THE AI-DRIVEN BLUE OCEAN: REIMAGINING INNOVATION

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Abstract:

Red Ocean has become a common playground for today's organizations, with fierce competition in all business spheres. In this paper we investigate whether the synthesis of Blue Ocean Strategy and artificial intelligence (AI) can redefine organizational growth and lead to innovation. By examining the AI-enhanced Four Actions Framework (the ERRC grid: Eliminate, Reduce, Raise, Create), this study investigates the shift of AI from an IT tool to a driver of business model innovation. Our analysis shows that global organisational AI adoption may serve as a technological boost which changes the traditional trade-off of cost vs. value. Empirical data show that AI creates trillions of dollars in retail, banking, and manufacturing. It also significantly reduces time-to-market by automating routine tasks and increasing hyper-personalization. Still, there is an important limitation to it - although AI can exceptionally accelerate creation of ideas, it cannot compensate for the lack of knowledge in human domain, since less competent people who perform tasks with AI get lower results compared to experts. We conclude that even though AI can be used in generating strategies, human knowledge is still vital for executing them.

Keywords:

Blue Ocean Strategy, AI, Value Innovation, Business Model Innovation, ERRC Framework.

INTRODUCTION

In highly competitive industries, companies usually use well-known tactics and tools to compete in already established markets. Red Ocean strategies are normally used in industries where rules are well understood among the competitors [1]. As newcomers enter the marketspace, competition becomes fiercer, due to reduced opportunities for growth. In the other hand, the Blue Ocean Strategy is a new approach which focuses on innovation over direct competition, creating new market niches and increasing demand, which then eliminates or decreases competition.

By merging the ideas of the Blue Ocean Strategy, namely the simultaneous pursuit of low cost and differentiation, with the use of AI, companies can identify uncontested markets where competition becomes pointless.

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DOI: 10.15308/Sinteza-2026-394-399

In a short time, the use of AI has changed from a theoretical advantage to a necessity [2], and a core driver of corporate reinvention, with global organizational AI adoption reaching from 72% in 2024 [3] to 79% in 2026 [4]. The implementation of AI is not just an interesting and fun IT tool, but a catalyst for business model innovation and the development of corporate capabilities [5].

Currently, the technological and business communities are paying increasing attention to Generative Artificial Intelligence (GenAI): a form of AI that can drive innovation through new product discovery and development. The advent of Generative artificial intelligence (AI) like Open AI Chat GPT, Google Gemini and many other LLMs has provided a novel "method of invention" that reshapes the nature of the innovation process itself. Over the last three years, venture capital firms have invested more than 1.7 billion USD into GenAI solutions, with GenAI-enabled drug discovery and software coding getting the most funding [6].

Studies show that employees who use generative AI are, on average, 33% more productive in each hour of use [7]. Experiments demonstrate that workers in customer support and software development are 5-25% more productive [8] .

McKinsey's studies emphasize the high macroeconomic potential of generative AI, which could create trillions of dollars every year in industries such as retail and banking[3, 9]. The focus of AI use has moved from lowering costs in everyday operations to top-line innovations. In retail, AI-driven hyper-personalization and optimisation of inventory create around $400-660 billion every year. Likewise, the use of AI for advanced predictive modelling and bespoke wealth management brings about new $340 billion in banking.

2. AI AND INNOVATION

AI today helps to reconfigure technology resources into new and innovative solutions. According to Reim, W. and colleagues, AI should be integrated directly into the business model, instead of treating it just as an IT upgrade [10]. In their paper they provide a roadmap for integrating AI technologies into business model to gain competitive advantages, in which AI radically changes how value is created and captured. According to the authors, AI-driven operations and data management should be placed at the centre of the company, particularly in increasing customer engagement, innovation, sustainability, and digitalization.

The economic effect of AI is also quite remarkable, because it changes the rules of innovation. Deep learning enhances both the performance of end-use technologies and the essence of research itself [11]. Gama and Magistretti describe three main reasons for using AI in innovation, namely replace, reinforce, and reveal [12]. Replacing means automating routine tasks that used to be done by humans to improve productivity; reinforcing means serving as a "cognitive substrate" that enhances human decision making; and revealing means using unsupervised learning and big data analytics to process large quantities of data to uncover consumer patterns or emerging market segments. Mariani et al. also emphasize that companies successfully leverage generative AI to improve innovation in three different areas: augmenting ideation efficiency through automated generation of content, facilitating transfer and synthesis of knowledge from different areas through intelligent data analysis, and enabling fast prototyping via computer images [5].

On the other hand, in their qualitative study, Bendal et al. explored how practicing accounting professionals perceive the use of AI in accounting [13]. While AI is adopted mostly in low-risk operative applications, such as making summaries or initial outline of a long text, adoption of AI into key accounting workflows, such as forecasting or assurance, remains different in different organisations. The participants saw AI as a tool that can help in analysis but cannot be used instead of human decision making and contextual interpretation.

The study by Vendraminelli et al. shows another limitation of AI [14]. The results indicate that although generative AI can greatly improve productivity and save time, it cannot compensate for a lack of area expertise by employees. Their study with 78 workers at a global trading company showed that AI helped non-experts, such as marketing and technology specialists, to perform as well as experts during the first phases of content creation (conceptualization and outlining). Nevertheless, during the execution and writing phase, the non-expert specialists produced texts that showed 13% less clarity and competence than the experts. This difference implies that, although AI is very successful in reducing the time spent on ideation, it cannot entirely empower true novices when executing a complex task.

We cannot help dwelling on some challenges and considerations related to the use of AI in innovation. First and foremost, there are ethical concerns. For example, for AI-enabled products, the main ethically relevant characteristics are multi-functionality, interactivity, and AI intelligence. All three may be related to

products, consumers, or the whole society. Du and Xie identified AI biases, cybersecurity, individual wellbeing, ethical design, consumer privacy, and unemployment as key ethical issues in AI-enabled products [15] .Also, a 2026 survey of more than 650 senior cybersecurity decision-makers shows that 66% of the organisations now widely use AI in software development, with as many as 78% use agentic AI systems which are able to take autonomous actions, no humans required [16]. The problem is the speed of this expansion, because it is much faster than security teams and corporate governance plans. Also, today we can hear many voices that highlight the need for distinguishing "the good, the useless and the ugly" among the uses of AI in innovation, the "good" being beneficial for the society; the "useless" are new expensive technologies with limited economy-wide influence; and the "ugly" the innovation that is actually harmful for humanity [17] (shown by the case of a lawsuit against Amazon, that allegedly used secret algorithm to raise consumer prices) [18].

3. AI AND BLUE OCEAN STRATEGY

As opposed to the traditional paradigm of intense competition and incessant fight over limited markets, the Blue Ocean strategy concentrates on innovation and creation of new market niches instead of direct competition [1]. Value Innovation is the "simultaneous pursuit of differentiation and low cost, creating a leap in value for both buyers and the company" [1]. Instead of focusing on outperforming rivals and choosing between delivering higher value and decreasing costs, the Blue Ocean strategy shifts the strategic imperative towards making competition irrelevant. Cost cuts are made by eliminating or decreasing the factors that lead to the industry competition, whereas customer value is enhanced by creating elements that were never offered within the industry. The argument for this strategic shift is that whereas strategic launches aimed at creating "blue oceans" generate a staggering 61% of total profits, the market launches within the existing "red oceans" generate a very small share of total profits [1].

The main idea of the Blue Ocean strategy is value innovation, i.e. breaking the traditional value vs. cost trade-off [1]. Recent strategic management literature underscores that AI facilitates this shift through cross-domain data fusion and latent need discovery. Advanced AI models can analyse huge datasets to identify potential customers and predict emerging market circumstances [19]. Precisely, AI does that by pursuing cost reduction and buyer value elevation, i.e. "value innovation".

We can illustrate this strategic shift by examples across various industries which show the potential of AI in enhancing value innovation. For example, in healthcare, instead of using AI for repetitive administrative tasks like scheduling or billing, its use can be much more valuable, such as improving diagnostic precision. Platforms like PathAI and Tempus can be used for early cancer detection, targeted therapies and personalized genomic treatments, while Babylon Health can perform AI triage, not just the usual paperwork [20] . Likewise, in education, instead of just using AI for writing homework (which has taken a form of an epidemic), which enhances the "Red Ocean" perspective through plagiarism, it can become a sort of personalized pedagogy. For example, Duolingo Max, which uses AI for immersive practice; Squirrel AI, which adapts teaching to a pupil's pace; and various Socratic tutors, designed to help learning through conversations (asking questions to enhance critical thinking), such as Khan Academy's Khanmigo for mathematical problems, or a writing tutor Scraft, which helps with learning English [21].

In climate technology, instead of static reporting, AI applications shift to real-time optimisation. For example, Octopus Energy can adjust renewable energy supply and demand over millions of homes, Flexidao aligns corporate power usage with renewable supply in real-time, and DeepMind at Google decreases cooling energy consumption in data centres by 40%.

In business, companies that offer APIs (Application Programming Interface) have reached radical simplification by embedding fraud detection into APIs, invisible to developers (Stripe), or reframing automation from bots to orchestration (UiPath). In this manner, true AI innovation means eliminating dashboards completely instead of just adding new features [20].

3.1. THE AI-ERRC MATRIX

The Four Actions Framework (ERRC), developed by Chan Kim and Renée Mauborgne is used to recreate customer value elements by making a new value curve or a new strategic profile, in order to discontinue the trade-off between differentiation and low cost [1]. It is the driver of the Blue Ocean Strategy because it gives a starting point to achieve value innovation. In order to do that, the company should ask the key four questions which test the industry's logic and the company's business model:

- Eliminate: Which elements that the industry takes for granted should be eliminated?

- Reduce: Which elements should be decreased below the industry's norms?
- Raise: Which elements should be raised above the industry's norms?
- Create: Which new elements should be created or offered?

Industry 4.0 technologies, most of all AI, Big Data and Internet of Things (IoT) boost the Four Actions, so that the implementation of Blue Ocean Strategy is more data-driven and systematic [22]. AI enhances market analysis, competitive intelligence, customer segmentation, decision-making support, and risk assessment, which aids organisations to identify and assess new uncontested spaces [23, 24, 25].

Atlan highlights AI's potential for improving the ERRC Framework: 1) AI can eliminate manual ineffectiveness, such as repetitious data entry in finance or paper-based registrations in healthcare; 2) AI can reduce time-to-market by half through fast prototyping and automatic testing; 3) Predictive analytics can raise the customisation to unprecedented levels; 4) AI can help create the completely new categories, such as "autonomous finance agents" or "predictive consumer simulation" [26].

Studies by Ramkissoon and Al-Tarifi et al., undoubtedly illustrate the benefits of the use of AI in Blue Ocean strategies [27, 23].

Exploring market disruption in Latin America and the Caribbean, a study by Ramkissoon at al. shows how the use of AI helps companies capture uncontested market spaces across underserved market niches [27] . They claim that basic AI (Machine Learning and Natural Language Processing) eliminates digital friction and reduces costs, but the real transformation comes from the use of advanced technologies, such as Agentic AI and Digital Twins. These tools can raise cultural relevance and create new, highly customised, high-trust digital environments that offer a clear competitive advantage over traditional banking and retail models.

Al-Tarifi et al. explored the role of AI in assisting the decision-making process in the strategic shift from Red Ocean to Blue Ocean strategies [23]. Companies can successfully go through this shift by looking for opportunities and creating strategies to serve new market niches. The study introduces the "Isolation Forest", which is an AI-powered approach used for processing vast consumer datasets. This tool can isolate anomalies and find opportunities in uncontested market spaces where new value can be created.

4. CONCLUSION

Companies that use AI simply to survive the cut-throat Red Ocean competition will succumb to the race to the bottom. On the other hand, the integration of AI into strategic management marks signifies a shift from traditional market competition to a new era of value creation. AI is materialising as a powerful enabler of Blue Ocean Strategy by data-driven value innovation, going beyond price wars and decreasing margins. AI enables the identification of latent consumer needs and uncontested market niches, such as personalizes pedagogy or predictive treatments in healthcare. The ERRC matrix is substantially boosted using AI.

Despite the fact that generative AI enables huge increase in productivity, the execution of complex tasks still requires human expertise. Therefore, the companies that use Blue Ocean strategies most successfully will be those who use AI as a tool that enhances, rather than replaces, human professional knowledge and judgment. As AI adoption among organizations increases, the true strategic differentiator will be the ability to translate technical potential into meaningful leaps in customer value.

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