

A Hybrid Intelligent Change Management Approach to Generative AI Adoption

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Abstract. The emergence of no-code AI platforms presents a revolutionary opportunity for democratizing AI, making it accessible for non-technical users to engage in AI-driven innovation [1]. This democratization is particularly evident in the realm of Generative AI (GenAI), which holds substantial promise for creative and problem-solving applications [2]. Despite the wealth of frameworks addressing IT development and adoption [3, 4], the integration of generative AI's disruptive capabilities into existing paradigms remains underexplored, often relegated to the insights of private consultancy reports [5]. This paper aims to address this gap in academic literature within the interdisciplinary concept of Hybrid Intelligence (HI), [6, 7], synthesizing insights from human-centered AI interface development [8], organizational upskilling [9], and the significance of a psychologically safe environment for collaborative innovation [10,11]. Here, we propose a comprehensive framework for integrating generative AI within organizational change management. This framework, highlighting common challenges and opportunities for innovation in GenAI adoption, is informed by product development workshops and training sessions with hundreds of industry leaders in Northern Europe over the past year.

Keywords. Generative AI, Hybrid Intelligence, Human-Centered AI, change management, organizational learning

1. Challenges in Generative AI Adoption

Organizations face numerous obstacles in leveraging Generative AI, including:

Inadequate Policy: Many organizations lack the necessary IT security policies and funding mechanisms for exploratory AI tool adoption, impeding innovation.

Misaligned Expectations: An IT-centric approach often leads to initiatives that fail to garner widespread support, stifling holistic organizational innovation.

Training Gaps: Simplistic training programs fail to equip employees with the skills needed for effective GenAI utilization, leading to inefficient use of AI outputs.

Leadership vision: Lack of a concrete leadership response to popular tech-narratives of imminent job loss

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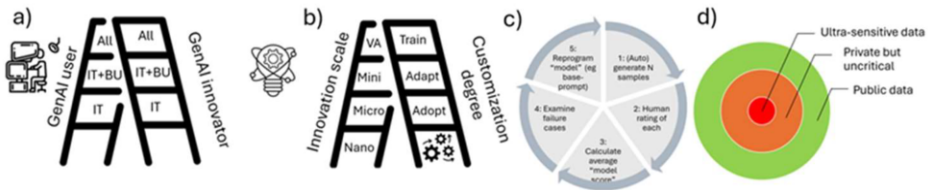


Figure 1. a) GenAI users and product and process innovators double-ladder from IT-driven over IT+Business Unit (BU) teams to all employees. b) GenAI product ladder with increasingly complex use cases from nano-innovations (simple GPT prompts), micro (chatbots on a knowledge base such as documents and websites), mini (systematic operations on a well defined structured data set such as an extract from a customer support data-base) to full Virtual Assistants (VA) operating on a dynamical database. Each innovation should progress through a corresponding product customization ladder, see text below c) Training all GenAI innovations should follow a human-AI training cycle. Example: while training a website chatbot, large amounts of questions and answers can be automatically generated (prediction task) whereas the evaluation of the quality of each response involves human, contextual judgment. d) GenAI applications should progressively move from outer to inner-layers of data privacy.

2. Framework for HI-powered Generative AI Adoption

Overarching considerations:

- 1: Human-controlled assistants:** in the GenAI future, all employees will become high-level task-operators of complex Virtual Assistants (VA)
- 2: Empowering Employees as Innovators:** Due to the unprecedented accessibility of GenAI, any employee can become a user *and* an innovator with GenAI, Fig1a)
- 3: Culture today, disruption tomorrow:** Rather than identifying your organizational killer VA application of GenAI, start by building a culture of upskilling and micro-innovations, Fig1b)
- 4: Complementary role of GenAI:** GenAI can assist in *any* task but take over very few

Successful GenAI organizations rely on deliberate and simultaneous emphasis on three key factors:

a) Product innovation: We advocate for a graduated approach to GenAI integration, starting with simple prompt-based tasks and progressing to complex data-driven applications, Fig1b). Each innovation type should progress through three stages of customization; i) Adoption of an external prompt or service without modification, ii) Adaptation of the innovation to the organizational context via text or functionality edits and iii) Training through iterative application development involving several learning loops of generating output, evaluating/rating them and learning from failure cases. The latter can only be achieved within a Human-Machine-Learning-Loop (HMLL) which involves an efficient decomposition of tasks into machine and human actions, Fig1c). For this, we recommend applying the notion of prediction (manipulation of large amounts of well-structured data) and judgment (manipulation of large amounts of tacit or contextual knowledge), respectively [12].

b) Cultural innovation: A few highlights of the identified steps towards creating a comprehensive and inclusive GenAI innovation culture.

HI prompt engineering understanding both strengths and weaknesses of LLMs and changing from an emphasis on rapid LLM-output production and subsequent iterative improvements to a more deliberate task description and calibration with the AI-partner.

Sharing and celebrating nano and micro-innovations organization-wide to create an inclusive culture of innovation in which any employee can contribute. This includes an organization-wide prompt library both as concrete process improvement as well as a part of communicating leadership commitment to upskilling and organizational learning. Including explicit emphasis on prompt curation: a continuous and comprehensive effort to invoke a cultural change in mindset.

ChatGPT@Home: Organize an after-work social lecture on utilizing GPT technologies at home, such as fixing a bike with chatGPT image recognition assistance [13].

c) Strategic innovation highlights:

Human-centered vision: Formulate an easily communicable vision of how the transformation will benefit not just the company but also the employees, e.g. shifting tasks from prediction to judgment or that GenAI is perfectly suited to bolster existing strategic competences.

An innovation friendly data security strategy, In particular introducing a middle layer, where a risk assessment of the potential of business value loss is low, is crucial for climbing efficiently up the GenAI product innovation ladder. Fig1d)

GenAI innovation fund allowing employees easy access to experimentation tools across the GenAI modality spectrum.

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