Human and Organizational Values in Agile Software Development: A Case Study

Kseniia Suomalainen[1,*], Mohammad Rijal[1], Leticia Duboc[2], Jari Porras[1], Xavier Albaladejo[3], Merri Herrera[3] and Xavier Belloso[3]

[1]LUT University, Lappeenranta, Finland
[2]La Salle, Universitat Ramon Llull, Barcelona, Spain
[3]Voxel Group, Barcelona, Spain

Abstract

Human and organizational values influence how software development teams collaborate, make decisions, and evaluate outcomes. Agile software development emphasizes principles such as individuals, collaboration, and adaptability, suggesting alignment with value-oriented practices At the same time, organizations typically define values at a corporate level, while human values such as freedom, enjoyment, security, and empathy remain central to developers' everyday work. When such values are not fulfilled, unintended consequences may arise. Despite the widespread articulation of organizational values, it remains unclear how human and organizational values are embedded in everyday Agile practices and whether they are addressed explicitly. The aim of this study is to explore how human and organizational values are embedded in Agile software development practices and to what extent these values are made explicit in practice. Drawing on Schwartz's theory of human values, Schein's organizational culture framework, and Maio's value representation model, we conducted an exploratory qualitative case study in a technology company, combining semi-structured interviews with team leads and a questionnaire using the Values Q-Sort method completed by software practitioners. The findings show that human and organizational values are widely recognized and aligned with the organizational culture, but they are rarely addressed explicitly in Agile practices. Instead, values are primarily embedded implicitly through team culture, collaboration, and company initiatives, with only a few practices directly linked to Agile processes. These results highlight a gap between Agile's value-oriented principles and their enactment in everyday development work. By investigating how values are embedded in everyday practices, the paper contributes valuable insights that can inform both practitioners and researchers how values appear in Agile practice and offers a basis for future research on making value reflection more explicit in Agile development.

Keywords

Agile software development, Human values, Organizational values, Agile practices

1. Introduction

As software companies and their products increasingly shape societal dynamics, human considerations are becoming increasingly important in software development [1]. Agile software development has become one of the dominant approaches for organizing software projects, emphasizing principles such as individuals and interactions, collaboration, and responsiveness to change [2]. These principles reflect a strong orientation toward values that influence how software teams organize their work and interact. However, the extent to which these values are explicitly reflected in everyday development practices remains unclear. In practice, organizational pressures, delivery constraints, and team norms may influence how these values are interpreted and enacted. At the same time, organizations promote their own values that guide decision-making and collaboration. Consequently, software teams often operate at the intersection of multiple value systems: organizational values promoted by the company and the personal values of individual developers. Prior research has examined values in software engineering

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*Corresponding author.
kseniia.suomalainen@lut.fi (K. Suomalainen); rijal@sttcipasung.ac.id (M. Rijal); l.duboc@salle.url.edu (L. Duboc); jari.porras@lut.fi (J. Porras); xalbaladejo@voxelgroup.net (X. Albaladejo); mherrera@voxelgroup.net (M. Herrera); xbelloso@voxelgroup.net (X. Belloso)
0000-0002-1558-8455 (K. Suomalainen); 0009-0006-7920-7232 (M. Rijal); 0000-0002-7437-2101 (L. Duboc); 0000-0003-3669-8503 (J. Porras)
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from several perspectives, including human values in software artifacts, the influence of organizational culture on Agile adoption, and the role of value alignment in team performance [3],[4],[5]. However, studies that explicitly address human values in software development remain limited [6]. Yet Agile ceremonies and artifacts structure development work, they provide limited guidance on how such values should be reflected in practice. While many organizations communicate their core values [7], it remains unclear how these values are embedded in everyday Agile practices, and empirical insights into how human and organizational values are jointly enacted remain limited. In many teams, values are assumed to be shared and aligned, particularly in Agile environments with strong cultures and established ways of working. From a sustainability perspective, this implicit treatment of values can be problematic. When values are not explicitly discussed or operationalized, their enactment may depend on individual interpretation and informal norms, making them vulnerable to erosion over time or under changing conditions.

To address this gap, this paper investigates the following research question: **How are human and organizational values embedded in Agile software development practices, and how explicitly are they addressed?** To answer this question, we draw on Schwartz's theory of basic human values [8], Schein's organizational culture model [9], and Maio's multi-level value framework [10]. We report an in-depth qualitative case study of two Scrum teams within a technology company, combining interviews and questionnaires to examine how values are interpreted and instantiated in practice.

This study makes two contributions. First, it provides empirical insight into how human and organizational values appear in everyday Agile software development practices. Second, the findings show that, within the studied teams, values were largely embedded implicitly through team culture and collaboration rather than explicitly operationalized in Agile ceremonies and artifacts, suggesting a gap between Agile's value-oriented principles and their enactment in practice.

2. Background and Related Work

2.1. Human and Organizational values

For many years, human values have been topics of scientific study in the fields of psychology and sociology [11, 12, 13]. The most comprehensive work on human values is Schwartz's theory of Basic human values [14]. The theory identifies 10 human values classified based on their overarching goal. These values in which agile teams cope with human needs include Self-Direction, Security, Hedonism, Conformity, Universalism, Power, Stimulation, Benevolence, Achievement, and Tradition [8]. Following Schwartz's theory, Maio [10] conceptualizes values as mental constructs which are manifested at the system level, the abstract value level and the instantiation level. The *System level (L1)* refers to certain generally accepted values such as honesty, respect, freedom or equality desired by every human. The *Abstract Value level (L2)* refers to interpretation by a person of that value. The *Instantiation level (L3)* refers to the situation or issues where the abstract values are applied. In relation to agile, the system level represents the values that for example, freedom to develop own ideas, the scrum master or the software developer considers important. At the abstract level, a software developer may perceive organisational value such as "quality software" differently from the scrum master. At the instantiation level, a technology firm with security as a core will take concrete action to install strong malware for its software.

There are various definitions of organizational values in the literature, many of which are adapted from human values to suit the organizational context. Stavru's [15], review of organizational values found that all definitions agree that organizational values reflect what the organization considers intrinsically valuable. In the organizational culture framework proposed by Schein [9], organizational values can be seen in the intermediate layer, espoused beliefs and values. It is defined as core values stated by management for the organization in their official publications. According to Schein [9] , these values may or may not be reflected in the employee's day-to-day actual work. These values influence decision-making and the evaluation of individuals and organizations, both in terms of actions and outcomes. This paper uses the definition of organizational values defined by Schein [9] to investigate a

technology company's organizational values.

2.2. Values in Agile Development

Agile software development focuses on iterative and incremental development [16], [17] and is guided by the following four core values according the the agile manifesto: 1) Individuals and interactions over processes and tools; 2) Customer collaboration over contract negotiation; 3) Working software over documentation; 4) Responding to change over following a plan [2]. These values underpin many Agile methods, including eXtreme Programming, Scrum, and Crystal [18], [19]. Among these, Scrum is the most widely adopted framework [20], [21], organizing work into short iterations called sprints. This study focuses on two Scrum teams implementing Agile practices in their work.

Several studies have tried to address values in software development [22, 23]. The role of *Values Guide Selection of Method* was identified only for organisational values [24]. Strode et al. [24] conducted a multi-case study on nine software projects, finding that some organizational culture factors show statistically significant correlations with agile method usage. The role of *Values Affect Performance* was identified for two categories of values, organizational [25, 26, 27, 28] and human [29]. In the organizational context, Alec Cram [25] found that team performance improves when organizational and system development values align. Robinson and Sharp [26] identified the behavior, beliefs, attitudes, and values of the organizational culture as critical to XP team effectiveness. Lenberg et al. [27] linked value misalignment to poor organizational performance. Alahyari et al. [28] explored how organizational values are understood and applied in agile software development from the perspectives of project managers and product owners. Hussain et al. [29] showed that human values improve efficiency and help overcome challenges. Following the ongoing discussions, it is argued that value plays an important role with immense impact on both organization and human by affecting project team [25], organizational [27] and software [29] performance. The role of *Values Transcend Specific Action* was observed in the literature regarding only human values [4]. This role means that a specific value can be expressed through various practices and holds significance in multiple contexts. In investigating the role of values, Ferrario and Winter [4] performed an empirical study using Values Q-Sort to understand values and their practical reflection in software engineering. They demonstrated that value practices are heavily varied depending on someone's interpretation of values. The results failed to distinguish between interpretation and instantiation [4].

Unlike Hussain et al. [29], our work focuses on agile ceremonies and artifacts rather than development stages. Furthermore, it distinguishes between value interpretations (Maio L2 level) and their instantiations (Maio L3 level), thereby extending Ferrario and Winter's [4] research. In contrast to Alahyari et al. [28], which broadly defines values as anything benefiting the organization, product, or customers, this study explicitly examines officially articulated organizational values within Agile contexts.

3. Study design

3.1. Methodology

To address our research question, we conducted a case study following the guidelines of Runeson and Höst [30]. According to Runeson and Höst, case studies are a suitable research methodology in software engineering [30], as they investigate a software engineering phenomenon by exploring multiple sources of evidence in a software company or a small number of software teams. The semi-structured interviews aim to deepen understanding of how values are recognized and applied in organizations, with an emphasis on the organizational perspective. The questionnaire, in turn, explored how values are perceived and enacted from the standpoint of individual practitioners. By examining values from both organizational and individual perspectives, we establish a foundation linking theory and practice by investigating different perspectives on the same research question.

Table 1
Participants of the study

ID	Team	Role	Gender	Experience in Agile
ID1	Pay	Software Engineer	Male	5
ID2	Pay	Software Engineer	Male	2
ID3	Pay	Software Engineer	Male	7
ID4	Pay	Team Lead	Female	8
ID5	Pay	Software Engineer	Male	6
ID6	Com	Team Lead	Male	10
ID7	Com	Software Engineer	Male	3
ID8	Com	Software Engineer	Male	4
ID9	Com	Software Engineer	Male	1

3.2. Case selection and Context

Two criteria guided the case selection: (1) the organization used Agile methodologies, particularly Scrum, and (2) its organizational values were clearly stated in official documents or on its website. The selected case organization, Voxel, is a technology company with over 200 employees that develops procurement, billing, and payment solutions for the travel industry. The company emphasizes its organizational values, described in its cultural handbook, which we refer to as **People-centric, Challenge-centric, Team-centric, and Change-centric**. The case study involved two Agile software development teams, **Pay** and **Com**, both self-organized Scrum teams. Team Pay develops a payment management platform, while Team Com focuses on commercial contracting services. The study included nine software engineers from the two teams, as shown in Table 1. All participants completed the questionnaire, and the team leads from both teams (ID4 and ID6) also participated in interviews.

3.3. Data Collection

We applied two data collection techniques: interviews and questionnaires. Our dominant data collection technique is a questionnaire, and we used it mainly for the purpose of obtaining results from the Value Q-sort exercise.

1.Interviews: Semi-structured interviews were conducted to investigate the role of human and organizational values and how they are implemented from an organizational perspective. The interview guide consisted of three sections: (1) introduction and study protocol, (2) organizational values in Agile, and (3) organizational perceptions of employee values in Agile. Before the study, a pilot interview was conducted with a software engineering lead and an engineering manager from two Indonesian software companies to refine the protocol. The full interview protocol (introductory protocol, session introduction, and questions) is available in the Data Availability section. Following the pilot, two one-on-one interviews were conducted with Team Leads by the first author using Microsoft Teams or Google Meet. Each interview lasted approximately 30 minutes and was recorded and transcribed. Interviews were conducted in English or Spanish. If the interview was in Spanish, the transcript was carefully translated into English and then reviewed by a third author, a native Spanish speaker. The data was then analyzed using qualitative coding made by the first author to identify key themes and connections.

2. Questionnaire: We used a questionnaire to investigate the role of human and organizational values from the individual perspective of employees. It allowed participants to complete the survey at their convenience. Based on the related literature, the **Values Q-Sort** tool [4], was selected as the primary instrument. Values Q-Sort is a value elicitation and measurement method based on the Q-sort technique, where participants rank value statements according to preference. Each statement corresponds to a value in Schwartz's human values model, as shown in Table 2. Each value statement (**S**#) was mapped to one of Schwartz's value groups (e.g., Conformity). For example, the Conformity group includes 'Interpersonal Conformity' (S4) and 'Rules Conformity' (S13). The questionnaire was implemented as a

Table 2
Statement Mapping to Schwartz Values. Adapted from Ferrario and Winter [4]

ID	Statement	Schwartz Values
S1	It is important to me *to be given the freedom to produce new ideas, inventions, and creative works.*	**Self-Direction** Thought
S2	It is important to me *that the software I develop is robustly and usably secure.*	**Security** Societal
S3	It is important to me *to enjoy the process of developing software.*	**Hedonism**
S4	It is important to me *that I do not annoy or upset anyone in the course of my work.*	**Conformity** Interpersonal
S5	It is important to me *that the public good is the central concern of all professional computing work.*	**Universalism** Concern
S6	It is important to me *that the software I develop influences the end user.*	**Power** Over people
S7	It is important to me *that I identify and address any environmental issues in my work.*	**Universalism** Nature
S8	It is important to me *that I am allowed to take risks when developing software.*	**Stimulation**
S9	It is important to me *to improve public awareness and understanding of software.*	**Benevolence** Care
S10	It is important to me *that the software I develop is commercially successful.*	**Power** Resources
S11	It is important to me *that my workplace promotes my physical safety & psychological well-being.*	**Security** Personal
S12	It is important to me *that I do not discriminate against others when developing software.*	**Universalism** Tolerance
S13	It is important to me *that I know and apply industry rules when developing software.*	**Conformity** Rules
S14	It is important to me *that I make my own decisions when developing software.*	**Self-Direction** Action
S15	It is important to me *that I personally achieve high quality in software design and production.*	**Achievement**
S16	It is important to me *to uphold, promote, and respect the principles of my industry.*	**Tradition**
S17	It is important to me *to be an honest and trustworthy colleague.*	**Benevolence** Dependable

self-administered activity on a Miro board with instructions. A pilot study with four master's students in software engineering in Finland showed that describing the top three value statements required more than 40 minutes. To reduce completion time, participants were asked to describe only their most preferred statement. The final questionnaire (available in the Data Availability section) was completed by practitioners from Team Pay and Team Com using Google Forms and Miro. Participants received a questionnaire link and a private Miro board and could respond in English or Spanish.

3.4. Data analysis

The data analysis followed an iterative exploratory process to examine how human and organizational values are embedded and addressed in Agile practice. The analysis focused on identifying observed patterns rather than developing causal explanations.

First, questionnaire data were analyzed to identify which values participants recognized and how they associated them with Agile ceremonies and artifacts. Responses were extracted into Excel and, when necessary, translated from Spanish into English and reviewed by a native Spanish-speaking author. Values Q-Sort responses were aggregated to identify commonly preferred values across teams. For questions linking values to Agile practices, frequencies were calculated to determine how often participants associated specific values with particular ceremonies or artifacts. Results related to Agile ceremonies and artifacts were visualized using bar charts.

Table 3
Example of coding progression from responses to themes

Raw Response Excerpt	Initial code	Subtheme	Final theme
(..every single day, my **colleagues are taking care of me.**.) [ID4]	Colleagues are taking care of me	**OINS-1 Take Care of Colleagues**	**People-centric**
(..we **take care of our colleagues**, where we enjoy a good work environment that we co-create..) [ID5]			

Table 4
Example of values coding and mapping for each value using Maio's multi-level value framework

System (L1)	**Interpretation (L2)**	**Instalation (L3)**
S3 - It is important to me *to enjoy the process of developing software.*	(...I can have **different kinds of projects** and tasks to work on..)	(..**every sprint I take or propose one task** out of my team domain..)
Hedonism	**HINP1 Different Task**	**HINS1 Cross Task in Sprint**

Second, interview transcripts and open questionnaire responses were analyzed qualitatively to examine how participants interpreted values in their everyday work. The data were coded inductively to capture references to value interpretation, enactment, and reflection. Initial codes were then grouped into higher-level categories related to human values, organizational values, and Agile practices. Table 3 illustrates the coding process from raw responses to concrete value instantiations (L3).

Third, the questionnaire and interview data were combined through a mapping process informed by Maio's [25] three-level mental representation of values. Coding was conducted independently by two researchers and discussed until consensus was reached. Statements describing how values were understood were categorized as value interpretations (L2), while statements referring to concrete actions or behaviors were categorized as value instantiations (L3) (see Table 4). This mapping enabled a structured comparison between abstract value recognition and their enactment in practice. For human values, level L2 (interpretation) was coded as **HINP**, and level L3 (instantiation) as **HINS**. Organizational value instantiations were coded as **OINS** using the same logic. Patterns across data sources were then identified by comparing results within and across teams. Recurring themes, similarities, and differences were summarized in the Results section. The analysis aimed to provide an empirical description of how values are embedded implicitly and how explicitly they are addressed in Agile software development practices.

4. Results

Across both teams and data sources, several patterns were observed: (1) Human and organizational values are widely recognized by Agile team members; (2) Values are primarily embedded implicitly through team culture and everyday collaboration; (3) Explicit consideration of values within Agile ceremonies and artifacts is limited; (4) Only a small number of value-related practices are directly linked to Agile processes; (5) The enactment of values relies largely on individual interpretation and informal norms.

4.1. Limited Explicit Treatment of Values in Agile Ceremonies and Artifacts

The questionnaire data provide insight into how explicitly values are addressed within Agile ceremonies and artifacts. Figure 1 compares the frequency with which participants considered human and organizational values during Agile ceremonies. We asked participants *In which Agile ceremonies do they consider values?*The *Daily* meeting was the most frequently cited context for reflecting on **human values** (8 of 9 participants). *Sprint Review* and *Retrospective* were less frequently associated with human values (3 of 9 participants). The *Product Inception* ceremony was selected by 5 of 9 participants from two teams

and was the only ceremony where all three value types were reported equally. For **organizational values**, *Backlog Grooming* was most frequently mentioned (7 of 9 participants). *Daily* and *Sprint Review* were the least cited (3 of 9 participants each). Two participants also mentioned a bidirectional feedback session, and one referred to a stakeholder alignment meeting.

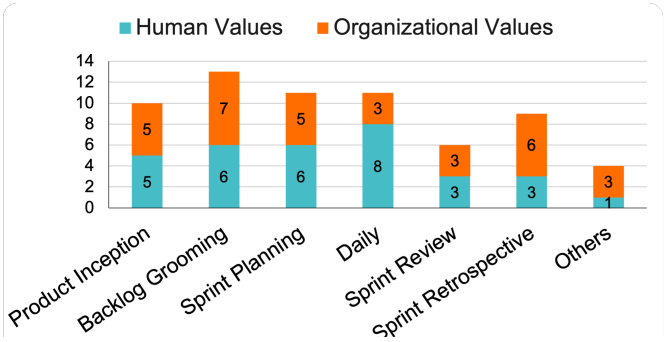


Figure 1: Agile Ceremonies and Values

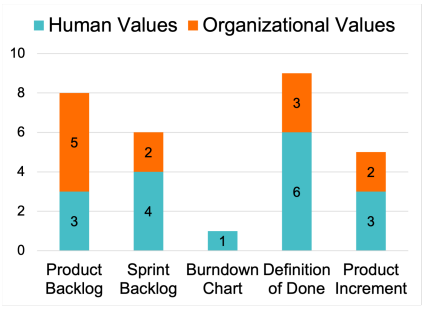


Figure 2: Agile Artifacts and Values

Figure 2 shows the comparison of the results of human and organizational values for each artifact. The question was *In which Agile artifacts do they consider values?* Questionnaire responses showed that the *Definition of Done* was most frequently associated with **human values** (6 of 9 participants). The *Burndown Chart* was rarely mentioned, and no additional artifacts were reported in relation to human values. For **organizational values**, the *Product Backlog* was the most frequently cited artifact (5 of 9 participants), while the *Burndown Chart* was the least cited, with no participants selecting it. No additional artifacts were reported in relation to human or organizational values. Overall, values were more often mentioned in relation to Agile ceremonies (e.g., daily meetings) than Agile artifacts.

4.2. Human Values in Practice

Interviews with the team leaders revealed that, Voxel has different initiatives in cultivating human values in the organization, ranging from mindfulness courses, career plans, to a space for sharing. They want to make the organization a "Great Place to Grow". Team Leaders believe that the human values of their team members are a concern in their organizations. "Voxel cares about how people feel in their team. So the balance between work and personal life is a big thing. We have metrics for that, so people have a lot of flexibility in terms of their family commitment" (ID4). "Voxel always tries to have an impact on our life, for example now we have a mindfulness course" (ID6). Similarly, with organizational values, Voxel uses a platform named Nailted to measure metrics related to human values, such as level of well-being and engagement. Interview and questionnaire data revealed a variety of practices through which human values are instantiated in everyday work. Table 5 presents the mapping of human values in practice to Maio's three levels of value, based on qualitative questionnaire responses.

Mapping responses to Maio's three levels showed how these abstract values were interpreted and instantiated in practice. For instance Security (S11) was interpreted as maintaining a safe and respectful workspace and instantiated through "choosing the least frictional decision." ID1 noted that in his work, when making decisions, he tries to minimize friction between stakeholders.

The practices for considering values varied depending on the participants' personal interpretations, with only a few practices directly related to agile processes. Notably, only three practices were directly tied to Agile processes: (1) Utilizing Agile planning methods (HINS-6), (2) Practicing collaborative programming (HINS-7), and (3) Using Scrum for quick feedback (HINS-10). Although participants often mentioned tools like Nailted to support well-being (ID6, ID7, ID9), few practices explicitly linked human values to Agile techniques or ceremonies. This finding indicates that values are culturally present but procedurally absent. There was no clear mention of value-specific tools, techniques, or frameworks.

Table 5
Human Values in Practices

Value (L1)	Interpretation (L2)	Installation (L3)
S11	**HINP1 Safe Space** (.. work should not cause prejudice in your physical or psychological well being..) [ID1]	**HINS1 Choose Least Friction Decision** (..when making decisions I do my best to choose the one that causes the least friction to the stakeholders..) [ID1]
S17	**HINP2 Bare Minimum for Work Environment** (..Everything falls apart in an environment with trust issues, it is not worth your time..) [ID7] **HINP3 Transparent** (...make an enjoyable, transparent, and productive environment for my teammates..) [ID7]	**HINS2 Use Nailted Tools** (..I believe there are some metrics on a tool called Nailted that might indicate the level of "trustworthy" but that would be the closest thing..) [ID2],**HINS3 Active Documentation** (...I actively write documentation and use diagrams to help my teammates understand...) [ID7] **HINS4 Acknowledge Someone's Work** (...I also publicly acknowledge their work..) [ID7]
S10	**HINP4 Necessity for User (**..one of the reasons software is commercially successful is because it addresses the necessity of our customer..) [ID3] **HINP5 Sustainable Development** (..you can enjoy the process... etc., but if the software does not achieve success, further development will not be sustainable...) [ID3]	**HINS5 Use Visualization Tools** (..use visualization tools like PowerBI to understand the impact..) [ID3]
S6	**HINP6 Impact on User (..**the software we develop every day is important and useful for somebody... user impact it's really important for me...**)** [ID4]	**HINS6 Utilize Agile Planning Method** (.. always considering the faster and greater value we can provide to the final user. MVP, Vertical Slicing, and Planning Poker, help us a lot to keep it in mind..) [ID4]
S3	**HINP7 Necessity for Software Practitioners** (..As a software engineer... who spends a large part of my day making software, I find it appropriate to enjoy my work..) [ID5] **HINP8 Foundation of Good Working Environment** (..if I enjoy my work, I do (foster) a good work environment for my teammates and do the best work I can...) [ID6] **HINP9 Enjoyment in Development (..**I really like to develop and do it in a fun way..**)** [ID9]	**HINS7 Collaborative Programming** (..working as a team with mob or pair programming..) [ID5]**HINS8 Practice Quality Process and Product** (..following good practices, Developing a robust and quality product..) [ID5]**HINS2 Use Nailted Tools*** (..Nailted helps to show our empathy level..) [ID6]
S1	**HINP10 Creative Way to Deliver Value** (.. because i like thinking of creative ways to solve a problem and give real value to the users..) [ID8]	**HINS9 Propose Multiple Solution** (... I try to understand a problem from the user's perspective... can think and propose different solutions..) [ID8 **HINS10 Utilize Scrum to Get Quick Feedback** (...we use Scrum in order to obtain feedback as quickly as possible...)[ID8]

4.3. Organizational Values in Practice

Organizational values were described as being enacted primarily through cultural practices and company-wide initiatives rather than through explicit Agile mechanisms. The interview with the team leaders revealed that in considering organizational values, Voxel uses one of the organizational values each quarter to develop initiatives. These initiatives were applied to all employees, including people in the agile software development team. As an agile team, they are also welcome to develop their own initiatives based on the quarterly chosen organizational value. Team Leads believe that organizational

values are also present in their day-to-day work as an agile software development team. However, they mentioned that it is more implicitly considered rather than explicitly. *"The organizational values are ingrained in the culture itself, rather than an agile process. We do (incorporate) it in a more subtle way, rather in a systematic way"* (ID6). In measuring the organizational values, Voxel uses Nailted, an employee engagement and feedback software. The questions asked in Nailted were mapped to metrics related to the values themselves. There was no clear mention of the specific practice in agile software development processes enforced by the organization to support the inclusion of organizational values. Due to space limitations, the detailed mapping of organizational values to practices is omitted from the paper and provided in the supplementary material referenced in the Data Availability section. There is only one practice that is directly related to agile processes, which is OINS-7 Reflect and Continuously Improve. Similar practices were identified across different organizational values, such as OINS-1 in People-centric and Team-centric values, as well as OINS-3 in Challenge-centric and Change-centric values. There was no clear mention of value-specific tools, techniques, or frameworks used.

5. Discussion

5.1. Implicit Value Embedding in Agile Software Development

The study suggests that human and organizational values play a meaningful yet often implicit role in Agile software development within the studied organization. Human values were mainly expressed through team interaction and culture, such as collaboration, trust, and enjoyment. Participants most frequently associated the *Daily* meeting with reflecting on human values, while *Sprint Review* and *Retrospective* were less often linked to such reflections and appeared more task-focused. Organizational values were primarily reflected through company-wide initiatives rather than Agile ceremonies or artifacts. Few explicit mechanisms translated values into Agile practices, suggesting that values shape the surrounding culture of Agile work but are not systematically embedded in the development process. Consistent with earlier research [4], the findings from the case also suggest that values influence how team members interpret and enact Agile principles. Participants often described values as "part of the culture," indicating that they are embedded through shared assumptions and informal norms. While this implicit embedding may support flexibility and autonomy, it also means that value enactment within the studied organization depends largely on individual interpretation.

Two roles disscused in prior literature are particularly relevant for interpreting our results, both of which complement previous findings: (1)*Values transcend specific actions and situations*: Human values are relevant in multiple Agile ceremonies and are not limited to specific behaviors or attitudes. Ferrario and Winter [4], showed that Agile team members interpret values differently depending on context. For example, the value Stimulation (S8) was interpreted as "an expression of autonomy" in a personal context but as something avoided in an organizational context. A similar pattern emerged in the Voxel case study, where participants interpreted the same value differently. For example, Hedonism (S3) was described as a personal necessity by one participant and as a way to foster a positive work environment by another (Table 5, HINP7–HINP8). (2)*Values affect performance:* Values are closely related to team performance, development processes, and product outcomes. While prior study [29] link values to performance, our findings indicate that values shape everyday work practices rather than directly observable performance outcomes. For example, one participant noted that enjoyment in software development contributes to a positive work environment and higher-quality work (Table 5, HINP8). Similar links between values and performance have been reported in several industry case studies. [25, 26, 27, 28]. Together with the Voxel case, these findings suggest that values influence how Agile teams function, even when they are not explicitly embedded in process frameworks.

5.2. Explicit Treatment of Values in Agile Practices

A second key finding concerns the limited explicit treatment of values within Agile ceremonies and artifacts in the studied case . While participants were able to associate certain values with ceremonies

such as daily meetings or retrospectives, these associations were largely informal and varied across individuals. Agile artifacts were rarely perceived as supporting value reflection, and some commonly used artifacts were described as purely technical or procedural. This suggests that Agile practices may not inherently ensure the explicit consideration of values. Instead, values are addressed unevenly and depend on team-specific habits rather than on structured mechanisms, meaning that the visibility and consistency of value enactment could vary across teams and over time.

The findings reveal that both human and organizational values are recognized and appreciated at Voxel, but their operationalization within Agile processes remains informal and fragmented. Voxel embodies these values more in its cultures than in the agile software development process. While daily stand-ups, sprint planning, and retrospectives create opportunities for reflection on interpersonal and team-level values, these moments rarely involve explicit discussion or formalization of organizational values, and participants did not describe clear mechanisms supporting their integration into Agile practices. At the Instantiation level (L3), the findings from this case indicate that values are less considered in the agile process. Unlike Ferrario and Winter [4], who did not clearly distinguish between Instantiation (L3 / HINS) and Interpretation (L2 / HINP), our study makes this distinction explicit. Similarly, Hussain et al. [29], classified practices into five stages of software development, but without linking them to specific human values. While that study mainly identified cultural practices, this case observed some tools and techniques supporting values, such as Nailted and collaborative programming. However, only three practices (HINS-6, HINS-7, HINS-10) were identified as directly related to agile software development. For organizational values, [28] reported that the most commonly mentioned activities were tied to Agile practices, a pattern not observed in this case. Only one organizational value instantiation (OINS-7) was directly related to agile software development. At Voxel, practices such as Nailted surveys and mindfulness sessions demonstrate an organizational commitment to well-being and empathy, yet these remain parallel cultural activities rather than integrated process mechanisms. Overall, the findings highlight a gap between cultural intent and methodological practice. Although Agile frameworks encourage reflection (e.g., retrospectives), these opportunities were not systematically used in the studied organization to articulate or align work practices with core values.

5.3. Implications for practice and academia

For practitioners, the findings suggest that making values more explicit within Agile practices may improve alignment within teams. This does not require introducing new frameworks or fundamentally changing Agile methods. Instead, teams could incorporate value reflection into existing ceremonies, such as retrospectives or planning meetings, or adapt artifacts to prompt discussions about human and organizational values. Such reflection should not prescribe specific behaviors but provide shared reference points that help teams navigate trade-offs and changing conditions. The study highlights several practical insights: (1) A need for practices that more explicitly reflect organizational values within Agile processes. (2) Developers' enjoyment and motivation appear to contribute positively to team well-being and performance. (3) Digital engagement tools such as Nailted may support employee engagement and help operationalize value alignment within teams. Organizations may therefore benefit from formalizing value reflection in Agile ceremonies and integrating organizational values into Agile artifacts. The case study revealed that team members interpret and enact values differently, supporting the findings of [4].This suggests opportunities for future research to further investigate human and organizational values in Agile software development with larger and more diverse participant samples.

6. Limitations and Threat to Validity

This study acknowledges several potential threats to validity. Internal validity may be affected by selection bias, as the case organization, Voxel, was chosen through the author's internal network, potentially limiting the objectivity of case selection. Additionally, there can be another bias as Voxel selected the teams to participate in the study by themselves. Since it was not randomly sampled, the teams might have specific traits regarding values (e.g. positive attitude towards value) and produce

desirable answers regarding values. To minimize this threat, minimum information about the case study was provided without spoiling what the participants are expected to do. In addition, we explained how the data will be processed, aggregated, and anonymized to ensure the individual cannot be identified so that participants feel free to express their ideas and opinions. External validity is constrained by the study's focus on a single company in the travel industry, making it difficult to generalize findings to other Agile teams with different organizational cultures. The relatively small sample size further limits the generalizability of the results. To mitigate these threats, future research could expand the study to multiple organizations and increase the sample size. Construct validity may be that the questionnaire and interview responses may not fully capture the complexity of these values within Agile practices. This research is limited to agile team members within organizations that develop software, meaning the focus on human values examined are the human values of agile team members.

7. Conclusion and Future work

This paper investigated how human and organizational values are embedded in Agile software development practices and how explicitly they are addressed in everyday work. Based on an exploratory case study of two Agile teams, the findings show that values are widely recognized and aligned with organizational culture but are rarely made explicit in Agile ceremonies or artifacts. Instead, they are embedded implicitly through shared assumptions, informal norms, and team culture. While Agile frameworks emphasize values conceptually, their enactment in practice appears to depend largely on individual interpretation rather than structured mechanisms. These findings highlight the importance of human well-being and organizational resilience as socio-technical concerns in software engineering. For practitioners, the study suggests increasing awareness of how values are treated in Agile work and creating opportunities for reflection within existing practices. Making values more explicit may help teams reflect on their ways of working, though such reflection should remain contextual and adaptive rather than prescriptive. Future research should examine (1) value integration across multiple organizations and industries, (2) investigate how values interact with other human factors such as cognitive biases, (3) develop instruments for assessing value alignment in Agile processes, and (4) explore interventions aimed at making values more explicit in practice.

8. Data availability

Questionnaire and interview protocol available at https://doi.org/10.5281/zenodo.15286571. Details related to social sustainability values were omitted for clarity and due to page limitations. Mapping of organizational values to practices available at 10.5281/zenodo.21100686.

Declaration on Generative AI

During the preparation of this work, the authors used Grammarly in order to: Grammar and spelling check. After using these tool/service, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

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