

# AGENTIC AI

## MARKET APPLICATIONS

NOVEMBER 2025

# Contents

1. Introduction
2. Market size: comparison with AI and generative AI
3. Market applications – heat map
4. Use cases & real-world examples
5. Conclusion
6. Sources

# INTRODUCTION

Agentic AI represents the next major evolution of artificial intelligence, emerging directly from the rapid advances in generative AI and large language models (LLMs). While the concept of “AI agents” has existed for decades — ranging from rule-based expert systems to robotic planners and classical multi-agent architectures — the agentic AI described in this report refers specifically to a new class of **LLM-native, autonomous systems capable of planning, reasoning, and executing multi-step tasks** with minimal human intervention.

These agents do not rely on static rules or predefined decision trees. Instead, they use foundation models to interpret intent, break down objectives, invoke tools and APIs, collaborate with other agents, and iteratively refine their actions based on real-time inputs. This capability — rooted in generative reasoning rather than traditional symbolic logic — marks a fundamental departure from pre-ChatGPT agent technologies.

In this report, “agentic AI” therefore denotes **autonomous, goal-driven systems powered by generative models**, such as task-orchestrating business agents, research agents, developer agents, enterprise workflow agents, and multimodal planning systems. These technologies build on the generative AI wave that began in 2023 and extend it **from content creation to action**, enabling AI systems to not just answer questions but complete processes end-to-end.

By grounding this report in this modern, LLM-based definition of agentic AI, the analysis focuses on the technologies that are reshaping markets today: **autonomous systems driven by generative reasoning, real-time tool use, contextual decision-making, and multi-agent collaboration**. This provides a clear framework for assessing market growth, sectoral opportunities, and strategic implications for organisations as they move beyond experimentation and begin integrating agentic AI into core business processes.



# AGENTIC AI

(Projected) market size between 2025 and 2030

## Worldwide key metrics

(Grand View Research)



**\$7.63bn**

Revenue in 2025



**\$50.31bn**

Forecast revenue 2030



**45.8%**

CAGR 2025 - 2030

The global market for agentic AI is entering a phase of hypergrowth, with Grand View Research estimating its value at **USD 7.63 billion in 2025** and projecting an expansion to **USD 50.31 billion by 2030**, representing a compound annual growth rate (CAGR) of **45.8%**. This growth trajectory underscores the rapid shift from experimental deployments to scaled adoption of autonomous AI agents across industries such as banking, telecom, healthcare, and manufacturing. Early adoption is concentrated in sectors with strong digital infrastructure and repetitive, high-value processes, but growth will broaden as more enterprises integrate agentic platforms into mission-critical functions.

## European key metrics

(Grand View Horizon)



**\$1.3bn**

Revenue in 2025



**\$11.48bn**

Forecast revenue 2030



**44.1%**

CAGR 2025 - 2030

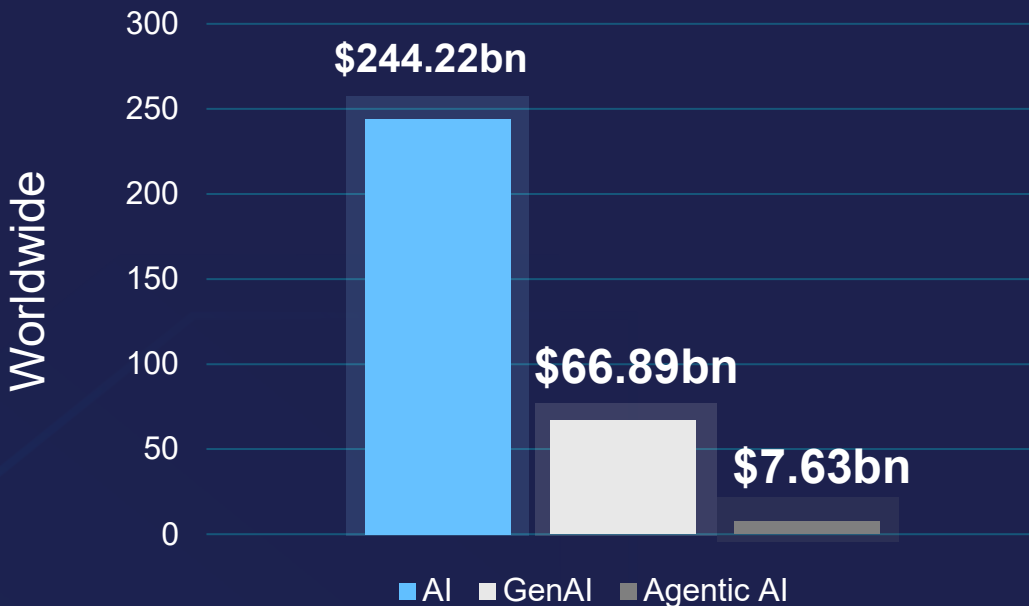
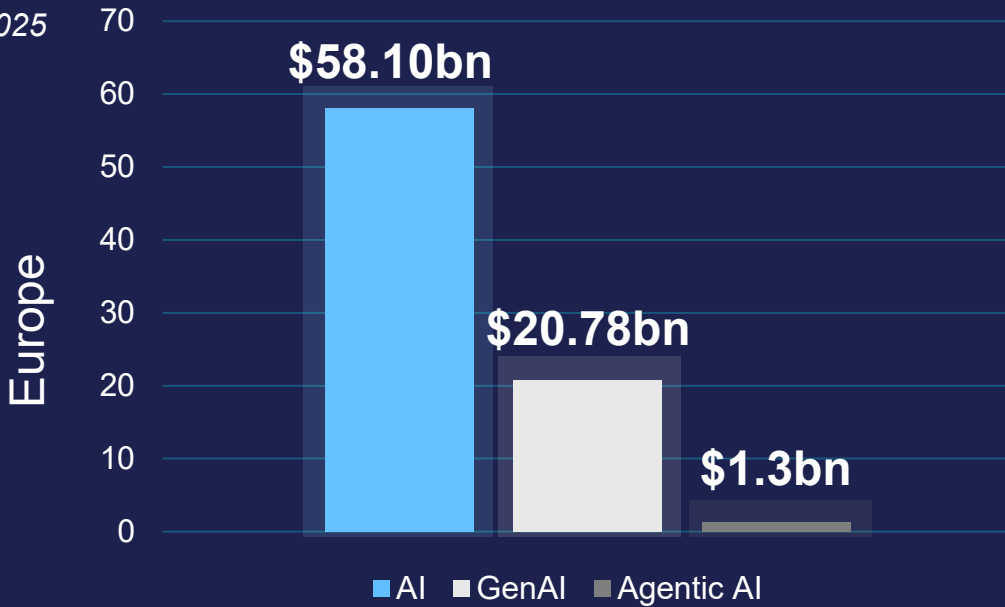
In Europe, the agentic AI market follows a similar pattern of rapid growth, albeit at a smaller scale due to regional regulatory environments and a comparatively slower pace of enterprise digitisation. According to Grand View Horizon, the European market is valued at **USD 1.3 billion in 2025** and expected to rise to **USD 11.48 billion by 2030**, achieving a **44.1% CAGR** over the same period. Europe's growth is shaped by two reinforcing dynamics: strong public investment in AI innovation (through EU frameworks such as [Horizon Europe](#) and [Digital Europe](#)) and the continent's highly regulated business landscape, which creates demand for trustworthy, transparent, and compliant AI systems.

“25% of firms using GenAI are expected to deploy AI agents in 2025, growing to 50% by 2027, according to Deloitte's latest predictions, signalling a massive transformation in enterprise data utilization.” ([Deloitte](#))

# AGENTIC AI

Estimated market size in 2025 for AI, GenAI and Agentic AI

In \$bn  
In 2025





# AGENTIC AI

## Market applications

### HOW TO READ THE FOLLOWING HEATMAP?

The heat map was developed based on a qualitative approach based on industry research and use cases. It is based on five criteria applied to each industry-function pair:

- **Technical feasibility:** availability of machine-actionable data, APIs, and digital infrastructure
- **Economic upside:** scale of the function and cost savings or revenue gains from automation
- **Safety and regulatory risk:** likelihood of harm or compliance challenges if agents act autonomously
- **Human-in-the-loop complexity:** extent to which tasks require subjective judgment or frequent human intervention
- **Integration friction:** assess the integration capacity with existing systems or business processes.

Final ratings also reflected evidence from current pilots and industry, ensuring that desk-based scores were grounded in real-world observations. This approach balances **theoretical potential** with **practical adoption constraints**, providing framework for identifying where agentic AI can deliver the highest business impact.

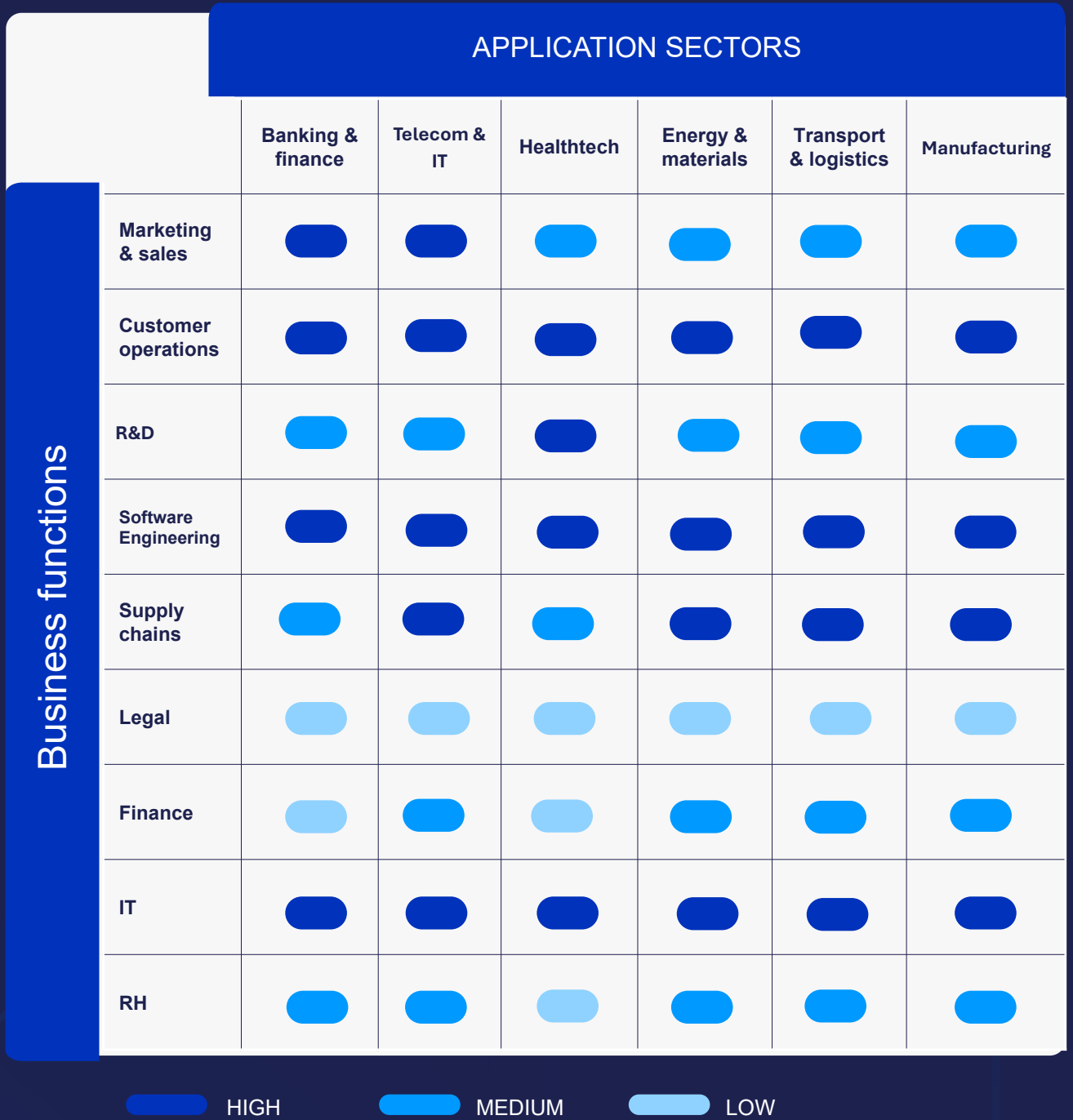
### NOTE ON METHODOLOGY

The opportunity heat map is based on a structured scoring framework that evaluates each industry–function pair across five criteria: technical feasibility, economic upside, safety and regulatory risk, human-in-the-loop complexity, and integration friction. Each factor is scored from 0 to 2, producing a total score from 0 to 10 that maps to a High, Medium, or Low opportunity level. The assessment combines desk research, sectoral use-case evidence, and expert analyses from McKinsey (1 – 2), [BCG](#), [EY](#), [IBM](#), etc., and was generated with the support of AI-assisted analysis to ensure consistency and comparability across domains.

You are an AI expert, and you want to help us refine our scores?  
Please contact us at [knowledgehub@luxinnovation.lu](mailto:knowledgehub@luxinnovation.lu)

# AGENTIC AI

## Market applications





# AGENTIC AI

## Market applications – heat map analysis

Agentic AI has the strongest opportunities in **customer-facing and workflow-intensive functions** such as customer operations, marketing & sales, software engineering, IT, and supply chain orchestration. These domains combine large-scale, repetitive tasks with structured data and well-defined APIs, making them suitable for autonomous, goal-driven agents that can act beyond simple prompts.

In contrast, domains such as legal, finance, and HR tend to see medium or lower opportunity because they involve **higher regulatory and ethical risks, a greater need for human oversight, and complex judgment calls** that limit the autonomy of AI systems.

**Healthtech is a special case:** research and development processes — like literature mining, experiment planning, and simulation — are well-suited to multi-agent collaboration, giving them relatively higher potential compared to other industries.

Across sectors, the pattern is clear: functions where workflows are structured, digital, and high-volume rank highest, while those demanding nuanced human judgment or constrained by regulation remain medium or low.

**“The rapid rate of improvement of gen AI agents means that a wait-and-see approach is potentially a high-risk move. Early practical learnings are invaluable in quickly building a competitive advantage as the technology matures.”** ([McKinsey](#))

CBInsights has conducted a survey among 60+ organisations leader in their field, regarding their current and expected use of agentic AI in various business functions. What stand out most are the functions related to **customer support and operations, marketing and software development**.

### The AI agent takeover by department

Based on survey of 60+ organization leaders\* in June 2025

What business areas are using or will be using AI Agents in the next 12 months? (Select all that apply)



© 2025 CB Insights. Source: CB Insights survey data \*Director level or above at organizations with 250+ employees; 50% work at companies generating more than \$100M in revenue and 31% have revenue over \$1B.

CBINSIGHTS |

Beyond this sector-specific view, agentic AI could also disrupt the business model of tech giants, including Google. The recent launch of ChatGPT Atlas, a browser that integrates ChatGPT technology into navigation, allowing users to directly obtain summaries of articles, write emails, or even book airline tickets, calls into question the advertising model created by Google ([Paperjam](#)). The search experience becomes more fluid; users no longer search; they ask questions and place orders.

# AGENTIC AI – USE CASES

## Banking & finance

Agentic AI is transforming finance by automating repetitive workflows, personalising services, and ensuring compliance. Agents can gather and analyse large amounts of data, enabling for more insightful reportings, monitor portfolios, execute trades within defined policies, and continuously scan for regulatory updates. This augments financial advisors and compliance teams, creating both efficiency and resilience.

### KEY APPLICATIONS

- Personalised portfolio optimisation and automated trade execution
- Customer service automation (multi-step onboarding, account management)
- Real-time AML/fraud detection and anomaly response
- Automated compliance monitoring and reporting

### WHAT IS HAPPENING WORLDWIDE?

[Visa](#) is developing agentic AI tools that allow large language models (LLMs) or AI agents to take user queries all the way through to executing payments. Instead of a user doing a search, clicking links, going to merchant sites, adding items to cart, and paying, the user could just ask an AI agent (via an LLM) to find and buy something. The AI agent fetches options, presents them, and upon user confirmation, executes the payment on behalf of the user.

While questions about securing automatic payments made by agents can be raised, digital identity company [Prove](#) as launched the [Prove Verified Agent](#), that aims to verify identity, intent, payment credentials and consent on behalf of users and businesses. All identities and transactions are validated against a dynamic registry of agent

publishers, relying parties, merchants, payment networks, and content delivery networks to eliminate unverified automation. Upon successful verification, agents are empowered to operate on behalf of authenticated individuals or entities. Prove ensures the persistent connection between verified identity, expressed intent, payment credentials, and user consent.

### WHAT IS HAPPENING IN LUXEMBOURG?

[BREIGN](#), a Luxembourg-based platform by InTech and Deep, offers a “sovereign agentic AI” platform designed to let organisations build, deploy and govern autonomous AI agents without coding. The platform emphasises full traceability, ethical guardrails, regulatory compliance, and data sovereignty (hosting in European / sovereign cloud infrastructure). The system supports integration with enterprise data (documents, APIs, databases), lets multiple agents collaborate together, and is meant to help automate document comprehension, legal/scientific research, customer workflows, proposal generation, and other business-centric tasks. According to the testimony of a fintech director, BREIGN would have allowed his team to save 80 % of time normally devoted to information extraction.

# AGENTIC AI – USE CASES

## Telecom & IT

Agentic AI acts as an autonomous defender, ingesting vast telemetry data, spotting anomalies, and launching pre-approved countermeasures. Agentic AI enables autonomous network and customer operations by resolving tickets, rerouting traffic, and providing end-to-end support.

### KEY APPLICATIONS

- Real-time anomaly detection and fraud mitigation
- Automated threat hunting and isolation of compromised systems
- Continuous vulnerability scanning and patch orchestration
- Autonomous escalation with human-in-the-loop oversight
- Automated ticket triage and resolution
- Network optimisation agents
- Conversational service agents for multi-step issue resolution
- Predictive maintenance of network hardware

### WHAT IS HAPPENING WORLDWIDE?

[AT&T](#) partnered with Unsupervised to deploy agentic AI data agents that act like always-on analysts, able to query internal data in natural language, uncover hidden patterns, generate insights, and even make predictions. By letting these autonomous agents continuously explore and learn from complex datasets, AT&T identified over \$100 million in business opportunities, proving the scale of impact agentic AI can deliver inside a Fortune 100 enterprise. The success has led AT&T to expand the rollout of these AI agents across more business units, highlighting how agentic AI is moving beyond experimentation into core operational strategy.

# AGENTIC AI – USE CASES

## Healthtech

Agentic AI supports clinicians and administrators by automating workflows and assisting with decision-making. The time saved thanks to process automation allows practitioners to focus more on patients' interactions. At a more advanced level, AI agents also accelerate research while respecting strict predefined safety guardrails.

### KEY APPLICATIONS

- Intake and triage agents that route patients appropriately
- Clinical decision-support agents
- Scheduling and billing automation
- Research agents curating and analysing biomedical data

### WHAT IS HAPPENING WORLDWIDE?

This [Mayo Clinic Platform article](#) describes how agentic AI systems are increasingly reshaping domains like healthcare and research by not just responding to prompts but acting, planning, and iterating on their own. It highlights examples such as DeepMind's AI Co-Scientist, which uses a multi-agent architecture to generate and evolve research hypotheses, and Biomni, which autonomously carries out biomedical workflows, from data analysis to lab protocol design.

# AGENTIC AI – USE CASES

## Energy & materials

Agentic AI balances energy systems by coordinating demand response, scheduling maintenance, and trading flexibility on energy markets. AI agents can analyse vast amount of data, identify patterns, make decisions to enables energy companies to operate efficiently and reduce costs.

### KEY APPLICATIONS

- Grid balancing and demand-response agents
- Predictive maintenance for turbines, transformers
- Market agents trading capacity / flexibility
- Autonomous outage detection and resolution

### WHAT IS HAPPENING WORLDWIDE?

[ENERGYai](#) is a pioneering agentic AI solution developed by AIQ in collaboration with ADNOC, Microsoft, and G42. Launched in November 2024, it is designed to enhance decision-making, sustainability, and operational efficiency across the energy value chain. Trained on over 80 years of ADNOC's proprietary data, ENERGYai employs specialised AI agents to autonomously handle complex tasks such as seismic analysis, real-time monitoring, and reservoir modelling. These agents enable faster, more informed decision-making, reducing development planning timelines from years to weeks and cutting associated costs and emissions. The solution is scalable and integrates seamlessly with existing technologies, ensuring long-term value and operational resilience.

# AGENTIC AI – USE CASES

## Transport & logistics

Agentic AI boosts logistics resilience by forecasting demand, autonomously coordinating shipments, optimising routes, and managing disruptions. Multi-agent systems enable warehouses, fleets, and suppliers to act in real time, reducing downtime and costs.

### KEY APPLICATIONS

- Forecasting demand by using historical data and advanced algorithms
- Dynamic route planning and real-time re-routing
- Predictive maintenance for vehicles and handling equipment
- Warehouse task orchestration (robots + staff scheduling)
- Inventory agents that trigger reorders and switch suppliers

### WHAT IS HAPPENING WORLDWIDE?

[Dow Chemical](#), a global leader in materials science, was grappling with a complex freight invoicing system handling up to 4,000 shipments daily across multiple invoice types. To address this, the company implemented a newly developed invoice agent using Microsoft Copilot Studio. This agent automates the freight invoicing workflow by tracking incoming emails for attached invoices, organising the data for analysis, and detecting billing errors. As a result, Dow can manage logistics expenses more effectively, minimise the risk of overpayments, and enhance overall operational efficiency.

### WHAT IS HAPPENING IN LUXEMBOURG?

Based in Bissen, [Ohmio](#) designs and deploys electric autonomous shuttles targeted at smart cities, airports, campuses and other controlled zones. Their vehicles use agentic AI systems for route-mapping, sensor fusion (LiDAR, cameras) and obstacle avoidance, enabling driverless or minimally supervised operation in defined environments.

[Pony.ai](#), another Luxembourg-based company, develops autonomous driving technology via their “virtual driver” core, and applies it to three main mobility streams: robotaxi services, robotruck (autonomous freight / logistics trucks), and personally owned vehicles (POV) equipped with their systems.

# AGENTIC AI – USE CASES

## Manufacturing

Agentic AI powers self-optimising factories by increasing operational productivity, scheduling production, managing maintenance, and ensuring quality control. Multi-agent systems coordinate supply, machinery, and labour for continuous improvement. Automation reduces costs, enhance quality control and defect detection.

### KEY APPLICATIONS

- Predictive maintenance agents to avoid costly downtime
- Automated production scheduling under changing demand
- Vision-based defect detection and quality assurance
- Procurement agents optimising supplier choices

### WHAT IS HAPPENING WORLDWIDE?

[Siemens](#) has expanded its Industrial Copilot, a generative AI platform with agentic capabilities, and Thyssenkrupp Automation Engineering will adopt it globally. These AI agents assist engineers autonomously in tasks such as creating machine visualisations, writing automation code, managing data, and configuring sensors, effectively acting as digital collaborators. With upcoming features like multimodal processing, agent-based automation, and on-premises deployment for data sovereignty, the agentic AI aims to boost productivity, address skilled labour shortages, and streamline complex engineering workflows across industrial environments.

The company [Oracle](#) has recently announced launching AI agents for supply chain management and manufacturing. These new agents must assist planners, managers, and logistics teams in automating and optimising processes. At the same time, [Oracle](#) announced a partnership between its Fusion Cloud SCM service, Microsoft Azure IoT Operations, and Microsoft Fabric, with the aim of guiding manufacturers in data-driven decision-making and the automation of key supply chain processes by gathering real-time insights from factory equipment and sensors via Azure IoT Operations and Microsoft Fabric.

# AGENTIC AI – USE CASES

## Legal

In corporate legal departments, agentic AI adoption remains limited due to high regulatory exposure, the need for defensible human judgement, and strong autonomy constraints. However, in the legal-services industry — particularly law firms — agentic AI shows significantly higher potential because workflows are more standardised, high-volume, and economically incentivised for automation.

Agentic AI augments compliance functions by reviewing contracts, upgrading the efficiency and quality of legal research, and generating audit-ready records. It reduces the cost and speed of compliance processes. Moreover, AI agents can autonomously address common legal questions related to contracts, fundamental legal rights, etc.

### KEY APPLICATIONS

- Autonomous contract review and risk flagging
- Automated legal research
- Automated policy watch and draft creation
- Due diligence automation

### WHAT IS HAPPENING WORLDWIDE?

[DigitalClerX](#) offer legal AI agent(s) that integrate with a law firm's internal knowledge, precedents, regulatory data etc., to automate routine legal workflows like document summarisation, case file digesting, etc. Their agents are customisable, integrate with existing tools, and claim to help recover billable time by taking over repetitive tasks.

Based in Stockholm, [Legora](#) is a legal-tech company that offers an AI-powered workspace tailored for lawyers, and its **Workflows** product is a fully agentic AI system that lets legal teams automate complex, multi-step tasks. Instead of simply executing pre-set steps, this AI “agent” plans and executes tasks — like contract review, research, extraction, drafting — using firm-specific templates, precedents, and policies.

Another example is [DeepJudge](#), a Swiss legal-tech company that builds agentic AI tools for law firms by combining a high-precision enterprise search layer with AI workflows

# WHAT ABOUT LUXEMBOURG?

Building on the country's strengths in finance, regulation, multilingual markets, and digital infrastructure, a new generation of startups is embedding intelligent agents into real business processes. Rather than simple chatbots or copilots, these agents execute multi-step tasks, from customer engagement and data integration to compliance management, acting as digital coworkers that coordinate, decide, and learn in context.

## Autonomous workflow automation & integration

- [EasyLab.AI](#) deploys internal “developer agents” to build, test, and deploy software autonomously, illustrating the shift from human coding to agent-driven software engineering.
- [MIRANKI](#) is developing Sendplex, a platform that aims at orchestrating and governing multiple agents, to simplify interactions and workflow management with autonomous AI agents.
- [APIDNA](#) automates API integrations using self-learning agents that map, test, and maintain software connections.
- [EmailTree AI](#) provides an enterprise-grade email automation platform that leverages agentic AI to autonomously manage, classify, and respond to emails, enabling hyper automation through customisable workflows.

## Intelligent customer and business operations

- [Younea.AI](#) offers multilingual AI agents managing voice, chat, and WhatsApp interactions for online shops, handling transactions and inquiries end-to-end.
- [Spaider Space](#) develops “special-purpose AI agents” for repetitive business operations, from analysing documents, flagging risks, mapping traceability, to drafting compliant responses, especially for the aerospace sector.
- [Data Design Engineering](#) provides customised data-driven AI services and solutions tailored to specific sectors.

## Regulated and secure agentic systems

- [Nuwacom.AI](#) enables secure multi-agent collaboration inside enterprises, allowing AI coworkers to access documents, generate insights, and take compliant actions within a controlled environment.

# AGENTIC AI

## Conclusion

Agentic AI is rapidly reshaping the technological and economic landscape, moving beyond traditional automation to systems capable of autonomous decision-making, adaptive learning, and complex task orchestration. Across industries — from finance and healthcare to manufacturing, logistics, and transport sectors — agentic AI introduces new levels of efficiency, personalisation, and strategic insight. These capabilities are not simply incremental improvements; they enable entirely new business models, operational paradigms, and competitive advantages.

However, unlocking the full value of agentic AI requires thoughtful integration. Organisations must address challenges including governance, transparency, safety, data quality, and human-AI collaboration. As the technology becomes more capable, establishing robust frameworks to ensure accountability and alignment becomes essential.

In sum, agentic AI pushes generative AI further and represents a transformative shift in how value is created and delivered. Businesses that proactively explore its applications, pilot concrete use cases, and build the necessary organisational foundations will be best positioned to capitalise on the next wave of AI-driven innovation.



## SOURCES

Grand View Research, “AI Agents Market (2025 – 2030)”

Grand View Horizon, “Europe Agentic Ai Market Size & Outlook”

PWC, “AI agents are here – and they’re transforming finance and reporting”, 2025

IBM, “AI agents use cases”

Fennemore, “Ai agents are revolutionizing the legal profession and expanding access to justice”, 2025

Salesforce, “How AI agents are transforming telecommunications”

McKinsey, “Chat are AI agents, and what can they do for healthcare?”, 2025

Oracle, “Ai agents for healthcare: benefits and use cases”, 2025

Salesforce, “Guide to AI agents for energy”

Oracle, “Ai in logistics: potential benefits and applications”, 2024

LeewayHertz, “Ai agents in logistics and supply chain: applications, key components, capabilities, benefits and implementation”

Microsoft, “The future of logistics: How generative AI and agentic AI is creating a new era of efficiency and innovation”, 2025

Salesforce, “Ai agents for manufacturing success”

World Economic Forum, “Why should manufacturers embrace AI’s next frontier – AI agents – now?”, 2025

GSDC, “Top Industries Positioned to Benefit from Agentic AI”

Willowtree, “Quantifying the Opportunity Value of Agentic AI: WillowTree’s Enterprise Playbook with Three Industry Examples”, 2025

Ena, “Agentic AI: Transformation and Opportunities in the Market”, 2025

McKinsey & Company, “Why agents are the next frontier of generative AI”, 2024

BCG, “AI Agents”

EY, “How to transform global supply chain operations with agentic AI”, 2025

Deloitte, “Agentic AI meets data products”

McKinsey, “The change agent: Goals, decisions, and implications for CEOs in the agentic age”, 2025



**LUXINNOVATION**<sup>®</sup>

#MakingInnovationHappen

5 Av. des Hauts-Fourneaux  
L-4362 Esch-sur-Alzette  
Luxembourg  
+352 43 62 63-1  
[www.luxinnovation.lu](http://www.luxinnovation.lu)

**DO YOU WANT TO  
FIND OUT MORE**

**ABOUT INNOVATION IN  
LUXEMBOURG  
ECOSYSTEM?**

**CONTACT US**