DIGITAL EDUCATION COUNCIL

AI Skills Opportunity Map

Preparing the Next Generation Workforce

A **Google.org** Engaged
Global AI Readiness Research Initiative

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We are grateful to each contributor for their openness in sharing candid perspectives, challenging our assumptions, and helping ensure this work moves beyond analysis to something genuinely useful.

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Executive Summary

This report presents a multi-level analysis of AI's impact across 11 job families, identifying the shifts in task performance and the evolution of skills. The findings culminate in the **AI Skills Opportunity Map**, a framework that highlights where AI creates new professional potential and outlines the emerging capabilities, including key AI skills, needed for the future workforce.

The study utilises the following approach: a **Task Analysis** that evaluates the AI Applicability of tasks based on Task Suitability and AI Capability, and a **Skills Analysis** that assesses the evolution of core professional skills and the degree of AI embeddedness across roles.

The findings also encompass key insights derived from a number of interviews with industry experts on how AI is adopted in their workplace, what skills are becoming increasingly critical and their views on what higher education needs to focus on to prepare graduates for the labour market.

Key Insights: Four Trends Reshaping the Work

Insights distilled from expert interviews and data analysis reveal significant trends:

- AI is becoming embedded unevenly and gradually: AI integration varies significantly, accelerating in highly digital and structured work but moving more slowly in roles that demand human presence and judgement.
- Deep expertise is becoming a force multiplier: AI amplifies the value of strong domain expertise, positioning knowledgeable professionals better to refine AI outputs, detect errors, and apply the technology creatively within context.
- Productivity dips before it soars: AI adoption follows a J-curve: early gains plateau as workflows change faster than people's ability to manage them. However, those who develop enduring skills are likely to move through the disruption and reach significantly higher levels of contribution.
- Human advantage is moving upstream: As AI automates production, human value is shifting from generating outputs to directing, refining, and integrating them. A premium is placed on judgement, problem framing, social intelligence, and ethical reasoning.

Strategic Value: A Roadmap for Curricula and Strategy

For higher education institutions, corporate leaders, and professionals, this report provides a roadmap for navigating the AI-driven transformation of work. It offers a structural analysis of the impact on roles and skills, enabling institutions to redesign curricula for the future and allowing organisations and individuals to strategically invest in developing the redefined and emerging capabilities necessary for long-term relevance and success.

Key Takeaways

1 **Stable Task Structures Make AI Impact Predictable Despite Rapid Change**
While AI capability evolves rapidly, the structure of tasks remains stable. This underlying structure helps predict how AI will ultimately be integrated into work.

2 **Automation Is Densest Where Work Is Most Structured**
Sales, administrative, and computer roles face the highest share of automatable tasks, concentrated in structured, rule-based work.

3 **Where Accountability Is High, AI Adoption Hits a Hard Limit**
Banking and healthcare retain the largest share of human-led tasks. Accountability and authority create a firm ceiling on AI integration.

4 **AI Could Support the Majority of Work in Education, Business, and Management**
These roles exhibit the highest AI embeddedness, meaning AI could support the majority of their daily tasks.

5 **AI Increases the Value of Expertise While Making It Harder to Build**
Professionals with deep domain expertise are best placed to judge where AI should be applied. Yet pathways for building that expertise are narrowing as AI absorbs entry-level work.

6 **Management Skill Is Moving Down the Hierarchy**
Coordination, oversight, and evaluation of AI outputs are becoming foundational skills for early-career professionals, not just senior leaders.

7 **AI Often Reduces Productivity Before It Improves It**
A productivity dip can emerge as AI is integrated into workflows, driven by three mismatches: output volume outpaces human review capacity, AI is applied to the wrong tasks, and task complexity exceeds users' domain expertise.

8 **Long-Term AI Productivity Depends More on Human Capabilities Than on AI Skills**
Applied AI skills will continue to evolve, but enduring human capabilities sustain productive and effective AI use over time.

Action Guide for Higher Education

Designed to inform how higher education institutions prepare for an AI-driven workforce, the following four guides are each tailored to a specific stakeholder group. They distil the key implications and outline practical ways to apply the findings. Download the document that best fits your role.

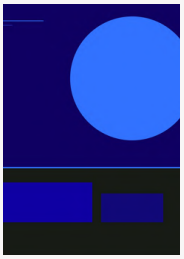
1 For Higher Education Leaders

01 AI disruption is discipline-specific. AI affects fields differently depending on the structure, risks, and judgement demands of their work.

02 Build alternative pathways for early-career expertise. As AI reduces routine entry-level work, institutions need to create new ways for students to build early expertise through applied learning.

03 Management skill is moving down the hierarchy. Early-career professionals increasingly need management skills to oversee AI-supported workflows, outputs, and processes.

04 Match AI investment with capability-building. AI productivity gains depend on aligning tool deployment with human capability development.



Download

PDF · Leadership Briefing

2 For Higher Education Administrators

01 Expand experiential and applied learning. Institutions need more applied opportunities for students to practise judgement and build early expertise.

02 Build AI literacy for all. All students need baseline AI literacy to use AI responsibly, evaluate outputs, and apply it effectively within their discipline.

03 Create effective mechanisms to recognise and embed emerging skills. Institutions need stronger industry engagement, clearer ownership, and flexible curriculum pathways to embed emerging skills systematically.

04 Create the conditions for educational innovation. Institutions need coordinated support for experimentation, scaling, upskilling, and measurement to make innovation sustainable.

Download

PDF · Embedding Emerging Skills into Programmes

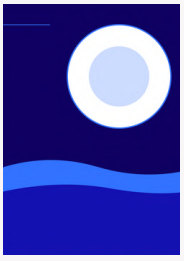
3 For Faculty and Educators

01 Eleven skills defining AI-Ready Graduates. Graduates need both applied AI skills and enduring human capabilities to succeed in the future workplace.

02 Sequence learning before introducing AI. AI should be introduced after students build core domain knowledge, so they can use it from a position of understanding.

03 Build the oversight layer explicitly into the curriculum. Students need tasks that require them to direct AI, evaluate outputs, correct errors, and defend their decisions.

04 Shift assessment from output to process. Assessment should focus on how students reason, make choices, and identify or correct errors, not only on the final output.



Download

PDF · Design Teaching to Build Emerging Capabilities

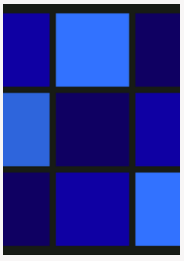
4 For Students

01 Five emerging applied AI skills. Students need to develop five emerging applied AI skills, such as AI-assisted workflow design, to use AI effectively and responsibly.

02 Six enduring human capabilities. Strong human capabilities, such as industry expertise, systems thinking, and problem framing, are critical for students to succeed in the AI-driven workforce.

03 Build domain knowledge before relying on AI. Students should build strong foundations of domain knowledge, avoid using AI to skip difficult coursework, and preserve meaningful struggle.

04 Get experience solving real problems before graduation. Students should use their degree and programme as structured opportunities to work on complex, real-world problems before entering the workplace.



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PDF · Emerging Skills in the AI-Driven Workforce

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Part I

The AI Skills Opportunity Map

AI and the Evolving Labour Market

The rapid development and deployment of Artificial Intelligence (AI) is reshaping how work is performed and what skills are valued across the global labour market. As AI systems increasingly automate structured tasks, augment analytical work, and inform human decision-making, understanding how professional roles evolve becomes critical for professionals, educators, institutions, and policymakers.

This report provides a structured analysis of AI's impact across 11 major job families, examining how professional roles and competencies are changing. The research aims to move beyond abstract discussions of AI disruption and instead offer a practical framework for understanding how work is being reconfigured and what capabilities the next generation workforce will need to develop.

The analysis combines task-level examination, skills analysis, and insights from professionals and industry experts. Task analysis is used to assess the AI applicability of work, distinguishing between tasks that are becoming automatable, those increasingly performed through human-AI collaboration, and those that remain fundamentally human-led due to judgement, accountability, or authority requirements. This task-level perspective is complemented by a skills analysis that tracks how core professional capabilities evolve as work changes.

These findings culminate in the AI Skills Opportunity Map which translates task transformation into practical capability strategies for learning and workforce development. The Map identifies a set of enduring skills that help individuals work effectively alongside AI and move through the early productivity dip toward sustained growth.

The report is structured into two main sections:

- Section 1 presents the research methodology, key findings from analysis and expert interviews, and introduces the AI Skills Opportunity Map.
- Section 2 provides detailed profiles of the 11 job families, outlining how tasks and skills are evolving within each professional domain.

Together, these insights aim to provide a clearer understanding of how AI is reshaping work and to help organisations and institutions align learning and workforce development with emerging opportunities in an AI-enabled economy.

Context and Definitions

This section maps the AI capability spectrum: from narrow AI to hypothetical general intelligence and superintelligence, covering definitions and current advancement levels. The strengths and limitations of each are further analysed and discussed. It then explores recent work on AI's impact on the workforce.

AI Fundamentals: Capability Categories, Strengths, and Limits

To position current discussions within a clear conceptual framework, the literature commonly distinguishes AI according to capability levels and developmental stages. The table below summarises these classifications, outlining how contemporary systems fit within the broader trajectory from narrow to hypothetical general and superintelligent forms.

Figure 1. Types of AI and Their Development Stage

Artificial Narrow Intelligence (ANI) Capability Level		
Traditional narrow AI	AI designed to perform specific, well-defined tasks such as pattern recognition, classification, translation, or prediction without general reasoning across domains. These systems excel within their narrow scope but cannot transfer knowledge outside it.	Exists today
Generative Models (e.g., LLMs)	Models that generate novel content (like text, images, or code) based on learned patterns. These models are used as building blocks for broader systems (e.g., agents), but on their own they lack full autonomous goal-directed behavior.	Exists today
AI Agents (autonomous task executors)	Software systems that use AI to autonomously pursue specific goals on behalf of users by observing their environment and acting accordingly.They exhibit autonomy, planning, and memory within a limited domain but are still task-focused.	Early stage
Multi-Agent Systems	Configurations of multiple AI agents that collaborate or coordinate to accomplish tasks that might be too complex for a single agent alone. These systems decompose problems and jointly execute subtasks in an orchestrated way.	Emerging/Evolving
Agentic AI (coordinated autonomy)	AI systems composed of multiple autonomous components that reason, plan, adapt, and execute multi-step workflows toward complex goals with limited human guidance. They combine agents with orchestration logic to manage broader tasks.	Emerging/Evolving
Artificial General Intelligence (AGI) Capability Level		
Hypothetical general intelligence systems	A future class of AI that would match or exceed human capability across virtually any cognitive task in completely new domains without specific programming.	Research/Future
Artificial Superintelligence (ASI) Capability Level		
Hypothetical super-intelligent systems	A hypothetical extension of AGI where AI exceeds human intelligence in all domains, possessing self-improving capabilities and solving problems beyond human comprehension.	Theoretical

This typological overview establishes the capability landscape within which current workforce debates take place. However, understanding AI's impact also requires recognising operational strengths and structural limitations in practice.

Building on the typological overview above, the following tables synthesise key strengths and limitations identified in the literature regarding current AI systems. It highlights the operational advantages and structural constraints that shape how AI performs in practice. This distinction helps ground subsequent analysis in a balanced understanding of both AI's transformative potential and its inherent boundaries.

Table 1. Summary of Empirically Observed Generative AI Strengths Across Task Types

Task Category	Representative Tasks	Why AI Performs Well
Information Creation and Transformation	• Edit written materials • Prepare informational material • Develop news or creative content	Tasks are language-based, and support iterative refinement with clear quality signals.
Information Gathering and Synthesis	• Gather information from various sources • Maintain knowledge in area of expertise • Compile records or documentation • Research historical or social issues	LLMs excel at processing large volumes of text and identifying patterns across sources.
Explanation and Sense-Making	• Explain technical details of products • Present research or technical information • Interpret language or cultural information	These tasks rely on semantic understanding and re-expression rather than original judgement.
Communication and Response	• Respond to customer inquiries • Provide information to customers or the public • Provide general assistance to others	High repetition, structured intents, and clear communicative goals suit AI delegation.
Instructional and Training Support (conceptual)	• Teach academic or vocational subjects (content-level) • Train others conceptually (non-physical)	Instruction focused on explanation (not pedagogy or supervision) aligns with AI strengths.
Accuracy Checking and Review Support	• Examine materials for accuracy • Evaluate data quality or consistency	Works well when verification is downstream and final judgement remains human.

1. Tomlinson, K., Jaffe, S., Wang, W., Counts, S., & Suri, S. (2025). *Working with AI: Measuring the applicability of generative AI to occupations.* arXiv. https://arxiv.org/abs/2507.07935

Figure 2. Key Limitations of Current AI Systems Relevant to Task-Level Human–AI Interaction

Limitation	Progress in Addressing
1 Performance on hard-to-verify tasks Many high-value jobs depend on outcomes that can't be cheaply or objectively checked at scale (e.g., strategy, policymaking, research, aesthetic judgement). Without scalable verification or strong transfer, AI struggles to improve reliably in these domains.	**Mixed/Contested.** Modest progress has been made on broader verification, but experts disagree about strong generalisation/transfer, especially across domains.
2 Performance on long tasks Much valuable work involves multi-step projects lasting days or weeks where performance can degrade because errors compound or goals drift. If systems cannot stay coherent and effective over long horizons, they cannot function as "drop-in workers" on real workstreams.	**Clear progress.** Benchmarks show sustained exponential progress in time horizons, with similar doubling times at 50% and 80% success rates.
3 Performance in complex environments Real workplaces are high-variability and unpredictable. Good performance requires prioritisation, coordination, and handling novel situations. A system can look strong on benchmarks yet fail in messy real settings.	AI systems struggle in large, high-variability environments, and there is a gap between benchmarks and real-world utility. However, there is also **limited evidence of progress**.
4 Sufficiently low error rate Some contexts have low tolerance for mistakes (medical, critical infrastructure). Errors also compound over long tasks, undermining end-to-end performance unless error correction is robust.	**Some progress.** There is some evidence for declining intrinsic error rates and some emergent error correction, but this is still fragile.
5 Meta-awareness and calibration For high-stakes work, systems must know when they're likely wrong and adjust confidence accordingly. Without this, outputs can mislead and create risk even when average accuracy is high.	**Meaningful progress/Already substantial.** The evidence indicates frontier models already show substantial capability in calibration.
6 Adaptability to the deployment environment Real jobs require absorbing local context (organisation practices, role specifics, materials, norms). Without strong deployment adaptability, "task skill" does not translate into reliable job performance.	**Progress on multiple fronts.** Context length and utilisation are improving rapidly, PEFT methods enable efficient weight adaptation, and specialised architectures for efficient long-context memory are in development.
7 Continual learning post-deployment A frozen system may fall behind as tasks and requirements shift, especially if AI adoption itself changes the nature of work. Continual learning helps systems keep up.	**Partial progress with major bottlenecks.** There has been significant progress on catastrophic forgetting "in principle," but sample efficiency and implementation remain major challenges.
8 Original insights Some economically valuable work (possibly including AI R&D) depends on genuine novel ideas. If AI rarely produces real scientific breakthroughs, automation stalls in research-heavy roles.	**Limited progress.** Notable examples are rare; multi-agent successes are described as modest, and originality remains a major limitation with uncertain solutions (scaling may help, but not guaranteed).

1. Heitmann et al. (2025). *Understanding AI Trajectories: Mapping the Limitations of Current AI Systems.* https://www.aisi.gov.uk/research/understanding-ai-trajectories-mapping-the-limitations-of-current-ai-systems

Taken together, the strengths and limitations outlined above define the realistic boundary conditions of AI deployment. These boundary conditions informed the assessment of AI's applicability to occupational tasks.

Measuring AI's Impact on Occupations

Recent labour market research shifts the focus from AI systems to the structure of work, analysing how AI capability interacts with occupational task composition.

The literature on AI's labour market impact largely adopts a task-based analytical framework. Rather than treating occupations as indivisible units most studies begin by decomposing jobs into granular tasks, enabling a more precise assessment of where AI's strengths and limitations apply. Task definitions are typically grounded in O*NET or equivalent national occupational taxonomies, providing a standardised representation of work activities.

Across this literature different empirical strategies are used to evaluate task-level AI impact.

For example, Kam et al. (2025) uses an adapted DACUM process, a structured job analysis method, to develop an occupational profile of AI-enhanced software developers. Through a three-phase process involving expert practitioners at the cutting edge of AI use, the study identified 12 work goals, 75 tasks, and the skills and knowledge required to use generative AI effectively capturing how AI reshapes task execution and skill requirements, in practice.

In another study, Tomlinson et al. (2025) draws on approximately 200,000 anonymised Copilot conversations. The authors map real user-AI interactions to O*NET Intermediate Work Activities using an LLM-based classification pipeline. Task-level signals of AI assistance and delegation are then aggregated into occupation-level AI applicability scores, grounding the analysis in observed usage rather than forecasted capability.

A third line of research applies a task-first exposure rubric to task-based taxonomies. Eloundou et al. (2024) classifies each task according to whether large language models could materially reduce task completion time at comparable quality. Using a combination of human expert annotations and GPT-4–based classification, the study applies this rubric to O*NET task data and finds that while most occupations exhibit some degree of exposure, the level of exposure varies widely, with higher exposure concentrated in information-processing and higher-wage roles.

Finally, O'Donoghue and Roberts (2025) decomposes approximately 1,000 occupations into around 18,000 tasks using O*NET-style descriptions. Tasks are classified for AI exposure using a combination of expert judgement and machine-learning models trained on task characteristics. Labour mobility and displacement difficulty are then inferred from historical displacement data, and productivity and GDP impacts are simulated using an economic model.

1. National Center for O*NET Development. O*NET OnLine. Retrieved May 11, 2026, from https://www.onetonline.org/
2. Kam, M., Miller, C., Wang, M., Tidwell, A., Lee, I. A., Malyn-Smith, J., Perret, B., Tiwari, V., Kenitzer, J., Macvean, A., & Barrar, E. (2025). What do professional software developers need to know to succeed in an age of Artificial Intelligence? In *FSE Companion '25: Proceedings of the 33rd ACM International Conference on the Foundations of Software Engineering* (pp. 947–958). ACM. https://arxiv.org/abs/2506.00202
3. Tomlinson, K., Jaffe, S., Wang, W., Counts, S., & Suri, S. (2025). *Working with AI: Measuring the applicability of generative AI to occupations*. arXiv. https://arxiv.org/abs/2507.07935
4. Eloundou, T., Manning, S., Mishkin, P., & Rock, D. (2024). GPTs are GPTs: Labor market impact potential of LLMs. *Science*, 384(6702), 1306–1308. https://doi.org/10.1126/science.adj0998
5. O'Donoghue, O., & Roberts, D. (2025). *Gen AI: New work, new world. Cognizant & Oxford Economics.* https://www.cognizant.com/us/en/aem-i/generative-ai-economic-model-oxford-economics

While recent studies have advanced task-level AI impact analysis using expert annotation, large-scale usage data, and economic modelling, three limitations remain:

First, exposure metrics primarily estimate whether AI can assist or reduce time on tasks but do not systematically evaluate structural suitability including authority constraints, accountability requirements, contextual dependency, and error tolerance thresholds that shape real-world delegation decisions.

Second, most analyses treat AI applicability as a static condition, offering limited insight into how short-term augmentation may differ from long-term integration once organisations adapt their workflows, structures, and capabilities accordingly.

Third, existing research quantifies task impact but does not model the interaction between AI capability and enduring human capabilities required to stabilise and scale AI adoption within occupations.

This study addresses these limitations by assessing structural task suitability, developing an AI Skills Opportunity Map that links applied AI skills with enduring human capabilities. The report differentiates between short-term productivity gains and long-term opportunity formation.

Methodology

This research identifies 11 major job families, providing broad coverage across roles ranging from managers and healthcare professionals to technicians. For each job family the analysis consists of both task-level and skills-level assessments.

The following section outlines the approach used to conduct the task-level and skills-level analysis across all 11 job families.

Task Analysis: Tracking AI Applicability

Our approach proceeds in 4 steps:

Step 1 - Decomposition
We reviewed job taxonomies from over 12 countries across APAC, North America, Latin America, Europe, Africa, and the Middle East to synthesise a representative list of tasks for each job family.

Step 2 - Task Evaluation
Each task is evaluated across two interacting dimensions:

- *Task Suitability:* To what extent the nature of the task lends itself to automation or augmentation.
- *AI Capability*: To what extent current AI systems can perform the task to an acceptable standard.

This relationship is defined as:

***AI Applicability** = Task Suitability x AI Capability*

If either dimension is low, overall applicability is constrained. Importantly, task suitability tends to be relatively stable over time while AI capability is evolving rapidly. The framework therefore captures both the structural nature of tasks and the dynamic pace of AI progress.

Task Suitability is estimated based on 7 stable dimensions:

Dimension	Description
Modality	Digital vs. Physical
Structure	How well-defined the rules are
Error Sensitivity	The cost of a mistake
Judgement	The level of interpretation required
Contextual Understanding	Reliance on local/tacit knowledge
Authority	The need for legal or ethical accountability
Verifiability	How easily a human can check the AI's work

AI Capability is estimated based on the 3 criteria:

- **High:** AI matches/exceeds humans with minimal oversight.
- **Medium:** AI handles parts, but needs human refinement.
- **Low:** AI is unreliable or unable to perform the task.

The result is the AI Applicability score which is explained in the following rubric.

High Suitability				
High Suitability	+	High Capability	→	Automatable
High Suitability	+	Moderate Capability	→	Augmented with the potential to be augmented or automatable
High Suitability	+	Low Capability	→	Human-led with the potential to be augmented or automatable
Medium Suitability				
Medium Suitability	+	High Capability	→	Augmented
Medium Suitability	+	Moderate Capability	→	Augmented
Medium Suitability	+	Low Capability	→	Human-led with the potential to be augmented
Low Suitability				
Low Suitability regardless of Capability			→	Human-Led

Step 3 - Cluster Evaluation
To produce a cluster level analysis, we interpret the pattern of labels across layers to understand how AI interacts with the task. Based on these patterns, each task cluster is classified into one of three AI applicability tiers:

- **Predominantly Automatable:** AI can perform the task end-to-end with little or no human input. Human involvement is limited to exception handling or system oversight.
- **Predominantly Augmented:** AI meaningfully supports or accelerates the core workflow, delivering material improvements in time or quality. Humans continue to make key decisions and remain accountable, while AI outputs become core work products that can be generated, reviewed, and reused.
- **Predominantly Human-Led:** AI provides limited or peripheral support because the core value of the task is produced through human judgement, and formal accountability. AI output serves as supporting input, but the work remains resistant to standardisation and delegation.

Step 4 - Job Family Evaluation
Finally, for each job family we provide a short summary synthesising these findings. This approach highlights meaningful variation within roles, showing which tasks are more AI-applicable than others. It explains why these differences arise, based on the nature of the task and the level of human judgement required.

Skills Analysis: The Evolution of Core Professional Skills

The skills analysis follows a methodology of 4 steps.

Step 1 - Skill Identification by Task Cluster
We reviewed job taxonomies from over 12 countries across APAC, North America, Latin America, Europe, Africa, and the Middle East to synthesise a representative list of skills for each job family.

Step 2 - Core Skill Evolution Classification
We assess how AI changes existing core skills using these labels:

- Largely Unchanged: Purpose, judgement, and responsibility remain stable.
- Expanded: The core purpose remains, but scope or tools grow through AI.
- Redefined: Purpose, decision authority, or success criteria change fundamentally.

In addition to classifying core skill evolution, we identified the emerging AI-specific skills required to operate within new AI-supported workflows.

Step 3 - Focused Skills Analysis
To isolate the most significant shifts we filtered for redefined skills and examined how AI is reshaping what these skills mean and appear in practice.

Step 4 - AI Embeddedness Assessment
The final step examines emerging AI skills and measures the extent to which a job family's daily work can be enhanced or supported by these capabilities. This is captured through AI Embeddedness — a measure of how deeply AI skills integrate into the routine functioning of a job family.

Key Findings

Structural Shifts in Workflows and Skills

Across the 11 job families, AI impact is shaped by the structural properties of work. The key patterns from the task and skill analyses are outlined in this section.

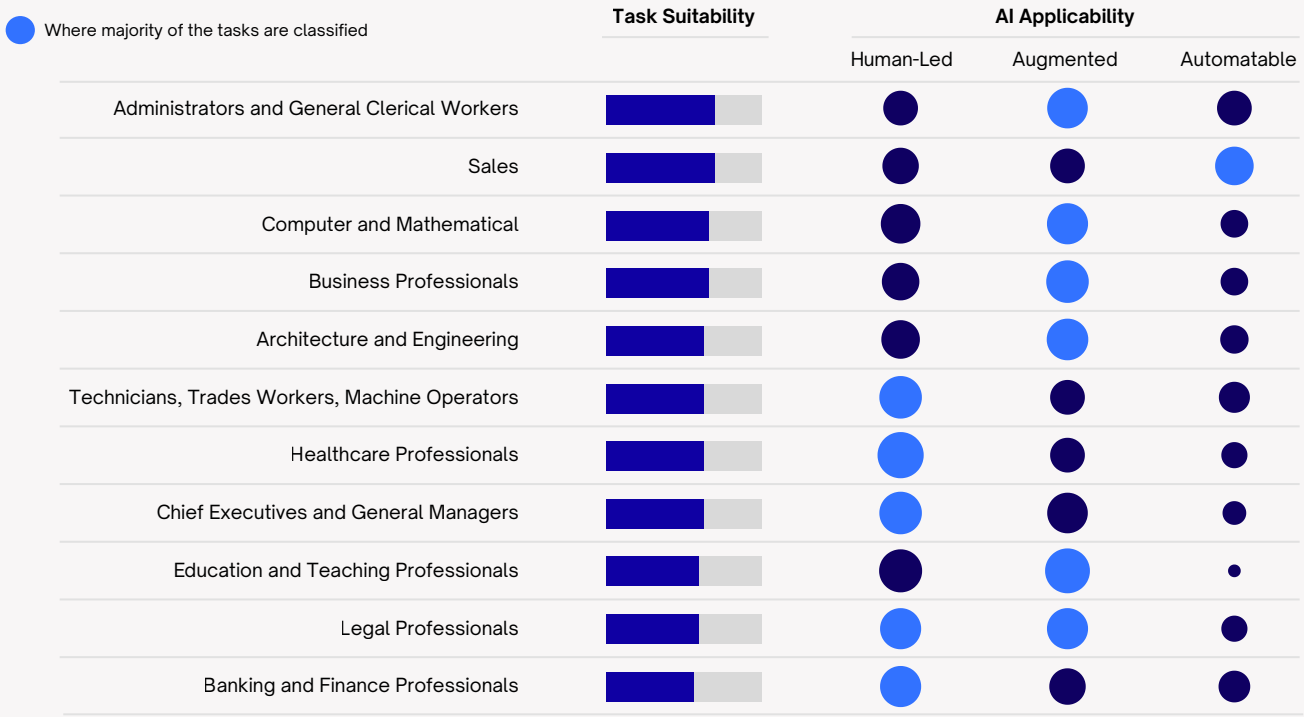
A Task-Level View: Where AI Lands and Where It Doesn't

The task-level analysis provides the structural foundation of this study. By mapping how tasks are distributed across the spectrum from automation to human-led work, we determine where AI is reshaping professional activity.

The AI Integration Spectrum: AI Is Rewriting Who Does What

> **Key Takeaway:** Most job families are already operating in AI-present environments, but the transition is not about wholesale replacement. Instead, we are seeing a profound structural rebalancing of how work is executed.

Figure 3. Job Family Task Suitability and AI Applicability



Augmentation is the Dominant Pattern: Across the vast majority of knowledge-intensive domains, human-machine collaboration is the new baseline. AI is embedded into the foundational layers of modern work. Rather than displacing workers, this technology is forcing a professional evolution: humans are shifting from raw content creators to high-level curators. The clear trajectory for the modern workforce is deeper, more sophisticated augmentation.

Automation is Confined to Routine Tasks: Where true, independent automation occurs, it is highly concentrated in a narrow set of tasks. Routine, system-mediated tasks are increasingly being handed over to algorithms. However, this mainly reduces the volume of routine execution tasks and streamlines the periphery of a job.

Accountability and Physical Execution Remain Human-Led: Despite rapid technological advances, the need for human authority remains absolute. Fiduciary duty, clinical accountability, relational empathy, and physical embodiment create a firm ceiling on AI integration.

Work remains human-led wherever outcomes depend on accountability and navigating real-world uncertainty.

In Summary: The impact of AI is uneven, yet it is deeply embedded across all professional clusters.

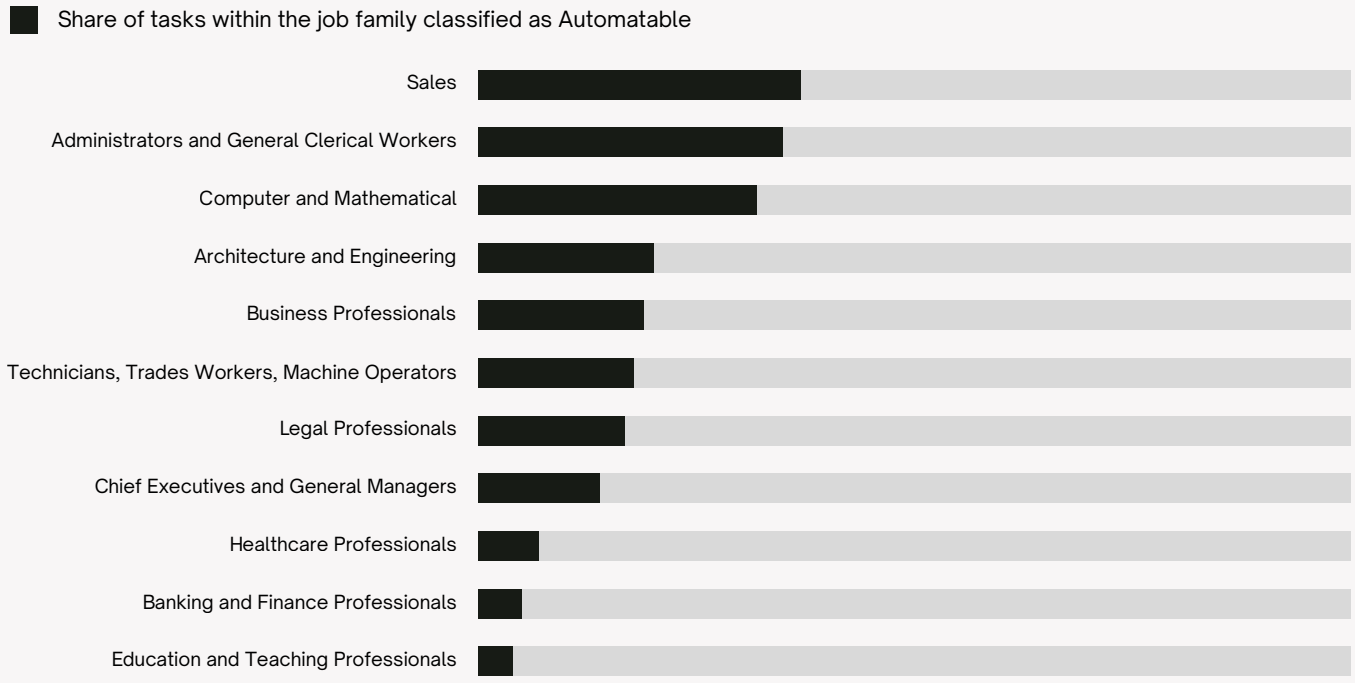
Automation targets routine work, while augmentation strengthens analytical tasks. Areas requiring authority remain firmly human-led.

The following section disaggregates the specific automation, augmentation, and human-led shares for each job family in greater detail.

The Automation Landscape: Compressing Routine Execution

> **Key Takeaway:** Automation concentrates heavily in structured, rule-based execution layers, while roles that rely on complex judgement and real-world interaction remain strongly human-dependent.

Figure 4. AI Task Automation Exposure by Job Family



Highest Share of Automatable Tasks: The Process-Driven Frontline

Sales and Administrative, Computer and Mathematical, and General Clerical roles show the highest automation potential. Their day-to-day work is defined by structured, system-mediated operations.

- **Verifiable Workflows:** Routine, system-based tasks follow clear and predictable rules, making them highly suitable for independent AI execution.
- **Standardised Reporting**: The heavy reliance on data management and system-based administration allows automation to efficiently take over the execution layer.

Moderate Share of Automatable Tasks: Peripheral Delegation

Architecture and Engineering, Business Professionals, Computer and Mathematical roles, Technicians, and Legal Professionals occupy the middle tier. In these fields, automation tends to execute peripheral tasks rather than core responsibilities.

- **Compressing the Data Layer:** AI efficiently supports a range of routine, system-based tasks, particularly those involving data preparation and monitoring.

- **Preserving Core Functions:** While the technology streamlines background execution, responsibilities centred on design and higher-level judgement remain largely unchanged.

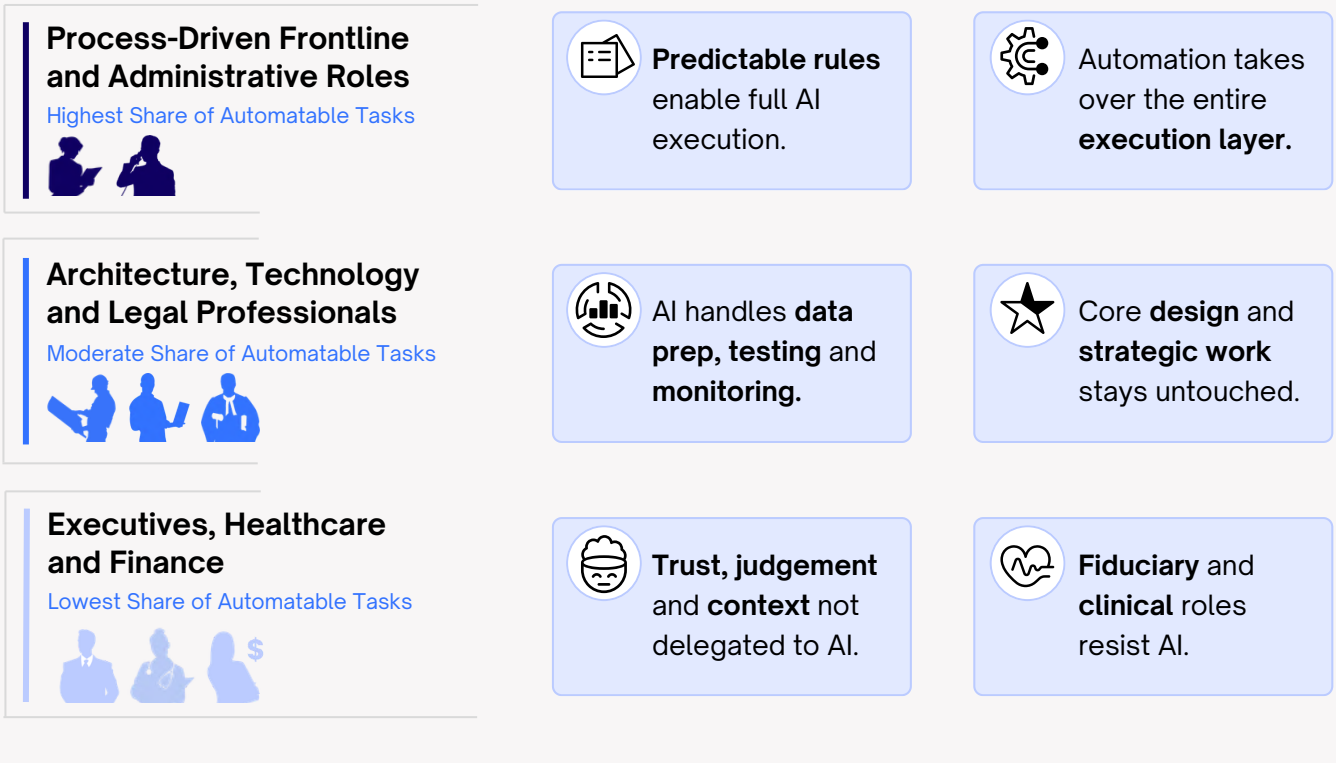
Lowest Share of Automatable Tasks: The Accountability Barrier

Chief Executives, Healthcare Professionals, Banking and Finance, and Education possess the smallest proportion of fully automatable tasks. These job families operate in environments where substitution is constrained by risk and responsibility.

- **Contextual and Strategic Depth:** Heavy reliance on complex reasoning and institutional context prevents AI from operating independently, particularly where trust plays a central role.

- **Fiduciary and Clinical Authority:** Accountability and risk ownership keep decision-making firmly in human hands, limiting the scope for autonomous AI use.

Figure 5. Summary of Automatable Tasks Share by Job Family



The Augmentation Shift: Expanding Oversight and Analysis

> **Key Takeaway:** Augmentation is the dominant force in modern knowledge work. AI executes the heavy analytical drafting; professionals provide the strategic validation and oversight.

Figure 6. AI Task Augmentation Exposure by Job Family

Highest Share of Augmented Tasks: The Knowledge Refinement

Education, Computer and Mathematical, and Business Professionals stand apart as the most augmented job families. In these domains, AI can move beyond assistance into a genuine collaborative role.

- **AI Generates, Humans Architect:** AI generates code, learning materials, and campaign drafts. Humans define solution architectures, learning strategies, and stakeholder communication.
- **AI Drafts, Humans Validate:** AI drafts technical specifications, instructional content, and communication strategies. Professionals apply pedagogical judgement, technical feasibility assessment, and brand/organisational alignment.

Moderate Share of Augmented Tasks: Structured Acceleration

Four job families including Legal Professionals, Chief Executives and General Managers, Architecture and Engineering, and Healthcare Professionals occupy the middle tier. Across these fields, AI can serve as an accelerator for the more process-driven tasks in this work.

- **Strict Constraints:** The combination of regulatory constraints and accountability requirements confines AI to an assistive role.
- **Mandatory Oversight:** High-stakes decision-making and real-world physical constraints mandate human intervention to safely integrate AI-generated insights into practical applications.

- **Healthcare's Selective Augmentation:** Whilst Healthcare sits within this tier, the scope of augmentation is narrower than its peers. AI finds application in specific areas such as diagnostic support, patient record summarisation, and literature review. AI integration remains limited in clinical settings that rely on direct patient interaction and real-time judgement.

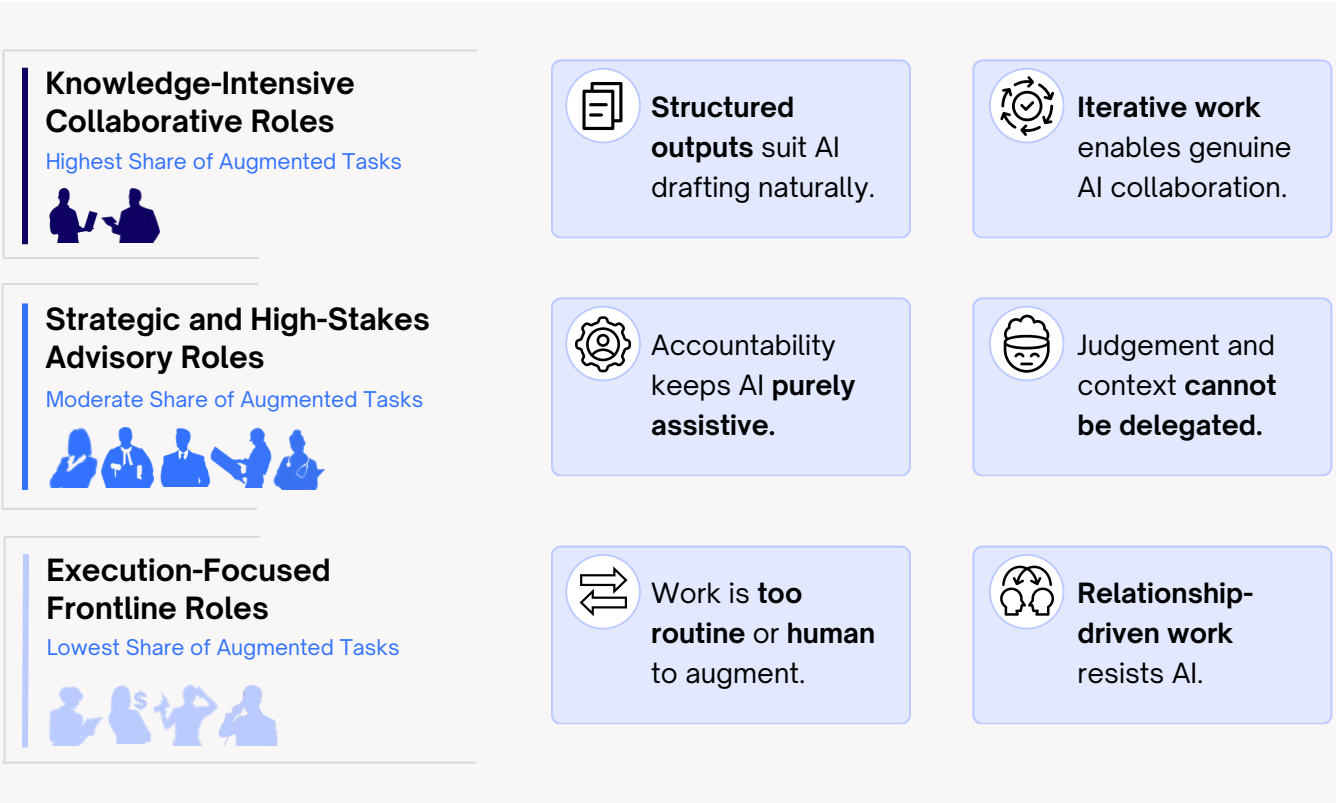
Lowest Share of Augmented Tasks: Limited Scope for Augmentation

Administrators and General Clerical Workers, Banking and Finance Professionals, Technicians, Trades Workers and Machine Operators, and Sales experience the lowest levels of augmentation. The nature of work in these fields leaves limited room for collaborative, augmented workflows.

- **Full Automation:** Routine transaction processing and data entry are handed over to autonomous systems, bypassing the augmentation layer.

- **Strictly Human:** Persuasion and negotiation remain distinctly human, with limited meaningful support from AI.

Figure 7. Summary of Augmented Tasks Share by Job Family



The Human Core: Authority and Accountability

> **Key Takeaway:** Work remains fundamentally human-led wherever physical execution, relational empathy, fiduciary duty, and accountability are non-negotiable.

Figure 8. Human-Led Task Share by Job Family

Highest Share of Human-Led Tasks: The Accountability Imperative

Banking and Finance and Healthcare carry the greatest proportion of human-led tasks. Despite their vastly different environments, these roles share a strong reliance on human authority and real-world execution.

- **Professional Accountability:** Banking demands strict risk ownership and high-stakes decision-making. Final financial judgements are difficult to legally or ethically delegate to AI.
- **Clinical Authority:** In healthcare, although AI supports tasks such as diagnostics and documentation, the demands of physical care and clinical accountability ensure that most work remains human-led.

Moderate Share of Human-Led Tasks: Interpreting Complexity

Legal Professionals, Architecture and Engineering, Business Professionals, Sales, Technicians, Education, and Chief Executives form a broad middle tier. Roles like Legal, Architecture, Business, and Sales rely on interpretation and judgement in complex, high-stakes contexts. Others, like Technicians, educators, and executives, require physical presence, trust, and the ability to lead people. AI can support the analytical side of this work, but the human element stays central.

- **Risk Ownership:** AI processes vast amounts of data and generates initial drafts. Human professionals handle final regulatory compliance, legal risk ownership, and design validation.

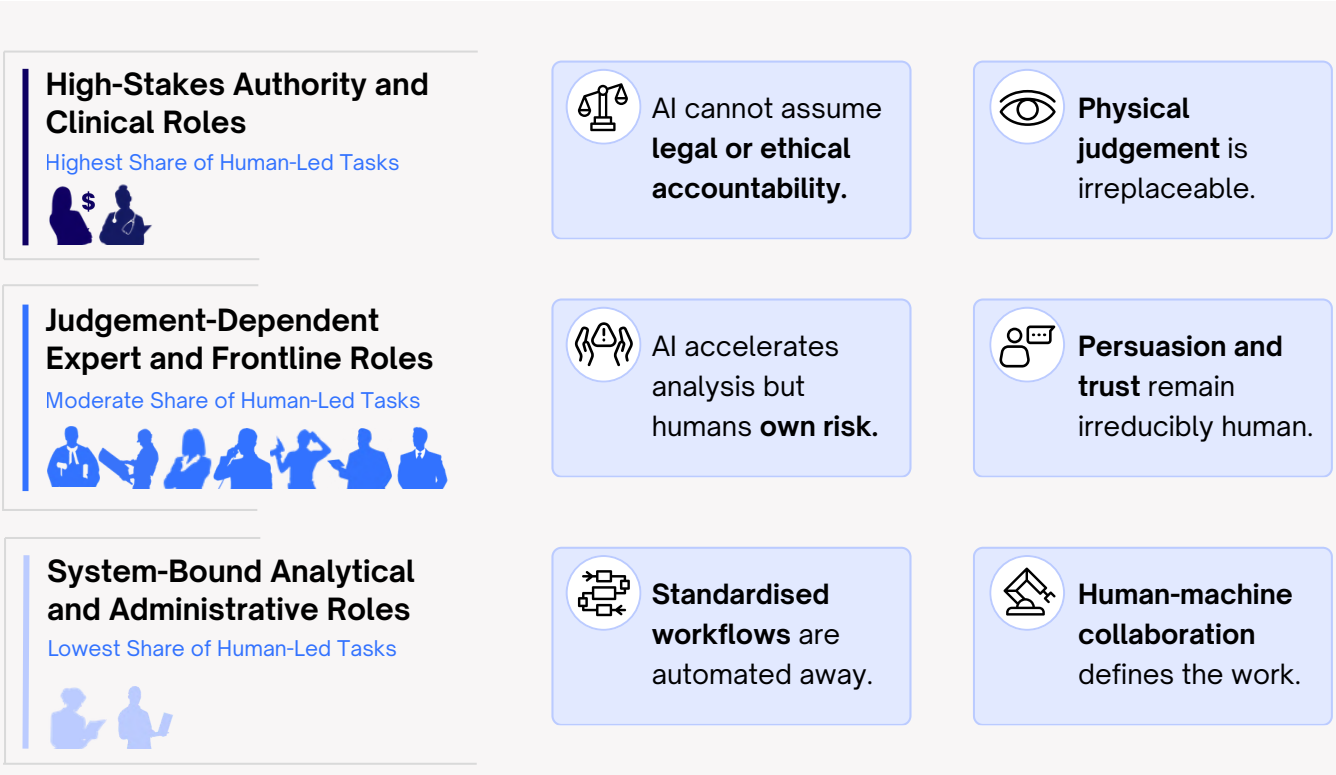
- **Human-to-Human Persuasion**: While data processing is automated, Sales and Business roles remain centred on trust and negotiation.
- **Relational and Strategic Leadership:** Education and Executive roles depend on stakeholder alignment and organisational direction, with pedagogy playing a central role. AI may inform decisions, but accountability remains concentrated at the human level.
- **Embodied Execution:** Technicians operate in unpredictable, physical environments where installation, repair, and real-time troubleshooting require context-sensitive judgement and physical dexterity that AI cannot readily substitute.

Lowest Share of Human-Led Tasks: The System-Bound Shift

Administrators and General Clerical Workers and Computer and Mathematical roles possess the smallest amount of predominantly human-led work. This reflects their exposure to automation and augmentation.

- **Rule-Bound Operations:** Administrative work is highly structured, and verifiable. Because workflows are heavily standardised, the vast majority of tasks can be either automated or heavily augmented.
- **Deep Symbiosis:** Computer and Mathematical roles are defined by human-machine collaboration. The work can be significantly augmented by AI, with few core responsibilities that require independent human execution.

Figure 9. Summary of Human-Led Tasks Share by Job Family



A Skills-Level View: The Transformation of Core Competencies

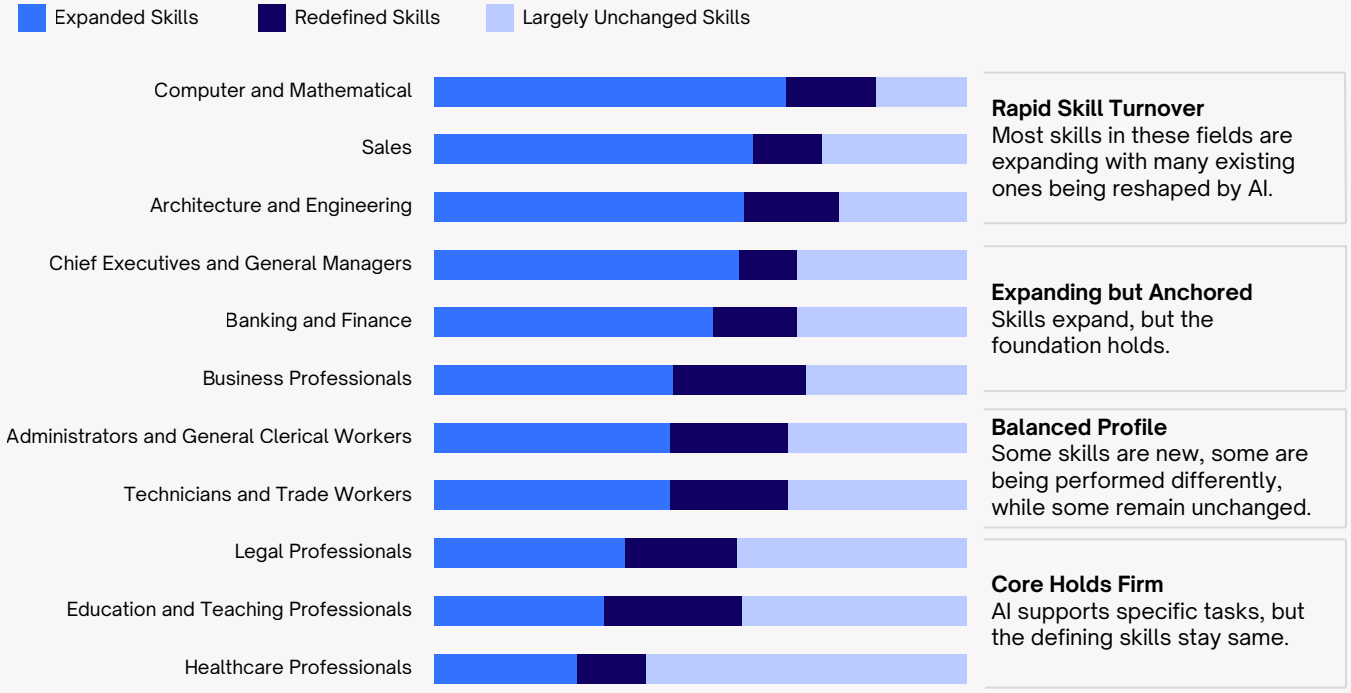
The skills analysis shows how changes in tasks affect the skills required, highlighting which skills are expanding, changing, or staying the same.

Figures below present the ratio of skills and the AI embeddedness percentages.

The Evolution of Skills: How Competencies are Changing

Key Takeaway: The integration of AI drives three distinct patterns of skill transformation across the workforce: rapid expansion in technical roles, structural redefinition in analytical roles, and sustained stability in authority-driven professions.

Figure 10. Core Skills Evolution



The skill transformation landscape across job families does not follow a single uniform pattern. The data reveals distinct adaptation profiles, each reflecting a different relationship between expanding capabilities, redefining workflows, and preserving stable competencies. Understanding these profiles provides a more nuanced picture of how AI is reshaping professional skill demands across the workforce.

Rapid Skill Turnover

Computer and Mathematical, Sales, and Architecture and Engineering face the most pronounced shift in their skill profiles. Expansion dominates, whilst unchanged skills represent the smallest share across all job families. A notable portion of skills are also being redefined, reflecting a gradual shift in how certain tasks are performed as AI becomes more embedded in daily workflows. These roles are rapidly expanding, requiring continuous integration of AI tools and new ways of working.

Expanding but Anchored

Chief Executives, Banking and Finance, and Business Professionals share a profile where expansion is the dominant force, with a solid foundation of unchanged skills. Business Professionals in particular carry a higher share of redefined skills, pointing to a shift in core

analytical functions. These roles are broadening their technical and analytical capabilities considerably, yet retain a foundation of unchanged competencies rooted in judgement, risk ownership, and strategic leadership. AI extends what these professionals can do without fundamentally altering the authority and accountability structures that define their roles.

Balanced Profile

Administrators and General Clerical Workers and Technicians and Trades Workers show relatively balanced skill profiles across categories. Expansion leads, but redefinition and unchanged skills carry comparable weight. This balance reflects roles that are integrating new tools and adapting workflows, while retaining a stable core of competencies. The transformation here is gradual and broad rather than concentrated in any single direction.

Core Holds Firm

Healthcare, Education, and Legal roles are defined by their unchanged core skill base. Whilst expansion and redefinition are present as a secondary force, the dominant characteristic of these job families is the structural integrity of their core competencies. Clinical judgement, legal advocacy, and pedagogical leadership remain largely intact as AI expands. These professions are grounded in accountability and contextual complexity which keeps AI in a supporting role.

Taken together, the data reveals three distinct ways job families are adapting to AI:

- Expansion-Heavy Transformation: Technical and operational domains must integrate new AI tools to broaden their existing expertise.
- Redefinition-Heavy Transformation: Analytical and business-facing roles are shifting their core focus from production to evaluation and refinement.
- Stability-Dominant Transformation: Authority-driven professions retain the structural integrity of their core competencies, with AI playing only a supporting role.

AI Skill Embeddedness: The Depth of Integration

> **Key Takeaway:** High exposure to AI does not automatically mean deep integration. AI embeddedness correlates directly with knowledge intensity and task abstraction, taking root deepest in roles heavily reliant on complex information processing and strategic decision-making.

AI skills are an emerging category of capabilities that support the execution of a wide range of tasks. AI Skills Embeddedness measures the proportion of tasks within a job family that can be meaningfully enhanced or supported by AI-related skills.

Highest Embeddedness: The Intellectual and Strategic Core

Education and Teaching, Business Professionals, and Chief Executives and General Managers exhibit the highest levels of AI skill embeddedness. In these domains AI is woven into core intellectual and decision-making functions. It actively shapes how organisations design, plan, and oversee their operations. Rather than just assisting on the periphery, AI has become structurally essential to this knowledge-intensive work.

Substantial Embeddedness: Inseparable Workflows

Computer and Mathematical and Architecture and Engineering roles also demonstrate substantial embeddedness. In these technical fields, AI acts as a foundational pillar within system design, and data-driven optimisation. While human professional judgement remains the ultimate authority, AI tools are now completely inseparable from everyday technical execution.

Figure 11. AI Skill Embeddedness by Job Family

Moderate Embeddedness: Constrained by Accountability

Healthcare, Banking and Finance, Legal Professionals, and Administrative roles sit in the middle tier, though they land there for vastly different structural reasons:

- **Regulatory Boundaries:** In Healthcare, Finance, and Law, AI is widely used in areas such as documentation and analysis. However, strict ethical and accountability requirements create a clear boundary. AI supports the groundwork, but final accountability limits how deeply it can embed into core decision-making.
- **Execution vs. Strategy:** For Administrative workers, AI is widely integrated into reporting and coordination systems. Yet, this deep integration is entirely confined to the execution layer; it does not redefine strategic authority.

Lowest Embeddedness: The Physical and Relational Frontlines

Sales and Technicians and Trade Workers show the lowest levels of true embeddedness. Crucially, lower embeddedness does not imply low exposure to the technology.

- **The Relational Core:** In Sales, AI supports CRM and analytical functions, but the defining aspects of the role, centred on persuasion and human relationships, remain distinctly human. AI compresses the administrative support layers but cannot redefine the professional core.
- **The Embodied Core:** For Technicians and Trade Workers, physical execution and on-site, embodied problem-solving inherently limit how deeply a digital AI tool can integrate into central, hands-on task performance.

In Summary: Embeddedness measures the true depth of AI integration within a role. The more a job relies on information-intensive and strategic work, the more deeply AI becomes embedded. Conversely, professions anchored in physical execution, embodied judgement, and interpersonal trust naturally resist deep structural integration.

Together, task exposure, skill evolution, and embeddedness reveal where and to what extent AI is present in the modern workforce. The following section distils these interaction patterns into key implications.

Six Key Shifts of the Workforce

The findings above map the structural reality of how tasks are redistributing and how skills are evolving across 11 job families. Combined with insights from expert interviews, the following section translates that data into six broader implications for professionals and institutions.

01 AI Is Becoming Embedded Unevenly and Gradually

AI is increasingly integrated into daily workflows but the level of embeddedness varies significantly across roles and sectors. Highly digital and structured work is integrating faster, while authority-heavy and embodied roles remain more resistant.

Looking ahead, the rise of agentic systems capable of managing multi-step workflows could accelerate this shift. However, even in an AI-first future, tasks that require high accountability, contextual judgement, or complex verification are likely to evolve more slowly.

02 Managing AI Is Moving Down the Hierarchy

AI systems are beginning to handle not just individual tasks but sequences of tasks. As a result, oversight is no longer limited to senior roles. Early-career professionals are increasingly expected to manage and evaluate AI outputs.

Over time, this may compress traditional management hierarchies and bring responsibility forward in careers. As AI embeds itself into workflows, coordination and oversight are emerging as foundational skills for professionals at every stage.

03 Deep Expertise Is Becoming a Force Multiplier

Professionals who understand a specific industry's constraints and operating norms are better positioned to integrate AI in practically viable ways. They know instinctively where AI adds value and where human judgement must take over. Shallow knowledge limits the ability to apply, evaluate or improve AI-generated work.

As AI and agentic systems become more powerful, the return on deep expertise is likely to increase. The long-term implication is a widening gap between those who combine AI with domain mastery and those who rely on AI without expertise.

04 Human Advantage Is Moving Upstream

As AI makes production abundant, human value shifts from generating output to shaping how it is used. The premium is on judgement, problem framing, organisational awareness, social intelligence, and ethical reasoning elevating AI outputs into real-world decisions.

Because tools evolve rapidly, deep expertise must be paired with enduring skills.

05 Career Pathways Are Becoming Less Linear and Less Automatic

AI is absorbing portions of routine execution that once served as informal training grounds for early-career professionals. While not all junior roles are disappearing, the mechanism through which expertise traditionally accumulated is weakening.

Skill development can no longer rely solely on gradual exposure and repetition. Going forward, organisations may need to design more structured development pathways such as rotational programmes, simulations, and mentorships. Career progression is shifting from passive accumulation to intentional capability-building.

06 Production Is Accelerating, Learning Requires Intentional Design

AI can produce high-quality output quickly in many contexts, and its capabilities continue to grow.

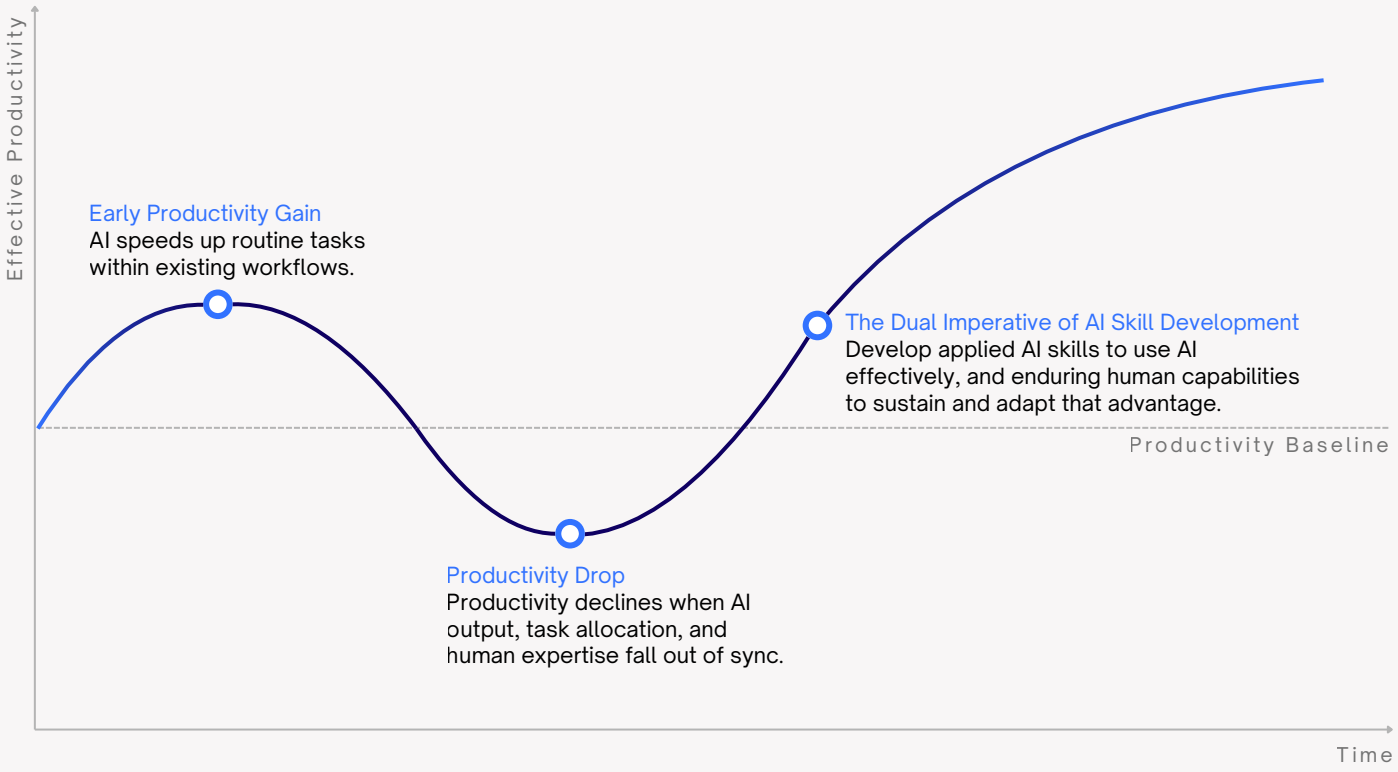
What this means for education is that the cognitive effort traditionally embedded in completing a task can now be easily bypassed and delegated to AI. As AI improves, education institutions will need to design learning experiences more deliberately to ensure foundational reasoning and problem-solving skills remain central to learning.

The Productivity Paradox

The six shifts described above illustrate how AI is beginning to reshape the structure of work, altering how tasks are performed, where responsibility sits, how expertise creates value, and how careers develop.

As these changes unfold, organisations often experience a characteristic pattern during AI adoption. Early efficiency gains are followed by a period of disruption as workflows change faster than the capabilities people have to operate within them. This pattern is commonly described as the productivity paradox of AI adoption.

Figure 12. The AI Productivity Paradox: From Early Gains to Sustainable Value



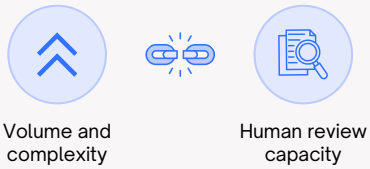
The Early Gain

In the short term, AI adoption produces visible productivity gains. Routine tasks, such as drafting, summarising, synthesising information, and creation of initial analysis can be delegated to AI systems, enabling faster execution within existing workflows. However, these gains are constrained. AI at this stage speeds up what people already do; it does not transform how work is structured or how decisions are made.

The Productivity Drop

As AI use expands beyond routine tasks, productivity often stalls or declines. This is not a failure of the technology but a set of mismatches between what AI enables and what humans are currently equipped to handle.

Figure 13. AI Creation-Human Need Mismatches

Mismatches	What AI Creates	What Humans Need	
Output-Review Imbalance	 Volume and complexity	Human review capacity	AI dramatically increases the volume and complexity of work produced, but human capacity to evaluate that output does not scale at the same pace.
AI-Task Misallocation	Alternative approaches to tasks	Judgement to match the right approach to the task	Without clear understanding of what different AI tools can do, people apply the wrong approach to the task creating friction that accumulates over time.
Expertise-Complexity Gap	Complexity of AI-driven work and processes	Domain expertise to verify output and reasoning	As AI takes on more complex work, the expertise needed to evaluate both the output and the process behind it often exceeds what the user can provide.

Mismatch 1: Output-Review Imbalance

AI makes it easy to produce more in far less time. This rapidly increases the volume of material, while the human capacity to review and evaluate it does not scale at the same pace. AI can also increase task complexity by generating multiple alternatives that must be compared and synthesised before a final decision is reached. As a result, the volume and complexity of material awaiting human judgement grow much faster than the ability to evaluate it well.

This problem is further compounded when prompting skills are underdeveloped. Vague prompts produce poor outputs, triggering repeated cycles of re-prompting and revision, sometimes consuming more effort than the task would have taken without AI. As review volume accumulates, evaluation quality may also decline, with people skimming rather than scrutinising AI-generated material and allowing errors to slip through. The result compounds: more is produced, more reviewing and iteration are required, and less of what gets through is properly checked.

Mismatch 2: AI-Task Misallocation

Not every task benefits from AI, and not every AI-enabled task requires the same approach. However, without a clear understanding of the capabilities of different tools, people may apply AI in ways that do not match the nature of the task. For example, manual work may actually be faster, or overly complex AI systems may be chosen when simpler methods would be more reliable.

The underlying issue is the mismatch between the task and the approach chosen to complete it. Over time, these small inefficiencies accumulate, creating friction in everyday work. Effective AI adoption depends on understanding the task, AI capabilities, and choosing the right approach.

Mismatch 3: Expertise-Complexity Gap

As AI moves beyond routine work into analysis, interpretation, and domain-specific reasoning, the human evaluating the output needs sufficient expertise to know when it is sound and when it is not. Where that expertise is thin, AI-generated work passes through without adequate scrutiny — not because the person is careless, but because they lack the basis to challenge it.

This challenge becomes more pronounced when AI systems are used in complex, multi-step processes, where understanding how the system arrived at the final decision is also important.

Without sufficient domain knowledge, it becomes difficult to assess whether both the result and the process are reliable.

This creates a silent erosion of quality and accountability: work is produced quickly and appears complete, but the underlying judgement is shallow. The costs may only become visible later, through poor decisions or rework, sometimes affecting reputation.

The Resolution: The Dual Imperative of AI Skill Development

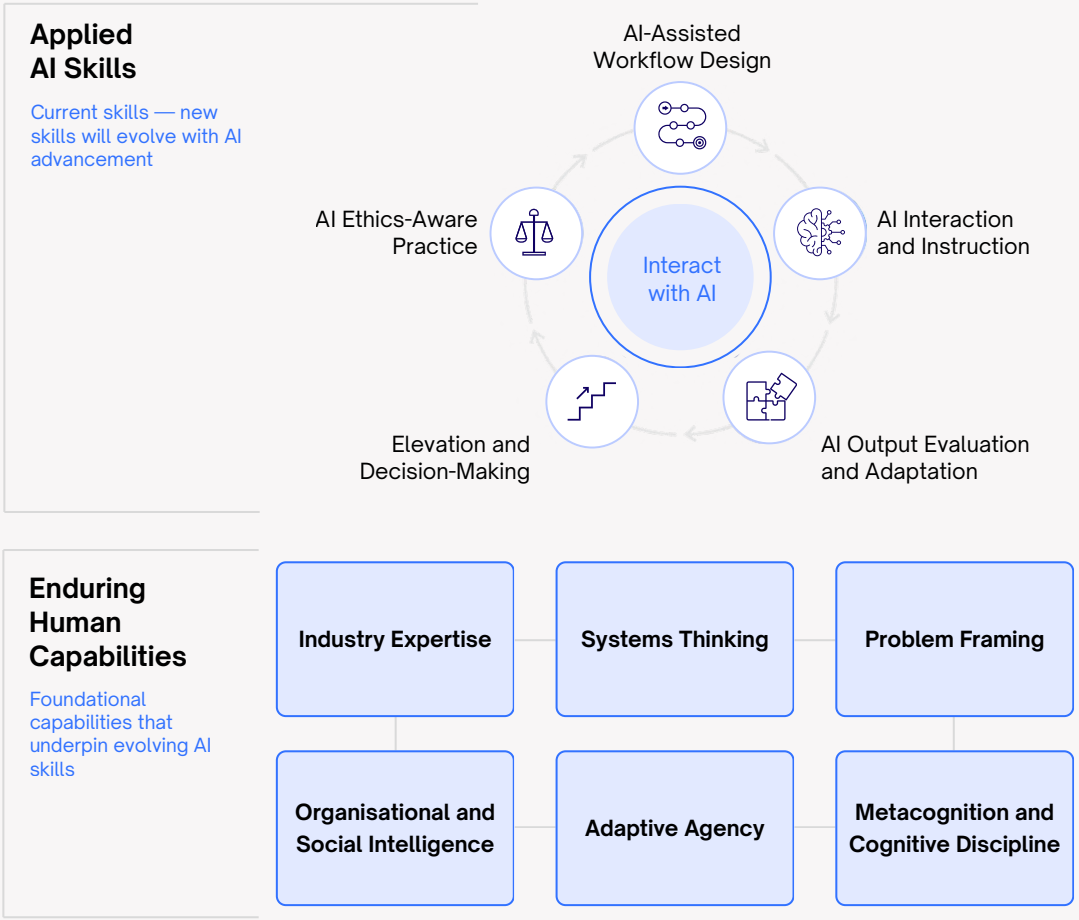
Resolving these mismatches requires development of two layers of skills:

Layer 1: Applied AI skills — the practical capabilities that govern how effectively someone works with AI day to day. These include designing tasks with the right human-AI division of labour, instructing AI with precision, evaluating and adapting AI output, building on that output to elevate its value for decisions, and applying ethical judgement throughout. These skills directly address the mechanics of the productivity drop: better task design reduces misallocation, sharper instruction reduces rework cycles, stronger evaluation and the ability to elevate AI content help close the judgement-complexity gap, and ethical awareness secures sound and responsible AI use.

Layer 2: Enduring human capabilities — what sustains productive AI use over time. Industry expertise gives people the substantive basis to judge AI output in context rather than in the abstract. Systems thinking enables them to see where AI is best positioned to help and how AI-augmented tasks connect across workflows. Problem framing ensures the right questions are asked before AI is deployed to answer them. Organisational and social intelligence provides the contextual understanding that AI consistently lacks — the dynamics that shape how work actually gets done. Adaptive agency allows people to develop personalised approaches to AI that fit their strengths and to adapt their skills as the technology evolves. And metacognition — the ability to monitor one's own thinking — prevents the slow slide into over-reliance, helping people recognise when they are skimming rather than evaluating, generating rather than thinking, or deferring rather than deciding.

The key difference between these two layers lies in how they evolve over time. Applied AI skills reflect how people interact with AI as it exists today; as the technology advances, some skills will evolve, others may fade, and new ones will emerge. Enduring human capabilities, by contrast, remain relevant regardless of how the technology changes.

Figure 14. The Dual Imperative of AI Skill Development



The AI Skill Opportunity Map

The productivity paradox of AI adoption shows what can happen when AI adoption outpaces human readiness. However, it also reveals new opportunities: when individuals develop the right combination of applied AI skills and deeper human capabilities, they move beyond the initial disruption and begin to unlock new forms of value creation.

This paradox emerges because AI changes how work is performed. As AI becomes embedded in workflows some tasks become automated, others are carried out through human-AI collaboration, and some remain human-led. These shifts alter how professionals interact with information requiring new ways of working and new capabilities.

The AI Skills Opportunity Map captures these emerging opportunities. It shows how applied AI skills interact with enduring human capabilities to expand what individuals can contribute in AI-enabled workplaces. For example, combining systems thinking with the ability to design AI-assisted workflows allows individuals to move beyond using AI effectively to shaping how organisations integrate it into everyday operations. Similarly, those who pair strong AI output evaluation with deep domain expertise can become trusted authorities validating high-stakes, AI-supported decisions.

Seen this way, the transition to AI-enabled work is not only about productivity gains. It also creates new forms of professional contribution centred on judgement, orchestration, and strategic integration.

Figure 15. The AI Skill Opportunity Map

AI Skill	Key Enduring Human Capabilities		Long-Term Opportunity Trajectory
AI-Assisted Workflow Design *Designing workflows where AI performs structured tasks while humans supervise, configure, and manage exceptions.*	Systems Thinking	to redesign workflows holistically	**Workflow Strategy** Transitioning into roles focused on operational design and process improvement. **Integration Ownership** Taking charge of how human teams and AI tools interact on a day-to-day basis. **Process Transformation** Leading audits and restructuring legacy systems for AI-enabled operations.
	Organisational and Social Intelligence	to align AI integration across teams	
	Adaptive Agency	to drive operational change	
AI Interaction and Instruction *Directing AI systems effectively through clear instructions, and structured communication.*	Problem Framing	to define the right questions before AI use	**Problem Structuring Leadership** Defining complex challenges before AI deployment. **Cognitive Orchestration** Designing disciplined human-AI collaboration for ambiguous work. **Exploration Direction** Guiding AI toward higher-value inquiry rather than surface output.
	Metacognition and Cognitive Discipline	to avoid cognitive outsourcing	
	Adaptive Agency	to evolve methods as AI tools change	
AI Output Evaluation and Adaptation *Assessing AI-generated outputs, identifying errors or limitations, and refining results before use.*	Industry Expertise	to recognise domain-specific inaccuracies	**Quality Authority** Serving as the accountable expert validating high-stakes AI outputs. **Domain Calibration** Refining AI tools using deep industry knowledge. **Specialised Oversight** Shaping AI deployment in regulated or mission-critical contexts.
	Metacognition and Cognitive Discipline	to question AI assumptions	
	Organisational and Social Intelligence	to assess contextual implications	
Elevation and Decision-Making *Using AI-generated insights to inform decisions while retaining human judgement and accountability.*	Organisational and Social Intelligence	to interpret implications across stakeholders	**Strategic Translation** Converting AI-generated insights into coordinated institutional action. **Cross-Functional Navigation** Managing stakeholder implications of AI-informed decisions. **Systems-Level Stewardship** Aligning AI intelligence with long-term organisational direction.
	Systems Thinking	to assess system-wide effects	
	Industry Expertise	to ground decisions in domain realities	
AI Ethics-Aware Practice *Applying ethical and governance principles to ensure AI is used responsibly and within organisational and regulatory boundaries.*	Metacognition and Cognitive Discipline	to reflect on AI limitations and bias	**Governance Stewardship** Designing sustainable AI oversight structures. **Accountability Engineering** Embedding deliberate human checkpoints into automated systems. **Trust Leadership** Building institutional legitimacy in AI-enabled environments.
	Organisational and Social Intelligence	to balance stakeholder impact	
	Adaptive Agency	to evolve governance frameworks over time	

What the Map Means for Higher Education: Four Key Opportunities

As AI reshapes tasks and skills institutions may consider how curriculum and learning design for workplace success in specific career programs evolve in response. The Opportunity Map highlights several emerging themes:

Build Foundations Before Introducing AI

AI can accelerate learning but it can also bypass the cognitive friction required to build deep understanding.

Implication for institutions:

- Introduce AI after core reasoning and disciplinary knowledge are established;
- Design assignments where students solve the problem first, then use AI to extend or test their thinking.

» Please refer to ***The Next Era of Assessment*** for assessment redesign methodologies.

Expand Experiential and Applied Learning

As AI handles more structured analytical work, human value shifts toward judgement, contextualisation, and decision-making.

What this means for curriculum design:

- Increase project-based and real-world assignments;
- Expand industry-linked projects and applied research, including internships and live briefs;
- Create learning environments where students must interpret AI outputs and justify decisions.

Make Human Capabilities Explicit Learning Outcomes

As AI takes over more routine cognitive tasks, capabilities such as problem framing, reasoning, adaptability, and judgement are becoming the primary differentiators for graduates.

Implication for institutions:

- Identify what AI cannot replicate in your discipline and build assessments around those moments;
- Make human capabilities visible in learning outcomes;
- Design tasks where students must exercise judgement and account for their own reasoning.

Teach the Full AI Workflow

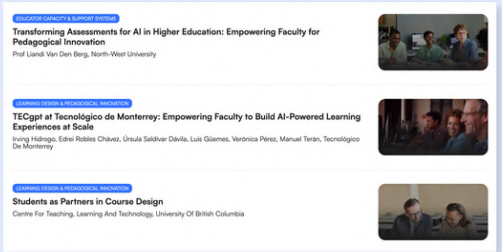
Most AI education focuses on prompting or generating outputs. In practice, the highest-value work happens after the AI produces a result.

Students need to learn how to:

- Validate AI-generated outputs;
- Adapt results to context and constraints;
- Integrate AI insights into real-world decisions;
- Secure stakeholder acceptance of AI-assisted work.

We invite institutions and practitioners to contribute examples of innovative education practices to the Digital Education Council's **Best Practices Collection**.

Submit a case or example **here**.



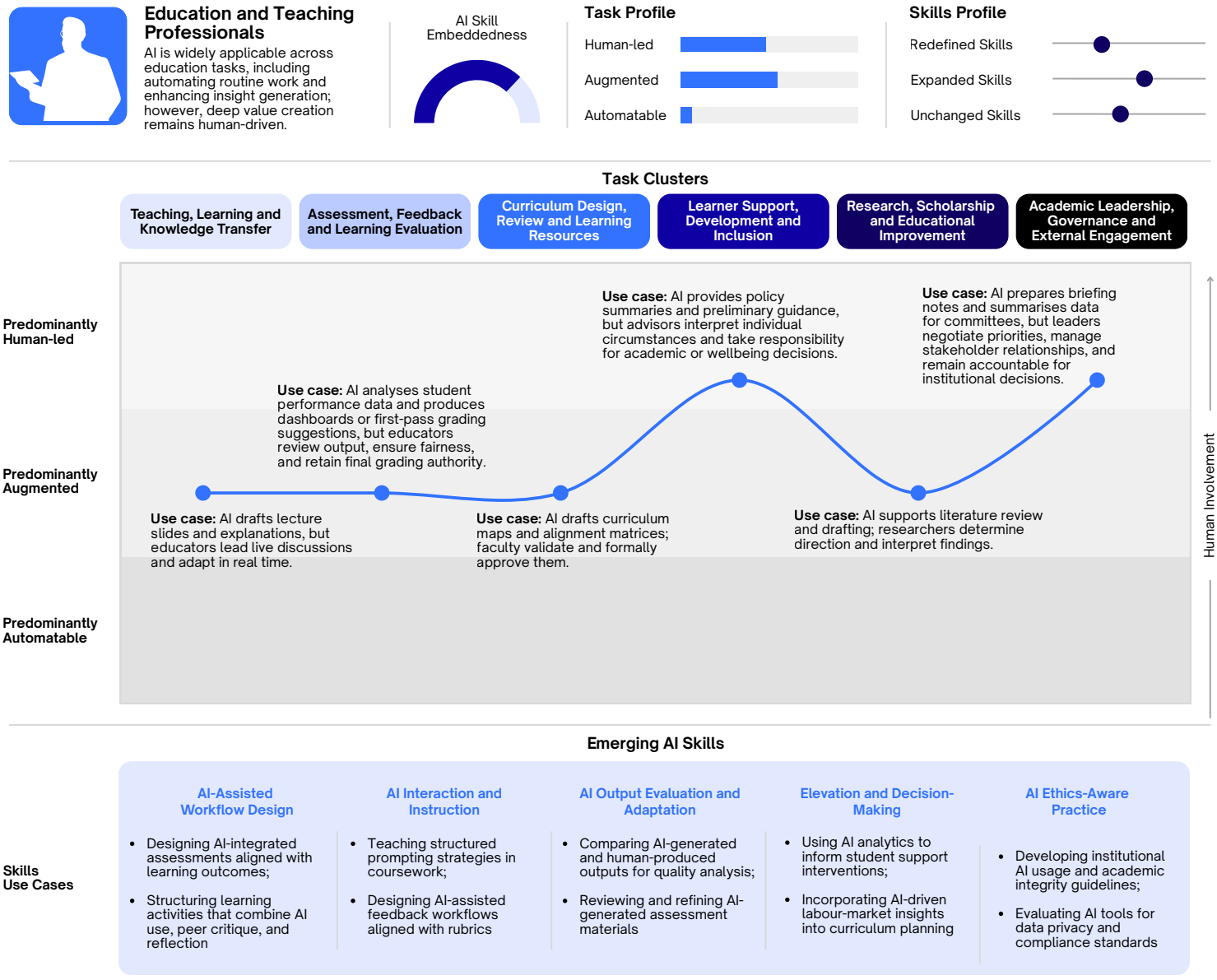
Part II

Job Family AI Transformation Profiles

Job Family AI Transformation Profiles

Job Family 1: Education and Teaching Professionals

Figure 16. Education and Teaching Professionals AI-Enabled Job Profile



AI is present across the education job family, but it impacts clusters in different ways. Augmented work dominates where tasks produce reviewable artifacts e.g., drafting lecture materials and explanations, generating curriculum maps and alignment options, summarising feedback/data, and drafting rubrics or feedback because outputs can be checked and refined before use.

Human-led work remains central in learner support and academic leadership/external engagement, where outcomes are high-context and accountability-heavy (advising, duty of care, governance decisions, negotiation). Automation is limited to tasks such as performance trend analysis, where the work is digital, well-defined, and easily checkable.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 2. Summary of Task-Level Shifts for Education and Training Professionals

Largely Unchanged	Expanded	Redefined
Leadership Development	Project Feasibility Assessment	Assessment Design and Implementation
Coaching and Mentoring	Quality Assurance Management	Learning Experience Delivery
Crisis Management	Behaviour Change and Group Facilitation	Learning Technology Design
Research Design	Competency and Skills Framework Development	Research Data Analysis
Stakeholder Engagement and Management	Research Communication and Practice Translation	Innovation Management
Intellectual Property Management	Knowledge Management	
Change Management		
Project Management		

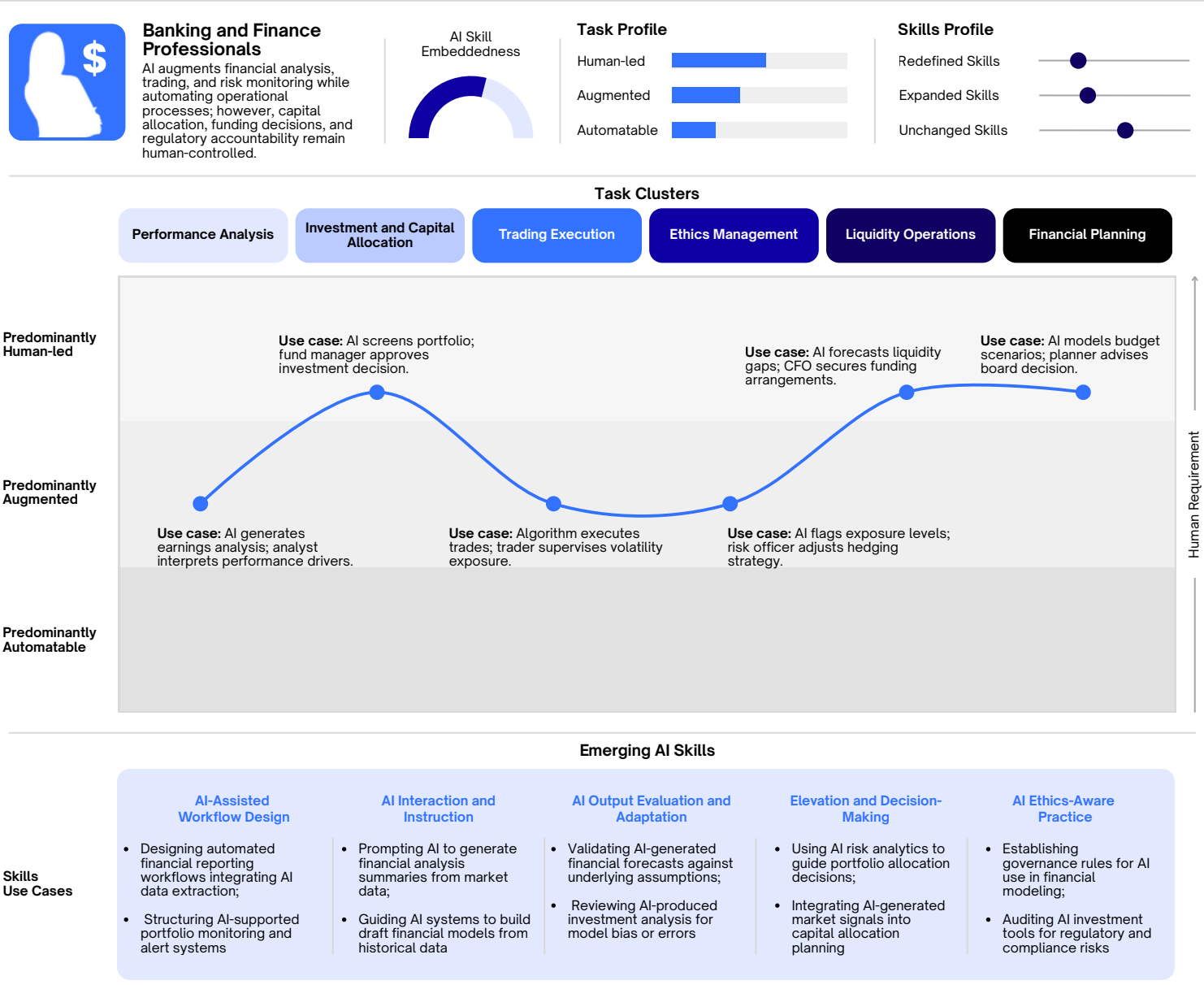
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 17. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Assessment Design and Implementation	AI can generate answers and complete many traditional assignments. The skill therefore shifts to designing assessments that reveal student reasoning, structure AI use, and evaluate AI-supported work.
Learning Experience Delivery	AI can explain concepts, generate examples, and answer questions instantly. Delivery shifts from presenting content to guiding students in using, questioning, and learning through AI tools.
Learning Technology Design	AI turns learning tools from static platforms into adaptive systems that generate feedback, content, and tutoring. The skill shifts to designing AI-enabled learning workflows rather than just selecting digital tools.
Research Data Analysis	AI can automate data processing, pattern recognition, and statistical analysis across large research datasets. The skill shifts from manually conducting analysis to designing analytical frameworks, interpreting AI-generated findings, and validating research conclusions.
Innovation Management	AI can rapidly generate ideas, scan emerging trends, and model innovation scenarios across industries. The skill shifts from manually sourcing and evaluating ideas to curating AI-generated insights, guiding experimentation priorities, and assessing the strategic viability of innovations.

Job Family 2: Banking and Finance Professionals

Figure 18. Banking and Finance Professionals AI-Enabled Job Profile



AI is present across the finance job family, but its impact concentrates unevenly across tasks depending on structure, verifiability, and accountability. Automation emerges most clearly in tasks that are digital, well-defined, and easy to verify, such as financial statement analysis, ratio and variance computation, position and P&L monitoring, stress testing, and core financial operations (settlement, reconciliation, collateral and margin processing). Augmentation dominates a broader middle layer of finance work, including financial modelling, valuation workups, investment and credit research, trading strategy design, risk detection, and compliance screening, where AI can accelerate drafting, scenario generation, synthesis, and monitoring, but humans must set assumptions, interpret signals, and approve outputs due to low error tolerance and costly verification. Human-led work remains central in areas where authority, judgement, and delayed verifiability define the task, such as investment theses and capital allocation decisions, liquidity and funding strategy, hedging decisions, governance and assurance, and operational resilience. In these tasks, AI may inform options or surface risks, but the core work is exercising accountable judgement under uncertainty, keeping decision-making firmly human-led.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 3. Summary of Task-Level Shifts for Banking and Finance Professionals

Largely Unchanged	Expanded	Redefined
Regulatory Compliance	Operational Risk Management	Valuation and Attribution Analysis
Mergers and Acquisitions Management	Sustainable Investment Management	Trade Processing and Fund Settlement
Treasury Management	Financial Management	Risk and Compliance Reporting
Credit Risk Management	Financial Analysis and Modelling	
Market Risk Management	Capital and Asset-Liability Management	
Portfolio and Investment Risk Management	Budgeting and Capital Investment Evaluation	
	Market Research and Analysis	
	Risk Analytics	
	Financial Reporting and Statement Review	
	Cash Flow and Treasury Reporting	

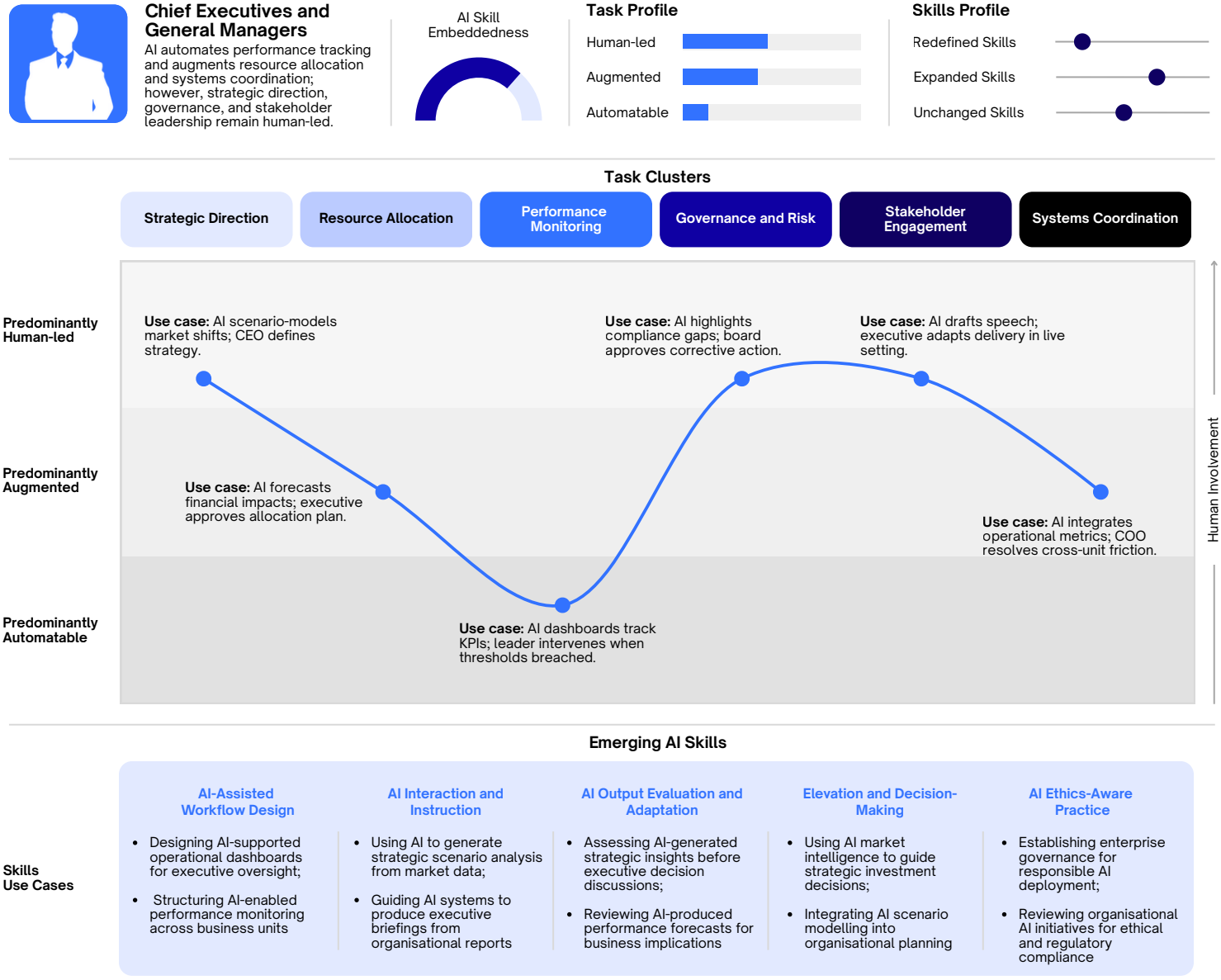
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 19. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Valuation and Attribution Analysis	AI can run complex valuation models and attribution calculations quickly, shifting the role toward interpreting results, testing assumptions, and validating model outputs.
Trade Processing and Fund Settlement	AI automates transaction matching, reconciliation, and settlement workflows, shifting the role from manual processing to overseeing automated systems and resolving exceptions.
Risk and Compliance Reporting	AI continuously monitors transactions and risk indicators, shifting the skill from compiling reports to supervising automated risk detection and interpreting compliance signals.

Job Family 3: Chief Executives and General Managers

Figure 20. Chief Executives and General Managers AI-Enabled Job Profile



AI is present across the executive management job family, but its impact varies sharply by task cluster. Automation is most feasible in performance monitoring and diagnostic work, where tasks are digital, well-defined, and easy to verify, allowing AI to handle much of the analysis end-to-end. Augmentation dominates in resource management and systems coordination, where AI accelerates modelling, optimisation, and visibility but human leaders retain decision authority and accountability. By contrast, strategy, governance, and stakeholder engagement remain predominantly human-led because they are open-ended, high-context, and responsibility-heavy, with outcomes that are difficult to verify in advance; here, AI supports preparation and synthesis but does not replace human judgement or leadership.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 4. Summary of Task-Level Shifts for Chief Executives and General Managers

Largely Unchanged	Expanded	Redefined
Systems Thinking	Risk Management, Governance and Regulatory Compliance	Decision Governance
Risk, Governance and Regulatory Oversight	Change and Transformation Management	Organisational Design
People and Performance Leadership	Business Environment and Market Analysis	
Executive Decision-Making	Financial Planning and Analysis	
Organisational Vision and Values Leadership	Stakeholder and Partnership Management	
Complex Problem Solving	Business Performance Management	
	Strategy Development and Implementation	
	Project and Initiative Leadership	
	Customer and Market Relationship Management	
	Business and Opportunity Development	
	Innovation and Productivity Strategy	

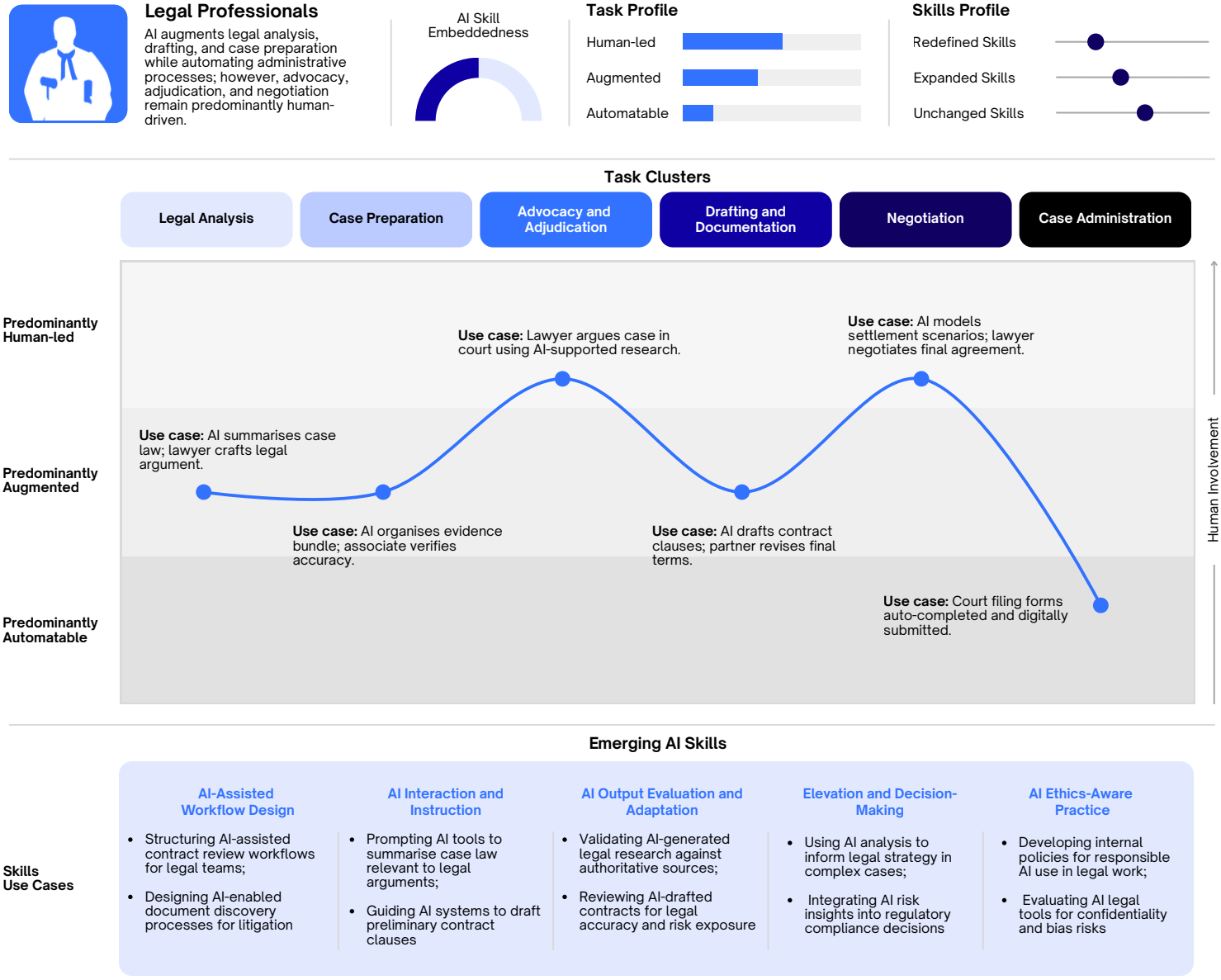
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 21. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Decision Governance	AI increasingly produces forecasts, recommendations, and risk signals that influence executive decisions. The skill shifts from relying mainly on human analysis to overseeing AI-informed decisions, questioning model assumptions, validating outputs, and ensuring accountability and responsible use.
Organisational Design	AI automates and augments many operational tasks, changing how work is structured across the organisation. The skill shifts from designing purely human teams and processes to structuring workflows where humans, AI tools, and automated systems work together effectively.

Job Family 4: Legal Professionals

Figure 22. Legal Professionals AI-Enabled Job Profile



AI is present across the legal job family, but its impact is unevenly distributed across task clusters. The strongest effects are seen in research, drafting, and administrative work, where tasks are digital, repeatable, and verifiable. In these areas, AI increasingly automates routine activities (e.g. document handling, record management) and augments higher-value work through faster research, synthesis, and first-draft generation. As a result, productivity gains concentrate in upstream analysis and operational efficiency rather than in the core exercise of legal authority.

At the same time, the defining functions of the legal profession remain human-led. Advocacy, adjudication, high-stakes legal advice, and dispute resolution depend on contextual judgement, ethical responsibility, interpersonal trust, and formal authority that cannot be delegated to AI. Even where AI capability is improving, low error tolerance and accountability requirements constrain automation. Overall, AI reshapes how legal work is prepared and supported, but not who holds responsibility for decisions, positioning the legal job family as predominantly augmented, with structurally human-controlled core functions.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 5. Summary of Task-Level Shifts for Legal Professionals

Largely Unchanged	Expanded	Redefined
Legal Advocacy	Client and Stakeholder Management	Legal Research and Analysis
Interpret Law	Negotiation and Deal Structuring	Due Diligence
Dispute Resolution Strategy	Business Risk Assessment	Legal Writing and Contract Drafting
Legal Interviewing	Crisis Management	
Active Listening	Legal Business Acumen	
Legal Ethics and Confidentiality		

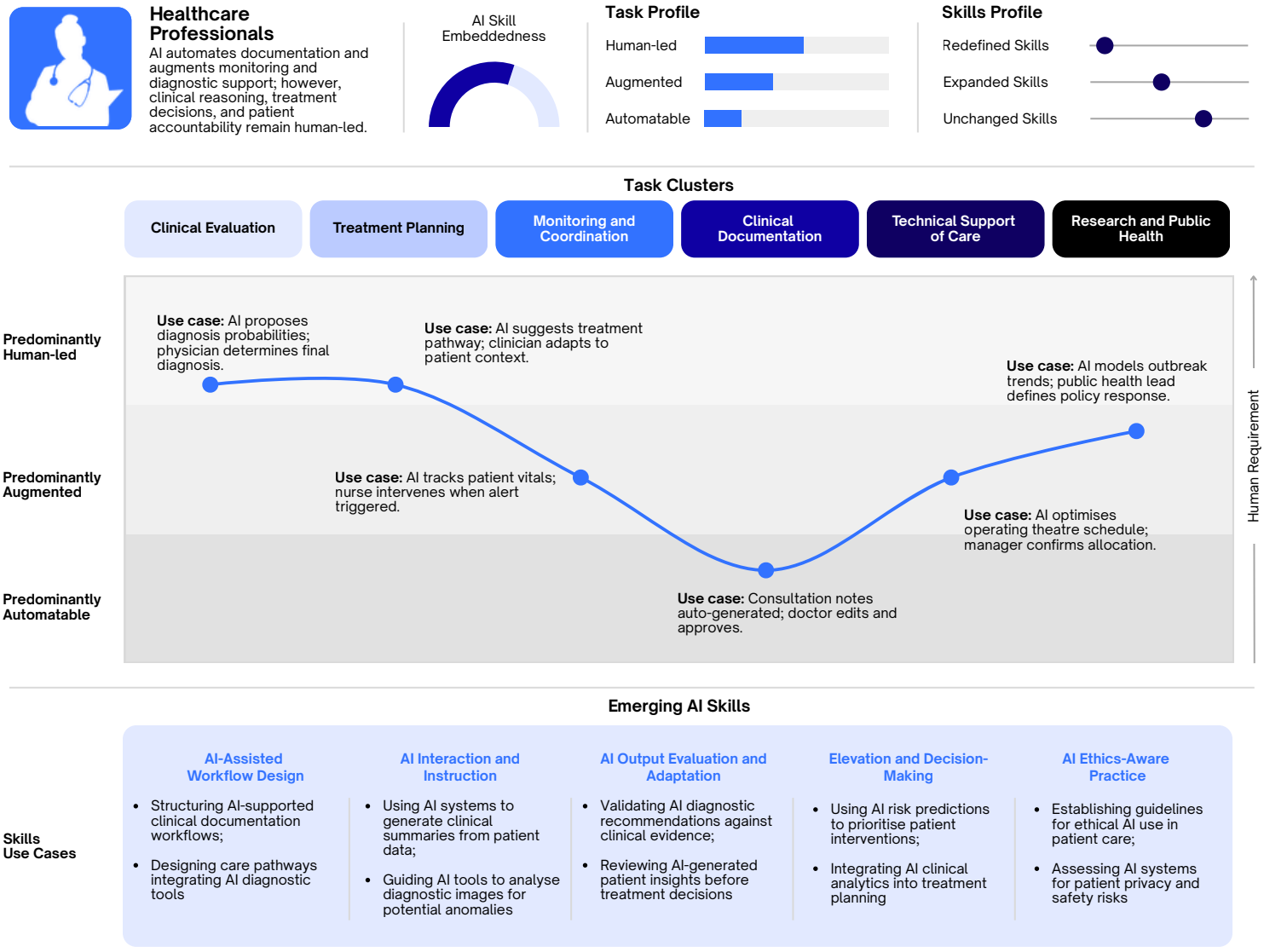
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 23. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Legal Research and Analysis	AI can search case law, statutes, and legal databases instantly and summarise relevant precedents. The skill shifts from manually locating information to framing precise legal questions, evaluating AI-generated interpretations, and validating sources and reasoning.
Due Diligence	AI can rapidly scan and extract key clauses, risks, and anomalies across large volumes of legal documents. The skill shifts from manual document review to supervising AI analysis, verifying flagged risks, and interpreting legal implications.
Legal Writing and Contract Drafting	AI can generate first drafts of contracts, memos, and legal arguments. The skill shifts from drafting from scratch to structuring prompts, refining AI-generated text, ensuring legal accuracy, and tailoring documents to the specific legal context.

Job Family 5: Healthcare Professionals

Figure 24. Healthcare Professionals AI-Enabled Job Profile



AI is present across the healthcare practitioner job family, but its impact is highly uneven across task clusters. Core clinical work particularly clinical evaluation, diagnostic reasoning, and treatment planning and delivery remains firmly human-led, driven by high judgement requirements, low tolerance for error, strong contextual dependency, and formal professional accountability. These tasks involve embodied care, ethical responsibility, and decisions whose correctness is often hard to verify in advance, limiting AI's role to advisory and decision-support functions.

The greatest AI impact appears in monitoring, coordination, documentation, and operational support. Here, tasks are more structured, digital, and verifiable, allowing AI to automate routine documentation and information management, and augment monitoring, follow-up planning, and care coordination through alerts, synthesis, and workflow optimisation. In research, prevention, and public health activities, AI is strongest as an analytical and synthesis tool, while humans retain responsibility for intervention design, interpretation, and policy-relevant judgement. Overall, AI in healthcare shifts work away from administrative and surveillance tasks toward judgement-intensive, patient-facing care, reinforcing rather than replacing the core professional role of clinicians and allied health practitioners.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 6. Summary of Task-Level Shifts for Healthcare Professionals

Largely Unchanged	Expanded	Redefined
Professional, Legal and Ethical Healthcare Practice	Clinical Documentation and Records Management	Patient Data Analysis and Early Warning Detection
Clinical Governance	Data Collection and Clinical Data Management	Decision-Making with Data-Driven Insights
Clinical Assessment and Diagnosis	Care Coordination and Transition Management	
Risk Management in Patient Care	Stakeholder Communication in Care Teams	
Patient Counselling and Communication		
Patient Education and Engagement		
Intervention Planning and Implementation		
Therapy and Treatment Evaluation		
Quality Improvement and Patient Safety		

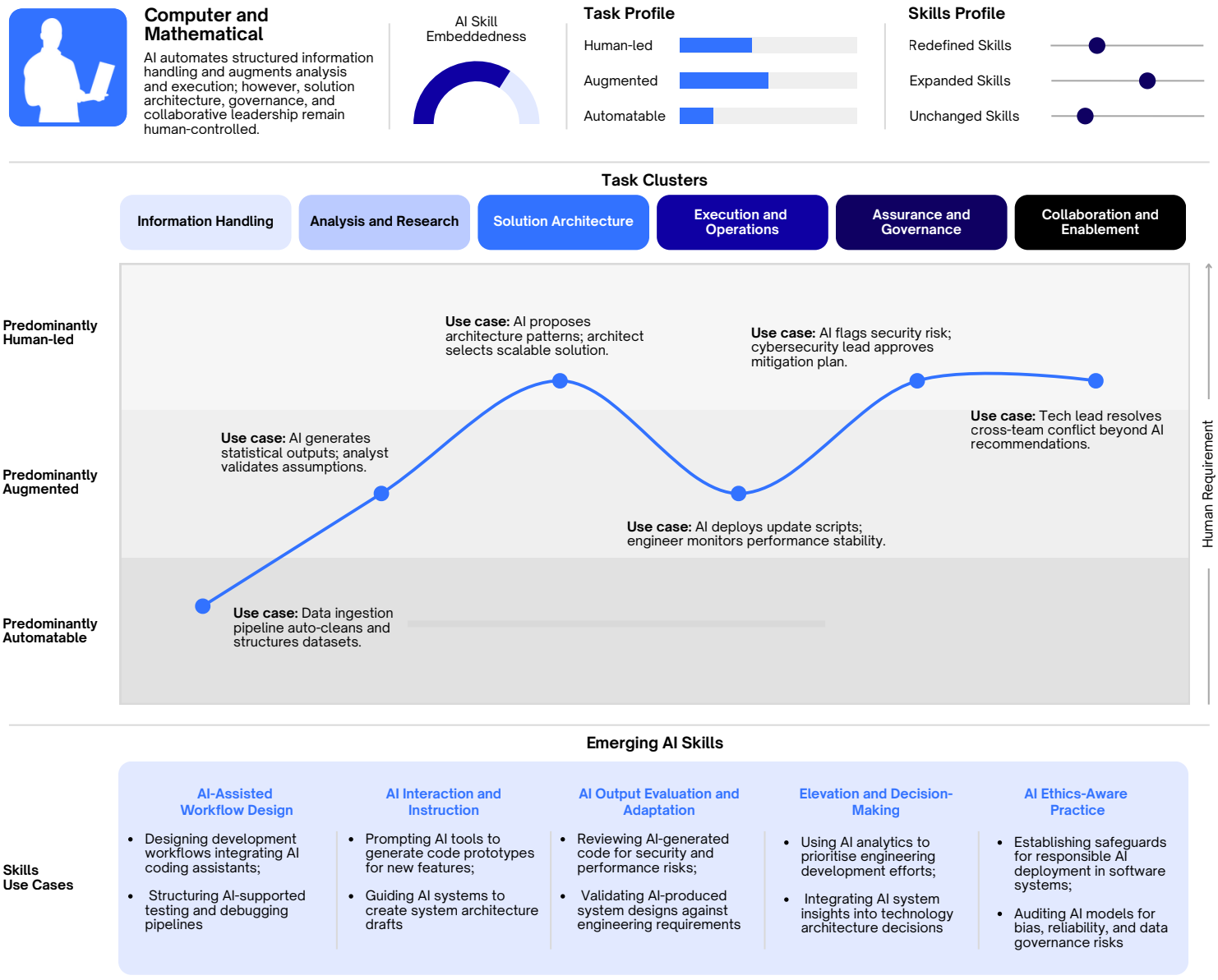
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 25. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Patient Data Analysis and Early Warning Detection	AI systems can continuously analyse patient records, vital signs, imaging, and monitoring data to detect patterns and early signals of deterioration. The skill shifts from manually reviewing patient data to interpreting AI-generated alerts and identifying which signals require clinical attention.
Decision-Making with Data-Driven Insights	AI tools generate diagnostic suggestions, risk scores, and treatment recommendations based on large datasets. Clinicians increasingly incorporate these insights when evaluating options and determining the most appropriate course of care.

Job Family 6: Computer and Mathematical

Figure 26. Computer and Mathematical AI-Enabled Job Profile



AI impact in this job family is driven by task composition rather than job titles. Information Handling is largely automatable due to its digital, well-defined, and verifiable nature. Analysis and Research and Execution and Operations are predominantly augmented, with AI accelerating analysis, monitoring, and routine operations while humans retain responsibility for interpretation, judgement, and exception handling.

In contrast, Design and Solution Architecture, Assurance and Governance, and Collaboration and Enablement remain human-led, as they involve open-ended work, high contextual dependency, and formal accountability that cannot be delegated to AI. Overall, AI functions as a productivity and capability amplifier, shifting human effort toward judgement-intensive, accountable, and relational work rather than replacing the core of the role.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 7. Summary of Task-Level Shifts for Computer and Mathematical Professionals

Largely Unchanged	Expanded	Redefined
Technology Risk, Compliance and Governance	Software and Systems Architecture	Product Development
Secure Technology Governance	Data Engineering and Data Design	Application and Systems Integration
Data Governance	Enterprise and Solution Architecture	Computational Modelling
	Security Architecture	
	Systems Design and Integration	
	Data Analytics and Visualisation	
	Infrastructure Design and Deployment	
	Network Security Engineering	
	Database Administration	
	Agile Software Development	
	Continuous Integration and Deployment	
	Quality Engineering and Software Testing	

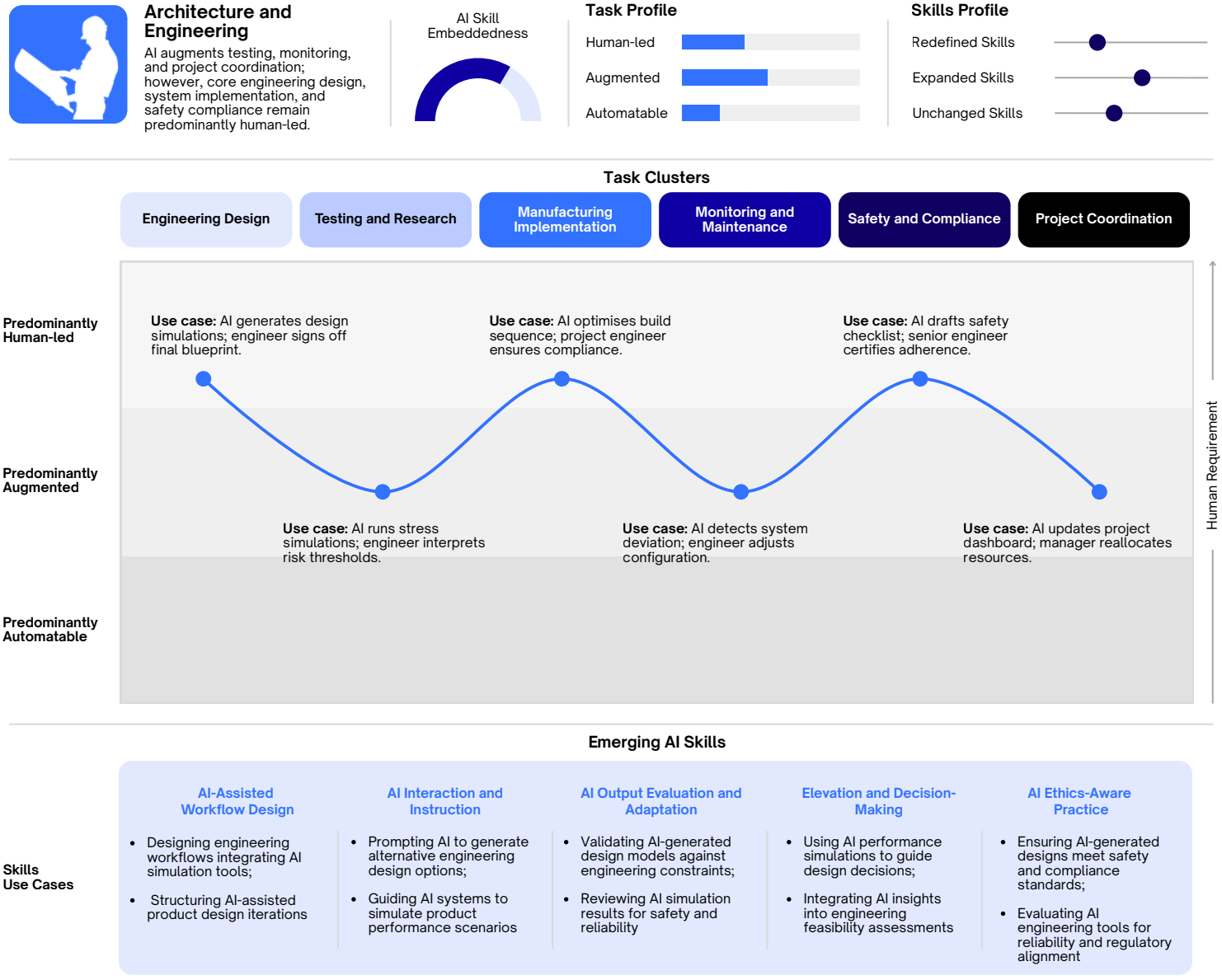
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 27. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Product Development	AI tools can generate code, prototypes, design suggestions, and user experience variations, accelerating experimentation and iteration. The skill shifts from manually building features to guiding AI-assisted development, validating outputs, and integrating AI capabilities into products.
Application and Systems Integration	AI can automatically generate APIs, map data flows, and detect compatibility issues across systems. The skill shifts from manually configuring integrations to supervising AI-assisted integration processes and resolving complex system interactions.
Computational Modelling	AI enables faster simulation, model generation, and pattern detection across complex datasets. The skill shifts from manually building models to selecting modelling approaches, interpreting AI-generated results, and validating model assumptions and outputs.

Job Family 7: Architecture and Engineering

Figure 28. Architecture and Engineering AI-Enabled Job Profile



Overall, architecture and engineering roles remain predominantly human-led, with AI acting as a strong augmenting force rather than a substitute. Core activities such as system design, technical specification, and safety or regulatory decision-making require high judgement, contextual understanding, and formal accountability, keeping them firmly under human ownership.

AI has its greatest impact in testing, monitoring, documentation, estimation, and routine analysis, where tasks are more structured, digital, and verifiable. In these areas, AI improves efficiency, consistency, and speed, while humans retain responsibility for interpretation, exceptions, and downstream consequences.

In practice, AI reshapes how work is done across the job family but does not change who is ultimately responsible. The professional value of architecture and engineering roles increasingly concentrates on design judgement, system integration, risk management, and coordination, supported by AI.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 8. Summary of Task-Level Shifts for Architecture and Engineering

Largely Unchanged	Expanded	Redefined
Design for Safety	Engineering Product Design	System Architecture Design
Failure Analysis	3D Modelling and Computer-Aided Design	Equipment and Product Testing
Regulatory Submission and Clearance	Quality Engineering Integration	Technical Report Writing
Project Feasibility Assessment	Process and Manufacturing Design	
	Design for Manufacturing and Assembly	
	Electrical and Power System Design	
	Instrumentation and Control System Design	
	Front-End Engineering and Design (FEED)	
	Engineering Project Management	

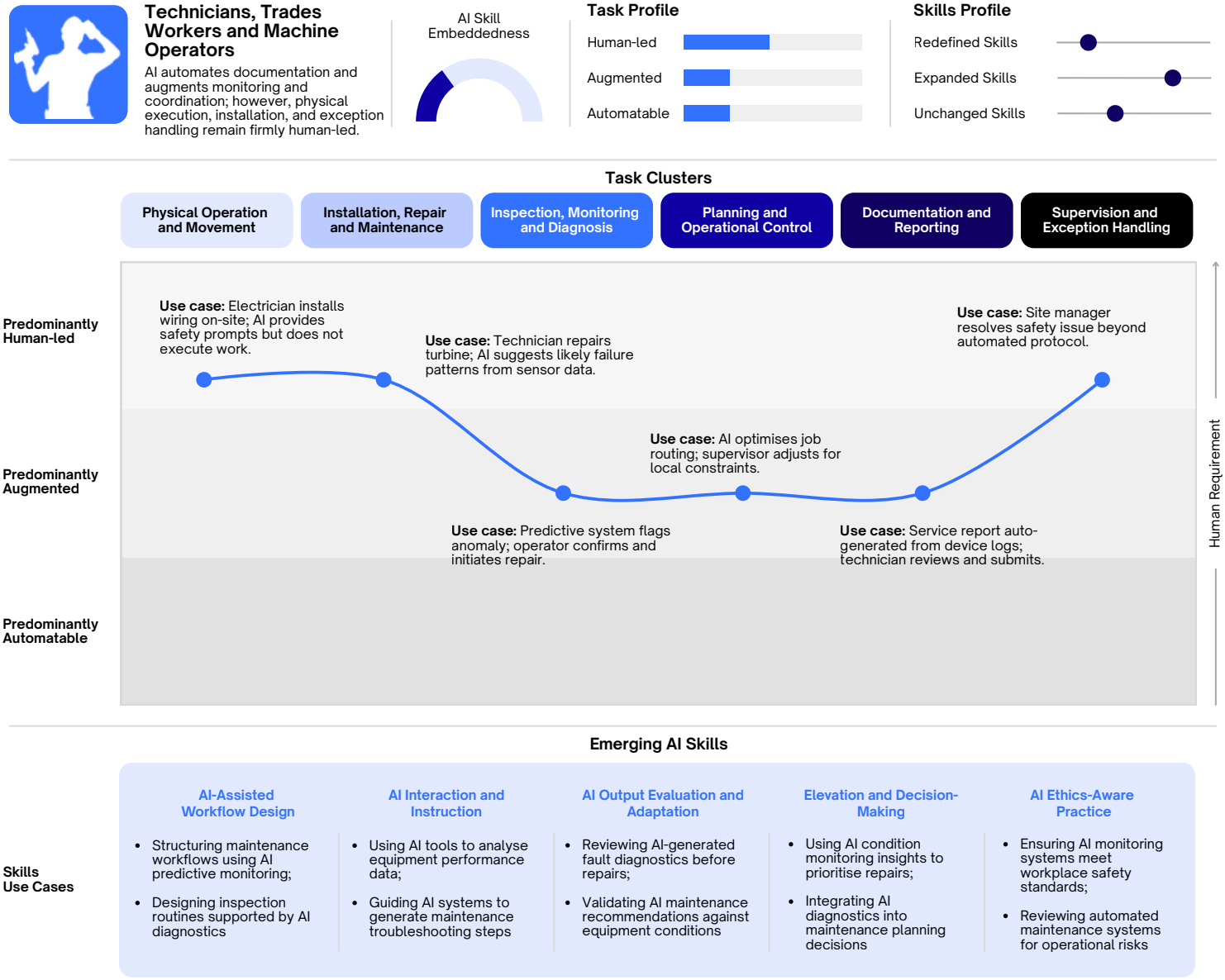
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 29. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
System Architecture Design	AI tools can analyse system requirements, simulate configurations, and suggest architecture options based on performance, cost, and reliability constraints. The skill shifts from manually evaluating design alternatives to guiding AI-assisted architecture exploration and validating system-level trade-offs.
Equipment and Product Testing	AI can analyse sensor data, detect anomalies, and automate large portions of testing and diagnostics. The skill shifts from manually executing and reviewing tests to designing test scenarios, interpreting AI-generated test results, and identifying complex failure patterns.
Technical Report Writing	AI tools can generate draft reports from engineering data, test results, and documentation inputs. The skill shifts from writing reports from scratch to structuring inputs, refining AI-generated content, and ensuring technical accuracy and clarity.

Job Family 8: Technicians, Trades Workers and Machine Operators

Figure 30. Technicians, Trade Workers and Machine Operators AI-Enabled Job Profile



AI impact in this job family is shaped by task composition rather than job titles. Documentation, Recording and Reporting is largely automatable due to its digital, structured, and highly verifiable nature. Inspection, Monitoring and Diagnosis and Planning and Operational Control are predominantly augmented, with AI improving monitoring, optimisation, and planning while humans retain judgement and accountability.

In contrast, Physical Operation and Movement, Installation and Maintenance, and Human Interaction and Exception Handling remain human-led, as they are embodied, safety-critical, and highly context-dependent. Overall, AI functions as a supporting and productivity-enhancing tool, shifting human effort toward execution, supervision, and judgement rather than replacing the role.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 9. Summary of Task-Level Shifts for Technicians, Trades Workers and Machine Operators

Largely Unchanged	Expanded	Redefined
Workplace Safety and Health	Maintenance Planning and Scheduling	Technical Documentation Management
Hazard and Risk Identification and Management	Equipment and Mechanical Maintenance Management	Engineering Drawing and Technical Blueprint Interpretation
Installation and Assembly	Instrumentation and Control Maintenance Management	Advanced Inspection and Non-Destructive Testing
Welding	Robotic and Automation System Maintenance	Technical Reporting
Operating a Machine	Process Operations Troubleshooting	
Precision Measurement	Technical Inspection	
	Condition Monitoring	
	Quality Control and Assurance	

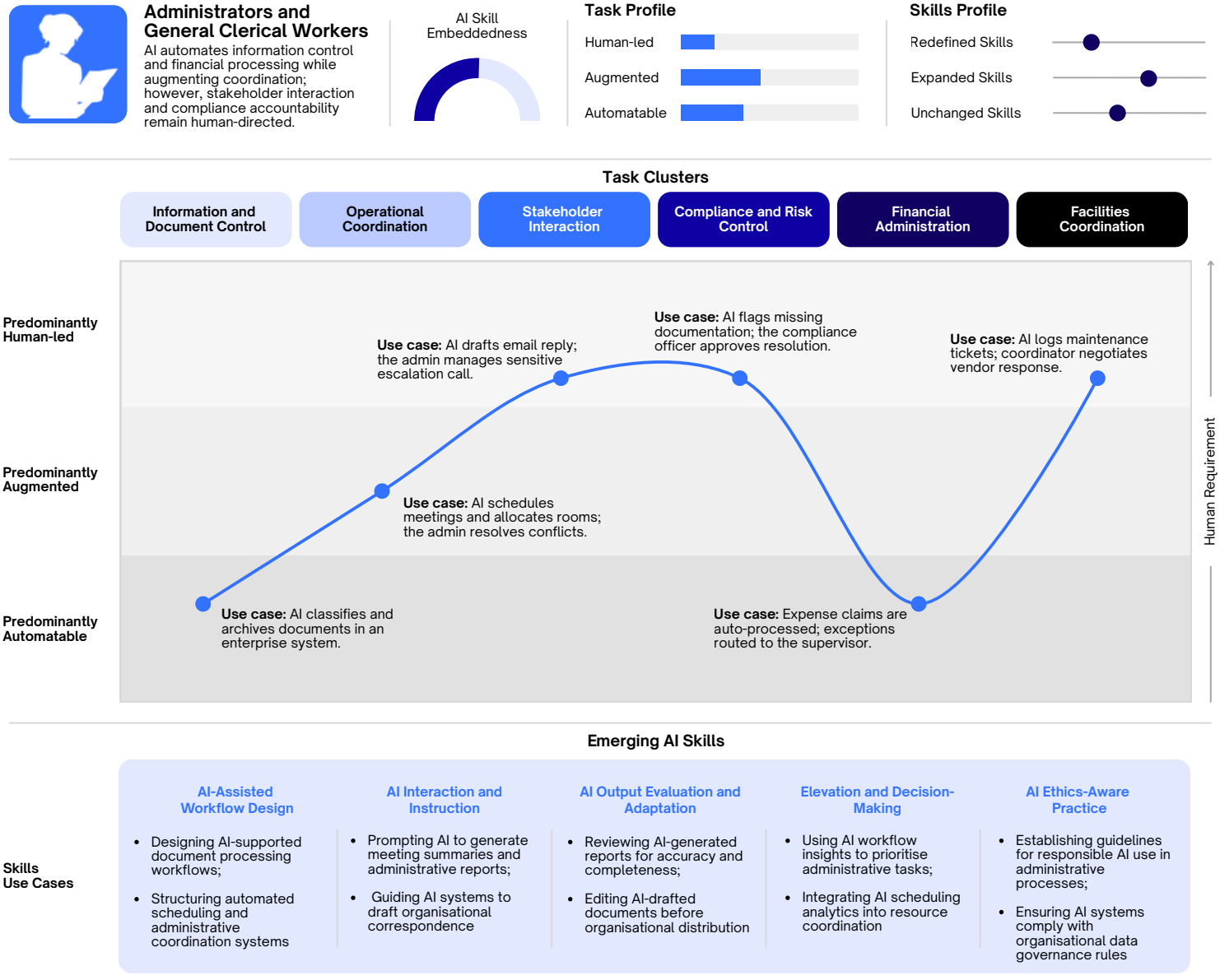
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 31. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Technical Documentation Management	AI systems can automatically organise, classify, and retrieve technical documents, drawings, and maintenance records. The skill shifts from manually managing documentation to supervising AI-driven document systems and ensuring information accuracy and traceability.
Engineering Drawing and Technical Blueprint Interpretation	AI tools can analyse drawings, detect inconsistencies, and generate digital models from technical blueprints. The skill shifts from manually interpreting drawings to verifying AI-generated interpretations and using digital tools to visualise and validate designs.
Advanced Inspection and Non-Destructive Testing	AI can analyse inspection images, sensor data, and scan results to detect defects or anomalies more quickly and consistently. The skill shifts from manual inspection to interpreting AI-assisted diagnostics and validating detected issues.
Technical Reporting	AI tools can generate structured reports from inspection data, maintenance logs, and operational records. The skill shifts from writing reports manually to reviewing AI-generated reports and ensuring technical clarity and correctness.

Job Family 9: Administrators and General Clerical Workers

Figure 32. Administrators and General Clerical Workers AI-Enabled Job Profile



This job family is characterised by a high concentration of structured, rule-based, and verifiable tasks, particularly within Information and Document Control and Financial Administration and Control. These clusters show strong alignment with AI automation, indicating substantial potential for efficiency gains through end-to-end automation of routine documentation, record-keeping, and transactional processing. As a result, the overall task volume in these roles is likely to decrease, even as throughput and consistency increase.

At the same time, the job family retains a core of judgement-intensive and context-dependent work, concentrated in Operational Coordination and Oversight, Stakeholder Interaction and Issue Handling, and Compliance and Risk Control. Tasks in these clusters require human authority, interpretive reasoning, social judgement, and accountability—factors that limit full automation and instead position AI as a decision-support or augmentation layer. This shifts the human role away from execution toward exception handling, coordination, interpretation, and risk management.

Overall, AI does not eliminate this job family but rebalances it. Entry-level and routine administrative tasks are most exposed to automation, while mid-level roles increasingly emphasise coordination, compliance judgement, stakeholder management, and oversight. The long-term impact is a compression of purely **clerical roles** and a relative expansion of hybrid roles combining administrative fluency with decision-making, accountability, and interpersonal skills.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 10. Summary of Task-Level Shifts for Administrators and General Clerical Workers

Largely Unchanged	Expanded	Redefined
Workplace Safety and Health	Contract Development and Management	Administrative Documentation and Records Management
Legal Compliance Management	Financial Planning and Analysis	Administrative Reporting and Business Communication
Stakeholder Management	Budgeting	Administrative Workflow Coordination
Regulatory Submission and Clearance	Procurement Management and Policy Development	Information and Data Processing
Enterprise Risk Management	Vendor Management	
Business Continuity Planning	Customer Relationship Management	
	Programme and Project Coordination	
	Asset and Inventory Management	

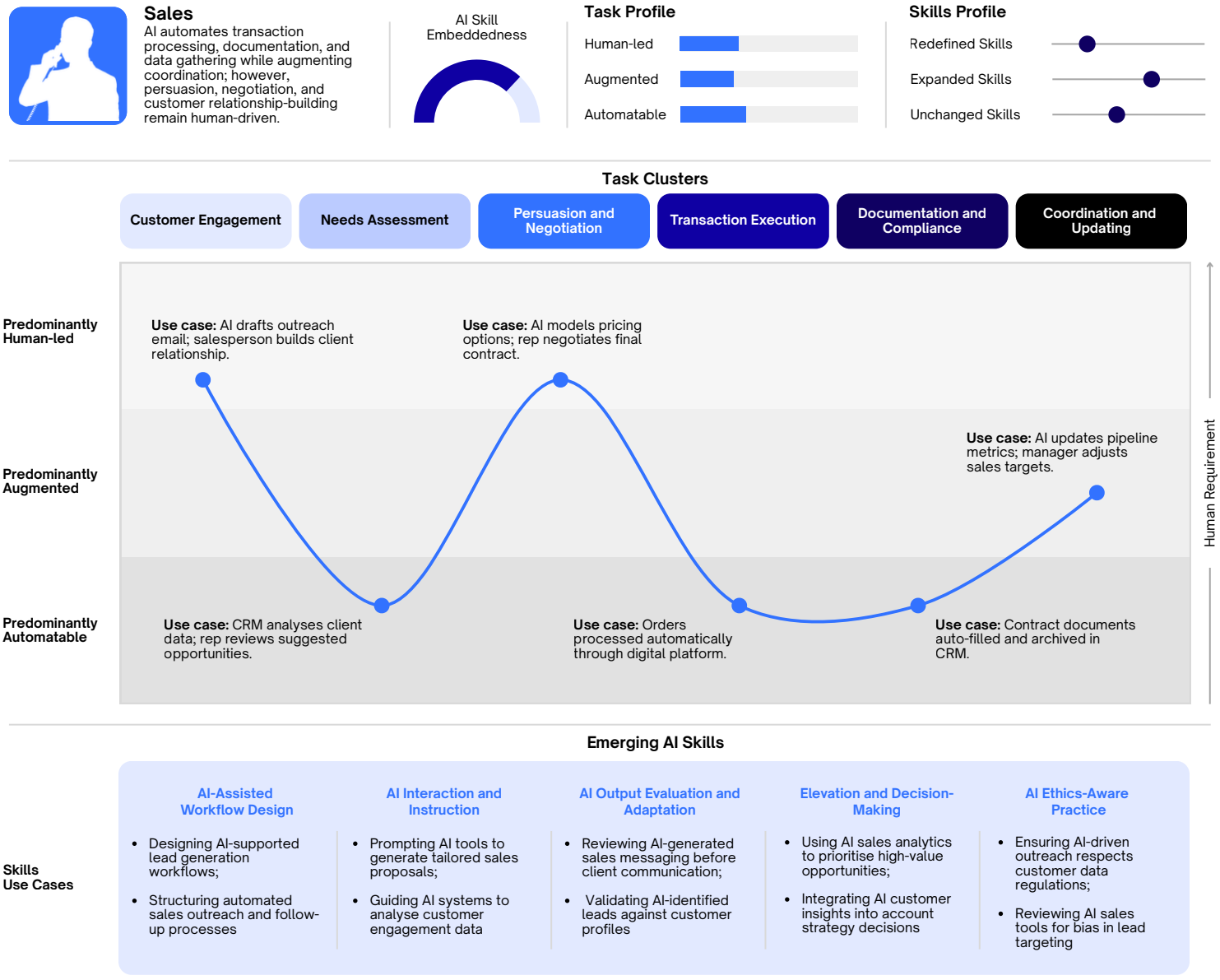
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 33. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Administrative Documentation and Records Management	AI systems can automatically generate, classify, extract, and organise documents across administrative workflows. The skill shifts from manual document preparation and filing to supervising AI-driven document processing and ensuring accuracy.
Administrative Reporting and Business Communication	AI tools can generate reports, proposals, and summaries from organisational data. The skill shifts from drafting documents manually to structuring inputs, reviewing AI-generated outputs, and ensuring clarity and correctness.
Administrative Workflow Coordination	AI-enabled systems increasingly manage scheduling, task routing, and workflow coordination. The skill shifts from manually coordinating activities to managing AI-supported workflow systems and monitoring task progress.
Information and Data Processing	AI can extract, classify, and process large volumes of administrative data across systems. The skill shifts from manual data entry and processing to supervising automated information flows and ensuring data quality.

Job Family 10: Sales

Figure 34. Sales AI-Enabled Job Profile



The Sales job family shows a clear structural split under AI impact. Executional and record-based work (transactions, documentation, data capture) is largely automatable, as these tasks are well-defined, low-judgement, and easy to verify. Operational coordination and needs qualification sit in the augmented zone, where AI can support tracking, structuring information, and surfacing insights, but human oversight remains necessary. In contrast, the core value-creation activities of sales—persuasion, negotiation, relationship management, and high-stakes customer interaction—remain predominantly human-led, as they are open-ended, judgement-intensive, context-dependent, and carry accountability.

Overall, AI reshapes sales by automating the operational backbone and enhancing decision support, while leaving trust-building, influence, and responsibility-centered tasks firmly human-led.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 11. Summary of Task-Level Shifts for Sales

Largely Unchanged	Expanded	Redefined
Stakeholder Management	Account and Customer Relationship Management	Customer Acquisition and Lead Generation
Business Relationship Building	Customer Experience Management	Sales Proposal and Pitch Development
Business Negotiation	Customer Loyalty and Retention Strategy	
Product Advisory	Customer Behaviour Analysis	
	Market Research and Market Intelligence	
	Market Profiling	
	Sales Strategy Development	
	Business Opportunities Development	
	Business Needs Analysis	

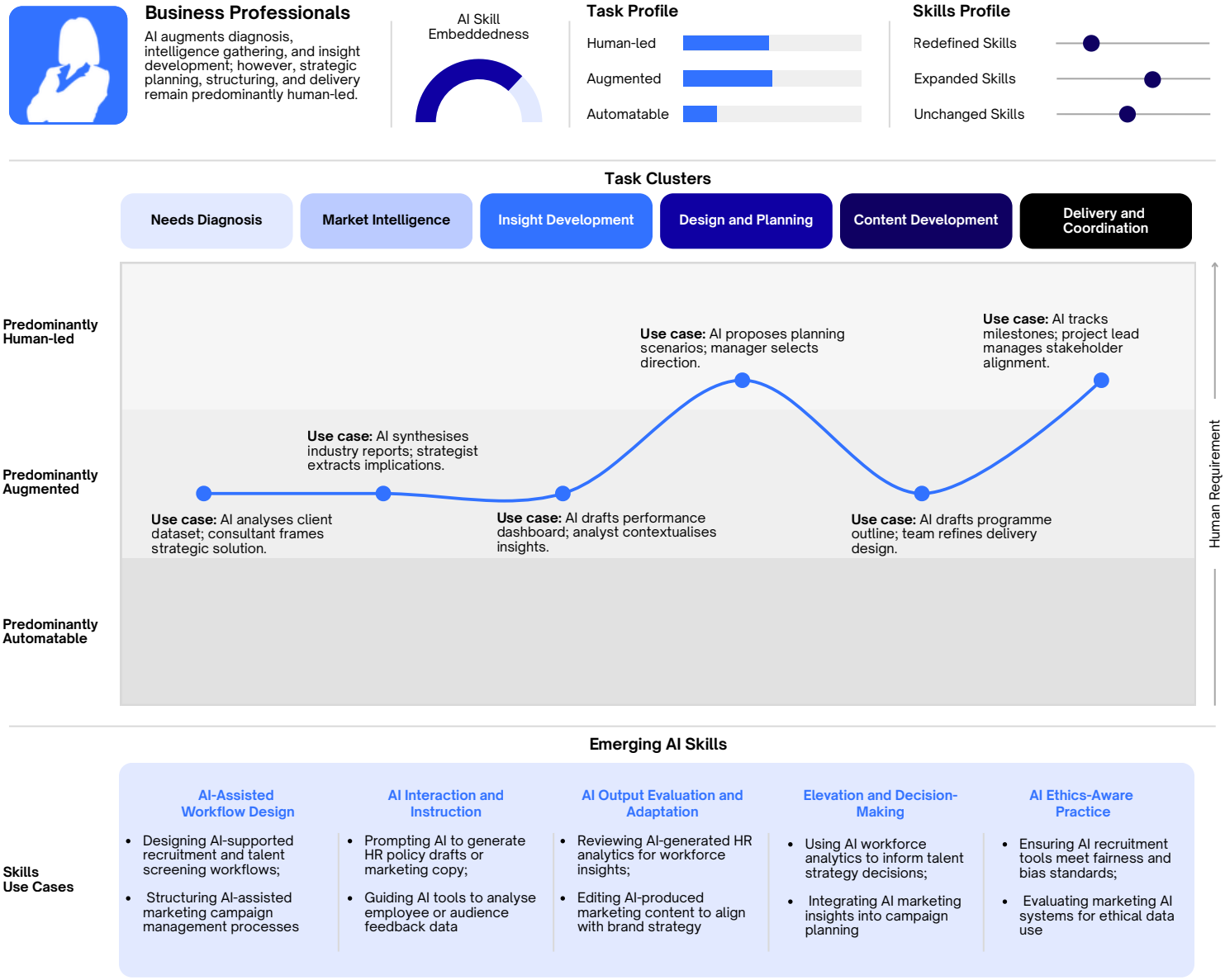
The following examples illustrate how AI is redefining selected skills within this job family.

Figure 35. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Customer Acquisition and Lead Generation	AI systems analyse customer data, identify high-potential prospects, segment audiences, and automate targeted outreach across channels. The skill shifts from manually identifying and contacting leads to managing AI-driven acquisition systems and prioritising the most promising opportunities.
Sales Proposal and Pitch Development	AI tools can generate structured proposals, draft responses to RFPs, and produce tailored sales materials using client and product data. The skill shifts from writing proposals and pitch documents manually to structuring inputs, refining AI-generated drafts, and ensuring alignment with client needs and sales strategy.

Job Family 11: Business Professionals

Figure 36. Business Professionals AI-Enabled Job Profile



Business Professionals sit at the edge of augmentation rather than automation. Most tasks are labelled Augmented, especially those that are digitally executed but partially defined, judgement-based, and costly to verify (e.g., market assessment, performance interpretation, content adaptation, stakeholder coordination). A smaller subset is Automatable, limited to well-defined, low-judgement, easy-to-verify tasks such as data collection, structured analysis, document production, and metric monitoring. However, strategically central activities—clarifying objectives, framing problems, designing strategies and policies, translating insights into priorities, delivering sessions, and negotiations—remain Human-led due to being open-ended, high-judgement, authority-bound, and hard to verify. Overall, AI significantly augments workflows but does not replace core strategic and responsibility-bearing functions.

Core Skill Evolution Classification

Task-level shifts translate into changes in the underlying skill set, with some skills remaining largely unchanged, others expanding in scope, and a few being structurally redefined.

Table 12. Summary of Task-Level Shifts for Business Professionals

Largely Unchanged	Expanded	Redefined
Stakeholder Engagement and Management	Organisational Diagnosis	Content Writing and Editing
Partnership Management	Market Research and Market Intelligence	Content Strategy
Organisational Strategy Formulation	Business Insights and Data Analysis	Integrated Marketing
Human Resource Strategy Formulation	Performance Management	Brand Campaign Management
Strategic Workforce Planning	Talent Management	Brand Guideline Development
Employee Engagement Management	Learning and Development	
	Project Management	
	Marketing Strategy Development	
	Brand Management	

The following examples illustrate how AI is redefining selected skills within this job family.

Figure 37. AI Tasks Transformation Illustration

Skill	How AI Impacts the Skill
Content Writing and Editing	AI can generate articles, marketing copy, press materials, and social media content quickly. The skill shifts from producing content manually to directing AI tools, refining outputs, and ensuring brand voice, accuracy, and strategic alignment.
Content Strategy	AI tools can analyse audience behaviour, engagement data, and content performance across channels. The skill shifts from manually planning content themes to using AI insights to shape messaging priorities, optimise formats, and guide content ecosystems.
Integrated Marketing	AI systems can coordinate campaigns across multiple channels, personalise messaging, and optimise timing and targeting automatically. The skill shifts from manually coordinating campaigns to designing and managing AI-enabled multi-channel marketing systems.
Brand Campaign Management	AI can generate campaign concepts, test variations, and optimise messaging based on real-time performance data. The skill shifts from manually designing and monitoring campaigns to guiding AI-driven experimentation and evaluating campaign impact.
Brand Guideline Development	AI can analyse brand usage across content, platforms, and customer interactions, helping enforce consistency. The skill shifts from static guideline creation to defining adaptable brand frameworks that guide AI-generated content and automated communications.

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