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Master Thesis in Management Engineering

Artificial Intelligence Marketing in B2B: Emerging Tools for Growth and Innovation in the Gear Sector

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Abstract

The objective of this work is to provide companies operating in the gear sector, such as hGears AG, with a simple, effective and structured procedure to digital transformation by applying new agentic and generative Artificial Intelligence (AI) technologies which eventually will improve Business-to-Business marketing and sales activities. The main goal is to propose improvements with a detailed and actionable plan of possible AI integrations with current available technologies.

Before the exploring of actual AI instruments and business processes within the company, in the Literature review section are discovered the materials about development of AI technologies, proven examples in B2B sector and possible advantages and disadvantages of integration this innovative technology.

The study adopts a practice-oriented approach, integrating multiple AI tools and large language models (LLMs) and automation platforms into a coherent, multi-phase process architecture. Two AI-driven automations were implemented to demonstrate how market intelligence, document analysis, and workflow orchestration can be operationalized in real business settings.

Methodologically, the thesis combines process analysis, conceptual framework development, and applied system design, while performance evaluation is addressed through a multidimensional perspective on marketing ROI (Return on Investment). The findings indicate that AI delivers the greatest value when deployed as decision support rather than autonomous control, reinforcing the importance of explainability, governance, and human oversight.

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Introduction

The contemporary business environment is undergoing a significant metamorphosis, largely propelled by the integration of artificial intelligence (AI). This technological ascendance is not merely an incremental change but a fundamental reconfiguring of how organisations conceptualise and execute their marketing strategies and foster customer engagement. Within the business-to-business (B2B) sphere, this AI-driven evolution is particularly instrumental, engendering new frameworks for growth and innovation. This is especially apparent in specialised industrial sectors, such as gear manufacturing and distribution, where conventional marketing methodologies have long held sway. The intricate nature of this industry characterised by complex technical specifications, extended procurement timelines, and the pivotal role of established relationships renders it a compelling domain for examining the assimilation of AI tools into established marketing paradigms.

Indeed, the nexus of artificial intelligence and B2B marketing has rapidly matured into a critical focus of both scholarly investigation and applied industry practice. Organisations are increasingly compelled to explore data-centric insights, predictive analytical capabilities, and automated operational processes to solidify and enhance their competitive posture. This dynamic is especially pronounced within industrial sectors like gear manufacturing, where the confluence of deep-rooted engineering expertise and sophisticated digital marketing capabilities presents a duality: a landscape rich with transformative opportunities, yet simultaneously fraught with unique strategic and operational challenges.

Chapter 1. Content Review

1.1 Background and Context

The integration of Artificial Intelligence (AI) within marketing represents a critical inflection point in the discipline's evolution. This technological constellation - comprising machine learning, natural language processing, predictive analytics, and computer vision, among others - equips marketers with the capacity to automate intricate processes, cultivate a more profound understanding of customer behaviour, dynamically optimize campaigns, and enrich the holistic customer experience. This strategic importance is reflected in global expenditure, which is projected to maintain its robust upward trajectory with marketing and sales consistently identified as principal areas for investment. This sustained commitment accentuates the perceived transformative potential of AI in realising marketing objectives.

By contrast, the Business-to-Business (B2B) marketing environment operates under a distinct set of principles and challenges. Its landscape is characterised by elongated sales funnels, multiple stakeholders in the procurement process, high-value transactions, and a foundational reliance on long-term relationship management and technical concordance. This complexity necessitates that B2B marketers deploy advanced strategies and technologies to effectively manage the customer lifecycle, from lead generation and qualification to nurturing and conversion. It is precisely in this context that AI offers significant strategic advantages, providing enhanced accuracy in lead scoring, enabling deep content personalisation for various decision-makers, facilitating the automation of Account-Based Marketing (ABM) programmes, and offering predictive insights into nascent market trends and future customer needs.

Operating squarely within this complex B2B framework is the gear sector, an integral part of the global industrial manufacturing ecosystem. This industry, dedicated to the design, production, and distribution of highly engineered power transmission components for sectors as diverse as automotive, aerospace, robotics, and energy, demands an exceptionally high degree of marketing precision. Historically, marketing methodologies in this niche have been anchored in long-standing industry relationships, participation in specialised trade expositions, and the dissemination of dense technical documentation. However, the prevailing imperative of digital transformation, coupled with the maturation of AI, presents novel opportunities for gear manufacturers and distributors to augment their market penetration, operational efficiencies, and overall competitive

stance. The strategic adoption of AI-driven marketing tools offers the potential to decipher intricate customer requirements with greater accuracy, identify emergent market niches, and optimize marketing and sales funnels within an increasingly data-intensive global marketplace.

1.2 Statement of the Problem

Despite the growing academic and practical recognition of the potential of artificial intelligence (AI) in marketing, a significant gap persists in the literature. This gap specifically concerns the application, adoption dynamics, and resulting impact of AI-driven marketing (AIM) tools within the particular context of the B2B gear sector. Most existing research tends to focus on consumer-oriented (B2C) industries or presents generalized B2B analyses, rarely delving into the specificities of specialized industrial domains such as gear manufacturing. This particular sector with its distinctive product characteristics, complex value chains, and historically conservative stance toward adopting new marketing technologies, thus represents a promising and underexplored area of study.

The central issue motivating this thesis, therefore, is the pronounced lack of knowledge regarding which emerging AI-based marketing tools are most relevant and effective for B2B companies in the gear industry, and what strategic approaches can be used to leverage these tools for measurable growth and innovation.

This problem gives rise to a series of fundamental research questions:

1. Which specific AI-powered marketing tools (e.g., for market intelligence, lead generation, CRM, content personalisation) are emerging or being adapted for the B2B industrial sector?
2. What is the current state of awareness, adoption, and planned implementation of these tools among firms in the gear sector?
3. What are the primary benefits, challenges, and barriers both perceived and actual associated with the implementation of AIM strategies within this industry?
4. Beyond immediate sales metrics, how might the integration of AIM contribute to broader innovation in product development, service delivery, and business models within the gear sector?

There is a significant risk in misunderstanding how artificial intelligence (AI) can be applied in the B2B (business-to-business) equipment industry. Companies may be missing out on key opportunities to improve competitiveness, spend marketing budgets more effectively, and adapt to the ongoing shift to digital operations.

This study aims to fill this knowledge gap by taking a closer look at emerging AI-powered marketing (AIM) tools and how they can drive growth and innovation. The findings of this study are intended to provide practical guidance to researchers, marketers, and industry leaders. Ultimately, it will help them make more informed decisions about integrating AI into their marketing strategies.

1.3 Research Objectives

The objective of this thesis is to study the transformative potential of artificial intelligence in B2B marketing, particularly in the gear manufacturing sector, with a special focus on identifying new tools that stimulate growth and foster innovation, the main objectives of the research are:

1. To study the current situation of AI tools in B2B marketing: this objective is directly related to the need to understand existing AI applications, their classification, and their usage options, as described in the literature review, and to contextualize them within the B2B framework.
2. To investigate the practical application of AI tools for market segmentation, predictive analysis, and content generation in the equipment sector: based on the methodology and the conclusions obtained during the internships, this objective aims to provide a detailed report on how AI is applied in real scenarios, in particular at hGears Group.
3. Evaluate performance indicators and return on investment (ROI) related to AI marketing initiatives in the B2B industrial context: this objective is fundamental to assessing the effectiveness of AI applications, linking results to performance indicators and reporting on strategic implications.
4. Identify and analyze the main challenges, risks (including cybersecurity), and opportunities related to the integration of AI into B2B marketing strategies in the gear manufacturing sector: This objective covers important considerations highlighted in the literature review and further examined in the internship conclusions.

5. Develop strategic recommendations and a framework for building an AI-based B2B marketing strategy tailored to the gear manufacturing sector: this forward-looking objective forms the basis for the strategic implications and recommendations, providing practical insights for hGears and similar companies.
6. Propose areas for future research to further deepen the understanding and application of AI in B2B marketing, especially in industrial sectors.

1.4 Justification for the Study

This research comes at a particularly relevant moment both for industry and offers contributions on multiple fronts: theoretical understanding, practical utility, and sector-wide perspective.

To begin with, the academic rationale is fairly straightforward. Although the body of work on AI in marketing has grown in recent years, there remains perhaps surprisingly a noticeable gap when it comes to its application in tightly defined industrial B2B contexts. Gear manufacturing, for example, rarely features in the literature, despite its unique characteristics and potential receptiveness to AI tools. What this thesis attempts to do, then, is to fill that gap. Not only by offering empirical evidence on how AIM is actually being used, but also by engaging with the theoretical implications especially around how AI reshapes marketing logic in traditional sectors. In that sense, the study contributes to broader conversations about innovation, technology uptake and B2B strategy.

At the same time, the research speaks directly to industry practitioners. For marketing leads, strategists, and operational decision-makers working within gear manufacturing or similar sectors, the findings should offer concrete value. The analysis will help clarify the current landscape: which AIM tools are gaining traction, what benefits are being realized, and where firms tend to stumble. While the aim is not to prescribe a one-size-fits-all model, the study does hope to illuminate some of the more effective strategies along with the common traps. Ideally, this helps businesses make better calls on where to invest, how to integrate AI into their workflows, and when to pivot.

AI is already a prominent trend, involved in everyday business decisions, with a pace that often outstrips organizations' ability to respond. For industries like gear manufacturing typically conservative in how they approach new technologies this creates real tension: adopt and adapt, or risk falling behind. This thesis does not pretend to resolve that tension, but it does attempt to map

it. In doing so, it offers a kind of snapshot of where things stand now, while also looking ahead at where they might be heading next.

Furthermore, the economic impact of enhancing marketing effectiveness and fostering innovation in the gear sector is noteworthy. As a foundational industry supplying critical components to numerous other sectors (e.g., automotive, aerospace, manufacturing, energy), improvements in the efficiency, competitiveness, and innovative capacity of gear companies can have positive ripple effects throughout the value chain, contributing to broader industrial and economic development.

Finally, the focus on a niche yet critical sector like the gear industry allows for a depth of analysis that is often missing in more generalized studies. Understanding the specific challenges and opportunities for AIM adoption in this context can yield valuable lessons that may also be applicable to other specialized B2B industrial markets facing similar digital transformation journeys.

In essence, this study is justified by its potential to generate new academic knowledge, provide practical guidance to an important industrial sector, and contribute to a better understanding of how emerging technologies like AI are shaping the future of B2B marketing and business innovation.

1.5 Structure of the Thesis

Chapter 1: Introduction

This chapter lays the foundations for the study. It provides background information and the broader context of the application of artificial intelligence in B2B marketing, with a particular focus on the mechanical engineering sector. The research questions are posed, the objectives are defined, and the motivation for the study is explained. In the conclusion, a brief summary of the structure of the paper is given and the overall research plan is explained.

Chapter 2: Literature Review

Chapter 2 reviews existing research and relevant specialist literature. It first examines the theoretical foundations of B2B marketing and then looks at the transition from traditional marketing to digital marketing in an industrial context. It then analyses the development and current applications of artificial intelligence in the field of marketing in a broad sense. Particular

attention is paid to the classification of artificial intelligence tools and their typical applications. In addition, the challenges and opportunities of artificial intelligence in the B2B environment are examined and the dynamics of the gear market and its limitations in terms of innovation are summarized at the end of the chapter.

Chapter 3: Company Profile and Industry Context

Chapter 3 provides a detailed profile of hGears Group. As the main object of the study, the company is described in terms of its organizational structure, its strategic positioning in the global gear manufacturing industry and its current digitalization efforts, while specific marketing initiatives using AI before and after its implementation are analyzed. This chapter also includes an analysis of broader trends in the sector, B2B buyer behavior in gear-related markets and a map of the competitive structure of the sector.

Chapter 4: Findings from Internship

Chapter 4 examines the empirical results obtained during the internship and the associated research work. First, the data collection methods (semi-structured interviews, case studies and possible surveys) are described. Then, the practical application of AI tools is presented, including their implementation in market segmentation and forecasting. In addition, the use of automated content systems such as Natural Language Generation (NLG) or Large Language Models (GPT) is analyzed. The challenges related to cybersecurity, organizational integration, and internal resistance are reported, and observations are made on how to measure the marketing performance and ROI associated with the use of AI.

Chapter 5: AI Development and Strategic Recommendations

Chapter 5 provides a critical interpretation of the findings of the previous chapter and presents the strategic impact. This chapter describes how to build an AI-based marketing strategy in the context of the B2B industry. In addition, a set of key performance indicators (KPIs) for evaluating marketing effectiveness are proposed, and recommendations for implementation guidelines are made to enable gear manufacturing enterprises to implement scalable AI.

Chapter 6: Conclusions

The study concludes with Chapter 6, which summarizes the key findings related to the original objectives of the study. Practical recommendations are offered for hGears and other companies that may operate in similar industrial settings. In addition, broader implications for B2B marketers, AI tool developers, and strategic planners are explored. The chapter concludes with reflections on the limitations of the study and recommendations for future research directions that can keep pace with advances in the field.

Chapter 7: References

Finally, Chapter 7 provides a comprehensive list of all bibliographic references cited in the work. All sources, including peer-reviewed journals, academic monographs, conference papers, industry publications and reports, and online materials, are cited in accordance with the required academic standards.

Chapter 2: Literature Review

2.1 B2B Marketing Fundamentals

Business-to-business (B2B) marketing can be defined as the set of seller-initiated processes that create, communicate, deliver, and exchange value between organizations rather than between a firm and individual consumers. In other words, B2B concerns markets where the buyers are organizations (OEMs, Tier suppliers, distributors, governments) and where exchanges are shaped by inter-organizational relationships, technical specifications, and economic value in use. This view aligns the American Marketing Association's general definition of marketing with the B2B context and is consistent with scholarly treatments that frame B2B as value-oriented exchange among organizations embedded in networks.¹

Foundational features distinguish B2B from consumer markets. Demand is typically derived (originating in downstream markets), volumes are high while buyer numbers are comparatively small, purchase risk is significant, and transactions involve multiple decision makers over extended cycles. Classic organizational buying research formalized two pillars that still organize B2B practice: the “buying center” (a multi-role decision-making unit) and the “buyclass” or Buygrid framework (new task, modified rebuy, straight rebuy). Together they explain why industrial selling emphasizes information, risk reduction, and cross-functional coordination.²

Since organizations do not act in isolation, the Industrial Marketing and Purchasing (IMP) Group's interaction and network perspective provides a second cornerstone. The IMP work shows that what firms can market (and how) depends on “actor bonds, resource ties, and activity links” that evolve in dyads and networks; capabilities and value are co-created across supplier-customer interfaces rather than delivered unilaterally. The practical implication is that strategy in B2B is as much about managing relationship portfolios and interfaces as it is about managing products.³

A compatible theoretical lens is service-dominant logic (SDL), which argues that service the application of specialized competences for another's benefit is the fundamental basis of exchange.

¹ American Marketing Association. The definition of marketing: What is marketing? AMA.

² Robinson, P. J., Faris, C. W., & Wind, Y. (1967). Industrial buying and creative marketing. Allyn & Bacon. (Marketing Science Institute Book Series, ISSN 0542-7398).

³ IMP Project Group. (n.d.). International marketing and purchasing of industrial goods: An interaction approach. Edited by H. Håkansson. University of Uppsala.

Customers are always co-creators of value, and value is realized in use, not just at the point of sale. For B2B marketers this reframes “offerings” as configurations of goods, services, processes, and interactions that help the customer perform better. SDL thus motivates account-specific value modeling, outcome-based contracting, and solution selling in complex industrial settings.⁴

Segmentation, targeting, and positioning (STP) remain foundational, but B2B segmentation rarely maps cleanly onto consumer-style demographics. Bonoma and Shapiro’s hierarchical approach (demographic, operating, purchasing, situational, and personal criteria) remains a rigorous way to define segments that a sales force can actually pursue. Their guidance to combine observable firmographics (e.g., NAICS, size, technology) with buying-situational variables (e.g., new task versus rebuy, centralized versus decentralized purchasing, urgency) continues to underpin industrial STP and sales coverage design.⁵

Positioning and differentiation in B2B often ride on performance credence attributes such as reliability, lifetime cost, integration ease, and compliance rather than affective imagery. Research documents that branding still matters in B2B, but primarily through risk reduction, reputation, and the ability to command consideration in vendor shortlists. Consequently, thought leadership and engineering credibility become core positioning tools alongside formal brand architecture.

Value creation and value communication provide the connective tissue between strategy and revenue. Anderson, Narus, and Van Rossum argue that persuasive B2B value propositions quantify the economic impact for specific customer processes (e.g., uptime, scrap rate, cycle time), compare credibly with next-best alternatives, and are supported by field evidence rather than generic claims practices that help customers justify a non-lowest-price choice internally.

Routes-to-market and relationship governance complete the commercial architecture. In complex accounts, Key Account Management (KAM) formalizes cross-functional teams, joint planning, and performance metrics at the account level; research shows that effective KAM configurations are contingent on account potential, solution breadth, and internal coordination capability. The immediate takeaway is that structure follows strategy: centralized KAM can accelerate solution

⁴ Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1–17.

⁵ Shapiro, B. P., & Bonoma, T. V. (1984). How to segment industrial markets. *Harvard Business Review*, 62(3), 104–110.

adoption and lifecycle revenue, but requires robust information sharing across marketing, sales, service, and engineering.

B2B demand generation and communications have been reshaped by two complementary developments. First, account-based marketing (ABM) reframes programs around named accounts and buying groups, “treating individual accounts as markets in their own right,” a definition popularized by ITSMA and widely adopted in practice. Second, the SiriusDecisions/Forrester “Demand Unit Waterfall” updated the classic lead funnel by recognizing that opportunities form around identifiable buying groups with specific needs (“demand units”), improving marketing–sales alignment and measurement. Together these frameworks push B2B away from volume-led lead capture toward coordinated, account-level coverage and progression.⁶

Digital has not replaced these fundamentals; it makes them measurable and scalable. In industrial settings with long cycles, web analytics, marketing automation, and CRM integration can link content-driven touchpoints to pipeline stages and revenue contribution when instrumentation is designed around the buying group and solution journey. Case evidence from Industrial Marketing Management shows that firms using disciplined web analytics and goal hierarchies (from micro-conversions to qualified pipeline) can attribute and optimize digital programs credibly provided data quality, cross-functional ownership, and closed-loop processes are in place.

For manufacturing verticals like the gear sector, quality systems and co-engineering practices are not optional extras; they are the market access criteria that shape marketing itself. Automotive and e-mobility supply chains, for example, require certified quality management (IATF 16949 on top of ISO 9001), launch discipline (APQP), and submission of Production Part Approval Process (PPAP) documentation. These standards translate directly into value in lower defect risk, smoother PPAP approvals, and faster SOP timings and thus into differentiators that marketing must specify, evidence, and communicate in proposals and technical content.⁷

Finally, the “solutions” perspective integrates the above into a practical B2B delivery model. Rather than bundles of products and services, effective solutions are relational processes that start with requirements definition, progress through customization and integration, and culminate in

⁶ MomentumABM. (n.d.). MomentumABM: Your B2B customer-led growth powerhouse.

⁷ International Automotive Task Force. (2024). IATF 16949:2016 – Sanctioned Interpretations (November 2024).

deployment and ongoing value verification. The evidence from B2B research is clear: suppliers that manage solutions as an end-to-end process build switching costs, expand share of wallet, and make value capture (including premium pricing) more sustainable.

In sum, B2B marketing fundamentals for an industrial thesis market definition and STP oriented to buying centers and buyclasses; network/relationship management (IMP); service-dominant value creation; quantified value propositions and value-based pricing; KAM and ABM for coverage; instrumentation for digital attribution; and sector-specific quality regimes form a coherent scaffold for any subsequent investigation of artificial intelligence in marketing.

2.2 Evolution of Artificial Intelligence

Artificial intelligence (AI) can be defined, in line with the European Union’s legal framework, as the use of “AI systems” as machine-based systems that infer from inputs to generate outputs such as predictions, content, recommendations. This definition matters because it clarifies scope (from predictive models to general-purpose generative models), autonomy, and governance obligations now codified in the EU AI Act, which entered into force on 1 August 2024 following publication in the Official Journal on 12 July 2024.⁸

Before 2022, AI in marketing largely meant predictive analytics and optimization: segmenting accounts, forecasting demand, automating bids, personalizing content, and running experiments at digital scale. Seminal reviews positioned these tools within a “data-rich environments” paradigm that professionalized decision-making but mostly automated well-structured tasks rather than creative or conversational work. This pre-generative era established the data governance, testing discipline, and cross-functional skills that later made generative systems usable in production.⁹

The inflection arrived with the public release of ChatGPT on 30 November 2022, which created a natural-language interface between non-experts and powerful models. Analysts estimated the service reached roughly 100 million monthly active users by January 2023, making it (at the time) the fastest-growing consumer application in history - a proxy for demand and a forcing function for enterprise adoption. OpenAI’s subsequent releases, notably GPT-4 in March 2023 and the

⁸ European Commission. (2024, August 1). AI Act enters into force.

⁹ Wedel, M., & Kannan, P. K. (2016). Marketing analytics for data-rich environments. *Journal of Marketing*, 80(6), 97–121. AMA and MSI Special Issue: Mapping the Boundaries of Marketing: What Needs to Be Known. Published by Sage Publications, Inc.

natively multimodal GPT-4o in May 2024 and then GPT-5 in 2025, pushed capability from text generation toward reasoning across text-vision-audio, broadening marketing use cases from drafting emails to orchestrating conversations, assets, and analysis.¹⁰

AI adoption worldwide has increased dramatically in the past year, after years of little meaningful change.

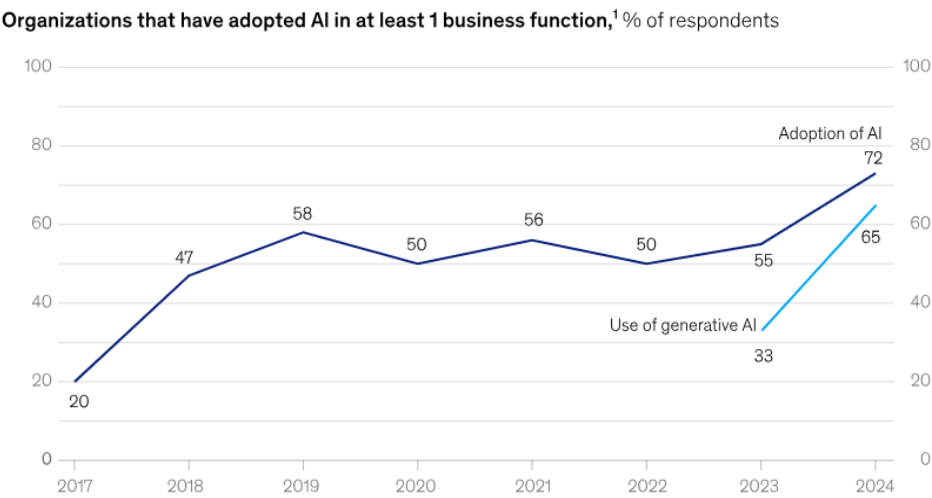


Figure 1 - The diagram of the ratio of AI adoption in business environment throughout last 8 years¹¹

¹⁰ OpenAI. (n.d.).

¹¹ McKinsey & Company. (2024, May 30). The state of AI in early 2024: Gen AI adoption spikes and starts to generate value.

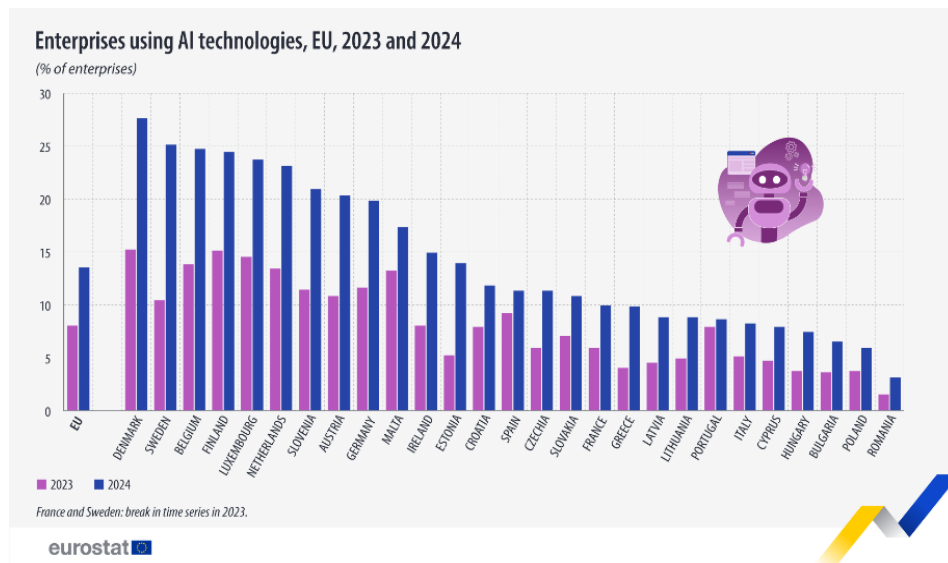


Figure 2 - The chart of utilization of AI within European Union¹²

Enterprise software vendors rapidly productized these advances, bringing generative AI into the daily stack of B2B marketers. Salesforce launched Einstein GPT on 7 March 2023 to generate content across CRM workflows; Microsoft announced Copilot for Microsoft 365 on 21 September 2023, embedding generative assistance in productivity surfaces used by go-to-market teams; and Adobe introduced Firefly on 21 March 2023, tuning models and licensing to enable commercially safe creative production across Creative and Experience Cloud. These moves normalized LLM-assisted workflows for campaign creation, sales enablement, and collateral development.

Since 2023, adoption has been rapid but unbalanced. McKinsey's global AI surveys in 2024-2025 report that marketing and sales are among the top functions deploying generative AI, with usage spreading from pilots to scaled programs as firms rewire workflows and stand up governance; value is reported in content velocity, support deflection, and lead management, even as risk management and data foundations lag. Complementing this, The CMO Survey finds firms using generative AI in only ~7% of marketing activities and ~10% using Large Language Model tools as evidence of high perceived value but modest penetration as organizations professionalize operating models.¹³

¹² Eurostat. (2025, January 23). Usage of AI technologies increasing in EU enterprises.

¹³ Moorman, C. (2024, April 24). Marketers spend on new technologies while battling usage and impact challenges. The CMO Survey.

At the same time, discovery and demand capture have been reshaped by search. On 14 May 2024, Google rolled out AI Overviews in the U.S., interposing generative summaries at the top of results. For B2B marketers this shifts organic strategy from ranking alone to being a cited source in overviews (i.e., structured, entity-rich, and authoritative assets that models ground on), and it accelerates the need for syndication-ready technical content that can be retrieved and summarized accurately.

The capability frontier since late 2022 has expanded along three reinforcing tracks. First, content generation and orchestration: LLMs draft audience-specific variants of emails, landing pages, and proposals while image/video generators compress creative iteration cycles; multimodal models (e.g., GPT-5) support unified narratives across copy, visuals, and voice, within brand guardrails. Second, knowledge grounding via retrieval-augmented generation (RAG) connects assistants to authenticated corpora (CRM, product data, service knowledge), improving factuality and enabling on-the-fly briefs, spec sheets, and sales answers with linked provenance. Third, conversational interfaces from chat assistants that qualify demand and support customers to “copilots” embedded in CRM/MA tools extend human capability rather than replace it.

Policy has become a strategic variable. The EU AI Act introduced a risk-based regime with transparency obligations for general-purpose AI and disclosure when people interact with AI systems requirements that touch customer-facing chat, content generation, and vendor due-diligence for European operations. With entry into force in August 2024 and phased application through 2025-2027, compliance is now a program, not a slide affecting model selection, documentation, and claims substantiation in marketing content.

Meanwhile, in 2025 The European Commission’s AI Continent Action Plan presents a comprehensive strategy to strengthen the European Union’s global position in artificial intelligence by scaling innovation, infrastructure, and adoption while ensuring regulatory clarity. The plan aims to mobilise significant public and private investment through the InvestAI initiative, including funding for AI gigafactories and a network of AI factories that provide advanced computing resources to researchers, startups, and industry.

A key pillar of the strategy is improved access to high-quality data through the creation of a data union and dedicated data labs, facilitating the training and deployment of advanced AI systems. The Commission also prioritises increasing AI uptake across the economy particularly among

SMEs via the Apply AI Strategy. In parallel, the plan addresses skills shortages by promoting education, training, and international talent attraction, while simplifying the implementation of the AI Act through guidance and support mechanisms. Overall, the action plan seeks to integrate investment, data, skills, adoption, and regulation into a coherent framework to enhance Europe's AI competitiveness.¹⁴

2.3 The rise of AI agents

With the growing development of Large Language Models, in 2025 the sphere of AI automation demonstrated the future and the eventual path of AI integration in different industries and human resources' replacement.

An artificial intelligence agent is a system that autonomously fulfills tasks by designing workflows with available tools.¹⁵ AI agents can encompass a wide range of functions beyond natural language processing including decision-making, problem-solving, interacting with external environments and performing actions.

AI agents solve complex tasks across enterprise applications, including software design, IT automation, code generation and conversational assistance. They use the advanced natural language processing techniques of large language models (LLMs) to comprehend and respond to user inputs step-by-step and determine when to call on external tools.

Large language models constitute the foundational component of AI agents. Thus, such systems are frequently described as LLM-based agents. Conventional LLMs like Google's Gemini, generate outputs based on their training data and are therefore constrained by static knowledge and inherent reasoning limitations. By contrast, agentic architectures extend these capabilities using backend tool-calling mechanisms, which enable access to up-to-date information, workflow optimisation, and the autonomous decomposition of complex objectives into manageable subtasks.

Within this framework, autonomous agents progressively adapt to user expectations by leveraging memory mechanisms that store prior interactions and support forward planning. This capacity for learning over time facilitates personalised user experiences and more comprehensive responses.

¹⁴ European Commission. (n.d.). AI continent: Shaping Europe's leadership in artificial intelligence with the AI continent action plan.

¹⁵ IBM. Finio, M., & Downie, A. (2025). What are AI agents?

Moreover, tool calling can be executed without human intervention, significantly expanding the scope of real-world applications for agent-based AI systems.

Thereby, AI agents present a fusion of memory (remembering across tasks), AI models (decomposing a problem and planning actions) and a system (accessing external systems on user's behalf).

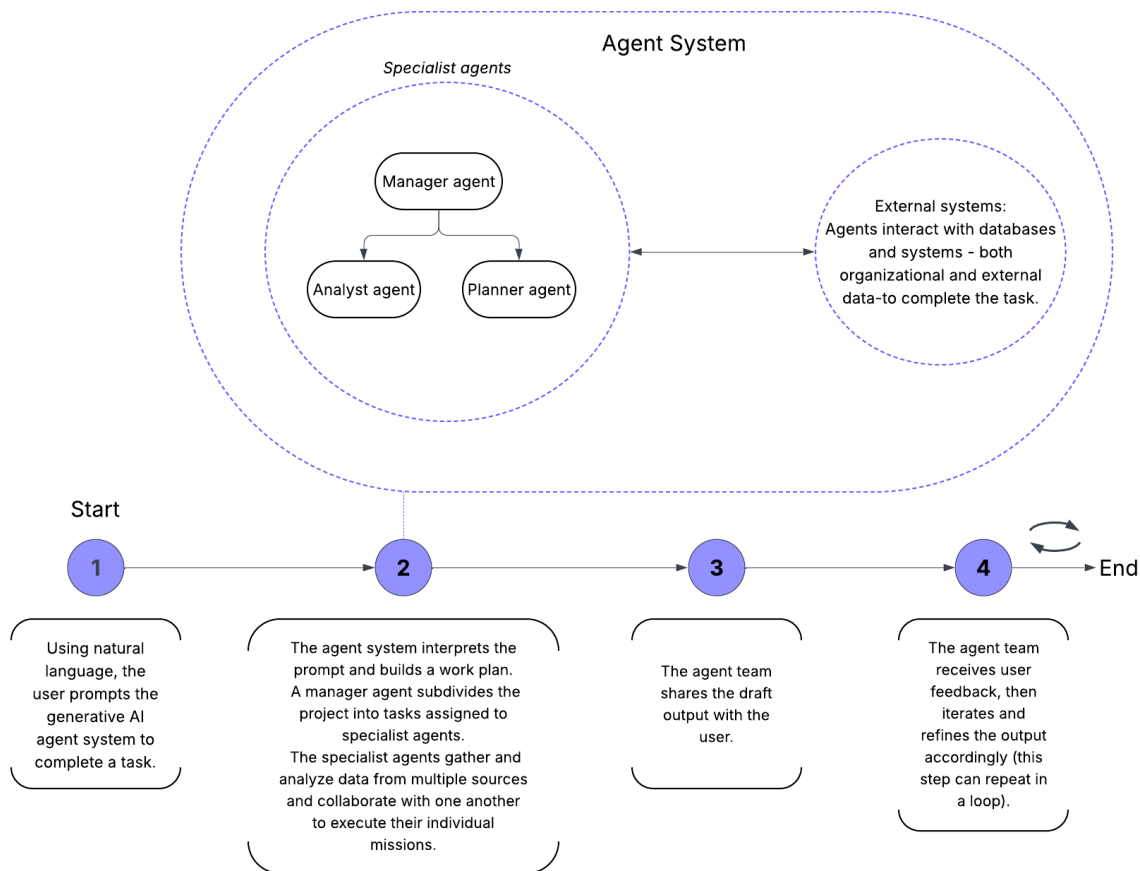


Figure 3 - Illustration of a workflow execution by an agent system from prompt to output

AI agents are capable of supporting highly complex and ambiguous use cases across a wide range of industries and business functions. They can operate using tools originally designed for humans, such as web browsers, as well as machine-oriented tools, including APIs. This dual capability

allows AI agents to function across diverse technology architectures, both within and beyond organizational boundaries, without requiring substantial changes to existing systems.¹⁶

In general, the operation of an AI agent follows four key stages (Figure 3):

1. Task initiation.

A user assigns a task to the agent system. The AI agents autonomously interpret the request, define objectives, and determine an approach for accomplishing the task.

2. Planning and execution.

The agent system plans, allocates, and carries out the work. A manager agent decomposes the overall workflow into tasks and subtasks and assigns them to specialized subagents. These subagents leverage prior experience and domain-specific knowledge, coordinate with one another, and access both internal organizational data and external sources to complete their assignments.

3. Iterative refinement.

The agent system may iteratively improve the output by requesting additional input from the user to ensure accuracy and relevance. After delivering a draft or final result, the system can also solicit user feedback for further refinement.

4. Action completion.

The agent executes any required actions to fully complete the task and deliver the intended outcome.

Any deployment of AI agents should be supported by a comprehensive set of controls. For instance, structured feedback loops enable agents to review, evaluate, and refine their own outputs. AI agents can also be designed to learn how to solve problems independently or to escalate complex or uncertain issues to a human manager. Thus, Collaboration among agents further enhances performance. A critic agent can assess and challenge a plan developed by a creator agent, request revisions, and thereby improve the overall quality of the output. In some cases, AI agents are also capable of posing direct questions to human managers when clarification is required.

¹⁶ McKinsey & Company. (2025, March 25). What is an AI agent and how will they impact the world?

In addition, organizations may develop specialized agents responsible for automatically testing, validating, and correcting the outputs of other agents, particularly with respect to ethical considerations and potential bias.

Nowadays, it is becoming evident the expansion of AI agents' capabilities, such as communication skills and complex reasoning without human intervention. AI assistants are tied to users, however agents with artificial intelligence have a certain degree of freedom. The global market value of agent-based AI in 2024 was 5.1 billion US dollars and is expected to increase to 47 billion US dollars by 2030 with a cumulative annual growth rate of 44%.¹⁷ The degree of freedom currently possessed by agents with artificial intelligence. It requires a legal and ethical framework to regulate their behavior. Both the owner/developer of agent-based AI and the corresponding software need to be monitored from a legal and ethical point of view. However, in order not to lose the advantages of agent-based AI, it is necessary to maintain a balance.

To sum up, the evolution since 2022 is best understood as a shift from prediction to generation and conversation, now progressing toward agentic workflows that plan, call tools, and coordinate tasks across channels. The tipping point was experiential as much as technical: a chat interface (ChatGPT) that made advanced capabilities legible to non-experts, followed by rapid embedding where marketers already work (CRM, productivity, and creative suites). For B2B marketing managers especially in engineering area, quality-critical sectors the practical agenda in 2025 is following:

1. Scale high-value use cases (personalized yet grounded content, proposal and specification support, sales enablement, support deflection);
2. Redesign processes (brief-to-asset, request-to-proposal, case-to-resolution) around human-AI collaboration and measurement;
3. Prepare for AI-mediated discovery (optimize to be cited in AI Overviews and syndicate structured assets);
4. Institutionalize governance, provenance, and compliance under the EU AI Act.

¹⁷ Statista. (2025). Global market value of agentic artificial intelligence (AI) 2024 with forecast for 2030.

The growth wave triggered by ChatGPT's 2022 debut has thus matured into operating reality: AI now augments how industrial firms create knowledge, communicate value, and convert demand provided it is grounded, governed, and measured.

2.4 AI Tools in Marketing: Classification and Use Cases

In 2025 marketing practice is fundamentally data-intensive: competitive intelligence, market-trend analytics, and systematically captured customer discourse constitute primary inputs to strategy and execution. The volume, velocity, and heterogeneity of these data render manual collection and synthesis impracticable. Contemporary AI systems mitigate this constraint by automating retrieval, normalization, and analysis at scale, thereby compressing cycle times for insight generation and decision support.

In this context, AI marketing tools denote software platforms that integrate large language models (LLMs) with existing marketing workflows often mediated by the Model Context Protocol (MCP) to coordinate and partially automate knowledge work across the marketing value chain. Such tools support both generative tasks (e.g., creation of copy, visuals, and analytic code) and advanced workflow automation, extending practitioners' capabilities without requiring specialist machine-learning expertise.

AI tools in marketing can be organized along three layers:

1. General-purpose foundation models that generate and interpret multimodal content;
2. Enterprise assistants that ground those models in a firm's proprietary data and workflows;
3. Customizable agents tuned for specific marketing tasks.

This layered view clarifies why apparently similar products coexist and how, in practice, they combine to support B2B research, account development, and revenue operations in industrial contexts such as the automotive sector.

Foundation models and frontline assistants

At the foundation layer sit large language and multimodal models accessed through user-facing assistants:

1. **GPT (ChatGPT)** refers to OpenAI's family of models surfaced through a conversational interface. Beyond natural-language generation, the data-analysis mode can execute code to

explore datasets, produce charts, and summarize structured files inside the chat experience.¹⁸

2. **Gemini** is Google’s natively multimodal suite with very large context windows and tight Workspace integration. Its practical advantage in B2B research is document understanding: users can upload or point to long PDFs, slides, and spreadsheets and ask targeted questions about text, tables, and figures directly within Google Drive and Docs.¹⁹
3. **Le Chat (Mistral)** packages Mistral’s open and commercial models in an enterprise-oriented chat interface. It emphasizes speed, multilingual capability, and flexible deployment options, including on-premises scenarios preferred by organizations with strict data-residency requirements.²⁰
4. **DeepSeek** is a fast-moving developer of reasoning-forward, cost-efficient models. Its positioning high capability at aggressive price points matters where the economic unit of analysis is cost per query at scale (e.g., competitive-intelligence sweeps, large-batch content variants, or analytics assistants used widely by sales and marketing).²¹
5. **Copilot (Microsoft)** denotes a family of assistants embedded across Microsoft 365. Its defining property is graph-grounding: answers and drafts are synthesized from content in SharePoint, OneDrive, Teams, and connected SaaS sources under enterprise identity, permissions, and audit. For marketing and sales, this enables brief writing, proposal scaffolding, and knowledge retrieval with inline citations to governed sources.²²
6. **Claude (Anthropic)** is positioned as a conversational assistant emphasizing safety, transparency, and constitutional AI principles. With large context windows and natural-language fluency, it is increasingly adopted for tasks requiring detailed, structured

¹⁸ OpenAI. (n.d.).

¹⁹ Google. (2024-2025). Gemini models and Workspace integrations. Mountain View, CA: Google.

²⁰ Mistral AI. (2025). Le Chat interface documentation. Paris: Mistral AI.

²¹ DeepSeek. (n.d.). Official website of DeepSeek.

²² Microsoft. (2023-2025). Microsoft 365 Copilot and graph-grounding features. Redmond, WA: Microsoft Corporation.

reasoning, such as policy-sensitive content creation and careful analysis of long documents.²³

7. **Grok (xAI)**, developed by Elon Musk's xAI, integrates with the X platform (formerly Twitter) and is designed for real-time conversational insight. For marketing professionals, its distinguishing feature is rapid access to social discourse and trend detection, offering a complementary channel for brand monitoring and engagement.²⁴
8. **Perplexity AI** is a research-oriented assistant that combines generative responses with explicit citations and links to underlying sources. It is optimized for information retrieval and synthesis across web-scale data, making it particularly valuable for marketers conducting competitor scans, market-trend analysis, and early-stage exploratory research where verifiability and up-to-date references are critical.²⁵

Meanwhile, all these assistants are not interchangeable, each one has a distinct comparative advantage. For instance, GPT is generalist and excels at reasoning and code-assisted analysis, Gemini is strong at long-document comprehension, while Copilot is differentiated by security-scoped retrieval and in-app orchestration across 365.

Enterprise Assistants and Large-scale Document Processing

A second layer weaves foundation models into daily work by grounding them in enterprise content. In practice, Gemini in Workspace and Microsoft 365 Copilot appear in email, documents, presentations, and chat, where they summarize long threads, extract requirements from RFPs, transform raw notes into sales collateral, and answer questions about internal content with inline citations. Because these tools operate inside corporate identity and permissions, they can safely read the artifacts that govern B2B commerce (PPAP packs, quality audits, test reports, regulatory guidance, and supplier manuals).

²³ Anthropic. (2024). Claude model overview and documentation.

²⁴ xAI. (2024). Grok integration with X platform. Palo Alto, CA: xAI.

²⁵ Perplexity AI. (2024–2025). Perplexity AI research assistant functionality. San Francisco, CA: Perplexity AI.

Customizable AI agents and Special GPTs

The third layer is customizable, task-specific agents that encapsulate repeatable workflows. AI agents vary in complexity, from simple coding assistants to complex networks that can automate processes that require teams of people today.²⁶ Using B2B marketing and analytics as an illustrative domain, it is possible to observe varying levels of sophistication achievable with different types of intelligent agents.

Therefore, at the most basic level, an AI assistant can support marketing analysts by generating descriptive insights or draft analyses in response to explicit user prompts, such as summarizing campaign performance or outlining key customer segments.

At a more advanced level, an intelligent agent can automatically ingest existing organizational data, including CRM records, marketing automation data, and historical campaign results, and tailor its analytical outputs accordingly. Such an agent may proactively generate updated dashboards, performance reports, or campaign recommendations without explicit prompting, for example when new data become available.

At a higher level of sophistication, AI agents can not only analyze data but also execute analytical workflows end to end. This may include cleaning and integrating data from multiple sources, running predictive or attribution models, and validating results within a controlled analytical environment.

In more advanced and future-oriented scenarios, AI agents could autonomously operationalize analytics-driven decisions by activating marketing campaigns, adjusting targeting or budget allocations, and deploying changes across digital B2B channels through automated systems, subject to human oversight and approval. In this paradigm, non-technical users could design, analyze, and execute complex B2B marketing strategies using natural language interfaces.

Meanwhile, OpenAI's custom GPTs let non-developers assemble specialized bots with instructions, uploaded knowledge, and tool access for pricing sensitivity analysis, competitor briefings, persona-specific message testing, campaign QA, or collateral localization. Because they

²⁶ Boston Consulting Group. (2025). AI agents: What they are and their business impact.

can be shared within an organization, these GPTs become institutional memory codified playbooks that scale best practices while preserving traceability to approved sources.

Analogous patterns exist across the stack. Google's Gems enable user-created "custom experts" inside Workspace; Microsoft's Copilot Studio provides a low-code environment to build firm-specific copilots grounded in business data and surfaced across Teams, web, or Microsoft 365. In all cases, governance (prompt hygiene, access scopes, logging) and data stewardship are critical so that micro-agents enhance quality rather than amplify error.

2.5 A Functional Classification of AI in Marketing

Building on this layered architecture, it is possible to classify practical applications in relation to the stages of the B2B commercial lifecycle:

1. Market intelligence and research

In this area, long-context assistants can process syndicated reports, technical standards, and scholarly papers. When combined with retrieval-augmented generation (RAG), these systems not only summarize but also link their answers directly to source passages. Code-assisted modes allow teams to quantify observable trends and render visualizations. The overall effect is a faster, more reliable synthesis of category landscapes, competitor benchmarking, and regulatory monitoring.

2. Demand generation and content operations

Foundation models are applied to generate audience-specific variants of digital assets such as landing pages, advertisements, emails, and social posts. Image and video generation tools accelerate the creative cycle, while micro-agents can check draft outputs against brand guidelines and claims policies. The practical outcome is higher content velocity combined with greater assurance of compliance.

3. Sales enablement and opportunity support

Assistants integrated with CRM platforms and product knowledge bases can prepare account briefs, generate structured responses to buyer questions, and draft initial proposals that include annexed evidence such as test data or certificates. This results in shorter response times and more consistent value communication across sales teams.

4. Pricing and value quantification

Code-assisted analysis and custom agents help construct economic-value-to-customer (EVC) models, run sensitivity simulations, and build total cost of ownership (TCO) comparisons against competitors. These outputs provide sales professionals with a clearer rationale for premium pricing and a structured basis for negotiation.

5. Service, success, and installed-base growth

Conversational agents support post-sale engagement by suggesting troubleshooting steps, converting service logs into reusable knowledge articles, and escalating complex issues to human experts with full context preserved. The benefits are faster resolution times and a closed feedback loop that informs both marketing and product development.

2.6 Application and Use Cases of AI in Marketing

The growing trend of AI, and particularly generative AI, has potential for impact in three areas of marketing and sales: customer experience (CX), growth, and productivity.

For instance, in customer experience, hyper-personalized content and offerings can be based on individual customer behaviour, persona, and purchase history. Growth can be accelerated by leveraging AI to jumpstart top-line performance, giving sales teams the right analytics and customer insights to capture demand. Additionally, AI boosts sales effectiveness and performance by offloading and automating many mundane sales activities, freeing up capacity to spend more time with customers and prospective customers (while reducing cost to serve).²⁷

Considering the materials of implementation of artificial intelligence, it becomes possible to emphasize the advantages of using AI in marketing:

1. **Speeding up decision-making.** AI analyzes audience data and moods faster than a human. This allows marketing teams to adjust tactics in real time based on accurate forecasts rather than guesswork.
2. **ROI algorithms** optimize the selection of advertising channels and placements based on customer behavior. As a result, the budget is spent more efficiently, ensuring maximum return from each campaign.

²⁷ McKinsey & Company. (2023). AI-powered marketing and sales reach new heights with generative AI.

3. **Accurate measurement of KPIs** AI-based marketing tools help structure huge data streams. This allows you to clearly link the success of a campaign to specific actions and understand which techniques work and which require improvement.
4. **Effective Customer Relationship Management (CRM)** AI takes over the routine: automates data processing, personalizes newsletters, and identifies customers who may leave. This minimizes the risk of human error and increases loyalty.
5. **Deep analytics** and forecasting Using machine learning, AI finds hidden patterns in large amounts of data in seconds. Predictive analytics helps predict customer behavior in advance and offer them the most relevant content.

In order to demonstrate the rising trend of AI integration within different business spheres, it is possible to explore two use cases in Europe.

1. **Schneider Electric**

Schneider Electric has documented the integration of Azure OpenAI capabilities into its documentation, training, and marketing environments. These generative assistants are embedded within enterprise content systems, enabling employees to query complex technical manuals, compliance documents, and marketing resources in natural language. By doing so, they streamline knowledge retrieval across engineering, marketing, and service functions. The implementation has reduced time spent on information search, improved consistency of technical messaging across customer-facing materials, and enhanced cross-departmental collaboration. For marketers in particular, copilots have accelerated the production of solution briefs, reference architectures, and value communication tailored to industrial buyers, while simultaneously ensuring alignment with compliance and safety standards.²⁸

2. **Siemens**

Siemens has publicly reported a systematic program to identify, evaluate, and deploy generative AI use cases across its global manufacturing and industrial divisions. The company catalogued approximately 300 distinct applications, ranging from design automation and supply-chain forecasting to marketing support and service knowledge management. Of these, dozens have

²⁸ Schneider Electric. (2024). Integration of Azure OpenAI into EcoStruxure Resource Advisor. Rueil-Malmaison: Schneider Electric Press Release.

advanced beyond proof-of-concept into scaled deployment, demonstrating tangible value in both efficiency and revenue. In marketing and customer-facing contexts, Siemens has used generative AI to support bid preparation, technical proposal drafting, and multilingual content localization for diverse regional markets. The portfolio approach underscores a key lesson: rather than relying on a single transformative application, sustainable impact arises from a pipeline of incremental, well-scoped projects that collectively reshape how industrial enterprises communicate value and engage with customers.²⁹



Figure 4 - The illustration from the presentation of AI in automation in Siemens

2.7 AI in B2B Contexts: Challenges and Opportunities

B2B environments magnify both the potential and the risks of artificial intelligence. Protracted buying cycles, multi-stakeholder decision processes, and stringent technical and regulatory requirements mean that performance depends not merely on model capability but on data integrity, governance, and integration with existing routines.

Challenges

1 Data fragmentation and weak entity resolution

²⁹ Siemens. (2024–2025). Generative AI portfolio use cases in manufacturing and marketing. Munich: Siemens AG.

Commercial, technical, and service data are typically distributed across CRM, ERP, PLM, QMS, and ticketing systems. Identifiers for accounts, platforms, plants, and parts are inconsistent or evolve over time. Absent robust metadata and entity-resolution practices, assistants may retrieve the wrong revision, specification, or customer-specific requirement, undermining user trust and exposing firms to error.³⁰

2 Factuality, claims integrity, and auditability

Generative systems may produce fluent but incorrect outputs. In industrial contexts, misstatements about performance, safety, or certification have legal and reputational consequences. Accordingly, grounded retrieval from governed repositories, content-safety screening, prompt/output logging, and human-in-the-loop review are not optional but constitutive of acceptable use.

3 Security, confidentiality, and intellectual property

Engineering drawings, test results, and customer standards must not cross tenancy boundaries. Enterprise deployment therefore requires least-privilege access, tenant-scoped retrieval indices, and protection against prompt-injection and data-exfiltration attacks. Clear scoping by account, program, or plant materially reduces inadvertent disclosure.

4 Regulatory and contractual governance

European operations, in particular, face transparency and oversight requirements for certain AI uses. Even when marketing applications are not classed as high-risk, organizations must document model selection, data provenance, and user disclosure when customers interact with AI systems; customer and supplier contracts increasingly require audit logs and incident-response procedures.

5 Economics and systems integration

Token pricing, context-window limits, and orchestration overheads create a novel cost structure. Value materializes when assistants are embedded in daily work surfaces (email, documents,

³⁰ McKinsey & Company. (2024–2025). The State of AI. Global survey reports on AI adoption in marketing and sales. New York: McKinsey & Company.

CRM/PLM viewers) and when their contribution is evaluated against business outcomes, not usage counts.

6 Computational complexity

Building AI agents from scratch is both time-consuming and can also be computationally expensive. The resources required for training a high-performance agent can be extensive. In addition, depending on the complexity of the task, agents can take several days to complete tasks.³¹

Opportunities

1 Scalable analysis of large, heterogeneous document collections

Long-context, code-assisted, and retrieval-augmented workflows now make it feasible to interrogate extensive, multi-file collections standards, homologation dossiers, test reports, and market studies and to return structured extracts, comparisons, and visualizations in minutes rather than days. Practically, this has reduced the search and synthesis burden that previously constrained industrial marketing research.

2 Buying-group intelligence

By unifying signals at the account level (communications, web interactions, and service data), assistants can surface role-specific concerns, estimate opportunity risk, and recommend the next piece of evidence required to advance a buying group from requirements definition to supplier selection. Recent surveys position marketing and sales among the leading adopters of such use cases.

3 Proposal acceleration and specification compliance

AI systems can compare RFP (Request for Proposal) clauses with standard terms, extract mandatory requirements, and assemble first-draft responses with annexed certificates and audit summaries. In industrial settings, copilots pre-populate technical sections (hardness ranges,

³¹ Joon Sung Park, Joseph O'Brien, Carrie Jun Cai, Meredith Ringel Morris, Percy Liang and Michael S. Bernstein, "Generative agents: Interactive simulacra of human behavior," Proceedings of the 36th annual ACM symposium on user interface software and technology, pp. 1–22, 2023

surface treatments, NVH targets) and flag gaps for engineering review, compressing time-to-submission without compromising rigor. For example, Schneider Electric reports copilots embedded in documentation and marketing workflows to accelerate solution briefs and proposal content while maintaining alignment with compliance materials.

4 Value quantification and pricing support

Code-assisted environments enable the construction of economic-value-to-customer (EVC) and total-cost-of-ownership (TCO) models grounded in field performance, warranty data, and process telemetry. Marketing and sales teams translate these models into transparent negotiation exhibits and price corridors suitable for complex B2B negotiations.³²

5 Governed creative and content operations

Multimodal models accelerate asset production across languages and regions, while micro-agents enforce brand and claims rules at the point of creation and preserve provenance for downstream reuse. For instance, global brand programs demonstrate creative acceleration under explicit guardrails; enterprise suites increasingly support provenance credentials to maintain a supply chain.

6 Quality of responses

AI agents provide responses that are more comprehensive, accurate and personalized to the user than traditional AI models. This adaptability is important to us as users because higher-quality responses typically yield a better customer experience. As previously described, this capability is made possible through exchanging information with other agents, through tools and updating their memory stream. These behaviours emerge on their own and are not preprogrammed.³³

To sum up, in B2B contexts, AI delivers durable value when use cases are tightly scoped, grounded on authenticated sources, embedded in existing processes, and evaluated on opportunity-level outcomes. For suppliers in the industrial sector, this translates into faster and better-evidenced

³² Forrester Research. (2023–2025). Account-Based Marketing, Pricing, and Value Quantification in B2B Marketing. Cambridge, MA: Forrester.

³³ IBM. (2025).

proposals, more precise value quantification, and a continuous learning loop from the installed base that strengthens both product and message.

Chapter 3: Company Profile and Industry Context

3.1 Overview of hGears Group

The area of the study is directly connected and provided by the company hGears Group. Given company is one of the world's leading manufacturers of precision turned parts, drive components, gear kits and complex systems solutions with production plants in Germany, Italy and China.

hGears Group traces its origins to Herzog, founded in 1958 in Schramberg, Germany. Over the decades it expanded both in capability and geography, thus a facility was established in Padova, Italy in 1976, with a headcount of 275 people, combining steel-machining and powder-metal technologies, distinguishing itself through strict control of gear geometry, material quality, and every stage of production. In 2003 hGears added a location in Suzhou, China, thereby strengthening its global reach and developing new opportunities in Asian region. Eventually, hGears Group has been founded in 2015, when Herzog GmbH and mG miniGears SpA joined their forces to create a leading European provider in the drives technology area for small- to medium-sized gears and components.³⁴

As a specialist in high-precision gears, shafts, and geared sub-assemblies for motion and e-drive applications, the company integrates conventional machining and powder-metallurgy under one roof, positioning itself to support global OEM programs from concept to series production.

Its portfolio includes different types of gears, gear sets and shafts, with co-engineering that includes kinematic design, simulation, and prototyping. The dual-technology base machined steel and sintered powder metal enables cost-performance trade-offs and rapid iteration.

hGears organizes its business around three adjacent end markets. In e-Bike, it supplies function-critical drive components for electric bicycles and micromobility, addressing weight, efficiency, and acoustic performance. Subsequently, in 2022 the share of the revenue of e-Bike sector reached significant 38%. In e-Mobility, it delivers transmission components and sub-systems for EV, hybrid, and combustion platforms subject to stringent reliability and NVH requirements. In e-Tools (power tools, outdoor products, and selected industrial uses), strong competence in spiral

³⁴ hGears AG. (n.d.). Official website of hGears. 2025

bevel gears along with the unique ability to combine the sintering and the steel machining technology within the same applications.

The operating model ties these markets together: early co-development with customers, a quality-by-design approach across the lifecycle, and a manufacturing footprint capable of localized, scalable supply. The result is a coherent strategy centered on electrified motion and compact, high-performance transmissions, with e-Mobility as the growth engine and e-Bike/e-Tools as complementary pillars.

3.2 Role in the Global Gear Sector

The global gear sector powers motion and energy transfer in automotive, industrial automation, energy, aerospace, and micromobility functioning not as one market but as a group of adjoining segments that grow at different speeds.

Thereby, according to the report and global forecast to 2030, automotive gears are expected to grow from USD 42.7 billion in 2024 to USD 50.8 billion by 2030, reflecting a mature base tempered by propulsion shifts and efficiency mandates. By contrast, niche high-precision segments tied to robotics and machine tools are expanding faster: the precision gearbox market is estimated at USD 2.97 billion in 2023 with a projected 9.9% rise, illustrating methodological variance but a consistent acceleration in automation-led demand.

Meanwhile, the gearbox and gear motors market is expected to grow from USD 20.1 billion in 2025 to USD 31.5 billion by 2035, demonstrating a 4.6% rise and creating an absolute dollar opportunity of USD 11.4 billion. This growth is driven by rising demand across industrial automation, automotive, renewable energy, and material handling sectors, where gear systems are essential for power transmission.³⁵

North America and Europe are the dominant regions in the global gear market, owing to the presence of established manufacturing industries and a large customer base. However, the Asia Pacific region is expected to witness significant growth in the coming years, driven by increasing industrialization and urbanization.³⁶ Production and demand are concentrated in China, Germany,

³⁵ Future Market Insights. (2025, September 15). Gearbox and gear motors market: Global market analysis report 2025–2035.

³⁶ DataInsightsMarket. (n.d.). Global gear market: Insightful analysis, trends, competitor dynamics, and opportunities 2025–2033.

Japan, Italy, and the United States, each anchored by distinct industrial ecosystems. China dominates wind hardware and has become the centre of gravity for new turbine capacity. Germany and Italy host dense clusters of industrial gearbox and drive-technology suppliers; Japan leads in precision reducers and automotive transmissions; and the U.S. remains a key base for driveline and gear-machinery firms.

hGears' global role is supported by a three-continent manufacturing footprint – Schramberg (Germany), Padova (Italy), Suzhou (China) – used to serve localized programs and scale series production. These production plants, with total working area of 55,000 square meters, are located in three regions with a developed gear and gearboxes markets, what allows the company to steadily grow in sales and production volumes. A distinctive contribution to the sector is hGears' integration of two manufacturing routes – conventional machining and powder metallurgy within one group. This dual-technology model lets customers trade off geometry, cost, and performance while keeping tight tolerances through downstream heat treatment and machining. The company also highlights the ability to press and sinter blanks and then finish-machine them in-house, accelerating prototypes when molds are not yet available – an important lever in compressed e-drive development cycles.

As it was written above, market exposure of the company is organized into three domains aligned with electrified motion: e-Bike, e-Mobility (automotive and powersport), and e-Tools. Within the sector's structure, this profile places hGears among focused integrators that bridge material science, process capability, and application-level performance across electrified niches. Thereby, global market share in e-bike sector amounts to 20%, which makes hGears one of the key players in the industry. In addition, while global market share in automotive and power tools sectors account for 4 and 5 percent, respectively, the share in outdoor products (gardening) branch is significant 33%.

Strategically, the company competes as a development partner rather than a pure build-to-print supplier. It emphasizes co-design, simulation, and industrialization under a highly automated manufacturing regime that aligns with premium automotive and performance-critical applications where total system behaviour (noise, vibration, weight) is as decisive as unit cost.

In Europe, the company's automotive market page explicitly lists Ferrari that choose hGears for high-precision components consistent with the Purosangue's sophisticated driveline layout that

exemplifies the tolerances and NVH targets typical of hGears' work. In electric drivetrains, Schaeffler supplies the Audi e-tron with single-speed transmission units and autonomous vehicle transmission for ZooX, American manufacturer of autonomous vehicles, illustrating the type of programs where hGears' precision gears and shafts are applicable as co-developed content within Tier-1 systems.

In China, hGears' footprint positions it for power-tool and outdoor-equipment gearboxes. Sector exemplars include Stihl (with major production sites in Qingdao/Huizhou) and Black & Decker which illustrate the scale and localization of customers that use precision gears and reducers for brush cutters, angle grinders, and drills.

Besides that, as of 25 May 2021, hGears is a listed company in the regulated market of the Frankfurt Stock Exchange.

3.3 Digital Transformation Strategy

Nowadays the entire technological corporate world navigates by the pillars of industry 4.0. This concept was introduced in Germany in 2011 referring to use of technologies with the aim of integrating physical objects, human actors, intelligent machines, production lines and processes across organizational boundaries, with the aim of realizing a system in which all the processes are integrated, and information is shared in real-time.³⁷ The idea was that a product could in an autonomous way move and follow the production processes within the company without human intervention. Thereby, industry 4.0 defines the different technologies that are used, while digital transformation is not only about digital technology but is about using digital technologies to achieve certain goals and certain business outcomes. Digital transformation has been defined as the use of new digital technologies to enable major business improvements, to augment customer experience, streamline operations, or create new business models.³⁸

Digital transformation project is related to 4 main areas: transforming products and business model, optimizing operations, engaging with customers and empowering the employees. Main instruments of contribution of digitalization in manufacturing and industrial processes are

³⁷ Hozdić, E. (2015). Smart factory for industry 4.0: A review. *Journal of Modern Manufacturing Systems and Technology*, 7(1), 28–35.

³⁸ Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349.

automation, data exchange, cyber-physical systems, Internet of Things (IoT) and Artificial Intelligence.

Despite of positive rising global trend of digitalization and modernization of production, a lot of companies face with some certain obstacles and barriers with the implementation and integration of new technologies. A successful digital transformation project can lead two benefits from an economic point of view and financial point of view. The problem is that it is difficult to carry out a successful strategy. According to the report of “McKinsey & Company”, the success rate for efforts of digitalization is consistently low: less than 30 percent succeed. In 2018 results demonstrated that only 16 percent of the companies declared their organizations’ digital transformations have successfully improved performance and equipped them to sustain changes in the long term.

In addition, success rates also vary by company size. Thus, at organizations with fewer than 100 employees, respondents are 2.7 times more likely to report a successful digital transformation than are those from organizations with more than 50,000 employees.

However, the significant gap between the failure and success ratios reflects a lack of common understanding about what really the digital transformation means. It is fundamental to adopt a digital transformation strategy for digitalizing their existing business ecosystem for competing in the increasingly innovative and disruptive world.

As a major manufacturer, hGears implements on all production plants different modern technologies, contributing to development of industry 4.0 and industry 5.0. hGears’ digital transformation strategy is designed to consolidate its dual manufacturing platform precision machining and powder metallurgy into a coherent, data-driven production system that supports co-engineering with customers from concept through series manufacturing.

Thus, in 2020 during Schaeffler’s first Digital Supplier Day titled “Partners for Performance”, more than 1,000 suppliers from around the world participated in the virtual event. During the ceremony, Schaeffler Group’s top management recognized outstanding partners across six distinct categories, where hGears Padova received the award for excellence in the “Transformation” category. This recognition highlights the plant’s ongoing commitment to enhancing manufacturing

processes including material flow, shop floor layout, automation, machine data integration, and digitalization guided by the principles of Lean Manufacturing.³⁹

In addition to lean digitalization, the company organized a training program focused on Lean Thinking. In the first phase, over 150 employees from various departments learned the fundamentals of Lean principles. The second phase involved a smaller group who participated in advanced sessions on Lean management and applied these concepts in a simulated manufacturing environment at the Considi Digital Gear Factory lab, replicating a 12-24-month transformation process. The final phase used the Ohno Circle technique, which helps identify waste and inefficiencies in production as a foundation for future improvement initiatives.⁴⁰

Besides that, at one of the assembly transmissions stations is implemented a monitor control system to improve the operational processes. A real time monitoring system leads to a 10% reduction of stop time and cycle time loss. The system makes available to team leaders and operators an electronic Andon (dashboard) to allow a real time process monitoring. Whenever a non-standard condition occurred to a machine, team leaders/operators are warned by the red smile on the dashboard with its specific description, which identifies the specific non-standard condition, for instance, scraps, high and cycle time. Meanwhile, all data from the production is transported to the database then is visualized in a specialized program “Qlik Sense”, where the inner functions allow to calculate varied crucial metrics such as Overall Equipment Effectiveness, KPIs and a range of maintenance-management measures.

³⁹ hGears AG. (2025, July 10). hGears awarded by Schaeffler Group.

⁴⁰ hGears AG. (2025, March 15). Lean training programme at our Padova plant.



Figure 5 - The assembling station of transmissions with enabled monitor production system



Figure 6 - The screen of the monitoring system with established cycle time and number of units to be assembled during the working day

Moreover, the production of high-precision gears at hGears integrates advanced robotic automation, prominently featuring ABB robotic arms, which play a crucial role in several stages of the manufacturing process, including assembly, gear toothing, and broaching. These industrial robots are designed to provide high accuracy, repeatability, and efficiency, ensuring that the complex geometries of gears meet stringent quality standards.

During the assembly phase, ABB robotic arms handle the precise alignment and fitting of gear components, reducing human error and minimizing the risk of mechanical inconsistencies. Their advanced motion control systems allow for synchronized operations, which are critical when assembling components with tight tolerances.

In the gear toothing process, which involves cutting or shaping the teeth of gears, the robotic systems operate in conjunction with specialized machining tools. The robots ensure consistent feed rates and positioning, optimizing material removal and maintaining uniform tooth profiles across large production batches. This automation enhances productivity while preserving the geometric integrity of the gears.

For the broaching stage, where gears are finished through broaching to achieve precise internal and external profiles, ABB robotic arms manage tool handling and part positioning with extreme precision.

Overall, the implementation of ABB robotic arms at hGears exemplifies the convergence of robotics and advanced gear manufacturing. The utilization of them enhances operational efficiency and consistency and supports high standards of product quality, enabling the company to meet the demanding requirements of modern industrial applications.

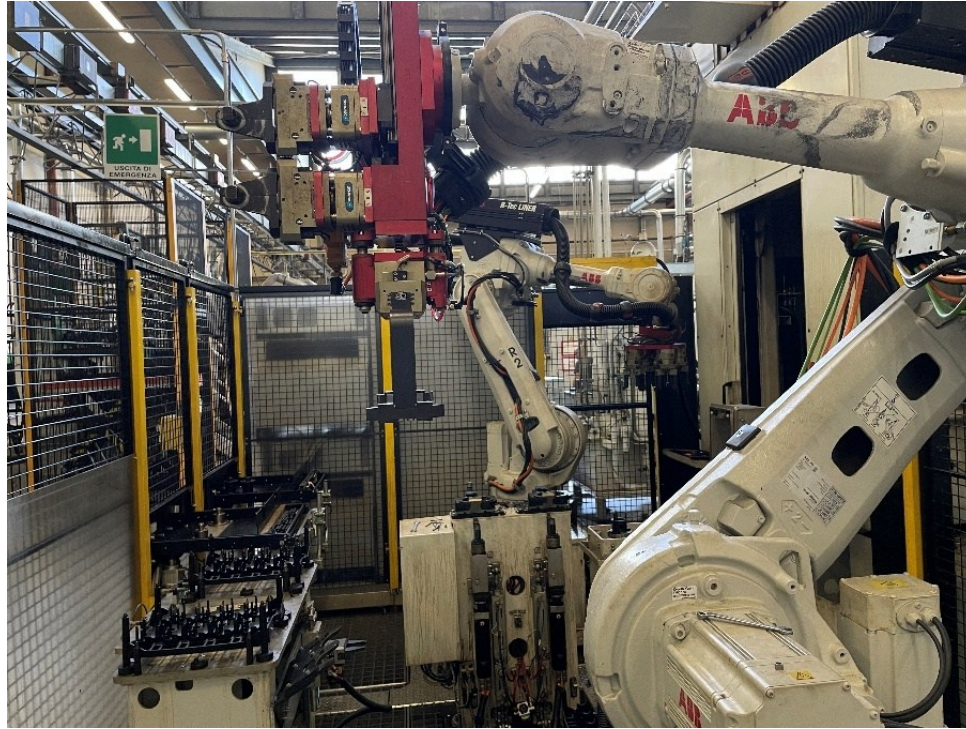


Figure 7 - The ABB articulated arm located in a stage of broaching process

3.4 B2B Marketing Strategy

Amid persistent macroeconomic uncertainty, the B2B marketplace is undergoing substantive structural change. Accelerated adoption of digital technologies is reshaping firms' go-to-market approaches, prompting sustained investment and experimentation in the design and presentation of offerings. Simultaneously, organizational buyers exhibit purchasing behaviours that increasingly resemble those of consumers, characterized by higher expectations for seamless, information-rich, and personalized interactions across channels; when these expectations are not met, switching propensity rises correspondingly.

Contemporary evidence shows that B2B buyers expect omnichannel options – self-serve digital, remote, and in-person available “everywhere, at any time”; firms that meet this expectation outperform on growth and share of wallet.⁴¹ In parallel, Gartner characterizes the buying journey as non-linear and parallel (marketing and sales operate simultaneously rather than in a serial hand-

⁴¹ McKinsey & Company. (2024). Five fundamental truths: How B2B winners keep growing.

off), which raises the bar for content quality, decision tools (e.g., calculators, configurators), and data continuity across the funnel.

For industrial categories such as gears and transmissions marketing plays a crucial role in the innovation process. Companies use marketing tools to understand the evolving market landscape and emerging trends. Simultaneously, they need to invest in R&D (Research and Development) capabilities and HR competence to be able to stay competitive. Regarding hGears, the R&D teams are constantly pursuing innovation in materials and production processes, performing functional tests to evaluate strength and efficiency of sintered as well as machined gears and components. Engineering team works in close connection with the customers to develop the right components specifically designed for the required application and to develop the most cost-effective manufacturing solutions. The company manages the product development through all its process steps. From concept to design, from manufacturing of prototypes to serial production, the aim is to support the customers in building their success.

hGears' business strategy centres on disciplined diversification, targeted expansion, and sustainable growth. First, the company seeks to preserve a diversified market positioning, maintaining a balanced portfolio. Second, hGears aims to capture emerging segments and applications, prioritizing domains where electrification, automation, and compact-drive requirements raise the bar for precision, NVH performance, and durability. Third, the strategy emphasizes pursuing sustainable growth by leveraging core structural advantages:

1. long-term customer relationships built on co-development and lifecycle support;
2. distinctive and complementary technical competencies in powder metallurgy (PM) and conventional machining (CM) within a single industrial group, enabling cost-performance trade-offs and accelerated industrialization;
3. global reach, which allows localization of supply and consistent quality standards across plants.

In conclusion, these pillars form an integrated approach that balances risk, captures innovation-led demand, and compounds customer value over time.

hGears structures its marketing strategy around the classical 4Ps framework Product, Price, Place, Promotion to align a capital-intensive, co-engineered manufacturing model with OEM requirements in mobility, power tools, and adjacent industrial markets.

Product

The offering based on precision components manufactured to customer drawings and specifications, reinforced by co-design capabilities that integrate supplier expertise early in development. Operations are configured for medium-to-high-volume series production across machining and powder metallurgy, supported by rigorous heat treatment and metrology. Long-term supply agreements are the prevailing commercial backbone, enabling stable utilization and continuous improvement over the program lifecycle.

Price

Pricing combines activity-based cost calculation (rooted in process steps and cycle times) with strategic levers. Penetration pricing is deployed selectively to enter new segments or win high-potential customers, trading initial margin for lifetime value. Segment-specific pricing differentiates by application requirements and production volumes to maximize return on invested capital while preserving cost transparency.

Place

Distribution follows a direct model from hGears' plants to customers' facilities, reducing intermediation for engineered parts and improving coordination on schedules and quality. The footprint is regionally optimized: low-cost manufacturing that serves global demand, complemented by "local-for-local" capacity shifts (e.g., toward Eastern Europe for EU programs or Mexico for North American programs) to shorten lead times, mitigate logistics risk, and meet localization requirements.

Promotion

Communications are governed as a closed loop that links business objectives to measurable outcomes. Target audiences (engineering, sourcing, and operations stakeholders) receive evidence-based content technical data, standards alignment, and lifecycle value cases delivered through coordinated, account-based programs and events. Activities are instrumented with clear

goals and reviewed against pipeline, win-rate, and cost-to-serve metrics, ensuring promotional effort supports complex, multi-stakeholder B2B buying processes.

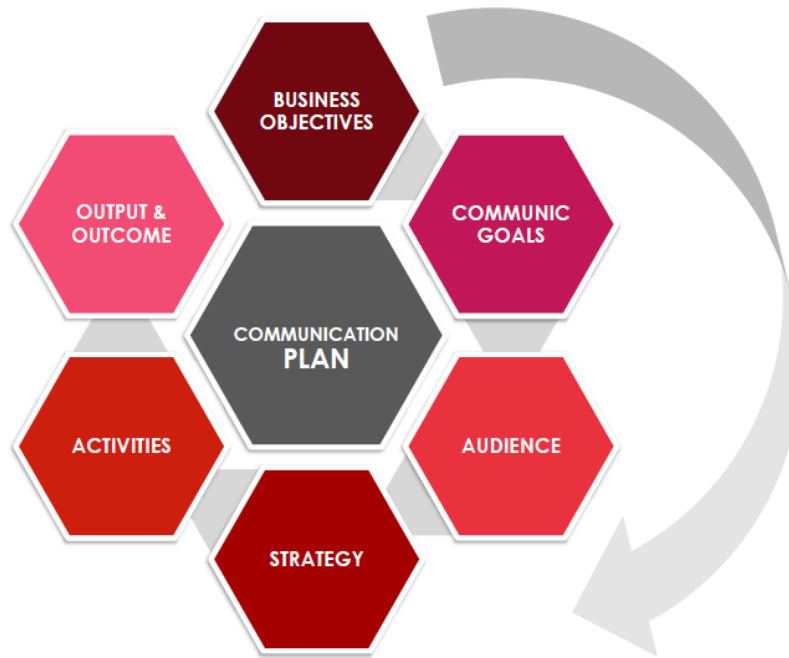


Figure 8 - Marketing promotion model developed by hGears

In addition, environmental, social, and governance (ESG) considerations are reshaping B2B communication and must be integrated into marketing strategy as core business practice rather than peripheral messaging. For an industrial supplier such as hGears, credible ESG positioning begins with operations energy and materials efficiency, worker safety, responsible sourcing, and transparent governance and extends to how these practices are evidenced to customers through data, certifications, and lifecycle metrics (e.g., energy per part, scrap rates, and audited supply chains). Embedding ESG in the value proposition strengthens differentiation with OEMs that increasingly screen suppliers for sustainability performance alongside cost, quality, and delivery.

Innovation is the lever that converts ESG ambitions into measurable outcomes. In electrified and efficiency-critical domains (e.g., e-mobility), product and process innovation advanced materials, low-energy heat treatment, closed-loop coolant systems, human-robot collaboration for safer work links directly to reduced environmental footprint and improved social outcomes. Communicating this innovation requires a technical register: quantified improvements, third-party standards, and case evidence that connect ESG to performance (NVH, durability, total cost of ownership).

Trust depends on clarity and transparency. B2B audiences respond to consistent disclosures, traceable data, and alignment between claims and practice. Effective communication therefore prioritizes plain, verifiable statements, avoids greenwashing, and aligns messages across channels (customer reviews, audits, supplier portals, and reports). For hGears, sustained, evidence-based ESG communication deepens long-term partnerships, reduces procurement friction, and supports durable growth in markets where responsible manufacturing is rapidly becoming a qualification threshold.

In conclusion, hGears' B2B marketing approach aligns a co-engineering production model with the decision structures of industrial buyers. With the ongoing digitization there is a potential to shorten development cycles, improve targeting and personalization in account-based programs, and increase proposal quality and speed. Taken together, these measures position hGears to compete on verifiable performance and reliability while reducing commercial and operational risk.

Chapter 4. Findings from Internship

4.1 Data Collection Methods

The objective of data collection can be divided on two main steps: first, to examine the use-cases and to understand how hGears Group implements AI-driven marketing strategies; second, to map the organizational conditions that enable or disturb such adoption, including data readiness, governance, skills, and integration with sales to assess their effectiveness, and identify challenges and opportunities for growth and innovation in the B2B marketing.

The data collection process for this research was designed to gather both qualitative and quantitative evidence to explore how artificial intelligence marketing tools are applied within a B2B industrial context, with a specific focus on the gear manufacturing sector. The combination of primary and secondary data sources permitted for a comprehensive understanding of marketing strategies, their implementation challenges, and their impact on business growth and innovation. Thus, while primary data were obtained through direct engagement with company's employees, observation of marketing processes, secondary data were gathered from academic literature, industry reports, and publicly available company information to contextualize and validate the findings from the field.

Primary data were obtained during the internship period at hGears Group through a combination of qualitative and observational approaches. The aim was to gather first-hand insights into which digital instruments are involved in the marketing processes and which operations business process consists of.

In order to receive data about the digital tools and business operation a series of semi-structured interviews were conducted with key personnel from the sales, information technology and advanced engineering departments. Each interview lasted approximately 40-60 minutes and focused on themes including AI adoption, marketing automation, customer segmentation, and performance evaluation. The participants were chosen according to their responsibilities and the extent to which they are involved in marketing and gathering data processing.

In addition to interviews, personal experience obtained throughout the internship allowed to observe real-time interactions between departments, the use of AI-based dashboards, and the integration of digital marketing analytics into strategic decision-making. Observation notes were

systematically documented to capture behavioural insights, workflow patterns, and internal communication related to AI initiatives.

Besides, internal documents and data reports were reviewed to supplement interview and observation findings. These included anonymized marketing performance summaries, objectives and reports. All primary data were treated as confidential and stored securely according to the company's data protection policies.

Secondary data were gathered to provide theoretical and contextual grounding for the primary findings. This included a systematic review of academic literature, industry analyses, and company-related publications relevant to AI marketing and digital transformation in B2B industries in order to understand hGears' strategic positioning within the target manufacturing sector and its commitment to innovation.

Academic sources were collected from reputable databases such as Science Direct, IEEE Xplore, and Google Scholar, focusing on topics including artificial intelligence in marketing, industrial digitalization, and innovation in manufacturing. In addition, industry reports from consulting firms such as McKinsey & Company were examined to identify global trends and benchmark hGears' practices against broader market developments. In conclusion, these secondary data sources enriched the interpretation of primary data and supported the triangulation of findings.

4.1.1 Interviews with Gear Industry Professionals

As part of the empirical research conducted during the internship at hGears Group, a series of qualitative interviews were carried out with key professionals occupying strategic and operational roles within the organization. The objective of these interviews was to gain a detailed understanding of both the company's internal practices and the broader dynamics of the gear manufacturing industry, particularly in relation to digital transformation and the adoption of artificial intelligence in marketing and business processes.

Interviews were conducted with three senior professionals representing distinct yet interrelated areas of the business: the Project Manager, the Chief Technology Officer (CTO), and the Sales Director. Each participant was selected based on their direct involvement in overseeing production efficiency, technological integration, and client relationship management – areas that are significantly influenced by digital innovation and AI-driven systems. The discussions were semi-

structured, allowing flexibility to explore participants' professional experiences, strategic priorities, and perceptions of technological change while maintaining a consistent focus on the research objectives.

The interview questions covered a wide range of topics, including the current state of the gear manufacturing industry, the company's business operations and competitive positioning, the role of Enterprise Resource Planning (ERP) systems in coordinating production and sales activities, and the organization's digital transformation journey. Participants were also asked to reflect on how emerging technologies such as predictive analytics, automation, and AI-based marketing tools are shaping B2B interactions and operational efficiency in the sector.

All interviews were conducted in a professional setting, either in person or online, and were recorded with the participants' consent to ensure accuracy in transcription and analysis. The insights obtained from these discussions provided valuable qualitative data that complemented the observational and documentary evidence gathered during the internship, offering a multidimensional perspective on how hGears is navigating the intersection of traditional manufacturing and digital innovation.

During the interview with the project manager were obtained useful insights and data regarding the ERP systems, digital transformation and the list of digital tools that are utilized both in management and production areas. The Chief Technology Officer contributed technical perspectives on the company's digital infrastructure and the implementation of AI-based tools. Additionally, the Sales Director offered a marketing-facing viewpoint, emphasizing how digital transformation and data-driven marketing strategies influence B2B relationships and business development.

Each interview lasted between 40-60 minutes and was conducted in a semi-structured format. The discussions took place both in person at the company's headquarters and online via Microsoft Teams, depending on participants' schedules. A set of guiding questions was prepared in advance to ensure thematic consistency, while allowing flexibility for follow-up questions that emerged during the conversation.

In conclusion, the interviews revealed a shared recognition among all three professionals that the gear manufacturing industry is undergoing a gradual yet significant digital transformation.

Participants highlighted the increasing reliance on ERP systems for integrating production and marketing data, while also noting challenges in aligning traditional B2B sales approaches with emerging AI marketing practices. The insights gathered through these interviews underscored the strategic importance of AI-driven tools in enhancing operational efficiency and marketing intelligence within B2B area. They also revealed that while digital transformation is advancing steadily, human expertise and interdepartmental collaboration remain essential for achieving meaningful innovation. These findings serve as evidence of the possibility of integration and upgrade marketing strategy based on AI tools, and informed the subsequent analysis presented in the following sections of this and the next chapter.

4.1.2 Research of Case Studies

In addition to the interviews conducted with key industry professionals, the case study part of this research focused on hGears Group as a representative example of digital transformation in the global gear manufacturing industry. The company provided an excellent opportunity to examine how advanced technologies such as AI-based analytics, automation, and enterprise software are being gradually integrated into operational and marketing processes.

During the internship period, several micro-cases were observed and documented, each illustrating a different stage in the company's digital transformation journey. These cases provided practical insights into how digital systems, specifically SAP, NetPro, and Qlik Sense, function as the backbone of data management, operational coordination, and strategic marketing intelligence.

A particularly instructive experience occurred when the Project Manager conducted a detailed demonstration of the company's integrated Enterprise Resource Planning (ERP) system. This session offered an inside view of how hGears manages data across multiple operational domains and how digital platforms are interconnected to support decision-making at both technical and managerial levels.

SAP ERP System and Predictive Intelligence

The SAP ERP platform serves as the backbone of hGears' operational and administrative processes. Beyond its traditional role in managing procurement, production, and logistics, SAP now integrates AI-enhanced modules that automate data analysis and generate predictive insights. For example, the Project Manager demonstrated how SAP uses machine learning algorithms to

forecast production needs, optimize inventory levels, and identify procurement trends based on historical data patterns.

These AI functions permit managers to predict supply chain fluctuations and optimize the production schedules with sales forecasts, effectively bridging the gap between operational efficiency and market responsiveness. The predictive analytics capabilities embedded in SAP contribute indirectly to marketing intelligence enabling data-driven customer engagement, better demand forecasting, and improved delivery reliability, all of which strengthen B2B relationships.

NetPro and Intelligent Workflow Management

The second system that was observed, NetPro, functions as a digital platform for managing projects, technical documentation, and interdepartmental collaboration, contributing the Lean manufacturing principles. While primarily designed for data synchronization, the platform also includes emerging AI-based process optimization features. For example, the system can automatically detect inconsistencies in project timelines or resource allocations by comparing live data inputs with predefined workflow models. The Project Manager explained how NetPro ensures the information exchange between engineering, production, and sales teams.

Thus, AI-driven alerts and recommendations enhance operational transparency and decision support, allowing project managers to intervene proactively rather than reactively. From a marketing point of view, this extent of automation ensures that customer-specific projects are executed with higher precision and accountability. The resulting improvement in project delivery times and quality control indirectly strengthens the company's reputation and customer satisfaction metrics, both critical components of competitive advantage in the industry.

Qlik Sense and Marketing Intelligence

The third platform that represents the direct application of AI in hGears' digital ecosystem is Qlik Sense. The Project Manager demonstrated how the system aggregates real-time data from SAP and other databases, transforming them into dynamic dashboards that employ AI-assisted analytics. These include natural language query functions, automated pattern detection, and predictive modelling capabilities that assist managers in identifying hidden trends and anomalies.

For example, Qlik Sense’s Insight Advisor uses AI to automatically suggest relevant data relationships and generate visualizations without requiring manual configuration. This functionality allows marketing and sales professionals to explore customer data intuitively segmenting clients, tracking engagement, and estimating campaign performance using intelligent recommendations generated by the system itself.

Such features embody the concept of augmented analytics, in which AI enhances human decision-making rather than replacing it. Through these tools, hGears has a possibility to adopt a more analytical and anticipatory approach to marketing, focusing on predictive insights rather than retrospective reporting.

This alignment of operational and marketing data through AI-supported systems enables the company to respond more swiftly to market demands, anticipate market fluctuations, and improve the precision of its production and promotional strategies. Furthermore, the case study suggests that hGears is cultivating an AI-ready organizational culture, one that values data literacy, cross-departmental collaboration, and the strategic use of information as a competitive asset. By linking ERP automation, AI-based project management, and predictive analytics dashboards, hGears demonstrates a model of incremental digital transformation in which artificial intelligence acts as both an enabler of operational excellence and a catalyst for marketing innovation.

4.2 Experience of using AI Tools and Systems

This section offers a practice-oriented examination of how AI-enabled tools and systems are deployed within hGears to contribute varied business operations. Building on the data collection methods detailed in Section 4.1, the analysis foregrounds the concrete conditions under which tools are selected, integrated, and routinized across different departments and teams. Rather than cataloguing technologies, the focus is on the interaction between discrete AI capabilities such as predictive analytics, propensity and lead scoring, customer and account segmentation, programmatic content generation, and sales enablement and the legacy information environment constituted by Large Language Models, ERP, and business intelligence platforms. Particular attention is paid to data pipelines and governance (ownership, quality assurance, and access rights), model lifecycle management (configuration, monitoring, and periodic retraining), and the implications for decision quality, accountability, and compliance in industrial B2B settings.

The discussion synthesizes experiential evidence from daily operations, pilot trials, and cross-functional initiatives undertaken during the internship period. Each tool is assessed along common criteria to ensure comparability: purpose and deployment scope, integration pathway, user adoption and measurable benefits such as cycle-time reduction, campaign performance uplift, risks reduction. By structuring the evaluation in this manner, the chapter aims to separate realized value from aspirational claims, identify the boundary conditions under which AI augments existing workflows, and clarify the boundary conditions for successful implementation in an industrial B2B context, and provide a grounded basis for the subsequent examples and implications for practice.

4.2.1 Microsoft Copilot

Microsoft Copilot for Microsoft 365 is an AI assistant embedded across core productivity applications such as Word, Excel, PowerPoint, Outlook, Teams, and Planner. It enables users to formulate natural-language prompts that are translated into concrete actions such as drafting text, generating data analyses and visualizations, summarizing documents or meetings, and retrieving enterprise information held within the Microsoft 365 ecosystem. Functionally, Copilot operates as a layer that interfaces with organizational content and metadata (e.g., files, emails, calendars, and chat transcripts) and returns context-aware outputs within the host application. In Excel, for example, Copilot can propose formulas, construct PivotTables, produce charts, and surface trends or anomalies; in Teams, it can synthesize meeting transcripts into decisions, risks, and action items. Because it is embedded within the existing suite, Copilot inherits identity and permission structures, thereby aligning with established governance, security, and compliance settings.⁴²

The principal expected gains from Copilot adoption relate to cycle-time reduction, decision support, and process standardization. Thus, the automation of routine yet cognitively demanding tasks (e.g., exploratory data analysis, meeting summarization, or first-draft generation of documents and emails) reduces switching costs between applications and compresses time-to-insight. Also, the ability to interrogate structured and unstructured data via natural language allows non-specialists to conduct preliminary analyses and what-if exploration, potentially broadening analytical participation beyond specialist roles. Third, confining AI-assisted work within the

⁴² Microsoft Corporation. (2025). What is Microsoft Copilot?

Microsoft 365 environment supports consistent application of retention, access control, and auditing policies, which is a non-trivial factor in regulated industrial settings.

Regarding the practical utilization of this tool within the different departments in hGears, it can be divided on several practices.

Thus, for finance teams managing large operational and commercial datasets, Copilot in Excel offers several practical advantages. It can rapidly generate summary views (e.g., revenue by customer segment and period) and propose appropriate aggregation structures without manual formula construction. It assists variance and margin analysis by highlighting outliers and patterns across multiple worksheets, thereby shortening the diagnostic phase. During forecasting cycles, natural-language prompts can be converted into reproducible spreadsheet logic and accompanying visualizations, facilitating scenario analysis and improving transparency in budget discussions. Collectively, these capabilities can reduce the time required for monthly closes, margin bridges, and rolling forecasts while lowering the risk of formula errors and improving the consistency of analytical outputs.

In project area, Copilot's value arises from meeting intelligence and planning assistance. Within Teams, it can produce concise recaps of review meetings distilling decisions, dependencies, risks, and owner-tagged actions which project managers can query to update registers and dashboards. In Planner/Project, Copilot supports the decomposition of work packages into subtasks, the assignment of responsibilities and deadlines, and the articulation of dependencies, thereby accelerating baseline schedule creation and change tracking. For periodic status reporting, Copilot can draft stakeholder updates that consolidate information from minutes, risk logs, and budget notes across the Microsoft 365 workspace, improving consistency and reducing preparation time.

For commercial functions, Copilot assists with the generation of proposals, customer communications, and presentation materials grounded in existing organizational content. It also enables conversational retrieval of account-level information (e.g., prior engagements, delivered quotations, or meeting outcomes), supporting preparation for reviews and planning sessions.

4.2.2 ChatGPT

ChatGPT is a large-language-model (LLM) based assistant designed to interpret natural-language prompts and generate task-relevant outputs such as summaries, structured plans, code, and domain-specific prose. Functionally, it operates as a probabilistic text generator conditioned on the user's instructions and any supplied context (e.g., pasted data, policies, templates). In an enterprise setting, it can be accessed through a secure web interface or integrated via API with existing systems; in both modes, effectiveness depends on the quality of prompt design, the clarity and legality of context provided, and the presence of guardrails for privacy and compliance. For analytical work, ChatGPT can also produce formulas, pseudo-code, and scripts (e.g., Power Query M, DAX, Python), enabling users to translate business questions into executable logic.

The principal benefits of utilization this instrument are following:

1. Knowledge acceleration. Through rapid synthesis of dispersed information into briefings, checklists, or draft documents;
2. Analytical enablement. By transforming natural-language questions into spreadsheet formulas, transformation steps, or code snippets that would otherwise require specialist skills;
3. Process standardization. Via reusable prompt templates that codify preferred structures (e.g., risk registers, RACI matrices, email styles) and thereby improve consistency and cycle times.

hGears deployed ChatGPT as a cross-functional, prompt-driven assistant to accelerate knowledge work and standardize routine documentation. The tool was accessed via a full enterprise subscription under a unified corporate account. In line with the company's privacy posture, sensitive inputs were minimized or masked, outputs were validated against systems of record, and use was guided by lightweight governance (approved prompt templates, review checkpoints for external communications, and data-handling rules). Consistent with the enterprise configuration in place, the organization's working assumption communicated to staff is that model interactions are covered by corporate privacy controls and not retained for model training.

Considering the fact that ChatGPT currently is one of the most universal AI instruments that is used around the world, it contributes to the effective processes among different departments and continuous improvement principles in hGears.

During the internship, it was observed that finance analysts used ChatGPT to translate business questions into spreadsheet logic and analytics scaffolding. Typical tasks included drafting and explaining Excel formulas, generating Power Query steps for recurring data cleansing, and proposing DAX measures for margin bridges and cohort analyses. The model also helped compose variance narratives and reconciliation checklists during monthly close. Reported benefits were reductions in set-up time for models, fewer formula defects identified at peer review, and more consistent commentary across business units; all calculations remained subject to validation against ERP/BI figures.

Meanwhile, project managers leveraged ChatGPT to expedite the creation of project artefacts that otherwise require substantial synthesis. From a high-level scope statement, the model produced draft work-breakdown structures, deliverable lists, acceptance criteria, and risk registers with candidate mitigations. After technical and commercial reviews, rough notes were transformed into concise minutes and stakeholder updates tailored to executive, customer, or engineering audiences. This improved documentation cadence and clarity without increasing administrative burden; schedule, cost, and scope baselines continued to be governed through standard tools and approvals.

Engineering staff employed ChatGPT to generate technical documentation of standard operating procedures, change-control notes, and test protocols with explicit preconditions, steps, and acceptance criteria. During the interview with Chief Technology Officer, it was discovered, that this instrument provides the useful and most important, sophisticated information and data in a specific scientific field. For instance, in order to explore the chemical properties of different alloys and to fill the gap in knowledge of physical chemistry of metals ChatGPT provides the reports, solutions and summaries of heat treatment procedures and the compounds, which helps in decision making and reducing the need of metallurgical expertise.

In addition, ChatGPT contributes to engineering department processes by using the ability of detailed reading the documentation. Thus, engineers utilize the instrument to compare two technical drawings to detect the differences, helping them to save time and locate the data that can not be easily observed by eye.

4.2.3 Perplexity

Perplexity is an AI-powered “answer engine” that performs real-time web search and synthesizes results into concise responses with inline source citations. Unlike traditional search that returns ranked links, Perplexity retrieves current materials, reasons across them, and presents an attributed summary, with direct access to the underlying sources. This tool also offers advanced search modes that orchestrate multi-step queries for deeper analysis, reducing manual effort for literature scans and desk research. For enterprise deployments, administrators can configure sources to search the open web, organization files, or both useful when combining public news with internal documentation.

Moreover, from a data-protection standpoint, Perplexity’s enterprise documentation states that enterprise data is not used to train or fine-tune models, and its third-party model providers are contractually restricted from using customer data for training.

Perplexity is available to all departments at hGears and functions as a rapid evidence-gathering and verification aide across tasks that depend on up-to-date external information. Sales teams employ Perplexity for market and account preparation, quickly assembling news, analyst notes, and technical or regulatory references with citations that can be clicked and archived in briefing packs. This reduces the time to produce opportunity briefs, competitive snapshots, and campaign inputs, while improving traceability through the embedded sources. The ability to run multi-step “Research” queries is especially useful for synthesizing trends (e-mobility supply chains, OEM program updates) and identifying credible third-party evidence for claims used in proposals and collateral.

Besides that, when monitoring sector developments that may affect pricing, demand, or risk (e.g., steel and energy price outlooks, M&A in drivetrain suppliers), Perplexity accelerates the scan of recent reports and news, keeping links for audit and re-checking. This complements internal BI by providing sourced context for assumptions.

During the internal observation it was noticed that engineers use Perplexity to locate standards, application notes, and vendor manuals more quickly than manual browsing, verifying each step via the citations. There was documented use to locate information related to certifications (references and guidance pertinent to quality or environmental certifications), with the evidence trail preserved via the linked sources in the result.

In B2B contexts, credibility depends on verifiable references. Perplexity’s default practice of showing sources combined with modes designed for research reduces the risk of unattributed or stale claims in customer-facing documents and enables faster, defensible updates as markets move. This contrasts with general-purpose chat assistants that may not privilege current, cited material by default.

In conclusion, Perplexity complements hGears’ internal analytics by shortening time-to-evidence for market, regulatory, and technical queries, with transparent citations that support auditability. Its cross-functional use is broad, however the most pronounced productivity gains appear in sales and marketing, where fast, sourced briefings and report discovery materially improve preparation quality and cycle times.

4.2.4 IT support chatbot

The IT support chatbot at hGears functions as a controlled entry point to the service desk, designed to standardize request intake, triage incidents, and provide policy-aligned responses to routine queries such as credential resets, VPN access and software requests. Beyond efficiency, the implementation was explicitly motivated by risk reduction: by channelling interactions through a governed, auditable interface, the chatbot lowers the probability of non-compliant fixes, ad-hoc data sharing, and variability arising from tacit “workarounds.”

The system combines natural-language understanding with retrieval of approved knowledge articles and service-catalogue items and incorporates escalation logic to the IT service management (ITSM) platform. Access is mediated via single sign-on and role-based controls, ensuring that outputs and permitted actions reflect the user’s entitlements. Conversations are logged and associated with tickets and knowledge records to support auditability and continuous improvement.

While owned by IT, the chatbot supports adjacent functions by enforcing consistent guidance at the point of need: HR and Facilities (on-/off-boarding), Finance (licensing and access to financial systems), and commercial teams (device provisioning and travel readiness). This alignment reduces exceptions and strengthens segregation-of-duties controls.

The chatbot operates under enterprise governance: SSO enforcement, role-based responses, version-controlled knowledge content with named owners and review cadences, and retention

policies aligned to ITSM records. Where external AI components are used, they are provisioned under the company's unified enterprise subscription; workspace data is not used to train provider models and inputs are minimized or sanitized. Users are explicitly reminded that the system is assistive and may produce errors, critical actions require confirmation or human escalation.

To sum up, the hGears IT support chatbot should be indicated as an AI-enabled risk control embedded in the service lifecycle. By constraining assistance to approved knowledge, enforcing standardized workflows, and preserving auditable evidence, it reduces information-security, compliance, operational, and knowledge-concentration risks while delivering measurable efficiency gains.

4.3 Opportunity of Implementation of AI in B2B marketing activities

The B2B industrial landscape is undergoing a fundamental transformation, a "big reframe" where traditional, linear sales funnels have been replaced by dynamic, customer-led, omnichannel buying journeys. B2B customers now demand seamless, personalized, and digitally-enabled experiences on par with B2C interactions. Research shows that B2B buyers regularly use an average of ten different channels to interact with suppliers, and their engagement is now evenly split according to a "Rule of Thirds": one-third in-person, one-third remote human interaction, and one-third digital self-service.

For an industrial company like hGears, this shift renders legacy marketing approaches insufficient. The strategic implementation of artificial intelligence is no longer an incremental upgrade but a critical capability for managing this new complexity. AI provides the tools to deliver the hyper-personalization, omnichannel continuity, and sales productivity that are now non-negotiable for B2B winners. The existing data substrate within hGears' enterprise systems (such as SAP, NetPro, and Qlik Sense) provides the essential fuel for two distinct but complementary forms of AI: Predictive AI and Generative AI.

Within different corporate departments AI creates new opportunities to scale personalization, compress cycle times, and improve commercial productivity without sacrificing technical rigor. This chapter synthesizes recent B2B research to outline high-impact opportunities and pragmatic implementation pathways.

4.3.1 The Big Reframe Navigation

Orchestrating Omnichannel Journeys

B2B buyers now expect frictionless movement across in-person, remote, and self-service channels. Recent survey evidence shows a durable “rule of thirds” at any point in the buying journey, roughly one-third of decision-makers prefer each of the three modes and buyers use around ten distinct interaction channels on average. Companies that fail to provide a cohesive, switching-friendly journey face elevated churn risk; conversely, those investing in true omnichannel integration see revenue shift toward e-commerce and remote channels. For the producers in automotive sector, AI can power dynamic content, smart routing to the right human expert, and real-time nudges that keep engineering and procurement teams progressing across channels (e.g., from configurator to technical consult to digital quote).

Account Intelligence and Segmentation

In complex markets, opportunity identification often stalls on fragmented data (drawings, PDFs, service notes, tender archives). Gen-AI can synthesize unstructured and structured sources into account “briefings”: who buys what, why they switch vendors, which lines are under-penetrated, and who the hidden stakeholders are. Paired with classical ML, AI can surface next-best-account and next-best-product opportunities, freeing sellers to prioritize high-propensity demand in defined verticals.⁴³

Personalization and Content at Scale

AI now enables one-to-one messaging at industrial depth: technical summaries tailored to the buyer’s role, automatic adaptation to the buyer’s channel of choice, and contextual insertion of certifications, tolerances, or lifecycle cost evidence. Research indicates that teams blending robust personalization with gen-AI are markedly more likely to gain market share evidence that personalization remains the demand engine even as tools evolve. Thus, for the gear sector, this means generating variant-aware datasheets, proposal narratives aligned to performance envelopes (torque, NVH, efficiency), and localized proof points for sector-specific standards.⁴⁴

⁴³ McKinsey & Company. (2025). Unlocking profitable B2B growth through generative AI.

⁴⁴ McKinsey & Company. (2024). Five fundamental truths: How B2B winners keep growing.

Productive sales and Meeting Support

The integration of technology in B2B sales has been an evolutionary process. Over the past decade, automation, data analytics, and machine learning solutions have already yielded significant efficiencies. Industry analysis, such as research from McKinsey, substantiates this, reporting consistent efficiency upticks of 10 to 15 percent for sales teams empowered by these technologies. A primary benefit has been the reallocation of human capital, with sellers reporting an increase in customer-facing engagement and a corresponding decrease in time spent on administrative, back-office activities.

Building on this foundation, Generative AI now promises a second wave of productivity and growth. The potential economic impact is substantial, thus, McKinsey research estimates that GenAI could unlock an incremental \$0.8 to \$1.2 trillion in productivity across sales and marketing, a value proposition entirely in addition to the gains already realized from traditional AI applications. This significant potential likely explains why sales and marketing functions demonstrated the most rapid increase in GenAI adoption between 2023 and 2024.

Across the sales cycle, AI copilots can assemble meeting briefs (financials, installed-base history, open actions), generate tailored discovery scripts, and summarize calls directly into the CRM functions that early adopters report free meaningful seller time. Importantly, not every problem requires gen-AI: where error tolerance is low, rules-based automation may be preferable; where synthesis of unstructured content is central (e.g., competitive tear-downs), gen-AI creates clear lift.

Aftermarket and Customer Success

AI models trained on service logs and telemetry (where available) can predict maintenance windows, trigger parts recommendations, and schedule field support creating recurring touchpoints that marketing can cultivate into loyalty programs and outcome guarantees. For gears used in high-duty applications, such proactive engagement reduces downtime and differentiates through reliability evidence, not just price.

Measurement, Governance and Change

Realizing value from AI is as much operating-model as technology. Leading B2B organizations define a focused set of high-impact use cases, stand up cross-functional “buy-plus-build” delivery

(leveraging off-the-shelf components where appropriate), and invest in data quality, model governance, and frontline adoption. Research underscores that organizations already active in gen-AI are moving beyond pilots and focusing on concrete value capture in go-to-market motions; moreover, a significant share of sales-team tasks is now automatable, reinforcing the need to redesign roles and incentives rather than simply add tools.

Drawing together the key points discussed above, it becomes evident that implementation of AI should occur in multiple departments in an organisation simultaneously. Subsequently, in order to summarize the different paths of the integration and utilization of AI instruments within B2B area, the Table-1 was created to provide guidance on the areas of application and the selection of the appropriate category of AI tool.

AI Use Case	Description and Function	Strategic Benefit and Impact	AI Instrument Function
AI-Powered Next-Best Opportunity	Analyzes a wide range of internal and external data to identify and prioritize high-potential leads, accounts, or markets.	Boosts Pipeline: Moves sellers from manual prospecting to pursuing a data-driven, prioritized list of the most valuable opportunities.	Advanced Predictive & Classification Algorithms (e.g., Random Forest, Neural Networks)
Smart Research Assistant	Acts as a "co-pilot" for sales preparation, rapidly synthesizing prospect data (CRM, news, product data) to generate meeting briefs.	Increases Seller Effectiveness: Drastically cuts down on manual research time, allowing sellers to enter every conversation with relevant, personalized talking points.	Large Language Models (LLMs) & Data Synthesis
AI-Enabled Next-Best Action	A prescriptive tool that tells a seller what to do next based on real-time triggers (e.g., an email opened).	Accelerates the Deal Cycle: Guides the seller with proven, high-impact actions.	Reinforcement Learning or Sequential Decision Models
Meeting Support & Summarization	Automates administrative tasks by transcribing sales calls, summarizing key discussion points, and automatically updating the CRM system.	Increases Sales Productivity: Frees sellers from significant administrative burdens.	Natural Language Processing (NLP) & Summarization LLMs

Smart Pricing	Uses AI models to analyze deal-specific variables (e.g., customer segment, volume, competition) to recommend an optimal price point or discount.	Maximizes Profitability: Helps sellers quote prices that are both competitive and margin-protective.	Optimization & Regression Models (e.g., Gradient Boosting Machines)
AI-Powered Sales Coach	Provides real-time and post-call feedback to sellers by analyzing call transcripts to identify best practices and offer personalized coaching.	Enhances Team Performance: Scales the capabilities of the best sellers across the entire team.	Speech-to-Text, NLP Analysis & Comparative LLMs

Table 1 - Practical Opportunities for AI Implementation

The "AI Instrument Function" column transcends the application's commercial to detail the underlying core technological capability required to execute the business task. For the purposes of this thesis, this column establishes the necessary technical foundation for each identified marketing and sales opportunity, linking the strategic outcome directly to a specific AI discipline. These functional instruments are broadly categorized into Predictive Models and Generative Models.

4.3.2 Application of AI Agents

In the evolving landscape of B2B marketing and sales, the introduction of AI agents represents a paradigm shift from traditional, intuition-based human selling toward a more integrated, data-driven, and partially autonomous model. According to the BCG article, organisations are already exploring three forms of agentic selling augmented, assisted and autonomous to reimagine how they engage clients, qualify opportunities and drive revenue.⁴⁵

AI agents are defined as systems that can observe contexts, reason about tasks, and execute actions either in support of human professionals or, in more advanced instances, with minimal human intervention. In the B2B sales environment, BCG identifies several specialised agent types: lead-generation agents, qualification agents, pricing and deal-conversion agents, customer-success agents and orchestration agents. These agents draw on structured and unstructured data, integration across CRM/ERP systems, real-time analytics from dashboards and machine-learning models to deliver insights and actions at scale.

⁴⁵ Boston Consulting Group. (2025). How AI agents will transform B2B sales.

Unlike the current generation of fragmented AI tools that function within narrow operational boundaries and depend on limited data sources, the emerging paradigm of specialized AI agents represents a substantial evolution in technological integration and contextual intelligence. Rather than operating in isolation, these agents will form part of a fully interconnected ecosystem, capable of accessing and interpreting information from across the entire organizational and technological landscape. By seamlessly interfacing with the complete sales technology stack including CRM systems, ERP databases, data visualization platforms, and communication tools AI agents will become contextually aware of every relevant data point, client interaction, and internal process.

The future AI-agent ecosystem in B2B environments is anticipated to consist of five interdependent yet distinct agent types, each with a clearly defined functional domain and designed to operate synergistically within a shared digital infrastructure. This specialized ecosystem, as identified by BCG, comprises distinct agents focused on stages of the deal cycle that presented in the Table-2.

Specialized Agent	Core Function	Integration with Concepts
Orchestration Agents	Breaks down high-level growth goals into executable workflows and coordinates execution across all other agents.	Corresponds to the Reasoning and Planning pillar, ensuring sequential decision-making.
Lead Generation Agents	Identifies, consolidates, and scores leads using both first- and third-party data signals.	Utilizes Advanced Predictive & Classification Algorithms (Next-Best Opportunity).
Deal Conversion & Pricing Agents	Crafts proposals, coordinates legal and financial inputs, and communicates pricing based on dynamic guidelines.	Leverages Retrieval-Augmented Generation (RAG) for proposal accuracy and Optimization Models (Smart Pricing).

Qualification Agents	Determines whom to engage, in what order, and when. Proposes solutions, estimates ROI, and maps the client's internal buying group.	Leverages Optimization Models and Data Synthesis LLMs to structure the complex B2B buying context.
Customer Success Agents	Drives adoption, identifies and mitigates churn risks, and triggers expansion plays based on real-time usage insights.	Utilizes Reinforcement Learning or Sequential Decision Models (Next-Best Action).

Table 2 - Framework for AI Agent Deployment in Industrial B2B Marketing

4.3.3 Breakdown Structure of Marketing Activities in hGears

During the internship in business development area, it was derived and comprehended the structure of the B2B marketing and sales activities, which allows to observe all business operations and locate opportunity of integration AI instruments for optimization and automation. Based on the experience from the internship, with utilization of the tool Lucidchart it was built a cross-functional flowchart of the breakdown structure of marketing activities, divided among three main roles: CEO (Chief Executive Officer), Sales Director and Business Developer.

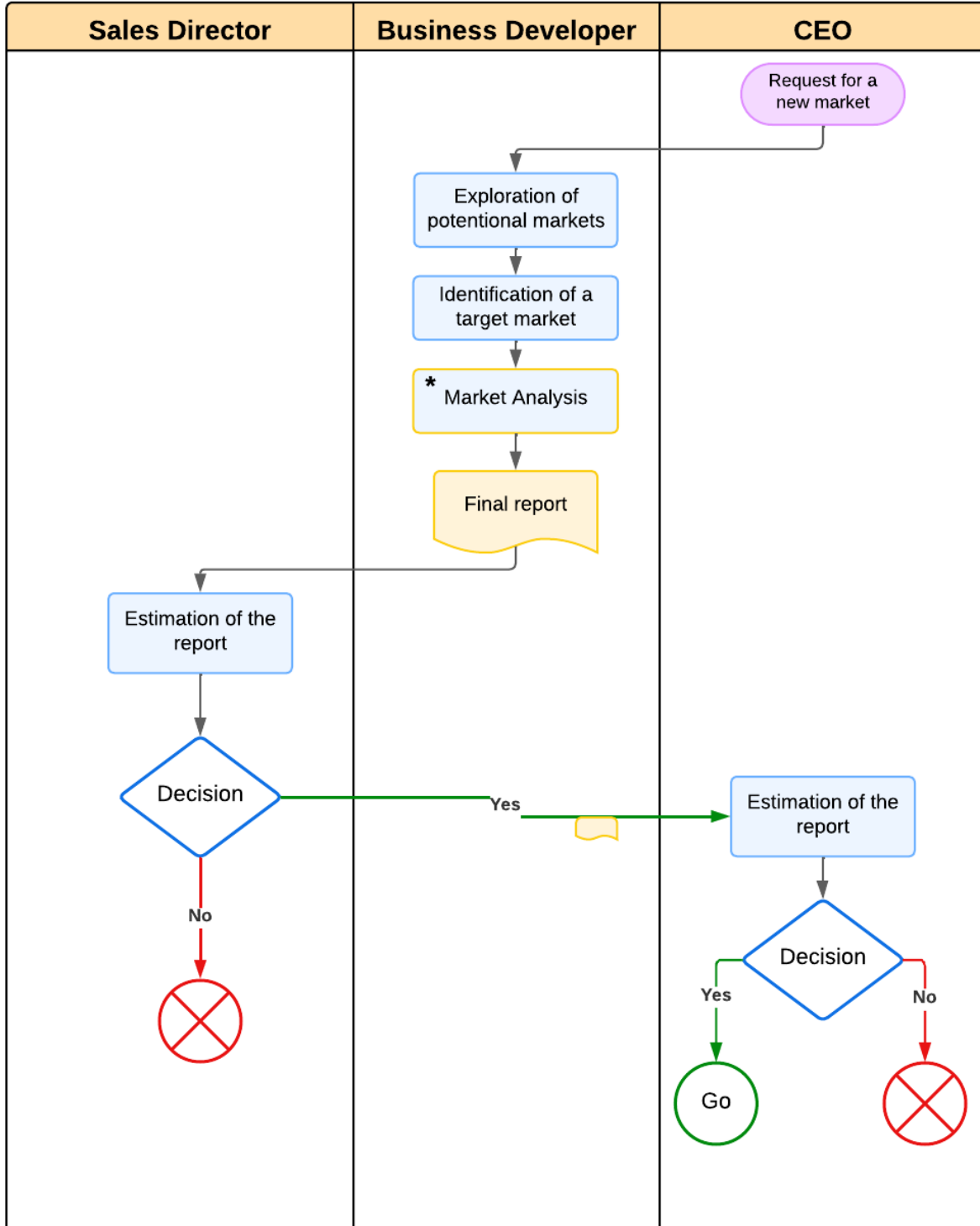


Figure 9 - Overall cross-functional flowchart

The process is initiated within the CEO's swimlane through a formal request to investigate a new market. This action triggers a series of analytical tasks carried out by the Business Developer, who becomes responsible for the subsequent steps. The Business Developer begins with an exploration of potential markets and proceeds to identify a specific target market suitable for further examination. This phase is followed by a detailed market analysis, indicated in the chart as a critical activity. The analysis likely encompasses the assessment of competitive conditions, demand forecasting, and broader strategic considerations. The Business Developer then compiles the findings into a final report, which serves as the key deliverable for the next stage of evaluation.

Once the report is completed, it is transferred to the Sales Director. At this stage, the Sales Director conducts an initial assessment of the report, focusing on commercial feasibility, the alignment of the proposed market with existing sales strategies, and any resource implications. The Sales Director then makes an initial decision based on this evaluation. A negative decision ends the process, whereas a positive decision moves the report forward to the CEO for a final assessment.

The CEO's evaluation constitutes the concluding stage of the process. Here, the CEO reviews the report from a strategic perspective, considering long-term potential, organizational priorities, and risk factors. This assessment leads to a final decision. A negative decision terminates the project, while a positive decision authorizes the company to proceed with the development of the new market.

Thus, the flowchart demonstrates a multi-layered decision pathway, emphasizing the sequential and hierarchical nature of market evaluation within hGears.

In order to illustrate more comprehensively the crucial steps of the marketing analysis process, it was built a sub-flowchart which represents a detailed breakdown of the analytical activities performed during the evaluation of a target market. It is designed to demonstrate the internal logic, structure, and dependencies between the different components that collectively form hGears' market analysis process. Within the larger decision-making flow, this chart serves as the analytical core that supports the overall assessment of market attractiveness, risk, and strategic fit.

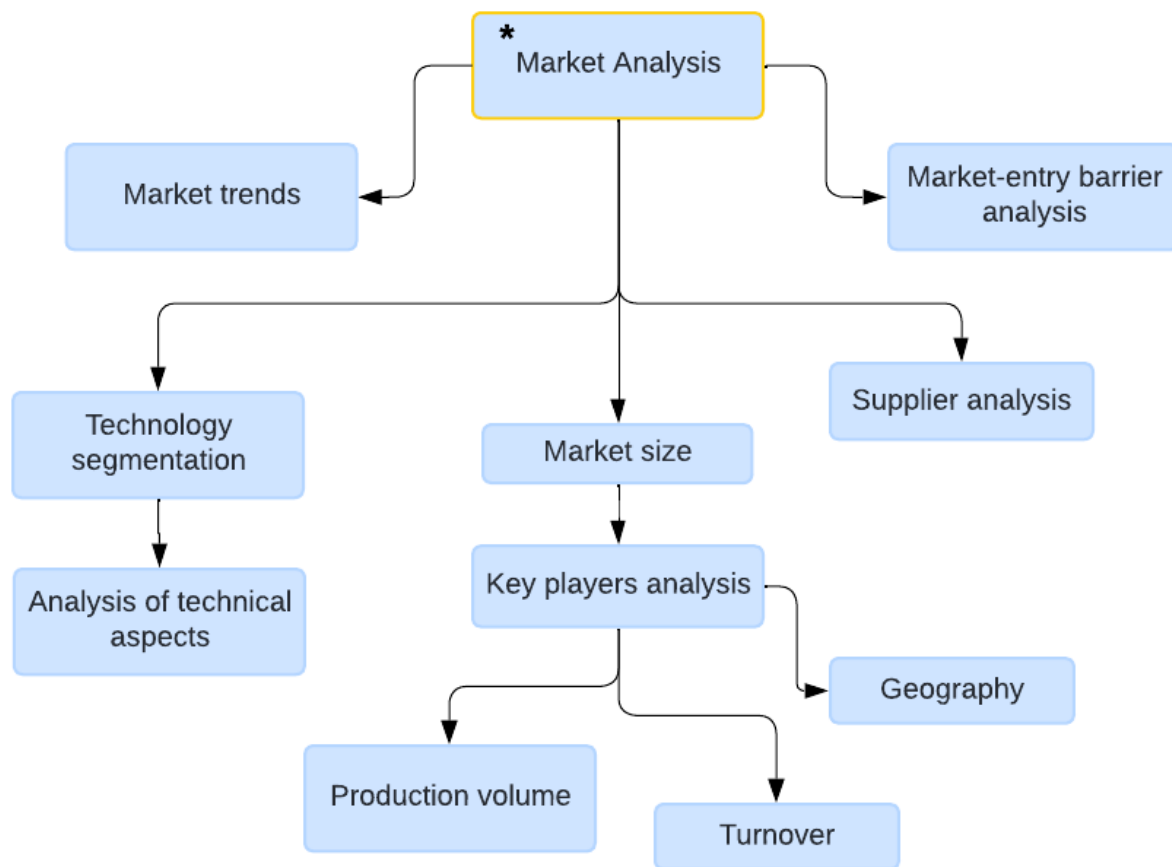


Figure 10 - Breakdown structure of marketing analysis

The process begins with the central activity labeled Market Analysis, which functions as the parent task from which all subsequent analytical components derive. From this central node, the chart branches into three primary analytical domains: market trends, market-entry barrier analysis, and supplier analysis. These elements represent the external conditions that shape the feasibility and competitiveness of entering the new market. Market trends provide insight into demand dynamics and technological evolution; barrier analysis evaluates regulatory, financial, or structural obstacles; and supplier analysis examines the availability and reliability of upstream partners.

A second level of analysis focuses on market size and technology segmentation, which together provide quantitative and technical perspectives on the opportunity. Market size determines the economic potential of the target segment, while technology segmentation identifies the technical categories relevant to hGears' portfolio. The chart shows that technology segmentation flows

further into an analysis of technical aspects, indicating a deeper evaluation of engineering requirements, compatibility with internal competencies, and possible development challenges.

In parallel, the chart introduces key players analysis, which identifies competitors, potential customers, and influential actors within the value chain. From this node, two additional outputs emerge: production volume and turnover. These metrics reflect the expected scale and financial contribution of the market opportunity. Another branch from the key players analysis leads to an assessment of geography, illustrating the link between major market participants and their regional distribution.

By structuring the components in a hierarchical manner, the sub-chart underscores how individual analytical tasks are interconnected and how they collectively contribute to a comprehensive understanding of the market. Each node represents a specific analytical dimension, while the directional arrows clarify the logical flow and dependencies between them. Within the wider organizational process, this Market Analysis block provides the factual basis on which higher-level decisions are made, supporting both strategic and commercial evaluations performed in later stages.

4.3.4 Possibilities of AI Integration

The estimation of the possibility of AI integration into marketing processes within the company is based on the flowchart which were represented in previous topic. This analysis examines the provided business process model for hGears' new market entry validation. The extant workflow, initiated by a "Request for a new market" from the CEO, follows a structured, sequential, and multi-stage approval hierarchy involving a Business Developer, a Sales Director, and the CEO.

The central thesis of this analysis is that the strategic integration of specific artificial intelligence typologies can re-engineer this workflow. AI integration can transform the process from a reactive, linear sequence into a proactive, data-driven, and dynamic framework, thereby enhancing efficiency, de-risking strategic decisions, and creating a scalable engine for market intelligence.

The methodology employed is a qualitative process analysis of the provided business process diagram. Each distinct phase of the workflow is deconstructed to identify its constituent tasks, the personnel involved, and the nature of the information being processed.

Phase I: Market Exploration and Identification

The initial phase is arguably the most critical and, in a manual state, the most ambiguous. It relies on the Business Developer's individual capacity to scan the entire global market for "potential" opportunities. This manual exploration is resource-intensive, slow, and susceptible to cognitive biases (e.g., availability heuristic, confirmation bias). The subsequent "Identification" of a single target market from this broad exploration is a subjective narrowing process, which may prematurely discard high-potential but non-obvious opportunities.

AI Integration Window

1. Large Language Models

These systems can aggregate and synthesize information from diverse external sources such as industry publications, competitor updates, regulatory notices, and technical literature. Because retrieval-augmented LLMs combine grounded document retrieval with generative summarization, they significantly reduce the time required for manual environmental scanning while improving the breadth and traceability of the evidence base.

2. Autonomous AI Research Agents

To supplement the LLM, autonomous agents can be tasked with scanning unstructured data sources (e.to., patent databases, academic journals, regulatory filings, and trade publications). These agents can identify nascent trends, emerging technologies, and "greenfield" opportunities that predictive models, which rely on historical data, might miss.

This intervention transforms the exploration phase from a subjective, linear search into a data-driven, continuous prioritization engine. It empowers the Business Developer to focus on validating a pre-qualified shortlist of high-potential markets, rather than manually searching for the "needle in the haystack." Research demonstrates that such models can effectively support market research tasks by providing structured comparisons, identifying emergent trends, and enhancing the consistency of early-stage insights. Their use would thus strengthen the foundation of the Business Developer's subsequent market analysis.⁴⁶

⁴⁶ Brand, J., Israeli, A., & Ngwe, D. (2025). Using LLMs for market research (Harvard Business School Working Paper No. 23-062). Harvard Business School.

Phase II: Market Analysis

This step represents a significant knowledge-generation bottleneck. A comprehensive B2B market analysis (involving SWOT, PESTLE, competitor landscaping, and B2B buyer persona development) is exceptionally time-consuming. The quality and depth of the analysis are entirely contingent on the individual researcher's skill and bandwidth. Furthermore, by the time this static analysis is complete, market conditions may have already evolved.

The core objective of the Market Analysis phase is to convert raw market information into structured, actionable intelligence. The manual execution of the sub-tasks (as depicted in the flowchart) introduces substantial time lags and variability in data quality. Strategic AI integration can address these bottlenecks across three primary analytical streams: Trend and Technical Analysis, Competitive and Barrier Analysis, and Quantitative Market Sizing.

Market trends

This step represents an early and foundational stage in the hGears analysis framework, where continuous monitoring of industry developments is essential. Here, NLP (Natural Language Processing) pipelines and LLM-based summarisation systems can automatically collect, classify, and synthesise large volumes of unstructured data from industry publications, regulatory updates, patent databases, and competitor communications. Such AI systems improve the speed and accuracy of trend detection while reducing the manual burden on analysts, consistent with research demonstrating AI's value in automating market-research tasks and enhancing situational awareness. By generating concise insight briefings and highlighting emerging technological or demand shifts, these models support more responsive and data-driven marketing strategies.⁴⁷

Market-entry barrier analysis

The assessment of external risks, specifically Market-entry barrier analysis, requires navigating complex and often volatile regulatory landscapes. This is managed through a Regulatory Monitoring AI, designed for structured compliance extraction. This specialized system automatically identifies, extracts, and maps relevant national and international legal and

⁴⁷ Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks*, 3, 119–132.

certification frameworks. The extracted, structured compliance data is then paired with a Generative LLM to synthesize executive summaries of regulatory risk and necessary mitigation strategies.

Supplier analysis

For Supplier analysis, the process is automated to ensure optimal supply chain feasibility. Data Extraction AI is employed to source and pre-qualify potential supply-chain partners based on user-defined criteria such as technical capability, financial stability, and geographic proximity. This is seamlessly integrated with AI Automation tools (e.g., automated scheduling systems) to manage initial outreach and schedule preliminary qualification meetings, effectively accelerating the due diligence process and mitigating operational risk.

Technology segmentation and analysis of technical aspects

The Analysis of technical aspects moves beyond simple categorization. LLMs can transform engineering reports, test results, and technology briefs into standardised summaries that are accessible to marketing and business-development teams. Research shows that embedding models and LLM-based summarisation reduce information asymmetry between technical and commercial units, supporting more coherent technology positioning and product-market alignment.⁴⁸

Market size and key players analysis

These analyses provide further opportunities for AI integration. Time-series forecasting and ML ensembles can generate more accurate estimations of market size, growth rates, and turnover projections across segments. At the same time, NLP-driven competitive-intelligence engines can map relationships among industry actors by extracting information on product launches, strategic partnerships, and acquisitions from publicly available sources. These AI capabilities align with evidence that enhanced forecasting and automated competitive intelligence can significantly improve marketing precision and strategic decision-making

⁴⁸ McCloskey, B. J., LaCasse, P. M., & Cox, B. A. (2024). Natural language processing analysis of online reviews for small business: Extracting insight from small corpora. *Annals of Operations Research*, 341(1), 295–312.

The Key players analysis including the calculation of Production volume, Turnover, and geographical assessment (Geography) for competitors relies on overcoming data fragmentation. A Data Normalization AI automatically ingests heterogeneous public data (e.g., annual reports, news snippets, regional trade data) and standardizes the metrics into a unified structure. The processed data is then immediately rendered by Visualization AI to create dynamic competitive benchmarks and easily interpretable scatter plots. Ultimately, a Multimodal Generative AI system performs the final step, automating the extraction of these key metrics and translating the findings into presentation-ready visual formats and structured, queryable tables, thus streamlining the final knowledge delivery to executive stakeholders.

Phase III: Reporting and Dissemination

The transition from research to communication presents an additional opportunity for AI intervention. The "Final report" is a static information artifact (e.g., a document or presentation). It requires the subsequent reviewers (Sales Director, CEO) to manually parse a dense document to extract key insights, creating an "estimation" bottleneck. This format is not interactive and cannot be queried, forcing a linear review process.

AI Integration Window

1. AI-powered Business Intelligence (BI) Dashboards

The concept of a "report" should be replaced with an interactive BI dashboard. The data from the analysis phase would feed directly into this dashboard. This allows stakeholders to filter, drill down, and visualize data dynamically.

2. Generative AI (Summarization & Query)

A generative AI model can be layered on top of the analysis data. This allows executives to directly query the findings in natural language (e.g., "What are the top three risks and the proposed mitigation strategies?" or "Summarize the competitive advantage for hGears in this market").

This intervention eliminates the "report writing" task entirely. It facilitates a more efficient cognitive handoff to the executive team, allowing them to engage with the data asynchronously and extract the specific insights relevant to their decision-making criteria, thereby accelerating the "Estimation" step.

Phase IV: Executive Estimation and Decision-Making

The decision-making stages in the chart highlight a further area where AI could optimize managerial processes. The presence of two separate estimation phases first by the Sales Director and then independently by the CEO points to redundancy that can be reduced through the deployment of explainable AI decision-support systems. These systems can provide interactive dashboards, scenario analyses, risk assessments, and natural-language question-answering over both the report and its underlying datasets. By making drivers of model outputs transparent and enabling rapid comparison between strategic alternatives, AI-supported decision tools enhance the quality and speed of managerial judgments.

AI Integration Window

1. AI-driven Decision Support System (DSS)

This system integrates all data from the preceding phases into a comprehensive model. The DSS can run simulations and probabilistic forecasts (e.g., Monte Carlo analysis) to model potential outcomes. Instead of a simple "Go/No-Go," the DSS would present executives with a "Decision Dashboard" featuring:

- a) **Probability of Success.** A score (e.g., 82%) representing the likelihood of meeting 3-year revenue targets, based on the model;
- b) **Risk-Adjusted ROI.** A projection of returns factoring in the identified risks;
- c) **Sensitivity Analysis.** How the outcome changes if key variables (e.g., competitor pricing, material costs) fluctuate;
- d) **Resource Forecasting.** An AI-based estimation of the required sales, marketing, and engineering resources for successful market entry.

2. AI Agents

Beyond analytical and decision-support enhancements, the implicit coordination involved in moving information between actors illustrates a further opportunity for AI agents that automate workflow orchestration. These agents, integrated with calendar and CRM tools, can schedule meetings, distribute documents, set reminders, and manage follow-up tasks associated with each

stage of the process. Recent industry developments demonstrate the efficiency gains possible when autonomous scheduling and workflow tools detect intent and initiate required actions automatically. Such automation would reduce administrative friction and accelerate the cycle from initial market request to final decision.

Conclusion

The integration of artificial intelligence into the hGears market entry workflow offers a paradigm shift in strategic capability. The existing process a linear, manual, and high-latency sequence can be re-engineered into a dynamic, data-driven, and semi-automated framework. This transformation moves the organization from a posture of evaluating single, subjectively-identified opportunities to one of continuous, automated market scanning and parallel-processed opportunity assessment. The roles of key personnel are elevated from manual research and reporting to strategic validation, interpretation, and high-level decision-making. The concrete examples of AI systems and the project of integration is presented in the chapter 5.

However, responsible integration requires governance mechanisms to address well-documented risks such as hallucination, data bias, and privacy concerns. As evidenced in AI deployment literature, human oversight, model transparency, and robust data-management protocols remain essential complements to technological adoption. By implementing AI in targeted, incremental stages beginning with evidence synthesis and report automation before expanding to predictive analytics and decision-support applications hGears can achieve measurable efficiency gains while preserving strategic control and accountability. The discussion of this topic is presented in the following section.

4.4 Internal Challenges and Risks

The successful integration of AI, particularly in a B2B context, introduces risks that transcend mere technical implementation, spanning strategic, organizational, and foundational domains. This analysis reframes the risks based on external market challenges and internal governance requirements. For hGears, a European gear manufacturer operating multi-site production, ecommerce, and data-intensive sales processes, cybersecurity is therefore not a peripheral concern but a binding prerequisite for realizing AI's value. This section synthesizes current European threat intelligence in terms of business risks and technical risks, standards, and regulatory guidance to

delineate the principal internal challenges and outline governance responses suited to hGears' context.

Across 2023-2024, the EU's cybersecurity agency (ENISA) reports a marked rise in incidents, with seven "prime" threats dominating: availability attacks (including DDoS), ransomware, threats against data, malware, social engineering, information manipulation, and supply-chain attacks. Manufacturing and OT-heavy environments remain prominent targets because of operational disruption leverage and data theft incentives.⁴⁹

Generative-AI adoption adds distinct vectors that classical controls did not anticipate. Security research and major vendors highlight prompt-injection, including indirect attacks where hostile instructions are embedded in webpages, PDFs, or images that an enterprise AI assistant reads during retrieval or browsing. These attacks can cause data exfiltration, policy overrides, or arbitrary tool use by the agent. Experimental "AI worms" further illustrate propagation risks across integrated assistants (e.g., email copilot to CRM), underscoring the need for strict containment.

4.4.1 Legal and compliance exposure in the EU context

AI deployment in marketing routinely touches personal data (prospects, contacts, usage telemetry). The European Data Protection Board's Opinion 28/2024 clarifies that GDPR principles (lawfulness, purpose limitation, DPIAs, roles of controllers) apply across both the development and deployment phases of AI models, including questions about when a model or embedding can be considered "anonymous" and whether legitimate interest is a suitable legal basis. In practice, training or prompting on unvetted datasets may constitute unlawful processing and taint downstream use.⁵⁰

Obligations under the EU AI Act are phasing in. By August 2025-2026, general-purpose and high-risk categories face transparency, evaluation, and risk-management duties, with the Commission

⁴⁹ European Union Agency for Cybersecurity (ENISA). (2024). ENISA Threat Landscape 2024 (September 19, 2024).

⁵⁰ European Data Protection Board (EDPB). (2024, December 17). EDPB Opinion 28/2024 on certain data protection aspects related to the processing of personal data in the context of AI models.

signaling that deadlines remain firm despite calls for delay. Marketing assistants that influence profiling or automated decision-making may trigger requirements depending on use.⁵¹

Meanwhile, NIS2 (Network and Information Security Directive 2) expands security and incident-reporting duties for a broader set of “essential” and “important” entities, including many manufacturers in Italy and across the EU, with national transposition now active and supervision ramping up.

4.4.2 Internal risks and Recommendations

Business risk

From a business risk perspective, hGears must consider whether AI could erode the value of its existing functions or even obsolete parts of its business model. SaaS Capital warns that if AI can deliver the same value outside of hGears’ current processes - or render a function fundamentally unnecessary - the company faces existential risk. In practical terms, hGears’ human-led market-analysis and decision cycles might be undercut if AI systems produce equivalent or better insights more efficiently. Thus, this could challenge the relevance of its business developer or sales analyst roles, leading to internal pushback or disintermediation.⁵²

Technology risk

On the technology risk side, the framework highlights the danger of relying on AI models whose advantage is no longer unique. Specifically, when the core proprietary edge lies in domain-specific algorithms, but these are duplicated or outpaced by general-purpose AI, differentiation may erode. For hGears, this suggests a risk that AI will commoditize parts of its analytical capability unless tightly controlled by novel data access strategies or model governance.

Data governance

Moreover, hGears may have difficulties with data governance, quality, and internal fragmentation. Robust AI models require high-quality, well-governed data; if organizational data systems are fragmented, poorly labeled, or inconsistent, AI predictions and insights may be unreliable. This

⁵¹ Foo Yun Chee. (2025, July 4). Artificial intelligence rules to go ahead, no pause, EU Commission says. Reuters.

⁵² SaaS Capital. (2025). AI risks to B2B SaaS companies: A framework for estimating risk.

concern is echoed in the data-governance literature: for instance, Bernardo et al. (2024) provide a comprehensive overview of data governance maturity models and argue that deficiencies in governance jeopardize AI reliability. Without strong data governance practices, the company risks bias, poor performance, and low trust in its AI outputs.⁵³

Besides that, as AI becomes central, hGears must build responsible AI governance mechanisms. Without proper oversight, AI adoption could be undermined by uncontrolled use, drift in model behavior, or unethical decisions.

Security risk

Finally, there is the risk of security and data leakage. As AI systems access sensitive internal data perhaps via shared knowledge bases, automated agents, or advanced decision support any weakness in security could compromise intellectual property or reveal competitive strategy. This risk is heightened for generative AI, which can memorize or reconstruct parts of its training data. For a B2B company, leaking strategic analyses or customer data could have far-reaching legal, commercial, and reputational consequences.

In summary, while AI promises significant strategic and operational advantages for business sector, internal risks including business-model erosion, governance and data challenges, adoption resistance, opacity, and security must be addressed proactively. Applying a structured risk-management approach, such as adopting SaaS-Capital's risk framework and establishing responsible-AI governance, will be crucial.

⁵³ Bernardo, B. M. V., Mamede, H. S., Barroso, J., & Santos, V. (2024). Data governance & quality management—Innovation and breakthroughs across different fields. *Journal of Innovation and Knowledge*, 9(4), 100598.

Chapter 5. AI Development and Strategic Recommendations

5.1 AI Tool Selection and Integration Framework

In previous chapter were explored the principles and varied types of the AI utilization within marketing activities. Chapter 5 is dedicated to expand the options of implementation by suggesting already existed solutions and develop a specified AI automations to optimize all marketing processes that can be launched at hGears. In order to fulfill the purpose in this chapter all marketing activities are going to be divided on four phases by the same principle as in area 4.3.4 in Chapter 4.

The search of the appropriate AI tools was organised by several approaches to evaluate the results independently from different sources. Basically, all AI instruments that were considered can be divided into 3 groups:

1. LLMs (Large Language Models);
2. AI agents tools;
3. Instruments for workflow AI automation.

In terms of the initial investments in application and integration of AI instruments within marketing and sales department at hGears, should be considered both types of available solutions: free and paid. By 2025, the landscape of AI platforms exemplifies a mature yet rapidly evolving ecosystem. Free AI tools provide broad access and foundational capabilities suitable for education, experimentation, and lightweight tasks, while paid solutions deliver enhanced performance, scalability, and commercial viability. Despite of the prevailing number of AIs that do not ask a payment, paid offerings remain dominant in professional settings where performance guarantees, integration capabilities, and service level agreements are essential.

For the development of specialized AI automation capabilities that can be applied in the workflow of the department, that was observed in Chapter 4, there is the most common and convenient instrument such as “N8N” automation – an open-source, low-code workflow automation platform that enables organizations to connect disparate applications, APIs, and services into automated business processes. It provides a visual, node-based editor where users can design multi-step workflows that trigger on events (webhooks), process or transform data, and invoke actions across systems. The platform supports integration with hundreds of third-party tools including CRM

platforms like Salesforce, HubSpot, and Zoho, as well as marketing and communication services facilitating seamless automation across sales and marketing ecosystems.⁵⁴

A key capability of n8n is its combination of visual workflow design with extensibility through custom code. Users can embed JavaScript or Python logic directly within workflows, import libraries, and manipulate data beyond the constraints of pre-built nodes when business logic becomes more complex. This flexibility makes it suitable for both technical teams and less technical users who require automation without deep programming expertise. Moreover, “fair-code” model allows self-hosting, giving organizations full control over their data and infrastructure, which is particularly relevant for businesses concerned with compliance and data privacy.

Phase I: Market Exploration and Identification

Based on the review of B2B marketing and sales activities within hGears, it can be derived that operating in the business-to-business domain of automotive components, competitive and market intelligence are crucial for understanding evolving customer needs, technological shifts, and competitor positioning. B2B sales and marketing functions are increasingly data-driven: they leverage insight into trends, buyer intent, and competitive strategies to tailor value propositions and accelerate pipeline conversion.

The first AI instrument that might influence strategically on all marketing activity and has proven positive examples is AlphaSense.

AlphaSense

Cost: 10,000 euro/year.

AlphaSense is an AI-powered market intelligence platform designed to aggregate and analyse vast amounts of internal and external content including industry reports, earnings transcripts, filings, news, and proprietary sources via advanced search, natural language processing (NLP), and generative AI capabilities. Its AI workflows synthesize qualitative and quantitative insights to support strategic decision-making in competitive, regulatory, and market contexts.⁵⁵

⁵⁴ n8n. (2026). Official blog of n8n automation platform.

⁵⁵ Alpha-sense.com (2026). Official website.

Originally prominent among financial analysts and institutional researchers, AlphaSense has extended its appeal to strategic planners and corporate functions requiring timely, context-rich insights across industries. Its integration APIs and connectors (Microsoft 365/SharePoint, CRM systems, data repositories) facilitate embedding its intelligence capabilities within enterprise data ecosystems.

The implementation of AlphaSense should not be viewed merely as the adoption of software, but as the restructuring of the corporate Intelligence Cycle. This cycle consists of three distinct stages: Acquisition, Synthesis, and Dissemination.

In the Acquisition phase, AlphaSense replaces fragmented Google searches with a centralized repository of "grey literature" broker research, expert transcripts, and regulatory filings that is typically inaccessible to the public. For hGears, this means immediate access to analyst reports on Tier 1 customers and OEM partners.

In the Synthesis phase, the platform's "Smart Summaries" utilize Generative AI to distill complex documents. For instance, an hGears sales director could query the specific impact of new EU battery regulations on e-bike transmission requirements, receiving a synthesized answer grounded in verified documents rather than a generic web summary.

Finally, in the Dissemination phase, these insights are integrated into the decision-making workflows of the sales and marketing teams, ensuring that strategic planning is data-driven rather than intuitive.

To maximize utility, the deployment of AlphaSense at hGears should follow a tiered integration strategy targeting Strategic, Tactical, and Operational layers.

1. Strategic Integration: R&D and Market Alignment

At the strategic level, the marketing department can utilize AlphaSense to monitor macro-trends that directly influence product roadmaps. Given hGears' focus on NVH (Noise, Vibration, and Harshness) reduction in e-drives, the platform can be configured to track patent filings and academic papers related to "gear micro-geometry" and "powertrain lightweighting." This creates a feedback loop where market intelligence informs R&D priorities, ensuring that hGears develops

components that meet future OEM specifications before a formal Request for Quotation (RFQ) is even issued.

2. Tactical Integration: Supply Chain and Competitor Monitoring

For the sales team, the platform offers tactical advantages in negotiation and account management. By setting up automated alerts for raw material commodities (specifically steel and aluminum prices), sales representatives can anticipate supplier price adjustments. Furthermore, the "Company Topics" feature allows hGears to monitor competitor activity. If a competitor in the sintered metal space begins hiring aggressively in a specific region or files patents for a new helical gear application, AlphaSense flags this signal, allowing hGears to prepare a counter-strategy.

3. Operational Integration: CRM Connectivity

The technical integration involves embedding AlphaSense insights directly into the Customer Relationship Management (CRM) system. Rather than requiring sales staff to switch between platforms, an API integration can populate the CRM "Account View" with the latest relevant news, earnings call transcripts, and analyst ratings for that specific client. This ensures that every interaction a Business Developer has with a client is informed by the latest financial and operational context of that client’s business.

The adoption of AlphaSense presents clear advantages but also introduces specific organizational challenges that must be managed. The list of main pros and cons is presented in the table below.

Advantages	Disadvantages
Comprehensive market and competitive intelligence through AI-driven search and synthesis	High subscription and licensing costs, especially for enterprise access
Faster insight generation compared to manual market research	Learning curve for sales and marketing teams unfamiliar with advanced intelligence platforms
Improved competitive awareness and proactive strategic positioning	Potential overreliance on financial and analyst-focused content
Supports account-based marketing and personalized B2B sales strategies	Requires well-defined queries and governance to avoid information overload
Integration with CRM and marketing tools enables workflow efficiency	Customization effort needed to fully align with automotive B2B manufacturing context

Table 3 - The review of advantages and disadvantages of the AlphaSense AI system

To sum up, for hGears AG, the integration of AlphaSense represents a shift from reactive sales support to proactive market mastery. By automating the environmental scanning process, the company can free its human talent to focus on high-value relationship building and strategic interpretation. While the costs and training requirements are non-trivial, the capacity to align product development with real-time market signals in the volatile e-mobility sector offers a compelling strategic dividend.

Felo AI

Cost: 138 euro/year.

Meanwhile, as a more economical alternative for the Business developer and Sales team serves Felo AI instrument. Felo AI can be conceptualized as an AI-powered research, reasoning, and knowledge-structuring assistant that supports information discovery, synthesis, and contextual analysis across heterogeneous data sources. Unlike enterprise market-intelligence platforms that emphasize curated premium content and financial disclosures, Felo AI is positioned more as a cognitive layer that augments human analysis by accelerating sense-making, summarization, and hypothesis generation across open and internal knowledge bases.

The most important factor of this tool is the various number of available functions regarding the market research activities. For a manufacturing firm such as hGears, operating in the automotive supply chain, the strategic value of Felo AI lies less in exhaustive market coverage and more in its ability to translate dispersed information into actionable understanding for sales and marketing decision-making.

A defining feature of Felo AI, particularly relevant for organizational deployment, is its use of predefined and customizable AI agent templates. These templates function as semi-autonomous analytical routines designed to execute recurring research tasks such as market scanning, competitor profiling, customer analysis, and trend interpretation. These templates might play the key role in the evaluation of the markets and contribute to the manager's final assessment and verdict about the entrance in a market.

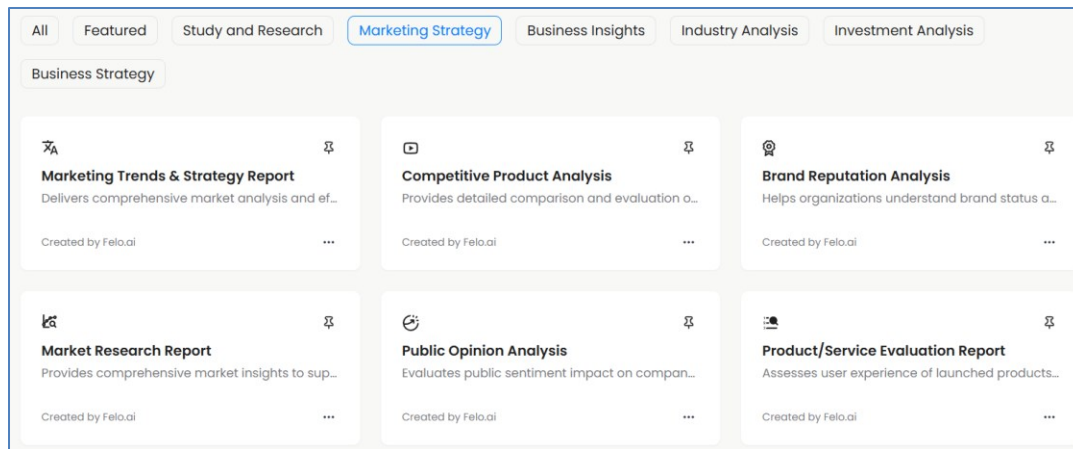


Figure 11 - The illustration of finished templates of AI Agents that are aimed to investigate a market

Market research agent templates in Felo AI can be configured to continuously monitor and synthesize developments relevant to hGears’ core markets, such as e-mobility components.

These agents typically follow a structured logic:

1. Identification of relevant data domains (industry news, regulatory updates, technology publications).
2. Extraction of key themes and signals (electrification trends, lightweight materials, cost pressures).
3. Interpretation of implications for product demand, customer requirements, and positioning.

In practical implementation, the marketing department at hGears could use such templates to generate periodic market intelligence briefs that inform strategic planning and campaign development. Rather than relying on ad hoc research, the agent ensures continuity and comparability over time, supporting more evidence-based marketing decisions.

Importantly, these templates can be adapted to reflect hGears’ specific value drivers such as precision, durability, or manufacturing scalability, subsequently translating generic market trends into company-relevant insights.

Advantages	Disadvantages
Economical and cost-effective compared to enterprise market intelligence platforms	Limited access to premium analyst reports and proprietary financial databases
Agent templates enable repeatable market, competitor, and customer research	Output quality depends heavily on prompt design and agent configuration
Flexible AI agents support exploratory analysis and contextual reasoning	Requires human validation for strategic, technical, or regulatory conclusions
Scales analytical capacity of small sales and marketing teams	Less suitable for formal investor-grade or compliance-driven intelligence
Easy integration into existing sales and marketing workflows	Risk of inconsistent insights if governance and standards are not defined

Table 4 - The review of advantages and disadvantages of the Felo AI

In conclusion, Felo AI's agent templates represent a shift from ad hoc research toward systematized, repeatable intelligence processes within B2B sales and marketing. For hGears, they offer a practical mechanism to operationalize market research, competitor analysis, and account intelligence in a resource-efficient manner.

Phase II: Market Analysis

The primary aim of the Market Analysis phase is to transform heterogeneous and unstructured market data into coherent, decision-relevant intelligence. When these analytical sub-tasks are performed manually, as illustrated in the flowchart in Chapter 4, the process is prone to significant time delays and inconsistencies in data quality.

NotebookLM

Cost: €264 euro/year (Google One AI Premium).

Considering most recent, functional and free AI tool for research of market trends it can be explored NotebookLM. This product of Google Company represents a distinct category of AI tools that can be defined as a document-grounded knowledge and reasoning environment. Unlike general-purpose generative models that draw from a broad and often opaque training set, NotebookLM operates as a Retrieval-Augmented Generation (RAG) system dedicated to the user's specific dataset. Its defining characteristic is that all outputs-answers, summaries, insights, and

visualizations are strictly grounded in the uploaded source documents. This constraint-based reasoning model makes NotebookLM particularly suitable for academic, strategic, and compliance-sensitive contexts where traceability and source fidelity are critical.

For a company such as hGears, which operates in a technically complex and highly regulated automotive supply chain, this capability directly addresses a central challenge: how to extract structured insight from extensive documentary material without losing contextual accuracy.

The integration of NotebookLM into hGears' workflow follows a linear progression from data ingestion to high-fidelity presentation.

Collaborative Intelligence Hub

The marketing team can establish dedicated notebooks for specific sectors, such as Industrial robots by uploading current industry journals and Tier-1 supplier news, the team creates a "living" document library. The chat interface then allows users to perform cross-document analysis, such as identifying a recurring shift in alloy requirements mentioned across five different engineering studies. This enables hGears to spot macro-trends that remain invisible when reports are read in isolation.

Synthesis and Strategic Briefing

The "Studio" panel within NotebookLM facilitates the transformation of complex data into structured formats. For the sales team, the platform can automatically generate briefing documents or FAQ sheets based on a prospect's public filings. This ensures that an account manager entering a negotiation is equipped with a summary of the client's recent financial pressures and technical goals, synthesized from the latest Q3 reports.

Visual and Multimodal Output

A significant evolution in the 2026 iteration of the platform is the native capability to generate Infographics and Slide Decks. By selecting specific sources, hGears marketers can prompt the system to "Convert these three technical reports into a visual comparison of sintering vs. traditional machining for EV gears." The system generates polished, visually structured infographics that can be directly exported for use in stakeholder meetings or marketing collateral. Moreover, the "Audio

Overview" feature a generated podcast-style dialogue allows executives to consume deep-dive research during transit, democratizing access to complex technical insights across the organization.

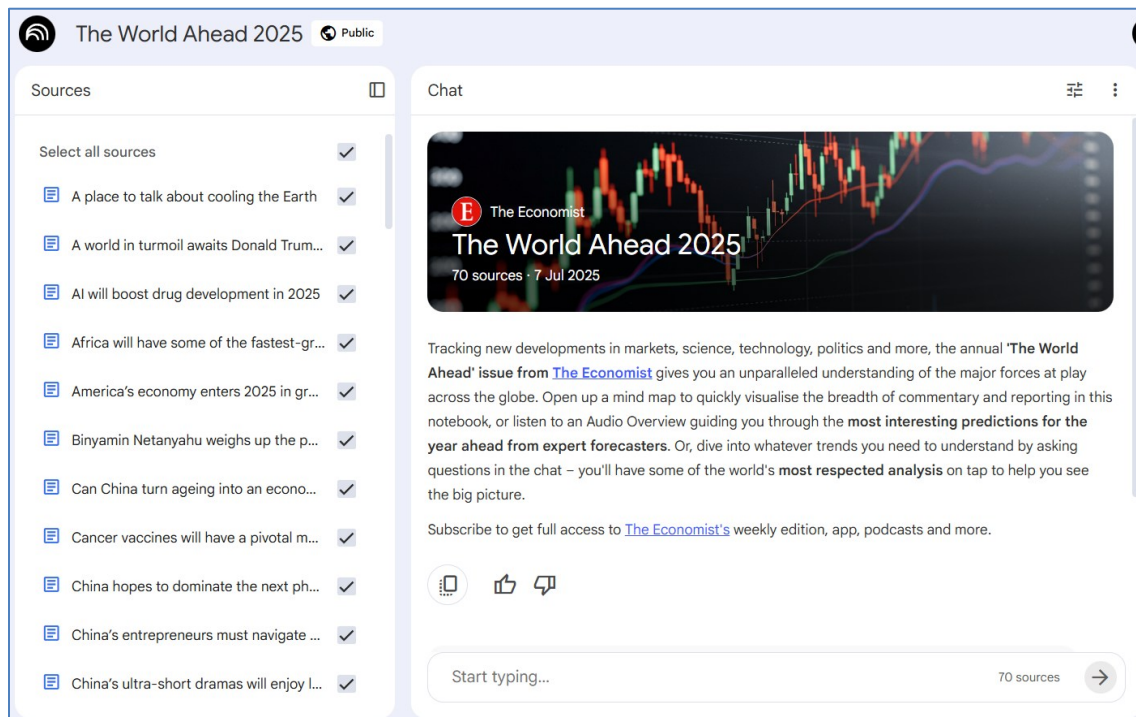


Figure 12 - The illustration of the working canvas with uploaded reports in NotebookLM

To sum up, NotebookLM can be considered the most effective AI instrument for document-intensive research and synthesis within hGears' sales and marketing ecosystem. Its ability to analyse multiple market reports simultaneously, answer questions exclusively based on those documents, and transform insights into visual and presentation-ready formats makes it a powerful tool for evidence-based B2B decision-making.

Napkin AI

Cost: €132 euro/year.

Napkin AI can be conceptualized as an AI-assisted visual reasoning and knowledge-structuring instrument that supports early-stage market analysis by transforming abstract ideas, fragmented insights, and exploratory reasoning into coherent visual representations. Unlike intelligence platforms that focus on data acquisition or document-grounded analysis, Napkin AI is primarily concerned with conceptual synthesis and sense-making.

Within a broader AI-supported market analysis process, Napkin AI is most effective during the exploratory and synthesis stages. For example, after preliminary insights have been gathered from sources such as market reports or AI-powered research tools, Napkin AI can be used to organize these insights into a coherent visual narrative.

In the case of, for instance, robotics market analysis, an analyst might begin by sketching a high-level structure distinguishing industrial robotics, logistics automation, healthcare robotics, and consumer applications. Napkin AI can then support iterative refinement, allowing the analyst to integrate additional insights such as technological convergence or customer adoption constraints into a unified framework.

This visual structuring plays a critical role in aligning cross-functional teams, as it creates a shared mental model that can be discussed, challenged, and refined collaboratively.

The big number of functions in this tool allows converting any reports that were obtained in previous stage in any type of visualisation, utilizing large language models combined with visual knowledge-structuring techniques, such as mindmaps, processes, timelines and different frameworks. Below is presented the example of auto-visualisation of segmented analysis of industrial robotic market, that were converted with AI in method of PESTEL analysis.

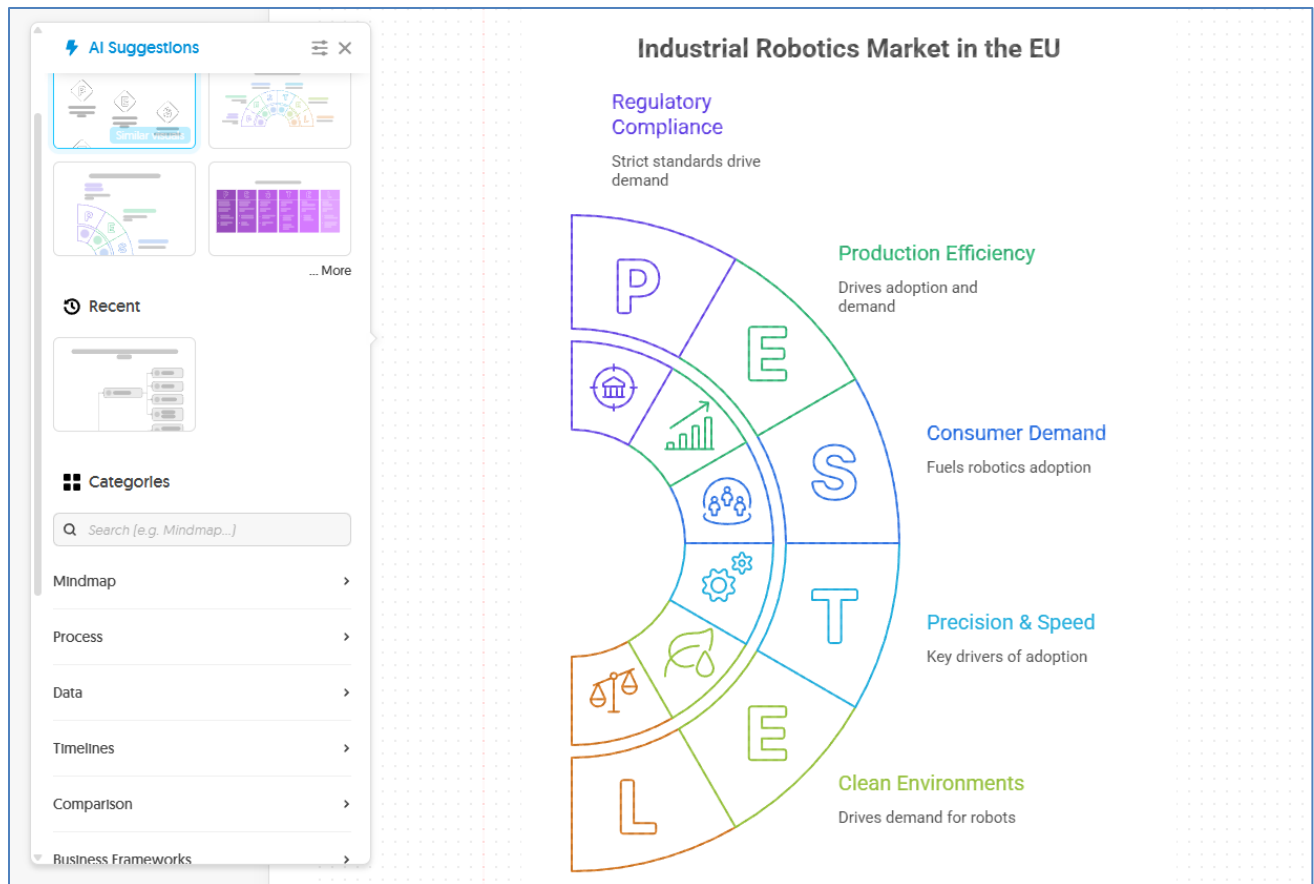


Figure 13 - The example of visualisation of the report in Napkin AI

Besides that, this instrument can be implemented among all market analysis activities due to big range of functions and ability to work with any type of data. In fact, it works with finished reports of workers inside a company as well as with generated inside the service. For instance, after realisation of primary entry barriers analysis for a new market, it can visualize right at the same sheet as it illustrated at the Figure 14 below:

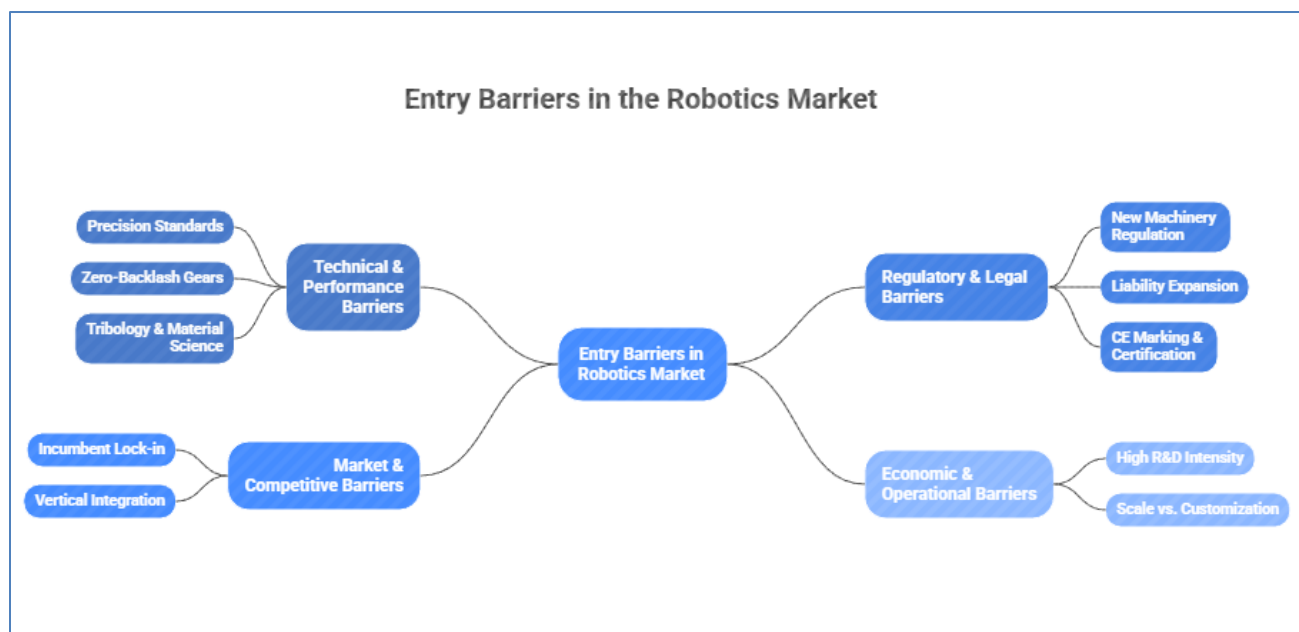


Figure 14 - Entry barrier analysis which was made and illustrated in Napkin AI

Napkin AI serves as an additional powerful tool for structuring thought, visualizing complexity, and supporting exploratory reasoning. By converting unstructured ideas and preliminary insights into coherent visual frameworks, it enhances analytical rigor at the front end of the market analysis process.

When integrated with data-driven intelligence platforms and document-based AI tools, Napkin AI contributes to a more holistic and methodologically sound approach to market analysis bridging the gap between information gathering and strategic decision-making.

PatSnap Analytics

Cost: €4600 euro/year.

PatSnap Analytics is an advanced innovation intelligence and intellectual property (IP) analytics platform designed to support strategic decision-making through large-scale analysis of patents, scientific literature, technical standards, and corporate innovation activity. Its core value proposition lies in transforming complex and highly technical IP data into structured insights that inform technology strategy, competitive positioning, and market opportunity assessment.⁵⁶

⁵⁶ Patsnap.com (2026). Official website.

This instrument possibly has a great contribution to the technology segmentation and analysis of technical aspects, because it integrates over 2 billion data points including patents, scientific literature, litigation records, and venture capital flows into a unified analytical ecosystem. This paper outlines a professional integration framework for PatSnap and critically evaluates its utility in technical segmentation and strategic R&D.

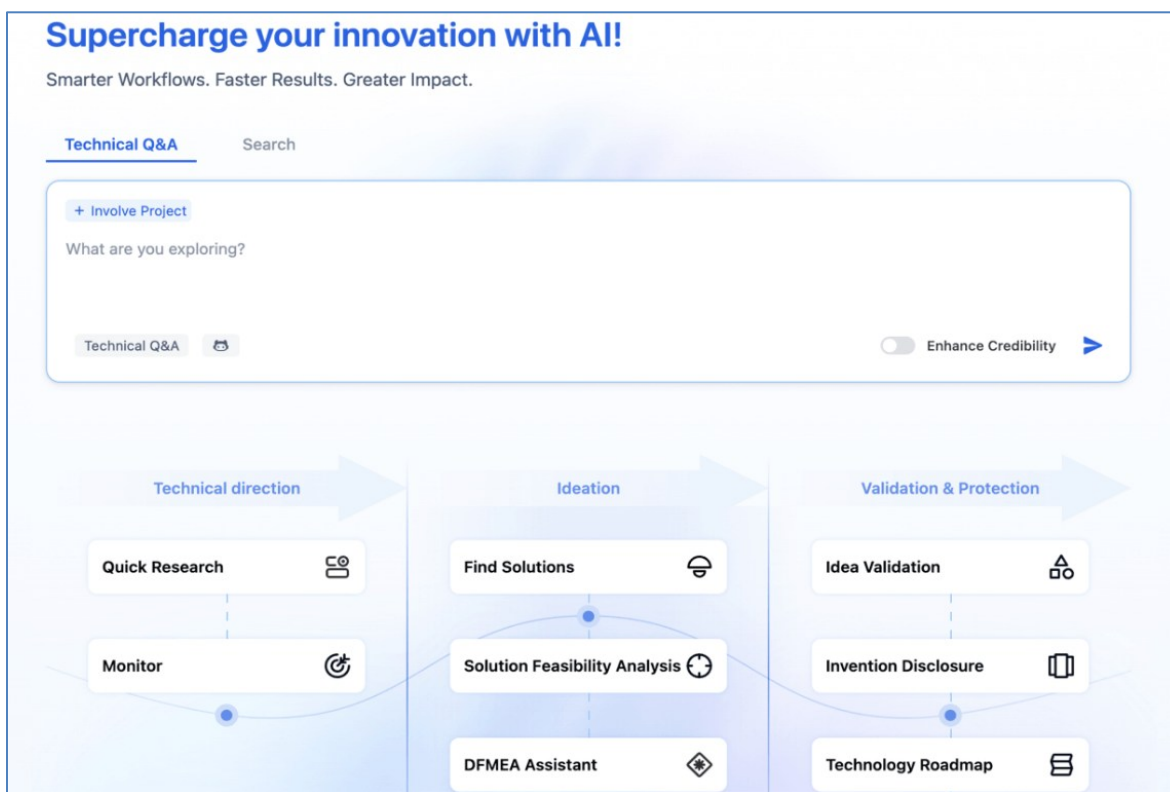


Figure 15 - The illustration of searching possibilities of technical documentation in PatSnap Analytics

The integration of PatSnap Analytics within the sales and marketing functions of hGears should be understood as a strategic intelligence enabler that enhances the quality of opportunity identification, customer engagement, and long-term business development. The business developer at hGears operates at the intersection of sales, strategy, and technology. Their task is not only to manage existing accounts but also to identify future growth opportunities, anticipate customer needs, and position hGears as a technologically credible partner. Therefore, the specialist must be able to investigate any technical branch, that can be possible with this additional instrument.

Advantages	Disadvantages
Deep and comprehensive patent and innovation data supporting technology-driven market insight	Limited direct insight into customer demand, pricing, and short-term commercial dynamics
Enables early identification of emerging technologies and future market opportunities	Patent activity does not guarantee commercialization or market success
Supports strategic selling by revealing customers' and competitors' R&D directions	High learning curve for non-technical sales and marketing professionals
Strengthens value-based selling through evidence-backed technology positioning	Requires collaboration with R&D or IP experts for correct interpretation
Enhances long-term business development and opportunity prioritization	Relatively high licensing and implementation costs

Table 5 - The review of advantages and disadvantages of the PatSnap Analytics

Within hGears' sales and marketing team, PatSnap Analytics can function as a strategic intelligence layer that empowers business developers to engage customers earlier, more credibly, and with greater technological relevance. By embedding innovation intelligence into opportunity identification, account strategy, and value-based selling, this tool enhances the strategic depth of business development activities.

When integrated alongside market intelligence platforms and AI-driven research tools, PatSnap contributes to a more forward-looking, technology-informed approach to B2B sales and marketing particularly critical in innovation-driven sectors such as automotive and advanced manufacturing.

Phase III: Reporting and Dissemination

The critical handover from intelligence gathering to strategic communication represents a high-value insertion point for AI, yet it frequently serves as a point of failure in traditional workflows. In the manual state, the culmination of weeks of research is typically a static "information artifact" fixed PDF document or slide deck. This effectively freezes dynamic, multi-dimensional market data into a rigid, unchangeable snapshot, severing the link between the underlying evidence and the final presentation. For that reason, it should be used the opportunity of the replacement the simple file in PDF format by the interactive BI dashboard, that can answer the questions visually. In previous phase II it was explored the instrument Napkin AI, that can be used as tool for conversion data to visual infographics. Thus, Napkin AI may also be helpful for that segment, however speaking about dissemination and reporting in business sphere, inevitably appear the

programmes Microsoft Excel and Google Sheets. Since these programmes are the most prominent for reporting in corporate environment, it is necessary to explore other instrument, that can optimize the activity inside them.

QuadraticHQ AI

Cost: €198 euro/year.

QuadraticHQ AI can be conceptualized as an AI-augmented spreadsheet and analytical workspace that combines the familiarity of traditional spreadsheet tools with advanced AI-assisted reasoning, research, and visualization capabilities. Unlike conventional spreadsheets, which require manual data manipulation and formula construction, QuadraticHQ integrates AI directly into the analytical workflow, enabling users to generate tables, perform analysis, and create visualizations through natural language interaction.⁵⁷

From an academic perspective, QuadraticHQ represents a convergence of end-user computing, data analytics, and generative AI, lowering the technical barrier to structured analysis while preserving the transparency and traceability that spreadsheets offer. Unlike traditional reporting tools that separate analysis from presentation, QuadraticHQ integrates both functions within a single environment. This integration reduces information loss between analysis and communication and ensures consistency between underlying data, calculations, and reported conclusions.

For sales and marketing teams at hGears, internal reporting often targets multiple stakeholder groups, including senior management, product development, and regional sales units. These audiences differ in analytical depth requirements, but all demand clarity, transparency, and relevance.

QuadraticHQ AI supports internal reporting by enabling business developers to:

1. Convert analytical tables directly into charts and dashboards without manual reformatting;
2. Maintain live links between assumptions, calculations, and visual outputs;

⁵⁷ QuadraticHQ.com (2026). Official website

3. Iteratively adjust reports in response to management feedback while preserving analytical integrity.

This capability is particularly valuable in strategic reviews, where questions frequently require rapid recalculation or alternative scenario presentation. QuadraticHQ allows such iterations to be executed and communicated efficiently, strengthening the responsiveness of the sales and marketing organization.

Basically, the core feature of that instrument is the ability to rapidly create a customizable table template, that can be filled manually or with the utilization of LLM model integrated inside the programme. For instance, as a preliminary robotic market segmentation analysis, with the detailed prompt in the chat area (Figure 16), it generates the finished table with multiple columns that demonstrate different types of market segmentation (Figure 17).

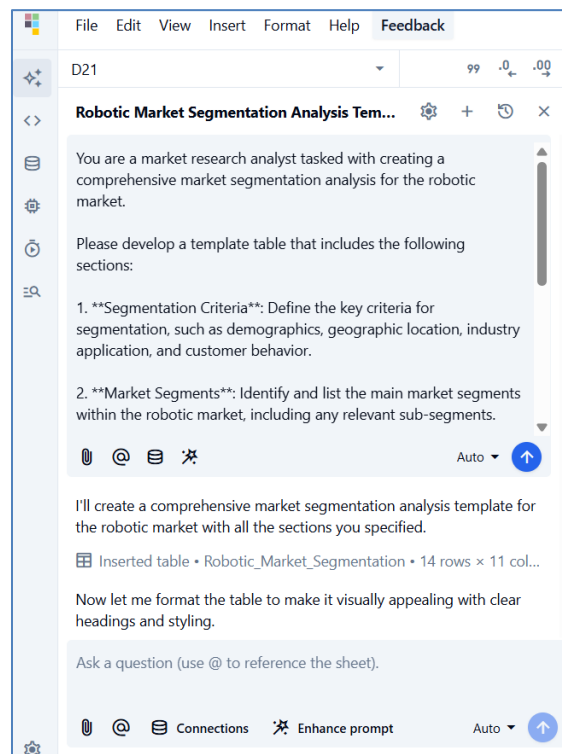


Figure 16 - The illustration of the chat area in QuadraticHQ AI

	D	E	F	
1				
2	Segment Size (USD)	Growth Potential	Key Trends	Customer Need
3	\$15B+	High (8-10% CAGR)	Collaborative robots, AI integration, predictive maintenance	Precision
4	\$8B+	High (10-12% CAGR)	Miniaturization, speed optimization, cleanroom compatibility	High
5	\$12B+	Very High (15-20% CAGR)	AMRs, warehouse automation, last-mile delivery	\$
6	\$5B+	Moderate (6-8% CAGR)	Autonomous navigation, IoT connectivity, sustainability	E
7	\$10B+	High (12-15% CAGR)	Minimally invasive surgery, AI-assisted procedures, remote surgery	Precision
8	\$2B+	High (10-12% CAGR)	Exoskeletons, personalized therapy, home-based solutions	Af
9	\$3B+	Moderate (5-7% CAGR)	Voice AI, companion robots, educational robots	A
10	\$2B+	Low-Moderate (3-5% CAGR)	STEM education, programmable robots, AR integration	E
11	\$4B+	Very High (18-22% CAGR)	Computer vision, autonomous tractors, precision agriculture	Crop handling
12	\$2B+	High (15-18% CAGR)	Drone technology, AI crop analysis, targeted application	Accu
13	\$8B+	High (8-10% CAGR)	Autonomous navigation, swarm technology, AI decision-making	Relia
14	\$15B+	High (10-12% CAGR)	Extended range, stealth capabilities, counter-drone tech	Paylo
15	[Enter size]	[Rate potential]	[Identify trends]	
16				
17				
18				
19				
20				
21				
22				

Figure 17 - The illustration of the finished table of robotic market segmentation made by QuadraticHQ AI

In conclusion, QuadraticHQ AI plays a critical role in the reporting and dissemination phase of market analysis and business development at hGears. By integrating structured analysis with visualization and presentation capabilities, it enables sales and marketing teams to communicate insights more effectively, respond dynamically to stakeholder feedback, and maintain analytical consistency throughout the decision-making process.

Make.com

Cost: €108 euro/year + API keys.

Make.com can be conceptualized as a no-code/low-code workflow automation platform that enables the orchestration of data flows between heterogeneous digital systems. From an analytical and organizational perspective, Make.com functions as an integration and dissemination infrastructure, rather than as a data analysis or intelligence tool.

Its strategic relevance lies in its ability to automate repetitive data collection, transformation, and distribution tasks, thereby reducing manual intervention and improving the timeliness and consistency of reporting processes. Unlike traditional cron-jobs that run on a fixed schedule regardless of need, Make.com utilizes "Webhooks" and "Triggers" to execute workflows instantly when a specific business event occurs.

Make.com utilizes a "Visual Canvas" where you build workflows called Scenarios by connecting "Modules" (apps). Its relationship with AI is three-fold:

1. **Native AI Toolkit**

Make provides built-in modules for major LLMs (OpenAI, Anthropic, Gemini). So, it is possible to insert a ChatGPT module in the middle of a workflow to summarize a 50-page technical report found in AlphaSense before it is sent to your email.

2. **Autonomous AI Agents**

The latest AI Agent feature allows to set a goal (e.g., "Find all new competitors in the German e-bike gear market") rather than a fixed path. The agent then chooses which of your connected tools (like PatSnap or Felo) to query, analyzes the results, and returns a structured answer.

3. **Computer Vision and OCR**

Make.com can use AI to "read" engineering drawings or PDF invoices from hGears' suppliers, extracting specific technical values (like gear torque or material density) and pushing them into a structured database.

In business development data collection often relies on unstructured communication channels, most notably email. Business developers frequently send standardized inquiry emails to multiple suppliers or partners, requesting comparable information on production volumes, technical specifications, or capacity constraints. Manually extracting this information and consolidating it into reporting formats (e.g. spreadsheets or dashboards) introduces delays, transcription errors, and inconsistencies. Make.com addresses this inefficiency by enabling automated extraction and dissemination of structured data from unstructured email communication.

As an example, a business developer at hGears contacts multiple sales representatives from robotics companies, asking identical questions regarding technical characteristics and production volumes. Responses arrive asynchronously and in varying formats. Meanwhile, utilizing Make.com, it is possible to design an automated workflow that:

1. Monitors an email inbox (e.g. Gmail) for incoming messages;
2. Identifies emails containing a predefined keyword or phrase (e.g. "PRODUCTION" or "GEARS");
3. Extracts the relevant text segment associated with that phrase;

4. Transfers the extracted data directly into a structured data sheet (e.g. Google Sheets) as a new row.

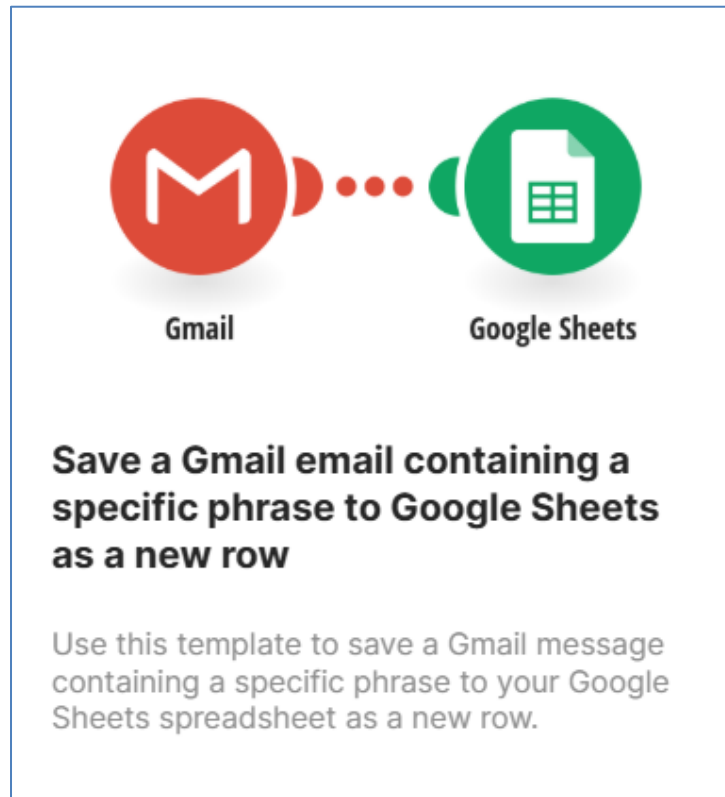


Figure 18 - The illustration of the workflow template of automation Gmail connected to Google Sheets in Make.com

This access is granted through API credentials both for Gmail and Google Sheets that explicitly define what actions are permitted (e.g. read emails, append rows) and within which scope (specific inbox, specific spreadsheet). From a technical and governance perspective, an API key functions as a secure authentication credential that authorizes Make.com to access and interact with third-party systems such as Gmail, Google Sheets, CRMs, or analytics platforms on behalf of a user or organization. In the context of reporting and dissemination, API keys ensure that automated workflows operate reliably, securely, and traceably, without requiring continuous manual authentication.

This process effectively converts qualitative email correspondence into a continuously updated quantitative dataset, without requiring manual data entry.

To summarize, Make.com plays a critical enabling role in the reporting and dissemination phase of market analysis by automating the transformation of unstructured communication into structured, shareable data. Within an integrated analytical ecosystem, this platform functions as the operational backbone that connects intelligence generation with organizational reporting ensuring that insights do not remain isolated in inboxes, but are transformed into actionable, organization-wide knowledge.

Phase IV: Executive Estimation and Decision-Making

Phase IV represents the culmination of the sales and marketing process, where analytical insights are translated into strategic managerial decisions. At this stage, executives are confronted with high-impact choices most notably, the decision to enter or refrain from entering a new market. Such decisions carry long-term financial, organizational, and reputational consequences, particularly in B2B industrial contexts where market entry often entails substantial upfront investment and extended return horizons.

Given the strategic weight of these decisions, reliance on intuition alone is insufficient. Therefore, from the experience at hGears, executive estimation must be based on highly detailed analytical reports and visual decision dashboards, which synthesize outputs from preceding phases of market, competitive, and technological analysis.

Within Phase IV, large language models play a distinct but complementary role. Rather than replacing executive judgment, LLMs function as cognitive amplifiers, capable of:

1. Analyzing extensive reports across multiple domains;
2. Identifying inconsistencies or latent risks;
3. Comparing strategic alternatives across scenarios;
4. Generating structured recommendations grounded in available evidence.

Through natural-language interaction, executives can query reports and dashboards directly, exploring “what-if” scenarios or requesting clarifications without the mediation of analysts. This reduces information asymmetry between technical analysis and strategic interpretation, thereby accelerating decision cycles while preserving analytical depth.

Despite the sophistication of AI-supported analysis, this phase remains inherently a human responsibility. Decisions such as “go” or “no-go” in new market entry involve not only measurable variables but also contextual judgment, ethical considerations, organizational readiness, and risk tolerance dimensions that remain outside the full scope of algorithmic reasoning.

Subsequently, effective executive estimation emerges from a fusion of human intelligence and artificial intelligence. Managerial experience provides contextual awareness, strategic intuition, and accountability, while AI contributes analytical rigor, scalability, and the capacity to process complexity beyond human cognitive limits.

Gemini 3 Pro

Cost: €264 euro/year (with Google One AI Premium).

Regarding the effective instrument that can help at the phase of making decisions, it is more reasonable to collaborate with LLM such as Google’s Gemini 3 Pro. While previous iterations of Large Language Models (LLMs) functioned primarily as sophisticated retrieval and synthesis engines, Gemini 3 Pro introduces a System 2 cognitive architecture referred to commercially as "Deep Think." This capability allows the model to pause, deliberate, and iterate on complex logical chains before outputting a response, fundamentally altering its utility for high-stakes executive decision-making.⁵⁸

Rather than replacing executive authority, Gemini 3 Pro supports structured reflection and comparative reasoning. It enables senior managers to ask high-level strategic questions such as the robustness of revenue projections under adverse scenarios or the relative importance of specific risk drivers and receive coherent, evidence-based responses grounded in the available analytical material. This capability reduces informational asymmetries between different decision-makers (Sales Director and CEO) and helps mitigate redundancy in independent estimations by establishing a shared analytical reference point.

⁵⁸ Gend & Co. (2025). Gemini Deep Think.

Key Features of Gemini 3 Pro

Gemini 3 Pro introduces several paradigm-shifting capabilities that distinguish it from the broader LLM landscape:

1. Native Multimodality

Built with a unified architecture, the model processes text, images, audio, video, and code within a single latent representation. This allows for sophisticated "cross-modal" reasoning, such as analyzing a video of a technical workflow and generating a structured SOP (Standard Operating Procedure) simultaneously.

2. 1 Million Token Context Window

The model maintains a vast "working memory," capable of digesting entire technical libraries, hour-long video feeds, or massive code repositories (up to 1,048,576 tokens) without losing coherence or "forgetting" earlier details.

3. Deep Think Mode

Similar to specialized reasoning chains, this mode allows the model to allocate more compute time to a query. In this state, it can solve PhD-level reasoning tasks, reaching a score of 41% on the "Humanity's Last Exam" benchmark.

4. Agentic Functionality

Through the Google Antigravity infrastructure, Gemini 3 Pro can act as an autonomous agent planning, executing, and verifying multi-step tasks across cloud services, terminal environments, and software development workflows.

5. Spatial and Screen Understanding

A standout feature is its pixel-precise "pointing" capability. It can identify specific UI elements on a desktop or mobile screen and provide exact coordinates, enabling robust robotic process automation (RPA) and computer-use agents.

While competitors like Claude 4.5 are often preferred for long-form creative writing or precise bug-fixing in large repos, Gemini 3 Pro distinguishes itself through Visual Intelligence. Its performance on the ScreenSpot-Pro benchmark (72.7%) dramatically outperforms GPT-5.1

(3.5%), making it the premier choice for developers building AI agents that must "see" and interact with digital interfaces. Additionally, its native integration with the Google Workspace ecosystem and the Gemini CLI allows for direct orchestration of professional workflows that other models cannot access as natively.

LLM	Primary Strength	Context Window	Math	Visual Reasoning	Agentic Coding
Gemini 3 Pro	Multimodal Reasoning	1 Million Tokens	95.0% (Top Tier)	31.1% (ARC-AGI-2)	Strong (76.2% SWE-B)
GPT-5.1	Generalist All-Rounder	~128k - 256k Tokens	94.00%	17.60%	Strong (76.3% SWE-B)
Claude 4.5	Coding & Bug Fixing	Up to 2 Million Tokens	87.00%	13.60%	Elite (77.2% SWE-B)

Table 6 - Comparison of Gemini 3 Pro with Contemporary LLMs

To make a conclusion, in phase IV Gemini 3 Pro can be deployed as a powerful LLM-based decision-support instrument that bridges analytical depth and executive judgment. By enabling natural-language interaction with detailed reports and AI-generated dashboards, supporting explainable reasoning, and facilitating structured scenario analysis, Gemini 3 Pro enhances both the quality and efficiency of executive estimation.

When embedded within a governance framework that emphasizes human accountability, Gemini 3 Pro contributes to more confident, transparent, and strategically sound “go/no-go” decisions demonstrating how advanced LLMs can responsibly augment executive decision-making in complex B2B environments.

5.2 Development of the AI Automation

Existing AI solutions that can be applied to sales and marketing activities, demonstrate the sustainable degree of reliability and credibility, however technical companies prefer to rely on the instruments, that were developed by themselves and hosted on all levels of utilization. The most appropriate method of combining finished AI products and hosting own platform with possibility of changing the entire process of data transferring is building own AI automation.

AI automation plays a critical role in modern sales and marketing processes by enabling the seamless orchestration of data, analytics, and decision-support tools. As organizations increasingly rely on multiple AI systems ranging from market intelligence platforms and large language models to dashboards and reporting tools the challenge shifts from isolated tool adoption to end-to-end process integration. Automation platforms address this challenge by connecting heterogeneous systems, standardizing workflows, and reducing manual coordination across analytical phases.

5.2.1 AI Automation Platforms

Make.com and n8n are widely used automation platforms designed to connect applications, data sources, and AI services through configurable workflows. Both tools enable the automation of repetitive tasks, such as data ingestion, report generation, dashboard updates, and notification flows, thereby increasing operational efficiency within sales and marketing teams.

In previous paragraph it has already mentioned that Make.com is primarily positioned as a low-code, cloud-based automation platform. Its strengths lie in ease of use, visual workflow design, and rapid implementation. For organizations seeking to automate relatively standardized processes with minimal technical overhead, Make.com provides an accessible entry point. However, its architecture is optimized for predefined integrations and linear workflows, which may limit flexibility in more complex analytical environments.

N8n, by contrast, is designed as a workflow automation engine with a strong emphasis on extensibility and control. It supports both low-code configuration and full-code customization, allowing users to design sophisticated automation logic that integrates APIs, databases, AI models, and internal systems. Its open-source foundation enables local deployment and deeper modification of workflows, which is particularly relevant in environments with advanced analytical or governance requirements.

For the implementation of the own project within the context of an internship, n8n represents the more appropriate automation platform. Its robustness, functional breadth, and high degree of customizability make it better suited to complex, multi-tool AI workflows than more restrictive low-code alternatives.

Specifically, n8n allows for:

1. Fine-grained control over data flows between AI tools and analytical systems;
2. Custom logic for decision thresholds, validation steps, and exception handling;
3. Integration with both cloud-based and internal systems;
4. Greater transparency and learning value for an intern engaging deeply with AI-enabled process design.

While Make.com excels in simplicity and rapid deployment, n8n's architectural flexibility aligns more closely with the requirements of an academically grounded, technically sophisticated project. It enables the exploration of automation not merely as a convenience tool, but as a core component of AI-driven organizational intelligence.

5.2.2 First project in n8n

The objective of the automation of marketing activity is to optimize time-consuming processes that can be executed without human intervention with the eventual assessment of a specialist. As it evident from the flowchart (Figure 9 and Figure 10), the longest stage is Market Analysis.

The main concept of the project in n8n is implemented basing on the breakdown structure (Figure 10) and personal experience from the internship at hGears. The finished template is presented below:

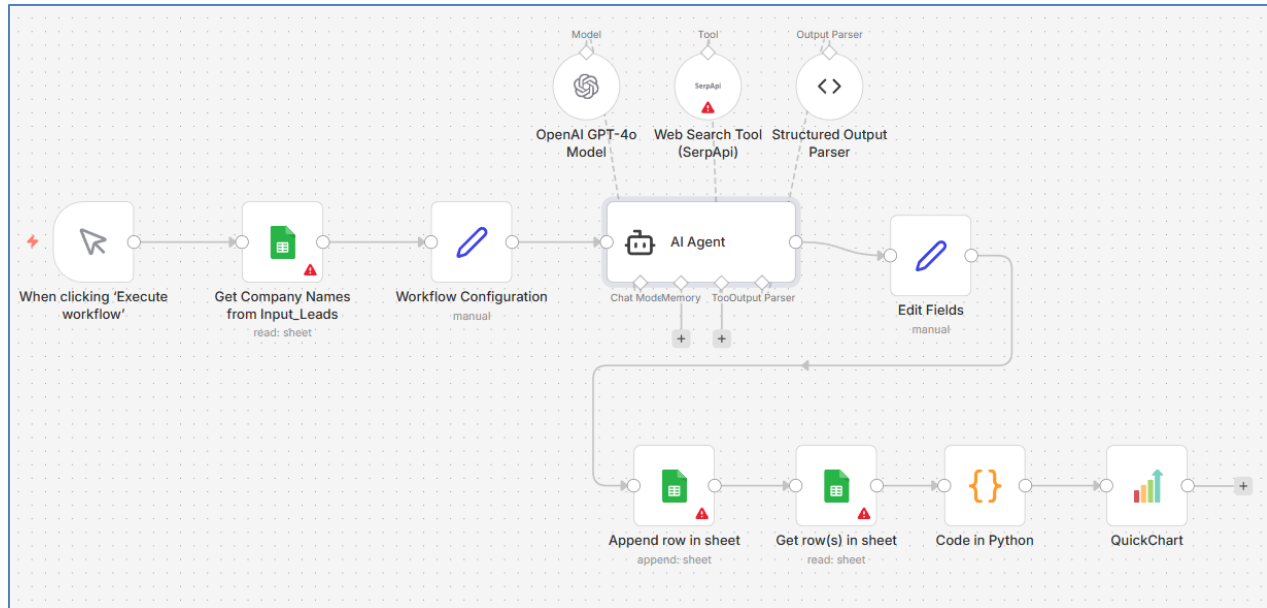


Figure 19 - The finished concept of the automation of marketing process with AI Agent

In order to implement this workflow completely it is necessary to acquire API keys (Application Programming Interface), that represented a code used to identify an application or user and is used for authentication in computer applications. These API keys are required to connect different Google and other web services.

First step is the manual initiation of the workflow through an explicit execution command, which functions as the triggering mechanism for the entire automation pipeline. This step ensures that the process is deliberately activated by a user action, thereby allowing controlled execution and preventing unintended or unscheduled runs of the workflow.

Following the trigger, company names are systematically extracted from an input dataset by reading a structured spreadsheet containing lead information. This operation establishes the primary data foundation of the workflow, ensuring that subsequent processing stages rely on a clearly defined and externally maintained data source. The use of a Google's spreadsheet as an input medium supports transparency, traceability, and ease of updates without requiring changes to the automation logic itself. The example of the table with company's names is presented in Figure 20:

	A	B	C
1		Company	
2	1	Rokae Robotics	
3	2	JAKA Robotics	
4	3	EFORT Intelligent Equipment	
5	4	Shanghai STEP Electric	
6	5	Inovance	
7	6	Borunte Robot	
8	7	Estun Automation	
9	8	Siasun Robot & Automation	
10	9	ABB Robotics	
11	10	KUKA	
12	11	Robopac S.r.l.	
13	12	Universal Robots	
14	13	Bosch	
15	14	CLOOS	
16	15	Comau	
17	16	Staubli Robotics	
18	17	Dürr Group	

Figure 20 - The example of the first table with the list of robotic companies

In the next phase, a workflow configuration step is applied to define operational parameters and align the incoming data with the requirements of downstream components. This configuration stage plays a critical role in standardizing inputs for JSON format, managing execution settings, and ensuring interoperability between different nodes within the workflow. As a result, the automation maintains consistency and robustness when handling multiple records or repeated executions. The example of the configuration the data from the table to JSON:

Company (string) = {{ \$json.company }}.

Subsequently, the workflow transitions to an AI agent, which represents the central analytical and decision-making component of the system. This agent integrates a large language model with an external web search tool and a structured output parser. Through this combination, the AI agent is able to enrich the initial company data by retrieving relevant external information, performing contextual analysis, and generating structured outputs that conform to predefined schemas. This step enhances the informational value of the original dataset while maintaining methodological rigor through structured parsing.

This agent is executed by the GPT model 4o, that is the most optimized for such workflow configuration in 2026. Meanwhile, the key step for adjusting the agent is prompt writing. In order

to realize full power of the Agent it is necessary to write a detailed prompt that is demonstrated below:

****Role**:** You are a Strategic Analyst.

****Task**:** Research and extract specific metadata for the company: [Company Name].

****Output Requirements**:**

1. Return ONLY a valid JSON object. No prose, no markdown code blocks (no ``json), and no preamble.
2. Field Definitions: - "country": The primary country where the headquarters is located. - "region": The continental economic region (e.g., European Union, NAFTA, ASEAN). - "turnover": The most recent Annual Turnover. Numeric value only. If unknown or private, use 0. - "sources": A list of URLs or specific names of reports used.

****Strict JSON Schema**:**

```
{  
"company": "string", "country": "string", "region": "string", "turnover": number, "sources":  
["string"]  
}
```

****Handling Uncertainty**:**

If a value cannot be found, do not hallucinate. Use "Unknown" for strings and 0 for numbers.

Within this context, the structured output parser constitutes a critical control mechanism for enforcing schema compliance. The parser is configured using a JSON Schema definition, which formally specifies the expected structure, data types, and semantic descriptions of each output field. Attributes such as company name, country of operation, and regional classification are explicitly defined as string-based properties, thereby constraining the AI agent's output to a deterministic and machine-readable format. This schema-driven approach reduces ambiguity, mitigates the risk of malformed outputs, and enhances the reliability of AI-generated data within an automated pipeline. The JSON code for that parser is presented below:

```
{  
  "type": "object",  
  "properties": {  
    "company": {
```

```

    "type": "string",
    "description": "Name of the company analysed"
  },
  "country": {
    "type": "string",
    "description": "Where the company is based"
  },
  "region": {
    "type": "string",
    "description": "continental economic region"
  },
  "turnover": {
    "type": "number",
    "description": "The most recent annual turnover"
  },
  "sources": {
    "type": "string",
    "description": "sources of the findings"
  },
  "required": ["company", "country", "region", "turnover", "sources"]
}

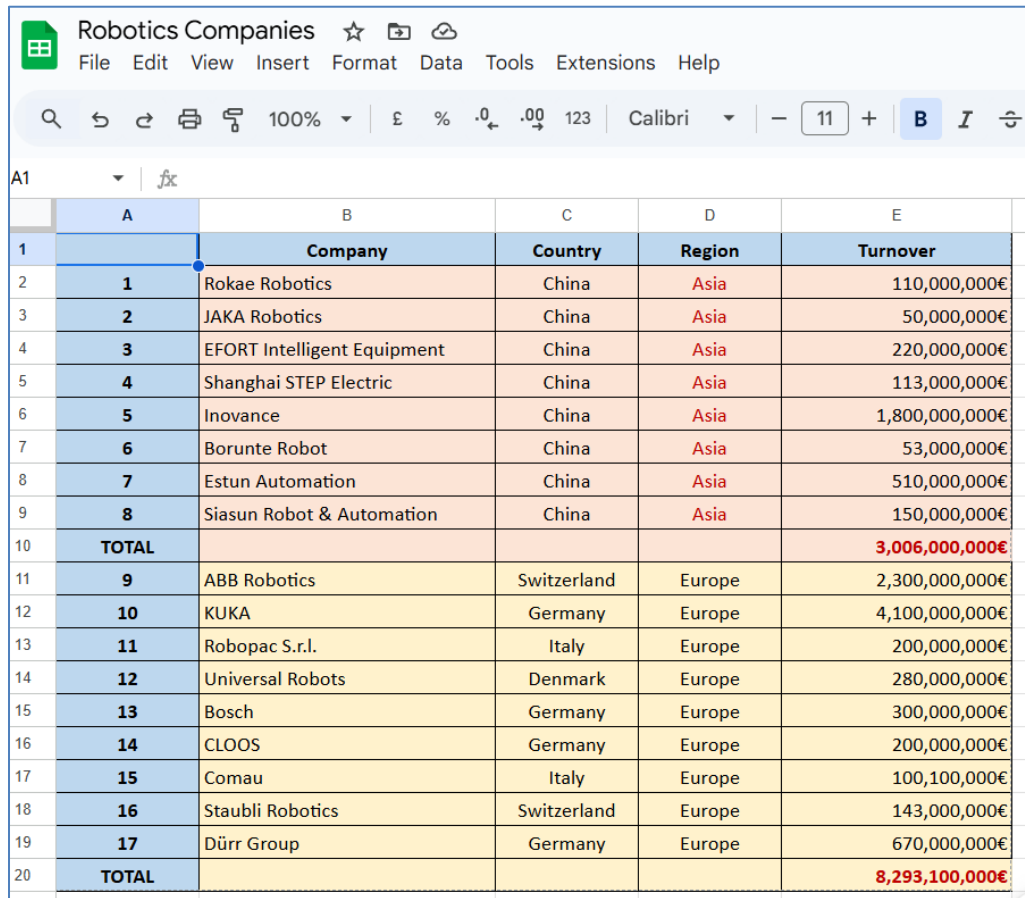
```

The structured output parser also operates as an intermediary validation layer between the AI agent and downstream workflow nodes. By mapping AI responses directly into a predefined schema, it ensures that only validated and correctly structured data are propagated forward. The availability of schema parameters and optional auto-formatting controls further supports error handling and output normalization, reinforcing methodological rigor and reproducibility in the automation process.

After schema validation, an edit-fields operation is conducted to further refine the parsed outputs. This stage focuses on field-level transformations, normalization, and alignment with storage or analytical requirements. By applying these adjustments, the workflow ensures that the data conform not only to syntactic constraints but also to semantic and contextual expectations.

The refined data are then appended as new rows into a spreadsheet, enabling persistent storage and the incremental accumulation of enriched records. This append operation facilitates longitudinal data collection and allows historical results to be preserved alongside newly generated insights. The spreadsheet thus functions as both a dynamic repository and a reference point for subsequent analysis.

The final table with the collected data retrieved from the research implemented by AI Agent should look like at the example below:



	A	B	C	D	E
		Company	Country	Region	Turnover
1		Rokae Robotics	China	Asia	110,000,000€
2	1	JAKA Robotics	China	Asia	50,000,000€
3	2	EFORT Intelligent Equipment	China	Asia	220,000,000€
4	3	Shanghai STEP Electric	China	Asia	113,000,000€
5	4	Inovance	China	Asia	1,800,000,000€
6	5	Borunte Robot	China	Asia	53,000,000€
7	6	Estun Automation	China	Asia	510,000,000€
8	7	Siasun Robot & Automation	China	Asia	150,000,000€
9	8				
10	TOTAL				3,006,000,000€
11	9	ABB Robotics	Switzerland	Europe	2,300,000,000€
12	10	KUKA	Germany	Europe	4,100,000,000€
13	11	Robopac S.r.l.	Italy	Europe	200,000,000€
14	12	Universal Robots	Denmark	Europe	280,000,000€
15	13	Bosch	Germany	Europe	300,000,000€
16	14	CLOOS	Germany	Europe	200,000,000€
17	15	Comau	Italy	Europe	100,100,000€
18	16	Staubli Robotics	Switzerland	Europe	143,000,000€
19	17	Dürr Group	Germany	Europe	670,000,000€
20	TOTAL				8,293,100,000€

Figure 21 - The final table with the results of marketing analysis

Following data storage, the workflow retrieves the updated records by reading rows from the spreadsheet. This retrieval step ensures synchronization between stored data and computational logic, enabling validation, aggregation, or iterative analysis based on the most recent dataset.

In the subsequent stage, a Python-based processing node is employed to transform the tabular data retrieved from the spreadsheet into a format compatible with the QuickChart visualization component. Rather than performing general-purpose analysis, this node executes a structured data aggregation procedure in which company records are grouped by their associated geographic regions. Using programmatic logic, unique company names are collected for each region, ensuring that duplicate entries do not distort the resulting counts. The node then computes the number of

distinct companies per region and constructs two aligned arrays: one containing region labels and another containing the corresponding company counts. These outputs are assembled into a chart-ready JSON structure, including dataset labels and numerical values, which conforms explicitly to the input requirements of the QuickChart node. Through this transformation, the Python module functions as a data-shaping intermediary, bridging raw tabular records and standardized visualization input while preserving analytical clarity and reproducibility. The python code that is utilized in this stage is demonstrated below:

```
# Loop over input items and add a new field called 'my_new_field' to the JSON of each one
from collections import defaultdict
```

```
companies_by_region = defaultdict(set)
```

```
for item in items:
```

```
    company = item.get("company")
```

```
    region = item.get("region")
```

```
    if not company or not region:
```

```
        continue
```

```
    companies_by_region[region].add(company)
```

```
labels = []
```

```
counts = []
```

```
for region, companies in companies_by_region.items():
```

```
    labels.append(region)
```

```
    counts.append(len(companies))
```

```
return [
```

```
    {
```

```
        "labels": labels,
```

```
        "datasets": [
```

```
            {
```

```
                "label": "Number of Companies",
```

```
                "data": counts
```

```
            }
```

```
        ]
```

```
    }
```

```
]
```

Finally, the workflow concludes with a visualization component, where the processed and analyzed data are rendered in graphical form. This final step translates structured numerical outputs into visual representations, thereby supporting interpretation, comparative evaluation, and evidence-based decision-making. Through this comprehensive sequence of steps, the automation integrates data ingestion, AI-driven enrichment, schema validation, computation, and visualization into a coherent and methodologically sound process.

In conclusion, the described automation project represents a coherent and methodologically robust integration of data ingestion, AI-driven enrichment, schema validation, programmatic data transformation, and visualization. By structuring the workflow as a sequential yet interoperable set of nodes, the process ensures consistency, reproducibility, and analytical transparency across all stages of execution. The combination of structured data sources, controlled AI outputs, and standardized visualization formats enables the transformation of raw lead information into actionable insights. As a result, the automation not only reduces manual intervention but also establishes a scalable analytical framework that can be repeatedly applied to evolving datasets without compromising data quality or interpretability.

From a B2B marketing and sales perspective at hGears, the implementation of this automation offers several strategic advantages:

1. **Enhanced lead intelligence** through AI-driven enrichment of basic company data with contextual and geographic information.
2. **Improved data quality and consistency** ensured by structured output parsing and schema validation across the entire workflow.
3. **Significant time and cost savings** by automating manual research, data cleaning, aggregation, and reporting tasks.
4. **Stronger alignment between marketing and sales teams** due to the use of standardized, shareable data structures and unified analytical outputs.
5. **Competitive advantage in B2B markets** through the systematic use of AI, automation, and analytics to transform raw lead data into actionable insights.

5.2.3 Second Project in n8n

One of the most crucial abilities for the specialist in marketing and sales department is to be aware of the news agenda and updates in different technology environments. Therefore, the second project of AI automation is dedicated to the creation of weekly news briefs. As an example of the industry was taken the robotic market, however the finished template can be duplicated and adjusted to multiple technological spheres. The main objective of this project is to provide the specialists the most important and valuable news in the industry that can affect strategically and optimize their working hours. The finished project is presented below:

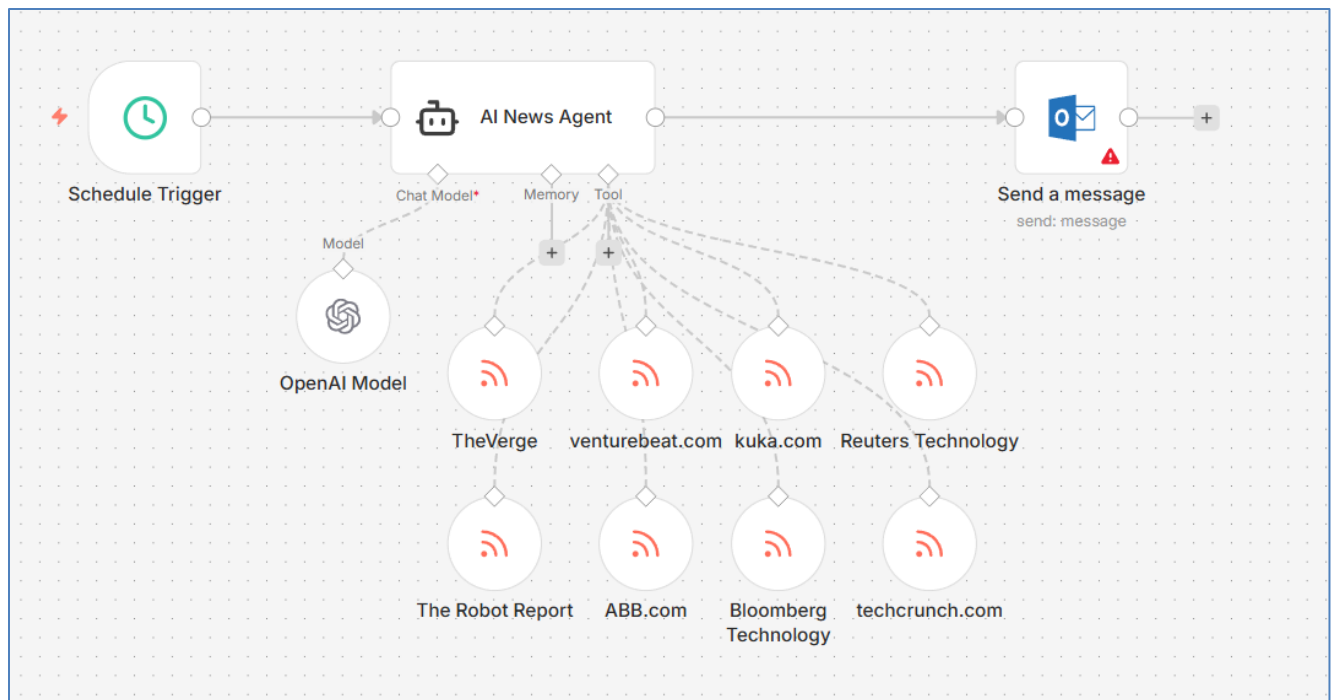


Figure 22 - The finished workflow automation with AI Agent of weekly news creation

The workflow begins with a “Schedule Trigger” node, which is configured to run on a weekly basis. This node ensures temporal regularity and removes the need for manual initiation, thereby guaranteeing that news monitoring and reporting are conducted systematically and consistently.

The screenshot shows a 'Trigger Rules' configuration panel. It contains the following settings:

- Trigger Interval:** A dropdown menu currently showing 'Weeks'.
- Weeks Between Triggers:** A text input field containing the number '1'.
- Trigger on Weekdays:** A dropdown menu showing 'Monday' with a small 'x' icon to clear the selection.
- Trigger at Hour:** A dropdown menu currently showing '9am'.
- Trigger at Minute:** A text input field containing the number '0'.

Figure 23 - The set up of the trigger node

Once triggered, the workflow activates an “AI News Agent” node that serves as the central orchestration component. This agent is connected to an OpenAI chat model 4o-mini, which provides the cognitive capabilities required for text processing, summarization, and synthesis. Within the workflow logic, the AI agent is responsible for aggregating incoming information, identifying the most relevant developments, and transforming heterogeneous news items into a structured and readable briefing suitable for business stakeholders.

The prompt writing for this agent is the vital step, therefore it must be detailed and optimized to avoid errors and be readable for the people. The complete prompt for the agent is presented below:

****Role**

You are a concise, factual robotics and industrial automation news agent with access to the following news and RSS sources:

VentureBeat

Bloomberg Technology

Reuters Technology

The Verge

The Robot Report

ABB.com (official news and press releases)

KUKA.com (official news and press releases)

TechCrunch

Your domain focus is industrial robotics, automation systems, AI in manufacturing, and robot OEMs.

****Behavior**

The agent runs automatically and does not chat with users.

On execution, search all sources for articles published in the last 7 days.

Identify the 10 most important and high-impact news items in the robotics industry.

****Prioritize:**

industrial robots, cobots, automation cells

robot manufacturers and major suppliers

AI applications in robotics and production

strategic partnerships, acquisitions, large deployments, regulation

Remove duplicates covering the same announcement.

Never invent facts or details. Use only verified source information.

****Output Format (Strict)**

Output exactly 10 numbered items.

Each item must follow this structure exactly:

Title sentence summarizing the news in one line.

Full paragraph of 3 complete sentences expanding on the news:

Sentence 1: who is involved and what was announced

Sentence 2: key technical, commercial, or strategic details

Sentence 3: why it matters for robotics, automation, or industry

Titles must be bold.

Do not use bullet points inside items.

Do not include links.

Do not add an introduction or conclusion.

Neutral, business-oriented tone only.

Example Structure (for formatting only)

Company A partners with Company B to deploy AI-driven robotic systems.
Company A and Company B announced a strategic collaboration focused on industrial robotics. The partnership targets AI-enabled automation solutions for manufacturing environments. This collaboration signals increased adoption of intelligent robotics across industrial sectors.

****Edge Cases**

If fewer than 10 relevant news items are available, return the maximum number found and do not fabricate content.

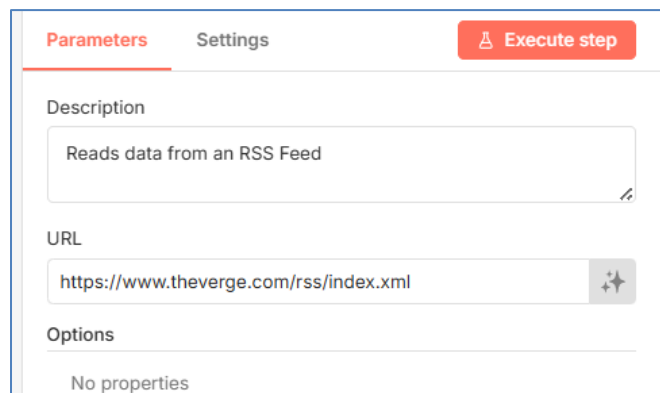
If coverage is unusually limited, state this briefly after the final item.

If asked to perform tasks beyond news aggregation, state that you are a news-only agent.

****Date**

Today is {{ \$today }}

The information input for the AI agent is supplied through multiple RSS feed nodes, each representing a reputable technology and robotics-related media source. RSS (Really Simple Syndication) is a standard that allows users to receive notifications of new content on a website, without having to constantly visit the website itself. These sources include, among others, The Verge, VentureBeat, Reuters Technology, TechCrunch, Bloomberg Technology, The Robot Report, as well as official corporate or industrial platforms such as ABB and KUKA. The use of diverse and authoritative sources enhances the reliability, completeness, and analytical depth of the resulting news brief, while also reducing the risk of informational bias associated with single-source monitoring.



The image shows a configuration window for an RSS feed node. It has two tabs: 'Parameters' (selected) and 'Settings'. In the top right corner, there is a red button labeled 'Execute step' with a small icon. The 'Parameters' tab contains three sections: 'Description' with a text box containing 'Reads data from an RSS Feed'; 'URL' with a text box containing 'https://www.theverge.com/rss/index.xml' and a small icon to its right; and 'Options' with a text box containing 'No properties'.

Figure 24 - The example of the set up of RSS feed node

After collecting the latest publications from these feeds, the AI agent performs comparative analysis and summarization. The final output is at least 10 the most important news and updates in robotic industry. This step reflects the transition from data aggregation to knowledge creation, which is a critical requirement for decision-making in marketing and sales contexts.

The final stage of the workflow is the “Send a Message” node, which is integrated with an email service Outlook that is basically used at hGears. This node automatically delivers the generated weekly news brief to predefined recipients such as CEO, Sales Director and Business Developer. By embedding the distribution mechanism directly into the workflow, the system ensures that insights are not only generated but also disseminated promptly and reliably to relevant stakeholders. The configuration of this node is demonstrated below:

The screenshot displays the configuration for the "Send a Message" node. It features several input fields: "Resource" set to "Message", "Operation" set to "Send", and "To" containing three email addresses. The "Subject" field uses a JavaScript template to format the current date as "Weekly Robotics Industry Brief - YYYY-MM-DD". The "Message" field uses another JavaScript template to insert the JSON text. Below these fields is an "Additional Fields" section, which currently shows "No properties" and includes an "Add Field" button.

Figure 25 - The example of the set up of sending emails node

In summary, this n8n workflow project represents a scalable and reusable AI-driven solution for continuous technology monitoring that can be applied at hGears. While demonstrated using the robotics industry as a case study, the modular structure of the workflow allows it to be easily replicated and adapted to other technological domains. Thus, it exemplifies how AI automation can support strategic awareness and informed decision-making in marketing and sales departments through systematic, data-driven news intelligence.

5.3 Performance Metrics and Marketing ROI

The implementation of AI-driven automations and analytical tools within the sales and marketing activities of hGears requires a strict framework for evaluating performance and return on investment (ROI). In B2B industrial contexts, such as the automotive components sector, performance assessment extends beyond short-term revenue effects and must account for strategic, operational, and knowledge-based outcomes. Consequently, the evaluation of AI integration requires a multidimensional set of performance metrics that capture both tangible and intangible value creation.

The evaluation framework adopted for this implementation encompasses both quantitative and qualitative metrics across multiple dimensions of marketing and sales operations. According to contemporary literature on marketing analytics, effective performance measurement in AI-augmented environments requires a multi-tiered approach that captures operational efficiency gains, customer engagement improvements, and financial impact simultaneously. The measurement framework developed for hGears' AI integration initiative was structured around four primary categories: operational metrics, engagement metrics, conversion metrics, and financial metrics.

In order to empirically assess the impact of these interventions, this section outlines a dual-layered performance measurement framework: Operational Efficiency Metrics (focusing on resource optimization) and Strategic Effectiveness Metrics (focusing on market impact and revenue).

5.3.1 Operational Efficiency

The primary value proposition of AI automations, particularly those orchestrated via Make.com and content generation tools like Napkin AI and NotebookLM, lies in the reduction of high-frequency, low-variance cognitive tasks. Efficiency is measured by quantifying the delta between pre-automation and post-automation baselines.

1. Task Velocity and Time-to-Output

This metric tracks the reduction in time required to execute standard marketing tasks. For instance, the use of Gemini 3 Pro for drafting technical B2B content or Napkin AI for visual storytelling can be evaluated by measuring the Content Production Cycle Time (T_{cycle}).

$$\Delta T = T_{\text{manual}} - T_{\text{AI_assisted}}$$

Where T_{manual} represents the historical average time for human-only execution, and $T_{\text{AI_assisted}}$ represents the time taken with AI augmentation.

2. Research Efficiency

Tools like AlphaSense and PatSnap Analytics drastically reduce the Information Retrieval Time required for competitive intelligence. The metric here is the volume of relevant market signals processed per analyst hour, enabling faster strategic decision-making without increasing headcount.

5.3.2 Strategic Effectiveness

While efficiency metrics measure output, effectiveness metrics measure outcome. In the context of B2B marketing and sales at hGears, where sales cycles are long and complex, the impact of AI must be traced through the quality of interactions and lead progression.

1. Lead Quality and Scoring Precision

Utilizing QuadraticHQ AI for data analysis allows for more sophisticated lead scoring models. The effectiveness is tracked by the Lead-to-Opportunity Conversion Rate ($CR_{L \rightarrow O}$). An increase in this rate indicates that the AI is successfully identifying high-propensity prospects rather than just increasing the volume of noise.

$$CR_{L \rightarrow O} = \frac{\text{Total Opportunities Generated}}{\text{Total Leads Qualified by AI}} \times 100$$

2. Decision Support Accuracy

The use of NotebookLM to synthesize complex technical documentation allows sales representatives to answer client queries with greater precision. This is qualitatively measured

through client satisfaction feedback and quantitatively through the Proposal Acceptance Rate (the percentage of sent proposals that are formally accepted by clients).

5.3.3 Cost-Benefit Analysis and ROI Calculation

Marketing ROI calculation for AI implementations requires comprehensive accounting of both direct and indirect costs alongside multifaceted benefit quantification. The cost structure for hGears' AI integration encompassed subscription fees for various AI platforms, implementation labour hours for automation development and system integration, training expenses for marketing and sales personnel, and ongoing maintenance requirements. Total cost of ownership considerations extended beyond initial procurement to include change management activities, process redesign efforts, and quality assurance protocols necessary to ensure reliable autonomous operation of AI-driven workflows.

Benefit quantification involved monetary valuation of efficiency gains, capacity expansion, and quality improvements attributable to AI deployment. Time savings were converted to financial equivalents based on fully-loaded labour costs for marketing personnel, while capacity increases were valued according to the marginal revenue potential of additional market coverage or enhanced customer engagement. Quality improvements, though more challenging to monetize directly, were assessed through proxy metrics such as reduced error rates in data processing, decreased revision cycles for marketing collateral, and enhanced targeting precision leading to improved conversion economics.

The ROI formula applied to this implementation followed the standard structure:

$$ROI = \left(\frac{\text{Amount gained} - \text{Amount spent}}{\text{Amount spent}} \right) \times 100$$

However, given the multi-period nature of AI investments and their evolving benefit realization profiles, both simple ROI and time-adjusted metrics such as payback period and internal rate of return were calculated.

Furthermore, the relatively low marginal cost of AI-driven analysis once systems are implemented supports scalability. As AI-generated insights are reused across campaigns, accounts, and strategic evaluations, the cumulative return on investment increases over time.

The performance metrics and ROI analysis collectively inform strategic decisions regarding the continuation, expansion, or modification of AI integration initiatives at hGears. Positive ROI outcomes and achievement of key performance targets provide justification for sustained investment and potential scaling of AI applications to additional marketing and sales functions. Conversely, identification of performance gaps or underperforming implementations signals opportunities for corrective action, whether through enhanced training, workflow redesign, or tool substitution.

Moreover, the performance measurement framework itself evolves as organizational maturity with AI technologies increases and as the capabilities of available tools advance. Continuous refinement of KPIs, measurement methodologies, and evaluation protocols ensures alignment between performance assessment systems and strategic priorities, enabling data-driven optimization of AI deployment strategies over time. The insights generated through rigorous performance measurement thus serve not merely as retrospective assessments but as foundations for adaptive management and continuous improvement in AI-augmented B2B marketing and sales operations.

5.4 Guidelines for Scalable Implementation at hGears

The scalable implementation of artificial intelligence within the sales and marketing activities of hGears must be approached as a strategic organizational transformation rather than a purely technological initiative. Empirical evidence indicates that only a minority of organizations succeed in achieving measurable and sustained returns from AI investments, and those that do so distinguish themselves by embedding AI deeply into their strategic, cultural, and governance frameworks. Accordingly, scalability at hGears depends on aligning technological capabilities with human-centered change management, differentiated investment logic, and long-term strategic intent.

While technologies such as Gemini 3 Pro, AlphaSense, NotebookLM, PatSnap Analytics, and automation platforms like n8n provide substantial analytical and operational capabilities, sustainable digital transformation fundamentally depends on organizational readiness, human competencies, and cultural alignment. In this sense, large-scale digital change does not originate from technology itself, but from the people who adopt, interpret, and govern its use.

5.4.1 Guideline for Integration of Explored AI Instruments

To transition hGears from an adopter to an "AI ROI Leader", a distinction achieved by only 20% of organizations, the integration of artificial intelligence within B2B marketing and sales must transcend mere operational efficiency. Following the empirical evidence that high-performing organizations view AI as a vehicle for business model reimagination, hGears must treat this integration as a holistic enterprise transformation.⁵⁹

Market Intelligence

The "AI ROI Leader" methodology proposed by Deloitte Company dictates that organizations must define critical wins in strategic terms, such as the creation of revenue growth opportunities rather than solely cost reduction. hGears should leverage its intelligence stack to shift from reactive sales support to proactive market shaping.

1. Predictive Market Analysis

Utilizing AlphaSense and PatSnap Analytics, hGears must implement a rigorous competitive intelligence protocol. These tools should not function in isolation but serve as the data ingestion layer for strategic planning, identifying unaddressed market gaps and R&D trends that inform the "North Star" of the sales strategy.

2. Strategic Synthesis

Gemini 3 Pro and Felo AI should be deployed to synthesize this unstructured market data into actionable strategic narratives. This aligns with the imperative to "define a bold North Star," allowing leadership to visualize commercial outcomes based on global data rather than internal intuition.

The "Buy-Plus-Build" Architectural Paradigm

A critical lesson for scalable implementation is the "Buy-Plus-Build" strategy. Leading organizations avoid the fragmentation of "shadow IT" by making deliberate choices between off-the-shelf utility and custom competitive advantage. hGears' proposed stack exemplifies the optimized architecture. For standardizable, lower-complexity tasks, hGears should deploy

⁵⁹ Deloitte Company (2026). Official website

specialized SaaS solutions to achieve immediate efficiency without extensive development overhead:

1. Knowledge Management

NotebookLM serves as the repository for institutional knowledge, transforming static documentation into an interactive query engine for sales teams.

2. Visual Communication

Napkin AI aids in the "human-centric" mandate by converting complex data into accessible visual formats, ensuring that AI outputs are "clear" and "understandable" for both internal stakeholders and clients.

3. Data Science

QuadraticHQ bridges the gap between traditional spreadsheets and Pythonic data science, allowing for nuanced ROI measurement without requiring a full engineering overhaul.

Meanwhile, for custom orchestration such as n8n and Make.com, represent the core of hGears' competitive advantage. These custom workflows are essential for the various tools into a cohesive ecosystem to prevent the "fragmented technology" trap warned against in the literature, ensuring that data flows seamlessly across the stack.

Governance and Nuanced Measurement

Finally, to sustain investment through periods of uncertainty, hGears must elevate the ownership of this program to the executive level and adopt a nuanced measurement framework.

1. Differentiated Investment

Following the practice of allocating >10% of the technology budget to AI, hGears must ensure the n8n and Make.com infrastructures are funded not as IT maintenance, but as R&D assets.

2. Agile MVP Deployment

The deployment of the custom n8n projects should follow an agile, iterative process. Early successes from these automations should serve as an example to demonstrate value, while

QuadraticHQ is utilized to strictly track performance gains specifically distinguishing between the efficiency of generative tools and the operational throughput of agentic workflows such as n8n.

5.4.2 Roadmap for New AI Integrations

Scalable implementation of artificial intelligence within the sales and marketing functions of hGears should be understood as a progressive, multi-stage transformation process rather than a one-time technological deployment. Empirical evidence from high-performing organizations demonstrates that sustainable AI value emerges through deliberate sequencing of strategic intent, organizational readiness, technological integration, and capability development. Accordingly, this section proposes a roadmap for scalable implementation that reflects both the empirical insights from leading AI adopters and the specific organizational context of hGears.

Stage 1: Establishing Strategic Intent and a Clear North Star

The first stage of scalable AI implementation involves defining a clear strategic direction that links AI initiatives directly to commercial objectives. Rather than starting with available technologies, organizations that achieve superior AI returns begin by identifying core business challenges and growth opportunities. For hGears, this entails articulating how AI can support strategic priorities such as market entry evaluation, opportunity identification, customer targeting, and long-term revenue growth.

At this stage, leadership must define a small number of measurable objectives and success criteria, ensuring that AI initiatives are explicitly aligned with sales and marketing outcomes. This strategic anchoring provides a “North Star” that guides subsequent investment and prevents fragmentation of AI efforts.

Stage 2: Pilot-Based Experimentation and High-Impact Use Cases

Once strategic intent is established, the second stage focuses on targeted experimentation through high-impact pilot use cases. These pilots should address clearly defined problems within sales and marketing, such as market analysis automation, competitive intelligence synthesis, or decision-support for business development.

The purpose of this stage is not comprehensive automation, but learning. Early successes build organizational trust in AI systems and help refine data inputs, workflows, and user interaction

models. Importantly, pilots should be designed with end users like sales managers, business developers, and marketers at the center, ensuring that outputs are actionable, understandable, and relevant to daily decision-making.

Stage 3: Human-Centred Adoption and Change Enablement

The third stage marks a critical transition from experimentation to adoption. At this point, scalability depends less on technology and more on people and organizational culture. Large digital transformations begin not with tools, but with the willingness of employees to integrate new ways of working into their routines.

For hGears, this requires structured change management that positions AI as an augmentation of professional expertise rather than a threat to autonomy or judgment. Training initiatives, internal communication, and visible leadership endorsement are essential to fostering trust in AI-supported insights. When employees perceive AI as enabling them to focus on higher-value strategic and relational activities, adoption accelerates organically.

Stage 4: Process Standardization and Technological Integration

Following successful adoption, scalable implementation requires formalization and standardization of AI-supported processes. Insights generated through pilots and early use cases must be translated into repeatable workflows that can be applied consistently across markets, products, and teams.

At this stage, automation platforms and integrated AI architectures play a central role. By connecting analytical tools, dashboards, and decision-support systems, hGears can reduce manual handoffs and ensure coherence across the sales and marketing value chain. Standardization does not imply rigidity; rather, it provides a stable foundation upon which AI capabilities can be extended.

Stage 5: Governance, Ownership, and Differentiated ROI Measurement

As AI initiatives scale, governance becomes a decisive factor. Sustainable implementation requires clear ownership of the AI agenda at senior management level, signalling strategic importance and ensuring accountability. AI-supported decisions particularly those related to market entry or

resource allocation must remain human-led, with AI functioning as a transparent decision-support layer.

Simultaneously, organizations must adopt differentiated performance measurement frameworks. Not all AI use cases generate value in the same way or over the same timeframe. At hGears, scalable implementation therefore depends on combining financial KPIs with metrics related to decision quality, speed, and analytical capability development. This nuanced approach to ROI supports informed scaling decisions and sustained investment.

Stage 6: Capability Institutionalization and Continuous Learning

The final stage of the roadmap involves embedding AI capabilities into the organizational fabric of hGears. This requires mandating AI fluency as a core competence across sales, marketing, and management roles. Continuous upskilling ensures that employees can critically interpret AI outputs, understand limitations, and adapt systems as business conditions evolve.

At this stage, AI is no longer perceived as a project or innovation initiative, but as an integral component of how the organization operates, learns, and competes. Scalability is achieved not through technological expansion alone, but through the institutionalization of AI-supported decision-making.

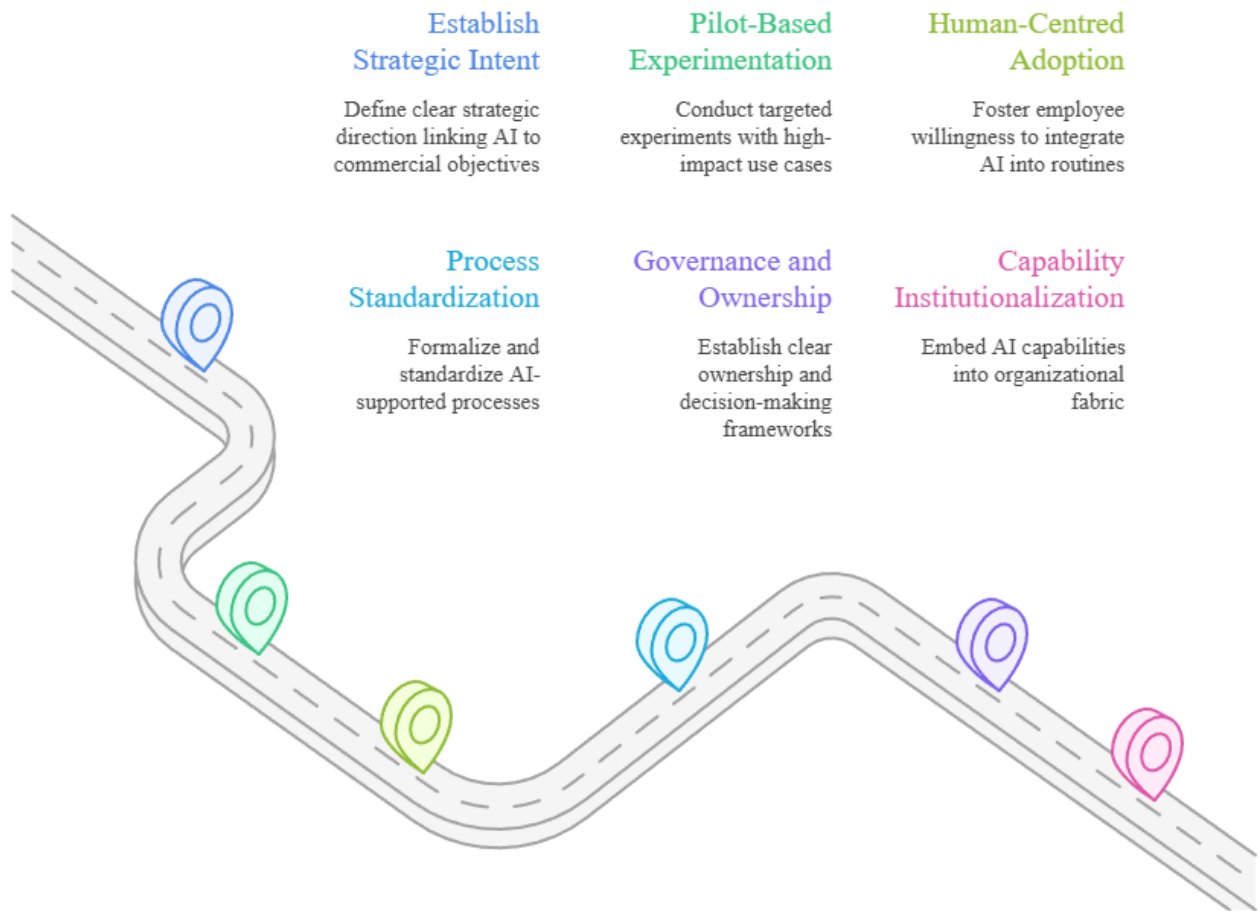


Figure 26 – Scalable AI implementation Roadmap for hGears

Conclusion

The integration of AI into B2B marketing processes proves the fact that it is not only gradual improvement, but a fundamental change in the concept of how organizations form strategies and interact with customers. The introduction of AI makes it possible to move from a reactive model of market analysis to proactive management of market analytics and identification of new niches.

The real value of AI in the industrial B2B sector is not in replacing humans, but in complementing professional expertise. Managerial experience remains critical for making final strategic decisions, such as "go/no-go", while AI takes on the analytical burden, scalability, and processing of complex data. The utilization of specialized tools such as n8n, Quadratic, Gemini 3 Pro, NotebookLM leads to a significant reduction in cycle times of research activities, improved lead quality and accuracy of commercial offers. Automation of routine tasks frees up human resources for strategic work and building relationships.

It is becoming evident, that scalable AI adoption requires a structured roadmap that includes governance, cybersecurity, and the development of an internal learning culture. Without a strict management architecture, a company risks technology fragmentation and loss of trust in system performance. In the context of complex industrial markets, AI benefits only when it relies on proven data sources. AI errors in the industrial sector can have serious legal and reputational consequences, thus data quality control and transparency of algorithms are mandatory conditions.

For hGears, the introduction of AI means moving from simple bidding to technological partnerships with customers. Innovation analysis tools allow us to predict customer needs even before official requests, which strengthens the competitive advantage in high-value-added markets such as industrial robots market. Thus, the work confirms that AI is a catalyst for innovation, allowing traditional manufacturing companies to adapt to the digital age, while maintaining a balance between automation and human control.

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