured and clear control over when and how the AI may act.

5 Discussion

Our workshops suggest that future conflicts remain fundamentally human and resemble today's conflicts. Even in 2035 scenarios with pervasive AI, participants framed these conflicts as persistent coordination, legitimacy, and relationship challenges rather than problems that automation simply removes. Across the workshops, we identify a broad skepticism toward AI fully taking over conflict mediation. Participants emphasized the need for human oversight

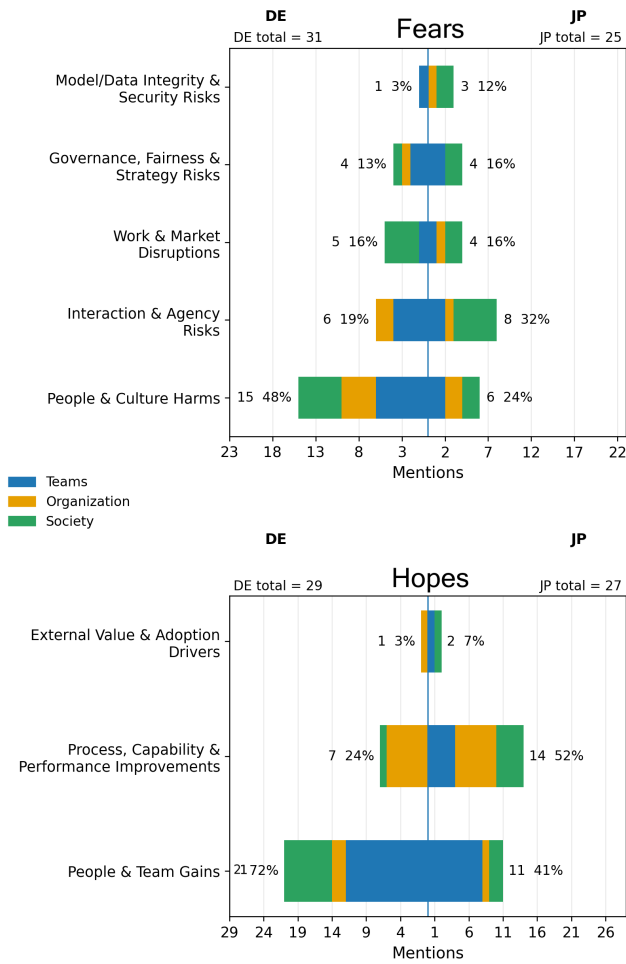


Figure 8: Mirrored horizontal stacked bars showing hopes and fears by site, with DE on the left and JP on the right. Bar lengths indicate raw counts for each normative expectation category, and colored segments distinguish team, organization, and society.

and gradual integration, suggesting that acceptance depends on allowing teams time to adjust and negotiate AI involvement.

Across both sites, participants’ hopes and fears converged on procedural expectations for how AI mediation should be introduced and governed. Interventions were expected to be explicitly authorized, reversible, and easy to override. Responsibility and attribution also needed to remain legible, including who triggered the AI and whose preferences it reflected. Participants further expected ways to contest or audit AI contributions when they shaped outcomes, as well as clear and transparent boundaries around data access. These expectations position acceptability as a matter of calibration rather than feature presence alone.

A poorly timed or poorly framed intervention was described as potentially worsening disagreement, in line with [11]. This suggests that acceptability depends not only on what the AI does, but also on when it acts and how its action is authorized, made reversible, and

explained in the moment. We develop these implications further in the design lenses below.

5.1 What Design Lenses Exist Based on the Design Stories?

We derived four design lenses by synthesizing (a) intervention mechanisms from envisioned AI teammate designs and generated storylines (timing, targets, visibility, and data scope) with (b) procedural expectations from hopes and fears (consent, approval, and provenance) and (c) the tensions surfaced in hopes/fears (e.g., efficiency vs. human agency; clarity vs. relational harmony), similar to design challenges identified by Collyer-Hoar et al. [13]. Rather than prescribing a single “best” AI mediator design, these lenses specify adjustable dimensions that can be calibrated to support conflict resolution while preserving human authority and cultural fit.

Moment lens: configurable triggers and conflict-focused summaries. Participants consistently wanted AI to help teams recognize when conflict warrants structure (e.g., summarizing positions, clarifying trade-offs), without imposing outcomes. This requires calibrating when the AI intervenes (before/during/after) and how strongly it acts (notify vs. nudge vs. restructure). Designs like Tommy (DE2) and Anpanman (JP3) illustrate in-the-moment support, but hopes about speed and clarity co-occurred with fears about mistiming, escalation, and loss of control. Addressing the challenges of in-the-moment support [11], moment calibration therefore emphasizes configurable triggers (e.g., repeated disagreement, long silence after a dispute, detectable escalation cues) and short, conflict-focused summaries that stabilize discussion as boundary objects rather than verdicts.

Meaning lens: blended rational and relational explanations. When AI outputs include summaries or policy-guided recommendations, participants required explanations that are both procedurally legitimate and socially acceptable. DE narratives emphasized transparency and fairness (and feared unfair decision-making, e.g., R2D2 (DE3)), while JP narratives emphasized control and harmony (and feared incomprehensible logic or overreach during live moments, e.g., Omega-Chan (JP6)). Our meaning calibration therefore pairs rational grounding (e.g., policy constraints, trade-offs, evidence pointers) with relational sensitivity (e.g., acknowledging emotions, preserving face, reducing accusatory phrasing). This is especially important for designs that rewrite messages or cite external rules in our set of design story artifacts (e.g., Tommy (DE2)), where purely legalistic or purely “empathetic” framing can both undermine trust. This role-specific design may even increase trust, as shown in studies from other contexts that compare trust perceptions toward personalized bots using a role-specific design compared to plain bots in mental health support [31].

Norm lens: culturally aware defaults with human overrides. Across sites, acceptability depended on whether AI behavior aligned with interaction norms (directness, face/harmony, rule orientation) without locking teams into a one-size-fits-all profile. This aligns with norms mentioned in literature on how culture impacts cognition and emotion [34, 38] and the benefits of personalized AI design [31]. Translated to design, this norm calibration therefore suggests using starting profiles (e.g., more direct, rule-explicit vs. more harmony-preserving and indirect) but keeping override and

blending mechanisms available at the team level. This is critical for hybrid teams and for scenarios where cultural styling (e.g., embodied “character” vs. neutral tool, R2D2 (DE3), Hello Kitty (JP5)) influences perceived legitimacy and comfort, providing a specification for culture-sensitive design options in team conflict [3].

Trajectory lens: lightweight feedback loops over time. Participants’ hopes and fears also implied that legitimacy is not static. Intervention styles that feel helpful initially may later feel intrusive, and teams may drift toward overreliance or reduced human skill over time (e.g., Roland (DE1)). While these risks are not unique to team conflict settings but address broader fears in human-AI interaction (see e.g., [4, 48, 53]), the proposed trajectory calibration therefore embeds lightweight feedback controls and periodic reflection (e.g., “step in less/more,” “use shorter summaries,” “avoid rewriting messages”) and maintains short, non-intrusive logs of adjustments. This supports learning across repeated conflicts and keeps responsibility clearly with the humans, addressing fears about responsibility shift and skill loss.

5.2 How Are the Design Lenses Reflected in the (Culture-Sensitive) AI Conflict Resolution Designs

These design lenses not only summarize our findings, but also provide a framework for comparing the AI concepts below.

Envisioned AI teammate intervention approaches map to different design lens foci. Across the AI concept storylines, AI teammates clustered around three recurring conflict resolution approaches (Table 4, conflict resolution approach column). Some scenarios treated conflict primarily as a need for procedure and decision support (e.g., Roland (DE1), Doraemon (JP2), Anpanman (JP3)), which amplified lens questions about Norm (what makes a rule- or evidence-based recommendation legitimate) and Trajectory (how decisions and rationales are documented and carried forward). Other scenarios foregrounded communication shaping (e.g., Tommy (DE2), Jarvis (DE4)), which made Meaning central (what is allowed to be rewritten, how edits are disclosed, and how authorship is preserved). A smaller set emphasized relational or affective de-escalation (most explicitly Omega-chan; also Jarvis (DE4) and Hello Kitty (JP5)), increasing sensitivity around Moment (timing in live interaction) and Meaning (how affect and tone are interpreted and represented).

Envisioned AI teammate design reflects constraints in Norm and Trajectory design lenses. The envisioned intervention in each design story is tightly coupled to its assumed inputs and outputs (Table 4, AI teammate design column). Scenarios that invoked broad access to files, management information, or behavioral signals tended to elicit stronger acceptability constraints about Norm (who grants access, who can limit scope, and how use is justified) and Trajectory (what is stored, who can audit it, and how long it persists) (e.g., Jarvis (DE4), Omega-Chan (JP6)). Conversely, scenarios that constrained the AI to facilitative, reversible outputs tended to shift acceptability toward Moment and Meaning: participants focused on interruption costs, mis-timing, and whether the AI’s phrasing could escalate disagreement (e.g., Anpanman (JP3)).

Cross-site emphases show same aspiration, but different “only-if” conditions. Across both sites, participants wanted assistance that reduces burden while keeping resolution in human hands. However, triggers as well as hopes and fears that surface acceptability constraints differed by site (Figure 4; Figure 8). In Japan, participant-generated conflict scenarios more often centered on disagreements about AI/data use and priorities, and hopes and fears emphasized that acceptability depends on bounded access, privacy protection, and user control/ agency. In Germany, conflicts more often foregrounded perceived injustice and personal sentiment, and fears emphasized risks to interpersonal communication, fairness, and culture when AI intervenes in sensitive moments.

5.3 What Do We Learn for Future Cross-Cultural And Culture-Sensitive Design Workshops?

Our comparison of the German and Japanese sessions highlights considerations for future cross-cultural or culture-sensitive workshop designs, with a focus on *local adaptation in execution* [3, 27]. Even when materials are co-designed across sites, facilitation often needs local adjustment in how intent is explained and how feedback is given. These choices matter because they shape what participants feel able to say in the workshop and therefore what kinds of future artifacts are produced. By providing in-depth recommendations, we are extending prior work on speculative design and design fiction across several locations or cultures subsequently and studies that address culture-sensitive design aspects [36, 48, 55]. When interpreting these cultural reflections, differences in the sample may confound the insights, and recommendations are specific to our setup. They may serve as guidelines for future workshop organizers, who are encouraged to elaborate on these aspects in their work.

Across sites, we observed differences in how participants articulated conflict. In Germany, participants often grounded conflicts in personal experiences and explicitly stated individual viewpoints, whereas in Japan conflict descriptions were more general and role- or team-referential, with fewer explicit references to individual feelings. This may be linked to themes of individualistic versus collectivistic cultural differences [22, 24]. We treat first-person phrasing cautiously because Japanese often omits explicit subjects and translation may reduce visible “I” framing. In our Japanese workshops, we used indirect entry points such as consequences or tensions to scaffold conflict elicitation. Finding this useful for reducing pressure for early personal disclosure and for supporting scenario selection, we recommend future workshop facilitators to reflect statements within the boundaries of culture-specific linguistics.

We also observed differences in how groups engaged with workshop structure. German groups tended to move quickly into open discussion and early solutioning, sometimes with more simultaneous talk. In Japan, groups generally followed the instructions closely, while participants often sought confirmation of the intended goal and what a good output should look like. When this confirmation-seeking was present, making step intent explicit and providing frequent reassurance that multiple outputs are acceptable helped to keep attention on exploration rather than on matching presumed

Table 5: Design lenses for shaping AI involvement in conflict. Pills point to recurring evidence in design storylines and hopes and fears themes.

<i>Legend. Country</i> DE: Germany JP: Japan <i>Associated Normative Expectations</i> H:Hope F:Fear				
Lens	AI cognition	Interaction	Governance	Evidence pointers
Moment	<ul style="list-style-type: none"> Use configurable conflict trigger templates Summarize after repeated disputed turns Flag long silence after disagreement 	<ul style="list-style-type: none"> Provide concise summaries of positions and trade offs Use summaries as boundary objects rather than verdicts 	<ul style="list-style-type: none"> Keep escalation authority with humans Support human controlled handoff and easy override in live interaction 	DE2 Tommy JP3 Anpanman JP6 Omega chan JP5 Hello Kitty F:Mistiming F:Interaction and agency risks H:Process, capability and performance improvements H:People and team gains
Meaning	<ul style="list-style-type: none"> Pair rationales with relational cues Use acknowledgment and face-sensitive wording 	<ul style="list-style-type: none"> Offer adjustable explanation modes Disclose when the system reshapes language 	<ul style="list-style-type: none"> Provide provenance cues on demand Support contestability and allow users to request or withhold detail 	DE1 Roland JP3 Anpanman JP4 Moses DE2 Tommy F:Governance, fairness and strategy risks F:Interaction and agency risks H:Process, capability and performance improvements H:People and team gains
Norm	<ul style="list-style-type: none"> Offer culturally informed starting profiles as defaults Keep room for rule transparent and harmony preserving profiles 	<ul style="list-style-type: none"> Enable team level blending and overrides Allow switching styles per episode 	<ul style="list-style-type: none"> Make consent scope visible Keep opt-in opt-out and override accessible 	DE2 Tommy DE3 R2D2 JP3 Anpanman JP5 Hello Kitty JP6 Omega chan JP1 Ninomiya kun JP2 Doraemon JP4 Moses F:Model/Data integrity and security risks F:Model/Data integrity and security risks F:People and culture harms H:People and team gains
Trajectory	<ul style="list-style-type: none"> Support learning across episodes Detect intervention backfires and escalation 	<ul style="list-style-type: none"> Provide quick feedback controls Use periodic reflection prompts 	<ul style="list-style-type: none"> Keep short logs of adjustments for legibility over time Keep responsibility with humans and prevent overreliance 	DE1 Roland DE2 Tommy JP2 Doraemon JP4 Moses F:Interaction and agency risks F:Governance, fairness and strategy risks F:Overreliance H:Process, capability and performance improvements

researcher expectations. We recommend future workshop facilitators to frequently observe whether confirmation-seeking behavior exists in their workshops.

The design of the workshop also required a calibration of the scope and duration of the material, along with challenges of comparability between sites. Based on pilot studies, we used structured worksheets together with participants-created future teams to surface assumptions about team composition, including the presence and number of AI teammates, while still ensuring the feasibility of contrasts in conflict resolution intervention expectations. Structured materials can improve comparability, but they can also narrow narrative variety. We therefore underscore calls for pairing fixed fields with flexibility in how participants express content for future multi-culture speculative design workshops.

In sum, our German-Japanese sessions illustrate limits to method transfer without adaptation. Accordingly, in line with critiques of universalizing design methods and calls to adapt methods to local norms [3, 27, 55], we suggest that high-level structures such as collaborative speculation, iterative reflection, and discussion around

shared materials may transfer across sites, while prompts, facilitation strategies, and participation norms should remain context-specific and adjusted as needed.

5.4 General Limitations and Future Work

Speculative design as a form of RtD relies on imagined or narrativized ideas, which may result in abstracted or idealized accounts [8]. It is therefore best suited for surfacing normative expectations on what participants hope for, fear, or consider acceptable in future AI-mediated conflict resolution. However, it cannot demonstrate how teams would actually perceive an AI teammate in real conflicts, nor how such interventions would affect interaction dynamics and outcomes. Accordingly, our design lenses should be read as generative design knowledge rather than evidence of behavioral effectiveness. Future work should prototype culturally attuned AI teammate behaviors grounded in the outlined design calibrations and evaluate their effects through behavioral and in-situ studies. For instance, wizard-of-oz or vignette studies may be employed across different cultural circles to manipulate the presented design lenses (esp. visibility, mandate, timing) to test user perceptions.

Moreover, we did not conduct a secondary expert evaluation, usually common in speculative settings for deepened critique [7, 8]. Future work should add panels spanning AI, ethics/regulation, and team science researchers, although our hopes–fears activity functioned as an embedded critique step.

With $N=28$ across Germany and Japan, we position our findings as generative design knowledge rather than broadly generalizable. Because workshops were run in nationality-separated groups to support localized facilitation, future work should test mixed-cultural workshops to examine cross-cultural conflict dynamics directly. Furthermore, adding other countries and culture that do not address Western biases toward AI (e.g., India, African cultures) would provide a more global and culture-inclusive view. Participant demographics and roles differed across countries, including age, which may have influenced perceptions of AI and the resulting narratives, hopes, and fears. These limitations should be considered when interpreting our cross-cultural findings, and future workshops should aim for more balanced participant groups.

6 Conclusion

We set out to understand how an AI teammate should be designed to resolve team conflict and how expectations vary across cultural contexts. In five co-created speculative design workshops in Germany and Japan ($N = 28$), participants produced ten near-future conflict scenarios and articulated hopes and fears that surface both shared aspirations and different constraints for acceptable AI involvement. Across sites, participants expected familiar task, process, and relationship conflicts to persist in AI-saturated teamwork and consistently resisted AI that overrides human authority. However, what made intervention acceptable diverged: German participants emphasized transparent mandate, fairness, and protecting human exchange from relational harm, while Japanese participants emphasized control during live intervention and bounded access to personal and organizational data. Building on the AI concepts of AI conflict intervention, we contribute (1) intervention patterns of AI, (2) a matched German-Japanese mapping of acceptability constraints, (3) four resulting design lenses for calibration (Moment, Meaning, Norm, Trajectory), and end with a methodological reflection on cross-cultural and culture-sensitive design workshops. These contributions support accountable, culturally attuned AI teammates that reduce conflict burden while preserving human authority.

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A Workshop Scaffolds


This appendix documents the workshop scaffolds that structured the design workshop activities across sites. These materials are provided for transparency and replication. They were used as researcher-prepared prompts and facilitation aids, while the scenarios, sketches, storyboards - and lines, and reflections analyzed in the paper were generated by participants.

B Supplementary Material

Supplementary material contains participant-generated design storylines as well as detailed coding table of each design storyline to create Table 4. It is available here: https://osf.io/pvj6d/overview?view_only=f054eddb13774729b615864b1d566ef5.

Let's imagine Ann's life in 2035.

In 2035, Ann, a mother in her early 30s, works as part of a product management team at a service provider company specializing in AI-driven rare disease diagnosis and multilingual consultation support. She lives with her husband and their young child.



#	Scenario	Possible in 10 years	I would like to see it happen
	<i>Sample: Ann uses self-driving cars to take her child to nursery.</i>	●	●
1			
2			
3			

Within your group

- Write 2-3 one sentence daily routine episodes for the persona Ann in 2035.
- Consider the following elements: technology, social vibes, climate changes...
- Use dot vote to select the most possible and preferable episode. Five dots each.
- You can assign as many dots as you want to any scenario, based on your opinion.

Points of interest

- Develop up to three "work-related" scenarios.
- Prioritize imagination and verbal sharing over written notes.

10 min





Figure 9: Facilitation slide for Activity 1. The slide introduces the shared persona, time box, and discussion first facilitation norms, then asks groups to propose brief work related routine episodes and compare them through voting.

Let's imagine Ann's team in 2035.

Team [insert team name] 2035



Leader **Influencer** **Supporter** **Thinker**

The team works on **[the team task]**.

The team has a mission that **[the team mission]**.

The team differs from a team in 2025 by **[differences between teams]**.

Within your group

Create an imaginary team in **2035**:

- Describe Ann's (work) team described in 0.1
- What does the team work on?
- What is the mission of the team?
- Who else is in the team? Create personas for them, similar to Ann and outline their characters
- Discuss: How does this team differ from a team today in 2025?

You can refer to the characters in the previous activity to help brainstorm.

Points of interest

- First, write ideas individually on Post-it notes.
- Consider Ann + 2 or more members.
- Specify each member's name, age, role, personality, and area of expertise.
- Share within the group and compile onto a poster.

15 min





Figure 10: Facilitation slide for Activity 2. The slide guides groups to construct the imagined team by defining a team task and mission, adding members with roles and attributes, and consolidating ideas onto a shared poster.

Imaginary Future

In 2035, Ann, a mother in her early 30s, works as part of a product management team at a service provider company specializing in AI-driven rare disease diagnosis and multilingual consultation support. She lives with her husband and their young child.



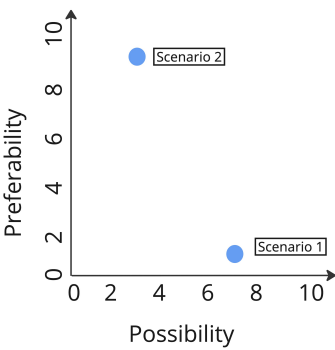
Green: Preferability, Red: Possibility ● ●

Within your group

- Write 2-3 one sentence daily routine episodes for the persona Ann in 2035.
- Consider the following elements: technology, social vibes, climate changes...
- Use dot vote to select the most possible and preferable episode. Five dots each.
- You can assign as many dots as you want to any scenario, based on your opinion.

10 min

#	Scenario	Possible in 10 years	I would like to see it happen
	<i>Sample: Ann uses self-driving cars to take her child to nursery.</i>	●	●
1			
2			
3			



Within your group

Position the scenarios using the dot vote results.

- Score Calculation: Determine the maximum points each scenario received for possibility and preferability.
- Plot on Chart: Position scenarios on the two-axis chart (X: Possibility, Y: Preferability). You can use post-its with the scenario number on it.


5 min

(a) Sheet 1


Sheet 1: Imaginary future (2035). This sheet primes near-future thinking through short “everyday routine” episodes and includes a feasibility–preferability activity to separate what participants want from what they consider plausible.

Figure 11: Workshop Material


Create an imaginary team




1. **Leader:** Sets clear goals, makes decisive choices, and motivates the team to achieve results.



2. **Influencer:** Brings energy, shares ideas, and builds strong team connections.



3. **Supporter:** Maintains harmony, offers empathy, and fosters trust within the team.




4. **Thinker:** Provides thoughtful analysis, ensures accuracy, and focuses on long-term planning.

Within your group
Please read the team characters on the left. Introduce yourself by answering the questions below:

1. The team structure and background you are mostly working with
2. Can you identify yourself as one or more of the five characters on the left?

5 min

Team [insert team name] 2035



Leader Influencer Supporter Thinker

The team works on **[what the team does]**

The team has a mission that **[the team's mission]**

The team differs from a team in 2025 by **[differences between teams]**

Within your group
Create an imaginary team in **2035**:

1. Describe Ann's (work) team described in 0.1
2. What does the team work on?
3. What is the mission of the team?
4. Who else is in the team? Create personas for them, similar to Ann and outline their characters
5. Discuss: How does this team differ from a team today in 2025?

You can refer to the characters in the previous activity to help brainstorm.


15 min

(b) Sheet 2

Sheet 2: Imaginary team (2035). This sheet guides teams to define an imagined multi-party team (roles, mission, work context) and to explicitly discuss how this team differs from present-day teams.

Figure 11: Workshop Material (continued)

Imagine the potential conflict



Relationship Conflict: Disagreements based on personal issues, emotions, or interpersonal incompatibilities, often involving clashes in personality or values rather than the task at hand.

Process Conflict: Disputes over how tasks or workflows are executed, including disagreements about roles, responsibilities, timelines, or procedures.

Task Conflict: Conflicts centered around the content and objectives of the task, involving differing viewpoints or ideas about how to approach and complete the work.

Within your group
Please read the conflict types.
1. Identify the conflicts you have experienced in real-life.
2. Share about the causes of these conflicts briefly

5 min

Green: Most critical conflict ●

In 2035, a project team experienced a conflict between the team leader and an influencer over VR social media advertising. The team was developing an interactive advertising experience within a VR environment, which involved plans to utilize sensitive behavioral data such as users' gaze and movements. The influencer argued for full-scale data use, trusting in users' own privacy protection tools. In contrast, the leader prioritized ethical constraints and maintained a cautious stance. As a result of this conflict, the execution of the campaign became limited.

- Relationship Conflict Scenario:**
"During our work, **[team member names or roles]** had a disagreement about **[personal issue or concern]**, which led to **[emotional reaction or outcome]**."
- Process Conflict Scenario:**
"The team encountered a process conflict when **[specific event or issue]** occurred, resulting in disagreements about **[task steps, roles, or deadlines]**."
- Task Conflict Scenario:**
"The team members disagreed about **[specific task or goal]** due to differing perspectives on **[approach, method, or outcome]**, which caused **[brief result of the disagreement]**."

Within your group
For the imaginary team in Section 1.2:
1. Brainstorm scenarios for the conflict types and write them down in the template
2. Write down how they differ from conflicts you know today
3. If there are multiple conflict scenarios, vote to decide the most critical one

Between the groups
Share the team and conflict scenario.

15 min | 5min

(a) Sheet 3

This sheet prompts groups to generate conflict scenarios (task, process, relationship) and to select a focal conflict for further development, including prompts that contrast future conflict needs and constraints with those of today.

Figure 12: Workshop Material

Conflict resolution and AI

Paste the most critical conflict scenario here

#	Solution	Possible in 10 years	I would like to see it happen
1		●	●
2			
3			
4			

Green: Preferability, Red: Possibility ● ●

Within your group

1. Paste the most critical (voted for) future conflict scenario to the highlighted box
2. Brainstorm feasible solutions by an AI-powered intelligent teammate to solve the conflict (approx. 10 mins)
3. Combine similar solutions and use the dots to vote for the most possible and preferable solution individually (5 votes each).
4. In the end, discuss and select the most preferable solution and circle it

15 min

How do they interact?
"Describe the key interaction modes your AI-powered intelligent teammate uses."

What cognitive capabilities do they have?
"How it understands context, solves problems, and supports decision-making.."

Add your AI-powered intelligent teammate's appearance here

What are their roles?
"Summarize their main contributions."

What are their personality?
"Share the tone, traits, and behaviors your AI-powered intelligent teammate exhibits."

Green: Preferability

Within your group

1. For the solution identified in 3.1, envision an AI-powered intelligent teammate (AIT) that implements this solution within your imaginary team.

For the AI-powered intelligent teammate

- How do they interact?
- What mental abilities do they have?
- What are their roles?
- What is their personality?

2. Afterward, combine similar features and use the dots to vote for the most desired features per category.

30 min

(b) Sheet 4

Sheet 4: Conflict resolution and AI teammate design. This sheet scaffolds the design of an AI teammate intervention: what the AI does, when it intervenes, what information it draws on, and what authority boundaries and handoff rules apply.

Figure 12: Workshop Material (continued)

Scenario story of AI

The existing conflict

Paste the most critical conflict here

In this situation, [AI teammate] acted as a [role, e.g., mediator, assistant, advisor], using [interaction mode, e.g., structured dialogue, predictive suggestions] to support [decision or task, e.g., resolving conflict, optimizing timelines].

As a [relationship to the team, e.g., peer, assistant, leader], it shaped interactions through its [cognitive capabilities, e.g., contextual awareness, real-time adaptation]. With access to [resources, e.g., project timelines, team preferences], it provided timely, relevant support. Its [personality traits, e.g., empathetic, proactive] influenced team dynamics.

In this case, the AI facilitated resolution by [positive action, e.g., promoting open communication, aligning decisions], ensuring smoother collaboration.

Hopes and fears

Impact on ...	Hopes	Fears
AI		
Teams		
Org.		
Society		

Within your group
With the outcomes from 3.2, imagine the possible conflict resolution scenario based on the template.

Between the groups
Share the conflict resolution story. Comment on what aspects of the scenarios do you find appealing?

20 min | 5 min

Within your group
Evaluate the outcomes from 4.1

1. What hopes do you see for each of the scenarios?
2. What fears do you see for each of the scenarios?
3. Use different post-it colors for each team

Team 1

Team 2

Between the groups
Share your most important hopes and fears.

15 min | 5 min

(a) Sheet 5

Sheet 5: Scenario story + hopes and fears. This sheet supports scenario storytelling and structured critical reflection. Groups write a short story of how the AI participates in the conflict episode and then articulate hopes and fears about the AI's involvement.

Figure 13: Workshop Material