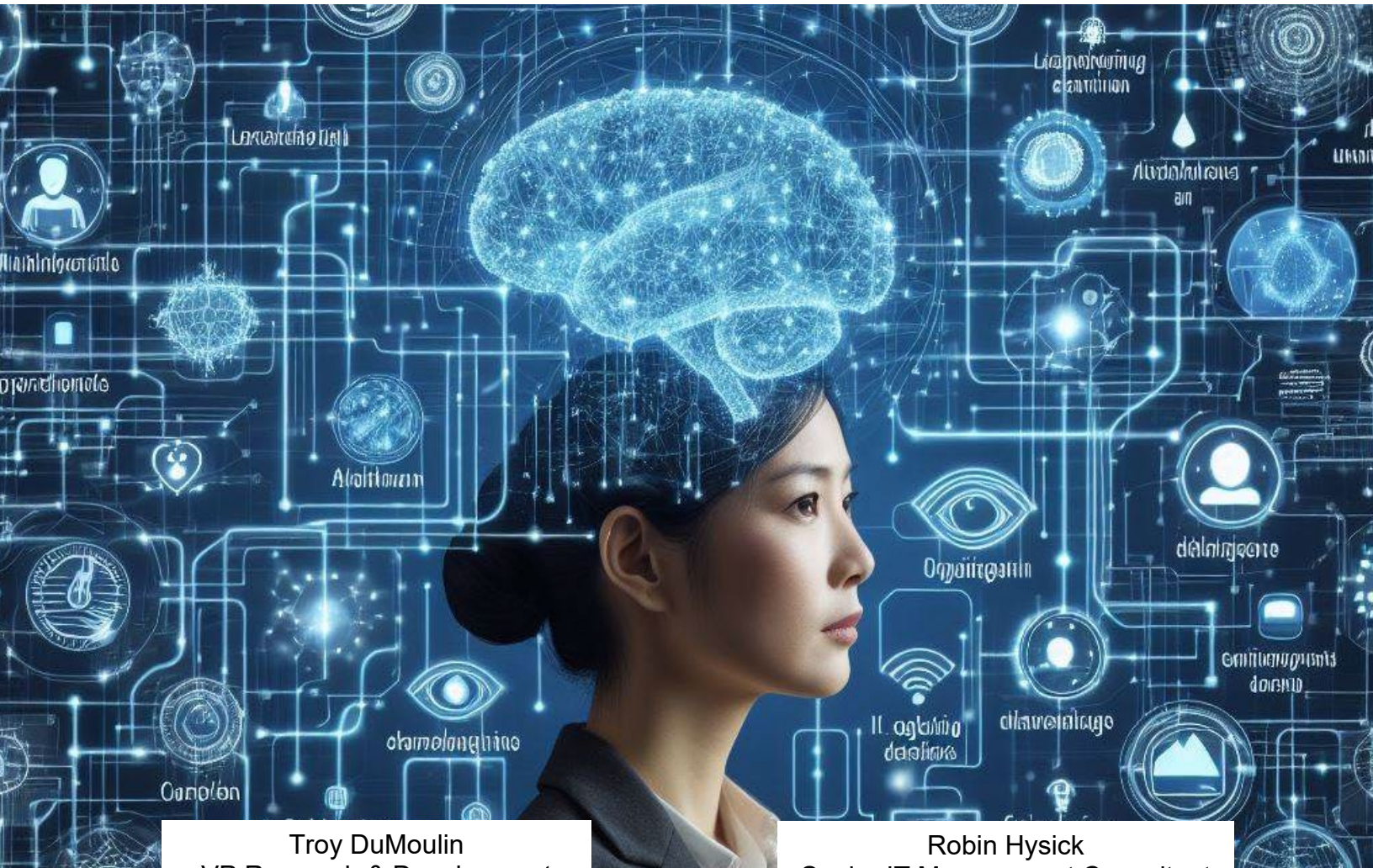


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AI Augmented ITSM

The Impact of AI on ITSM Processes and Professionals
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Introduction

IT service management (ITSM) has always been focused on delivering the best possible value to business partners and customers while enabling continuous improvement and managing risk. Over the past decades, ITSM practitioners have used various tools and strategies to achieve this. However, as with everything else, the digital landscape is constantly changing. Technology disruptions such as distributed computing, cloud adoption, and remote workforces have always presented unique challenges but have also spurred innovation in ITSM.

Artificial intelligence (AI) is the latest disruptive force that IT professionals must address. It holds incredible potential to change the way we work. On the one hand, many routine tasks may be automated by AI. On the other hand, AI can be a powerful tool to augment the ability to provide value if used correctly.

In this paper, we will dive into how ITSM will evolve as AI augmentation becomes more prevalent. The goal is to identify tasks where AI can truly shine as well as areas where the human touch is still essential. The purpose of this document is to help IT professionals understand how to work alongside AI and maximize their human potential to offer unparalleled value to their customers.

Key points:

- IT professionals constantly face change and innovation.
- Technological advancements, including AI, cause significant technology disruption and drive ITSM transformation.
- AI has the potential to both disrupt and greatly enhance ITSM capabilities, processes, roles, and skills.
- AI may automate and even eliminate some entry-level tasks, thereby requiring ITSM workers to focus on critical thinking, problem-solving, human interaction, empathy, and customer relationship skills.
- An intentional and proactive learning and development road map and plan is critical for IT professionals to successfully navigate the AI-augmented future.

Paper Structure

This paper provides a high-level overview of the transformative nature of AI and its strengths and limitations. By highlighting AI's limitations, the paper pinpoints areas where human skills and abilities are vital. It offers a roadmap for IT professionals to enhance their personal learning and development, maximizing their professional value.

To support its purpose and goal, the paper is divided into the following sections.

The changing IT service management (ITSM) landscape:

This section reviews how ITSM practitioners have weathered a storm of technological changes and disruptions over the past 30 years. However, AI represents a unique turning point – a challenge and a powerful enabler unlike anything encountered before. This section explores this evolution, contrasting past disruptions with the unprecedented impact of AI on the ITSM field.

Societal impacts of AI:

This section illustrates some of the challenges and concerns due to the rapid societal and technological transformations related to AI. It describes some of the challenges that are experienced at the global, organizational, and individual levels and provides a call to action for individuals and organizations to help themselves by preparing for changes to their work environment related to AI.

From data to applied wisdom:

This section explores how AI integrates into the uniquely human process of turning data into wise decisions. We'll examine AI's strengths, its limitations, and the irreplaceable role of human knowledge and skill in the ITSM landscape.

Three ITSM capability areas:

The remainder of the paper will then consider three high-level ITSM capability areas and their related processes and roles:

- Customer engagement and relationship management
- IT support
- Service provisioning

The specific purpose will be to establish where AI can be leveraged to improve efficiency and effectiveness and how IT professionals need to adapt their knowledge and skills to create personal and organizational advantage.

While this paper covers a broad range of ITSM capabilities and process areas, it is still not an exhaustive list. **To keep this paper practical for your specific area of interest, feel free to use the table of contents to go directly to the sections that most apply to your personal area of interest.**

The Changing IT Management Landscape

IT service management (ITSM) has a rich history of improving customer value realization by refining IT professionals' expertise, behaviors, and work outcomes. ITSM practitioners achieve this through enhanced collaboration, communication, process optimization, and automation. This focus on continuous improvement has allowed ITSM to adapt to waves of innovation and digital disruption.

Our technology landscape is in constant flux, and the IT industry has repeatedly proven its resilience. IT professionals have adapted their skills, knowledge, processes, products, and partnering strategies in response to major disruptions. Just within the last 30 years, examples of these significant disruptions include:

- **The distributed computing revolution:** Marked by the rise of personal computers, this shift to decentralized IT computing created complexities for IT service management.
- **The mobile era:** Smartphones morphed from mobile telephones into powerful computing platforms that demanded novel approaches to support and security outside of traditional corporate perimeters
- **Ubiquitous high-speed internet:** This fueled cloud adoption and fundamentally altered IT infrastructure and service delivery models
- **Globalized remote workforces:** Initially enabled by previous advancements, the pandemic accelerated this trend, forcing ITSM to rapidly adapt to widely dispersed users

Each of these disruptions has led to adjustments in working practices, roles, and job functions. As Nicholas Carr describes in his book *The Big Switch*¹, the adjustments typically follow a technology adoption curve with three broad stages:

1. **Technology advantage:** Early adopters gain a competitive advantage by using innovative technology.
2. **Ubiquitous adoption:** Technology becomes widely adopted and becomes mainstream.
3. **Commoditization:** Technology becomes so common that it no longer provides a competitive advantage.

¹ Carr, Nicholas. *The Big Switch: Rewiring the World from Edison to Google*. New York, NY: W. W. Norton & Company, 2013. Last modified January 28, 2014. Accessed February 27, 2024. https://www.nicholascarr.com/?page_id=21

AI research, funding, and adoption tend to follow a similar cyclical pattern known as AI winter, spring, and summer. AI winters refer to periods of disappointment, where overblown expectations did not live up to the hype, which led to reduced interest and investment. (1970s, late 1980s, and early 1990s)

The rise of expert systems in the mid-1980s to 1990s fueled an AI spring, although this period also faced limitations and a subsequent decline in interest moving back to AI winter. AI summer represents the current boom that started in the early 2010s, driven by advances in large language models and related fields. This brings us to today and a flourishing of AI where research progresses rapidly, funding is plentiful, and breakthroughs lead to wider adoption of AI technology. These cycles are driven by a combination of hype, tangible results, and advancements in computing power. The current boom is connected to tangible results and marketing hype and is moving the world through a period of universal adoption faster than any previous adoption curve of any other previous technology disruption.

Today, we stand on the precipice of another major technology disruption that has the potential to represent a seismic digital disruption that will have a larger impact than any previous event. The possible applications of AI promise to transform and even eliminate certain tasks across IT. While this raises valid concerns about displacement, history teaches us that disruption also creates opportunities.

AI's Potential Is Both a Challenge and a Powerful Enabler

For the IT industry, AI's potential is a double-edged sword – a disruptive challenge and a powerful enabler. Entry-level tasks like content creation, routine coding, and basic research may face automation. This shift demands that IT professionals find their unique value proposition in areas where AI has limitations such as nuanced problem-solving, deep business-domain expertise, and building the empathetic relationships that drive true customer understanding.

However, the current marketing hype around AI and ITSM focuses heavily on tools – digital engagement channels, chatbots, AIOps, data analysis, forecasting, and knowledge management. This mirrors trends in other industries, like banking and food retail, where the initial rush toward self-service kiosks and automated tellers is now met with a renewed emphasis on human interaction. Customers, it seems, still crave connection and personalized support especially when dealing with complex issues. We often overlook the critical human element where process redesign and reskilling are essential for successful AI implementation. This paper will focus on this aspect of AI

disruption, exploring how adopting AI will both transform and augment specific ITSM processes and roles.

Key Thoughts:

- **The limitations of self-service:** While AI-driven tools excel at efficiency, they can fall short when dealing with emotional complexity or troubleshooting unique customer needs. IT professionals must understand where human judgment and flexibility are essential to avoid frustrating and impersonal experiences.
- **A balancing act:** The future of ITSM lies in a hybrid model. AI will streamline common or repetitive tasks, freeing up human experts to focus on building relationships, strategic problem-solving, and providing the kind of high-touch support that builds customer loyalty.
- **Evolving skillsets:** The successful implementation of AI in ITSM requires investment in training and development. Technical proficiency remains vital, but IT professionals will also need to hone their communication, empathy, and adaptability to thrive in an AI-augmented workplace.

Societal Impacts of AI

Change is an inherent and unavoidable aspect of existence. Without change there would be no growth of the individual, of groups of people (for example, the organization you work for), and of society. Notice the time frames for these two quotes about change and overall flux in the world:

"Change is the only constant in life." is often attributed to Heraclitus, a Greek philosopher who lived from 535-475 BCE (before common era).

"The pace of change has never been this fast, and it will never be this slow again." Justin Trudeau, the Prime Minister of Canada said this to the members of the Davos World Economic Forum's Annual Meeting in January 2018. It has since been widely cited in discussions about the challenges and opportunities presented by rapid societal and technological transformations.²

AI, especially generative AI, has the potential to profoundly transform society. AI's impact on society today is already significant and varied. It is enhancing productivity in industries like healthcare, finance, and transportation by offering personalized experiences in entertainment and shopping, and even helping tackle complex global challenges like climate change and disease outbreaks.

Along with the positive transformational opportunities comes the potential for serious societal risks. These risks are already expanding societal and equity gaps; for example, wealth, power, and knowledge that already exists between individuals and across and between national economies. The impact of societal risks cross job classes, gender, racial, and age differences. It's crucial for society to navigate these challenges thoughtfully, ensuring appropriate usage and that AI benefits everyone and upholds ethical principles.

The challenges and concerns that have already surfaced include the following examples:

- Widening skills gap: Those able to effectively use generative AI tools could have a significant advantage, potentially exacerbating existing inequalities between those with tech knowledge and those without. While AI can enhance productivity, it will make some existing skills less valuable. People with skills complementary to AI (creativity, critical thinking, and complex problem-solving) will be in high

² Prime Minister Justin Trudeau. "The Pace of Change Has Never Been This Fast," delivered at the World Economic Forum. Youtube.com. Last modified January 23, 2018. Accessed January 4, 2024. <https://www.youtube.com/watch?v=fT11YNTNb0g>

demand. Those lacking these skills or the ability to adapt could struggle to find jobs.

- Ethical concerns: AI algorithms can perpetuate existing biases if the data they are trained on is biased. Generative AI models are trained on real-world data pulled from the internet or large-content collections that inevitably contain human biases, stereotypes, and discriminatory language and images. If not addressed, the AI model learns these biases. This can lead to discriminatory outcomes, disproportionately affecting marginalized communities and perpetuating systemic inequalities. Examples of unfair outcomes are already evident in areas such as loan approvals, hiring practices, and criminal justice.
- Privacy issues: Generative AI models are trained on massive datasets that often include personal information sometimes scraped from the internet without specific consent. It can use these datasets to create synthetic data, known as deepfakes, that closely resemble real information; for example, creating realistic videos of people saying things they never actually said. These highly realistic fakes can be misused for fraud, defamation, or other harmful purposes.
- Job displacement: AI can replace jobs and deepen inequality. Based on an article from the International Monetary Fund (IMF), 60% of jobs may be impacted by AI in advanced economies, 40% in emerging markets, and 26% in low-income countries. About half of the 60% impact in advanced economies will benefit from AI, which includes increased productivity, while the other half experiences job tasks that are currently performed by humans being replaced by AI applications.³

This doesn't automatically mean that AI will eliminate entire jobs; it will change them by automating specific tasks. This can result in a lower labor demand, lower wages, and reduced hiring.

There is a risk of some jobs becoming obsolete, particularly in creative and knowledge-based sectors. This could have significant economic and social consequences, particularly for those without the skills to transition to new jobs.

Proactive measures focusing on ethics, responsible use, and education are essential to maximizing the benefits while migrating the serious risks AI poses. This requires collaboration between governments, industry, academia, and civil society to shape policies and practices that promote the responsible development and deployment of AI.

³ Georgieva, Kristalina. "AI Will Transform the Global Economy. Let's Make Sure It Benefits Humanity," Imf.org, (blog), last modified January 15, 2024, accessed March 19, 2024. <https://www.imf.org/en/Blogs/Articles/2024/01/14/ai-will-transform-the-global-economy-lets-make-sure-it-benefits-humanity>

While these larger questions of AI policy and law are debated and settled in the mid- to future-time frame, it is imperative that organizations act now to establish their own policies on the appropriate and ethical use of AI in alignment with their own company values.

Individuals can help themselves prepare for changes related to AI by:

- Being willing to adapt to changing circumstances and embrace new opportunities that arise
- Continuously learning and staying updated with the latest development in your industry and acquiring the new skills that are in demand
- Developing transferable skills that are less likely to be automated such as critical thinking, problem-solving, creativity, emotional intelligence, and interpersonal communication
- Cultivating human-centric skills that emphasize human interaction and empathy such as customer service, relationship building, and leadership
- Embracing technology instead of fearing it. Use it as a tool to enhance your productivity and efficiency. Learn how to use relevant technologies and software in your field to streamline processes, improve performance, and stay competitive

Change is the only constant, and embracing adaptation will be key to navigating the evolving landscape shaped by AI. This transformation requires individual initiative. Cultivating adaptability, continual learning, and the development of essential human skills will be crucial in finding success and fulfillment in an AI-powered world. Now is the time to embrace technology as a tool for advancement and focus on honing our unique human capabilities to thrive alongside AI.

DIKW and Artificial Intelligence

Raw data and information without context are of little value. For organizational knowledge to be used effectively, it requires structure and contextualization. A popular model to describe the translation of data and information to knowledge applied to wisdom-based decision-making is known as the DIKW model.

According to Russell Ackoff⁴, a systems theorist and professor of organizational change, the content of the human mind and, therefore, the practice of knowledge management can be classified into four categories:

1. Data – raw numbers, symbols, characters that have no specific meaning
2. Information – Data that is contextualized or logically grouped to have meaning that can be useful; provides answers to who, what, where, and when questions
3. Knowledge – the aggregation of data and information contextualized into relatable examples to improve understanding; classification and retrieval methods are provided to support strategy, planning, practice, method, or approach; answers the how questions
4. Wisdom – This reflects the use of knowledge and understanding for decisions, action, or inaction filtered through values, principles, insight, and ethics. Wisdom is the application of knowledge influenced by emotional intelligence.

With the context of this model, consider these insightful observations made by Neil Fleming⁵:

- A collection of data is not information.
- A collection of information is not knowledge.
- A collection of knowledge is not wisdom.
- A collection of wisdom is not truth.

These statements provide organizations with key principles for how we can form our thinking around the subject of AI augmentation of ITSM as described in this paper.

Applying this model to artificial intelligence, we can see correlation and areas of limitation.

⁴ Ackoff, Russell L. “Akoff’s Best” New York: John Wiley & Sons, pp 170 - 172 Accessed March 13, 2024. <https://faculty.ung.edu/kmelton/Documents/DataWisdom.pdf>

⁵ Fleming, Neil D. “Coping with a Revolution: Will the Internet Change Learning?” Vark-learn.com. VARK. Accessed May 9, 2023. http://vark-learn.com/wp-content/uploads/2014/08/Information_and_Knowledge.pdf

Artificial intelligence (AI):

“The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans such as the ability to reason, discover meaning, generalize, or learn from past experience.”⁶

Generative artificial intelligence (GenAI):

“Generative AI refers to a category of artificial intelligence (AI) algorithms that generate new outputs based on the data they have been trained on. Unlike traditional AI systems that are designed to recognize patterns and make predictions, generative AI creates new content in the form of images, text, audio, and more.”⁷

Imagine a super-smart computer that can write stories, draw pictures, compose music, or even write computer code! That’s what generative AI is all about. It’s the technology behind tools like ChatGPT, Google Gemini, Microsoft Co-pilot, and DALL-E. GenAI is like a digital artist unleashed. It can create things that are both realistic and seem as if it’s created completely from imagination – sometimes you can’t even tell it was made by a computer!

The key questions then becomes: Where does AI contribute to the DIKW model, and why is human judgment still crucial for wise decision-making?

AI – Strengths (efficiency and cost reduction):

- Data mining and discovery
- Content creation (text, images, code, video)
- Synthesis, summarization, classification
- Extrapolation, forecasting, translation
- Closing skills and knowledge gaps (examples, coaching)

AI skills excel at the data and information levels and enters the knowledge level (it can explain concepts, provide summaries, and even generate code that reflects an understanding of a problem). However, it is important to note that knowledge presented

⁶ Encyclopedia Britannica Copeland, B. J. “Artificial Intelligence.” Encyclopedia Britannica, February 26, 2024.

⁷ Routely, Nick. “What Is Generative AI? An AI Explains. Weforum.org. Last modified February 6, 2023. Accessed March 19, 2024. <https://www.weforum.org/agenda/2023/02/generative-ai-explain-algorithms-work/>

by AI is dependent on the data it was trained on. Its current iteration can go no further than information contextualization, retrieval, and sharing.

AI can only represent what it has learned and will sometimes present information as factual that is not. This is referred to as “hallucination.” AI also struggles with original reasoning or applying concepts to novel situations.

It is precisely at this point that true knowledge and wisdom – the applied and validated knowledge for effective and accurate decision-making – must consider the ethical, appropriate, and empathetic context. This critical success factor will continue to make human beings critical and irreplaceable.

Human – Unique Skills (Effectiveness and Adaptation):

- Intuition and creativity
- Ethics and moral judgement
- Emotional intelligence/empathy
- Social interaction and relationships
- Complex problem-solving
- Physical dexterity and mobility

“Knowledge is the means by which we inform and make decisions; it is not a higher order of information.” ~Dave Snowden⁸

The Critical Shift for IT Professionals with AI Augmentation

There is little doubt that the rapid adoption of AI will have an impact on IT professionals as in the case of each of the previous technology disruptions. The question is what those changes will be and how IT professionals will leverage their strengths to use AI to augment and improve the efficiency and effectiveness of specific ITSM process areas:

- From responders to problem-solvers: As AI handles routine queries and basic troubleshooting, agents will be freed up to tackle more complex issues that require critical thinking, nuanced analysis, and out-of-the-box solutions.
- Empathy and communication as core skills: Building strong relationships and understanding customer needs will become ever more crucial. Excellent communication skills, both written and verbal, will be needed to collaborate with AI tools and provide clear explanations to customers.

⁸ Snowden, David. “Knowledge Management.” Cynefin.io. Last modified September 30, 2021. Accessed May 10, 2023. https://cynefin.io/wiki/Knowledge_management

- **AI collaboration and understanding:** Agents will need to be comfortable working alongside and with AI tools. This means understanding the AI's strengths and weaknesses, knowing when to escalate an issue, and being able to seamlessly integrate AI insights into their workflow.
- **Organizational change:** Understanding the people side of any change and helping them adopt a new way of working augmented by evolving AI technologies
- **Data analytics literacy:** To effectively leverage the insights AI offers, agents will need a basic understanding of data analysis. This will help them identify patterns, trends, and potential areas for proactive problem resolution.
- **Continuous learning and adaptability:** As AI technologies continue to evolve, agents must embrace a mindset of ongoing learning. This means staying up to date on the latest AI capabilities, processes, and industry best practices.
- **Increased business acumen:** IT professionals will need to increase their knowledge and awareness of business acumen to understand how AI initiatives tie into the company's overall goals. This allows them to tailor AI solutions to achieve specific business outcomes rather than simply deploying technology for its own sake.
- **Business-centric value proposition:** Business-savvy IT professionals can articulate the value AI brings to customers. Going beyond technical jargon, they frame AI-powered solutions in terms of problems solved, improvements made, and new opportunities generated for the customer.

The Emotional Intelligence Edge: Why Soft Skills Are the New Must-Have for IT

The landscape of AI, particularly generative AI (GenAI), is evolving at breakneck speed. New tools and models emerge constantly, reshaping possibilities seemingly overnight. Traditionally, IT professionals have thrived on technical expertise and problem-solving through technology analysis. However, as predictive analytics become increasingly automated, a critical shift is needed: the cultivation of 'soft skills' like empathy and emotional intelligence.

This emphasis on soft skills may seem counterintuitive for an industry known for its technical focus. It requires a mindset shift, but one essential for future success. IT professionals who fail to adapt and develop these interpersonal skills risk being left behind in the AI revolution.

ITSM Capability Areas and the Impact on Processes and Roles

The next section of this paper will consider three high-level ITSM capability areas with the specific purpose of establishing where AI may be leveraged to improve effectiveness and how IT professionals need to adapt their knowledge and skills to create personal and organizational advantage.

Three ITSM Capability Areas:

1. **Customer engagement and relationship management:** This focuses on establishing and fostering positive, mutually beneficial relationships between the IT service provider and its customers. It involves strategic processes like business relationship management and product/service life cycle management to ensure offerings remain aligned with evolving customer needs. It also includes tactical areas like service delivery management, where expectations are set, and operational components like the service desk and call centers provide direct support and problem resolution to end users.
2. **IT support:** This is a core ITSM capability that focuses on resolving disruptions and restoring services as quickly as possible to minimize their impact on users and the business. It encompasses processes like incident management that aims for the rapid restoration of service after an outage, problem management that works to identify and eliminate the root causes of recurring incidents, and knowledge management that creates and maintains a repository of information to speed up resolutions and empower self-help for users.
3. **Service provisioning:** This is an ITSM capability area that ensures users have seamless access to the IT services they need. It involves tactical processes and capabilities such as request management, which handles standard service requests in a structured way; service catalog management, which provides a user-facing portal of available services; change management, which assesses and implements IT changes in a controlled manner to minimize risk; service level management, which negotiates and maintains an agreed-upon quality of service; and cybersecurity, which proactively manages threats and vulnerabilities that could disrupt service delivery.

Each of these sections is further broken down into the following subsections providing targeted information on the following:

- AI augmentations to ITSM processes: How AI is currently enhancing and augmenting traditional ITSM process areas through automation and content creation
- Shifts in IT professional key roles and skills: How IT professionals' knowledge and skills need to shift with the introduction of AI to IT management
- Learning and development opportunities: Opportunities for personal and team-based study and learning to enhance the ability of ITSM professionals to leverage AI and continue to add value and stay relevant during a period of technology disruption

Customer Engagement and Relationship Management

Without a doubt, one of the key areas that AI is being used for enhancement is the customer experience, which is found in multiple ITSM process areas related to customer engagement and relationship management. In this section, the paper will consider this ITSM capability area from both a strategic and tactical perspective as well as an operational perspective.

Strategic and Tactical Capabilities

Business relationship management (BRM):

It acts as the bridge between IT and the business units it serves. Business relationship managers cultivate a deep understanding of business needs, proactively identify how technology can drive business goals, and communicate the value IT provides.

Product and service life cycle management:

This oversees the complete lifespan of IT products and services, from design to retirement. This ensures services are strategically aligned with customer needs, built effectively, and continuously optimized for maximum value.

Service delivery management:

This focuses on the day-to-day execution of IT services. It includes managing the

service desk, overseeing swift incident and problem resolution, and ensuring consistent adherence to agreed-upon service levels to maintain user satisfaction.

Business analysis management:

This is the practice of aligning business needs with IT solutions. It involves identifying business problems, analyzing potential solutions, defining requirements, and ensuring the solutions implemented deliver the intended value to stakeholders. Business analysts act as a bridge between business stakeholders and the IT team, translating business objectives into actionable technology plans while maintaining a focus on maximizing organizational benefit.

Strategic and tactical engagement roles such as business relationship managers, product owners, service delivery managers, and business analysts can leverage AI-enabled engagement channels and data analytics to support improved customer experience management.

AI Augmented Strategic and Tactical Engagement and Relationship Management

Business Relationship Management:

- **Data-driven communication:** BRMs need to be comfortable interpreting AI-generated insights from customer feedback, behavior analysis, and market trends. They must translate this data into compelling narratives for both technical and business audiences.
- **Strategic insights:** BRMs should learn to use AI-powered predictive modeling and experience measurements to proactively identify unmet customer needs, potential pain points, and opportunities for value co-creation.
- **Emotionally intelligent AI use:** BRMs should develop a keen eye for where AI excels (pattern recognition, anomaly detection) and where the human touch is still essential (emotional intelligence, complex negotiation).
- **Experience measurement:** XLAs (experience level agreements) offer a powerful way to quantify technology friction's impact on the overall user experience. By focusing on metrics like ease of use, system responsiveness, and the time it takes to resolve issues, XLAs can expose areas where technology creates roadblocks for customers. These insights are invaluable to BRMs, who can use this data to advocate for investments in smoother, more intuitive technology solutions that align with user needs. Additionally, by demonstrating a proactive understanding of how technology friction directly impacts the customer, BRMs build stronger partnerships with both business stakeholders and IT teams. This collaborative effort drives solutions that not only improve technology but ultimately deliver a superior overall customer experience, a core goal of BRM.

Technology friction refers to any point in a user's interaction with a website, app, or digital product that creates difficulty, frustration, or a negative experience. This can include slow loading times, confusing navigation, bugs or errors, overly complex processes, or a lack of intuitive design.

Product and Service Life Cycle Management:

- User-centric data analysis: Product owners can analyze AI-driven insights about how customers interact with products and their features. This data goes beyond traditional usage statistics to reveal friction points and areas for improvement.
- Data-driven experimentation: Product owners can use AI-enabled A/B testing and feature analysis to validate design decisions and continuously iterate for an optimal customer experience.

Service Delivery Management:

- Proactive problem identification: Service delivery managers can leverage AI's anomaly detection and root cause analysis capabilities to shift from reactive firefighting to proactively addressing issues before they impact customers.
- Intelligent resource management: Service delivery managers can use AI-powered forecasting tools to optimize staffing, scheduling, and skill development to meet predicted service demand patterns.

Business Analysis Management:

- Technology friction measurement: Business analysts can use AI to analyze vast amounts of data and pinpoint inefficiencies and bottlenecks within a company's digital products and services.
- Persona identification: Business analysts can use AI tools to cluster user data to help identify customer personas. These personas offer deeper insights into needs, behaviors, and pain points, going beyond traditional demographics.
- Product usage pattern recognition: Business analysts can use AI to detect trends in how customers interact with products or services. This analysis reveals which features are most popular, when usage declines, why it happens, and where to improve the user experience. Business analysts use this knowledge to drive product development and refine features to increase user engagement.

Operational Capabilities

ITSM capability areas such as the service desk, service portals and catalogs are being transformed and significantly impacted and enhanced by trends related to omnichannel engagement and asynchronous chat tools that support both AI and live agent interactions.

Considering these emerging technologies, the question then becomes how service desk and call center agent roles will need to evolve in an AI-augmented environment. This necessitates focusing on the skills and knowledge they will need to thrive:

- A service desk is a specialized function focused specifically on resolving IT-related issues and requests. It aims to help employees or customers with technical problems, provide guidance on technology usage, and improve their experience with technology. Examples of what a service desk handles include password resets, software troubleshooting, hardware repairs, and account management.
- A call center serves as a broader customer contact point not specifically focused on IT services. It handles a wider range of inquiries, complaints, sales, or support that might involve phone, email, or chat channels. Typical examples of call center tasks include taking product orders, resolving billing questions, providing general troubleshooting (not always specific to IT), and scheduling appointments.

AI Augmented Operational Engagement and Relationship Management

Omnichannel engagement

AI-powered tools allow customers to interact seamlessly across channels like voice, chat, email, and social media. This creates a consistent, personalized experience. For example, a customer can start with a chatbot and seamlessly transition to a live agent for complex issues. AI provides the context to the agent for a smooth handoff.

AI-enhanced chat tools

Chatbots and virtual assistants can handle routine inquiries 24/7, reducing wait times and providing immediate assistance. Advanced AI can even understand natural language and sentiment, leading to more engaging, human-like conversations. For instance, an AI chatbot can troubleshoot basic connectivity issues, gather relevant information, and even offer potential solutions before escalation to a live agent.

Self-service portals and smart catalogs

AI-powered knowledge bases with intuitive search functions empower customers to find solutions independently, reducing the strain on support teams. Moreover, AI can analyze usage patterns to recommend relevant services or self-help articles proactively to tailor the service catalog to individual needs.

Intelligent knowledge management:

AI revolutionizes knowledge management for IT teams. It automates article creation, tagging, and update to ensure immediate access to the most current information. Moreover, AI-powered analytics proactively identify knowledge gaps to pinpoint areas within the documentation that need improvement.

Shifts in IT Professional Key Roles and Skills

As AI and generative AI (GenAI) technologies become more sophisticated, they will automate many routine and technical tasks within IT. This shift fundamentally changes the skills IT professionals need to stay relevant and effective. Here's why soft skills focused on customer engagement and relationship management become even more crucial:

Skill area: Understanding the bigger picture

AI excels at focused tasks but lacks the context to understand business strategies or long-term customer goals. IT professionals must be able to translate the strategic direction of the business into technology solutions optimized for user experience, not just technical perfection.

Skill area: Communication as a bridge

An AI interaction can be impersonal. IT professionals skilled in communication and empathy can smooth AI implementation, explain complex technical concepts to nontechnical users, and address concerns or frustrations during the adoption of new AI-powered tools.

Skill area: Managing organizational change

Integrating AI requires changes to workflows, roles, and responsibilities. IT professionals skilled in organizational change can ease employee anxieties, help retrain the workforce, and manage the ongoing change process brought about by AI.

Skill area: Emotional intelligence in handling frustration

Even advanced AI can have shortcomings. IT professionals need strong emotional intelligence to manage user frustration, gather valuable feedback to improve systems, and maintain positive relationships during periods of technological adjustment.

Skill area: From troubleshooting to solution design

IT professionals need to shift their focus from merely resolving technical issues to designing proactive solutions that address user pain points and align with business goals.

Skill area: From tech talk to relationship building

Communication must evolve from technical jargon to clear, empathetic business-focused explanations that build trust in IT service providers as strategic partners and empathetic support agents.

Skill area: From reactive to proactive change agents

IT professionals should anticipate and proactively manage potential disruptions caused by AI implementation to create support programs and training to help users thrive with new technologies.

The increasing automation made possible by AI and GenAI underscores the importance of human-centric skills. IT professionals who develop strong communication, adaptability, empathy, and organizational change expertise will become vital in bridging the gap between technology and the positive, user-focused outcomes it should deliver.

The goal is not to replace human engagement and relationship management practices and roles, but rather to empower and augment them. By focusing on high-value skills, IT professionals can become indispensable partners in an AI-driven ITSM landscape.

Learning and Development Opportunities

Advanced troubleshooting and critical thinking:

- **Service support simulations:** These are interactive scenarios that mimic real-world complex issues that require agents to analyze data, apply knowledge, and test different solutions.

- Active listening and communication skills training: These are focused sessions on developing strong verbal and written communication techniques with an emphasis on empathy and building rapport.

Business and process understanding and optimization:

- Process mapping workshops: These are collaborative sessions where teams map out the existing business or IT processes to identify pain points and opportunities for improvement.
- Lean/Six Sigma introduction: This provides basic concepts in process optimization and efficiency to help agents identify areas where process improvements can add the most value.

Business relationship and product management:

- Experience management: This focuses on learning about customer journey mapping, design thinking, and personas through case studies of successful and challenging customer interactions that focus on how agents leveraged both technical knowledge and creative problem-solving approaches.
- Business relationship management: Developing a strong understanding of the BRM role is essential and encompasses both strategic and tactical ITSM areas like demand management, investment planning, and program/project management. This also includes the communication and liaison skills crucial during major service disruptions.
- Agile product ownership: This facilitates a balanced understanding of product features, release planning activities, and backlog prioritization. Product owners need to understand business issues and regulatory requirements and have an overall focus on continual improvements that lead to improved customer value.
- Organizational change management training: This prepares IT professionals with skills and knowledge to support the adoption of new workflows and embrace the evolving role of AI within their work processes.

IT Support

In many organizations, AI is revolutionizing ITSM processes like incident, problem management, and knowledge management to significantly improve efficiency and drive key support goals in support of service level agreements (SLAs). Through intelligent automation, AI streamlines incident resolution by automating ticket triage and routing, empowering users with self-service solutions, and providing technicians with AI-suggested knowledge articles and solutions:

- Incident management: This focuses on resolving and restoring IT services to normal operation after disruptions or incidents such as system failures or service outages.
- Problem management: This aims to identify and address the root causes of recurring incidents and prevent them from happening again in the future.
- Knowledge management: This involves capturing, organizing, and sharing IT-related knowledge and information to enhance problem-solving and decision-making within the organization.

In problem management, AI technologies like AIOps enable proactive and even predictive maintenance. By analyzing vast amounts of IT data, AI can identify anomalies, pinpoint root causes of recurring issues, and even forecast potential failures that allow IT teams to prevent problems before they disrupt services. This AI-driven transformation results in faster service restoration times, reduced operational costs, and an enhanced overall user experience.

AI Augmented IT Support

Incident management: Faster service restoration:

- Virtual agents: AI-driven chatbots help to automate commonly reported incident resolutions and enable request automation by providing self-service knowledge articles. If additional support is required, they enable seamless transitions to live agents for complex issues.
- Intelligent triage and routing: AI can analyze incident descriptions to automatically categorize them based on impact and expertise and route tickets to the most appropriate support team. This cuts down on a manual triage and ensures issues get to the right people faster.

Problem management: Proactive and predictive:

- AIOps – a key to proactive support: AIOps platforms leverage AI (specifically machine learning) to analyze vast amounts of IT operational data – logs, events, metrics, etc. This allows them to detect anomalies, correlate events, and proactively pinpoint root causes of recurring incidents.
- Predictive analytics: AI can even predict potential failures by spotting subtle patterns in IT infrastructure data. This enables teams to take preventive measures and head off problems before they cause service disruption.

Knowledge management:

- Natural language search: AI makes knowledge bases more intuitive to search, going beyond keywords to understand the context of user queries.
- Content generation: AI can assist with creating basic documentation or troubleshooting guides by drawing from existing knowledge.
- AI-powered knowledge bases: AI can suggest relevant articles and solutions from knowledge bases by highlighting related knowledge articles and workarounds, empowering both end-users and support agents to resolve issues quickly. For example, an AI might recognize a password reset request that immediately provides the user with self-service instruction.

Shifts in IT Professional Key Roles and Skills

AI augments service support by reducing manual tasks, empowering both users and agents, and enabling a shift from reactive to proactive IT support. This leads to shorter resolution times, fewer recurring incidents, and an overall improved user experience. In many ways, the strengths of AI applied to IT support and enable organizations to finally have the capacity and resources to move from a reactive to a proactive approach to problem management.

Skill area: From knowledge holders to knowledge facilitators:

In the past, IT professionals often acted as the primary source of troubleshooting information. However, with the advent of AI-powered knowledge bases and self-service portals, users are increasingly empowered to find solutions independently. This shifts the IT professional's role toward curating and maintaining high-quality knowledge resources and identifying areas where additional documentation would be beneficial. For example, instead of simply providing a fix for a recurring issue, they might delve into root-cause analysis and work to update processes accordingly.

Skill area: Focus on complex problem-solving and critical thinking:

Historically, IT work often involved a substantial number of routine and repetitive tasks. AI excels at automating these tasks such as password resets or basic hardware troubleshooting. In the context of Google's site reliability engineer (SRE)⁹ role, this is often referred to as automating the toil. Automating this toil enables the SRE role to focus on higher value-added work. This frees up IT professionals to dedicate their expertise to complex issues that require deep technical knowledge, nuanced analysis,

⁹ "Google - Site Reliability Engineering." *Sre.Google*. Accessed March 20, 2024. <https://sre.google/>.

and out-of-the-box solutions. An example of this would be investigating those intermittent network issues that AI tools struggle to pinpoint and diagnose effectively.

Skill area: Emphasizing empathy and relationship building:

While technical skills have always been paramount in IT, communication could sometimes take a backseat. As AI handles basic interactions, the ability to connect with users on an empathetic level becomes even more critical. IT professionals must develop strong interpersonal skills to provide reassurance, manage expectations during complex problem-solving scenarios, and build trust with users. This involves explaining technical solutions in clear, understandable language while demonstrating patience and understanding when dealing with frustrated customers.

Skill area: Continuous improvement and process optimizers:

IT professionals have traditionally been reactive to technology issues. AI's ability to analyze vast amounts of data and pinpoint trends creates unprecedented opportunities for proactive improvement. IT professionals become partners with AI, using its insights to map value streams and optimize workflows, identify inefficiencies, and suggest proactive solutions. For example, they might utilize process performance reports to better understand where knowledge gaps exist that leads them to create targeted training materials that benefit both end-users and internal support staff.

Learning and Development Opportunities

Problem analysis:

- **Problem-solving and root cause analysis (RCA) training:** These are workshops and courses to learn about data analysis techniques, visualization tools, and how to interpret data to identify trends, correlations, and potential root causes. Master structured methodologies like the 5 Whys, Ishikawa (fishbone) diagrams, and data analytics. These skills will equip IT professionals to pinpoint and address the underlying causes of problems.
- **Critical thinking development:** These are workshops and courses that enhance logical reasoning, hypothesis testing, and the ability to dissect complex issues systematically.

Continual Improvement

- **Lean Essentials:** This introduces the philosophy of kaizen, which is focused on small, continuous improvements within the workplace. It covers tools like value stream mapping and waste identification.

- **Integrated IT Service Management Essentials:** This provides a framework of common IT execution processes specifically curated to focus on ongoing improvement within IT service management.
- **Organizational Change Management:** This prepares IT professionals to effectively lead and manage the implementation of process improvements as well as address potential resistance and promote adoption.

Lean Process Improvement

- **Lean Kaizen:** This offers a comprehensive methodology that combines Lean principles (waste reduction) and Six Sigma (statistical process control) for data-driven process improvement.
- **Value stream mapping workshops:** These are hands-on sessions that focus on mapping out IT processes as well as identifying bottlenecks, waste, and opportunities for streamlining.
- **Agile methodologies (Scrum/kanban):** While originating in software development, Agile principles emphasizing flexibility, rapid iteration, and customer feedback are increasingly relevant to ITSM process improvement.

Service Provisioning

IT service provisioning encompasses the activities involved in planning, providing, operating, and controlling the IT services offered to users within an organization. It is the core function of ITSM to aim to ensure IT services are aligned with business needs and deliver the value users expect. Several ITSM processes directly contribute to effective IT service provisioning. Example processes include:

- **Request management:** Handles standard user requests related to IT services (e.g., new hardware, software installations, account creations)
- **Service catalog management:** Enables the IT service provider to publish and make accessible to its business partners and customers a list of value-added services and service offerings to enable enhanced engagement processes and roles as well as an efficient request management process
- **Change management:** This provides a structured process to control and manage any changes to the IT environment. The process aims to optimize the assessment and approval of changes while reducing risks associated with change – with an overall goal to ensure changes are implemented in a controlled and authorized way
- **Service level management (SLM):** Establishes service level agreements (SLAs) between IT and the business or customers; SLAs define the performance

metrics, expectations, and consequences for meeting or not meeting the agreed-upon service levels

- **Cybersecurity:** Cybersecurity encompasses the strategies, technologies, and practices designed to protect digital assets, networks, and systems from unauthorized access, attacks, and data breaches. It aims to ensure confidentiality, integrity, and the availability of information and resources within an organization

AI-Augmented Service Provisioning

Request management:

- **AI-powered chatbots:** Can handle routine requests (password resets, access grants), automating fulfillment and freeing up staff for complex issues
- **Understanding user needs:** Just like your favorite online store recommends products, AI can analyze your end-user's past requests, job function, and frequently used services to suggest the most relevant offerings from the service catalog.
- **Intelligent routing:** AI models can analyze request language and urgency levels to assign them to the most appropriate support team, reducing delays.

Self-service portals and smart catalogs:

- **Tailored catalog views and descriptions:** AI eliminates one-size-fits-all service descriptions. Instead, it tailors the presentation to the user's role. Business users see clear explanations of how a service benefits them, while technical team members get the in-depth implementation details they need.
- **Dynamic search:** An AI-powered search goes beyond traditional keyword matching. It can understand the intent of a user's query and suggest relevant services even if the exact terms are not used. For example, a user who types "can't access reports" might be directed to solutions involving database permissions or report generation software.
- **Better demand management:** By analyzing service usage patterns and recommendations, AI can help identify areas of high demand and guide decisions on service portfolio expansion or retirement.

Change management:

- **Risk prediction:** AI analyzes historical change data to predict the likelihood of failure or disruptions caused by new changes and to suggest mitigation steps.
- **Automated approvals:** AI-driven systems can streamline approval workflows for low-risk, routine changes.

- Augmented change scheduling and intelligent calendar analysis: AI algorithms can analyze existing change schedules, historical implementation data, and resource availability (both human and infrastructure) to suggest optimal time windows for requested changes. This reduces potential conflicts and maximizes successful change implementation rates.
- Dependency mapping: AI can analyze the complex interdependencies between IT components, services, and planned changes through integration with discovery and monitoring tools. This helps identify changes that might potentially interfere with each other if scheduled concurrently.
- Risk-based prioritization: AI models can assess historical change success/failure rates along with the complexity of a proposed change to calculate a risk score. This risk score informs automated scheduling and prioritization that places high-risk changes in less disruptive periods or suggests additional testing before implementation.
- Real-time monitoring: AI can monitor systems, logs, and configuration items in real-time. This allows it to detect conflicts that might not be apparent during the change planning stage such as resource overbooking, unexpected configuration clashes, or service dependencies that have been overlooked.
- Automated alerts and notifications: When potential conflicts are identified, AI can automatically alert relevant stakeholders that include change managers, technical teams, and impacted business users. This facilitates a quick resolution and avoids unplanned downtime.

Service level management (SLM):

- Anomaly detection: AI monitors performance data in real-time to proactively identify potential SLA breaches and alert teams. This includes tracking vendor-provided services that underpin your organization's SLAs. For instance, AI can detect delays in a cloud provider's systems that could compromise the SLAs you have promised to your customers.
- SLA dependency mapping and predictive analytics: AI can analyze vendor contracts and SLAs in conjunction with your internal SLAs. It can create a visual map of how service failures at the vendor level might cascade and impact customer-facing SLAs. This provides a holistic view of service risk.
- Automated contractual analysis: Natural language processing (NLP) techniques within AI can review vendor contracts for clauses that might create hidden liabilities or SLA conflicts. For example, the AI system could identify maintenance windows in vendor contracts that overlap with peak demand periods for your own services.

Cybersecurity

AI offers both exciting opportunities for risk mitigation and introduces significant new risks when it comes to cybersecurity in service provisioning. The challenge here is that AI tools are available to both sides of the cyber battlefield. While it enables new tools to combat online threat vectors, it also equally places those tools into the hands of bad actors. The reality may be an escalation of the cyber arms race but, to use an old quote in this case, "The best defense is a good offence."

Opportunities:

- Threat detection: AI algorithms can analyze patterns in network traffic, user behavior, and system logs to identify potential threats and anomalies that human analysts might miss.
- Incident response: AI-powered tools can automate routine incident response tasks, allowing security teams to respond faster and focus on more complex issues.
- Vulnerability prediction: AI can analyze code and system configurations to predict potential vulnerabilities before they are exploited.

Risks:

- Adversarial AI: Enables attackers to develop more sophisticated attacks that include advanced malware, highly targeted social engineering tactics, and methods to evade cybersecurity defenses:
 - Algorithmic recourse: Involves altering inputs and prompts to change a model's output, however, this technique can inadvertently reveal information about the model's training data.
 - Membership inference attacks (MIA): Attempts to determine whether a specific data point (such as an individual's financial record) was part of an AI model's training dataset.
- Data security: Employees may unknowingly input sensitive company information into AI tools. This data could be stored, used to further train the models, and potentially be exposed to others.
- Compliance: Unapproved usage could lead to breaches of industry regulations or internal data handling policies.
- Intellectual property (IP) risks: Using company-specific code, trade secrets, or other proprietary information with an AI tool risks compromise or accidental sharing.
- Data bias: Bias in AI training data can result in cybersecurity tools failing to identify threats affecting certain demographics or systems.
- Unintended consequences: The complexity of AI models can lead to unexpected behaviors, making it harder to predict and control their impact on cybersecurity.

As AI becomes more integrated into service provisioning, it is crucial for cybersecurity to be an integral part of the design, implementation, and monitoring processes. Organizations must proactively address the risks of AI while harnessing its potential to enhance their overall security posture.

Shifts in IT Professional Key Roles and Skills:

To thrive in an AI-augmented ITSM world, IT professionals must adapt their service provisioning skills. This includes developing data analysis skills to understand AI outputs, learning how to collaborate effectively with AI systems, and cultivating cybersecurity awareness to protect sensitive data. They should also refine their expertise where AI currently struggles, such as problem-solving, systems thinking, and strategic decision making. Additionally, strong soft skills remain critical for customer communication, service level negotiation, and vendor management.

Skill Area: Data literacy, analysis, and interpretation

IT professionals will need to become conversant with the types of data that power AI models (performance metrics, logs, historical trends) and how to assess data quality. A basic grasp of how to understand data analytics and measurement will help in interpreting the output of AI predictions and risk models. Understanding how to effectively communicate data insights using visualization tools and graphs, both from the AI system and through data-driven reports, will be crucial.

Skill Area: Cybersecurity vigilance

Develop critical analysis skills to identify cybersecurity and identify biases in AI outputs. Critically scrutinize AI-generated incident reports, questioning the reasoning behind conclusions. Investigate instances of anomalous user behavior flagged by AI to distinguish true threats from unfamiliar usage patterns. Remain vigilant for potential biases in AI threat detection, which might under or overemphasize certain threats. By developing a keen cybersecurity judgement, IT professionals become essential safeguards in an AI-driven world.

Skill Area: Quality Assurance and Validation

Understanding when to trust AI recommendations and knowing when human judgment is still essential. Critically evaluating AI-generated data and outputs, including identifying potential biases. Rethinking or reimagining AI generated content for appropriate and best use. A recent blog post, "Thanks to AI, the coder is no longer king: All hail the QA

engineer”¹⁰ by the business magazine Fast Company, describes the typical software development ratio of 3:1 – three days of development for each day of testing [1]. Generative AI tools drastically shrink development time. However, they introduce more defects, potentially reversing this ratio. This means more time spent on quality assurance and validation, underscoring the increasing importance of QA engineers in an AI-driven development landscape.

Skill Area: Evolving from technology to product and service orientation

- AI discovery solutions can identify technology components but are not able to understand the nuances of holistic products and services. IT professionals need to continue moving from a technology/domain mindset to a systemic understanding of products and services. Upskilling in business acumen and understanding continues to be critical, focusing on the end-to-end user experience and how to optimize the interplay between human-delivered and AI-assisted support and delivery models.
- Understanding how vendor management and contract dependencies impact products and services dependent on vendor systems and how to hold vendors accountable for SLA compliance driven by AI insights

Skill Area: ITSM knowledge

As automation and AI solutions take care of routine tasks it has never been more important to have solid understanding of the core ITSM processes which are underpinned by the available automation. IT professionals who design and configure AI solutions, or who critically analyze AI outputs, need a deep understanding of ITSM principles, policies, processes, and roles.

Learning and Development Opportunities

Data Literacy, Analysis, and Interpretation

- **Data analysis and visualization:** Look for courses focused on business analytics and visualization tools (e.g., Tableau, Power BI, or Qlik). Even beginner-level courses will provide the necessary foundation.
- **Lean/Six Sigma:** Consider courses or workshops, such as Lean Kaizen, specifically tailored to applying statistical analysis to technology processes and service metrics. These courses should cover topics such as statistical process charts and data visualization techniques.

¹⁰ *Fastcompany.com*. Accessed March 20, 2024. <https://www.fastcompany.com/91045570/thanks-to-ai-the-coder-is-no-longer-king-all-hail-the-qa-engineer>.

- **Vendor-specific AI training:** Many ITSM tools now incorporate AI features. Seek out vendor-led training to understand the specific data models and insights features within your organization's existing tools.
- **Big data, machine learning, and decision-making:** Look for courses that combine elements of big data and analytics for enhanced decision making. This will help with understanding AI's strengths, limitations, and potential biases.

Cybersecurity Vigilance

- **Threat intelligence analysis:** Learn to gather and interpret security information to proactively identify threats. This includes understanding how attackers operate.
- **AI security fundamentals:** Understand how AI works in cybersecurity, both for defense and how attackers use it. Learn to spot AI-based attack techniques, including:
 - **Incident response and forensics:** The ability to react to security incidents, investigate attacks, and determine their cause
 - **Data analysis and visualization for security:** Analyze security data to recognize patterns that might signal hidden vulnerabilities.
 - **Bias in AI and ethical hacking:** Understand how bias influences AI security systems and learn ethical hacking to test those systems for weak points

Process Thinking, Collaboration, and Negotiation

- **IT performance & improvement management:** Consider a course that provides training on best practices related to measurement system design and development. These courses will focus on the necessary knowledge to assess and improve the performance of IT service management (ITSM) processes within an organization.
- **Value stream mapping:** A critical skill in support of process thinking is the ability to visualize a process in respect to its performance against customer value objectives. Any improvements must start by re-discovering, visualizing, and analyzing a process through the lens of quality, speed, and cost.
- **Communication and negotiation training:** Consider courses focused on data-driven storytelling and explaining technical concepts to non-technical stakeholders. These skills are essential for building trust in AI-driven decisions.

Evolving from Technology to Product and Service Orientation

- **Service catalog and service modelling:** Enhance your service catalog and modeling expertise. Discover ways to build agreement around design and to

organize and optimize service models within your configuration management system.

- **IT leadership and business acumen development:** Seek workshops or short courses for IT professionals that cover essential business, leadership, strategy concepts, financial terminology, and service thinking.
- **Vendor and service level management:** Look for courses that focus on contract negotiation techniques and SLA management, particularly in a cloud-based or heavily outsourced environment.

ITSM Knowledge

- **Integrated IT service management:** Courses, workshops, and other resources can help you deepen your understanding of integrated IT service management. Prioritize options that emphasize its business-focused approach, including the relationship between critical execution processes; key enablers such as Agile, Lean, and DevOps; and organizational goals.
- **AI and automation in ITSM webinars/conferences:** Look for industry events that specifically address how AI is changing specific ITSM processes like incident, problem, or change management.
- **Process design/improvement training:** Even with AI, the human need to design or tweak processes remains strong. Consider training related to Lean principles or process modeling.

Additional ITSM Process Considerations

The scope of this paper focuses on example ITSM capabilities but is in no way an exhaustive list of how AI impacts ITSM related processes. A great deal could be said about other key areas. This list covers a few more areas and there are many more.

Monitoring and Alerting

- **Predictive anomaly detection:** Instead of just reacting to thresholds, AI can analyze complex patterns in metrics (performance, resource usage, logs) to predict impending issues before they cause outages. For example, AI might spot subtle server performance degradation that could lead to a full crash.
- **Intelligent noise reduction:** AI can filter and correlate alerts, reducing the barrage of notifications for IT staff. This could involve identifying recurring alerts tied to the same root cause or de-prioritizing known, low-impact events.

Release and Deployment Management

- **Risk assessment:** AI models can analyze historical release data, dependencies, and code changes to predict deployment success or failure probabilities. Example: AI could flag specific changes that have high correlation with past incidents.
- **Automated rollbacks:** AI can initiate automated rollbacks if it detects post-deployment anomalies or performance degradation, minimizing downtime.

Service Assurance and Testing

- **Self-healing automation:** AI can trigger pre-defined remediation actions when it detects issues, potentially restoring services before users even notice. Example: AI might automatically restart a process or add additional resources in response to a performance slowdown.
- **AI-driven test case generation:** AI can analyze code requirements and past failures to automatically create test cases, improving coverage and streamlining testing processes.
- **Synthetic monitoring:** AI-powered bots can simulate user journeys and transactions, proactively identifying issues with service availability or functionality from the end-user perspective.

IT Asset and Configuration Management

- **Dynamic inventory and dependency mapping:** AI can discover and map asset relationships (software, hardware, network), including dependencies critical for change management and impact analysis. This can be especially helpful in complex cloud and hybrid environments.
- **Predictive maintenance:** AI models can analyze sensor data and asset usage patterns to predict component failures, enabling proactive replacement and avoiding unplanned downtime.
- **Software license optimization:** AI can track software usage trends against licensing agreements, identifying both underutilization of licenses (cost saving opportunity) and potential compliance risks (overuse of licenses).

Conclusion

AI Augmented ITSM - Your Roadmap to Success

This paper explored how artificial intelligence is reshaping the world of IT service management. AI is not replacing IT professionals – instead, it is offering a powerful set of tools to streamline processes, proactively resolve issues, and drive better decision-making for exceptional customer experiences.

Key Takeaways:

- **AI augments do not replace:** While AI excels at tasks like pattern recognition, data analysis, and automation of routine work, IT professionals remain critical and must focus on where human expertise is essential for effective IT service management: problem-solving, relationship management, and strategic thinking.
- **Data contextualization with human skill is key:** AI models are fueled by data. IT professionals must become data literate, understanding how to assess data quality and interpret AI outputs.
- **Process rethinking is essential:** Workflows need to be redesigned to seamlessly integrate AI insights and decision support.
- **Do not forget the "softer" skills:** As technology evolves, empathy, communication, and adaptability will be increasingly important for success.

Learning and Development Roadmap

- **Focus on the soft skills:** The strength of IT professionals is their humanity and relationship management. In a technological environment this can be an easy competence to overlook where the industry has traditionally focused on technology acumen over soft skills development. In a world enhanced by AI we will need to reverse this thinking.

Human – unique soft skills

- Intuition and creativity
- Ethics and moral judgement
- Emotional intelligence/empathy
- Social interaction and relationships
- Complex problem solving

- **Start with AI foundational knowledge:** Get comfortable with AI basics, types of models, and common ITSM-related applications.
- **Problem solving and root cause analysis (RCA) training:** Introduction to data analysis techniques, visualization tools, and how to interpret data to identify trends, correlations, and potential root causes within IT systems and processes
- **Upskill in Lean process analysis, improvement, and visualization:** Learn to use data to tell compelling stories and gain insights. Develop skills in Lean value stream mapping.
- **ITSM processes remain paramount:** Maintain a solid understanding of core ITSM principles and processes as the foundation for successfully applying AI.
- **Experience management:** Learning about customer journey mapping, design thinking and personas through case studies of successful and challenging customer interactions, focusing on how agents leveraged both technical knowledge and creative problem-solving approaches
- **Business relationship management:** Developing an understanding of the role of a BRM across both strategic and tactical ITSM capability areas related to demand management, investment and planning, and program and project management.
- **Agile methodologies (Scrum/Kanban):** While originating in software development, Agile principles emphasizing flexibility, rapid iteration, and customer feedback are increasingly relevant to ITSM process improvement.
- **Organizational change management training:** Prepares IT professionals with the skills and knowledge to support adoption of new workflows and embrace the evolving role of AI within their work processes.

The future of ITSM is AI-augmented. By embracing this change, using AI appropriately, proactively, and developing the right skills, IT professionals can unlock unprecedented value for their organizations and their customers.

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Troy, who has an extensive background in executive IT management training and consulting with over 30+ years' experience, is considered by many to be one of the world's foremost ITSM experts. As a leading IT governance and service management authority, he has exceptional expertise in Lean IT and DevOps. Troy is also a published and contributing author for multiple books on topics such as Lean IT, the service catalog, and ITSM. A frequent speaker at IT management events, Troy was recently named one of the Top 25 Industry Influencers in Tech Support and Service Management by HDI.

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Robin's stellar reputation for delivering outstanding consulting and educational services is continually reinforced by innumerable rave reviews from her clients. Captivating and engaging, she has an intrinsic ability to connect and communicate and, with more than 35 years of experience across multiple industry sectors, she has demonstrated expertise in the areas of organizational change management, leadership, Agile project management, ITSM, and DevOps. Robin possesses a Master of Arts in Organizational Management and Development, and her passion for teaching is apparent because she provides comprehensive subject matter accompanied by real-world examples that allow clients to apply learned concepts to their own organizations.

About Pink Elephant

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A premier global training, consulting, and conference service provider, Pink Elephant has an undisputed reputation for leading the way. We're proud of our pioneering and innovative spirit, which has enabled us to introduce and spearhead many revolutionary concepts and programs since our inception forty years ago.

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