

RAISE: leveraging responsible AI for service excellence

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Abstract

Purpose – This article introduces the Responsible AI for Service Excellence (RAISE) framework. RAISE is a strategic framework for responsibly integrating AI into service industries. It emphasizes collaborative AI design and deployment that aligns with the evolving global standards and societal well-being while promoting business success and sustainable development.

Design/methodology/approach – This multidisciplinary conceptual article draws upon the United Nations' Sustainable Development Goals (SDGs) and AI ethics guidelines to lay out three principles for practicing RAISE: (1) Embrace AI to serve the greater good, (2) Design and deploy responsible AI and (3) Practice transformative collaboration with different service organizations to implement responsible AI.

Findings – By acknowledging the potential risks and challenges associated with AI usage, this article provides practical recommendations for service entities (i.e. service organizations, policymakers, AI developers, customers and researchers) to strengthen their commitment to responsible and sustainable service practices.

Originality/value – This is the first service research article to discuss and provide specific practices for leveraging responsible AI for service excellence.

Keywords Artificial intelligence, Responsible AI, Sustainability, Well-being, SDGs, Generative AI

Paper type Conceptual paper

1. Introduction

The viral spread of generative artificial intelligence (GenAI) shattered the idea that AI is a futuristic tool or is solely designed to be used by technology experts. Instead, GenAI systems have been developed and trained by experts to be user-friendly, enabling non-experts to leverage these models for various applications without needing to understand the underlying complexities.

These capabilities allow anyone with internet access to generate text, codes, and simulations, synthesize images, graphics, and art, compose music, create videos, and much more (Peres *et al.*, 2023). The interactive component, or the conversational elements of AI

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systems, such as those found in ChatGPT (Chat Generative Pre-trained Transformer), Copilot, and Gemini possess, make conversational AI capable of natural language understanding, dialogue management, and natural language generation creating seamless and human-like conversations. All these innovative AI capabilities have massive implications for the service industry and beyond. However, while research on AI topics is currently growing, the rapid development and spread of AI technologies in general, and GenAI technologies in particular, present new challenges and opportunities that require multifaceted investigations.

The existing academic service literature on AI mostly (1) compares and contrasts AI capabilities with human capabilities (e.g. [Mende et al., 2019](#); [Crolic et al., 2022](#); [Uysal et al., 2022](#)); (2) proposes a categorization of different types and functions of AI ([Huang and Rust, 2018, 2021a, 2024](#)); (3) focuses on the customer and/or organization perspective ([Davenport et al., 2020](#)); (4) is profit-driven, seeking to increase the efficiency and effectiveness of the service process (i.e. service delivery, service creation, and service interaction); and (5) is future-oriented, predicting where AI is going (e.g. “feeling AI” in [Huang and Rust, 2021b](#)). While it is remarkable to witness the advancements of AI research, there is an urgent need to address its responsible deployment and usage ([Van Dis et al., 2023](#)). While some researchers have acknowledged that AI carries serious ethical, fairness, and privacy risks for service users ([Wirtz et al., 2023](#); [Belk, 2021](#); [Breibach and Maglio, 2020](#)), we see the need – and opportunity – for a more fundamental discussion about the long-term and more significant responsible usage of AI in service. This is even more urgent as novel and pressing issues are being voiced by policymakers and practitioners.

The rapid diffusion of GenAI tools has attracted attention and provoked controversy surrounding their use. For example, concerns regarding false, inaccurate, or even misleading information are being raised. Further concerns around data privacy and security are growing. These concerns led the Federal Trade Commission to investigate OpenAI for possible violations of consumer protection law ([The Washington Post, 2023](#)). Issues pertaining to gender and racial biases continue to headline various news outlets. Most recently, the US White House issued an Executive Order aimed at ensuring the safe, secure, and trustworthy development and deployment of AI. The Executive Order requires rigorous safety protocols and testing procedures for AI. In addition to security concerns, the Executive Order prescribes stringent guidelines designed to ameliorate AI-induced biases, specifically in sectors such as housing and criminal justice. The document advocates for the development of best practices for AI applications within healthcare and education, as well as directives aimed at minimizing job displacement and unfair labor practices attributable to AI technologies ([White House, 2023](#)). As service scholars, we have a moral obligation to dig deeper into these issues and address the responsible usage of AI in service.

In light of the above, this paper proposes a theoretically driven strategic framework for leveraging responsible AI for service excellence. As such, we introduce the concept of RAISE, standing for Responsible AI for Service Excellence. We define RAISE as “*a strategic framework for responsibly integrating artificial intelligence into service industries. It emphasizes collaborative AI design and deployment that aligns with the evolving global standards and societal well-being while promoting business success and sustainable development.*”

The key components of this definition warrant emphasis:

- (1) RAISE is a *practice-focused framework* aimed at empowering service entities to responsibly integrate AI into their operations.
- (2) RAISE advocates for *transformative collaboration* between service organizations, policymakers, AI developers, customers, and researchers to ensure AI applications are transparent and positively contribute to societal well-being.

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- (3) Given the broad and evolving nature of AI ethics and regulations, RAISE advocates staying *informed of and adapting to the evolving global standards*, encompassing ethical guidelines, regulatory frameworks, and industry best practices. This approach ensures alignment with the dynamic landscape of AI developments and regulations.
 - (4) RAISE calls for an *integrated approach* where AI technologies are designed and implemented to contribute to business success while also serving the greater good.

In summary, RAISE seeks to integrate these dimensions within the context of service excellence to provide a holistic framework that enables service organizations to achieve business success while contributing to societal well-being.

With the increasing reliance on AI, there is an urgent need to practice responsible principles respecting human rights and prioritizing societal well-being, as highlighted by the Sustainable Development Goals and the Ethical AI principles introduced by [Jobin et al. \(2019\)](#). We build on these important notions to develop the three RAISE principles for practice: (1) Embrace AI to serve the greater good, (2) Design and deploy responsible AI (by respecting and practicing the ethical principles of privacy, transparency, accountability, justice and fairness, and non-maleficence), and (3) Practice transformative collaboration with different service entities to implement responsible AI.

This research contributes to a foundation for responsible AI for service excellence. It underscores the importance of aligning AI with responsible principles to create a positive societal impact while promoting business success. By emphasizing that service organizations can harness the full potential of AI while adopting responsible and sustainable practices, this approach transcends the traditional view that positions profit generation and social good as mutually exclusive objectives. Instead, we advocate for an integrated framework where AI technologies are designed and implemented to contribute to economic growth while also serving the greater good. Moreover, by acknowledging the potential risks and challenges associated with AI implementation, this research provides practical recommendations for service entities to strengthen their commitment to privacy, transparency, accountability, justice and fairness, and non-maleficence as part of their sustainable service practices. The research also contributes by stressing the need for transformative collaboration in addressing responsible practices that have greater societal implications. Ultimately, we call on service researchers, policymakers, managers, and customers to collaborate and embrace responsible AI to drive service excellence and foster a sustainable future for all.

The subsequent sections of this article will provide an overview of the current state of research on AI in service, examine relevant perspectives to conceptualize RAISE, and discuss its three principles for practice.

2. Conceptual background

2.1 Artificial intelligence (AI) in service

Over the past decade, AI has been a prominent subject of interest in the service literature, alongside related concepts like robots, chatbots, and smart technology ([De Keyser et al., 2019](#)). [De Keyser and Kunz \(2022\)](#) identified 2,145 articles published in academic journals covered by the SERVSIG literature alert [1]. The search focused on keywords related to robots, technology, and AI in academic articles published between 2016 and the summer of 2020. Moreover, the *Journal of Service Management* (JOSM) published two special issues on the topic in the last five years ([Paluch and Wirtz, 2020](#); [Robertson and Tsarenko, 2021](#)), while the *Journal of Service Research* published another special issue on AI ([Bagozzi et al., 2022](#)).

Certainly, AI has been a frequent topic in all the marketing science literature [2] (e.g. [Huang and Rust, 2021a](#); [Puntoni et al., 2021](#)), so its prevalence in service research is not

especially noteworthy. However, the coverage of the subject in the service literature is, nonetheless, uniquely positioned. [Kunz et al. \(2019\)](#) observed that academic service literature often focuses more on the concept of technology than on specific technologies, such as ChatGPT, especially when compared to management journals and mainstream business publications. Recent discussions on AI's role in services highlight the critical need for workforce upskilling in AI and the adoption of digital twin technologies to improve service delivery and build consumer trust. These discussions focus on strategic integration rather than detailing specific applications of such technologies ([Spohrer, 2023](#)).

[Kunz et al. \(2019\)](#) also found that the existing service literature disproportionately focuses attention on the managerial consequences of new service technologies (e.g. [Skiera et al., 2022](#)) rather than on the impact of these technologies on consumers (e.g. [Kipnis et al., 2022](#); [Pantano and Scarpi, 2022](#)), though studies of both outcomes are certainly represented. By providing a structured approach to navigating and implementing technological changes in service systems, Service Innovation Roadmaps (SIRs) ([Spohrer, 2021](#)) ensure that the focus is not solely on operational and managerial aspects but also on enhancing the customer experience and satisfaction. This comprehensive view enables organizations to consider both internal and external effects of AI integration, ensuring that technological advancements contribute positively to all aspects of service delivery.

Beyond the coverage in the service literature, the practical application of these technologies in service is different than in other marketing and business contexts. [Bagozzi et al. \(2022\)](#) indicate that while AI in computer science is focused on rational and analytical decision-making, AI in service needs to be “a feeling machine.” Interestingly, the impact of AI on consumers' emotions and trust is a growing area of investigation in the service research space (e.g. [Bagozzi et al., 2022](#); [Belk, 2022](#); [Esmailzadeh and Vaezi, 2022](#); [Huang and Rust, 2024](#); [van Pinxteren et al., 2019](#); [Vorobeva et al., 2022](#)).

2.1.1 Theoretical foundations of AI in service. [Huang and Rust \(2018\)](#) pioneered research on AI in service, introducing a key theoretical concept—the alignment of various types of intelligence with specific service objectives. [Huang and Rust \(2021b\)](#) proposed three types of intelligence, both artificial and human, that link with the tasks of doing, thinking, and feeling. According to their framework, each type of AI can be used to either augment or replace the application of the respective human intelligence in service tasks. However, the balance of augmentation and replacement varies by the type of intelligence and the specific task requirements. Mechanical intelligence is the lowest level of AI and relates to the ability to perform routine and repetitive tasks efficiently. Mechanical AI can be used to make tedious, routine tasks more efficient and is often central to efforts to replace human labor with service robots or standalone self-service kiosks. Mechanical AI is useful for achieving standardization in processes and, as such, requires minimal learning and adaptation. Thinking intelligence involves analyzing data to make decisions or recommendations, either as a replacement for human decision-making or to assist humans in better-informed and quicker decision-making. Thinking AI is useful for delivering personalized rather than standardized output. An example of the application of this type of Thinking AI is the use of AI diagnostic tools in health services ([Spatharou et al., 2020](#); [Van Doorn et al., 2017](#)). Feeling intelligence involves communicative and interactive tasks that require recognizing and interpreting human emotions to provide appropriate responses. In contrast with Thinking AI, which achieves self-learning through analysis of massive amounts of data, Feeling AI must learn from and adapt at the moment to singular or anecdotal experiences. Given that such tasks are often difficult for even human beings, Feeling AI is the most difficult type of AI to realize, but arguably the most important for service.

A noteworthy distinction to be made is that “Thinking AI” and “Feeling AI” are merely metaphors: extant AI neither “thinks” nor “feels”, but rather utilizes algorithmic processes to respond to information and gives the appearance of thinking and feeling. High-level

executives at top AI firms indicate that AI can already better recognize and respond to customer emotional cues than human workers and that this capability allows AI to effectively “fake” empathy during customer interactions (Huang and Rust, 2024). Much like human service workers who engage in “emotional labor” (Hochschild, 1983), the ability to effectively display empathy is not predicated on the genuineness of the emotion (the ability of AI to truly understand or experience emotion delves into deeper philosophical arguments about Strong AI vs Weak AI (Searle, 1984), which are outside the scope of this paper).

Customer service chatbots that respond to consumers based on Feeling AI are charged with maintaining the most fundamental relationship in service: the trust of the consumer. Van Pinxteren *et al.* (2019) described how a lack of trust hinders consumer adoption of service robots. This is partially attributable to a lack of anthropomorphism in many applications but also to limitations in the performance of extant Feeling AI. As Feeling AI advances to better mimic human emotional intelligence, greater consumer adoption is a near certainty. The ability of ChatGPT to pass the Turing test – when AI can mimic human intelligence to the degree that humans cannot tell they are not speaking to an actual human – demonstrates that AI has, at least arguably, reached this threshold (James, 2023). The development and implementation of Feeling AI in customer service underscore the delicate balance between augmenting human emotional intelligence and replacing it, emphasizing the need to carefully consider which tasks are best suited for AI to ensure that technological advancements enhance rather than diminish the quality of human interactions (Huang and Rust, 2024).

The usefulness of AI for service may be less about how well AI can mimic human intelligence or empathy than whether it actually needs to be effective. Bock *et al.* (2020) argue against limiting AI by comparing it to human capabilities, as AI possesses the potential to surpass human abilities. They define “service AI” as “the configuration of technology to provide value in the internal and external service environments through flexible adaptation enabled by sensing, learning, decision-making, and actions” (p. 319). The key distinction between service AI and other new service technologies is its potential for flexible adaptation. Huang and Rust (2018) similarly posit self-learning as one of the two defining characteristics of AI. The other characteristic is connectivity, as AI is seldom standalone. Moreover, the interaction of AI with the Internet of Things (IoT) and humans is necessary to provide AI with the resources for self-learning. In other words, achieving the first characteristic (self-learning) relies on the second (connectivity).

An overarching concern in the service literature has been the increasing pace at which new service technologies are emerging and their significant consequences for consumers, corporations, and society (Wirtz *et al.*, 2018, 2023). Huang and Rust (2018) note, “The service and technology literature tends to focus on the positives of AI technology usage, while the economic literature tends to focus on the effect of AI on jobs.” (p. 155). Within the service context, there is a growing interest in studying the integration of humans with AI rather than the replacement of human employees with AI (De Keyser and Kunz, 2022; Henkel *et al.*, 2020). Nonetheless, the replacement of human labor remains a serious concern in the “Feeling Economy” (Vorobeva *et al.*, 2022), and the potential impact of AI on service jobs is only one of the potential ethical dilemmas raised by the rise of service AI. Beyond simply replacing humans on the job, half of AI researchers believe there is a non-negligible chance that human beings may go extinct as a result of our inability to control AI (Center for Humane Technology, 2023). The incorporation of advanced AI in customer care raises new considerations, especially regarding the manipulation of emotions and privacy (Huang and Rust, 2024).

Bock *et al.* (2020) emphasize the importance of studying the ethical implications of AI in service. Specifically, they highlight three research opportunities: (1) Investigating how service AI affects the ethical concerns in organizational and consumer decision-making, (2)

Examining the ethical design and governance of service AI systems, and (3) Studying the need for risk management associated with service AI.

The rapid development of Feeling AI, particularly in the form of GenAI, brings forth a pressing need to thoroughly study the AI implications beyond what is currently discussed in the service literature. The ability of AI to mimic human emotional intelligence and its integration with various facets of our lives creates unprecedented opportunities for manipulation, misuse, invasion of privacy, and potential bias. Moreover, the widespread adoption of AI across service industries (healthcare, education, finance, etc.) heightens concerns regarding job displacement, transparency, fraud, and accountability. As AI permeates various aspects of society, it becomes imperative to ensure responsible and equitable implementation.

By proactively studying responsible AI, we seek to foster an inclusive future while safeguarding the well-being of individuals, organizations, and society. To do so, in the next section, we link the identified need to investigate responsible AI in service to the SDGs as set by the United Nations.

2.2 Sustainable Development Goals (SDGs)

The United Nations' SDGs (or Global Goals [3]), established in 2015, serve as a comprehensive call to action to confront global predicaments. These address issues such as poverty, inequality, climate change, environmental harm, as well as the quest for peace and justice. The SDGs are a collection of 17 interlinked objectives designed to serve as "shared blueprint for peace and prosperity for people and the planet, now and into the future" (United Nations, 2023). The SDGs seek to guide the member states and their partners, including non-profits and commercial brands, "to achieve inclusive, people-centered, and sustainable development" (United Nations, 2023).

The 17 goals are structured around the five pillars of the 2030 Agenda: People, Planet, Prosperity, Peace, and Partnerships. These 5 Ps highlight how the SDGs are an intertwined framework instead of a group of solo goals. The progress on one P must balance and support the progress on another (United Nations Foundation, 2023).

- (1) **People:** The "People" pillar of the SDGs emphasizes the need to improve societal well-being through better healthcare, top-tier education, and equal employment opportunities for all people. The ultimate goal of the SDGs is to end poverty and hunger in all their forms and dimensions and to ensure that all human beings can fulfill their potential in dignity and equality within a healthy environment. The "People" principle promotes social inclusion and seeks to address issues of inequality and discrimination. It reflects a commitment to ensure equal opportunity and reduce inequalities of outcome, including thorough measures to eliminate discriminatory laws, policies, and practices (Saviano *et al.*, 2017).
- (2) **Planet:** The "Planet" pillar emphasizes the importance of sustainable production and consumption patterns, the incorporation of climate change measures into national strategies, and the preservation of biodiversity. It focuses on protecting the natural resources and ecosystems upon which we and future generations will depend. The SDGs seek to protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss (Field *et al.*, 2021). It addresses urgent actions to combat climate change and its impacts. Additionally, it emphasizes conserving and using oceans, seas, and marine resources sustainably.
- (3) **Prosperity:** The "Prosperity" pillar acknowledges that economic growth is crucial for prosperity but also highlights that this growth should be sustainable (Aksoy *et al.*, 2019).

It reflects a commitment to ensuring that all people enjoy prosperous and fulfilling lives and that economic, social, and technological progress occurs in harmony with nature. This involves a call for building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation. It also includes goals to ensure sustainable production and consumption patterns.

- (4) Peace: The “Peace” pillar seeks to foster peaceful, just, and inclusive societies that are free from fear, crime, and violence (Beutler, 2008). Peace relates not only to the absence of conflict but also to the presence of justice and the upholding of human rights. A peaceful society ensures justice and equality for all. It encompasses the goals of promoting peaceful and inclusive societies for sustainable development, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels.
- (5) Partnership: The “Partnership” pillar recognizes the importance of collaboration and cooperation in achieving the SDGs. The SDGs can only be realized with a strong commitment to global partnership and cooperation (Stott and Murphy, 2020). This approach mobilizes and shares knowledge, expertise, technology, and financial resources to support the SDGs’ achievement, particularly in developing countries. This pillar emphasizes that our ability to effectively address issues like poverty, inequality, and climate change requires collaboration between governments, the private sector, civil society, and individuals.

Every pillar of the 5Ps framework is key to shaping sustainable procedures and policies. As more service organizations, such as hotels, hospitals, restaurants, and law firms, integrate their operations with AI technologies, we argue that understanding and linking to these pillars is critical for practicing responsible AI applications. This would ensure that AI-enabled services not only improve efficiency and user experiences but also contribute positively to global sustainability and social equity.

2.2.1 SDGs and service research. While the direct engagement with the SDGs in service research has been somewhat limited, efforts by entities such as ServCollab and the *Journal of Services Marketing* are starting to fill this void, indicating a promising shift towards integrating these global objectives more explicitly into service research agendas. The recent scholarly synthesis undertaken by ServCollab [4] in conjunction with the *Journal of Services Marketing* (see Russell-Bennett et al., 2023), distills the United Nations’ 17 SDGs into seven thematic areas pertinent to service research. This distillation further informs our conceptualization of the RAISE framework.

By prioritizing ethical considerations and human-centric approaches, responsible practices of AI can significantly contribute to the SDGs by fostering the creation and delivery of services that not only enhance the well-being (Theme 1) and opportunities for all individuals (Theme 2) but also ensure the sustainable management of resources through regenerative economic frameworks (Theme 3); promote equitable economic growth (Theme 4); support institutions in providing fair and sustainable living conditions (Theme 5); integrate environmental objectives within service ecosystems (Theme 6); and facilitate collaborative efforts towards achieving global sustainability goals (Theme 7). We underscore that the transformative potential of AI can be fully realized only through earnest and strategic transformative collaboration across all service entities within the service ecosystem. These collaborative efforts must be anchored in a humanistic and forward-thinking design perspective, striving not only to meet immediate service needs but also to regenerate and sustain the service ecosystems of our planet. We argue that by incorporating responsible AI principles within service strategies, we can align with this service research agenda—driving innovations that enhance health, education, economic growth, and environmental

stewardship. Consequently, such initiatives contribute to the SDGs and ensure that technological advancements foster service inclusion (Fisk *et al.*, 2018), digital inclusion (Fisk *et al.*, 2023), resource efficiency, and sustainable growth. Together, this epitomizes the collaborative ethos essential for tackling global challenges and elevating the overall human experience (Fisk *et al.*, 2020).

2.3 Responsible AI dimensions

While the SDGs motivate the need for responsible AI practices, we now direct our attention towards the current debate surrounding the concept of *responsible AI* and its key dimensions.

The rapid expansion of AI, facilitated by the exponential growth of data and computing capabilities, has given rise to the field of AI ethics. This field examines the ethical and societal issues faced by developers, producers, consumers, citizens, policymakers, and civil society organizations. Initially, AI ethics focused on speculative scenarios like superintelligence and the ethics surrounding such scenarios. The second wave of AI ethics addressed practical concerns related to machine learning techniques, such as the opaqueness of black-box algorithms, the challenge of explainability, biases arising from unequal representation in training data, and the implications of facial and emotion recognition systems on privacy rights.

In light of the growing research on the dark side of AI (Anagnostou *et al.*, 2022; Mikalef *et al.*, 2022) ranging from gender bias in emotion recognition (Domnich and Anbarjafari, 2021) to privacy breaches through the collection and use of personal information (Curzon *et al.*, 2021), the concept of *responsible AI* in the context of business has emerged. Responsible AI in the business context refers to a set of ethical principles that must be adhered to when applying AI (Jakesch *et al.*, 2022; Mikalef *et al.*, 2022; Trocin *et al.*, 2021). While there are diverse definitions of responsible AI, it is crucial to emphasize its impact on a vast array of stakeholders, including organizations, AI developers, policymakers, customers, and researchers (Deshpande and Sharp, 2022). Indeed, responsible AI goes beyond the profitability of AI adoption. Overall, not only should responsible AI in the business context suggest that an organization adopting AI consider the business consequences of the adoption (i.e. whether the adoption is profitable for the business), but also, it should take into account how it might impact a broader set of stakeholders (i.e. whether the adoption does not harm or even benefits various stakeholders) and eventually how it might contribute to social good (i.e. whether the adoption helps the organization make the world a better place).

Despite extensive research on responsible AI principles, many organizations still struggle with the practical implementation of responsible AI (Dignum, 2019; Hagendorff, 2022). This gap between academia and industry arises due to the challenge of translating high-level academic discussions into concrete action plans. Stakeholders hold different interpretations of responsible AI, leading to discrepancies and confusion (e.g. Jakesch *et al.*, 2022). To bridge this gap, a systemic framework based on key dimensions of responsible AI can offer much needed practical guidance for organizations.

Efforts have been made by AI system designers, developers, and implementers to establish concrete principles for responsible AI (e.g. Cheng *et al.*, 2021). The Ethically Aligned Design, First Edition (EAD1e) by the IEEE (2019) Global Initiative on Ethics of Autonomous and Intelligent Systems is an exemplary initiative that provides conceptual pillars and specific steps for responsible AI design. However, these principles for those who design AI often require further translation for organizations that adopt AI. In this vein, academic contributions such as Jobin *et al.* (2019) [5] offer criteria that can assist in bridging the gap between high-level academic discourse and the practical implementation of responsible AI.

In their endeavor to establish a comprehensive definition of responsible AI and propose ethical standards that can be universally applicable, Jobin *et al.* (2019) conduct a thorough

analysis of prevalent discussions among various existing global guidelines on responsible AI. Their study systematically examined 84 articles that focused on ethical guidelines or principles in the realm of AI. To achieve this, they utilized a methodical protocol following the PRISMA framework, which underwent preliminary testing and calibration before data gathering commenced. To ensure a comprehensive and methodical approach, they employed a multi-level screening process. This involved both inductive exploration through search engines and deductive pinpointing of pertinent organizations with associated online databases and websites. This effort results in the identification of five principles for responsible AI: privacy, transparency, accountability, justice and fairness, and non-maleficence.

According to Jobin *et al.* (2019), *privacy* refers to the protection of consumer's personal information. This requires compliance with the personal data usage regulation and the protection of consumer privacy through consumer consent. *Transparency* requires that organizations are transparent about their use of AI and provide explicit explanations of how it works – specifying which data is being utilized. Such entities should both inform and educate consumers about their usage of the data. *Accountability* allows for the identification of stakeholders affected by this data utilization and creates ownership of responsibility for those going to be affected; thereby, the implementation of checks and balances becomes part of the process. *Justice and fairness* should be regularly assessed and serve as inclusive and responsive systems to reduce bias. Lastly, *non-maleficence* puts in place safeguards to manage unintended usage of data to minimize the potential for unintended consequences to occur if/when data might be misused.

In this paper, we rely on the five principles for responsible AI outlined by Jobin *et al.* (2019) as a foundational basis for designing the RAISE framework, ensuring our approach is deeply rooted in established principles of responsible AI.

3. The RAISE framework

With the increasing reliance on AI in service, there is an urgent need to practice responsible principles respecting human rights and prioritizing societal well-being, as highlighted by the SDG and the responsible AI dimensions (Jobin *et al.*, 2019). By synthesizing the knowledge gained from the SDGs and the responsible AI dimensions, we developed the RAISE framework (Figure 1).

We define RAISE as “a strategic framework for responsibly integrating artificial intelligence into service industries. It emphasizes collaborative AI design and deployment that aligns with the evolving global standards and societal well-being while promoting business success and sustainable development.” The RAISE framework, as depicted in Figure 1, represents a holistic model for integrating responsible AI for service excellence.

The RAISE framework consists of three key components:

- (1) *Ethical Foundations*: At its core, the framework is built upon the “Ethical Foundations” that comprise Justice and Fairness, Transparency, Accountability, Privacy, and Non-maleficence as identified by Jobin *et al.* (2019). These principles serve as the bedrock for ethical considerations in AI applications, ensuring that AI technologies are developed and utilized in ways that are fair, open, and respectful of individual rights and societal norms. This component forms the bedrock of the framework, represented visually by a foundational semi-circle that symbolizes the encompassing nature of ethics in AI.
- (2) *Service Entities*: Positioned at the base of the framework and visually represented by a matching semi-circle to signify the various stakeholders integral to the AI service landscape. Specifically, *service organizations* refer to businesses, and institutions

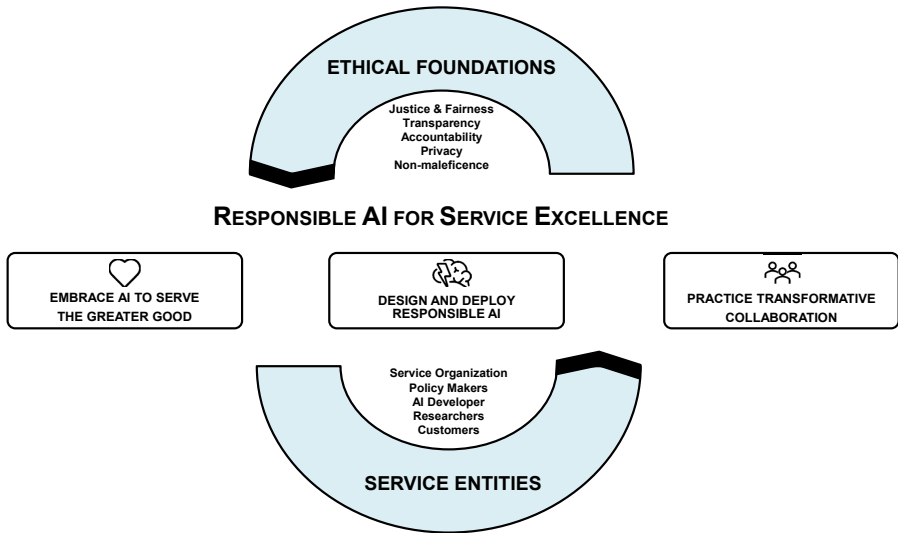


Figure 1.
The RAISE framework

Source(s): The above figure was created by the authors

leveraging technology and AI to enhance effectiveness, efficiency, and quality of service. *Policymakers* are individuals, groups, and/or government entities responsible for formulating, implementing, and regulating policies related to AI technology and their applications. *AI developers* are inclusive of professional experts involved in the design, build, and implementation of AI systems and applications. *Researchers* are professionals working in the field of AI to advance the understanding, development, and applications of AI technologies. Lastly, *Customers* refer to individuals, organizations, and entities that utilize AI technology to solve problems, enhance operations, and/or achieve specific goals. These key service entities form the service ecosystem responsible for the rapid growth of AI and, therefore, play a crucial role in pushing the boundaries of AI capabilities, while also shaping the ethical, legal, and societal implications of AI adoption and transformation.

- (3) *RAISE Principles*: Positioned at the center of the framework, the three RAISE principles represent the actional aspect of the framework:
- Embrace AI to Serve the Greater Good: This practice emphasizes the importance of leveraging AI technology with a focus on benefiting society and contributing positively to the greater good.
 - Design and Deploy Responsible AI: This practice refers to the careful planning and execution of AI systems with responsibility, ensuring they adhere to ethical standards and are beneficial and fair.
 - Practice Transformative Collaboration: This practice highlights the need for collaborative efforts among different stakeholders to create significant and positive changes through the use of AI.

The circular arrangement of the arrows in the RAISE framework symbolizes a continuous, iterative process. Within this process, the embrace of AI for the greater good, the responsible

design and deployment of AI, and the practice of transformative collaboration are not linear stages. Instead, they are interdependent elements that feed into and reinforce each other. This reinforcement is based on the evolving global standards of ethical foundations and the collaboration of service entities. These factors ensure a dynamic and ongoing commitment to ethical principles in AI-driven service excellence.

In summary, the RAISE framework depicts a coherent and holistic approach that elucidates how ethical foundations, service entities, and core principles for practice interlock to foster responsible AI for service excellence. It serves as a guide for integrating AI in a manner that is ethically sound, strategically effective, and conducive to collaborative innovation.

In the next section, we discuss in greater depth the three RAISE principles for practice: 1. Embrace AI to serve the greater good, 2. Design and deploy responsible AI, and 3. Practice Transformative Collaboration.

4. RAISE principles for practice

4.1 *Embrace AI to serve the greater good*

The pursuit of peaceful, fair, and inclusive societies, free from fear and violence, is central to the SDGs' objectives. Similarly, the concept of the "greater good" refers to what is considered the most beneficial action for society as a whole. In this context, RAISE serves as a strategic framework for service organizations, helping them realize their important role in contributing to the greater good through AI.

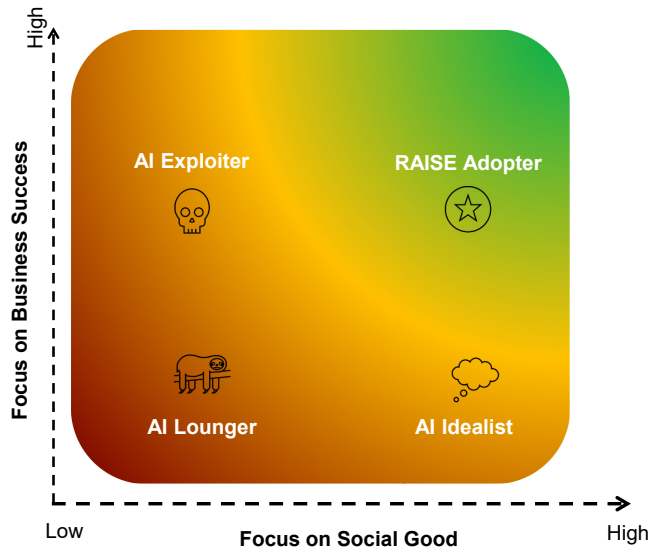
The first principle of RAISE emphasizes the role of service organizations in creating a safer, fairer, and more inclusive environment for all stakeholders through AI. Hotels, for instance, can prioritize the usage of AI for security enhancements, fraud detection, and to create personalized, stress-free experiences for guests. Hospitals can leverage AI to improve patient care, ensure fair allocation of resources, and safeguard sensitive patient data. Restaurants can use AI to foster fair employment practices, improve customer experiences, and maintain high standards of food safety. Law firms can employ AI for unbiased legal analysis, fraud detection, and to ensure transparency in their operations. By adopting RAISE, service organizations prioritize the greater good in their AI applications. This will ensure that AI is implemented in a way that advances peace, justice, and inclusivity.

Similarly, AI holds significant potential to stimulate economic growth, innovation, and infrastructure development, providing an unparalleled opportunity for service organizations across various sectors. AI can be instrumental in driving the "Prosperity" element of the SDGs by streamlining business operations, enhancing service delivery, and igniting economic prosperity. However, while AI can fuel prosperity, it may also widen the gap between the affluent and the less privileged (Fisk *et al.*, 2023). Through RAISE, service companies can strive to implement AI solutions that promote inclusive growth and economic equality.

Within our definition of RAISE, we emphasize that service organizations should utilize AI in ways that actively contribute to the overall well-being of various stakeholders, extending beyond the narrow confines of the organization's self-interest. This perspective resonates with contemporary notions of corporate social responsibility (Gebauer and Reynoso, 2013), shared value (Kramer and Porter, 2011), and social innovation in service (Aksoy *et al.*, 2019) emphasizing service organizations accountability beyond profit maximization.

To facilitate a nuanced comprehension of the various ways service organizations can adopt AI, we propose a categorization of roles along the RAISE Spectrum (Figure 2).

The RAISE Spectrum is a framework designed to guide organizations in the responsible integration of AI. It is visualized as a gradient (ranging from red (undesirable position) to green (desirable position), two-dimensional matrix that categorizes entities based on their "Focus on Business Success" and "Focus on Social Good".



Source(s): The above figure was created by the authors

Figure 2.
The RAISE spectrum:
balancing business
success and social good
in AI applications

The horizontal axis represents the “Focus on Social Good”, ranging from low to high, while the vertical axis denotes the “Focus on Business Success”, again from low to high. The framework is presented as a continuous spectrum, indicating that the focus on these two dimensions is not binary but rather a scale where entities can find themselves at any point, reflecting the fluid nature of their practices and priorities.

Within this spectrum, four quadrants are identified, each representing a distinct approach to AI in service:

- (1) *AI Exploiter*: organizations falling in this quadrant leverage AI technologies primarily for business gains, potentially at the expense of social good. They may prioritize profitability and efficiency over ethical considerations, potentially risking reputational damage and societal backlash.
- (2) *AI Lounger*: organizations falling in this quadrant have a low focus on both social good and business success. They may lack a comprehensive understanding of how to harness AI’s full potential and the diverse ways AI can impact a broad spectrum of stakeholders. This incomplete grasp can impede their ability to optimize AI for both profit and social good. This may indicate a lack of initiative or strategy in leveraging AI for meaningful impact, resulting in underperformance in both areas.
- (3) *AI Idealist*: organizations falling in this quadrant are characterized by a high focus on social good but may not have fully realized the business potential of AI. They may prioritize ethical considerations and societal impact, potentially at the expense of financial outcomes. Focusing exclusively on social good, to the detriment of profitability, can threaten the long-term viability of a business.
- (4) *RAISE Adopter*: organizations falling in this quadrant excel in both business success and social good. They demonstrate how responsible AI can be leveraged to not only enhance business performance but also contribute positively to society, embodying the ideals of the RAISE framework.

By introducing the RAISE Spectrum, we encourage organizations to aspire towards the RAISE Adopter quadrant—where the responsible use of AI aligns with both ethical imperatives and business objectives. It also underscores that these goals are not mutually exclusive; instead, it highlights that they are complementary, with each element reinforcing the other. Finally, the RAISE Spectrum serves as a tool for self-assessment and strategic planning, helping organizations to visualize their current position and chart a course towards greater social and business impact through AI. Table 1 illustrates examples of companies that have achieved a harmonious balance, known as “RAISE Adopters.”

In conclusion, the first principle of the RAISE framework “Embrace AI To Serve the Greater Good” underscores the ethical imperative of AI utilization within service organizations, encouraging them to pursue business success as well as societal well-being. Service entities are encouraged to become “RAISE Adopters” realizing their full potential as responsible AI-driven organizations that create value for themselves and society at large.

4.2 Design and deploy responsible AI

In the introduction, we describe RAISE as “a practice-focused framework aimed at empowering service entities to responsibly integrate AI into their operations.” In this regard, we posit that it is the responsibility of various service entities to design and deploy AI systems that align with this principle. Table 2 provides a detailed account of the practical strategies that could be employed by each service entity to foster the deployment of responsible AI, ensuring that the development and application of AI technologies are conducted with the utmost regard for ethical considerations and societal impact.

Table 2 presents a structured compilation of recommended practices for different stakeholders in the AI ecosystem to ensure the responsible deployment of AI technologies. For AI Developers, it suggests the implementation of privacy-by-design principles, regular

Sector	Company	Profit-driven applications	Social good applications
Healthcare services	IBM Watson Health DeepMind	Analyzing large healthcare datasets for commercial solutions	Improving healthcare outcomes and accessibility
		Commercializing AI algorithms for healthcare	Diagnosing eye diseases, predicting patient deterioration
Environmental services	OpenAI Orbital Insight	Research and commercial partnerships in NLP and robotics	Environmental monitoring and conservation
		Analyzing satellite imagery for commercial applications	Monitoring deforestation and illegal fishing
Educational service	Carnegie Learning Knewton	Selling AI-driven personalized learning solutions	Democratizing education through personalized learning
		Adaptive learning technologies for educational institutions	Improving educational outcomes through personalized learning
Transportation services	Waymo Tesla	Developing self-driving car technology for commercial use	Reducing traffic accidents, improving transportation accessibility
		AI for self-driving cars and energy-efficient solutions	Making transportation safer and more energy-efficient
Financial services	Upstart Darktrace	AI for more accurate and fair loan approval processes	Making credit more accessible, reducing discrimination in lending
		AI-driven cybersecurity solutions	Protecting institutions and data from cyber threats

Source(s): The above table was created by the authors

Table 1.
Examples of RAISE adopter companies

Table 2.
RAISE practices for
service entities

Ethical Principles Service Entities	Privacy	Transparency	Accountability	Justice and fairness	Non-maleficence
Service Organizations	<ul style="list-style-type: none"> • Collect only necessary data • Ensure transparency and consent • Clarify the purpose of any collected data • Establish data protection and encryption policies • Maintain strict access controls • Staff training and audit • Vendor and 3rd party vetting • Offer customers the choice to opt-out and/ or take their data elsewhere at any time • Comply with laws and regulations 	<ul style="list-style-type: none"> • Clearly disclose AI use to customers and employees • Use clear language that can be easily understood by non-experts • Secure informed consent before using AI with customers • Allow customers to customize their preferences when interacting with an AI. • Clearly communicate how customer data is going to be saved, used, and protected • Publicly share development and update roadmaps for AI services to show commitment to continuous improvement and transparency 	<ul style="list-style-type: none"> • Develop specific ethical guidelines to complement the legal standards • Establish an AI ethics committee and/or hire a compliance officer • Monitor AI performance through third party audits to ensure meeting the ethical standards • Establish secure channels for internal reporting of misuse or concerns • Design a crisis response to any AI breaches • Publicly acknowledge and correct any mistakes in AI implementation and clarify steps taken to prevent future errors 	<ul style="list-style-type: none"> • Ensure unbiased algorithms by collecting data representative of all groups • Closely monitor any discriminatory evidence in data collection or decision • Use diverse perspectives when designing and deploying the AI to minimize implicit and explicit biases • Promote inclusivity in AI services 	<ul style="list-style-type: none"> • Prioritize safety in AI deployment • Avoid unintended harmful consequences • Identify potential risks and mitigate them during the design phase • Ensure that the AI systems are fair and transparent • Monitor and evaluate AI systems constantly. • Oversee and intervene if necessary

(continued)

Ethical Principles Service Entities	Privacy	Transparency	Accountability	Justice and fairness	Non-maleficence
<p>Polycymakers</p> <ul style="list-style-type: none"> • Draft and implement comprehensive privacy regulations • Enforce data protection laws 	<ul style="list-style-type: none"> • Set standards for AI transparency • Encourage open and explainable AI. • Collaborate with other countries and international organizations to develop shared frameworks for fairness in AI. • Develop guidelines for companies developing high-risk AI to share safety test results and other important information with relevant policy makers 	<ul style="list-style-type: none"> • Create legal frameworks and national standards for AI accountability • Address liability concerns • Establish ethics review boards or committees • Impose significant penalties for non-compliance 	<ul style="list-style-type: none"> • Advocate for equitable AI policies • Ensure equitable access to AI benefits • Develop principles to mitigate job displacement and ensure workplace equity 	<ul style="list-style-type: none"> • Regulate AI safety and risk mitigation • Monitor AI research and applications • Promote AI education and training programs 	

(continued)

Table 2.

Table 2.

Ethical Principles Service Entities	Privacy	Transparency	Accountability	Justice and fairness	Non-maleficence
AI Developers	<ul style="list-style-type: none"> Implement privacy-by-design Use anonymized and encrypted data Delete data when it is no longer needed Regularly update and patch software to address vulnerabilities Accelerate development of techniques that allow AI systems to be trained while preserving data privacy 	<ul style="list-style-type: none"> Develop explainable AI algorithms Document AI system workings Educate users and stakeholders about AI systems' limitations 	<ul style="list-style-type: none"> Create mechanisms for AI oversight Embed traceability in AI systems Establish fairness and non-discrimination metrics and bias detection techniques 	<ul style="list-style-type: none"> Test algorithms for bias and fairness Use inclusive data sets Provide plain-language explanations that all users can understand 	<ul style="list-style-type: none"> Design AI systems with safety in mind Conduct thorough risk assessments Actively engage with stakeholders
Researchers	<ul style="list-style-type: none"> Investigate privacy-enhancing technologies Analyze data anonymization techniques 	<ul style="list-style-type: none"> Study AI transparency methods Explore interpretable machine learning 	<ul style="list-style-type: none"> Develop new models for AI governance Propose policy recommendations 	<ul style="list-style-type: none"> Examine AI's impact on social equity Identify and address algorithmic biases 	<ul style="list-style-type: none"> Research AI safety and ethics Evaluate potential negative impacts of AI Establish ethical review committees to monitor ethical implications

Source(s): The above table was created by the authors

updates to address vulnerabilities, and the acceleration of techniques that enhance AI transparency while preserving data privacy. Researchers are encouraged to explore privacy-enhancing technologies, study AI transparency methods, and develop models for responsible AI governance. Policymakers are tasked with developing privacy regulations, setting transparency and fairness standards, and creating legal frameworks to ensure AI accountability. [Table 2](#) outlines a proactive approach for each group, aiming to foster AI applications that are ethically sound, socially responsible, and beneficial to all stakeholders, thus aligning with the RAISE framework's commitment to responsible AI, the greater good, and service excellence.

4.3 Practice transformative collaboration

Besides the individual practices that each service entity should strive to implement (see [Table 2](#)), the RAISE framework calls for *practicing transformative collaboration* between service organizations, policymakers, AI developers, customers, and researchers to ensure AI applications are transparent and positively contribute to societal well-being. [Fisk et al. \(2018\)](#) maintain that “transformative collaboration occurs when all participants are able to make contributions at their full human potential” (p. 198). Transformative collaboration in the AI realm calls for a convergence of resources, expertise, and perspectives across diverse actors, thereby enriching the comprehensiveness and inclusivity of AI deployment frameworks. Such collaboration encompasses academia, industry, government, and civil society, fostering a rich understanding of AI's socio-ethical implications and regulatory needs. As such, transformative collaboration is crucial for sharing knowledge, formulating best practices, and developing ethical and regulatory frameworks essential for AI governance. We argue that this synergy could accelerate the development of strategies to manage risks and maximize societal benefits of AI ([Sinha et al., 2024](#)), yet a Deloitte study (2023) indicates limited corporate engagement in such partnerships, underscoring the necessity to amplify collaborative initiatives. This highlights the need for increased efforts to foster partnerships and dialogue among service entities to effectively address concerns in AI development and deployment ([Deloitte, 2023](#)).

In practice, transformative collaboration translates into AI developers working with service organizations to understand their specific ethical priorities, needs, and challenges. They can also work with policymakers to ensure that their AI systems comply with all applicable laws and regulations and take a proactive role in securing ethical guidelines prior to adoption and implementation. Similarly, service organizations can partner with AI developers to create and implement AI systems that are aligned with their responsible AI principles. For instance, Microsoft's Responsible AI Standard establishes criteria and furnishes practical guidance, tools, and methodologies for staff to integrate responsible AI principles into their daily operations. In tandem with this standard, Microsoft has instituted a Responsible AI Impact Assessment, designed to assess the potential impacts of AI systems on individuals, entities, and broader society. Furthermore, hotels might partner with tech companies and environmental organizations to develop AI systems that optimize energy usage, contributing to sustainable tourism. They can also collaborate with customers to educate them about the responsible use of AI. Moreover, customers can provide feedback to service organizations and AI developers, while also advocating for policies that promote responsible AI through discussions with policymakers. Lastly, researchers and policymakers need to collaborate and share their knowledge and expertise on responsible AI. Only by working together can these key service entities help to ensure that AI is used in a way that benefits everyone and advances the SDGs.

Central to these endeavors is adopting collaborative practices such as data minimization, anonymization, robust encryption methodologies, and strict adherence to regulatory

frameworks governing data protection. Comprehensive training protocols ensure proficiency among all stakeholders while using AI models and meticulous documentation fosters comprehension and trustworthiness within collaborative endeavors. Moreover, the periodic dissemination of transparency reports serves to cultivate a culture of openness and accountability facilitating transformative collaboration across governmental, private sector, and civil society entities necessitates a framework that not only encourages participation but also establishes mechanisms to enforce accountability in case of non-compliance. Furthermore, a paradigm shift in educational methodologies and workplace dynamics is advocated to engender fairness, inclusion, and adaptability environments. Mobilization and equitable dissemination of knowledge, expertise, technological advancements, and financial resources are pivotal for enriching the transformative collaboration in the AI realm and highlighting the indispensable role of collective action in realizing the full potential of responsible AI.

5. Conclusion

In this article, we introduce a novel, theoretically grounded strategic framework called Responsible AI for Service Excellence (RAISE). We define RAISE as a strategic framework for responsibly integrating artificial intelligence into service industries. It emphasizes collaborative AI design and deployment that aligns with the evolving global standards and societal well-being while promoting business success and sustainable development. The RAISE framework is operationalized through three core principles: Embracing AI to serve the greater good, designing and deploying responsible AI, and practicing transformative collaboration across service entities. “Embracing AI to Serve the Greater Good” signifies a commitment to harnessing AI for societal benefits. In this regard, the framework encourages service organizations to become RAISE Adopters, aligning their AI strategies with both business objectives and ethical imperatives, thus realizing their full potential as Responsible AI-driven organizations that create value for society. “Designing and Deploying Responsible AI” involves developing AI systems that adhere to ethical standards and societal expectations. It requires service entities to employ strategies that safeguard privacy, enhance transparency, and ensure AI systems are designed with the well-being of all stakeholders in mind. This principle ensures that AI technologies are not only beneficial but also equitable and socially responsible. “Practicing Transformative Collaboration” encompasses building synergies between service organizations, policymakers, AI developers, customers, and researchers. It emphasizes the importance of leveraging collective expertise to create AI applications that are ethically sound and contribute positively to societal well-being. Such collaboration is essential for sharing knowledge, establishing best practices, and accelerating the development of strategies to manage AI-related risks and maximize benefits. In conclusion, as we venture forward, we urge actors across various fields and industries to champion responsible AI as a fundamental element in driving innovation, fostering equity, and ensuring sustainable growth. This collective endeavor is crucial for setting new benchmarks for excellence and ensuring a future where technology enhances the well-being of society and the natural environment alike.

Notes

1. For an overview of the methodology, visit: <https://www.servsig.org/wordpress/research/service-literature-alert-system/>
2. For a recent overview of the state of AI in marketing, please see [Chintalapati and Pandey \(2022\)](#) and [Huang and Rust \(2024\)](#).
3. For an overview, visit: <https://sdgs.un.org/goals>

4. For further details, visit: <https://www.servcollab.org/post/journal-of-services-marketing-servcollab-special-issue-on-improving-life-on-planet-earth>
5. In their 2019 work, Jobin *et al.* employed the term “ethical AI” as a synonym for what we refer to as “responsible AI” in this paper. Given the conceptual overlap between their definition of ethical AI and our use of responsible AI, we have chosen to consistently use the term “responsible AI.”

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