Career Opportunities for Women in Agile Work Environments: An Organizational and Gender-Based Analysis

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Abstract. While agile methodologies are often associated with empowerment and self-organization, little is known about their implications for gendered career trajectories. Prior research shows that women in ICT frequently encounter "glass ceiling" effects and perform disproportionate amounts of "invisible work", This suggests that the intersection of agile work practices with these barriers remains underexplored.
To address this gap, an exploratory single-case study was conducted within a large German IT service provider. Eleven semi-structured expert interviews across diverse agile roles (Product Owner, Scrum Master, Agile Coach, Development, UX, QA) formed the empirical basis. Mayring's qualitative content analysis was applied to identify mechanisms linking everyday practices to promotion outcomes. Findings indicate that team-level transparency often fails to generate HR-visible signals, resulting in delayed or missed promotions for women. An inductively developed "Three Layers of Barriers" model—structural, process-related, and cultural—explains how agile routines may inadvertently reproduce gendered inequalities in career advancement.

Keywords: Agile Methods, Women in Tech, Career Advancement, Equality–Equity, Low-Promotable Tasks, Qualitative Content Analysis, Single-Case Study, ICT Sector (Germany)

1 Introduction

Agile work environments significantly influence women's career trajectories and advancement prospects, offering both opportunities and challenges. At the core of Agile methodologies lie practices that emphasize flexibility, collaboration, and responsiveness to change, which can enhance job satisfaction among women in technology fields. Agile settings are designed to promote cross-functional collaboration, enabling employees to engage in more comprehensive teamwork rather than operating within rigid, hierarchical structures [1, 2, 3].

Given these dynamics, it is not surprising that Agile has moved far beyond niche practices and evolved into a mainstream approach. Today, Agile methods are widely

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institutionalized in software and IT development, supported by standardized frameworks such as the Scrum Guide and broadly adopted across organizations [4]. Industry surveys indicate that approximately 70% of respondents incorporate agile practices into their software development lifecycle, frequently in hybrid configurations [5]. At the same time, women remain significantly underrepresented among ICT professionals in Europe, comprising only around 20% of the workforce [6]. This juxtaposition—between the widespread institutionalization of agile methodologies and persistent gender disparities—constitutes the central empirical and conceptual tension addressed in this study. While agile principles are broadly celebrated at the team level, their implications for individual career trajectories remain less understood. Agile team-level principles—transparency, iterative learning, and self-organization—are widely regarded as enablers of collaboration and quality, particularly when the team climate supports open communication [4]. Psychological safety, for example, has been shown to foster quality-oriented behaviors in agile environments [7, 8]. However, conducive team learning conditions do not automatically translate into individual career advancement (cf. [9]). This raises a critical question: to what extent do agile practices, structures, and routines generate HR-visible, person-specific signals that facilitate promotion—or conversely, obscure individual contributions and impede career progression?

Research question:
How do agile work environments shape women's career trajectories and advancement prospects?

2 Theoretical Framework

The study is conceptually anchored in four strands of literature. First, research on agile teamwork and role architecture emphasizes the importance of team transparency and evolving forms of leadership. Second, studies on career models in flat organizational structures, particularly the protean and boundaryless career frameworks, highlight the role of exposure and sponsorship in shaping advancement opportunities. Third, the body of work on gendered mechanisms in information and communication technology (ICT) points to persistent barriers, including masculine organizational cultures, evaluation biases, and the disproportionate allocation of low-promotable tasks to women. Finally, an equality–equity perspective provides a lens for examining how team practices are translated into HR-visible, person-specific career signals. Synthesizing these four perspectives motivates a conversion-oriented approach: investigating when and how agile rituals do—or do not—become recognizable evidence for career advancement.

2.1 Agile principles and role architecture

The analysis focuses on how role design and team transparency influence the upward legibility of individual contributions within agile work environments.

In agile teams, Product Owner (PO), Scrum Master (SM), Agile Coach (AC), and development/UX/QA roles coordinate work through short iterations and transparency artifacts (boards, reviews, retrospectives) [4, 10]. Roles differ in how directly their outputs register as person-specific, promotable signals: POs operate at the strategy - stakeholder interface (value, prioritization), while SM and AC concentrate coordination and facilitation; Dev/UX/QA deliver technical increments [4, 11, 12]. Research on self-organizing teams shows that informal role-taking distributes visibility and leadership functions unevenly [13]. Studies of agile teamwork also find that artifacts surface progress at the team level rather than attributing individual ownership [13]. Hence transparency increases observability but—without explicit attribution practices (evidence logs, named demo ownership)—it does not automatically generate HR-visible evidence for promotion; organizational practices must align evaluation with how work is actually produced [10, 14].

Implication. Role-based visibility asymmetries require attribution to convert team output into person-specific evidence for advancement.

2.2 Career models in flat, agile contexts

The analysis positions career advancement in flat organizational structures as a function of exposure, sponsorship, and engagement in promotable work, rather than formal rank alone.

Agile organizations increasingly replace linear ladders with more lattice-like and protean careers, where progress includes lateral and diagonal moves and development is self-directed and values-driven [15, 16]. Such models fit flat architectures but shift what "progress" looks like: accumulating scope, stakeholders, and cross-functional breadth can substitute for formal rungs. Progress nevertheless hinges on exposure to promotable work and sponsorship. Unlike mentoring, sponsors actively deploy political capital to secure opportunities and promotions [17, 18]. In agile role mixes, PO/Tech-lead positions typically yield strategy/client exposure, whereas SM/AC concentrate coordination and facilitation; these contributions are crucial for team functioning but often less upward-legible unless organizations translate them into person-specific evidence (e.g., named ownership, calibrated examples) [12].

Implication. Lattice/protean mobility increases pathway variety, but career outcomes depend on how organizations form evidence (attribution logs, calibrated rubrics) and allocate exposure (sponsorship), especially for coordination-heavy roles.

2.3 Gendered barriers & micro-mechanisms

A first Role congruity and prototypes. Role Congruity Theory predicts harsher evaluation when communal female stereotypes are seen as incongruent with agentic leadership prototypes; women face a higher proof bar to be judged equally competent [19]. This shapes how identical behaviors are interpreted in rituals (e.g., presenting

roadmaps, moderating retrospectives) and can tilt assessments of potential versus performance. The effect is most acute at the first promotion, where dossiers are thinnest; concentrated LPTs depress named evidence and amplify the first-promotion bottleneck (better known as "Broken-Rung") [20, 21].

Backlash and micro-inequities. When women display agentic behaviors (decisive, directive), backlash can trigger social penalties [22]. In everyday meetings, micro-inequities - interruptions, selective uptake of ideas, and biased reframing ("emotional" vs. "assertive") reduce talk time and willingness to contribute, dampening upward visibility over time [23].

Low-promotable tasks (LPTs) and credit drift. Necessary but under-credited coordination work (documentation, onboarding, facilitation, DEI/care work) often clusters on the same individuals; experimental and field evidence shows women are more frequently asked and more likely to accept LPTs [24]. In agile teams, boards and ceremonies surface progress at the team level; without attribution (named ownership, calibrated examples), LPT concentration creates weak HR-visible signals and thinner dossiers.

Evaluation bias in technical contexts. Studies of software contribution further document contexts where identical technical work is credited differently depending on who is seen as the contributor, reinforcing misrecognition risks in ICT environments [25].

Implication. These mechanisms predict credit drift and voice loss unless organizations counter them by design - i.e., rotate and credit LPTs, institutionalize sponsorship, and enforce facilitation/voice norms that stabilize airtime and explicit credit.

2.4 An equality-equity lens for organizational design

The analysis distinguishes between identical treatment and targeted design measures that compensate for structural disadvantages in the attribution of credit.

Equality vs. equity (organizationalized). In agile settings, equality means applying the same ceremonies and templates to everyone; equity means redesigning criteria and attribution so that contributions produce fair, HR-visible signals despite role-based visibility gaps. Team-level transparency surfaces progress but—without person-specific attribution—rarely becomes promotion evidence; agile adoption therefore requires complementary management practices beyond team rituals [10, 11].

Operational levers (applied to agile careers).

- Calibrated promotion rubrics & evidence logs: publish criterion definitions with role-family exemplars; require named ownership for outcomes [11, 17].
- Rotate & credit low-promotable tasks (LPTs): track documentation/coordination/onboarding/DEI and enter credit into HR systems [24].
- Structured sponsorship at the first step: pair candidates with sponsors who broker stretch work and budget sign-off [17, 18].
- Facilitation & voice norms: rotating moderation, no-interrupt rule, airtime tracking, and explicit credit in demos/recaps; psychological safety supports speaking up [23, 26].

Implication. The lens provides decision criteria to judge whether practices are merely equal (generic ceremonies) or substantively equitable (criteria, attribution, sponsorship, and voice rules that translate everyday work into person-specific advancement signals).

3 Methodology

This study adopts an exploratory single-case design to examine how agile work conditions shape women's advancement prospects. The case was situated in a large German IT service provider, allowing for contextual depth and analytic generalization of mechanisms rather than statistical inference [27].

The empirical material was generated through semi-structured interviews with eleven practitioners representing diverse agile roles (Product Owner, Scrum Master, Agile Coach, Development/UX/QA). Participants had held their role for at least twelve months, with variation in seniority and team context. A purposive sampling strategy, extended through snowball procedures, resulted in a final sample of three Product Owners, three Scrum Masters, one Agile Coach, and four Development/UX/QA professionals. Interviews were conducted remotely, lasted 45–75 minutes, and were audio-recorded, transcribed verbatim, and pseudonymized (e.g., INT5_UTW1). The interview guide covered three thematic blocks: (1) roles and advancement, (2) visibility and HR signals, and (3) low-promotable tasks (LPTs) and micro-inequities.

Data analysis followed Mayring's qualitative content analysis with a combined deductive–inductive approach [23]. Deductive categories from the theoretical framework (roles and career paths, visibility and HR signals, LPTs with micro-inequities) provided the initial coding structure. These were complemented with inductively generated subcodes capturing emergent mechanisms. Three steps guided the analysis: (1) inductive category formation, (2) iterative coding refinement, and (3) cross-case comparison. Two researchers independently coded 30% of the material, achieving a Cohen's κ of 0.72, indicating substantial agreement. Structuring and summarizing techniques were applied systematically, while an audit trail of analytic memos, claim sheets, and co-occurrence matrices ensured transparency.

Trustworthiness was enhanced through iterative recoding, double-coding of two transcripts, and resolution of discrepancies through discussion. Dependability was supported by version-controlled codebooks, confirmability through traceable links between claims, quotations, and identifiers, and credibility through member checks using anonymized thematic summaries. Participation was voluntary, informed consent was obtained, and all data were stored in compliance with data protection policies.

The findings provide mechanism-level explanations of advancement dynamics in agile ICT contexts. Transferability is limited to settings with comparable structures, particularly regarding grading rules, initial advancement thresholds, and the intensity of hybrid work configurations.

4 Findings

The analysis identifies a three-layer model that explains how barriers shape women's career signals in agile environments. The model comprises three interconnected mechanisms. The structural layer highlights how the first promotion is constrained by opaque criteria and budget-related gatekeeping. The process layer demonstrates how team-level transparency, when not linked to person-specific attribution, and the clustering of low-promotable tasks generate weak HR-visible evidence of individual performance. Finally, the cultural layer shows how micro-inequities, such as interruptions and biased framing of behavior, diminish women's talk time, perceived authority, and upward visibility.

Figure 1. provides an overview of the model, illustrating the structural, process, and cultural mechanisms and their cumulative effects on HR-visible career signals. The subsequent subsections (4.1- 4.3) elaborate each layer in detail, supported by illustrative quotations, deviant cases, and brief notes on prevalence.

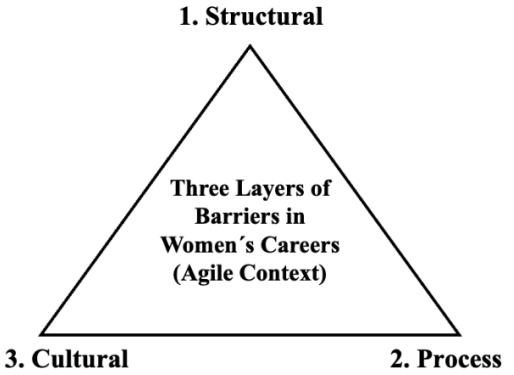

Figure 1. Three Layers of Barriers in Agile Careers. Structural, process, and cultural mechanisms and their effects on HR-visible career signals (details in Sections 4.1–4.3)

Each analytical layer is elaborated in turn, beginning with the structural bottleneck discussed in the next section.

4.1 Structural layer - Opaque criteria, gatekeeping, first-promotion bottleneck

The structural layer reveals how opaque promotion criteria and budget-related gatekeeping constrain early career advancement. In the absence of transparent rules, the first promotion often depends on case-by-case negotiations and informal sponsorship. Formal thresholds, such as the requirement to lead two teams, further amplify delays—particularly for coordination-oriented roles (Scrum Master, Agile Coach) and for interviewees with care responsibilities. As a result, HR-visible signals at the first career step

emerge more weakly and at a later stage. Interviewees repeatedly emphasized the decisive role of unit managers as budget holders. One participant explained:
"Final decision lies with the unit manager; budget must be allocated … much is not really measurable" (INT10_UTW3). Another reported that "the one promotion I got, I had to push through with the works council—otherwise it would not have happened" (INT2_SMW1). Several respondents highlighted the absence of defined career paths, noting, for example: "Do I have a promotion profile? … there is no career path" (INT11_UTM1). The formal threshold of leading two teams was described as a particular barrier for those with care obligations: "At a certain grade you must lead at least two teams … care work becomes the first barrier" (INT5_UTW1).
Patterns differed systematically across roles. Product Owner and technical lead tracks provided clearer exposure to strategy and client interfaces, offering more visible promotion signals. By contrast, Scrum Master tracks were often framed as support functions, yielding fewer upward-legible indicators unless facilitation and coordination work was explicitly translated into evidence.
A deviant case illustrates the role of transparency and sponsorship. One male Product Owner described a promotion process based on a clear rubric combined with sponsor backing, which allowed him to bypass the bottleneck observed elsewhere. This suggests that where criteria and sponsorship are explicit, the structural barrier is mitigated.
Alternative explanations such as seniority or performance differences were considered but found insufficient. Even in otherwise comparable cases, opaque thresholds and unit-level budget gatekeeping remained decisive in shaping advancement.
Proposition P1. In agile organizations, the first promotion is constrained when criteria are opaque and budget-holder gatekeeping dominates. Unless coordination-heavy contributions are explicitly translated into evidence, roles framed as support (e.g., Scrum Master) face systematically weaker first-step signals.
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4.2 Process layer - Invisible work, weak HR signals, and attribution gaps

In agile environments, the accumulation of low-promotable tasks (LPTs)—such as documentation, coordination, onboarding, and diversity/care work—on the same individuals produces significant attribution gaps. While these contributions are often valued within teams, they typically remain invisible at the organizational level when transparency mechanisms operate only at the team rather than the individual level. As a result, critical inputs to collective functioning are under-credited, which weakens the signals visible to human resources (e.g., system entries, promotion dossiers). This dynamic slows career progression despite high local appreciation.
Interview data illustrate this tension. Developers and Scrum Masters frequently described such tasks as "invisible work," rarely verbalized or officially recorded: "No one sees this … in the worst case the Product Owner thinks she [female developer] can't finish her tickets because he doesn't see the invisible work" (INT2_SMW1). Others

emphasized that documentation and organizational work are "considered part of the job" and therefore remain unrecognized (INT10_UTW3). One participant concluded bluntly: "HR doesn't even know I exist … there is no career path" (INT11_UTM1). Even when colleagues assigned informal titles—such as "protocol fairy" (INT9_POW1)—this local recognition did not translate into formal acknowledgment in HR systems.

A role-based comparison highlights these attribution gaps. Product Owners (POs) generally reported having person-specific and formally logged contributions, often "officially on paper." By contrast, Scrum Masters (SMs) and many Developers or UX specialists carried substantial glue work whose recognition remained local unless proactively documented. Consequently, HR-signal strength diverged across roles depending on whether contributions were individually attributed and formally recorded.

A deviant case offers nuance: one Scrum Master noted that process and documentation work was rotated and locally respected. Yet even in this setting, without explicit HR logging, the upward signal remained uncertain.

Alternative explanations such as personality traits or speaking style were mentioned in the corpus, but these factors did not outweigh the systemic asymmetry in valuation. The prevailing organizational hierarchy—where code is prioritized over care and coordination—emerged as decisive for dossier strength.

Proposition P2. In agile environments, uneven distributions of LPTs combined with team-level (non-attributed) transparency generate weak HR signals for individuals undertaking coordination and care work. Unless such contributions are rotated, explicitly credited, and logged to named individuals, career progression will slow despite strong team-level appreciation.

4.3 Cultural layer - Micro-inequities, biased framing, and reduced voice

The cultural layer highlights how subtle interactional mechanisms undermine women's visibility and authority in agile settings. In meetings and agile ceremonies, micro-inequities such as interruptions, selective uptake, and biased framing of identical behavior consistently reduced women's talk time and willingness to contribute. While men's assertive behavior was often labeled as "motivated" or "confident," similar actions by women were described as "emotional." Over time, these dynamics dampened women's upward visibility and influence, thereby weakening the career signals attached to their contributions.

Several interviewees described the cumulative effect of being ignored or dismissed. One developer recalled: "We were four female developers, and all felt that in meetings we were ignored/overheard, our objections dismissed" (INT5_UTW1). Another echoed this pattern: "Whenever I had something to say, it was dismissed or ignored" (INT9_POW1). Gendered interactional norms were also evident: "Men just talk themselves in (…) women say 'sorry, you go ahead' and step back" (INT4_SMM1). The longer-term consequences included withdrawal: "(…) I simply stopped speaking up. I just gave up" (INT2_SMW1). A recurring theme was the double standard in framing identical behavior: "When a woman says something, it quickly becomes 'she's

emotional'; for men, the same is seen as 'motivated/assertive'" (INT7_POM1). Another participant captured the asymmetry starkly: "A woman says something—silence. A man repeats it—applause" (INT10_UTW3).

Analytic memos and co-occurrence matrices confirmed the link between biased framing, interruptions, and reduced speech share. This pattern translated into diminished upward visibility, with effects ranging from self-censorship to considerations of exit. While one male Product Owner attributed such differences to personality or loudness rather than gender, the modal pattern across interviews remained gendered. Regardless of intent, the consequences for visibility and career signaling persisted.

Proposition P3. In agile ceremonies, micro-inequities and biased framing reduce women's talk time and perceived authority. Absent facilitation rules that protect airtime and credit contributions, these interaction patterns erode person-specific career signals and slow progression.

Table 1a. Three Layers of Barriers in Women's Careers in Agile Environments

Layer	Core mechanism	Typical manifestations in our case	Career implication	Practical levers
Structural	Opaque criteria + budget gatekeeping; formal first-step thresholds	Final decision by unit manager; no career path/profile; "lead two teams" rule; role channeling (PO/Tech-lead > SM)	Slowed/unequal first promotion; roles framed as support produce weaker upward signals	Promotion rubric with calibrated examples; document decisions; sponsor assignment at first step; clarify role-to-career mapping.
Process	Invisible work → weak HR signals (attribution gap)	LPTs (documentation, coordination, onboarding, DEI) cluster; team sees it, HR doesn't; "code has priority"; "protocol fairy" labeling	Thin promotion dossiers despite high team value → slower progression	Rotate & credit LPTs; evidence logs linking named ownership → outcomes; quarterly HR-visible summaries; demo-ownership norms.
Cultural	Micro-inequities and biased framing reduce voice & visibility	Interruptions, selective uptake; identical behaviour framed "emotional" (women) vs. "assertive/motivated" (men); withdrawal from speaking	Lower talk time & perceived authority → weaker decision influence & career signals	Facilitation rotation, no-interrupt rule, airtime tracking; explicit crediting/recap; trained moderators for ceremonies

Table 1b. Actionable Levers for Equitable Careers (aligned with equality–equity lens)

Layer	Equal (generic)	Equitable (targeted & outcome-oriented
Structural	Same ceremonies for all	Transparent promotion rubrics; broadened entry criteria; sponsor matching
Process	Generic "good job" feedback	Attribution logs from team artefacts; LPT rotation & credit; calibrated written feedback
Cultural	"Be respectful" norm	No-interrupt rules; rotating facilitation; airtime tracking; bias-aware recap of decision

5 Discussion

The findings shed light on how structural, process-related, and cultural barriers interact to shape women's career trajectories in agile environments. In this section, we interpret these results in light of the broader literature, highlight their theoretical implications, and derive practical recommendations for organizational design. The discussion is structured in three parts: first, a synthesis of the three layers observed; second, the study's theoretical contribution; and third, implications for practice.

5.1 Synthesis across layers.

The analysis reveals a coherent mechanism chain within a single agile organization (see Figure 1). Structural bottlenecks at the first promotion stage—driven by opaque criteria and budget gatekeeping—interact with process-level attribution gaps, in which team transparency is not linked to named ownership and low-promotable tasks disproportionately cluster on the same individuals. These dynamics are compounded by cultural micro-inequities, such as interruptions and biased framing, which reduce women's talk time and perceived authority. Together, these mechanisms thin the person-specific, HR-visible evidence required for career progression. As summarized in Table 1a, equality of rituals in agile environments does not guarantee equitable outcomes. Career equity depends on whether everyday contributions are appropriately attributed, credited, and surfaced for review.

5.2 Theoretical contribution

The findings specify what we term a *conversion perspective*: the conditions under which team-level artifacts and practices do—or do not—become career signals. This perspective extends equality–equity reasoning to agile careers by highlighting the distinction between identical ceremonies and targeted designs that address visibility asymmetries. We show that calibrated rubrics, systematic attribution and evidence practices, sponsorship at the first step, and facilitation norms that protect airtime and credit are necessary to ensure that team practices are converted into HR-visible signals of individual advancement. In doing so, the study contributes to debates on gendered career dynamics in flat structures by theorizing how transparency, coordination, and micro-interactions shape promotion outcomes.

5.3 Practical implications

Translating these insights into practice, Table 1b outlines five implementable levers that align agile practice with evaluation. Each lever addresses a specific mechanism identified in the findings and is accompanied by a minimal metric to enable monitoring.

- Publish calibrated promotion rubrics for the first step. This lever addresses structural opacity and gatekeeping by defining criterion narratives and providing calibrated

examples for each role family (PO, SM/AC, Dev/UX/QA). Requiring a named-ownership line for each exemplar ensures accountability. Minimal metric: the proportion of first-step dossiers containing all exemplars and the number of decisions escalated due to incomplete rubric fields.

- Make attribution routine through evidence logs and named demo ownership. This addresses the process-level attribution gap by adding ownership fields to sprint reviews and quarterly recaps. During demos, named owners of outcomes should be explicitly acknowledged. Minimal metric: the percentage of ceremonies with named ownership recorded and the count of person-specific entries synced to HR systems per quarter.
- Rotate and credit low-promotable tasks (LPTs). To mitigate clustering and underrecognition, task-allocation dashboards can track documentation, onboarding, coordination, and DEI work. High-load items should be rotated, and credit lines entered into evidence logs. Minimal metric: an LPT rotation index (distribution by person) and the number of credited LPT entries per individual per quarter.
- Institutionalize sponsorship at the first promotion step. This lever addresses gatekeeping and unequal exposure by creating an opt-in sponsorship pool and brokering stretch assignments on a quarterly basis. A sponsor memo should be required in first-promotion dossiers. Minimal metric: coverage (the share of first-step candidates with a sponsor) and conversion (the proportion of sponsor-backed dossiers submitted and approved).
- Enforce facilitation and voice norms in ceremonies. To counteract micro-inequities, rotating facilitation, a no-interrupt rule, brief airtime checks, and explicit credit recaps should be institutionalized. Minimal metric: airtime balance (distribution of talk time or turns), the number of interruptions per ceremony (self-reported), and the number of explicit credit lines announced.

Together, these levers translate structural, process, and cultural mechanisms into actionable interventions. By embedding equity-oriented practices into everyday agile routines, organizations can ensure that career signals are not only visible but also fairly distributed.

6 Limitations and future research

While the study advances understanding of how agile environments shape women's career trajectories, it is important to acknowledge its limitations and outline directions for future research. The following section first addresses methodological and contextual constraints that bound the scope and transferability of the findings (6.1). It then develops a research agenda (6.2) that builds on these limitations and identifies opportunities to further test, refine, and extend the proposed model.

6.1 Limitations and transferability

This study is based on eleven expert interviews within a single German ICT service provider, prioritizing contextual depth over breadth. The chosen roles (Product Owner, Scrum Master, Agile Coach, Development/UX/QA) reflect the central functions of agile teams that shape both visibility and career opportunities. This sampling strategy allowed for variation in responsibility, seniority, and gender representation, while remaining analytically comparable within one organizational context.

The findings therefore support analytic generalization to comparable agile structures rather than statistical inference. Transferability may be shaped by cultural and institutional features such as the role of works councils, budget allocation processes, and the intensity of hybrid work configurations. At the same time, potential biases may result from the role constellation and gender composition of the interviewees. While perspectives from diverse agile roles were included, the single-case design and small sample size inevitably limit representativeness. To enhance validity and reliability, triangulation was pursued through role variation, cross-case comparison, and double-coding procedures. Nevertheless, organizational culture and gender ratios may have influenced the findings and should be considered when applying the model to other environments.

6.2 Future research

The analysis suggests four avenues for further research.

Comparative and cross-national designs. Multi-case studies across countries, sectors, and organizational forms are needed to test the robustness of the three-layer mechanism. Such designs should explicitly contrast contexts with and without works councils and examine differences across agile frameworks and maturity levels.

Mixed-method measurement of conversion. Future work should model the “conversion step”—the extent to which team-level evidence becomes person-specific career signals—by linking evidence logs and named ownership to HR information systems. Longitudinal analyses, for example through survival or hazard models, could trace time-to-first-promotion before and after interventions such as calibrated rubrics or attribution routines.

Field experiments and pilots. Stepped-wedge designs at the team level could randomize interventions such as LPT rotation and credit, structured sponsorship at the first step, and facilitation/voice norms (e.g., no-interrupt rules, rotating facilitators). Low-cost instrumentation, such as airtime and interruption counts or credited entries, would allow estimation of causal effects on dossier strength and promotion outcomes.

Heterogeneity and intersectionality. Further studies should investigate role-specific career pathways (e.g., Scrum Master to Product Owner transitions), the dynamics of remote versus on-site teams, and distributional impacts across gender and other social

categories. Ethical handling of privacy-sensitive data is essential. Where feasible, triangulation of interview data with documentary evidence (e.g., review templates, rubric exemplars) and meeting analytics would strengthen internal validity.

7 Implications for Policy and Practice

The findings of this study point to several implications for organizational policy and managerial practice. At the **policy level**, organizations should establish transparent and formalized promotion criteria to counteract structural gatekeeping. Agile artifacts such as backlogs, sprint reviews, and retrospectives should not remain confined to the team level but be systematically integrated into HR evaluation systems. This would ensure that the visibility created within teams also translates into person-specific career signals at the organizational level. Furthermore, a regular **gender audit of role assignments** is recommended in order to identify and prevent systematic role channeling that allocates women disproportionately to facilitative or low-promotability tasks. Complementary sponsorship programs—beyond traditional mentoring—can strengthen women's upward visibility by actively connecting them to strategic stakeholders and decision-makers.

At the **practice level**, team leaders, Product Owners, and Agile Coaches should take conscious responsibility for equitable task allocation. Rotation mechanisms can help distribute "office housework" tasks such as note-taking or coordination, preventing the invisible concentration of such work on women. Meeting cultures should be actively moderated to reduce interruptions and ensure balanced speech shares. Agile Coaches can be trained to recognize and mitigate gendered interaction patterns that subtly disadvantage women. Finally, feedback and evaluation routines should be structured so that individual contributions are explicitly articulated and recorded, thereby strengthening the conversion of team-level evidence into promotable career signals.

Taken together, these recommendations emphasize that agile methodologies do not automatically lead to more equitable career opportunities. Rather, organizations need to deliberately adapt their HR policies and everyday practices to ensure that the benefits of agile—transparency, collaboration, responsiveness—are also translated into fair and inclusive career advancement processes.

8 Conclusion

This paper examined how agile work environments shape women's career trajectories. Drawing on eleven expert interviews, we developed a mechanism-first account of why team-level transparency does not automatically generate person-specific career evidence. The *Three Layers of Barriers* demonstrate that (i) structural opacity and budget gatekeeping create a first-promotion bottleneck, (ii) process-level attribution gaps around low-promotable tasks thin HR-visible dossiers, and (iii) cultural micro-inequities undermine voice and perceived authority.

An equity-oriented design is therefore required to complement the formal equality of agile rituals. The study proposes practical levers, including calibrated promotion rubrics and evidence logs, systematic rotation and credit of LPTs, structured sponsorship at the first promotion step, and facilitation norms that safeguard airtime and recognition. Together, these mechanisms ensure that everyday contributions are translated into upward-legible career signals.

Although limited to a single organization and qualitative scope, the model and accompanying tables provide a portable diagnostic for identifying structural, process, and cultural barriers in agile contexts. They also offer a practical agenda for redesign, enabling organizations to move beyond ritual equality toward substantive career equity.

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