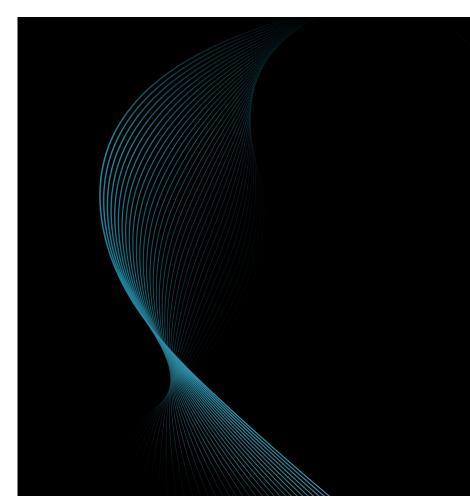
Harvard Business Review

An experiment by Paolo Cervini, Elisa Farri and Gabriele Rosani

Generative Al for Strategy & Innovation

ChatGPT's recommendations to transform 10 management theories and practices

Curated by Enrico Sassoon





INTRODUCTION

The Infinite Potential of Generative AI

ChatGPT has become a topic of conversation for nearly everyone. As a generative artificial intelligence based on large language models (LLMs), it is not the only one available today, but it is certainly the best-known and most widely used compared to its counterparts: DALL-E, Bard, Stable Diffusion, Midjourney, and others. In the history of technologies, it currently holds the record for penetration, with 100 million new users in just two months. This record will be broken, as previous ones have been, and it will be fascinating to see who accomplishes this achievement and when.

ChatGPT is both fascinating and intimidating. The ability for anyone to interact with an interface capable of answering nearly any question, providing millisecond responses in impeccable language, is undeniably exciting. However, despite its remarkable competence, critics caution that it can make errors and even engage in what is technically referred to as "hallucinations". Regardless, Bill Gates considers it an epochal step, equal to, if not surpassing, the Internet revolution.

Yet, there is also a worrisome aspect. The creators of ChatGPT, such as Sam Altman of OpenAI and others, harbor concerns about their own creation. While they are certainly not contemplating putting the genie back in the bottle, they emphasize the need for caution, the establishment of rules, and the definition of an ethical framework for the creation and utilization of AI. It is unlikely that they wish to stifle the goose that lays the golden eggs; more plausibly, they seek to safeguard themselves against the potential adverse outcomes of their creation.

This book utilizes ChatGPT not for recreational purposes or generic research and discovery, but to conduct an experiment exploring the tool's potential in the professional and cognitive domains. The authors of the experiment—Paolo Cervini, Elisa Farri, and Gabriele Rosani—have immersed ChatGPT in the realm of corporate strategy and culture, investigating how generative AI can enhance the application of key strategic and organizational theories and practices, both in terms of incremental improvements and radical rethinks.

2 Introduction

The experiment encompassed ten management theories and practices, categorized into two main groups: business strategy and innovation, and organization and culture. A dialogue with AI was constructed using generated and regenerated prompts to obtain meaningful answers pertaining to well-known management theories and practices, such as the Blue Ocean Strategy and Agile. These answers were then compared with the professional experiences of the authors, who are seasoned consultants and have recently been included in the world ranking of Thinkers50.

The path taken was meticulously prepared and rigorous, aiming to acquire reliable and qualified answers for further scrutiny. In fact, ChatGPT was asked to rank the top three elements for each response based on established criteria: business value, speed of execution, cost of execution, and feasibility. The ranking provided by the generative AI was not subsequently challenged, although there were instances where the team held differing opinions.

The outcome of this concentrated experiment, conducted over a handful of days, is of significant interest, not only because it may be the first of its kind, but also because it allows anyone interested to form their own opinion regarding the tool's potential. Harvard Business Review Italia considers this with great attention, as shown by the recent publication of the book "The Revolution of Artificial Intelligence". We are merely at the beginning, and the research continues.

Enrico Sassoon

2. Approach

Between May 29th and June 5th, 2023, we conducted a series of experiments with ChaptGPT Plus (GPT-3,5 and GPT-4) to investigate how GenAI can improve the application of leading strategic and organizational theories/practices, both in terms of incremental enhancements and radical rethinking.

The scope of experiments included the following 10 theories and practices, grouped in two main categories:

- Business Strategy & Innovation Management: value innovation; growth planning & experimentation; platforms & business ecosystems; multi-stakeholder co-creation; open innovation.
- Organization & Innovative Culture: leadership behaviors; fluid & flexible organization; agile way of working; empowerment & decision making; employee motivation. The selection was based on two main criteria: i) theories/practices that are popular and globally recognized (such as Blue Ocean Strategy, Open Innovation, or Agile) and ii) on which we are domain experts (because of our extensive application, research and publications over the last 10-15 years).

Here below we provide more detailed information about our experimental approach:

Format of interaction: human-ChatGPT dialogue (like a Q&A with an expert).

Role of ChatGPT: we asked ChatGPT to act as an expert both in GenAI and management theories/practices.

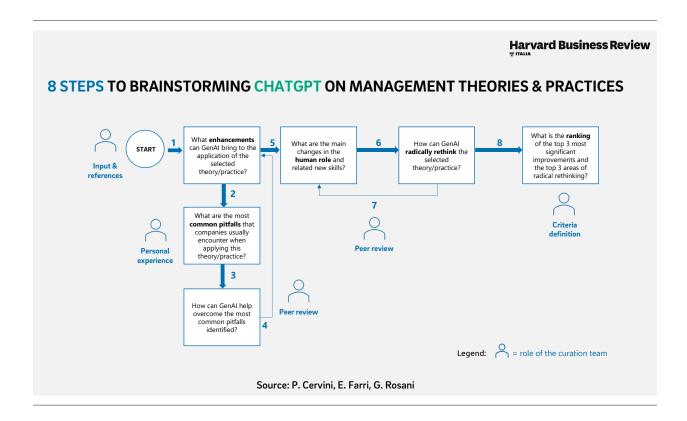
Context: For each theory/practice, we input ChatGPT with references in terms of: ideator of each theory/practice; articles or books explaining the related approach; examples; case studies (mainly featured in media or academic publications).

Prompting: After testing various options, we selected a sequence of 8 main prompts (i.e., text query/question) because it delivered the most accurate, creative and detailed answers:

4 Approach

1. Prompt about valuable enhancements that GenAI can bring to the application of a selected theory/practice

- 2. Prompt about common pitfalls
- 3. Prompt about how GenAI can help overcoming the common pitfalls
- 4. Again prompt #1
- 5. Prompt about the main shifts in human role and skills
- 6. Prompt about how GenAI can disrupt and radically rethink the selected theory/ practice
- 7. Again prompt #5
- 8. Prompt about the ranking of top3 enhancements and top3 areas of disruptions



Regeneration: we often preferred to rephrase the questions to ChatGPT, varying the prompting with additional information and feedback, rather than simply using the "regenerate" button.

Ranking: once the entire prompting sequence was implemented, we asked ChatGPT to consider only the improvement ideas and radical transformations that we selected and reviewed. Then we provided ChatGPT with four evaluation criteria: business value, execution speed, execution cost, and feasibility. Based on these specific criteria, ChatGPT identified the "Top 3 improvements" and "Top 3 radical transformations" for each theory/practice examined in their respective chapters. The remaining ideas are presented without a defined ranking. We did not question the ranking determined by ChatGPT, even though we had different opinions in some cases. ChatGPT also provided detailed explanations for each criterion to support its evaluation. This further confirms the future possibilities of interaction and collaboration with ChatGPT.

Experiment Rules & Guidelines:

- We created a new ChatGPT Plus account for this experiment.
- We created separate chats ('verticals') for each theory and practice. We did not want to mix the topics, but most importantly we wanted to train the language model on selected theories and practice, laying the foundations for an ongoing experimentation.
- We assigned the theories and practices to the person with the strongest domain expertise (on average, each of us covered 3 areas).
- We asked ChatGPT to provide output in the form of max 8 items for each prompt.
- For Prompt #6 we asked ChatGPT to be creative when thinking of potential ideas for disruption.

Human Curation:

- We challenged ChatGPT answers based on our hands-on experience (e.g., "based on our experience, we'd add another pitfall... or we'd rephrase the last pitfall because of...").
- We offered additional input, insights, examples (especially when ChatGPT delivered answers we felt too generic).
- We commented responses to help ChatGPT fine-tune and improve the quality of each answer. But also, to make it as much similar as possible to a human-to-human conversation.
- We peer-reviewed ChatGPT's responses to judge the quality of the generated answers: elimination of least convincing items, sequencing and prioritization of the most insightful items, refinement of the labelling and the text (e.g., cutting some redundant parts of the generated text, or highlighting important parts), identification of criteria for ranking.
- We identified the criteria for evaluating and ranking the list of ideas proposed by ChatGPT.

6 Our Point of View

3. Our Point of View: What we learned from interacting with ChatGPT

An Enriching Experience. On one hand, it provided us with valuable on-the-job training. Each interaction served as a learning opportunity, helping us refine our prompting techniques and foster our critical thinking skills. On the other hand, engaging with ChatGPT proved to be an intense mental exercise. It demanded a significant yet gratifying and stimulating effort. We found ChatGPT to be an excellent resource, serving as a reliable partner in simulating exceptional, high-quality brainstorming sessions.

Challenges and Future Approach. Concentrating our testing activities within a few days presented its own set of challenges. To address this, we plan to utilize the tool for max 2 hours a day in the future. This approach aligns with the principles of brainstorming among human participants, where the process is often spread out over multiple sessions. Additionally, we aim to continue training the language model from a perspective of continuous learning on each specific theory and practice.

Sharing Key Takeaways for Debate and Improvement. With the intention of stimulating constructive debate and inviting other experts and thinkers to join our experiment, we would like to openly share a detailed list of our key takeaways.

PROMPTING

- Initially, ChatGPT may provide generic and superficial responses, but subsequent prompts can be used to improve its accuracy and quality.
- When utilizing multiple sources such as books and articles, it is more effective to present them as a context and then query ChatGPT "source by source" before requesting consolidation.
- Certain topics consistently appear throughout various theories/practices, and ChatGPT incorporates these recurring themes as part of its default model (e.g. integrating data-driven insights, simulations, visualization, ethics).
- Occasionally, ChatGPT may mix significant insights with less valuable information, so human intervention is necessary to curate and select the most appropriate responses. If unsatisfactory answers are provided, asking for better alternatives can be helpful.

• To provide updates to ChatGPT, specific excerpts from texts such as chapters, articles, or books can be entered.

We found ChatGPT to be an excellent resource, a partner to stimulate high-quality brainstorming sessions

REPROMPTING / REGENERATION

- When interacting with ChatGPT, it is important to request specific responses linked to the context of the chapter, avoiding overly generic answers, and encouraging the use of keywords related to the specific topic. There are instances where it is necessary to guide ChatGPT to consider certain aspects more thoroughly or refer to specific articles, parts, or more granular details within a broader theory.
- ChatGPT tends to perform better when provided with a well-defined input to work with, such as the "six paths" of the Blue Ocean Strategy or the main steps of the Discovery Driven Planning approach. Customizing the response in a timely manner based on such inputs yields better results.
- While regeneration can help improve the rephrasing of answers, it may be less effective in generating significantly different responses.
- After some time, ChatGPT may start repeating itself, requiring a change in the approach or prompt structure. For example, explicitly asking for less obvious or intuitive items or exploring different perspectives can be beneficial.
- It can be useful to provide ChatGPT with an "additive" input, expanding on the initial list or asking it to consider similar things or explore new directions.
- Requesting concrete examples is important, as ChatGPT rarely generates them on its own. Often, the value of the response lies in the provision of specific, detailed, and tangible examples.

TONE/NARRATIVE

- ChatGPT often includes unnecessary pleonastic padding, resulting in the use of two or three sentences when one would suffice.
- It may be beneficial to ask ChatGPT for a more engaging or fitting rephrasing related to the topic, as its default responses can be somewhat flat, repetitive, and uninteresting.
- The "regenerate" function can be employed to modify specific items, allowing for the rephrasing of answers by shortening, expanding, or making them less verbose through the use of examples.

8 Our Point of View

• Creating narrative pieces by initially providing inputs or keywords helps establish the necessary connective structure, which can be further refined through multiple rounds of regeneration and requests for shorter or longer responses.

• Additionally, fine-tuning can be employed to correct the wording in a more targeted manner (by instructing ChatGPT on the desired style), followed by the incorporation of personal touches.

It is important to let ChatGPT know what kind of narrative response we would like to obtain (number of words, paragraphs, narrative tone, ...)

CREATIVITY

- ChatGPT demonstrated an impressive level of creativity, in some cases better than many domain experts.
- When seeking disruptive thinking, encourage ChatGPT to explore extremes by requesting "wild ideas" that are radically different or unconventional.
- If after some iterations ChatGPT becomes more predictable, it can be helpful to explicitly prompt it to be more creative and to look "outside the box".
- In first place, for ChatGPT the notion of "disruption" tends to be associated with technological disruptions (such as AR/VR, blockchain, etc.), therefore prompt it to also explore ideas that are not necessarily driven by technology.
- Sometimes ChatGPT may propose similar patterns/ideas for different theories. When this happens, ask ChatGPT to better customize the idea to the specific context, adding concrete examples.

ChatGPT has demonstrated an impressive level of creativity, sometimes surpassing that of many management experts

CONTENTS / COGNITIVE BIAS

- In the responses, the logic behind the sequence of the various bullets is often unclear. By applying deliberate pressure and requesting clarification, it is possible to gain a better understanding and encourage ChatGPT to organize the information in a more logical and coherent manner.
- ChatGPT may not be accurate in the distinction between AI and GenAI and between AI and other technologies, such as blockchain or VR/AR (where an AI component exists).
- When ChatGPT is given a corrective input, it tends to incorporate it explicitly in subsequent answers, seemingly aiming to please and satisfy the user. Therefore, it is important to exercise judgment when providing corrective inputs.

- ChatGPT sometimes may struggle to "connect the dots" between different theories and practices. When this happens, it's useful to explicitly prompt it to look for analogies and connections.
- ChatGPT has not displayed any significant errors or hallucinations that could be considered major mistakes in its responses.

HUMAN JUDGEMENT

- When evaluating responses and selecting generated items, it is crucial to possess strong domain expertise and maintain critical judgement. This is necessary because ChatGPT tends to mix valuable insights ("gems") with less valuable information.
- Assessing the effectiveness of response phrasing also requires experience and familiarity with business jargon. This expertise is essential to determine the appropriateness and relevance of the language used.
- For individuals with robust domain expertise, ChatGPT can serve as an excellent source of inspiration. It can act as an engaging sparring partner, stimulating motivational flow and generating intriguing insights.
- Overall, ChatGPT is an amazing tool for generating lists of items and ideas that can be further screened, refined, and evaluated.

Harvard Business Review SUMMARY OF THE KEY LESSONS LEARNED • In general, finding the right prompting sequence has required significant effort • When using multiple sources, it is more effective to query ChatGPT source by source Prompting • When ChatGPT starts repeating itself, change the prompting and/or ask for specific examples In our experiment, we did not notice significant errors or "hallucinations" Contents/ • ChatGPT tends to mix valuable insights ("gems") with less valuable information · When providing a list of responses, ChatGPT's ranking logic is unclear, so it is advisable to ask for explanations • ChatGPT showed a remarkable level of creativity (sometimes better than domain experts) Creativity • Do not hesitate to encourage ChatGPT to be more innovative (focus on extremes, "wild ideas," or radical concepts) · In general, the language used by ChatGPT can be somewhat "bland" and requires human intervention Tone/Narrative • Provide guidance to ChatGPT regarding the response format (number of words, paragraphs, etc.) and tone (style, intended audience, etc.) Source: P. Cervini, E. Farri, G. Rosani

10 Guidelines for the reader

4. Guidelines for the reader

The chapters in this eBook are grouped into two main categories: i) business strategy and innovation management; ii) organization and innovative culture.

While the chapters are organized in a coherent sequence with interconnections between them, they can also be extracted as standalone pieces. Depending on your curiosity, domain of expertise, or specific business challenge, you can choose the chapters that resonate with you the most. They can be read in sequence or independently, depending on your preference.

When you engage with each chapter, it is important not to limit yourself solely to the labels assigned to each bullet point (be it a suggestion for enhancement or potential disruption). Take the time to read the descriptions, as they hold the true value of the content. As emphasized in the previous chapter about key take aways of this experiment, the labels may sometimes appear generic, but the descriptions and examples contain the essence of the material.

From a content perspective, each chapter presents intriguing insights derived from ChatGPT. These insights can help you apply frameworks more effectively and efficiently, or even challenge and rethink them in a more radical manner.

This book is an experimental project and does not aim to provide definitive answers. Instead, it introduces a novel way of interacting with artificial intelligence. The current version serves as a starting point for further exploration and research experiments.

With these instructions in mind, we invite you to embark on this experimental journey. Embrace the possibilities that emerge from this interaction with ChatGPT. May it serve as a catalyst for your own exploration. *Let the experiment continue...*

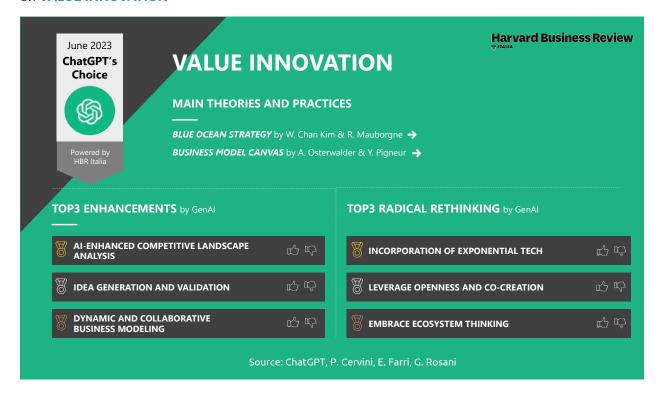
5. Business Strategy & Innovation Management



Kike Calvo/Getty Images

12 Value Innovation

5.1 VALUE INNOVATION



Theory & practice we selected

Innovative business strategies have become essential for organizations seeking to differentiate themselves in the marketplace and create sustainable growth.

The leading reference theory and framework is Blue Ocean Strategy (book and article) by W. Chan Kim and Renée Mauborgne. It suggests that companies can achieve remarkable success by creating new markets instead of competing in existing ones. The theory emphasizes the pursuit of uncontested market spaces, known as "blue oceans", where competition is irrelevant or non-existent. By identifying customer needs and pain points and offering unique value propositions, companies can create new demand for their offerings.

In practice, Blue Ocean Strategy methodology follows some key steps: analysis of the current Industry, identification of unmet customer needs; design of a Value Curve; exploration of new market spaces; development of a Business Strategy.

Blue Ocean Strategy is part of the broader Business Model Innovation concept, the process of creating, modifying, or redefining a company's business model to achieve superior performance or gain a competitive edge. To this regard, a relevant management tool is the <u>Business Model Canvas</u>, popularized by Alexander Osterwalder and Yves Pigneur: it allows organizations to define, visualize, and refine their business models.

Our hands-on experience

As long-term partners and contributors of the <u>Blue Ocean Strategy Network</u>, we have applied the methodology on dozens of firms across various industries and sectors worldwide, with established large companies and with smaller ones.

We have witnessed the transformative power of Blue Ocean Strategy: simple and effective framework and visual tools, a clear process to follow, the ability to foster a culture of creativity and innovation within organizations, encouraging employees to think outside the box.

During its application we have often observed organizations struggling in terms of: Customer understanding: organizations may struggle to fully grasp the needs, preferences, and behaviors of their target customers. Lack of market research, inadequate customer feedback channels, or a failure to analyze and interpret customer data can contribute to this challenge.

Internal biases: organizations can face difficulties in overcoming preconceived notions about their industry, customers, or competition. These biases can prevent the exploration of new opportunities, as decision-makers may be hesitant to deviate from established practices.

Quantification of qualitative insights: translating qualitative insights, such as customer feedback, into quantitative data can be a complex task for organizations. The inability to quantify these insights makes it challenging to prioritize opportunities and make data-driven decisions.

Complexity in implementation: organizations often encounter challenges when moving from strategy formulation to implementation. This can be due to various factors, including resistance to change, inadequate resource allocation, lack of clear action plans, or insufficient coordination.

14 Value Innovation



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of Innovative Business Strategies theories?

- 1. Al-Enhanced Competitive Landscape Analysis: GenAl can leverage data analytics
 to quantify qualitative insights on market dynamics and help identify gaps and differentiation opportunities. GenAl can provide evidence-based recommendations for
 divergent value propositions.
- 2. Idea Generation and Validation: GenAl can facilitate idea generation sessions, leveraging historical data, market trends, and customer insights; it can also assist in conducting surveys and gathering feedback to validate and refine business ideas before moving to implementation. GenAl can help looking across industry boundaries, strategic clusters, and other "strategic paths" described in the Blue Ocean methodology to spur ideas for strategic reconfiguration.
- 3. Dynamic and Collaborative Business Modeling: GenAl can enable real-time collaboration, version control, and dynamic updates. This capability supports iterative testing, refinement, and adaptation of business models based on new insights and market dynamics.

Generative AI can facilitate idea generation sessions, using historical data, market trends, and customer info. It can also help quickly conduct surveys and gather feedback to validate and refine new strategic ideas

Additional enhancements include:

- Explore and Unearth Value Barriers: Regarding customer / user understanding, GenAl can facilitate the combination of quantitative data analysis with qualitative research methods and help building a comprehensive and nuanced understanding of customer needs, behaviors, and preferences.
- Concept Exploration and Visualization: GenAl can help visualize different business concepts and models, or prototypes of potential business ideas, allowing to assess and refine them more effectively. This is particularly useful when using tools like the Blue Ocean Value Curve or the Business Model Canvas, as GenAl can generate visualizations of various canvas components, such as customer segments, value attributes, value propositions, and revenue streams.
- **Gamification and Simulations**: To enhance participant engagement and learning (for instance in a workshop session), gamified activities can encourage creative thinking, problem-solving, and the exploration of alternative business models. Simulations could simulate market dynamics, allowing participants to test and refine their strategic choices in a risk-free environment.

- **Exploration of Alternative Value Creation Models**: To challenge the traditional notions of value creation and capture, GenAl can help consider alternative models such as the circular economy, access-based models, subscription-based models, or outcome-based models.
- **Scenario Planning**: GenAl can assist in simulating different scenarios based on quantified data, helping organizations evaluate the financial viability and feasibility of implementing Blue Ocean ideas before implementation.



Disruptions - How would GenAl rethink or radically disrupt Innovative Business Strategies theories from within?

- 1. Incorporate Exponential Technologies: Embrace the transformative power of exponential technologies such as AI, blockchain, Internet of Things, and Augmented Reality. Explore how these technologies can enable entirely new value propositions, business models, and customer experiences. Integrate technology-driven innovation as a core component of the strategy and business model design process.
- 2. Leverage Openness and Co-creation: Embrace the principles of open innovation and co-creation by engaging external stakeholders, including customers, suppliers, and even competitors, in the strategy and business model design process. Foster collaboration, crowdsourcing, and open platforms to generate innovative ideas and drive co-creation of value with diverse stakeholders.
- 3. Embrace Ecosystem Thinking: Rather than focusing solely on individual businesses and industries, expand the scope to embrace ecosystem-level thinking. Consider how different players, technologies, and business models can collaborate and co-create value within interconnected ecosystems. This approach involves identifying new ways to collaborate, leverage partnerships, and create synergies across multiple industries and stakeholders.

Additional areas of disruptions include:

• Shift Towards Purpose-Driven Strategies: Consider the broader societal and environmental impacts of business decisions. Move beyond purely profit-driven strategies and focus on creating shared value for multiple stakeholders. Embrace sustainability, social responsibility, and ethical considerations as integral components of strategy formulation and business model design.

16 Value Innovation



Human Factor

- **Strategic Decision-Making:** While GenAl can provide data-driven insights and recommendations, it is up to humans to interpret the information, make judgments, and set the strategic direction for the organization. The human role shifts towards synthesizing Al-generated insights, evaluating trade-offs, and making strategic choices based on a holistic understanding of the business context.
- Contextual Knowledge and Expertise: When formulating new strategies, humans bring deep industry knowledge, experience, and contextual understanding that GenAl may lack. They possess tacit knowledge acquired through years of working in specific domains. This expertise enables humans to apply critical thinking and judgment when interpreting GenAl's outputs, ensuring that Al-generated insights align with the organization's unique challenges, goals, and values.
- **Human-AI Collaboration and Communication:** Collaboration between humans and GenAI becomes crucial. Human professionals need to effectively communicate their strategic intent, objectives, and priorities to GenAI, enabling it to generate relevant insights. Similarly, humans must interpret and communicate AI-generated insights to stakeholders, fostering understanding, buy-in, and alignment within the organization.
- Ethical Standards in Strategy Formulation: Humans must ensure that the data used is unbiased, representative, and ethically sourced. They are responsible for setting ethical guidelines, reviewing Al-generated recommendations from an ethical standpoint, and making strategic decisions that align with the organization's values and societal expectations.
- **Continuous Learning and Adaptation:** As GenAl evolves and brings new capabilities, humans need to stay updated with advancements, understand GenAl limitations, and acquire the skills to effectively collaborate with it.

The human role shifts towards evaluating trade-offs, and making strategic choices based on a holistic understanding of the business context

5.2 Growth planning & experimentation



Theory & practice we selected

In today's VUCA (Volatile, Uncertain, Complex, Ambiguous) world, testing hypotheses and learn in an iterative way is increasingly important in managing growth projects. The reference framework to help managers plan in a VUCA world is Discovery Driven Planning from Professor Rita McGrath and Ian MacMillan (link to book and HBR article). A similar theory that goes in the same direction of setting and validating key assumptions as cheaply and as fast as possible, is the "Lean Start-Up" popularized by Eric Ries and Steve Blank.

Both frameworks offer a lower-risk way to move a new initiative forward by testing assumptions and learning as much as possible as early as possible. It helps planners think critically, challenge assumptions and pivot when needed. The approach consists of a set of critical questions managers need to answer when developing a new initiative under uncertainties: what is our definition of success? What assumptions need to be true to achieve the desired success? How can the assumptions be validated? How can we adapt the plan as we test and learn?

Over the last two decades those dynamic planning methods have become increasingly popular as a disciplined approach to deal with growth projects and initiatives in hyperdynamic market environments.

Our hands-on experience

Over the years we have introduced the principles and tools in several large corporations, both in B2B and B2C environment and in different geographical markets. We also published our research and experimentation findings to <u>help companies adopt lean thinking more effectively</u>, especially in R&D.

While the approach brings several benefits, such as early risk identification, iterative learning, efficient resource allocation, and market-responsive decision-making, there are common pitfalls that planners can fall into:

- Poorly defined assumptions: one common pitfall is the lack of clarity and specificity in defining assumptions. If assumptions are vague or ambiguous, it becomes difficult to validate and measure.
- Unrealistic assumptions: planners may sometimes make overly optimistic assumptions about the market, customer behavior, or technology.
- Inadequate validation: planners may rely on their intuition or limited data, without conducting thorough validation experiments or collecting sufficient feedback from customers or stakeholders.
- Insufficient iteration and learning: planners may be resistant to change or may not allocate enough time and resources for iterative testing and refinement. This can hinder the ability to adapt and improve the project based on new insights.
- Failure to pivot: some planners may resist changing direction or may not recognize the need to pivot in a timely manner. This can lead to wasted resources and missed opportunities for corrections.

Addressing these challenges is crucial for successful implementation. By leveraging generative AI enhancements, planners can overcome these pitfalls and enhance the effectiveness of the methodology



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of Discovery Driven Planning?

- 1. Generate Assumptions: All algorithms can autonomously generate a diverse range
 of assumptions based on vast amounts of data and insights. Planners can then collaborate with All systems like ChatGPT to refine and iterate on these assumptions,
 combining human expertise and Al-generated insights. In addition, GenAl's can help
 uncover assumptions that might have been overlooked.
- 2. Design Experiments for Validation: GenAl can provide recommendations for efficient experimental designs that maximize learning and minimize costs. For example, by identifying the most critical assumptions to test first, and the right sequence (also based on sensitivity analysis and scenario simulation).
- 3. Simulate User Feedback for Validation: traditional validation methods such as interviews and market research can be time consuming. GenAl can simulate feedback from potential users/customers based on the assumptions (planners can describe their target audience and context, and GenAl can generate responses as if it were the user or customer). In addition, Al can help analyze large-scale data sets, customer feedback, online discussions, reviews, and other relevant sources.

Generative AI can simulate user feedback based on assumptions (planners can describe their target audience and context, and generative AI can generate responses as if it were the user or the customer).

Additional enhancements include:

- **Connect with Experts:** Planners can describe the specific expertise they are seeking, and GenAl can suggest potential experts to engage with or connect planners with relevant communities or forums. Planners can engage with these experts, seeking their perspectives for validating the assumptions.
- **Challenge the Assumptions**: Al systems can act as critical "challenger", questioning human-generated assumptions. GenAl can provide iterative feedback and challenge the assumptions developed by the planner, stimulating critical thinking or questions that help planners think deeper about the assumptions. It can also simulate different perspectives by suggesting alternative viewpoints.
- **Develop Metrics:** GenAl can help planners establish measurable milestones and targets to validate assumptions at specific stages, enabling more structured and actionable validation.
- **Trigger Pivots:** By engaging in discussions and simulations, GenAl can highlight discrepancies between assumptions and evidence, suggest alternative approaches, or identify potential gaps or limitations.



Disruptions - How would GenAl rethink or radically disrupt Discovery Driven Planning from within?

- 1. Al as Project Planner: Instead of human project leaders, an Al system takes the lead in driving the discovery process. It generates and tests assumptions autonomously, making decisions based on data analysis and machine learning algorithms.
- 2. Quantum Computing for Assumption Generation: Leveraging the power of quantum computing, assumptions are generated by exploring all possible scenarios simultaneously, allowing for a more comprehensive and nuanced understanding of potential outcomes.
- 3. Augmented Reality Assumption Testing: Assumptions are tested in immersive augmented reality environments, where planners can visually experience and interact with simulated scenarios. This experiential approach enhances the validation process and encourages creative problem-solving.

An artificial intelligence system can take a guiding role in the discovery process. It autonomously generates and tests hypotheses, making decisions based on data analysis

Additional areas of disruption include:

- Multi-Agent Assumption Validation: GenAl can create virtual ecosystems where assumptions are tested through dynamic interactions between virtual entities. This enables planners to understand the complex interdependencies that impact the success of assumptions.
- **Collaborative Assumption Setting**: Al systems can facilitate collaborative brainstorming sessions by generating and sharing ideas in real-time. Planners can leverage Al's ability to generate a vast number of ideas, sparking collective creativity and fostering a collaborative ideation process.
- Al-Facilitated Assumption Gamification: Al-powered gamification techniques can turn the assumption validation process into an engaging and interactive experience. Planners can compete or collaborate in virtual games that simulate real-world scenarios, fostering creativity and enhancing the motivation to validate assumptions.



Human Factor

- **Creativity (in Prompting):** With AI systems providing insights and suggesting potential assumptions, humans must think creatively on which deep questions and creative prompting can leverage the full potential of ChatGPT.
- Critical Thinking / Ability to Challenge: Humans must cultivate critical thinking skills, interpret results, assessing the capabilities, accuracy, and reliability of Al models, understanding their limitations, and making informed choices.
- **Integration of AI-generated Insights**: Human planners will need to synthesize AI-generated insights with their own expertise and industry knowledge to make informed decisions. This requires skills in data interpretation, pattern recognition, and critical analysis to extract meaningful insights from AI-generated data and integrate them into the planning process.
- **Iterative Adaptation and Pivoting:** Human planners will continue to be responsible for guiding the iterative adaptation and pivoting process. They will need skills in monitoring and analyzing feedback, identifying opportunities for course correction, and making strategic decisions about when and how to pivot based on a combination of Al-generated insights, user feedback, and market dynamics.
- Ethical Considerations in AI Use: Humans must understand the ethical implications of using GenAI and ensure responsible and unbiased decision-making. Skills in AI ethics, governance frameworks, and data privacy become essential. For example, by judging safe and secure methods/data for testing the assumptions.

5.3 Platforms & business ecosystems



Theory & practice we selected

Main reference is the seminal book "Platform Revolution" by Geoffrey G. Parker, Marshall W. Van Alstyne, and Sangeet Paul Choudary (book and article); this theory has provided a comprehensive overview of the platform business model, its key components, strategies, and implications. It has proven to be a valuable resource for understanding the transformative power of platforms in today's digital economy.

Another key contributor is <u>Michael Jacobides</u>; his work (as this <u>article</u>) has provided valuable insights into the role and dynamics of ecosystems in shaping competitive advantage and innovation. His research emphasizes the need for firms to embrace ecosystem strategies, become effective orchestrators, and navigate the complexities of ecosystem governance to thrive in today's interconnected business landscape.

Our hands-on experience

We applied the above theories and thinking in multiple contexts, drawing inspiration also for our publications and speeches/talks. Our original thinking was featured in leading magazines and various books. See for instance How to Embrace the Power of Platforms, or Ecosystems: the How Factor.

We have observed in several projects how the concept and thinking captured in "Platform Revolution" and in <u>Professor Michael G. Jacobides's</u> publications help business leaders in understanding and strategizing the potential of such innovative business models. Academic research has clearly highlighted how network effects operate, how they harness the virtuous cycle of growth where more users attract more participants. However, in many cases the application of platforms & business ecosystems theories has turned out to be challenging in several aspects:

- Unfamiliarity with platform logic: most managers are unfamiliar with platform concepts. Understanding the nuances of network effects, value sharing, and orchestration is crucial to leverage these theories successfully.
- Naïve approach: some organizations approach network effects, value sharing, and orchestration in a simplistic or inexperienced manner. Failing to be scientific and rigorous can lead to ineffective implementation and missed opportunities for value creation.
- Organizational inertia: overcoming factors such as organizational inertia, legacy systems, and resistance to change is essential for successful implementation in large organizations



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of Platforms & business ecosystems theories?

- 1. Data-driven Insights on Market Frictions: GenAl can analyze vast amounts of data to
 provide actionable insights on ecosystem dynamics, user behavior, and emerging trends.
 GenAl can help understanding the frictions, the current mismatches between the various
 platform sides, the needs for curation that today do not allow to release full value.
- 2. Enhanced Curation and Recommendations: GenAl can leverage user data to offer personalized recommendations and experiences within platform ecosystems. A stronger user interface (Q&A-based) can replace or complement search engines in most platforms. In addition to that, by analyzing user behavior and preferences, GenAl can help businesses tailor their offerings, enhance customer satisfaction, and drive engagement.
- 3. Collaboration Facilitation: GenAl can provide tools and recommendations to foster
 collaboration among ecosystem participants. By analyzing data on capabilities, GenAl
 can help identify potential partners, assess compatibility and complementarities, and
 facilitate resource sharing.

A more advanced user interface (based on questions and answers) can replace or integrate search engines in most platforms

Additional enhancements include:

- **Ecosystem Mapping and Visualization**: GenAl can assist in visualizing and mapping ecosystems by analyzing data on stakeholders, relationships, and dependencies. This can help businesses gain a holistic view of their ecosystem and understand the dynamics and interdependencies among participants.
- **Quantitative Analysis and Simulation**: GenAl can assist in quantitative analysis and simulation of platform dynamics, in terms of network effects, side liquidity and matching between sides, complementarities, value sharing mechanisms and incentives.
- **Risk Assessment and Mitigation:** By analyzing data on security, privacy, regulatory compliance, and market dynamics, GenAl can help businesses proactively address potential risks and ensure the long-term sustainability of their ecosystems.



Disruptions - How would GenAl rethink or radically disrupt Platforms & business ecosystems theories from within?

- 1. Embrace Decentralization and Blockchain Technologies: Traditional platform models often rely on centralized control and intermediaries. By embracing decentralized technologies such as blockchain, it is possible to create self-governing ecosystems where participants have more autonomy and control over their data, transactions, and governance. This shift can foster trust, reduce reliance on intermediaries, and enable more equitable value distribution.
- 2. Al and Machine Learning for Platform (Autonomous) Decision-Making: By leveraging Al and machine learning algorithms, platforms can automate certain aspects of decision-making, such as matching supply and demand, optimizing pricing, or recommending personalized offerings. This can enhance efficiency, scalability, and user experience within the ecosystem.
- 3. Foster User Empowerment and Data Sovereignty: Shift the power dynamics in favor of users by enabling them to have greater control over their data and privacy. Provide users with transparent access to their data, allowing them to manage permissions and decide how their data is utilized within the ecosystem. Empowering users can enhance trust and engagement within the ecosystem.

Additional areas of disruptions include:

• Embed "By-Design" Sustainability and Social Impact: Encourage responsible and ethical practices, promote environmental sustainability, and support social causes within the ecosystem. Consider how the platform can contribute to the well-being of society and address broader societal challenges.

- Embrace Circular Economy Principles: Encourage resource optimization, reduce waste, and promote sustainable practices across the value chain. Consider how the platform can facilitate the exchange, reuse, and repurposing of resources, products, and services within the ecosystem.
- **Dynamically Upgrade Platforms with Latest Technologies:** Continuously scan and experiment with emerging technologies and trends that can disrupt the traditional platform and ecosystem models. This may include exploring technologies like Internet of Things (IoT), augmented reality (AR), virtual reality (VR), or edge computing.



Human Factor

- **Sensemaking and Context Interpretation:** Humans play a crucial role in sensemaking by interpreting the insights and recommendations provided by GenAl within the specific context of their organization and ecosystem. A strong domain expertise (on platforms and ecosystems) is needed to interpret the insights and recommendations from GenAl
- Adaptability and Learning Agility: In the rapidly evolving landscape of platform and ecosystem strategies, humans need to be adaptable and quick learners. They must stay updated on emerging trends, technologies, and market dynamics. This enables them to understand the implications of GenAl's insights and adapt strategies accordingly. They need to stay informed also about advancements in Al technologies, understand GenAl's capabilities and limitations, and develop the necessary skills to effectively collaborate with Al systems.
- Communication, Collaborative and Relationship-Building Skills: Humans need to foster relationships, build trust, and engage with ecosystem participants to co-create value. They must leverage their interpersonal and relationship-building skills to forge partnerships and foster a collaborative environment. They need to effectively communicate the insights, recommendations, and strategic decisions to various stakeholders within the organization and the ecosystem. They must engage and manage stakeholders' expectations, address concerns, and foster alignment. These skills will be even more critical as they complement the capabilities brought by AI.
- Ethical Decision-Making: Humans need to assess the ethical implications of the recommendations provided by GenAl, consider potential biases, and make decisions aligned with ethical standards and social values. Think how much privacy, sovereignty, sustainability, circular economy, ecc. are related to the current and future ecosystems.
- **Creativity and Innovation:** Humans are essential for driving creativity and innovation within platform and ecosystem strategies. They can leverage the insights generated by GenAl to think creatively, identify new opportunities, and design novel approaches and directions for platform design and evolutionary paths.

26 Multi-stakeholder co-creation

5.4 Multi-stakeholder co-creation



Theory & practice we selected

Main reference is the theory of cooperative advantage, as proposed by Leon C. Prieto and Simone T.A. Phipps in their work "Cooperative Advantage: Rethinking the Company's Purpose". According to the authors, companies can create more value and achieve a sustainable competitive advantage by working collaboratively with stakeholders, rather than simply competing against rivals.

There are several well-established practices to working collaboratively with stakehold-ers: co-creation workshops; jamming sessions; stakeholder consultation meetings/summits; community engagement projects; participatory design / user-centered design.

Over the last decade an increasing number of companies have understood the benefits of multi-stakeholder co-creation and embraced it as a common practice. Among the pioneers, it is worth mentioning for example:

- <u>Procter & Gamble's Connect + Develop program:</u> P&G collaborates with innovators outside the company to identify promising ideas that can be developed and brought to market.
- Philips' Co-Creation Labs: Philips bring together consumers, health professionals, and other stakeholders to collaboratively develop solutions to healthcare challenges.

BASF Creator Space[™]: a global co-creation program initiated on BASF 150th anniversary to harnessing the collective knowledge, creativity, and expertise of various stakeholders – including employees, customers, academics, and members of the public sector.

Our hands-on experience

We have applied the above multi-stakeholder collaboration and co-creation methodologies in various contexts. Back in 2013, we directly supported the design and implementation of BASF Creator SpaceTM, a pioneering multi-year initiative, which was then published in an HBS Case Study.

Such theories and related practices can be extremely beneficial in terms of cultural change, relationship building with key stakeholders, innovation marketing, and – in some cases – also result in successful product and service innovations.

However, their application is complex and resource-intensive, especially in the preparation phase. Based on our direct experience, main pitfalls include:

- Lack of alignment on the <u>problem</u> being addressed: organizations may struggle to establish a clear understanding and agreement on the specific problem that the collaboration activity aims to solve.
- Selection and engagement of stakeholders: inadequate selection and engagement of stakeholders, characterized by under-representation, biases, or power dynamics, can lead to imbalanced decision-making processes and skewed outcomes.
- Insufficient resources/preparation: inadequate allocation of resources, both financial and human, can hinder the success of collaborative initiatives.
- Lack of proper follow-up: failure to properly follow up on collaboration activities can result in a lack of accountability and progress monitoring.

28 Multi-stakeholder co-creation



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of multi-stakeholder collaboration practices?

- 1. Improved Problem Framing: GenAl can perform extensive data mining and analysis
 on existing internal and external data sources to identify relevant trends, customer
 insights, market dynamics, and emerging opportunities that can help improve the
 challenge statement definition.
- 2. Advanced Modelling and Simulation: GenAl can be used to create complex models and simulations of different scenarios. This can help stakeholders explore various possibilities, understand potential outcomes, and make more informed choices during the co-creation process.
- 3. Improved Insight & Opportunity Generation: GenAl can analyze large amounts of data to detect patterns, trends, and correlations that may not be easily apparent to humans. This can help stakeholders gain deeper insights, make better decisions, and co-create more effectively. Also, GenAl can propose novel concepts, new product features, or innovative solutions based on the identified patterns and insights.

Generative AI can perform extensive data collection and analysis to identify relevant trends, customer insights, and market dynamics that can contribute to improving problem definition

Additional enhancements include:

Before the co-creation activity (e.g., a co-creation workshop or a jam session)

- **Participant Selection and Matching**: GenAl can assist in the selection and matching of participants for the co-creation process. By analyzing participant profiles, expertise, and past contributions, GenAl can recommend suitable stakeholders who bring diverse perspectives, relevant skills, and complementary knowledge to the table.
- **Knowledge Sharing and Content Curation**: GenAl can curate and disseminate relevant knowledge, best practices, case studies, and research findings to participants before the co-creation process. This ensures that participants have a shared baseline understanding of the subject matter, accelerates the onboarding process, and promotes a common knowledge foundation.
- **Scheduling and Logistics Optimization**: GenAl can optimize the scheduling of the co-creation process, considering participants' availability, time zones, and preferences. It can also assist in coordinating logistics, such as venue selection, travel arrangements, and resource allocation, streamlining the planning phase and ensuring smooth execution.

 Preparation and Pre-Work Assignments: GenAl can provide pre-work assignments or activities to participants to prepare them for the co-creation process. This may include pre-reading materials, thought-provoking questions, or small individual or group tasks aimed at priming participants' thinking and encouraging them to come prepared with initial ideas or insights.

During the co-creation activity:

- Enhanced Communication and Understanding: GenAl can use Natural Language Processing to understand, generate, and translate language (i.e., voice-to-text transcription, synthesis, semantic analysis and connection mapping). This can improve communication among diverse stakeholders, facilitate better understanding, and ensure that everyone's voices are heard and understood.
- **Personalization**: GenAl can help personalize the co-creation process for each stake-holder, considering their specific interests, perspectives, and needs. This can enhance stakeholder engagement and satisfaction.
- **Predictive Capabilities**: GenAl can predict potential obstacles or challenges that may arise during the co-creation process (e.g., IP topics), allowing stakeholders to proactively address these issues.

After the co-creation activity:

- **Consolidation and Analysis of Workshop Output:** GenAl can assist in consolidating the insights, ideas, and outcomes generated, and provide a comprehensive summary of the discussions.
- **Knowledge Management and Documentation**: GenAl can support the documentation and management of the co-creation process outcomes. It can create structured repositories or knowledge bases that capture the generated ideas, concepts, prototypes, and artifacts.
- **Idea Evaluation and Prioritization**: GenAl can employ algorithms and models to evaluate and prioritize the generated ideas based on predefined criteria or decision frameworks.
- **Action Planning and Roadmap Development**: GenAl can help in developing action plans and roadmaps. It can analyze dependencies, resource requirements, and potential risks to facilitate the creation of a realistic and comprehensive plan for implementing the co-created solutions.
- **Monitoring and Progress Tracking**: GenAl can contribute to ongoing monitoring and progress tracking of the co-creation outcomes. By analyzing relevant data points, metrics, or feedback, GenAl can provide insights into the implementation progress, identify potential bottlenecks or areas for improvement, and support continuous optimization of the co-created solutions.

30 Multi-stakeholder co-creation



Disruptions - How would GenAl rethink or radically disrupt multi-stakeholder collaboration practices from within?

- 1. Decentralized Collaboration: Using blockchain technology could allow for more democratic and secure co-creation processes. Each participant would have a transparent record of every change and contribution made during the co-creation process, ensuring accountability, trust, and fair attribution of ideas.
- 2. Augmented Collaboration (VR/AR): Virtual and augmented reality can help create immersive co-creation environments that go beyond traditional meeting or workshop settings. With VR/AR, stakeholders can interact in a fully immersive digital environment, manipulating ideas and designs in real-time, regardless of their physical location.
- 3. Real-time Sentiment Analysis and Adjustment: Employ GenAl to continuously analyze the sentiment and engagement levels of participants during co-creation sessions and along the overall co-creation process. Also, biosensors technology can monitor physiological responses (like heart rate, brainwaves, etc.) and thus provide real-time feedback during collaboration sessions. This data could be used to adjust the process, ensuring optimal engagement and effectiveness.

Virtual reality and augmented reality can help create immersive co-creation environments that go beyond traditional meetings or workshops

Additional areas of disruptions include:

- **Brain-Computer Interfaces (BCI):** Though it may sound like science fiction, BCIs could potentially allow for direct communication between the human brain and digital systems, which could radically disrupt the way we collaborate and co-create. In the future, this could allow for "thought sharing" and immediate translation of ideas into digital formats.
- Artificial General Intelligence (AGI) Co-Creator: While this is more speculative and future-facing, once AGI (AI with human-like understanding and capabilities) is realized, it could serve as another participant in the co-creation process, contributing its own insights and ideas, and even challenging human participants to think differently.



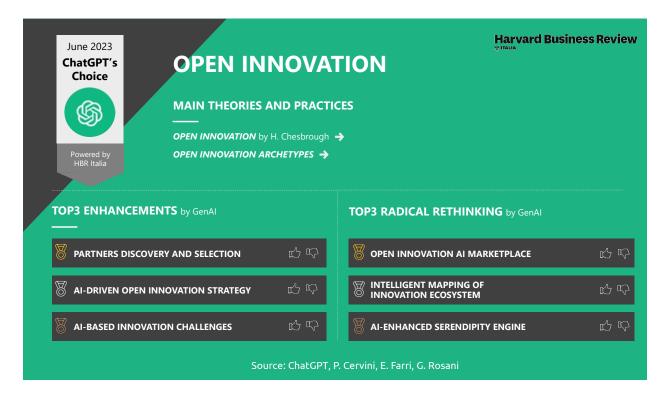
Human Factor

- Advanced Digital Fluency & Data Literacy: As collaboration technologies evolve, so too will the need for digital fluency. Understanding VR/AR environments, blockchain technology, and brain-computer interfaces will become vital. This includes not only how to use these technologies but also how to leverage them effectively for collaboration and creativity. With more sophisticated technologies, an increased amount of data will be available from sentiment analysis to neurofeedback. The ability to interpret and utilize this data will become a critical skill.
- Neuro-Technological Understanding: If brain-computer interfaces become a reality, understanding how the human brain functions and how it can interact with technology will be crucial.
- Ethical Considerations and Decision-Making: More advanced technology brings more complex ethical dilemmas. Skills in ethical decision-making, understanding of privacy implications, and managing the potential misuse of technology (like deepfakes in VR or security issues in blockchain) will become increasingly important.
- **Psychological Safety and Empathy:** As collaboration becomes more technologically advanced and potentially anonymous (in the case of blockchain), creating an environment of psychological safety and demonstrating empathy will be vital. This ensures participants feel comfortable expressing their ideas and thoughts, despite the impersonal nature of some technologies.
- **Human-Al Interaction:** As AGI may become a reality, humans will need to learn how to interact with AI not just as a tool, but as a co-creator. For instance, if an AGI is participating as a co-creator in a workshop, it could propose design ideas based on its vast knowledge base, predict the market response to different designs, or identify potential sustainability issues based on the latest research. Importantly, it would be capable of adapting its responses based on the conversation flow, perhaps even challenging human ideas, or proposing novel solutions.
- **Design and Visualization:** With VR/AR, the ability to design and visualize in three dimensions becomes crucial. For example, if a multi-stakeholder group is co-designing a new product, they could create a 3D model of that product in the virtual environment. Stakeholders could then "walk around" the product, viewing it from different angles, even interacting with it as if it were a physical object. Changes to the design can be made in real-time, with everyone witnessing and participating in the alterations.

For example, if a group of stakeholders is co-designing a new product, they could create a 3D model of that product in the virtual environment. Stakeholders could then "walk around" the product, interacting with it as if it were a physical object

32 Open Innovation

5.5 Open Innovation



Theory & practice we selected

Open innovation theory, coined by <u>Henry Chesbrough</u>, suggests that organizations can enhance their innovation capabilities by leveraging external ideas and resources. It emphasizes the importance of collaboration. Originating around 20 years ago, with a HBS book and seminal <u>HBR article</u>, open innovation has gained widespread adoption across industries. Over the years HBR has published more than 50 <u>contributions</u> (digital articles, podcasts, ...) on Open Innovation, that demonstrates the solidity and continued timeliness of the theory until today.

Open innovation offers several benefits, including access to a broader pool of ideas, increased speed of innovation, reduced costs, and risk mitigation through external collaborations. It enables organizations to tap into diverse perspectives, expertise, and resources, fostering a culture of innovation and growth.

From an organizational perspective, it has also led to the emergence of various <u>open innovation archetypes</u>, such as corporate innovation outposts, corporate garage, venture builders, corporate accelerators, innovation labs, innovation catalysts, venture client.

Our hands-on experience

Over the last ten years we have supported several companies in their open innovation journey, considering the tools and practices (like <u>crowdsourcing</u>) as well as the organizational and cultural implications for large corporations. In particular, we looked into open innovation archetypes and how to help leaders design <u>innovation units</u> and <u>outposts</u>. More recently we explored the broadening scope of Open Innovation towards <u>Sustainability</u> (as in the case of <u>Enel's Innovability</u>) and beyond the traditional R&D domain.

We have observed the following common pitfalls when large companies embrace open innovation:

- Strategic inconsistency, where innovations may not align with company goals or lack a long-term perspective.
- Organizational siloes result in disconnected open innovation labs, leading to misaligned initiatives and lack of support for scaling.
- Intellectual property and data privacy issues may arise due to sharing ideas externally
- · Lack of alignment of central processes such as procurement, finance, legal, IT, and HR
- Risk aversion and fear of failure hinder innovative thinking
- Cultural resistance as employees perceive external sourcing as devaluing their contributions or threatening job security.



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of Open Innovation theories and practices?

- 1. Partners Discovery and Selection: GenAl can analyze potential partners based on various criteria, such as their innovation track record, compatibility with the company's goals, and financial stability, among others, facilitating the process of partner discovery and selection.
- 2. Al-driven Open Innovation Strategy: GenAl can assess and propose open innovation initiatives based on the company's strategic goals, identifying and flagging those that may not be aligned. It can help ensure strategic alignment, mitigating the risk of wasted resources or conflicts/duplications/silos. GenAl can identify and recommend which business units might be most open to.
- 3. Al-Based Innovation Challenges: Organize innovation challenges or hackathons
 where Al algorithms are used to facilitate idea generation, evaluation, and collaboration. Al can provide real-time feedback, suggest improvements, and facilitate the
 selection of winning ideas.

Generative AI can analyze potential partners based on different criteria, thus facilitating the discovery and selection process

34 Open Innovation

Additional enhancements include:

Patent Screening, Evaluation, and Matching: GenAl can augment the process of identifying, screening, evaluating, and selecting patents or startups for collaboration. It can scan databases using specific criteria, analyze and score potential matches, evaluate their depth by predicting their impact or success, and provide data-driven recommendations for selection.

- **Streamlining of Central Processes**: GenAl can automate and streamline central processes, making them more adaptable and responsive to the needs of partners (startups, etc.), reducing the burden and improving efficiency.
- **AI-powered Needs Exploration:** GenAI can rapidly analyze large volumes of data, uncovering hidden trends, patterns, and insights that can drive innovative solutions. GenAI can also help analyze social media data, customer reviews, and other online data to gain a deeper understanding of customer needs and preferences. This could lead to the discovery of new innovative opportunities.
- Enhanced Intellectual Property (IP) Management: GenAl can assist in intellectual property management by automatically analyzing patent databases, identifying potential infringements, and helping organizations navigate complex patent landscapes to protect their innovations.



Disruptions - How would GenAl rethink or radically disrupt Open Innovation theories and practices from within?

- 1. Open Innovation AI marketplace: Establish an AI-driven marketplace where organizations can share their innovation challenges and receive AI-curated solutions from a global network of innovators. The marketplace would use GenAI to match the most relevant ideas with specific challenges, providing a diverse range of creative solutions.
- 2. Intelligent Mapping of Innovation Ecosystem: All could map the entire innovation ecosystem, including startups, research institutions, and potential partners. It could analyze their expertise, capabilities, and compatibility, helping organizations navigate the complex landscape and identify optimal collaboration opportunities.
- 3. Al-Enhanced Serendipity Engine: Create an Al algorithm that generates unexpected
 connections and serendipitous ideas by analyzing vast amounts of diverse data. The
 algorithm would identify unusual patterns, combinations, and associations, leading
 to groundbreaking innovations by connecting seemingly unrelated concepts.

The algorithm can identify unusual patterns, combinations, and associations, leading to disrupting innovations by connecting seemingly unrelated concepts

Additional areas of disruption include:

- **Patent Mining for Innovation:** Develop an AI system that autonomously scans and analyzes massive patent databases, identifying hidden patterns, cross-industry applications, and potential opportunities for collaboration or acquisition. This system could uncover novel ways of leveraging existing intellectual property for innovative purposes.
- **Open Innovation with AI Entities:** GenAI could create virtual entities or avatars ("synthetic innovators" with unique characteristics, skills, and perspectives) capable of participating in the open innovation process. These AI entities could generate ideas, provide feedback, and even collaborate with human innovators, bringing a unique blend of AI-generated insights and human creativity.



Human Factor

- **Strategic Thinking and Decision-Making:** Humans with strong strategic thinking skills play a vital role in assessing Al-generated insights and making informed decisions regarding innovation strategies, partnership selection, and resource allocation over the portfolio of OI initiatives.
- **Systems Thinking:** Open innovation involves complex systems with interconnected elements, and individuals with systems thinking skills can understand the interdependencies, identify synergies, and navigate the collaborative and dynamic nature of the innovation ecosystem.
- **Inquisitiveness and Curiosity:** Curiosity drives exploration and discovery, allowing individuals to uncover novel insights, challenge assumptions, and seek out innovative opportunities that may arise from open collaboration and diverse perspectives.
- **Domain Expertise:** Deep domain expertise allows humans to interpret and validate Al-generated insights, bringing industry-specific knowledge to evaluate the relevance and applicability of Al-generated suggestions in the open innovation process, for example providing valuable insights and guidance to startups, helping them refine their ideas and solutions.
- **Human Relationship with External and Internal Partners** While several Open Innovation tasks can be taken by GenAl, some elements are human specific: building and nurturing relationships with external stakeholders, such as partners, startups, and research institutions, requires strong interpersonal skills (communication, negotiation, ...) and the ability to foster trust and collaboration.
- **Open Innovation Ethics and Compliance:** Upholding ethical standards, ensuring data privacy, and complying with intellectual property regulations are fundamental in open innovation. Humans play a key role in ensuring ethical practices and responsible innovation while protecting stakeholders' interests.

6. Organization & Innovative Culture



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6.1 Leadership behaviors



Theory & practice we selected

In the last decade, extensive literature and academic research confirmed the critical role that leaders play in fostering and sustaining innovation within organizations. In his award-winning Harvard Business Review article on the <u>5 paradoxes of innovative cultures</u>, Professor Gary Pisano emphasizes the crucial role that leaders play in shaping and sustaining innovative cultures, while managing these paradoxes carefully:

Paradox #1 – Tolerance for Failure vs. Accountability: Encouraging and supporting experimentation while maintaining clear expectations for individual/team performance and holding individuals accountable.

Paradox #2 - Willingness to Experiment vs. Clear Strategy and Discipline: Promoting and supporting experimentation within the boundaries of the strategic objectives, ensuring that experiments are purposeful, aligned with the organization's goals, and executed with discipline.

Paradox #3 - Psychological Safety (as theorized by Professor Amy Edmondson) vs. Candor: Creating an environment where individuals feel psychologically safe to share ideas and take risks, while also promoting open and honest communication, encouraging constructive feedback.

38 Leadership behaviors

Paradox #4 - Collaboration vs. Individual Accountability: Creating structures and processes that encourage collaboration and teamwork, promoting a culture of shared goals and collective problem-solving, while also establishing clear expectations for individual accountability, ownership, and delivering on commitments.

Paradox #5 - Flat Hierarchy vs. Strong Leadership: Fostering a culture of empowerment and distributed decision-making, encouraging individuals at all levels to contribute their ideas and perspectives, while also providing strong leadership that sets the vision, direction, and guidance.

Compared to traditional approaches (mainly focused on rhetoric about abstract values), Pisano advocates a more concrete approach, where leaders need to embody and demonstrate a set of desired and observable behaviors themselves. As a measurement tool, Pisano designed a quantitative survey to evaluate concrete behaviors related to collaboration, psychological safety, empowerment, attitude toward failure, and experimentation. This data helps identify gaps, improvement areas, and weak spots within the organization.

Our hands-on experience

Under the supervision and guidance of Professor Pisano, we developed an innovative practice to help leaders lay the foundation for a successful cultural transformation. Our approach follows three main steps: (1) measure concrete behaviors rather than abstract values (tool: Pisano's survey), (2) select the desired behaviors (tool: deck of 40 cards, with a mix of positive and negative behaviors, in line with Pisano's 5 paradoxes), and (3) live the new, desired behaviors in practice (tool: Circles of Trust). The output is the Leadership Social Contract—a set of actionable behaviors that leaders must commit to either stop doing, start doing or keep doing.

We applied our approach to thousands of executives in multiple contexts, mainly in Europe and US. Overall, it has helped in creating alignment and commitment to real change. However, in many cases the application has turned out to be challenging because of:

- Failure to embed new behaviors: leaders may struggle to effectively live new behaviors in their daily tasks and decisions.
- Measurement of behaviors: difficulty in measuring behaviors against a baseline to track progress quantitatively.
- Difficult translation of behaviors into concrete actions: translating abstract values concepts into practical and actionable steps can pose challenges.
- Unclear correlation between cultural change and business impact: the lack of measurable link between behavioral shift and tangible business results can make it challenging to justify the ROI of the initiative and sustain support.



Enhancements - What are the most valuable enhancements that GenAl can bring to our Leadership Behaviors approach?

- 1. Improved Communication on Behaviors: GenAl can review and guide communications to ensure they align with desired behaviors and the organization's new social contract. It can also provide a consistent messaging across all communication channels to avoid mixed signals.
- 2. Automated Administration and Reporting: GenAl can automate various administrative tasks, such as conducting surveys, collating, and analyzing data, and generating reports. This reduces the resource burden and allows for more efficient and effective behavior change initiatives.
- 3. Behavioral Measurement & Monitoring: GenAl can use a combination of Natural Language Processing, sentiment analysis, and other machine learning techniques to objectively and quantitively measure behaviors. This could involve analyzing communication and actions within the organization, tracking progress over time, and providing real-time feedback to individuals.

Generative AI can use a combination of natural language processing, sentiment analysis, and other machine learning techniques to measure behaviors objectively

Additional enhancements include:

- **Personalized Coaching and Guidance**: GenAl could provide personalized suggestions for concrete actions individuals can take to align with desired behaviors. This could be based on an individual's role, context, and previous behavior. GenAl could also provide real-time coaching to leaders, helping them better embody and promote desired behaviors.
- In-depth Understanding of Organizational Context: By analyzing a wide range of data, GenAl can provide valuable insights into the organizational context and how it may influence behavior change efforts. This understanding can help leaders tailor their approaches to their specific organizational context, increasing the chances of success.
- Interactive & Engaging Workshops: GenAl could facilitate more interactive and engaging workshops. For example, it could create virtual scenarios or simulations where the participants can see the impact of their chosen behaviors in real-time. This can provide immediate feedback and allow them to refine their choices. Or could provide collaborative tools and platforms that enable participants to contribute ideas, collaborate on documents or visualizations, and provide feedback in real-time.

40 Leadership behaviors

• **Social Network Analysis**: GenAl could analyze social network data within the organization to identify influential individuals or groups who can drive behavior change. It could provide recommendations on how to leverage these influential nodes to cascade desired behaviors throughout the organization more effectively.

• **Continuous Behavioral Reinforcement:** GenAl can provide ongoing reinforcement of new behaviors, sending reminders or prompts when needed. It can also provide continuous feedback to individuals based on their progress, further promoting the adoption of new behaviors.



Disruptions - How would GenAl rethink or radically disrupt our Leadership Behaviors approach from within?

- 1. Real-time Feedback and Coaching: GenAl could provide instant, personalized feedback and coaching to individuals and teams, leveraging its ability to process vast amounts of data and provide immediate insights. This would enable individuals to adjust and course corrections in real-time, enhancing their behavior change efforts.
- 2. Virtual Simulation and Experiential Learning: GenAl could create virtual simulations
 or immersive experiences where individuals can practice and refine the desired behaviors in a safe and controlled environment. This would enable experiential learning,
 allowing individuals to build their skills and confidence in embodying the behaviors.
- 3. Al-Driven Behavioral Analysis: GenAl could utilize advanced algorithms and machine learning techniques to analyze behaviors at a much deeper level. It could identify patterns, correlations, and insights that humans may miss, enabling a more comprehensive understanding of behaviors and their impact on organizational culture.

Generative AI could identify patterns, correlations, and insights that humans may not grasp, enabling a more comprehensive understanding of behaviors and their impact on organizational culture

Additional areas of disruption include:

- Predictive Behavior Modeling: GenAl could use advanced analytics to predict potential outcomes of behavior change initiatives. This includes forecasting potential unintended consequences, as well as correlating changes in behavior with key business outcomes.
- Ethical AI Guidance: GenAl could provide ethical guidelines and considerations to ensure that behavior change initiatives are aligned with ethical standards and avoid potential biases or unintended consequences. It could continuously monitor the impact of behavior changes on diverse groups within the organization to promote fairness and inclusion.



Human Factor

- Advanced Data Literacy: Humans need to develop a strong understanding of data analysis, interpretation, and visualization to inform their behaviors. They should be able to derive actionable insights from the data generated by GenAI, effectively leverage data to drive behavior changes, and communicate the implications of data to key stakeholders.
- **Change Management & Enablement:** Humans play a crucial leadership role in driving behavior change initiatives with the support of GenAl. They need to provide vision, set strategic direction, inspire others, and navigate the organizational change process. Leadership skills become essential in creating an environment that embraces GenAl and fosters a culture of continuous improvement.
- Empathy, Authenticity and Emotional Intelligence: As GenAl becomes an integral part of behavior change initiatives, humans need to maintain and reinforce strong interpersonal skills. Empathy, emotional intelligence, and authenticity are vital in understanding the human experience, addressing concerns, providing support, and building trust between humans and AI, fostering genuine connections, and ensuring the authenticity of interactions in the behavior change process.
- Ethical Awareness and Decision-Making: Humans must be well-versed in ethical considerations related to the use of GenAl. They should understand the potential biases, privacy concerns, and social implications of using Al in behavior change efforts. Ethical decision-making becomes crucial when interpreting GenAl recommendations and ensuring fairness, transparency, and accountability.
- Adaptability and Agility: As behavior change initiatives evolve in collaboration with GenAl, humans need to be adaptable and agile. They should be open to new information, adjust strategies and approaches based on GenAl insights, and respond quickly to changes or emerging opportunities.

Ethical decision-making becomes crucial in interpreting generative AI recommendations and ensuring fairness, transparency, and accountability

6.2 Fluid & Flexible organization



Theory & practice we selected

In today's fast-changing business landscape, traditional hierarchical and bureaucratic models are giving way to innovative theories of organizational design. Henry Mintzberg was one of the first to observe a paradigm shift towards adhocracy accompanied by the emergence of the "networked firm" inspired by the internet economy. Building upon these foundations, Julian Birkinshaw and Jonas Ridderstråle introduced flexibility and informality within organizational structures in the book <u>Fast Forward</u>. Frederic Laloux's influential book <u>Reinventing Organizations</u> presented a compelling vision of self-management and introduced the concept of teal organizations.

More recently the open-source movement, agile methodologies, and the sharing economy have inspired participative, responsive structures and a range of company-specific variations on self-organization. For example, a prominent self-organization theory is <u>Holacracy</u>, which explicitly defines roles, enables distributed decision-making, and fosters adaptive governance. Holacracy encourages autonomy and accountability within teams, promoting a sense of ownership and unleashing collective intelligence.

The shift towards these modern theories of organizational design aims to strike a balance between reliability and adaptability. By embracing flexibility, self-management, and participative structures, organizations create environments that foster collaboration, innovation, and resilience.

The experience of few pioneers has offered valuable insights and lessons on potential benefits, as well as on barriers or pitfalls to avoid:

ING Bank - Tribes and Squads (extensively studied and researched by Professor Julian Birkinshaw): ING Bank transformation involved restructuring the organization into small, cross-functional teams called "squads" and implementing agile practices such as Scrum and Kanban, leveraging the organizational model of Spotify and other digital native firms. ING Bank's transformation has been widely recognized as a reference case of implementing adaptable organizations at scale within a large, established company. Zappos Holacracy (analyzed by Professors Ethan Bernstein, Juan Pablo Vazquez Sampere and Georges Romme): An online shoe and clothing retailer, Zappos embraced self-management and organizational agility. In 2013, they implemented a holacracy-based system called which involves distributing authority across self-organizing teams. This approach encourages employees to take ownership of their work, make decisions autonomously, and adapt to changing circumstances.

Our hands-on experience

Organizational reinvention is an area we have extensively studied, consulted, and published in the last 15 years. As domain experts, we are often engaged in <u>webinars</u>, conferences, and roundtable discussions.

In our experience with several companies, we have observed an increasing interest on more fluid and adaptable organizational models. Although tempting, copying the org. model of agile champions like Spotify or Zappos, is challenging and moreover, can bring significant unanticipated complexity. Our experience suggests that modernizing traditional organizational structures, especially for legacy companies, is challenging because:

- Overlooking the specific organizational context: each organization has its unique characteristics. Failing to consider these factors when implementing an agile organizational structure can lead to challenges and suboptimal outcomes.
- Lack of clarity in roles and responsibilities: old traditional practices such as RACI are no longer effective in fluid, flat organizational archetypes.
- Resistance to continuous change: people are reluctant to give up established hierarchies and power dynamics, and even when they transition, they neglect continuous learning and adaptation.
- Inadequate cross-functional collaboration: even if change happens, people keep working in isolation, inhibiting the flow of information.



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of fluid and flexible organizational models?

- 1. Promoting Cross-Functional Collaboration: GenAl can identify potential areas of resistance or collaboration gaps by analyzing communication patterns, dependencies, and information flow. It can suggest strategies to promote cross-functional collaboration, such as implementing shared platforms, facilitating knowledge sharing, and fostering a culture of collaboration.
- 2. Modelling Change in Organizational Structure: GenAl can analyze organizational data (such as size, industry, and existing culture), industry benchmarks, and best practices to provide insights and recommendations on the necessary changes to the organizational structure: where fluid/flat model applies and what archetypes fit best. It can offer simulations and modeling capabilities to help visualize the impact of different structural changes, aiding in decision-making.
- 3. Supporting Self-Organizing Teams: GenAl can provide resources and training materials to support self-organizing teams. It can offer guidance on decision-making frameworks, conflict resolution techniques, and best practices for effective self-organization. GenAl can also facilitate communication channels for teams to share knowledge and align their efforts.

Generative AI can analyze organizational data (such as size, industry, and existing culture), industry benchmarks, and best practices to provide recommendations on changes to the organizational structure.

Additional enhancements include:

- Clear the Organizational Fog: GenAl can assist in defining clear roles and responsibilities by analyzing job descriptions, skill sets, and team dynamics. It can provide recommendations on role definitions, accountability frameworks, and optimal composition of teams within a fluid and flexible organizational structure.
- **Performance Tracking and Organizational Improvement**: GenAl can monitor team performance, provide real-time feedback, and help identify areas for improvement within the fluid and flexible organizational structure. It can offer insights, recommend iterative adjustments to the organizational structure, and facilitate ongoing learning and adaptation.

- Support the shift in management styles: GenAl can assist in promoting servant leadership and a more empowering management style. It can provide training materials and resources to help leaders transition from command and control to a supportive and facilitative role. In addition, GenAl can provide insights on establishing guidelines, frameworks, and feedback mechanisms to ensure that individuals/teams have the autonomy to make decisions.
- Addressing Resistance to Change: GenAl can help identify sources of resistance to change within the organization by analyzing employee sentiment, conducting surveys, or collecting feedback. It can provide targeted interventions, such as personalized communication, training resources, and change management strategies, to address resistance and foster a positive mindset towards the agile organizational structure.



Disruptions - How would GenAl rethink or radically disrupt fluid and flexible organizational models from within?

- 1. Fluid Organizational Networks: Instead of rigid team structures, organizations could
 embrace a fluid network model. Employees would form dynamic networks based on
 project needs and personal interests, allowing for more agility and flexibility. GenAl
 can assist in the self-organization of fluid networks by analyzing project needs, individual availability, and team dynamics. It can provide recommendations on optimal
 team compositions, helping teams form and disband as projects evolve.
- 2. Decentralized Decision-Making Ecosystem: Rather than relying on a few designated leaders or managers, organizations could establish a decentralized decision-making ecosystem. At individual level, GenAl can provide decision support tools that offer data-driven insights and recommendations to individuals at all levels. Overall, GenAl can help ensure alignment and coordination within a decentralized decision-making ecosystem. It can provide mechanisms for sharing information, tracking decisions, and facilitating collaboration, enabling distributed leadership while maintaining organizational coherence.
- 3. Purpose-Driven Autonomous Cells: Organizations could transition towards purpose-driven autonomous cells that operate as independent entities. GenAl can assist in resource allocation within cells. It can analyze project requirements, individual capabilities, and resource availability to optimize resource allocation and decision-making within each cell. Also, GenAl can facilitate knowledge sharing and collaboration across cells.

Generative AI can analyze project needs, individual capabilities, and resource availability to optimize resource allocation and decision-making

Additional areas of disruption include:

- Dynamic Performance Evaluation and Rewards: Moving away from traditional annual performance reviews, organizations could implement dynamic and real-time performance evaluation systems. These systems would provide continuous feedback to individuals and teams based on their contributions, achievements, and alignment with organizational values and goals. GenAl can assist in identifying and recognizing individual and team contributions based on predefined criteria. It can provide recommendations for personalized rewards and recognition, promoting transparency and motivation.
- **Holistic Skill Sharing Platforms**: Organizations could develop holistic skill-sharing platforms that go beyond traditional job roles and functions. GenAl can analyze employee profiles, skills, and project requirements to identify potential matches for skill sharing. It can recommend individuals with complementary skills and interests to collaborate with like-minded colleagues or suggest relevant projects based on their skills and interests.



Human Factor

- Flexibility, Adaptability & Continuous Learning: In fluid and flexible organizational models, individuals may need to take on more adaptive roles that transcend traditional job descriptions. They may need to be flexible and adaptable, assuming multiple responsibilities based on the needs of the organization or project at hand. This requires a willingness to learn and embrace new challenges, as well as the ability to quickly acquire new skills and knowledge.
- **Collaborative organizational design:** Humans actively engage in collaborative design and customization of fluid and flexible archetypes in conjunction with AI systems. They work alongside GenAI to co-create organizational structures that promote agility, collaboration, and effective decision-making. Humans leverage their domain expertise, contextual knowledge, and understanding of team dynamics.

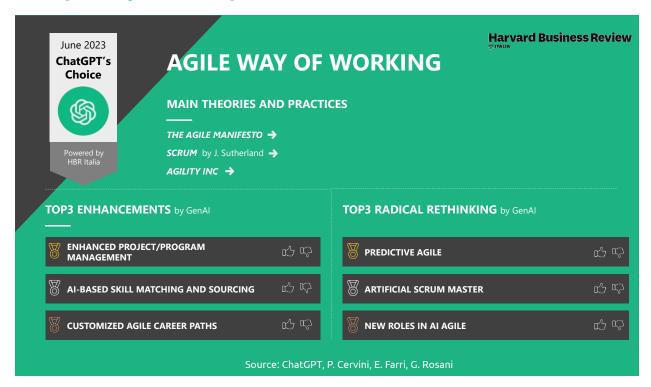
Humans working together with generative AI to co-create organizational structures that promote agility, collaboration, and effective decision-making.

Critical Thinking and Decision-Making: While GenAl provides insights and recommendations, humans must bring their critical thinking skills to the table. They need to evaluate and validate the suggestions provided by GenAl, considering the organizational context, human factors, and stakeholder input before making final decisions.

- Emotional Intelligence, Trust, and Empathy: Despite GenAl's capabilities, humans remain central to building relationships, trust, and collaboration within teams. Emotional intelligence skills, such as self-awareness, empathy, trust, and relationship management, are vital for fostering a positive and supportive team culture.
- Change Management and Leadership: As GenAl assists in change management, humans, particularly leaders, need to develop skills in guiding and supporting teams through change. This includes skills in communication, influencing, and empathetic leadership to address resistance, manage transitions, and create a supportive environment for agile transformations.

48 Agile Way of Working

6.3 Agile Way of Working



Theory & practice we selected

Agile <u>originated</u> as an approach for software development 20 years ago. Gradually, Agile principles and practices have expanded "<u>at scale</u>" well beyond IT teams and projects permeating the <u>entire organization</u>, beyond just individual teams or projects. This requires extending the Agile mindset to all levels and functions of the business, which can lead to increased flexibility, faster decision-making, and improved responsiveness to customer needs or market changes.

The principle underpinning an agile way of working are: decentralized decision-making (teams closest to the work make decisions, enhancing speed and efficiency); cross-functionality (teams possess all required skills to deliver a product or service, encouraging self-organization); alignment and autonomy (teams are guided by strategic goals but have the freedom to decide their path to those objectives); iterative and incremental development (regularly reassessing strategies and plans based on feedback).

For the successful adoption of an Agile way of working it's important to ensure a re-alignment of culture, leadership styles, as well as processes and systems of an organization.

Our hands-on experience

Over the last decade, we have contributed to the debate about Enterprise Agility with multiple publications: <u>Agility Inc</u> (Thinkers50), <u>Agile Planning</u> (HBR), <u>Agile Feedback</u> (HBR), <u>Agile Processes</u> (EBR) and <u>Agile Culture & Behaviors</u> (Thinkers50). Based on our research and direct experience with companies undergoing agile transformations we have identified common pitfalls and how to unmask "<u>fake agile</u>".

In our experience, Agile transformations often stumble due to common pitfalls:

- "Agile Theater": while Agile jargon and tools are adopted, the enterprise still operates in the traditional way with no signs of real systemic change (e.g., rigid goal setting and resource allocation, hierarchical authorization mechanisms, unaltered traditional decision-making processes, lack of continuous feedback mechanisms).
- Inadequate leadership behaviors: lack of effective shift in leaders' actions, failing to concretely support and empower agile teams.
- Burden of legacy systems: existing legacy systems and processes can pose challenges during Agile transformations, as they may impede flexibility and responsiveness.
- Overemphasis on tools: placing excessive focus on Agile tools rather than the Agile mindset, collaboration, and adaptive thinking can hinder the success of Agile transformations.
- Insufficient training: inadequate training and education on Agile principles and practices can limit the understanding and application of Agile concepts within the organization. Recognizing and addressing these pitfalls is crucial for a true Agile transformation.



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of Agile Way of Working theories and practices?

- 1. Enhanced Project/Program Management: GenAl can support the optimization of project schedules, backlog management and sprint planning. It can facilitate integration and coordination across different functions, setting OKRs, and improve efficiency in communications and alignment within and across agile squads and tribes.
- 2. Al-based Skill Matching and Sourcing: GenAl can match organizational needs with internal and external talents available. Al algorithms can analyze skill requirements, project demands, and talent profiles to recommend suitable matches.
- 3. Customized Agile Career Paths: GenAl can help identifying skill gaps and generating personalized learning and career plans. This can help organizations build a versatile and multi-skilled workforce, a key attribute of an agile organization.

Artificial intelligence algorithms can analyze skill requirements, project needs, and talent profiles to recommend suitable matches.

50 Agile Way of Working

Additional enhancements include:

• **Dynamic Planning and Resource Allocation**: To overcome rigid goal setting and resource allocation, GenAl can assess resource flexibility, budget forecasting, team capacity, skill requirements, and market opportunities to recommend efficient and effective resource allocation

• **Promote Transformative Leadership Behaviors:** All can employ sentiment analysis to understand employees' perceptions of leadership styles, thereby delivering essential feedback to guide leaders' development



Disruptions - How would GenAl rethink or radically disrupt Agile Way of Working theories and practices from within?

- 1. Predictive Agile: All could predict the success of an Agile project based on the initial requirements, available resources, and past projects. It could use this information to suggest an optimal project structure, team size, sprint length, and more, drastically improving project planning and execution.
- 2. Artificial Scrum Master: GenAl could potentially take over the role of a Scrum Master. It could automatically assign tasks, monitor progress, identify potential risks, and even suggest improvements based on data from previous iterations. It could facilitate daily stand-ups, sprint planning, and retrospectives by processing data in real-time and providing valuable insights.
- 3. New Roles in Al-Agile: Traditional Agile roles (like Scrum Master, Product Owner) may need to be redefined in the context of GenAl. For instance, teams may need roles focusing on Al ethics, data management, and Al model training and evaluation.

AI, based on the initial requirements, could use this information to suggest an optimal project structure, team size, sprint duration, dramatically improving project planning and execution

Additional areas of disruption include:

• **Transforming Traditional Agile Ceremonies.** Daily stand-ups may become unnecessary as generative AI provides real-time data and progress tracking. Sprint planning can be influenced by AI, which analyzes historical data and dependencies to suggest optimal plans. Retrospectives can be streamlined with AI-generated insights and recommendations for process improvements.

- Immersive Agile Training: Generative GenAl could simulate immersive training experiences to develop an Agile mindset in team members. Al-powered virtual environments would challenge individuals with realistic Agile scenarios, providing instant feedback, coaching, and adaptive learning paths to foster Agile thinking and behavior.
- GenAl as a Team Member: All could become an active contributor as a team member, working on tasks, writing code, designing solutions, and contributing to discussions.
 This could completely change the dynamics of Agile teams and open the door to 24/7 development cycles.

With AI becoming a prominent part of the team, effective collaboration and communication with AI tools, virtual assistants, and human colleagues are essential



Human Factor

- **Strategic Al Integration:** Teams need the ability to strategically integrate Al technologies into Agile practices. This includes evaluating Al capabilities, identifying areas where Al can enhance Agile processes, and aligning Al integration with Agile values and principles.
- **Human-Machine Agile Collaboration:** With AI becoming a prominent part of the team, effective collaboration and communication with both AI tools, virtual assistants and human colleagues becomes critical. This involves not just conveying information effectively, but also understanding and interpreting outputs from AI models.
- **Collaborative Problem-Solving with AI**: Agile teams should cultivate the ability to collaborate effectively with AI tools and systems in problem-solving activities. This involves leveraging AI-generated suggestions, predictions, and insights as inputs for collaborative discussions and decision-making within the Agile team.
- **Understanding AI Capabilities and Limitations:** Although not everyone will need indepth technical knowledge, a basic understanding of what AI can and cannot do will be important. This includes an appreciation for the strengths, limitations, and appropriate uses of AI tools in Agile projects.
- AI-based Coaching and Mentoring: With GenAI reshaping workflows and responsibilities, the role of managers as coaches and mentors becomes crucial. They will need to guide their team members through changes, helping them develop new skills and adapt to working with AI.
- Al Ethics and Governance in Agile: As GenAl integrates more into Agile practices, it's vital to ensure data privacy, mitigate Al bias, maintain process transparency, and understand the impacts of Al-based decisions within Agile projects.

6.4 Empowerment & Decision making



Theory & practice we selected

In today's dynamic context, characterized by rapid changes and evolving market conditions, there is a growing need for less rigidity and a greater emphasis on faster, autonomous decision-making processes. Empowerment becomes crucial as it allows individuals at all levels of an organization to have a voice and contribute their expertise. Rethinking decision-making practices and criteria, along with control models, becomes necessary to reduce excessive hierarchical bureaucracy.

This shift towards employee empowerment helps reduce the bureaucratic burden on individuals and fosters a culture of innovation. Over the last decade, noteworthy books such as Gary Hamel's and Michele Zanini's "Humanocracy," Reed Hastings and Erin Meyer's "No Rules Rules," Donald Sull's and Kathleen M. Eisenhardt's "Simple Rules for a Complex World", have provided valuable insights and methodologies to reshape decision-making processes in large bureaucratic corporations, emphasizing the importance of empowerment.

Various companies have pioneered innovative decision-making practices and empower-ment, including <u>Haier</u>, Nucor, Netflix, <u>Michelin</u>, Handelsbanken, Southwest Airlines, Vinci.

Our hands-on experience

Over recent years, we have further contributed to enhance these theories and practices developing a <u>framework</u> for innovative control models for more decentralized and empowered decision making, and enhancing the concept of debureaucratization. Seven innovative control models are presented to help achieve these goals: guiding principles, boundary rules, context setting, sounding board, peer review, social pressure, and post-detection.

We advocated "Trust-by-Design" as a way to embed trust in processes and decision making criteria (see our <u>article on IbyIMD</u>).

Introducing empowerment theories and practices in large companies we have observed common pitfalls that organizations need to deal with:

- Resistance from middle management: managers may resist losing their traditional power of control. Unlearning the old paradigm and embrace the new one can be challenging.
- Organizational inertia: existing structures and processes can exhibit inertia, making it difficult to effectively empower people.
- Lack of trust: building trust within the hierarchy and the layers of an organization is crucial for empowering employees and may be a challenge to overcome.
- Employee skill gaps: lack of capability among employees that can hinder their ability to take on additional responsibilities and make independent decisions with autonomous judgement.
- Legal and compliance constraints: formal requirements may limit the actual degree of autonomy that should be granted to employees in empowerment initiatives.
- Technology gaps: monolithic technology infrastructure can impede the effective implementation of empowerment practices due to rigidity and lack of flexibility and adaptability of systems.

The good news is that technology advancement, like GenAI, is changing the game. It can make bureaucracy harmless without necessarily eliminating its control system. On one side it can simply replace low-value tasks and decisions that traditionally were made by frustrated and demotivated humans; on the other side, GenAI tools like ChatGPT can augment human judgement to make faster, better and more autonomous decisions.



Enhancements - What are the most valuable enhancements that GenAl can bring to decision making and empowerment theories and practices?

- 1. Context Understanding for Decisions: GenAl can provide a wide range of information to employees, helping them understand the larger context in which they are operating.
- 2. Al-Facilitated Decision Making: GenAl can provide support by analyzing large datasets to offer predictive insights, forecasts, and recommendations (pondering pros and cons of decisions). This helps managers in making decisions faster and more accurately, reducing the time spent on deliberation.
- 3. Modeling and Simulating Decision Outcome: GenAl can model potential outcomes
 of decision-making scenarios, allowing individuals and teams to experiment with different approaches and see their potential impacts before actual implementation. This
 encourages a shift from a risk-averse mindset to one that embraces innovation and
 learns from failures.

Generative AI can provide support by analyzing large datasets to offer forecasts, insights, and recommendations by weighing the pros and cons of decisions

Additional enhancements include:

- **Streamlining Complex Rules:** GenAl could help streamline complex rules, turning them into simple, actionable, and understandable guidelines. It could suggest the most essential rules of a process or a policy. By defining common rules and leveraging Al-generated insights, organizations can reduce variations in adoption and interpretation, promoting consistent practices.
- **Human-Machine Decision Boundaries:** All can be designed with built-in decision-making boundaries, which can be quantitative or rule-based. The All could make decisions autonomously within these boundaries, while escalating decisions outside the boundaries to human oversight.
- Personalized Recommendations: By analyzing individual preferences, past decisions, and performance data, GenAl can provide personalized recommendations tailored to each employee's specific profile.
- **Trust-Building**: GenAl can help providing transparency. Al tools can track and analyze decision-making processes, ensuring that all decisions are fair, unbiased, and data driven. Al can help ensure that decisions are transparent and traceable, providing an audit trail for accountability.

- **Promoting Ethical Decision-Making:** GenAl can be programmed to consider ethical guidelines in decision-making, helping organizations maintain their standards as they become more decentralized. For example, Al can monitor activity and offer feedback or reminders about ethical guidelines.
- **Decision Storytelling and Narrative**: GenAl can help decision makers craft compelling narratives to communicate complex information and engage stakeholders. By analyzing data and generating narratives, Al can present decisions in the form of stories, making them more relatable and impactful.
- **Enhanced Decision Visualization:** GenAl can transform complex data and decision models into intuitive visual representations, making it easier for decision-makers to understand and communicate insights. By providing interactive and visually appealing dashboards, Al enhances decision visualization.
- **Risk Management (of Decisions):** GenAl systems can be designed to incorporate legal and compliance requirements, ensuring that decisions align with regulatory frameworks. Al-powered anomaly detection systems can also help identify potential security breaches and mitigate risks proactively.



Disruptions - How would GenAl rethink or radically disrupt the way decision making is conducted?

- 1. Al-powered Voting: Introduce Al-powered platforms that allow employees to directly participate in decision-making processes through voting and consensus mechanisms. GenAl algorithms can aggregate and analyze the collective input, enabling a more inclusive and democratic approach to decision-making.
- 2. Al-Augmented Collective Intelligence: GenAl can facilitate collective decision making by aggregating and synthesizing diverse perspectives from multiple individuals.
 Through natural language processing and sentiment analysis, Al can extract insights from discussions, forums, and social media, enabling a broader range of input in decision-making processes.
- 3 Decentralized Decision Networks: GenAl facilitates the creation of decentralized decision networks, where decision-making authority is distributed among various nodes in the network. Each node, represented by Al or human decision-makers, has the autonomy to make decisions within their domain of expertise, enabling faster and more agile decision-making.

As humans work in collaboration with AI systems, developing metacognitive skills becomes increasingly important. This includes awareness of one's cognitive biases, assumptions, and limitations, as well as actively monitoring and adapting decision-making strategies

Additional areas of disruption include:

- **Emotion and Sentiment Analysis**: GenAl can detect and analyze emotions and sentiments expressed in text, voice, or facial expressions. By understanding the emotional context, Al can help decision makers gauge the impact of their choices on stakeholders' well-being and make more empathetic decisions.
- **Responsible Decision Navigator:** GenAl acts as a navigator, guiding decision-makers through the complex landscape of sustainability considerations and trade-offs. It helps identify potential risks, evaluate the environmental and social implications, and suggest alternatives that align with sustainable practices.
- **Inclusive Decisions:** Al facilitates the integration of stakeholder voices by aggregating and analyzing data from multiple sources. This inclusive approach helps organizations make decisions that balance the interests and needs of different stakeholders, fostering a more inclusive and socially responsible outcome.
- Intelligent Decision Routing: GenAl can intelligently route decision requests to the most suitable individuals or teams based on their expertise, availability, and workload. By optimizing decision routing, Al ensures that decisions are handled by the most qualified and capable individuals, for better outcomes.
- **Multi-Agent Decision Optimization:** GenAl can employ multi-agent systems where different Al agents with specialized expertise collaborate to optimize decisions. Each agent contributes unique perspectives, allowing for holistic decision-making that considers a wide range of factors.



Human Factor

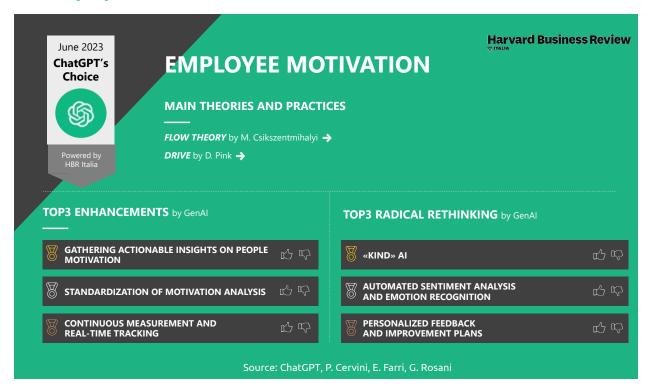
- Ability to Collaborate with AI: Humans collaborate closely with GenAI tools, working in tandem to achieve optimal outcomes. They leverage AI-generated insights and recommendations, combining them with their domain expertise, creativity, and critical thinking.
- Probing and Critical Thinking: Humans ask probing questions, challenge assumptions, and evaluate alternative perspectives to arrive at well-rounded decisions. They assess the reliability and relevance of Al-generated recommendations and ensure that decisions align with organizational goals and values.
- **Ability to Train AI**: Humans are responsible for training and validating GenAI models. They curate and prepare high-quality data, ensure model accuracy and fairness, and continuously monitor and fine-tune the AI algorithms to improve their decision-making performance and mitigate biases.

- Ethical Reasoning: While GenAl can process vast amounts of data and generate recommendations, good and fair judgment still requires human intervention. Skills related to ethical reasoning, critical thinking, and moral judgment become crucial.
- **Context Provision**: Managers provide contextual information to employees, guiding them on the strategic context, business objectives, and organizational priorities. They ensure that employees understand how Al-generated insights align with the broader goals of the organization.
- **Domain Expertise:** Employees bring their domain expertise and deep knowledge of specific areas to the decision-making process. They leverage GenAl tools to augment their expertise, analyze data, and gain insights, combining them with their domain knowledge to make decisions. They are also aware that GenAl's answers can have limitations and should be carefully reviewed.
- **Metacognition:** As humans work in collaboration with Al systems, developing metacognitive skills becomes increasingly important. Metacognition refers to the ability to reflect on and regulate one's own thinking processes. It involves being aware of one's own cognitive biases, assumptions, and limitations, and actively monitoring and adjusting decision-making strategies.

As humans work in collaboration with AI systems, developing metacognitive skills becomes increasingly important. This includes awareness of one's cognitive biases, assumptions, and limitations, as well as actively monitoring and adapting decision-making strategies

58 Employee Motivation

6.5 Employee Motivation



Theory & practice we selected

Main references are intrinsic motivation theories by Mihaly Csikszentmihalyi and Daniel Pink.

Csikszentmihalyi's flow theory focuses on the experience of being in a state of flow, which is characterized by complete immersion, deep focus, and a sense of enjoyment in an activity. Csikszentmihalyi identified several factors that contribute to the flow state, such as the match between the challenge level of the activity and an individual's skill level, clear goals, immediate feedback, and the merging of action and awareness. Flow theory emphasizes the intrinsic rewards of engagement and the importance of finding activities that provide an optimal balance between challenge and skill.

Csikszentmihalyi's theories served as the foundation and inspiration for Daniel Pink, who further elaborated on and popularized these ideas in his book <u>Drive</u>. Pink introduced the concepts of autonomy, mastery, and purpose as the key drivers of intrinsic motivation, highlighting their significance in fostering engagement, creativity, and satisfaction in individuals. Autonomy refers to having control over one's work, mastery to the desire to get better at what one does, and purpose to the belief that the work matters. Research in the field of organizational psychology and management has demonstrated that intrinsic motivation plays a crucial role in driving employee performance, satisfaction, and overall organizational outcomes (Lindsay McGregor and Neel Doshi in their

article "How Company Culture Shapes Employee Motivation"). When employees are intrinsically motivated, they tend to exhibit higher levels of engagement, creativity, and commitment to their work.

Cases often cited in the management literature include:

- **Best Buy** | Hubert Joly's human-centered approach (described in his book <u>The heart of business</u>), leveraging the full potential of Best Buy employees by ensuring they are well-motivated, adequately trained, and fully engaged in their roles.
- Michelin | Responsabilisation (French for "empowerment") Program which aimed
 at giving employees more responsibility and autonomy in their roles. By doing this, Michelin fostered a sense of ownership among employees which led to increased motivation and productivity.

Our hands-on experience

In applying these principles and practices we often observed that they can be very powerful, but their implementation and scale up can pose difficult challenges such as:

- Lack of standardization: without a standardized method to define and measure motivation, the process can become highly subjective. Different individuals may have different interpretations of motivation, which can lead to inconsistencies in measurement and interpretation of results.
- Difficulty in deriving actionable insights: surveys can provide valuable data on employee motivation but converting them into actionable strategies is challenging because of the complex nature of motivation.
- Perception that motivation is qualitative without a business case: numerous studies have shown a strong link between employee motivation and business outcomes such as productivity, retention, and customer satisfaction, but this connection is not yet obvious.

To help firms overcome these challenges we supported the development of a practical approach called "kindness triangle".

At the base of the triangle are motivation and wellbeing indicators. At its top are business results. Every vertex of the triangle has an associated set of indexes, with analytical correlations linking the three vertices. The logic is that a compassionate leadership results in higher rates of trust and engagement in people, which in turn translates into improved company performance. To convincingly show the link between kindness, motivation and business results, anecdotal evidence is not enough. We need analytical measurement, such as the "Kindness Performance Indicators": employees are surveyed on their

60 Employee Motivation

motivation with questions around purpose, autonomy, and relationship. Results by unit (or sub-unit) are compared with the unit leader's individual score on the Trust Behavioral Index. In the companies and units where we ran the correlation, we found consistent links between kind leaders and motivated employees.



Enhancements - What are the most valuable enhancements that GenAl can bring to the application of intrinsic motivation practices such as Kindness Performance Indicators (KPIs)?

- 1. Gathering Actionable Insights on Motivation: GenAl can process survey data and
 other relevant information to generate actionable insights to harness intrinsic motivation. By using advanced analytics and machine learning algorithms, GenAl can
 identify patterns, trends, and relationships that might be missed by human analysis.
 It can also suggest actions or motivation strategies.
- 2. Standardization of Motivation Analysis: GenAl can aid in creating an ad-hoc standardized model of measuring and understanding motivation across the organization. It can process a large amount of data to identify common factors and patterns, which can serve as a standard. The model can be used for individual assessments and comparisons across units or the whole organization.
- 3. Continuous Measurement and Real-time Tracking: GenAl can automate the process of regular measurement and tracking of KPIs. In traditional settings, these would typically be assessed through employee surveys and observations, usually conducted periodically. With the aid of GenAl, this process can be automated, providing real-time insights and analyses. The Al system can be trained to analyze various sources of data to measure indicators of kindness continuously.

Generative AI can process survey data and other relevant information to generate useful insights for unleashing intrinsic motivation

Additional enhancements include:

- **Demonstrating Business Case for Motivation:** By analyzing historical and real-time data, GenAl can draw clear connections between motivation levels and key business outcomes. It can provide evidence-based arguments for the impact of motivation on performance, helping to establish the business case for investment in motivation strategies.
- Enhanced Qualitative Analysis: While GenAl can analyze quantitative data, it can also process qualitative information, offering a deeper, more nuanced understanding of the qualitative aspects of motivation and kindness, often reflected in unstructured data such as open-ended survey responses, employee feedback, meeting transcripts, emails, and other text data. It can identify recurring themes, detect sentiment (positive, negative, neutral), and even comprehend subtle emotions (like joy, frustration, etc.).
- **Engaging Employees:** With capabilities like chatbots, GenAI can facilitate two-way communication with employees, inviting their input and feedback in a more interactive manner. This can help increase employee engagement in the process.



Disruptions - How would GenAl rethink or radically disrupt application of intrinsic motivation practices such as Kindness Performance Indicators (KPIs) from within?

- 1. "Kind" AI: GenAI systems can be designed to embody kindness in their interactions, serving as a digital exemplar of kindness in the organization. Through providing consistently empathetic and supportive responses, these AI systems foster a culture of kindness and provide a touchpoint for guidance.
- 2. Automated Sentiment Analysis and Emotion Recognition: GenAl, especially advanced Natural Language Processing (NLP) and machine learning algorithms, could process large amounts of text data (like emails, chat transcripts, social media posts) or even voice and video data to understand employees' emotions, satisfaction, and overall sentiments about their work and the company culture. This could provide real-time insights into motivation and kindness at work beyond traditional survey methods.
- 3. Personalized Feedback and Improvement Plans: Using AI, personalized feedback
 can be provided to each employee, including recommendations for enhancing motivation. These suggestions can be derived from analyzing vast amounts of data on successful interactions and patterns of motivation and kindness within the organization
 or across similar organizations.

Generative AI systems can be designed to embody kindness in their interactions, serving as a digital example of kindness in the organization.

62 Employee Motivation

Other areas of disruption include:

• **Kindness Forecasting & Proactive Intervention**: Through machine learning and data mining, GenAl could forecast potential pitfalls or opportunities related to motivation and kindness in the organization. It could predict how changes in policies or procedures might impact motivation, trust and kindness, or it could foresee which departments or individuals might need extra support.

- Immersive Empathic Training: Advanced AI can utilize AR/VR to simulate real-life scenarios and help in training employees and leaders to exhibit more kindness in their interactions.
- **Decentralization of Motivation and Kindness Initiatives**: Advanced Al technologies such as blockchain could be used to create a decentralized, transparent record of kindness-related initiatives, actions, and their impacts in the organization. This would democratize the process, giving every employee a chance to contribute to and access kindness-related data, and to certify the quality of data.



Human Factor

- **Data Interpretation:** As GenAl automates the process of data collection and initial analysis, humans can focus more on interpreting the results, understanding their implications, and developing strategic responses to foster employee motivation
- **Interactive & Kind Engagement**: Instead of disseminating information about kindness in a one-way manner, humans will play a vital role in engaging with employees interactively and having meaningful conversations, aided by GenAl tools such as chatbots. They'll focus on fostering relationships, building trust, and promoting a culture of kindness.
- Anticipatory Kindness & Motivation Management: Leveraging Al insights to proactively detect, address, and capitalize on shifts in motivation and kindness within the organization.
- **Immersive Learning Skills**: Mastery in designing and facilitating immersive, experiential learning experiences (possibly using AR/VR technologies) to enhance the understanding and practice of kindness.
- Authentic & Compassionate Leadership: Emphasizing the human ability to show empathy, exhibit personal authenticity, and serve as a role model of kindness. Interpersonal connection, understanding, and emotional intelligence are key to complement Al's analytical capabilities.

Interpersonal connection, understanding, and emotional intelligence are crucial for integrating the analytical capabilities of AI

BIOS

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