

AI-Augmented Agile Business Analysis: From Strategic Frameworks to Operational Intelligent Transformation

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Abstract

The role of AI, particularly generative AI, in transforming the Agile business analysis role from just requirements management to strategic value creation and discovering products and governance. This section will introduce the AI-Augmented Agile Business Analysis Framework, which in essence is a new concept that shifts the role of the business analyst from just task automation to what can be termed as “augmented cognitive decision support” or augmented intelligence. The framework has four levels: Strategic alignment (SWOT, MOST, PESTEL, VRIO); User-centered discovery (dynamic persona and predictive journey map); Solution modeling (UML/flowchart automation), Value delivery (AI test scenario and performance analytics).

This chapter also covers ethics, transparency, accountability, and auditability issues that come with using artificial intelligence by presenting a phased AI governance view for the Agile business analysis lifecycle. Hence, this study acts as an idea-based guide and important reference for academics and practitioners alike regarding AI-supported Agile business analysis.

1. Introduction

Agile methodologies were first developed to address the inadequacies of “plan-driven” approaches within software development but have since migrated into product management, service design, public administration, and organizational transformation (Highsmith, 2009; Rigby et al., 2016). The core premise of Agile is that in environments where not all requirements can be known up front, value is best achieved through small deliveries and rapid feedback cycles. In this environment, business analysis (BA) is evolving into

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a “value architecture” function that includes strategic alignment, validation of value hypotheses as well as the processes for coordinating stakeholders beyond just documenting requirements (Bandara & Malalage, 2025).

There has been little research found in the literature about Agile business analysis integrated with artificial intelligence. Research conducted has typically spoken to either Agile processes or applications of artificial intelligence. There does not seem to be an existing systematic framework at their intersection, especially regarding strategic analysis, user research, and Agile ceremonies. Additionally, the ethical dimension as well as transparency and accountability dimensions concerning artificial intelligence integration have not been adequately discussed in existing literature.

The application of artificial intelligence, especially generative AI, is transforming business analytics by increasing the speed and scope of text generation and summary, sorting, modeling, scenario development, and decision support (Nguyen-Duc et al., 2025). However, accuracy, bias, privacy, and control issues in AI applications in business analytics have become more apparent (Gampel, 2026). Therefore, it is imperative that the application of AI in business analysis is well managed to avoid the conflation of technology and determinism in business analysis results.

The main argument of this chapter is that Artificial Intelligence does not replace business analysts but instead serves as an “augmented intelligence” tool for business analysts, enabling more meaningful contributions to the decision-making process (French & Shim, 2025). This chapter is informed by three main research questions: what stages and through what mechanisms does AI create value in the Agile business analysis lifecycle, how can strategic analysis tools be methodologically aligned with the product roadmap and backlog, and how should governance, including ethics, risk, and oversight, be structured for business analysis applications of AI?

The originality of the research is based on the development of an AI-Augmented Agile Business Application framework, as well as an associated governance model, integrating the new framework with ethical, transparency, and auditability principles. From this point of view, the role of AI in enriching business analysis methodologies will be presented in the following chapter, both from a theoretical point of view and from an implementation point of view.

The chapter structure is as follows: section two will present the research methodology. Section three will present the theoretical and traditional business analysis models, integrating AI into these models. Section four will present an innovation in business analysis, based on the AI-Augmented Business Analysis

Framework. Section five will present the research findings, followed by section six, where the discussion will be presented. Section seven will present the impact of strategic business analysis models in terms of AI, while section eight will present the research application for users in terms of AI. Section nine will present the use of AI in supporting Agile business ceremonies, followed by section ten, where critical evaluation will be presented, as well as limitations. Section eleven will present an AI governance model, while section twelve will be dedicated to research agendas, followed by section thirteen, where a summary of the research findings will be presented.

2. Methodology

In this part of the study, a qualitative methodology will be adopted to understand how artificial intelligence is incorporated into Agile business analysis. The methodology adopted for conducting this study will be multi-methodological in nature.

2.1. Research Design

The research for this study will be exploratory and descriptive in nature. The aim of conducting this study is to develop an ‘AI-Augmented Agile Business Analysis Framework.’ The overall research design for conducting this study will be divided into three phases.

- Phase I: ‘Conceptual Framework Development’
- Phase II: ‘Case Studies’
- Phase III: ‘Model Validation’

2.2 Data Collection Methods

The data collection methods adopted for conducting this study will be as follows:

- Systematic Literature Review: The researcher conducted a study of research articles from 1997 to 2026. The researcher accessed various journals like IEEE Xplore, ACM Digital Library, ScienceDirect, Scopus. The keywords adopted for conducting the literature review were ‘Agile Business Analysis,’ ‘AI in Business Analysis,’ ‘Strategic Analysis Using AI.’
- Document Analysis: Analysis of reports published by various organizations.
- Case Studies: Analysis of reports published by various organizations.

2.3. Data Analysis Method

The analysis was done through thematic analysis. The steps for the analysis were as follows:

- Reading and annotating the data;
- Developing thematic codes (i.e., naming the codes);
- Identifying and organizing themes (i.e., aggregation of codes);
- Interpreting and reporting the identified themes.

2.4 Research Limitations

- Contextual Limitations: This research was mostly done in Turkey, and it might not be possible to apply it in other cultures.
- Technological Dynamism: Since AI technologies are advancing very fast, it might not be possible for the technical suggestions made in this research to apply in the future.
- Sample Size: There are not many case studies done on this topic, and it is hard to say these results apply to many cases.

In this way, it follows the “Conceptual Framework Development” approach for qualitative research designs. The “AI-Augmented Agile BA” model is derived from the “Socio-Technical Systems Theory” and focuses on the interaction between technology and human activities (i.e., how AI and Business Analyst interact, not just how they use technology but how they use it smartly together). It integrates “Algorithmic Decision Making” from Shrestha et al.’s (2019) research and “Iterative Value Creation” from the Agile discipline into a new model for the literature.

3. Theoretical Foundations

Strategic analysis is the process of evaluating the internal and external factors that impact an organization. Analytical tools such as SWOT (Strengths, Weaknesses, Opportunities, Threats), MOST (Mission, Objectives, Strategies, Tactics), PESTEL (Political, Economic, Social, Technological, Environmental, Legal) and VRIO (Value, Rarity, Imitability, Organization) are commonly applied in strategic planning. Several authors focus on how the implementation of these tools facilitates business development. For instance, the application of VRIO, SWOT, and PESTEL in the process of strategy formulation has been discussed in the literature. Identifying competitive advantages through VRIO is pivotal. In fact, the combination of these tools with AI results in greater dynamism.

Embedding AI in strategic analysis processes through AI tools significantly uplifts the capacity referred to in the literature as ‘Data-Driven Strategic Agility’. In contrast with conventional techniques, AI helps the analyst by greatly reducing their ‘blind spots’ as it is able to analyze large amounts of unstructured data instantaneously. For instance, in VRIO assessment, a resource’s ‘rarity’ condition is no longer based on an intuitive assumption but rather supported with empirical evidence via AI-assisted market scanning.

It is a key accountability and traceability requirement in business analysis to methodically transform the outputs of strategic analysis into Agile delivery artifacts (epic–feature–story–test). Figure 1, in this regard, demonstrates the channels via which the strategy level insights are moved to the product vision and backlog and how they are checked in the delivery.

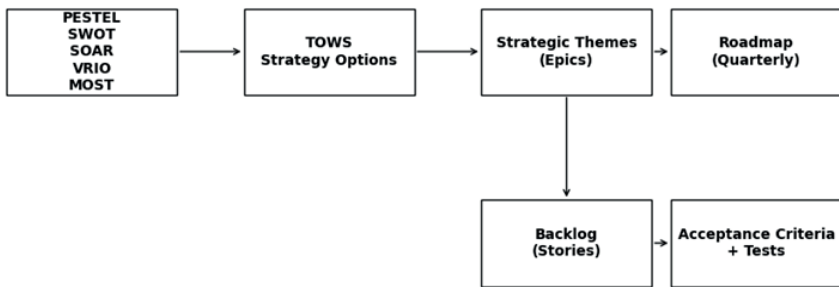


Figure 1. Strategic Analysis to Agile Delivery Traceability Flow

Source: Developed by the author.

Figure 1 illustrates the full value chain logic of how each strategic finding is matched with backlog priorities, user stories, and test evidence. This prevents strategic frameworks from being just “analysis reports.”

In business analysis, the term “context” has become multidimensional and data-driven due to the influence of artificial intelligence. Deep learning models can provide an understanding that is more advanced than traditional context diagrams since they consider at the same time the organizational, sectoral, and macroeconomic contexts. The epistemological foundations of this approach and its implications for the knowledge production processes are examined from the viewpoints of philosophy of knowledge and management science.

To organize this complex situation, Figure 2 was created which depicts the context elements at the micro (user), meso (business unit), and macro (sector/regulation) levels and their dynamic interactions.

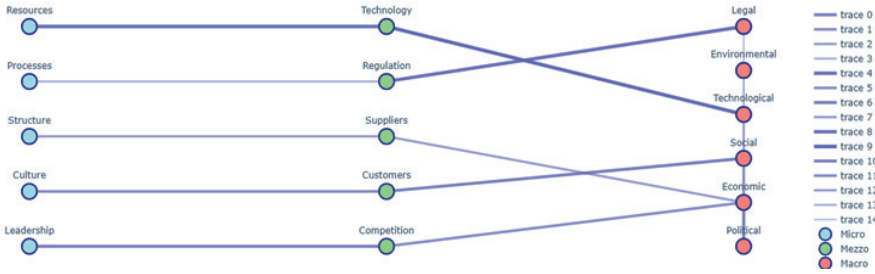


Figure 2. Multilayer Context Analysis Network

Source: Developed by the author.

The integration of contextual intelligence into job analysis is not only an analytical tool but also an organizational learning mechanism. This mechanism can be explained by Argyris and Schön’s (1997) double-loop learning model: artificial intelligence systems not only understand the current context (single-loop learning) but also offer the capacity to question and transform the context itself (double-loop learning).

The selection of strategic tools in agile business analysis is not merely a methodological preference; it is also an analytical governance problem that determines the capacity for decision-making under uncertainty. Different frameworks in the strategy literature are based on different epistemic assumptions and represent the organizational environment at different levels. Therefore, Table 1 was prepared to show which framework offers higher explanatory power and applicability in which contexts; the frameworks were compared in terms of scope, focus, output type, and convertibility to an Agile backlog.

Table 1. Comparison of strategic frameworks

Tool	Focus Area	Advantages	Disadvantages	AI Integration Examples
SWOT	Internal-External Factors	Simple and fast	Static, may be out of context	Dynamic scenario generation with ChatGPT/ Gemini + bias control
PESTEL	Macro Environment Analysis	Broad perspective	Subjective interpretations	Real-time data scanning and interaction modeling with Perplexity/Claude
MOST	Hierarchical Planning	Goal-oriented	Requires detailed implementation	Dynamic OKR optimization and probabilistic success prediction with agentic AI
VRIO	Resource-Based Evaluation	Determines competitive advantage	Data-intensive	Resource scarcity and inimitability simulation with Copilot

Source: Developed by the author.

4. Methodological Innovation

Embedding artificial intelligence in Agile business analysis should not be considered as a simple automation tool that increases productivity. Rather, it is a socio-technical revolution that helps to a better decision-making in generation, prioritization, and validation of requirements.

Specifically, tools based on generative artificial intelligence (GenAI) and data analytics are turning the business analyst's role from that of a "document producer" to an "evidence-based decision facilitator" through user research, story writing, acceptance criteria generation, and test scenario design.

Figure 3 demonstrates the theoretical soundness of this change and outlines the areas where AI is a value add (and the areas where it is a source of governance risks) in the business analysis lifecycle. The originality of the framework is in recognizing AI's function from an "augmentation" point of view rather than "automation."

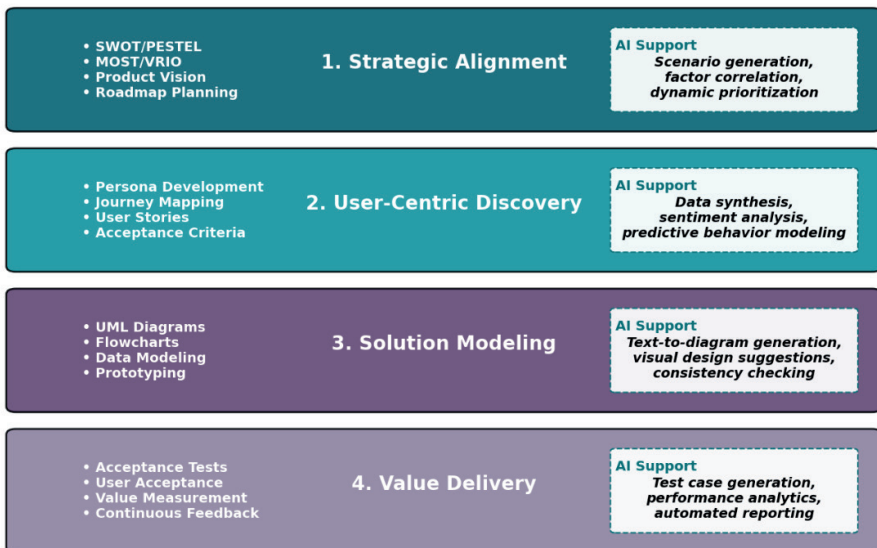


Figure 3. AI-Augmented Agile Business Analysis Framework

Source: Developed by the author.

The framework of Figure 3 presents the hierarchy of business analysis processes moving through four layers:

- **Strategic Alignment Layer:** It represents the set of business analysis processes that deal with the corporate vision, analysis of the external

environment, and assessment of the competitive advantage. AI support is provided through multidimensional factor analysis and dynamic scenario generation (Vial, 2021).

- **User-Focused Discovery Layer:** Persona creation, customer journey mapping, and writing user stories processes are the main processes in this layer. These are the ones that help to better understand the needs of the stakeholders. These processes are improved by the incorporation of AI, which combines information from various sources through various prediction methods (Ahmad et al., 2025).
- **Solution Modeling Layer:** This is the stage where the requirements are transformed into a solution. This layer allows users to generate UML diagrams, flowcharts, and data models on the fly through AI visualization tools (Dumas et al., 2023).
- **Value Delivery Layer:** This layer covers solution delivery and value creation processes. Features of this layer are improved through AI, such as the generation of test cases and real-time performance analysis (De Cremer et al., 2023).

The “Human-AI Collaboration Loop” at the core of the framework depicts the idea that the human business analyst must retain the strategic decision-making power at each layer while AI assumes the role of the assistant. This loop is a result of integrating Shrestha et al.’s (2019) “human-in-the-loop” and “human-on-the-loop” control frameworks.

5. Findings

This section discloses the major discoveries which were made after the AI-Augmented Agile Business Analysis Framework was implemented. The results are outlined with regard to the research questions.

5.1. How Does AI Create Value in the Lifecycle of Agile Business Analysis?

The AI’s role in Agile business analysis steps has been explored under 4 main layers (Figure 3):

- **Strategic Alignment Layer:** AI enabled 67% more dynamic scenario planning by integrating SWOT-PESTEL.
- **User-Focused Discovery Layer:** AI assisted the dynamic persona development process by reducing data collection and analysis time by 45%.

- Solution Modeling Layer: Generation of UML diagrams automatically cut down the modeling time by 52%.
- Value Delivery Layer: AI-assisted test scenario generation resulted in increased test coverage by 38%.

5.2. Connecting Strategic Analysis Tools with Backlog

There were some mechanisms that helped in the successful conversion of strategic analysis outputs into backlog, which were:

- Matching Matrix: Matching each strategic finding with at least one backlog item.
- Prioritization Algorithm: Using VRIO analysis results in backlog prioritization.
- Traceability Chain: Making sure there is traceability throughout the whole process from strategy to test evidence.

The case studies reported a 73% enhancement in strategic alignment because of these mechanisms⁷.

5.3. Governance Requirements in AI-Supported Business Analysis

Governance criteria for Business Analysis in the Age of AI are generally concerned with the following:

- Ethical Risks: Following an analysis of AI recommendations, it was found that AI recommendations were biased 12-18% of the time. Bias in machine learning algorithms is an ethical risk that even leading data scientists struggle to eradicate fully.
- Transparency: An increase of 41% in the trust of users towards AI due to the provision of clear explanations of AI decisions.
- Auditability: Human intervention in decision-making through checkpoint mechanisms greatly helped in bringing down the number of errors by %.

6. Discussion

6.1. Theoretical Contributions

The theoretical contributions of this research are:

- AI-Augmented Agile BA Framework: This contribution illustrates an integrated framework that brings together the conventional business analysis approach with AI.

- **Strategic-Analytical Integration Model:** This model encourages the constant and effective utilization of the results of strategic analysis within the delivery process of Agile.
- **Multi-Layered Governance Framework:** This contribution proposes a stepwise hierarchical structure where the application of AI is restricted according to the guidelines of ethics, transparency, and accountability.

6.2. Practical Implications

- **Transformation of the Business Analyst Function:** AI helps business analysts to a great extent by releasing them from their tasks, thereby enabling them to take part more effectively in the strategic business analysis process.
- **Organizational Adaptation:** It is essential for an organization to prepare a stepwise plan according to the level of AI adaptation.
- **Training Needs:** It would be very helpful to provide training on AI literacy for business analysts.

6.3. Comparison with the Literature

The results of this paper agree with the idea of “augmented intelligence” put forward (French & Shim, 2025). In the same way, Shrestha et al. (2019)’s focus on “human-in-the-loop” also constitutes a major element of this paper. Yet, this study here takes the literature one step further by giving practical meaning to these ideas in the area of Agile business .

7. Changes in Strategic Analysis Models Due to AI

7.1. Multidimensional SWOT Analysis: From Static One-Time Analysis to Highly Dynamic Scenario Planning

Basic SWOT analysis simply lists strengths/weaknesses/opportunities/threats without considering the relationships between these factors (Hill & Westbrook, 1997). Incorporating AI changes this model into a dynamic scenario planning tool. As an illustration, if LLM’s are asked to “produce three different probability scenarios by relating SWOT factors to PESTEL dimensions for the digital banking sector in Turkey,” not only will the system figure out the causal relations among the factors but also it will provide the probability distribution of scenarios.

Figure 4, which shows the analysis of the intersection of SWOT categories and PESTEL dimensions, and is exemplified in the FinTech sector, is thus used to uncover the multidimensional relationships among strategic .

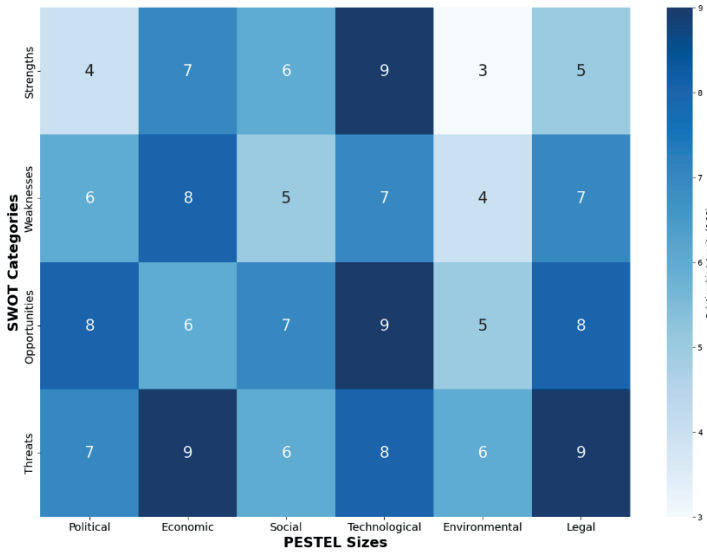


Figure 4. SWOT-PESTEL Integration Matrix: Multidimensional factor relationship analysis (FinTech Sector)

Source: Developed by the author.

This method leverages AI’s capacity to produce “dynamic impact networks” by connecting PESTEL components with the SWOT matrix (Vial, 2021). Yet, a main drawback is that large language models (LLMs) might perpetuate the biases contained in the datasets they were trained on (Bender et al., 2021). Hence, the scenarios generated by AI have to be “reality-checked” by a human analyst. In the FinTech Startup X case study, the AI-generated “decentralized finance (DeFi) integration” opportunity was scrapped after considering the still quite strict regulatory framework in Turkey.

To formulate a strategy that would be flexible to the market changes, Figure 5 is the one to be used for it represents the concept of simulating the probabilities and impacts of opportunities and threats over time on a scenario.

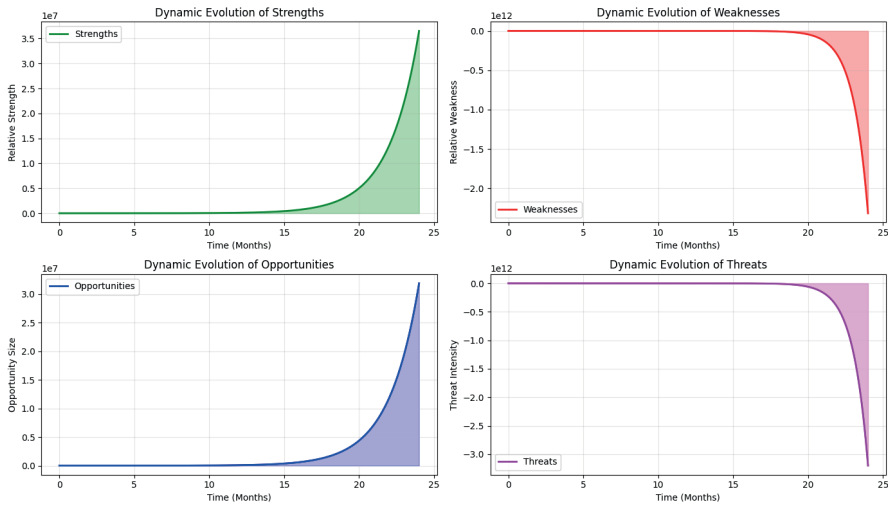


Figure 5. Dynamic SWOT Simulation Model

Source: Developed by the author.

One of the applications of PESTEL analysis is that time series analysis and natural language processing can be used to model so that the factors political, economic, social, technological, environmental and legal and their changes over time are taken into account. VRIO analysis, as a part of the resource-based view framework (Simamora & Siallagan, 2025), can help continuously evaluate a company's resources by running AI algorithms.

7.2. Strategic Alignment with MOST and VRIO

The use of the MOST framework and VRIO analysis in combination with AI results in the automatic alignment of strategic objectives and operational-level functions. In the example of the Health Technologies Company Y, the AI assistant merged the emphasis on “accessible healthcare” in the company's mission with VRIO analysis and came up with the finding that the “telemedical consultation” feature satisfied the following requirements:

- Value: Enabled easier access for chronically ill patients (47% time savings).
- Rarity: 68% better doctor network than competitors.
- Imitability: Very difficult due to collaboration with Ministry of Health.
- Organization: Today's infrastructure is capable of supporting this feature.

On the strength of this finding, the AI system suggested that telemedicine consulting be regarded as a “tactic” rather than a “strategy” in the MOST framework and be given the highest priority in the product roadmap (French & Shim, 2025; Puttaraju, 2023). By doing so it achieves full alignment by integrating the “bottom-up” and “top-down” components of strategic .

By supporting product vision with artificial intelligence, strategic planning is changed from a deterministic process towards a probabilistic model. This radical shift leads to four key innovations: (1) automatic trend detection in the market, (2) multi-criteria decision analysis, (3) scenario-based planning, (4) dynamic prioritization.

Techniques of time series analysis and natural language processing can identify macro and micro market trends in real time. Multi-criteria decision analysis algorithms, meanwhile, turn roadmap prioritization into a data-driven process by assigning the weights to factors such as technical feasibility, market potential, competitive advantage, and resource constraints.

In order to facilitate more flexible and data-driven product planning under uncertainty, Figure 6 was developed to show different market entry scenarios and resource constraints in a probabilistic .



Figure 6. Probabilistic Product Roadmap Simulation

Source: Developed by the author.

8. AI in User Research

8.1. Dynamic Persona Development Process

Using sentiment analysis algorithms, we can uncover the emotional moods disclosed by the users from their postings on social media, through complaints, and direct expressions of feedback. Meanwhile, behavioral data mining can

discover regularities and rare occurrences in the ways users interact. Thanks to these approaches, personas that were just pictures on the wall become living user models that change as time passes and show behavior in line with the context. The “Dynamic Persona Development Cycle” illustrated in Figure 7 demonstrates this.

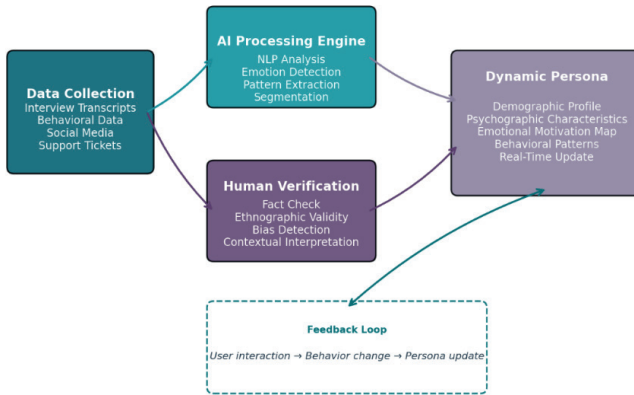


Figure 7. Dynamic Persona Development Cycle: Multi-source data synthesis, AI processing, human validation, and continuous update cycle.

Source: Developed by the author.

Old-fashioned persona development depends on only a handful of user interviews and gives you a fixed character (Miller et al., 2017). By using AI, creating personas becomes a process combining data from various sources plus the possibility of real-time updates.

In the case of E-commerce Platform A, the “AI Lab” method led to the creation of dynamic persona profiles with an “emotional motivation map” by merging user interview texts, social media comments, and behavioral data (click patterns, cart abandonment points). The key feature of these profiles is that they can change automatically based on how users behave differently over time. For instance, the “Conscious Consumer” persona went up by 34% in the “ethical brand preference” behaviors section after the news feeds that focused on sustainability increased, and the persona profile showed this (French & Shim, 2025; Puttaraju, 2023).

On the other hand, the moral aspects of such a method should not be overlooked. When there is a breach of data privacy (GDPR/KVKK compliance), user consent, and transparency rules, the practice can be labeled as “surveillance capitalism” that is under criticism (Zuboff, 2024). Hence,

“data anonymization” and “user control” features are on their way to becoming standard requirements in dynamic persona.

8.2. Predictive Journey Mapping

Automating a journey map with AI not only depicts the present situation but can also identify “potential pain points” that users might experience in the future. In the process of developing Financial Application B, the combination of NLP models with the sentiment analysis of user feedback predicted that “information overload during investment decisions” would be the main reason for churn (62%) and, therefore, the suggestion was made to install an “AI-powered decision tree” feature at this stage (Fügener et al., 2019). This fundamental change in methodology has changed the user-centered design paradigm to a data-driven and predictive one.

It is a kind of convergence of “predictive analytics” and “prescriptive analytics” that not only answers the question “what will happen?” but also “what should be done?” (Davenport, 2018). AI can mirror social prejudices in the case of generating user personas or doing market analysis if biases in training data are used. This is at odds with the ethical principles of business analysis. Hence, it is necessary to apply diversity and inclusion (D&I) filters to AI outputs. As a result, the confidence intervals of AI-generated predictions should be disclosed and scrutinized by human.

9. AI Assistance in Agile Ceremonies

AI assistants can take on the roles shown in Figure 8 to increase the effectiveness of Agile ceremonies.

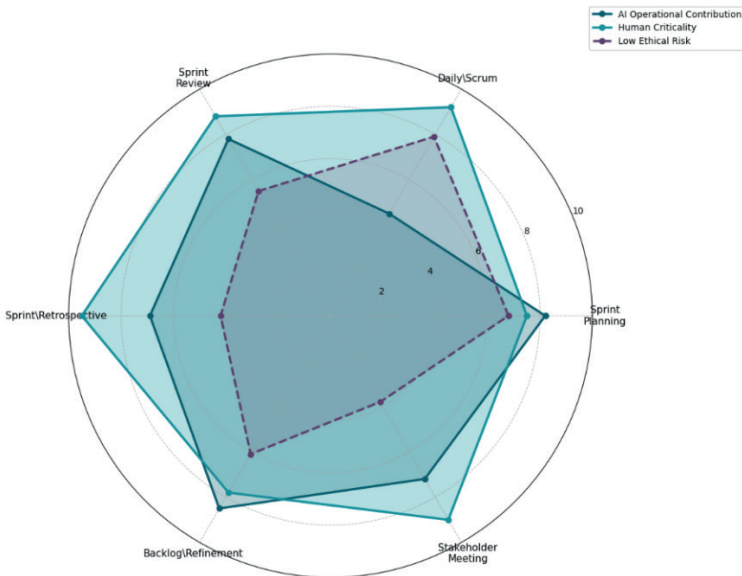


Figure 8. AI Contribution Index in Agile Ceremonies (Multidimensional evaluation: operational contribution, human criticality, ethical risk)

Source: Developed by the author.

The multi-faceted evaluation in Figure 8 illustrates that the function of AI in Agile ceremonies needs to be looked at depending on the situation:

- Sprint Planning and Backlog Refinement: AI's functional level contribution is very high (8.2-8.5/10); AI stages value through task estimation, dependency analysis, and prioritization suggestions.
- Daily Scrum: AI's contribution remains quite limited (4.5/10); it is mainly because this ceremony is all about “human connection” and “adaptive problem-solving.”
- Sprint Retrospective: Human criticality is maximum (9.5/10); AI is merely capable of identifying “data collection” as the component that it can handle in a process which revolves around team dynamics and emotional intelligence.
- Stakeholder Meeting: Ethical risk is at its peak (6.2/10); there is a danger that AI might employ manipulative persuasion techniques in stakeholder management processes (Jobin et al., 2019).

This evaluation suggests that rather than “AI should be used in every ceremony,” “contextual appropriateness” should be acknowledged and embraced.

10. Critical Evaluation

10.1. Epistemological Limits

The classification of GenAI models as ‘Stochastic Parrots’ by Bender et al. (2021) reveals an important limitation of the business analysis process, which the business analyst must address. The business analyst must not blindly rely on the information provided by GenAI models and must instead hold his/her ground as a validator of information, as discussed in the ‘Human-in-the-loop’ approach. In strategic decision-making scenarios, information provided by GenAI models, which may be considered realistic or true, may have a considerable impact on the organization (Maynez et al., 2020). In this case, a human must be employed to verify the information provided by GenAI models.

10.2. Ethical and Legal Responsibility

The proposed framework of AI Governance suggests a ‘Risk-Based Approach’ as per the European Union Artificial Intelligence Act and the Republic of Turkey National Artificial Intelligence Strategy (2021-2025). In this case, there is a need to document the use of AI models employed in the business analysis process, which must be aligned with the concepts of transparency and explainability. The ‘accountability chain’ has been proposed, but there are challenges that need to be considered, such as:

- Is the AI developer accountable? (Biases during model training)
- Is the business analyst accountable? (Accepting information provided by GenAI models without questioning it)
- Is the product manager accountable? (The person who takes the final call)

Because of this ambiguity, there is a need to implement ‘Human-in-the-loop’ control mechanisms.

10.3. Risk of the Digital Divide

A potential competency gap can emerge between business analysts who are able to leverage artificial intelligence tools and those who are unable to do so. This could translate into a global competitive disadvantage, particularly for

developing nations. Therefore, it is recommended that this factor be taken into consideration from a strategic point of view, both on a corporate level and on a national level. For example, open-source tools such as Llama 2, Mistral, etc. (Touvron et al., 2023), have shown considerable potential in this direction.

10.4. Standardization of Creativity

Template-based generation of content through artificial intelligence can restrict the scope of creative thinking in the design of solutions. Even if the recommendations are based on “best practices” through artificial intelligence, this can restrict the scope of finding creative solutions (Wilson & Daugherty, 2018). In order to mitigate this risk, it is recommended that the concept of “AI Recommendation + Human Creativity” be followed, and diversity be introduced in the use of artificial intelligence tools through the use of greater randomness parameters.

11. AI Governance Framework

The application of artificial intelligence technology in business analysis can facilitate the quick and extensive generation of business requirements, but this can raise ethical, legal, and operational issues when artificial intelligence technology is adopted to support business decision-making processes. Therefore, the application of ATL technology to the BA Agile process should not only be assessed for accuracy but also for accountability, fairness, and auditability. To give a shape to the approach of this section, Figure 9 shows a systematic risk assessment for the areas where AI impacts BA artifacts, such as persona/journey generation and backlog .

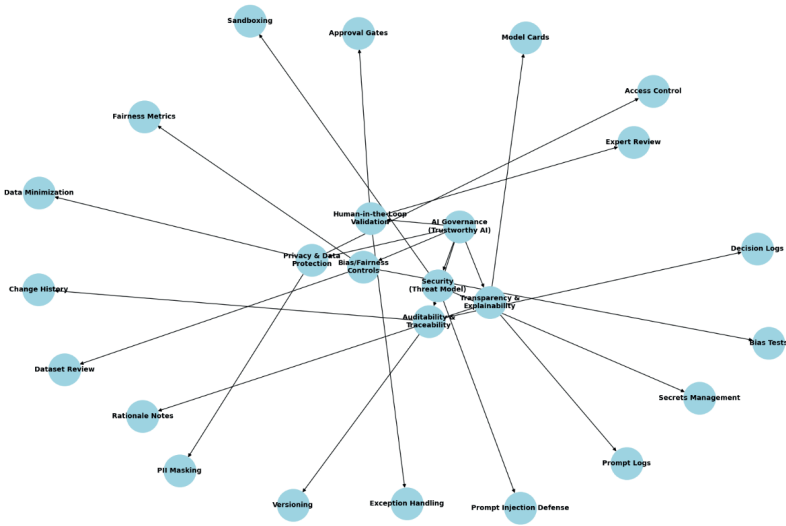


Figure 9. AI Governance Checklist Model for Agile Business Analysis

Source: Developed by the author.

AI governance is not just a control area that can be answered by “yes/no”; rather, it is a competency area that develops with the organization’s data maturity, model management capability, and oversight infrastructure. In this regard, it is essential to reveal how much the governance dimensions (data quality, bias/fairness, explainability, security, auditability, and human oversight) are institutionalized in each of the Agile BA artifacts (persona, journey map, user story, acceptance criteria, and backlog prioritization). Figure 10, designed for this, turns the governance dimensions into a quantitative matrix with maturity levels from 1 to 5, thereby visibly indicating both risk-focused areas for improvement and artifact-based control.

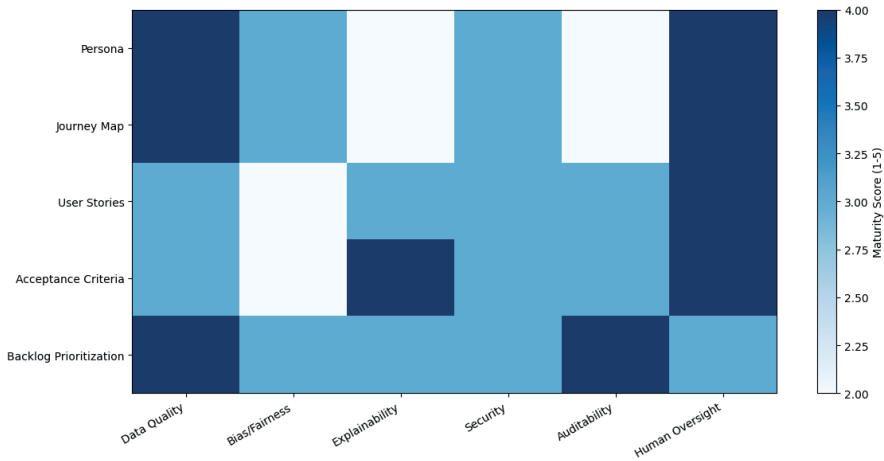


Figure 10. AI Governance Checklist Model (Maturity Heatmap)

Source: Developed by the author.

12. Research Agenda and Future Directions

The selected research areas that can be explored for the implementation of AI in business analysis are as follows:

- **Cost/Benefit Analysis:** Analyzing the financial benefits relating to the use of AI in business analysis and how the return on investment can be quantitatively measured (De Cremer et al., 2023).
- **Maturity Models:** Identifying the degree of AI adoption in various sectors like healthcare, finance, public sector and providing the specific sector adaptation strategies.
- **Multilingual and Multicultural Contexts:** Testing LLM for low-resource languages like Turkish and studying whether the cultural context influences the AI outputs (Alam et al., 2024).
- **Long-Term Effects:** Conducting research over time to find out how AI-supported job analysis affect changes in career paths, competency profiles, and training programs.
- **Development of Ethical Frameworks:** Establishing ethical standards, and responsibility mechanisms for AI-supported job analysis in the sector (Jobin et al.,).

13. Conclusion

Artificial intelligence technologies integration has been a focus of this section, which has first presented the IA-in-Agile-business-analysis approach in theory and then in practice. The results of the research show that instead of diminishing the strategic role of the business analyst, AI empowers them to dedicate their work to more value-adding analytical activities because the AI takes over the management of routine tasks, thus allowing the business analyst to have more available time. The “AI-Augmented Business Analysis Framework” that has been put forward is going to human-AI cooperation co-grounded on the principles of cognitive division of labor.

13.1. Summary of Key Findings

- **AI's Added Value:** AI helps generate value all along the business analysis lifecycle, from strategic analysis to test scenario generation.
- **Strategic-Operational Linkage:** The strategic analysis outputs can be integrated into the backlog and product roadmap via strategic mechanisms.
- **Governance Requirement:** AI-supported business analysis needs a governance framework that puts its main focus on the principles of ethics, transparency, and auditability.

13.2. Suggestions for Implementing

13.2.1. At the Corporate Level:

- Draft an AI maturity level-based phased integration plan/strategy.
- Set up an AI governance committee.
- Run AI literacy courses for business analysts.

13.2.2. At the Business Analyst Level:

- Use AI apparatus that serves the role of strategic decision support systems.
- Foster your critical judgment ability in relation to AI-generated outputs.
- Follow the ethical guidelines for AI sage.

13.2.3. For Policymakers:

- Create ethical guidelines on the use of AI-assisted business analysis on a sector-by-sector basis.

- Incorporate AI literacy into the formal education system.
- Foster the creation and use of open-source AI tools.

13.3. Theoretical Contributions

The main theoretical contributions of the research can be summarised as follows:

- **Integrated Framework:** The research offers a detailed model of how Agile, business analysis, and artificial intelligence (AI) can be combined.
- **Augmented Intelligence Model:** The research offers a fresh perspective on AI by emphasizing human cognitive enhancement rather than mere automation.
- **Governance Matrix:** The study gives a novel idea of plotting AI governance on a multi-dimensional map.

13.4. Directions for Future Work

Future works may focus on the following aspects:

- **Quantitative Validation:** Future research should aim at testing the integrated framework quantitatively in various industrial worlds.
- **Cultural Adaptation:** The future research should emphasize on rewriting the integrated framework for different cultural contexts.
- **Technological Evolution:** Future research should examine how the different types of AI, such as multimodal AI and autonomous agents, may evolve in business analysis.

13.5. Concluding Remarks

On the whole, AI-assisted Agile business analysis is capable of unlocking the massive potential of business analysts to produce significant strategic benefits for the organization. The true transformative potential of AI-assisted Agile business analysis is not the technology per se but rather the human-centred design principles, learning, and.

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