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Healthcare sector: The Future of AI and the Workforce

Impact of Generative AI on Healthcare jobs

Releasing time to care

May 2025

Foreword

In recent months, the sudden and very public interest in generative Artificial Intelligence (AI) has sparked immense debate about the broader good and potential risks that AI and Machine Learning can bring to society and the economy. From overall questions of ethics and governance to sector-specific applications for innovative new use cases, there are a number of countries vying to be global leaders in this transformational new technology.

Understanding the potential benefits of Gen AI, where these benefits might be the greatest, how it will transform how people work, and how it can help address critical workforce shortages are all important questions.

In healthcare, Gen AI has the potential to perform a range of activities currently carried out by staff, giving them more time to spend with patients. With current estimates putting the global shortage of clinical staff at 18 million, there is an obvious attraction of anything that might release time for care.

However, healthcare organisations are large and complex, raising the question of where they should start to employ Gen AI first and where the greatest benefit will be seen. For example, the National Health Service (NHS) in England is a complex network of hundreds of organisations that jointly employ 1.5 million people in over 300 roles and professions.

This report aims to provide an understanding of the Gen AI's potential based on a comprehensive assessment of the jobs and tasks performed by the staff in Leeds Teaching Hospitals Trust (LTHT). As far as we are aware, this is the most detailed assessment of the Gen AI augmentation potential in healthcare undertaken anywhere in the world. We hope our findings will be of interest to individual NHS providers, NHS England, the Department of Health and Social Care, and hospitals across the world which, to a large extent employ people doing similar roles.

Together with LTHT we have started to develop our understanding of how and where there is an opportunity to support the workforce by deploying Gen AI to help with daily tasks.

Our work provides valuable insight into the opportunities for Gen AI and where LTHT might focus its resources for the biggest benefit. A key example is automating routine administrative tasks, such as scheduling, data entry, and drafting, with Gen AI freeing up valuable time for healthcare providers. We hope this automation reduces the administrative load, allowing our doctors, nurses, and allied healthcare colleagues to spend more time on patient care, rather than paperwork. Over the next three months we aim to further develop our understanding of the real-life benefits of Gen AI working with clinicians and staff to develop specific use cases in specific services identified in this report.

We anticipate that Gen AI will create new opportunities and job roles. Healthcare professionals will increasingly need expertise in managing and interpreting Gen AI tools, leading to a demand for skills in Gen AI integration, data analysis, and cybersecurity. Roles in Gen AI oversight, ethics, and regulatory compliance are also becoming crucial.

Despite the many potential benefits of Gen AI, which we explore in this report, it is not a panacea for the workforce crisis in healthcare. For many clinical roles, the number and mix of staff required to provide safe, accessible, high-quality services now and in the future will not change as a result of Gen AI. They will continue to be determined by other factors; such as safer staffing guidelines, recommended ratios, whilst also ensuring roles and team structure remain attractive.

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Contents

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Glossary of terms

Robotic Process Automation (RPA):

Robotic Process Automation involves rule-based automation of straightforward workflow tasks such as opening an email, data entry, or copying & pasting data. AI and RPA can work in tandem to automate more sophisticated and complex tasks.

Artificial Intelligence (AI):

A broad field encompassing the development of computer systems that can perform tasks typically requiring human intelligence, such as learning, problem-solving, and decision-making.

Machine Learning (ML):

A type of AI that allows computers to learn from data without being explicitly programmed. It involves algorithms that can identify patterns in data and make predictions based on those patterns.

Neural Networks:

A type of machine learning model inspired by the structure and function of the human brain. They consist of interconnected nodes or "neurons" that process information and learn from data.

Deep Learning:

A type of machine learning that uses artificial neural networks with multiple layers to learn complex patterns from data. It is particularly effective for tasks such as image recognition, natural language processing, and machine translation.

Generative AI:

A type of AI that can create new content, such as text, images, music, or code, based on existing data. Examples include large language models (LLMs) and large image models (LIMs).

Large Language Models (LLMs):

A type of AI trained on massive amounts of text data, enabling it to generate human-quality text, translate languages, interpret information, write different kinds of content, and answer questions. LLMs are created using deep learning.

Large Image Models (LIMs):

A type of AI trained on massive amounts of image data, enabling it to generate realistic images, edit existing images, and understand the content of images. LIMs are created using deep learning.

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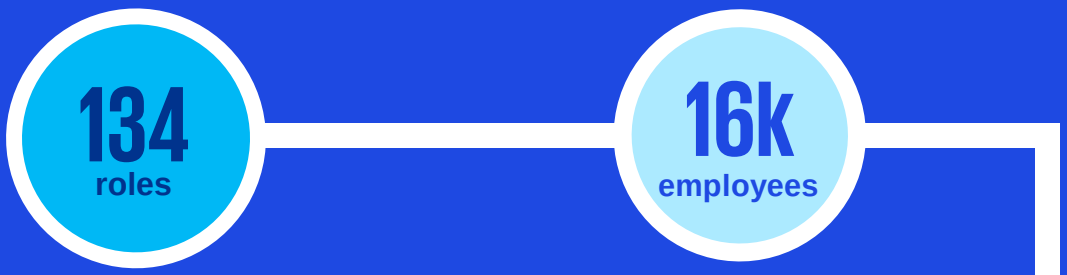
Section 1: Executive Summary

Gen AI and Healthcare workforce

In today's rapidly evolving healthcare landscape, the adoption of Gen AI has the potential for significant benefit but this needs to be much better understood. Our journey into this innovative technology began with a vision: to empower healthcare professionals with enhanced time for patient care, improve decision-making, and improve patient outcomes. To identify the potential of Gen AI for the healthcare workforce, and, thereupon, design and deploy a fit-for-purpose Gen AI solution, we adopted the following process.

We worked with Leeds Teaching Hospitals NHS Trust to analyse 134 roles across 16,000 employees. This exploratory assessment revealed that up to 24% of the tasks or sub-tasks might potentially be augmented by Gen AI providing the Trust with a heatmap of areas of focus and opportunity.



The potential benefits identified through our work to date are a promising indicator of the transformative impact this technology could have in hospitals. In practice the benefits will be much smaller, both because it will not be cost effective to deploy Gen AI in all roles or for all use cases and because the time and expertise required to develop and deploy it is limited. Where our work to date is most useful is in guiding and informing where the greatest benefits should be seen so that work to develop specific use cases can be targeted.

In our exploration of Gen AI's potential, we identified three key capabilities—data interpretation, summarising information, and content creation—that stand out as offering the most potential benefit. Focusing on these three uses in specific roles and functions the next phase of our work will be to develop specific use cases in conjunction with the people who really understand the work, the staff and clinical teams doing the work.

To capitalise on these capabilities, we selected three specific use cases (as detailed in the report) for pilot implementation. By piloting these use cases, we aim to evaluate the effectiveness of Gen AI in real-world applications, paving the way for broader integration across the organisation.

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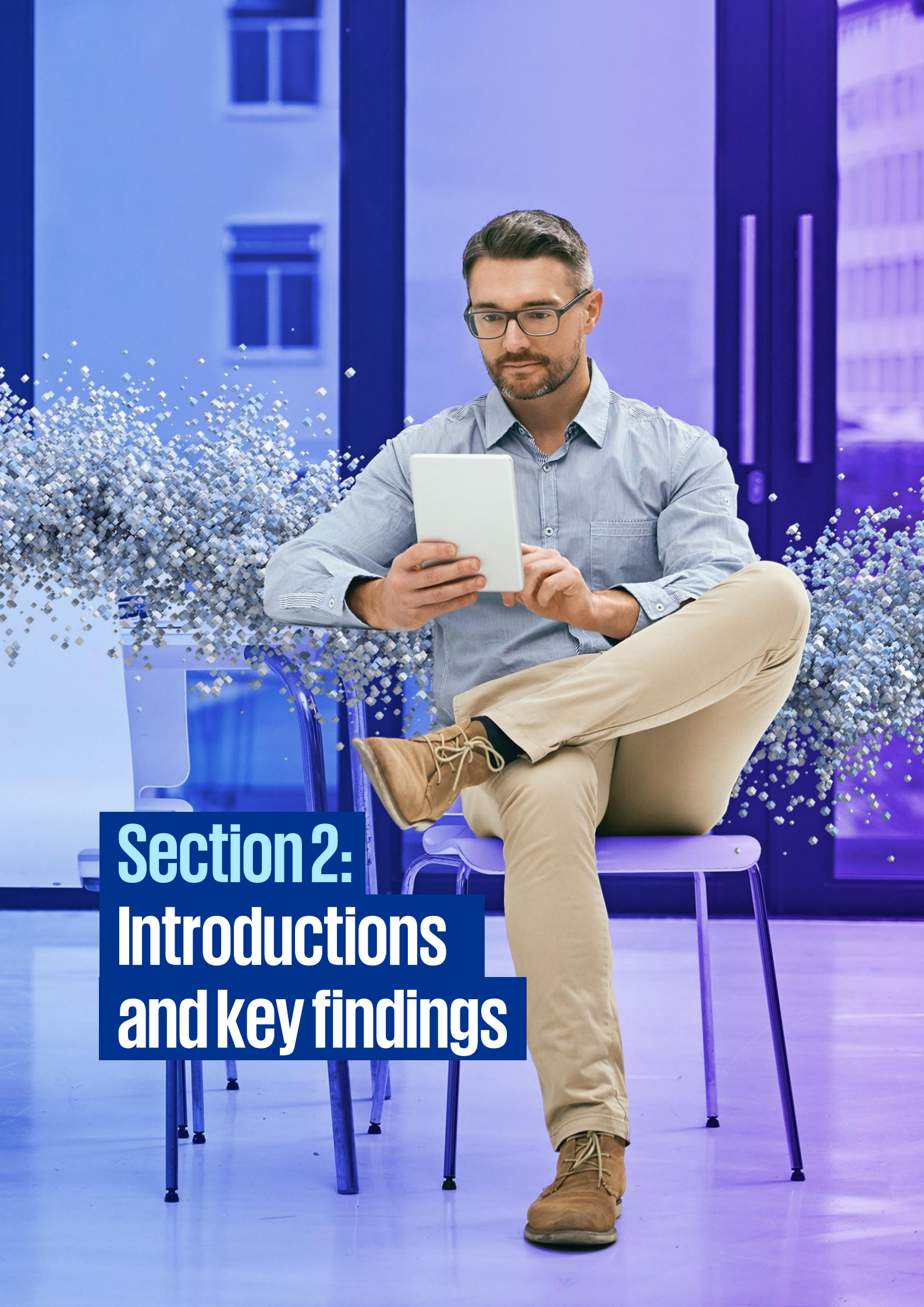


Section 2: Introductions and key findings

Generative AI and Healthcare

Gen AI has become an important consideration, creating endless possibilities to change the way health and care are delivered. While it continues to be the headline topic for many, putting Gen AI into action and its impact on the workforce remain speculative.

The purpose of this report is to take a closer look at the potential benefits of generative AI in a typical NHS hospital employing 22,000 WTE staff working in patient- facing roles, clinical support services, and corporate services. There are multiple reports in the literature of hospitals using applied neural networks to accelerate image recognition in radiology and histopathology, but few on the wider use of generative AI. Our work seeks to address this gap in our collective knowledge based on a detailed assessment of the tasks performed by different staff, the time spent on each activity, and the degree to which these tasks can be augmented or automated by generative AI, using KPMG's leading AI Workforce methodology.

The recent explosion of generative AI has, for the first time, seen knowledge work (work requiring an element of thinking) automated. Until recently, this type of work was thought to reside exclusively in the human domain. There is, understandably, a degree of unease about the potential impact of generative AI. Yet over the last thirty years, comparable disruption has been experienced as a result of advancements in computing power and – most importantly – the internet. While these changes have reduced the demand for some skillsets, they have created vast and important efficiencies and new roles.

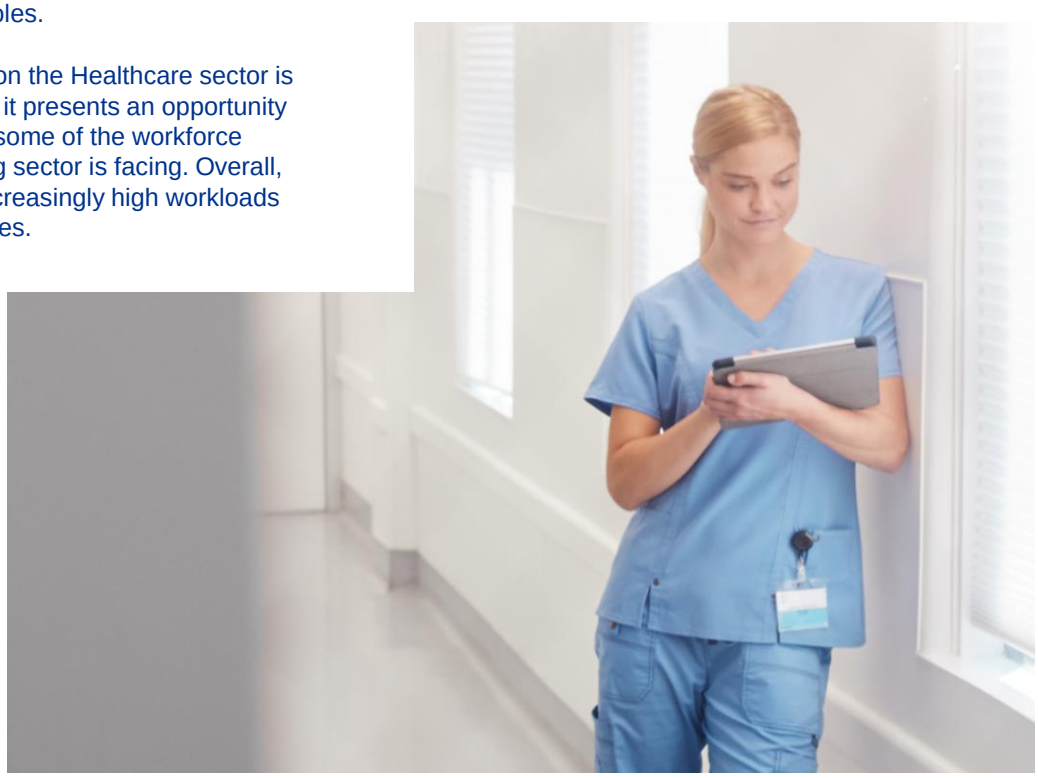
The impact of Gen AI on the Healthcare sector is particularly exciting as it presents an opportunity to potentially address some of the workforce challenges the growing sector is facing. Overall, the industry reports increasingly high workloads and workforce shortages.

We are exploring the potential to lighten the burden placed on colleagues and leverage new developments in Generative AI to enhance the way work is done, freeing up time for better and more care and higher-value activities as well as improving the quality of delivery and enhanced productivity to drive growth overall.

The advancements of Gen AI create an exciting new stage in the digital revolution. It is here to bring many benefits to employers, employees, and customers, through determining the scope and pace of workforce transformation.

The global healthcare sector is navigating a complex landscape marked by finite resources, rising demand, workforce shortages, and financial pressures. However, advancements in technology and ongoing modernisation offer hope for improving care and operational efficiency, providing a pathway to address current challenges and enhance the overall healthcare experience.

This report looks to identify, assess and quantify the opportunities for Gen AI in the hospital workforce and thereby **support organisations to focus their limited resources and budget in the right place for maximum gain.**



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Embracing Generative AI to transform Healthcare now

01 Addressing workforce shortages

The healthcare sector is grappling with a significant shortage of workers, particularly in clinical roles. While Robotic Process Automation (RPA) has been used to accelerate administration in healthcare for some time, Gen AI offers a new generation of RPA potential, such as better chat/email dialogues, data interpretation and note-creation, allowing staff to focus on more critical functions. Gen AI powered tools can support healthcare professionals by handling administrative work and optimising workflows; crucial in a time of workforce scarcity.

02 Enhancing productivity

Gen AI has the potential to significantly boost productivity in healthcare settings. By automating tasks; both repetitive and non-repetitive, analysing vast amounts of data, and generating insights, Gen AI applications can streamline operations and improve efficiency. This increased productivity helps healthcare organisations manage higher patient volumes and deliver faster, high quality care, ultimately leading to better patient outcomes and optimised resource utilisation.

03 Improving workforce retention and wellbeing

Healthcare professionals often face high levels of stress and burnout due to demanding workloads and administrative tasks. Gen AI can alleviate some of this pressure by automating routine tasks and providing decision-support tools, which can enhance job satisfaction and reduce burnout. By creating a more manageable work environment, Gen AI can help improve workforce retention and overall wellbeing, which is essential for maintaining a motivated and effective healthcare team.

04 Alleviating financial pressure

Healthcare organisations are under immense pressure to reduce costs while maintaining high-quality care. Gen AI may offer a cost-effective solution by optimising resource allocation, reducing errors, and enhancing operational efficiencies. Gen AI-driven tools can help in budgeting, forecasting, and managing financial workflows, which can lead to significant cost savings and better financial management. Gen AI has the capacity to help healthcare organisations improve financial outlook overall.

05 Technological advancements and infrastructure

The technology and infrastructure needed for Gen AI are now well-established and accessible. Recent advancements in Gen AI and machine learning provide powerful tools that could transform healthcare delivery. With significant data sources and process driven tasks, the NHS is in a unique position to leverage the potential of Gen AI to enhance patient care, streamline operations, and drive innovation.

However, there are considerations for the NHS particularly in data governance and ensuring the appropriate guardrails and strong infrastructure and data foundations are established and considered as part of this adoption journey. Recent advancements in the ability to govern and protect data as well as evolving maturity of the standards have all made use of Gen AI more accessible to the NHS moving forward.

06 Addressing technical debt

The NHS is actively working to resolve technical debt by modernising its IT systems and infrastructure. As these improvements take hold, the foundation for implementing advanced technologies such as Gen AI becomes more viable.

The NHS is also investing in implementing a Federated Data Platform at NHS Trusts and ICBs to connect data in a safe, secure and standardised way. By adopting Gen AI now, the NHS can capitalise on these upgrades, accelerating their digital transformation, and avoid further compounding technical challenges.

This proactive approach ensures that AI solutions can be integrated smoothly into existing systems, enhancing overall efficiency and effectiveness.

07 NHS licensing agreement

The NHS has established licensing agreements to facilitate the adoption of Gen AI. These agreements provide a framework for acquiring and deploying Gen AI tools, ensuring compliance and optimising value. By taking advantage of these agreements now, the NHS can accelerate the deployment of Gen AI solutions and benefit from negotiated terms that support its strategic goals and operational needs.

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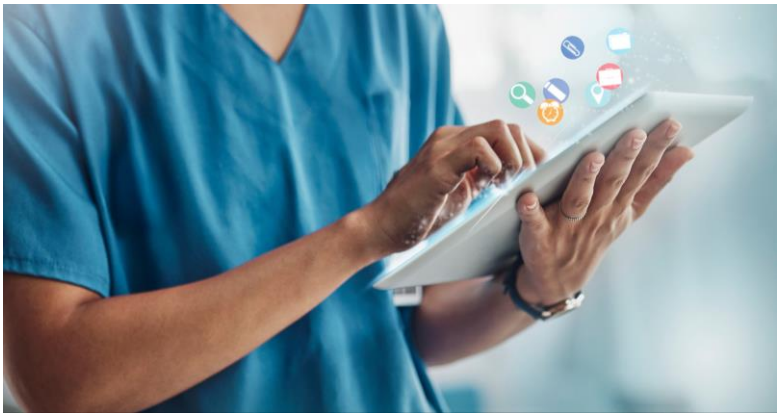
Unlocking Gen AI potential in Healthcare



Unlocking the value of Generative AI requires a new approach defined by identifying and augmenting previously hard to automate tasks. Without an intentional approach, and clear success criteria, it will be for organisations to effectively transform and augment their workforce.

To accelerate the value of any investment, we recommend a three-step, human-centered approach:

01 Before you deploy Gen AI... Identify workforce opportunity	02 While you deploy Gen AI... Augment the workforce	03 Following Gen AI worker impacts... Reshape the workforce
Assess and model automation impacts and opportunities for the workforce.	**Initiate worker upskilling and drive adoption by establishing new experiences.**	**Shift roles and operating models to deliver organisational value.**
Transformation		
• Identify, quantify, and prioritise role augmentation activities and tasks. • Align deconstructed job tasks with Gen AI solutions and data requirements. • Clarify role impacts for adoption enablement plan.	• Augment existing roles, activities and tasks with redefined experiences. • Establish productivity and capacity people value measures. • Activate intentional role-based adoption plan.	• Demonstrate and validate capacity and productivity value achieved. • Reconstruct & reorganise roles for optimised efficiency, effectiveness and experience. • Establish new talent metrics and processes.
Gen AI technology deployment		
• Analyse and prepare tech, data, risk & security.	• Identify, prioritise and test Gen AI solutions. • Pilot & deploy Gen AI solutions. • Monitor and scale tech, data, risk and security.	• Enhance data, monitor risk and security.

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Identifying Gen AI opportunity in jobs and tasks

As organisations increasingly adopt Gen AI technologies, understanding their impact on various job roles becomes crucial. A systematic approach to assessing this impact involves identifying how Gen AI can augment job functions.

This process includes breaking down jobs into specific tasks and analysing the augmentation potential for each task across seven key Gen AI capabilities: data interpretation, summarising information, content creation, code generation, calendar management, translation, and conversational agents.

KPMG's Workforce. AI methodology

Steps to identifying workforce opportunity with AI:

Consolidate

Job-relevant data

Company-specific documents that contain context on the tasks performed in the job – job profiles, descriptions, productivity data (e.g. tickets completed).

Process

Large language model

Documents are analysed to create a taxonomy for the most prevalent tasks performed across the workforce at your organisation.

Generate

Job: Task mappings

Tasks are linked to jobs to create a powerful new addition to your job architecture: tasks mappings.

Calculate

Gen AI impact

Tasks are structured according to potential Gen AI impact across five categories.

Apply

Workforce context

Workforce and commercial impacts are added for your organisation by adding volume of work (Whole Time Equivalent) data to jobs.

Best in class

Strategic insight

Authoritative insight to prioritise Gen AI investments and understand the impacts of Gen AI tooling such as Microsoft Copilot.

Gen AI capabilities

There are seven capabilities of Gen AI that can potentially be leveraged to help the workforce*:

Data interpretation

Summarising information

Creating content

Diary management

Conversational agents

Code generation

Translation

*There is merit in organisations beginning to increase their overall workforce bench strength in these areas, for example, by using applications like Microsoft Copilot etc.

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Limitations of the approach

While our approach is differentiated and offers early and clear insight into the potential benefits of Gen AI, the approach does have certain limitations. However, we do believe the results are useful in helping to identify specific roles or services where Gen AI is expected to realise the greatest benefit. The next phase of the research would be to understand the real benefits working with specific functions and clinical teams to develop specific use cases.

The table below details the limitations of the approach employed and how we have sought to mitigate these.

Limitation	Mitigation
The initial analysis is conducted based on job descriptions, which may not accurately represent the current on-the-ground reality. Some of the job descriptions and role profiles provided had not been updated since 2004 when Agenda for Change (AfC) was introduced, and as such don't accurately reflect the nature of the role today.	We worked with the relevant professional leads and human resources to update them where possible, with a specific focus on roles where the initial analysis identified a high augmentation benefit. We have then re-run the analysis based on revised job descriptions or role profiles. We have also cross-checked the results generated with an extensive database of the tasks performed by different roles covering all sectors of the economy (O*Net).
The approach to task and time allocation is informed by overarching market trends, potentially overlooking the nuances of specific organisational contexts.	For each of the selected roles, we are now collaborating with individuals either performing the role or possessing a comprehensive understanding of it, to update the job-to-task mapping and corresponding time distribution and, thereby, applying an organisation specific lens.
Job descriptions for Doctors in Training (DIT) do not contain a detailed description of tasks.	Given the absence of task-based job descriptions or role profiles for DIT in the NHS, we used relevant job descriptions for substantive Doctors for Service as a proxy.
The assessment presupposes that Gen AI presents a universally significant opportunity, serving primarily as a directional guide for identifying potential areas of application rather than offering precise quantification.	To enhance the practicality of our assessment results, a panel of subject matter experts and Gen AI specialists were convened to explore viable solutions to enable seamless integration of AI into routine work processes. This expert consultation aimed to bridge the gap between theoretical assessment and practical application, ensuring findings are both actionable and grounded in real-world feasibility.
The current report has not applied an Equality, Diversity and Inclusion (EDI) lens on top to identify trends, patterns and outliers for various segments and groups (and sub-groups) of employees. It is critical that organisations consider these factors while identifying and /or prioritising any opportunity (whether Gen AI or not).	To ensure fairness and transparency (which are also two of the important ethical pillars of the KPMG Trusted AI framework – more on this in section 5 of this report), we recommend applying EDI lens on all the outputs and opportunities. This can be done by way of data and can be covered extensively during the design workshops.
The current assessment regarding the potential for the augmentation with Gen AI identifies the maximum potential based on current technology and the detail provided. In practice, it is anticipated realisable benefits will be lower due to a factors such as cost and ways of working.	The next phase would be to focus on three use cases identified across a small number of roles and functions to jointly develop understanding and build a plan to realise the benefits particularly in time saved and return on investment.

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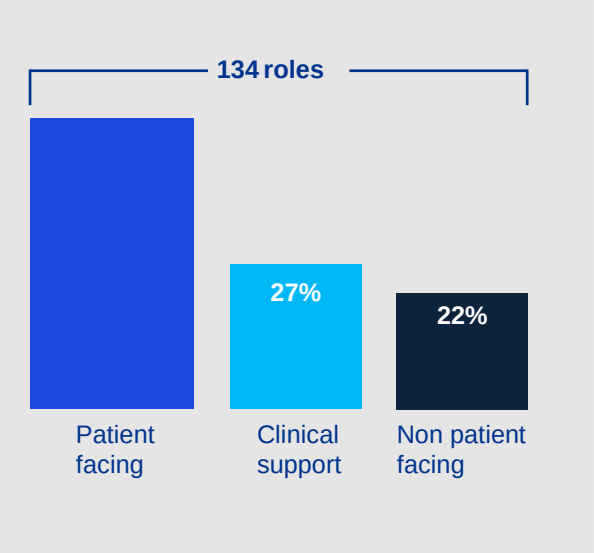
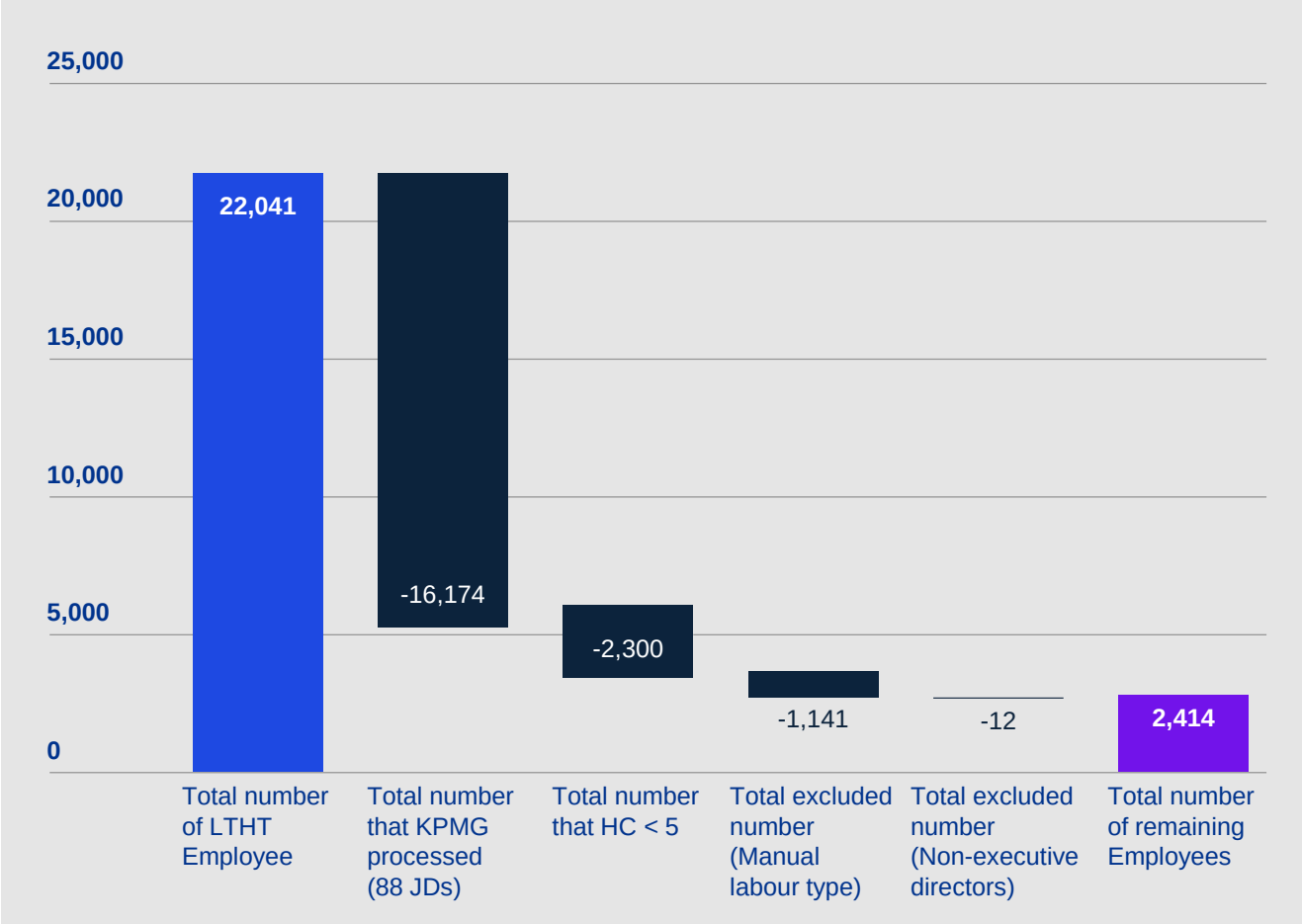
Section 3: The projected impact of AI on the health workforce

We looked at 134 roles across Leeds Teaching Hospitals NHS Trust

We have analysed 134 job roles, encompassing a WTE of 16,174 individuals across patient-facing, clinical support, and non-patient-facing job categories. Given that Leeds Teaching Hospitals employ 22,041 people which is 2% of all NHS hospital staff in England, potential benefits from AI deployment into a particular role or function nationwide can be scaled.

To maintain the anonymity of the analysis, we excluded job roles with a WTE (Whole Time Equivalent) of fewer than five people, as well as those with a higher level of manual responsibilities (for example, housekeeping). Additionally, non-executive director roles were omitted from the analysis. The analysis for the remaining 276 roles (2,414 individuals) would be carried out in the next phase.





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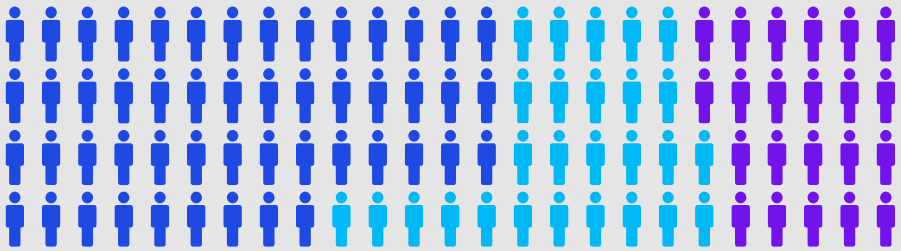
We identified trends across different types of roles

In healthcare, the wide range of job roles can be broadly categorised into three key areas: patient-facing roles, non-patient-facing roles and clinical support functions.

Each of these categories play a crucial part in delivering high-quality healthcare, ensuring that patient outcomes are optimised, and that the healthcare system functions smoothly.



51% Patient facing

27% Clinical support

22% Non patient facing

Patient facing roles

Patient-facing roles include doctors, nurses, allied health professionals, and other caregivers who interact directly with patients. These professionals are responsible for diagnosing, treating, and caring for individuals, making them the cornerstone of healthcare delivery. Their roles demand a unique blend of medical expertise, empathy, and strong communication skills as they directly impact the patient experience.

Clinical support roles

Clinical support roles cover professionals such as radiology technicians, phlebotomists, biomedical scientists and pharmacy technicians who assist patient-facing staff in delivering care. While they may have limited direct contact with patients, their work is critical to providing high quality care. These roles require technical expertise and strong collaboration with both patient-facing and non-patient-facing professionals.

Non patient-facing roles

Non patient-facing roles include administrators, staff in finance, procurement and estates, HR managers and IT specialists. Though they do not interact with patients directly, their work is essential. This group includes people responsible for the business, operational, and technological infrastructure.

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We also identified which Gen AI capabilities are the most impactful for Healthcare to release more time to care

Out of the seven Gen AI capabilities that we analysed, three stood out as particularly impactful for healthcare professionals: data interpretation, summarising information, and content creation.

Data Interpretation

Gen AI can identify and/or rectify inconsistencies, missing values, and outliers in datasets, classify data, compare datasets and match to/from different taxonomies.

Data interpretation is critical in healthcare, where vast amounts of patient data, medical research, and diagnostics are generated daily. Gen AI enhances the ability of healthcare providers to sift through complex datasets, providing insights that inform decisions on patient care, disease management, and research breakthroughs. This allows professionals to focus on more personalised care strategies.

Summarising Information

Gen AI can summarise large amounts of text, data, images, meeting, video and/or sound data and create multiple future scenarios based on historical data and predictive analytics.

Summarising information is another game-changing capability. In an industry driven by accuracy and timeliness, healthcare workers need to quickly access relevant information from research papers, patient histories, or clinical trials. Gen AI can swiftly distill complex reports into concise summaries, enabling healthcare professionals to stay updated with minimal time investment while still making informed decisions.

Content Creation

Gen AI can compose professional emails, communications, reports, marketing materials, creative ideas and research, images, video and sounds.

Content creation through Gen AI has the potential to revolutionise patient engagement, education, and communication. Whether it's drafting patient reports, creating educational materials for patients, or generating clinical notes, Gen AI-driven content creation reduces administrative burdens and improves the quality and consistency of written communications.

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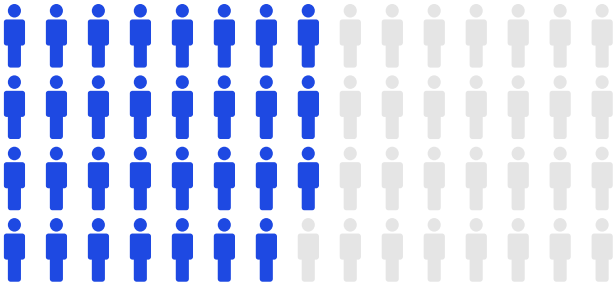
Overall the findings look encouraging and generate confidence in the potential of Gen AI

Patient facing roles

51% of the roles analysed were patient facing.



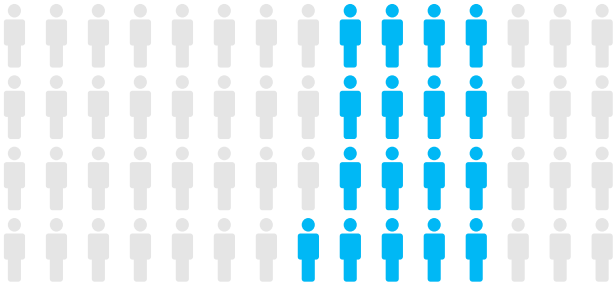
22%

The maximum capacity gain from AI across all of these roles is 22%.

Top 3 Gen AI capabilities. Across all of the patient-facing roles, the capacity gained from the top three AI capabilities, is up to **17%**

Clinical support roles

27% of the roles analysed were in clinical support.



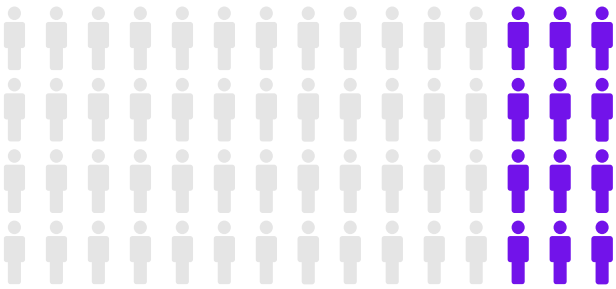
23%

The maximum capacity gain from AI across all of these roles is 23%.

Top 3 Gen AI capabilities. Across all of the roles in this group, the capacity gained from the top three AI capabilities, is up to **18%**

Non patient facing roles

22% of the roles analysed were non patient facing.



28%

The maximum capacity gain from AI across all of these roles is 28%.

Top 3 Gen AI capabilities. Across all of the roles in this group, the capacity gained from the top three AI capabilities, is up to **20%**

Note:

1. Estimated maximum Gen AI augmentation potential takes into consideration all 7 Gen AI capabilities (ie, Data Interpretation, Content Creation, Summarising Info, Code Generation, Translation).
2. Top 3 Gen I capabilities' Gen AI augmentation potential takes into consideration top 3 Gen AI capabilities only (ie, Data Interpretation, Content Creation, and Summarising Info).
3. On ground realisation is subject to user adoption, change management, solution design, and other such considerations.

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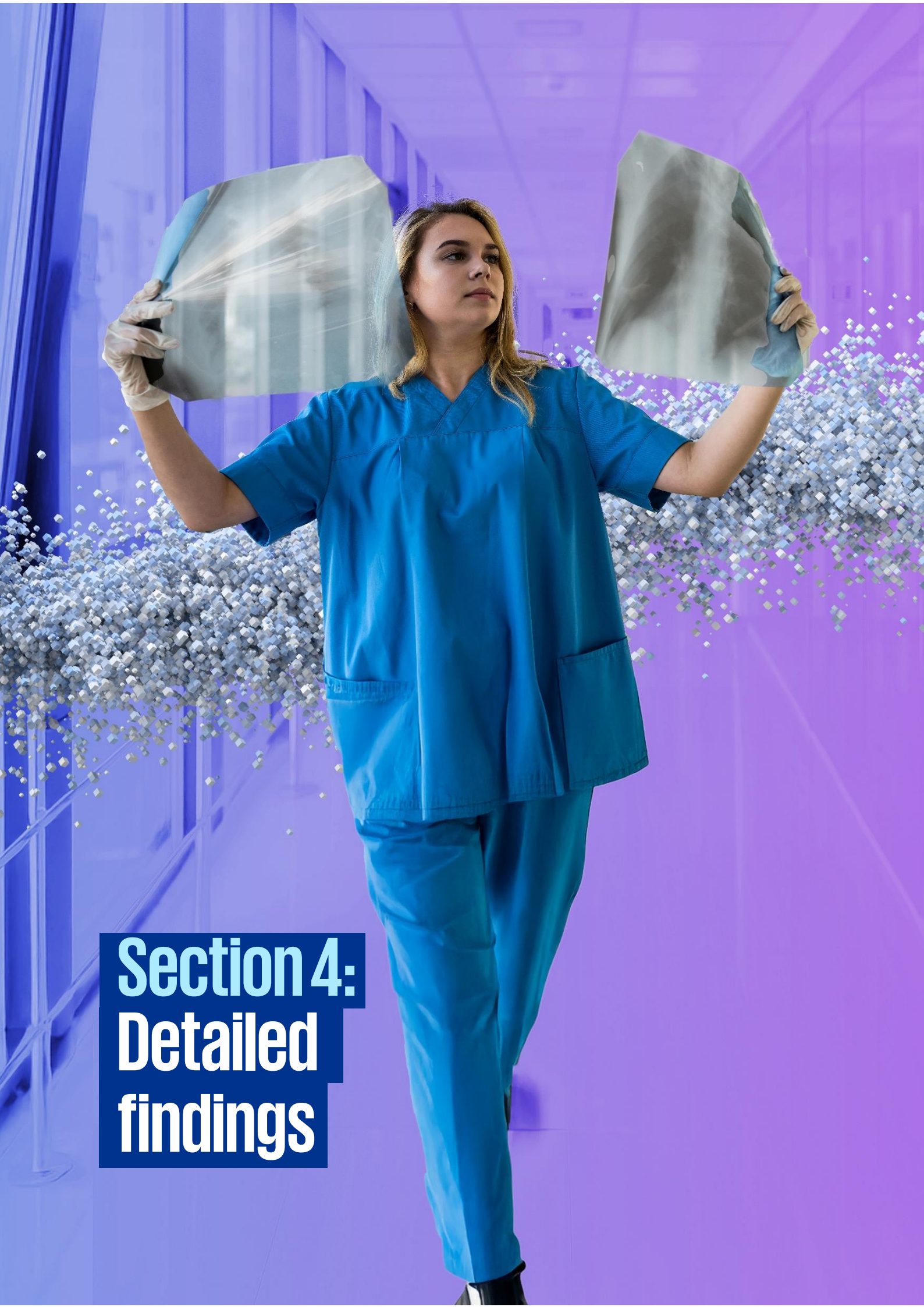

Section 4: Detailed findings

Impact of Gen AI on jobs in Healthcare sector: Releasing more time to care

Hospitals are typically large complex organisations employing thousands of people in hundreds of different roles and professions. In the NHS for example, there are over 300 different roles ranging from play therapists to medical photographers, phlebotomists to engineers and administrators to cardiac surgeons. Most of these roles are not well known or well understood by the public but they are critical to the successful running of the service.

In the NHS approximately 45% of employees work in non-patient facing roles and clinical support functions.

Our work has looked at most of these roles, the only exclusions being roles which are highly manual in nature, such as a porter and those with less than five whole time equivalents (WTE) in a role. The tables below provide a visual representation of the potential for Gen AI to augment each role alongside the specific use cases or applications.

Given the cost of Gen AI, we anticipate organisations seeking to employ it for specific use cases where the potential to automate and augment is high (highlighted by the green lights and potentially the amber ones. The pink box highlights specific roles and Gen AI capabilities – the ones we saw on page 11).

Non patient facing roles

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
2105b Team Medical Secretary	9%	10%	8%	2%	4%	2%	0%
720 Clerical Officer - Outpatients	13%	12%	5%	2%	2%	0%	0%
2333b Specialist Clinical Coder	10%	8%	7%	0%	2%	0%	5%
1785 MDT Co-ordinator	8%	9%	6%	4%	3%	2%	0%
1903 Service Manager	10%	11%	6%	1%	2%	0%	0%
616a Materials Management Assistant	8%	8%	4%	3%	5%	0%	0%
2190d Assistant Business Manager	8%	8%	7%	4%	0%	0%	0%
1277 Business Manager	10%	5%	7%	4%	5%	0%	0%
752.Assistant Patient Services Co-ordinator	8%	6%	7%	4%	4%	1%	0%
823b Patient Services Co-ordinator	10%	6%	5%	4%	2%	0%	0%
46 Senior Payroll Officer	12%	7%	6%	1%	2%	0%	0%
722d Supervisor - Outpatients	8%	5%	6%	5%	4%	0%	0%
2049 Clerical Officer	8%	3%	3%	5%	5%	1%	0%
129b Security Officer (External & Operational)	8%	7%	2%	4%	1%	0%	0%
133e Personal Assistant	4%	9%	9%	8%	4%	5%	0%
740 Admin Officer	5%	8%	11%	6%	4%	0%	0%
2106 Senior Medical Secretary	7%	9%	7%	7%	4%	0%	1%
742 Clerical Officer Receptionist	7%	8%	6%	5%	5%	1%	0%
1467 MDT Administrative Officer	5%	9%	7%	4%	5%	2%	0%
604b IM&T Technician	6%	8%	5%	2%	5%	1%	0%
2683b Mechanical Electrical Estates Technician	5%	9%	4%	3%	1%	0%	0%
2b Switchboard Operator	7%	5%	0%	2%	14%	0%	0%
743 Administrative Co-ordinator	7%	7%	7%	4%	4%	1%	0%
738 Secretary - Departmental Secretary	5%	6%	7%	5%	6%	0%	0%
2863 Patient Placement Coordinator	7%	7%	5%	5%	1%	0%	0%
2542.Discharge Co-ordinator	7%	6%	6%	2%	3%	1%	0%
75 Ward Clerk	6%	6%	5%	4%	3%	0%	0%
3302 Ward Support Worker	2%	4%	3%	4%	5%	2%	0%
115 Domestic Assistant	3%	2%	2%	3%	5%	0%	0%

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Impact of Gen AI on jobs in Healthcare sector: Releasing more time to care (cont.)

Patient facing roles

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
3831 Specialist Midwife	8%	8%	8%	1%	3%	1%	0%
2224 Trainee Advanced Practitioner	8%	8%	7%	4%	3%	1%	0%
2478 Critical Care Outreach Sister Charge nurse	8%	8%	6%	3%	1%	0%	0%
829d Senior Research Nurse Midwife AHP	9%	8%	4%	3%	4%	0%	0%
750 Senior Clinical -Counselling Psychologist	9%	8%	5%	3%	1%	0%	0%
509 Matron	8%	6%	6%	3%	2%	0%	0%
666 Senior Midwife (Band7)	9%	7%	6%	1%	3%	0%	0%
300a Radiographer	13%	4%	4%	2%	1%	0%	0%
AfC 828g Research Nurse	8%	7%	6%	1%	2%	0%	0%
2874 Physician Associate	8%	7%	3%	3%	3%	0%	0%
663a Midwife (Band6)	9%	7%	5%	1%	2%	0%	0%
2097 Advanced Practitioner Generic	10%	6%	5%	1%	1%	0%	0%
735 Senior Radiographer	8%	6%	5%	2%	1%	1%	0%
177 Specialist Peri-Operative Practitioner	8%	7%	4%	2%	1%	0%	0%
177 Spec Peri-operative Practitioner [ODP]	8%	7%	4%	2%	1%	0%	0%
364 Midwife (Band5)	8%	7%	5%	1%	2%	0%	0%
2978 Foundation Pharmacist	8%	6%	3%	2%	3%	0%	0%
2419b Staff Nurse Adult	8%	7%	3%	1%	2%	0%	0%
45a Reporting Sonographer	8%	6%	4%	1%	1%	0%	0%
232 Sister Charge Nurse	9%	6%	3%	0%	2%	0%	0%
2880 Nurse Practitioner	6%	8%	6%	2%	3%	1%	0%
3000b Apprentice Nurse	6%	8%	6%	2%	2%	1%	0%
530 Specialist Clinical Pharmacist	5%	8%	5%	2%	3%	0%	0%
3208 Apprentice Dental Nurse	4%	8%	4%	2%	4%	0%	0%
885 Post Graduate Doctorial Trainee Clinical Psychologist	7%	5%	8%	2%	2%	1%	0%
376 Senior Midwife (Sister)	6%	6%	7%	4%	3%	0%	0%
3477b Senior Clinical Nurse Specialist	6%	7%	5%	3%	2%	1%	0%

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
4286 Maternity Worker	3%	7%	5%	2%	6%	2%	0%
3991 Team Leader - Maternity	7%	6%	7%	3%	2%	0%	0%
496a Senior Occupational Therapist	7%	6%	6%	2%	2%	1%	0%
42 Physiotherapist	6%	6%	7%	2%	2%	1%	0%
3161 Nursing Associate	7%	6%	7%	2%	1%	0%	0%
87 Qualified Dental Nurse	6%	5%	6%	3%	2%	0%	0%
662 Senior Midwife (Community)	6%	5%	5%	3%	1%	1%	0%
43b Senior Physiotherapist	7%	5%	5%	2%	2%	0%	0%
3476b Nurse Specialist	7%	7%	4%	1%	2%	0%	0%
3476b Clinical Nurse Specialist	7%	7%	4%	1%	2%	0%	0%
3477b Senior Nurse Specialist	5%	5%	6%	2%	2%	1%	0%
2051h Senior Clinical Support Worker	7%	7%	5%	1%	0%	0%	0%
2051h Nursing Assistant/CSW	7%	7%	5%	1%	0%	0%	0%
95b Senior Sister Charge Nurse	6%	6%	4%	1%	3%	0%	0%
3302 Ward Environment Support Worker	5%	4%	4%	3%	2%	2%	0%
2050h Clinical Support Worker	5%	6%	5%	2%	1%	0%	1%
1447b Radiotherapy Paediatric Specialist Practitioner Radiographer	6%	4%	5%	2%	3%	1%	0%
2077d Maternity Support Worker	5%	4%	5%	2%	2%	1%	0%
AFC 119b Facilities Supervisor - Patient Environment	4%	5%	6%	2%	2%	0%	0%
2797a Apprentice Nursing Associate	4%	7%	5%	1%	1%	0%	0%
2050h Clinical Support Worker (Nursing)	6%	4%	3%	1%	3%	0%	0%
175 Perioperative Practitioner	3%	6%	3%	3%	2%	0%	0%
175 Perioperative Practitioner [ODP]	3%	6%	3%	3%	2%	0%	0%
AFC 3467 Trainee Clinial Support Worker (Nursing & Midwifery)	5%	6%	3%	1%	0%	0%	0%
AFC 3467 Apprentice Clinical Support Worker	5%	6%	3%	1%	0%	0%	0%
afc 44 Senior Physiotherapist	4%	2%	5%	3%	1%	0%	0%
AFC 3359 Facilities Assistant	2%	3%	2%	0%	1%	0%	0%

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Impact of Gen AI on jobs in Healthcare sector: Releasing more time to care (cont.)

Clinical support functions

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
1340e Clinical Trials Assistant	8%	9%	8%	2%	2%	0%	0%
2463 Specialist Speech and Language Therapist	8%	9%	4%	4%	5%	0%	0%
981c Registered Clinical Scientist (Lab Genetics)	8%	9%	5%	2%	4%	0%	0%
460b Senior Lead Technician -Medical Engineering	8%	8%	4%	3%	4%	0%	0%
1449 Clinical Physiologist - Clinical Educator	9%	8%	5%	2%	2%	1%	0%
2650BR Principal Clinical Scientist (Research)	9%	8%	5%	4%	1%	0%	0%
AFC 3896b Specialist Biomedical Scientist	8%	8%	6%	1%	2%	0%	0%
2926a Senior Clinical Trials Assistant	11%	9%	5%	1%	0%	0%	0%
1446c Radiotherapy Practitioner Radiographer	9%	8%	5%	2%	0%	0%	0%
526B Pharmacy Technician Specialist	9%	7%	3%	4%	3%	1%	0%
626b Advanced Clinical Pharmacist	9%	5%	5%	3%	1%	0%	0%
1167b Biomedical Support Worker - higher level	10%	4%	4%	1%	2%	0%	0%
AFC 3897b Biomedical Scientist	8%	5%	4%	3%	1%	0%	0%
32b Senior Dietician	7%	8%	6%	4%	4%	0%	0%
2308 Highly Specialist Speech & Language Therapist	7%	8%	4%	4%	2%	2%	0%
AfC 31b Band 6 Dietician	6%	8%	5%	2%	5%	0%	0%
1919 Clinical Scientist Trainee	6%	8%	6%	3%	0%	0%	0%
531a Pharmacy Support Worker Higher Level	5%	8%	1%	3%	5%	0%	0%
1385c Senior Peri-Operative Assistant	6%	8%	3%	1%	1%	0%	0%
1107 Radiographic Assistant MRI	5%	8%	3%	1%	1%	0%	0%
1715d Senior Occupational Therapy Support Worker	5%	8%	2%	2%	1%	1%	0%
695a Senior Occupational Therapist	7%	7%	4%	4%	2%	0%	0%
248 Radiographer Assistant-Helper	5%	6%	5%	3%	4%	0%	0%
2847 Pharmacy Services Assistant (In Training)	7%	5%	1%	5%	4%	0%	0%
473e Biomedical Support Worker	7%	5%	4%	1%	2%	1%	1%
AFC 3895b Advanced Biomedical Scientist	7%	6%	6%	1%	2%	0%	0%
2790 Advanced Practitioner Research Radiographer	7%	7%	2%	3%	1%	0%	0%
493 Occupational Therapist Basic Grade	5%	7%	4%	3%	3%	0%	0%
916 Advanced Radiographer Practitioner	7%	7%	2%	1%	3%	0%	0%
4255 Pre-Registration Trainee Pharmacy Technician	5%	7%	2%	3%	4%	1%	0%
AFC 3469 Transfer to Nursing - Apprentice Nurse	5%	4%	4%	3%	2%	1%	0%
afc 3178 Senior Pharmacy Services Assistant	7%	3%	5%	3%	3%	0%	0%
174e Perioperative Assistant	5%	3%	5%	2%	3%	2%	0%
539 Pharmacy Technician HL	3%	4%	5%	3%	5%	0%	0%
3855 Clinical Assessor	3%	6%	7%	2%	1%	0%	0%
1014a Specialist Cardiac Physiologist	4%	6%	4%	3%	1%	0%	0%

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Gen AI opportunity considering volume of work: Releasing more time to care

On the previous pages of the report, we saw Gen AI augmentation potential by job. The following pages provide a view of the overall capacity which can be released by Gen AI.

While Gen AI augmentation potential for a job measures the impact on a single role, the Gen AI augmentation potential of a job multiplied by the WTE (whole time equivalent) scales this assessment across the number of people performing that job within the organisation. It quantifies the overall potential organisational impact of Gen AI for a specific role by considering both the Gen AI augmentation potential, and the volume of employees in that role.

This concept provides a broader perspective on how Gen AI can affect workforce efficiency and cost-effectiveness at an organisational level.

A job with high augmentation potential but low WTE may not yield as significant an organisational impact as a job with moderate augmentation potential but a large WTE. Hence, why roles such as nursing which is the largest group employed appear at the top.

For most patient facing services, the number and mix of staff required to provide safe, accessible, high-quality services will not change as a result of Gen AI, they will continue to be determined by other factors; such as safer staffing guidelines, recommended ratios, or the number of staff required to maintain services around the clock whilst remaining attractive to employees.

However, Generative AI has the potential to release time to care and therefore improve quality and access and help reduce staff burnout.

Patient facing roles

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
2419b Staff Nurse Adult	172.4	134.8	60.3	12.5	38.5	4.7	0.0
232 Sister Charge Nurse	23.1	27.5	30.9	25.5	15.0	3.7	0.0
2051h Senior Clinical Support Worker	33.0	33.7	26.0	6.3	0.0	0.0	0.0
3476b Clinical Nurse Specialist	23.9	22.9	13.8	3.7	7.6	0.6	0.0
177 Specialist Peri-Operative Practitioner	17.4	14.2	10.9	1.3	4.4	0.0	0.0
663a Midwife (Band6)	16.4	15.4	8.9	5.0	3.1	0.0	0.0
175 Perioperative Practitioner	13.7	13.4	8.8	1.5	6.3	0.0	0.0
95b Senior Sister Charge Nurse	10.3	12.8	7.2	3.1	1.0	1.0	0.0
735 Senior Radiographer	14.4	9.8	8.2	2.7	1.6	2.1	0.0
AFC 3467 Trainee Clinial Support Worker (Nursing & Midwifery)	10.4	9.8	5.7	3.2	2.0	0.0	0.0
175 Peri-operative Practitioner [ODP]	11.2	6.2	5.7	1.0	0.8	0.0	0.0
177 Spec Peri-operative Practitioner [ODP]	9.1	15.5	8.5	7.0	5.5	0.0	0.0
AfC 828g Research Nurse	6.8	11.7	6.4	5.2	4.1	0.0	0.0
43b Senior Physiotherapist	8.9	7.4	7.1	1.0	2.3	0.0	0.0
2224 Trainee Advanced Practitioner	8.4	6.3	6.3	2.6	2.9	0.0	0.0
2797a Apprentice Nursing Associate	6.6	6.3	5.8	3.0	2.5	1.1	0.4
2097 Advanced Practitioner Generic	5.2	9.3	6.4	2.0	2.0	0.0	0.0
AFC 3467 Apprentice Clinical Support Worker	7.2	8.9	5.0	2.2	0.7	0.7	0.0
3161 Nursing Associate	6.8	5.7	6.9	1.5	1.1	0.3	0.0
364 Midwife (Band5)	8.4	6.8	4.8	0.6	1.5	0.0	0.0
885 Post Graduate Doctorial Trainee Clinical Psychologist	6.0	4.6	7.0	1.4	1.4	0.7	0.4
87 Qualified Dental Nurse	5.8	4.8	5.5	3.0	1.4	0.2	0.0
662 Senior Midwife (Community)	5.8	4.7	4.7	2.9	1.2	0.9	0.0
509 Matron	5.6	4.4	4.1	2.4	1.4	0.1	0.0
1447b Radiotherapy Paediatric Specialist Practitioner Radiographer	5.5	3.5	4.1	1.6	2.6	0.5	0.0
300a Radiographer	9.6	2.7	3.2	1.1	0.9	0.0	0.0

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Gen AI opportunity considering volume of work: Releasing more time to care

Patient facing

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
42 Physiotherapist	3.9	3.9	4.5	1.4	1.1	0.6	0.0
496a Senior Occupational Therapist	3.8	3.5	3.6	0.9	0.9	0.6	0.0
3302 Ward Environment Support Worker	3.5	2.8	2.8	1.9	1.3	1.0	0.0
afc 44 Senior Physiotherapist	3.3	2.0	4.5	2.7	0.6	0.0	0.0
2880 Nurse Practitioner	2.7	3.7	2.7	1.1	1.5	0.6	0.0
3477b Senior Clinical Nurse Specialist	2.8	3.4	2.8	1.5	1.1	0.4	0.0
3477b Senior Nurse Specialist	2.7	2.9	3.0	1.1	1.1	0.4	0.0
AFC 3359 Facilities Assistant	2.8	3.7	2.6	0.6	1.3	0.0	0.0
AFC 119b Facilities Supervisor - Patient Environment	2.1	3.0	3.3	1.2	1.0	0.0	0.0
2874 Physician Associate	3.6	3.1	1.3	1.1	1.3	0.0	0.0
3476b Nurse Specialist	3.4	3.3	2.0	0.5	1.1	0.1	0.0
45a Reporting Sonographer	3.8	2.9	1.8	0.6	0.3	0.0	0.0
3208 Apprentice Dental Nurse	1.4	2.8	1.5	0.7	1.5	0.2	0.0
530 Specialist Clinical Pharmacist	1.7	2.6	1.6	0.5	1.0	0.0	0.0
750 Senior Clinical -Counselling Psychologist	2.4	2.2	1.3	0.8	0.3	0.1	0.0
4286 Maternity Worker	0.9	2.1	1.3	0.5	1.7	0.5	0.0
2478 Critical Care Outreach Sister Charge nurse	1.9	2.1	1.6	0.7	0.3	0.1	0.0
2978 Foundation Pharmacist	2.3	1.8	0.9	0.5	0.8	0.1	0.0
829d Senior Research Nurse Midwife AHP	2.0	1.8	0.8	0.6	0.8	0.0	0.0
3000b Apprentice Nurse	1.4	1.9	1.3	0.4	0.5	0.3	0.0
666 Senior Midwife (Band7)	1.7	1.4	1.2	0.1	0.5	0.0	0.0
2077d Maternity Support Worker	1.0	0.8	1.1	0.3	0.4	0.2	0.0
3831 Specialist Midwife	0.7	0.7	0.7	0.1	0.3	0.1	0.0
3991 Team Leader - Maternity	0.5	0.5	0.5	0.2	0.2	0.0	0.0
2051h Nursing Assistant/CSW	0.6	0.6	0.5	0.1	0.0	0.0	0.0
2050h Clinical Support Worker (Nursing)	0.5	0.3	0.2	0.1	0.2	0.0	0.0
376 Senior Midwife (Sister)	0.3	0.3	0.4	0.2	0.1	0.0	0.0
2050h Clinical Support Worker	0.2	0.3	0.2	0.1	0.1	0.0	0.0

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Gen AI opportunity considering volume of work: Releasing more time to care (cont.)

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Clinical support

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
AFC 3896b Specialist Biomedical Scientist	9.1	8.8	7.2	1.2	2.5	0.0	0.0
626b Advanced Clinical Pharmacist	9.9	5.7	5.3	3.0	1.6	0.0	0.0
AFC 3897b Biomedical Scientist	9.4	6.0	4.1	3.4	0.7	0.0	0.0
473e Biomedical Support Worker	6.2	4.9	3.4	1.2	2.1	0.9	1.2
1167b Biomedical Support Worker - higher level	9.2	3.5	3.9	0.9	1.8	0.4	0.0
2926a Senior Clinical Trials Assistant	5.7	4.6	2.5	0.6	0.0	0.0	0.0
174e Perioperative Assistant	5.0	3.4	4.5	2.1	2.7	1.7	0.0
248 Radiographer Assistant-Helper	3.9	4.5	3.9	2.2	3.0	0.4	0.0
539 Pharmacy Technician HL	2.8	3.2	3.9	2.4	4.0	0.0	0.0
AFC 3469 Transfer to Nursing - Apprentice Nurse	3.9	2.8	3.2	2.0	1.5	0.7	0.0
AFC 3895b Advanced Biomedical Scientist	4.7	3.8	3.7	0.7	1.1	0.0	0.0
1340e Clinical Trials Assistant	3.4	3.8	3.3	1.0	1.1	0.0	0.0
afc 3178 Senior Pharmacy Services Assistant	3.8	1.7	2.6	1.7	1.5	0.1	0.0
32b Senior Dietician	2.4	2.7	2.0	1.2	1.5	0.1	0.0
1919 Clinical Scientist Trainee	2.7	3.4	2.4	1.1	0.0	0.0	0.0
AfC 31b Band 6 Dietician	1.9	2.7	1.6	0.8	1.5	0.0	0.0
1446c Radiotherapy Practitioner Radiographer	2.9	2.7	1.7	0.5	0.1	0.0	0.0
460b Senior Lead Technician -Medical Engineering	2.4	2.4	1.1	1.0	1.1	0.0	0.0
2463 Specialist Speech and Language Therapist	2.0	2.2	0.9	1.1	1.4	0.1	0.0
695a Senior Occupational Therapist	2.1	2.0	1.3	1.3	0.7	0.1	0.0
1449 Clinical Physiologist - Clinical Educator	2.5	2.3	1.3	0.6	0.5	0.4	0.0
526B Pharmacy Technician Specialist	2.5	2.1	0.9	1.1	0.8	0.2	0.0
916 Advanced Radiographer Practitioner	2.5	2.4	0.8	0.5	1.0	0.1	0.0
2308 Highly Specialist Speech & Language Therapist	1.9	2.2	1.0	1.1	0.5	0.5	0.0
981c Registered Clinical Scientist (Lab Genetics)	2.0	2.2	1.4	0.5	1.0	0.1	0.0
2847 Pharmacy Services Assistant (In Training)	2.3	1.5	0.4	1.7	1.1	0.0	0.0
493 Occupational Therapist Basic Grade	1.5	2.0	1.1	1.0	0.8	0.1	0.0
2650BR Principal Clinical Scientist (Research)	2.0	2.0	1.2	0.9	0.1	0.0	0.0
531a Pharmacy Support Worker Higher Level	1.2	2.0	0.4	0.7	1.4	0.1	0.0
1385c Senior Peri-Operative Assistant	1.6	2.2	0.7	0.3	0.3	0.0	0.0
4255 Pre-Registration Trainee Pharmacy Technician	1.6	2.1	0.8	1.0	1.2	0.3	1.2
2790 Advanced Practitioner Research Radiographer	1.6	1.6	0.5	0.8	0.2	0.0	0.0
3855 Clinical Assessor	0.8	1.3	1.7	0.4	0.3	0.0	0.0
1014a Specialist Cardiac Physiologist	1.0	1.6	1.1	0.7	0.2	0.0	0.0
1107 Radiographic Assistant MRI	1.2	1.8	0.8	0.3	0.2	0.1	0.0
1715d Senior Occupational Therapy Support Worker	1.2	1.7	0.4	0.4	0.3	0.1	0.0

Non-patient facing

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
742 Clerical Officer Receptionist	23.5	28.1	19.5	17.0	18.1	3.9	0.0
2106 Senior Medical Secretary	13.5	16.7	13.5	13.9	7.9	0.0	2.8
75 Ward Clerk	17.2	16.6	14.6	10.0	8.6	0.0	0.0
720 Clerical Officer - Outpatients	29.1	27.4	10.3	4.6	3.4	0.0	0.0
2105b Team Medical Secretary	11.6	11.8	10.4	2.3	5.1	2.8	0.0
740 Admin Officer	8.8	13.9	17.6	9.2	7.1	0.0	0.0
752.Assistant Patient Services Co-ordinator	6.8	5.8	6.1	3.6	3.6	0.6	0.4
2049 Clerical Officer	6.4	2.5	2.0	4.3	4.1	0.5	0.0
1277 Business Manager	5.5	2.9	3.7	2.3	2.7	0.0	0.0
722d Supervisor - Outpatients	4.5	3.0	3.5	2.7	2.5	0.0	0.0
823b Patient Services Co-ordinator	5.4	3.4	2.6	2.1	1.3	0.1	0.2
738 Secretary - Departmental Secretary	2.6	3.0	3.2	2.1	2.8	0.2	0.0
2542.Discharge Co-ordinator	3.6	3.4	3.2	1.3	1.5	0.5	0.0
743 Administrative Co-ordinator	3.1	3.3	3.0	2.0	1.6	0.3	0.0
2333b Specialist Clinical Coder	3.6	3.1	2.4	0.2	0.5	0.0	1.6
1785 MDT Co-ordinator	3.0	3.0	1.9	1.4	1.0	0.7	0.0
133e Personal Assistant	1.0	2.2	2.1	1.8	0.9	1.1	0.0
2683b Mechanical Electrical Estates Technician	1.9	3.4	1.7	1.4	0.3	0.0	0.0
46 Senior Payroll Officer	3.3	2.0	1.8	0.4	0.4	0.0	0.0
2863 Patient Placement Coordinator	2.3	2.1	1.7	1.5	0.4	0.0	0.0
1903 Service Manager	2.6	2.9	1.7	0.2	0.6	0.0	0.0
616a Materials Management Assistant	2.2	2.3	1.0	0.8	1.5	0.0	0.0
3302 Ward Support Worker	0.7	1.5	0.9	1.6	2.0	0.7	0.0
2b Switchboard Operator	1.7	1.3	0.1	0.4	3.6	0.0	0.0
1467 MDT Administrative Officer	1.0	1.7	1.3	0.8	0.9	0.5	0.0
2190d Assistant Business Manager	1.8	1.8	1.6	0.9	0.1	0.0	0.0
604b IM&T Technician	1.2	1.7	1.0	0.5	0.9	0.1	0.0
129b Security Officer (External & Operational)	1.6	1.4	0.5	0.8	0.2	0.0	0.0
115 Domestic Assistant	0.8	0.7	0.6	1.0	1.3	0.0	0.0

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Gen AI opportunity across different business units and bands

Leeds Teaching Hospitals NHS Trust is organised into a number of Clinical Support Units (CSU) and corporate functions as shown below. The terminology used to describe business units varies from one organisation to another, for example with some using directorate or division in lieu of CSU. However, the broad structure is one employed widely across the NHS and internationally. The table below shows the maximum Gen AI augmentation potential for all job roles within each of the CSU and corporate functions.

Clinical support units (CSUs)

>= 8%
>= 5% & < 8%
< 5%

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
Informatics	8%	9%	7%	3%	4%	0%	1%
Chief Operating Officer L4	8%	7%	5%	3%	3%	1%	0%
Directorate of Research & Innovation	8%	7%	5%	3%	2%	0%	0%
Management Executive L4	4%	9%	9%	8%	4%	5%	0%
Estates and Facilities Commercial Services L4	6%	8%	8%	5%	5%	1%	0%
Medical Directorate	7%	8%	6%	4%	4%	0%	0%
Estates Operations L4	7%	8%	4%	4%	2%	0%	0%
Human Resources	7%	7%	7%	4%	4%	1%	0%
Pathology CSU	7%	7%	6%	3%	3%	1%	0%
Finance	6%	6%	6%	4%	3%	0%	0%
Outpatients CSU	7%	7%	5%	3%	3%	0%	0%
Medicines Management and Pharmacy Services CSU	7%	6%	5%	4%	4%	1%	0%
Adult Therapies CSU	7%	7%	5%	3%	3%	1%	0%
Womens CSU	7%	7%	6%	3%	3%	1%	0%
Radiology CSU	7%	7%	5%	3%	3%	1%	0%
Chapel Allerton CSU	7%	7%	5%	3%	2%	0%	0%
Abdominal Medicine and Surgery CSU	7%	7%	5%	3%	3%	1%	0%
Leeds Dental Institute CSU	7%	7%	5%	2%	3%	0%	0%
Centre for Neurosciences CSU	7%	7%	5%	3%	2%	0%	0%
Childrens CSU	7%	7%	5%	3%	3%	1%	0%
Specialty and Integrated Medicine CSU	7%	7%	5%	3%	2%	1%	0%
Urgent Care CSU	7%	7%	5%	3%	2%	1%	0%
Chief Nurse	6%	6%	5%	3%	3%	1%	0%
Head & Neck CSU	7%	6%	5%	3%	2%	0%	0%
Trauma and Related Services CSU	7%	7%	5%	2%	2%	0%	0%
Oncology CSU	7%	7%	5%	3%	2%	0%	0%
Cardio-Respiratory CSU	7%	6%	5%	3%	2%	0%	0%
Theatres & Anaesthesia CSU	6%	6%	5%	2%	2%	0%	0%
Adult Critical Care CSU	7%	6%	5%	2%	2%	0%	0%
Facilities Management L4	4%	4%	4%	3%	3%	1%	0%

The majority of NHS staff are employed on Agenda for Change Terms and Conditions (AfC) which comprises separate pay scales as shown below. Very Senior Managers (VSM) and Doctors are the only staff not employed on AfC. The table below shows the aggregate AI augmentation potential for all roles within each AfC band. There is of course variation across roles within each band.

Bands

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
Band 8A-D	9%	7%	5%	2%	1%	0%	0%
Band 7	7%	7%	5%	3%	3%	0%	0%
Band 6	7%	7%	5%	2%	2%	0%	0%
Band 5	7%	7%	5%	2%	2%	0%	0%
Band 4	7%	7%	6%	4%	2%	1%	0%
Band 3	6%	7%	5%	2%	3%	1%	0%
Band 2	6%	5%	4%	3%	3%	1%	0%
Band 1	3%	2%	2%	3%	5%	0%	0%
Apprentice Scale	4%	7%	4%	2%	2%	0%	0%

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Gen AI opportunity considering volume of work: Releasing more time to care

While the previous page depicted the average Gen AI augmentation potential by each CSU and Band. The current page provides a view of the overall potential capacity which can be released by Gen AI in each business unit or CSU. While Gen AI augmentation potential for a job measures the impact on a single role, the Gen AI augmentation potential of a job multiplied by the WTE (Whole Time Equivalent) scales this assessment across the number of people performing that job within the organisation.

It quantifies the overall potential organisational impact of Gen AI for a specific role by considering both the Gen AI augmentation potential and the volume of employees in that role. This concept provides a broader perspective on how Gen AI may affect workforce efficiency and cost-effectiveness at an organisational level. A job with high augmentation potential but low WTE may not yield as significant an organisational impact as a job with moderate augmentation potential but a large WTE.

Clinical support units (CSUs)

>= 10%
>= 5% & < 10%
< 5%

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
Abdominal Medicine and Surgery CSU	88.5	82.5	57.9	22.6	23.8	3.9	2.3
Childrens CSU	78.0	68.3	42.9	16.9	22.6	3.2	0.8
Oncology CSU	70.9	65.3	44.5	18.6	19.8	3.4	1.0
Theatres & Anaesthesia CSU	56.2	60.9	38.7	22.8	19.5	2.9	0.1
Specialty and Integrated Medicine CSU	52.2	50.4	35.5	13.6	13.4	2.6	1.9
Facilities Management L4	29.2	35.4	38.0	28.7	18.8	3.8	0.0
Cardio-Respiratory CSU	46.3	43.4	29.4	11.8	12.4	2.0	0.8
Radiology CSU	46.3	36.2	28.6	14.1	13.4	3.8	0.2
Urgent Care CSU	46.6	40.6	26.8	10.1	11.4	1.9	0.3
Adult Therapies CSU	37.1	34.5	32.9	15.0	13.1	2.9	0.4
Pathology CSU	41.8	32.7	26.8	10.7	10.6	1.4	1.2
Medicines Management and Pharmacy Services CSU	29.4	24.6	18.4	12.6	14.0	1.0	0.0
Womens CSU	24.5	24.5	21.6	10.9	10.0	3.3	0.5
Outpatients CSU	40.0	36.7	17.4	8.8	11.0	0.7	0.2
Adult Critical Care CSU	42.5	34.7	20.7	5.5	9.8	1.0	0.3
Trauma and Related Services CSU	27.3	26.4	18.5	8.0	7.3	1.2	1.0
Centre for Neurosciences CSU	25.9	25.2	17.4	7.4	7.2	1.1	0.9
Chapel Allerton CSU	25.6	24.0	15.9	6.2	7.2	1.1	0.7
Directorate of Research & Innovation	21.1	18.7	15.0	4.0	4.7	0.1	0.0
Leeds Dental Institute CSU	11.7	12.5	10.6	6.1	5.7	0.9	0.0
Head & Neck CSU	11.7	10.1	7.3	3.7	3.6	0.5	0.3
Informatics	9.5	10.5	7.9	3.9	4.9	0.8	1.6
Finance	6.1	5.3	4.2	2.0	2.4	0.0	0.0
Chief Nurse	3.9	4.9	5.0	2.0	1.9	0.2	0.0
Chief Operating Officer L4	4.1	4.4	3.1	1.8	1.9	0.7	0.0
Estates Operations L4	3.7	5.0	2.3	2.2	0.7	0.0	0.0
Medical Directorate	1.4	1.6	1.6	0.9	0.8	0.0	0.0
Estates and Facilities Commercial Services L4	0.5	0.8	1.0	0.5	0.4	0.0	0.0
Human Resources	0.4	0.4	0.4	0.2	0.2	0.1	0.0
Management Executive L4	0.1	0.2	0.2	0.2	0.1	0.1	0.0

Bands

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
Band 8A-D	33.7	23.4	19.2	8.3	4.8	0.2	0.0
Band 7	69.1	65.3	50.7	23.6	25.6	3.5	0.4
Band 6	197.3	162.8	114.6	34.9	47.7	6.9	0.4
Band 5	235.5	197.9	104.8	39.9	59.4	5.6	1.9
Band 4	48.6	47.7	43.4	29.4	17.8	3.6	3.2
Band 3	99.1	108.7	91.5	35.3	33.3	6.1	0.0
Band 2	148.0	152.4	111.7	79.5	69.4	14.8	1.2
Band 1	0.8	0.7	0.6	1.0	1.3	0.0	0.0
Apprentice Scale	8.6	11.7	6.5	2.9	2.2	0.8	0.0

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Impact of Gen AI on medical jobs: Releasing more time to care

The table below shows the absolute capacity (time) that could potentially be released by Gen AI for a number of medical roles.

We analysed these specific roles rather than doing so for every individual speciality and sub-specialty on the basis that they are broadly representative of the medical and surgical workforce of a typical hospital. For example, the tasks performed by cardiologists were considered as “broadly representative” of physicians. As noted previously, the Trust Doctor job description and role profile were used as representative of Doctors in Training in the absence of a detailed description of the tasks performed by Doctors in Training.

Position Title	Data Interpretation	Summarising Info	Creating Content	Calendar Management	Conversational Agents	Translation	Code Generation
Consultant - Radiology	8%	9%	5%	3%	1%	0%	0%
Consultant Histopathologist	8%	8%	4%	0%	1%	0%	0%
Trust Doctor - Microbiology	8%	5%	7%	2%	4%	0%	0%
Trust Doctor - Cardiology	9%	6%	3%	1%	1%	0%	0%
Consultant - Anaesthetics	7%	8%	6%	0%	0%	0%	0%
Consultant - Cardiology - PCI	7%	6%	5%	2%	1%	0%	0%
Trust Doctor - Radiology	6%	6%	5%	1%	2%	0%	0%
Consultant Otorhinolaryngology	5%	6%	5%	1%	3%	0%	0%
Trust Doctor - Anaesthesia	6%	4%	3%	2%	1%	0%	0%
Trust Doctor - General Surgery	5%	4%	2%	1%	1%	1%	0%
Consultant Paediatric ENT	4%	5%	5%	2%	2%	0%	0%

>= 8%
>= 5% & < 8%
< 5%

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Key observations: Gen AI augmentation

Paramount potential and impactful roles of Gen AI

Before we go into detail about the potential benefits and specific use cases for Gen AI, we highlight that with the current technology available, non-patient facing roles benefit the most from Gen AI, with the potential to release capacity of up to 30% overall.

When focusing solely on three specific capabilities, non-administrative roles may appear to rank higher on the list. This doesn't necessarily mean their overall Gen AI potential impact is greater; rather, it suggests that certain tasks in these roles are more likely to be alleviated by Gen AI within those specific capabilities, rather than across all seven.

Volume of work opportunity

Although administrative roles stand to benefit the most from AI clinical roles make up the majority of the workforce and therefore stand to benefit the most overall.

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Key observations: Variability of Gen AI augmentation by role

Patient facing roles

Moderate benefits for patient facing roles

Many patient facing roles show low-moderate benefits from Gen AI deployment although there is some potential to release time to care through use cases to support data interpretation and the summarising of information. The gains from employing Gen AI to support tasks related to code generation, calendar management, and translation are limited for these groups.

Conversational agents are also minimally applicable to these roles currently, indicating a strong reliance on human interaction over Gen AI-driven communication tools. There are of course multiple use cases and benefit from employing conversational agents in the support services patient facing staff use such as HR. As GenAI tooling such as DAX Copilot comes to the market this will have the potential to significantly change this position.

Nursing roles in the Patient facing category

Key Gen AI capabilities such as data interpretation (7-9%) summarising information (6-8%) and content creation (5-6%) are all applicable in these roles.

Calendar management, conversational agents, and code generation offer limited benefits for these staff given the nature of their work.

Clinical support roles

Scientific and technical roles in the Clinical Support category

Positions such as Radiographers, Biomedical Scientists and Pharmacy Technicians can benefit from employing Gen AI in data interpretation and creating content (10-14%). This highlights the opportunity to assist with technical tasks like diagnostics, record keeping, and documentation using Gen AI tools.

Research Nurses and Clinical Trials Assistants exhibit moderate Gen AI potential in summarising information and data interpretation, reflecting a need for assistance in research and trial documentation.

Creating content remains important but is not heavily emphasised, highlighting that technical tasks are more about interpretation and data management rather than content creation.

Code generation remains non-existent or insignificant across all roles, reflecting that these tasks typically don't involve software development or programming.

Non-patient facing roles

Higher Gen AI adoption in managerial and specialised operations roles in the non-patient facing category

Managerial roles (e.g., the Chief Operating Officers team, General Management, and Facilities Management) display moderate Robotic Process Automation (RPA) potential, ranging between 10-20%. They also show opportunities for Gen AI to assist with data interpretation, summarising info, and calendar management, reflecting the administrative nature of these roles.

In specialised operational roles (e.g., Estates Operations, and the Medical Directorate), Gen AI applications like data interpretation, content creation, and summarising information remain useful, although their relevance to calendar management, translation, and code generation is low.

Clerical and administrative roles in the non-patient facing category

Roles like Medical Secretary, Clerical Officer, and Administrative Coordinator show a slightly higher augmentation potential for tasks such as summarising information (up to 14%) and data interpretation (8-14%).

The application of RPA is higher in these roles compared to clinical positions, reaching as much as 22% in certain secretarial and clerical positions.

Creating content also ranks higher, with percentages ranging from 5% to 10%, suggesting opportunities for automating documentation or report generation in these roles.

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Key observations: Variability of Gen AI augmentation by task

RPA adoption

The benefits of simple RPA, as opposed to Gen AI, have significant potential across a number of the administrative, clerical and analytical roles which exist in the typical hospital. For example, the Team Medical Secretary and Biomedical Scientist roles have RPA potential as high as 22% of overall workload.

RPA's applicability to clerical roles suggests an opportunity to reduce manual processes, such as scheduling, report generation, and document management.

Impact across the types of Gen AI capabilities

Across all roles, the potential for translation and conversational agents is very low, often less than 3%.

Across all roles, code generation is almost entirely absent, indicating that none of these positions require or benefit from Gen AI involvement in programming or automation in this context.

Similarly, calendar management tasks remain largely unaffected by Gen AI across these roles, indicating limited need for linguistic capabilities or heavy organisational automation.

AFC Bands

Our analysis shows that the potential benefits of Gen AI are evenly spread across the AfC bands although as expected content creation is less applicable for roles at band 2. As anticipated, the benefits of RPA, as opposed to Gen AI are greater at band 2-4.

Sector-specific insights

Pathology and Radiology roles highlight higher Gen AI augmentation potential in data interpretation and content creation, with potential capacity gains of up to 25%. These technical fields benefit from Gen AI's ability to assist with diagnostics and interpretation of results.

Roles in oncology, surgery, and trauma-related services show lower augmentation potential, particularly for human-centric, direct patient care functions.

End user adoption is critical for the success of any digital programme, digital maturity and adoption is lower than in some industries and imperative to setting colleagues up for success is focussing on a learning and enablement workstream to support adoption of GenAI technology.

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A deep dive in to the use cases

Having completed the initial work to identify the roles with the greatest potential benefit from RPA and Gen AI we agreed with the CIO and HR Director of the Trust that we would take three specific roles and work with individuals doing the job, their line managers and AI engineers to develop specific use cases or proof of concepts (POC) which can be deployed to realise the benefits identified. The three roles selected are shown below.

Use cases identified for next step – solution design and pilot

Clinical Support

Clerical Outpatient Officer

A clerical outpatient officer handles the administrative aspects of patient visits in outpatient clinics. Their duties include scheduling appointments, managing patient records, coordinating between healthcare teams, handling patient queries, ensuring medical documentation is available in the clinic and recording which patients attend and which don't. These officers play a key role in ensuring smooth and efficient clinic operations.

- **Gen AI Augmentation Potential:** Gen AI can significantly streamline the work of clerical outpatient officers through:
- **Automated Appointment Scheduling:** Gen AI-powered systems can optimise appointment scheduling by analysing patterns in patient flow, doctor availability, and clinic capacity, reducing manual scheduling efforts and errors.
- **Patient Records Management:** Gen AI has the ability to quickly retrieve and update patient records, reduce manual data entry errors, and ensure clinicians have access to accurate and up-to-date information.
- **Chatbots for Patient Queries:** Gen AI-driven chatbots could handle routine patient inquiries, such as appointment reminders, directions, and FAQs, reducing the clerical workload.
- By automating routine tasks and optimising workflows, Gen AI could significantly reduce the administrative burden on clerical outpatient officers, allowing them to focus on more complex patient needs and improving overall clinic efficiency.

Non Patient Facing

HR Manager/Advisor

HR Managers and Advisors are key professionals who specialise in developing and managing an organisation's workforce. They oversee recruitment, training, performance management, and ensure compliance with employment laws. Their role is crucial in fostering a positive work environment, promoting employee growth, and aligning HR strategies with organisational goals to enhance performance and inclusivity.

- **Gen AI Augmentation Potential:** Gen AI has the potential to enhance HR roles' work in multiple ways:
- **AI-assisted Recruitment Strategies:** Gen AI can provide data-driven insights and recommendations to improve recruitment processes and deployment strategies, ensuring alignment with organisational policies and goals.
- **Case management:** Leveraging Gen AI to record and summarise conversations and summarise information, helping expedite investigations for the benefit of employees and employer.
- **AI-driven HR Training Programs:** Utilising Gen AI to support the design and delivery of personalised HR training packages, improving the effectiveness of training programs and employee engagement.
- **Automated Compliance Checks:** Using Gen AI to automate the verification of payroll and other documentation, ensuring compliance with legal and organisational standards with reduced manual effort.

By integrating Gen AI into HR processes, tasks that are data-intensive, predictive in nature, or require high compliance can be significantly enhanced. This allows HR professionals to focus on strategic initiatives such as talent development, employee engagement, and organisational culture.

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A deep dive in to the use cases (cont.)

Patient Facing

Emergency Care Consultant

Emergency Care Consultants specialise in the rapid assessment and treatment of patients, often in critical conditions. They play a pivotal role in diagnosing, monitoring, and managing patient care in high-pressure environments. Their expertise is crucial in making swift, informed decisions to ensure optimal patient outcomes and improve the overall quality of emergency care services.

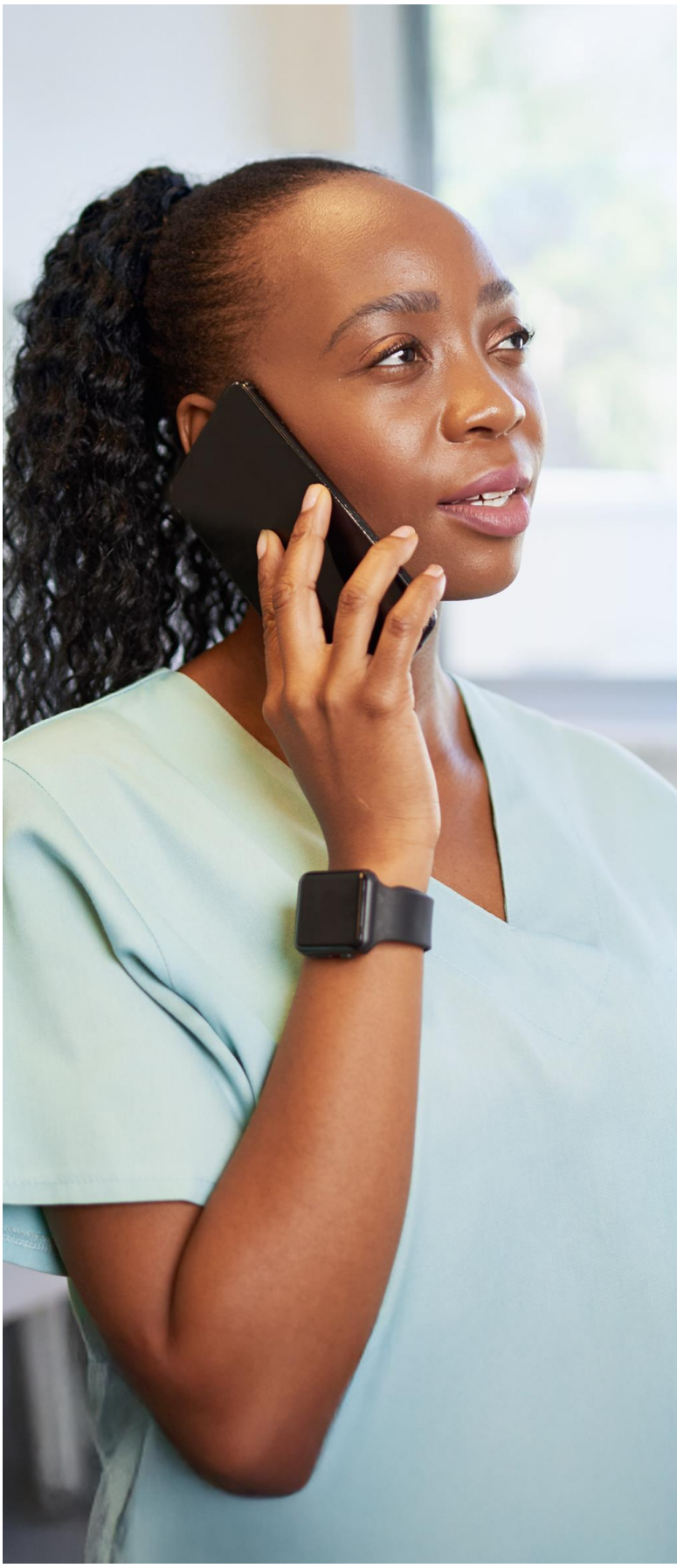
- **Gen AI Augmentation Potential:** Gen AI offers transformative capabilities for Emergency Care Consultants, enhancing various aspects of their roles:

- **Patient Diagnosis and Monitoring:** Gen AI provides reliable diagnostic insights and aids in monitoring patient conditions by interpreting and summarising data. While it supports consultants in making informed decisions, the critical task of assessing changes in patient conditions remains with human professionals to ensure safety and accuracy.

- **Performance and Quality Enhancement:** Gen AI can assist in data collection, interpretation, and report creation, suggesting strategies to improve performance and quality. This allows consultants to focus on critical decision-making and patient care, enhancing overall service delivery.

- **Educational Support and Staff Development:** As an effective learning tool, Gen AI can enable contextual learning in accessible formats, supporting the creation and delivery of educational content. This enhances the training and development of A&E staff, ensuring they are well-equipped to handle emergency situations.

By embedding Gen AI into emergency care workflows, consultants have the opportunity to enhance data-driven tasks, allowing them to concentrate on critical patient care and strategic improvements in the A&E department.



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Use case development – next steps

Having selected 3 roles for Gen AI deep dive, we have embarked on a process to refine job roles and explore the use cases. We are now conducting design workshops to focus on the value case and develop designs for specific Gen AI solutions which can be deployed and adopted in each profession.

Role deep dive

For each of the selected roles, we have worked with individuals performing the role and their line managers to review and refine, the job-to-task mapping and estimates of the time spent performing each task which underpin the analysis.

Refinement and reassessment of Generative AI augmentation potential

Following this, we revisited the analysis to determine if any changes would affect our initial evaluation of the augmentation potential.

Solution design for Gen AI use case development

Subsequently, we intend to conduct design workshops, bringing together professionals from the relevant service areas, Microsoft Technologists, AI engineers, and other experts, to develop specific Gen AI solution tailored to each role.

Value case for Gen AI integration

The outputs from this session will formulate a value case for the integration of Gen AI within that particular profession, outlining the potential benefits and strategic value of deployment. This will include but not be limited to an assessment of the time released and where relevant savings which can be realised.

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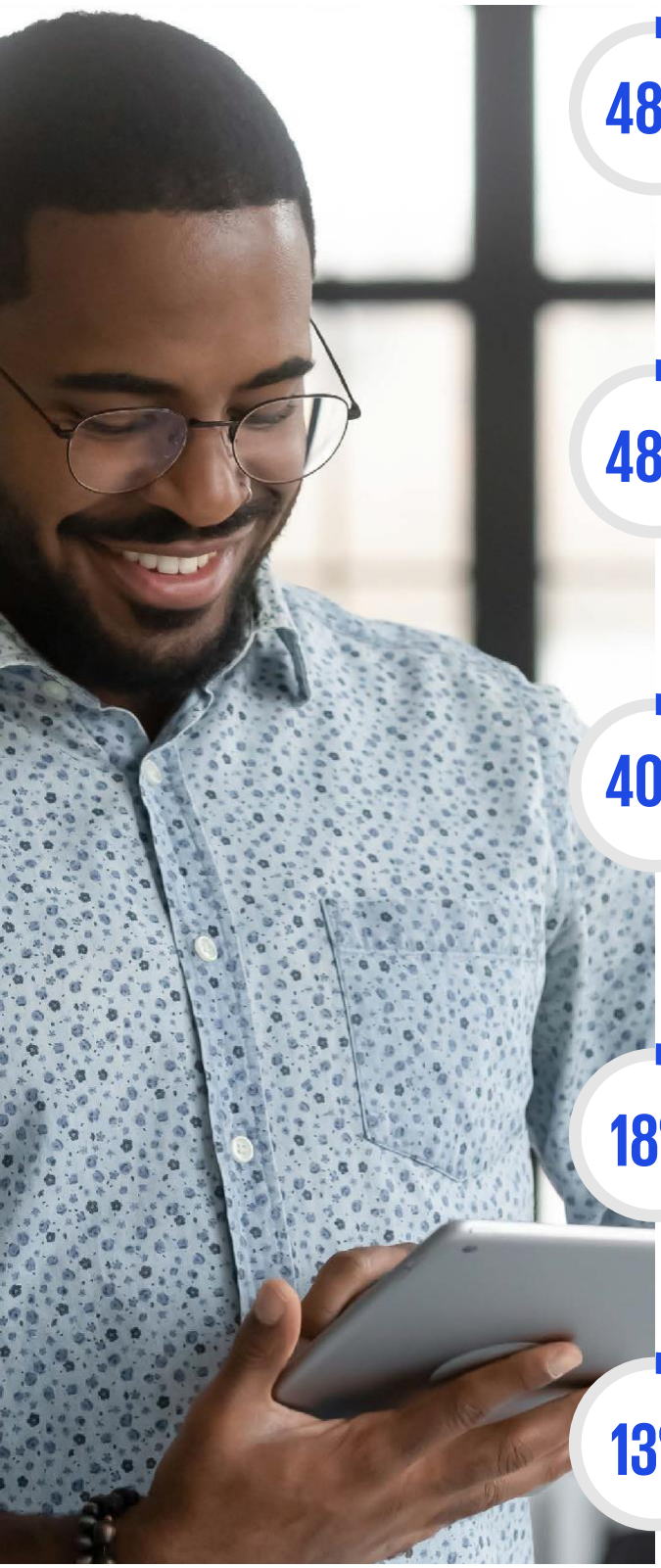
Clerical Officer – Outpatient

Specific tasks performed by this role where Gen AI can be employed to release time are shown below. The figures quoted are the absolute potential productivity gain (benefit) which could be realised by employing GenAI to support this specific activity or task, not to the overall capacity gains possible in the role which are shown on page 17. By working together to develop specific use cases we will be able to establish the realisable benefits from specific use cases.



48%

Referral and Test Follow-Up

Gen AI has the potential to revolutionise Referral and Test Follow-Up, automating referral letter processing and test request management. With a view to ensuring quick, error-free adherence to Trust Policies, to lead to enhanced patient care quality and operational efficiency.

48%

Case Note Management

Case Note Management sees significant improvement potential with Gen AI, streamlining note handling, tracking, and summarisation. This ensures essential patient information is accessible, secure, and efficiently managed, improving patient outcomes and service delivery.

40%

Patient Information Management

Gen AI has the ability to transform Patient Information Management, enhancing data recording and management accuracy and efficiency. By generating structured patient records and analysing data dynamically, Gen AI could support superior healthcare delivery and patient outcomes.

18%

Appointment and Scheduling Services

Appointment and Scheduling Services could benefit from Gen AI, automating bookings and special service arrangements in compliance with Trust Policies. Gen AI streamlines calendar management and patient needs identification, elevating the patient experience.

13%

Communication and Reception Services

In Communication and Reception Services, Gen AI could improve patient interactions through conversational agents and efficient information summarisation. This supports professional, efficient, and friendly service, enhancing the clinic experience for patients and relatives.

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HR Manager / Advisor

Specific tasks performed by HR Manager and Senior HR Advisor where AI can be employed to release time to care are shown below. The figures quoted are the absolute productivity gain (benefit) which could be realised by employing AI to support this specific activity or task, not to the overall capacity gains possible in the role which are shown on page 16 .

40%

Data Management and Reporting

Gen AI transforms Data Management and Reporting by automating data analysis and report generation, enhancing decision-making with quick insights, and facilitating database queries through conversational agents.

37%

Training and Development

In Training and Development, AI's ability to craft custom learning materials and simulate interactive training scenarios enriches staff education and supports diverse learning needs.

37%

Change and Project Management

Change and Project Management benefits from AI's project planning support, risk forecasting, and facilitation of project communications, streamlining project execution and coordination.

35%

Absence, Attendance, and Service Audit

AI plays a crucial role in Absence, Attendance, and Service Audit by analysing attendance patterns, generating insightful viewpoint, and aiding in the scheduling of audits, with conversational agents providing policy guidance.

26%

Policy and Compliance

In Policy and Compliance, AI enhances understanding and adherence to regulations by summarising legal documents, generating compliance reports, and offering translation services for global consistency.

23%

Advisory and Consultancy Services

For Advisory and Consultancy Services, AI streamlines the provision of HR advice by summarising complex information, generating advisory content, and offering initial guidance through conversational agents.

22%

Case and Crisis Management

AI aids Case and Crisis Management by summarising case details, preparing documentation, and providing conversational support for managing sensitive situations efficiently.

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Emergency Care Consultant

Specific tasks performed by Emergency Care Consultants where AI can be employed to reduce admin and increase time with patients are shown below. The figures quoted are the absolute productivity gain (benefit) which could be realised by employing AI to support this specific activity or task, not to the overall capacity gains possible in the role which are shown on page 16 .

50%

Performance and Quality Improvement

Gen AI can assist with data collection, interpreting data and creating content for reports. It can also suggest strategies and interventions to improve performance and quality.

30%

Advising and Teaching Staff

Generative AI has been demonstrated to be an effective learning tool, delivering contextual learning in easily accessible ways and supporting in the creation and delivery of learning.

25%

Diagnosing Patient Conditions

Gen AI has shown to make reliable diagnoses and could supplement the consultant decision making in the context of an emergency ward.

10%

Monitoring Changes in Patients

Gen AI can assist with data interpretation and summarising information, however the critical part of decision-making and making judgement calls on changes in patient condition must be done by a human.

5%

Assessing Patients and Treatment

Gen AI can aid in the provision and translation of relevant patient data but human intervention is required for thorough examination & diagnosis. As a highly skilled task involving physical procedures, automation is limited.

0%

Life-saving Procedures

This is a critical task involving physical action and quick decision-making, which cannot be automated and still requires human expertise. In the future, we may see an increase in Gen AI enabled robotics solutions to improve critical care.

0%

Communication with patients, family, and team

While summarising medical info can be automated, the human element of communication on an emergency ward is a less likely candidate for Gen AI.

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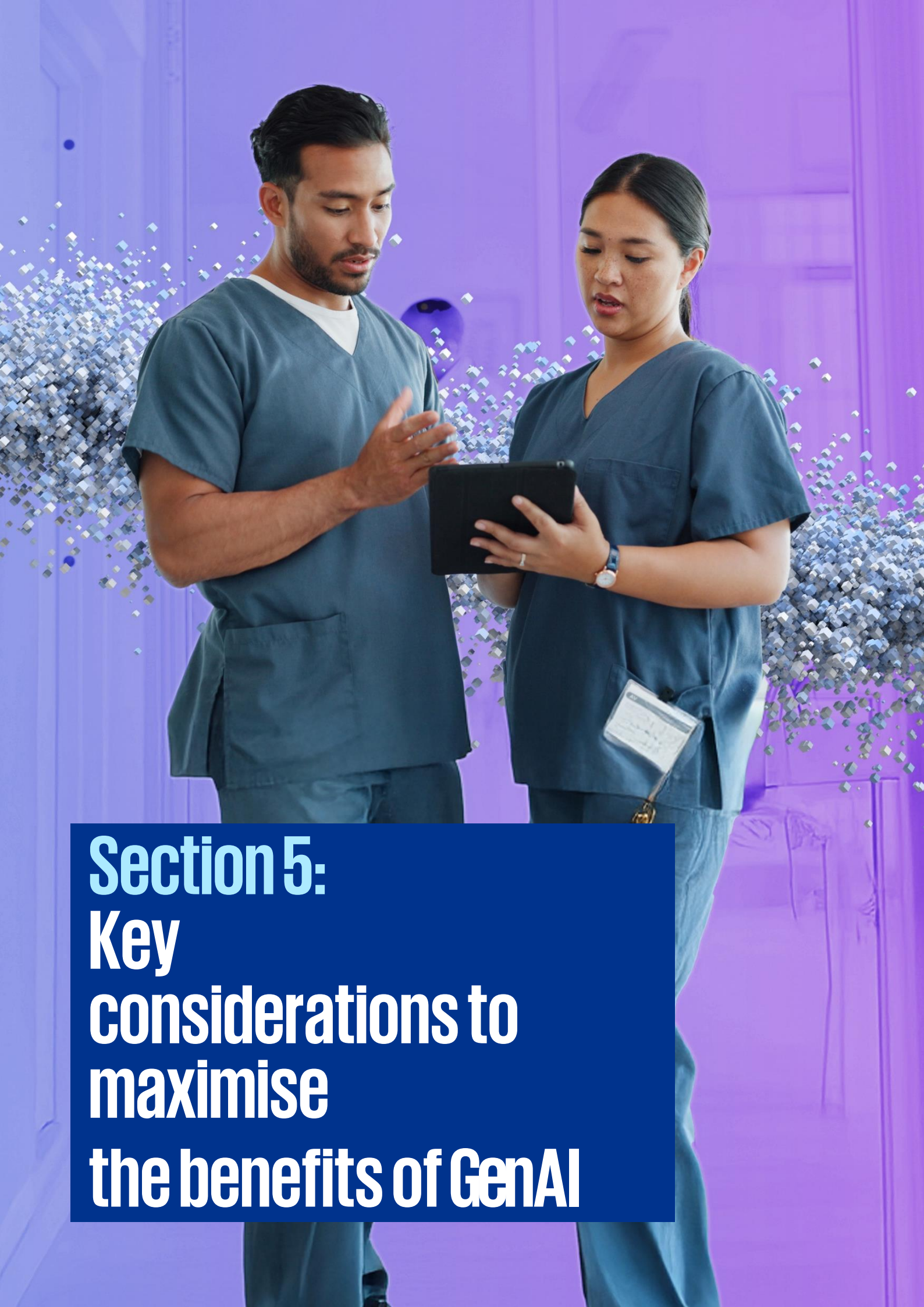


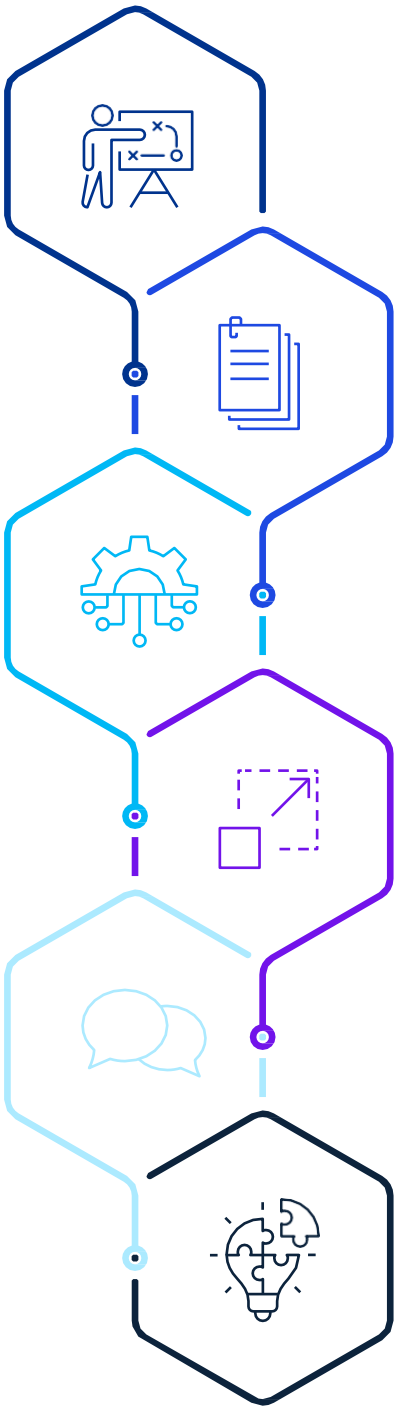
Section 5: Key considerations to maximise the benefits of GenAI

What's Next?
Critical success factors for Gen AI augmentation

This engagement is a journey and there are a number of practical next steps we are working to in order to determine where to focus our resources and how to make the art of the possible for GenAI a reality within our Trust to realise the potential benefits indicated. Alongside these activities, there are broader considerations such as wider legal and regulatory considerations that need to be understood and explored as outlined later in this report.

1. Design workshops

These workshops with the clinicians and other staff who really understand the work. By working together to develop specific use cases we can ensure that the Gen AI solutions proposed are aligned with business needs and user requirements. This work will be invaluable in helping us understand the delta between potential benefits and realisable benefits.



2. Value case for use cases

A well-developed value case helps secure executive support and funding by demonstrating the value and feasibility of Gen AI initiatives. It ensures that resources are allocated effectively and that the Gen AI solutions will deliver measurable business value.

3. Deployment

Successful implementation ensures that the Gen AI solutions are built to specifications and integrated smoothly, allowing the organisation to start realising the benefits of the technology.

4. Scale up

Scaling up ensures that the benefits of the Gen AI solutions are maximised and extended throughout the organisation. It allows the organisation to leverage Gen AI's full potential, improving efficiencies, and generating greater value from the technology.

5. Change and communication

Effective change management helps minimise resistance, ensures smooth adoption of Gen AI solutions, and aligns employees with new workflows and technologies.

6. User training

Proper training ensures that employees are proficient in using the Gen AI solutions, which maximises the technology's benefits and enhances overall productivity.

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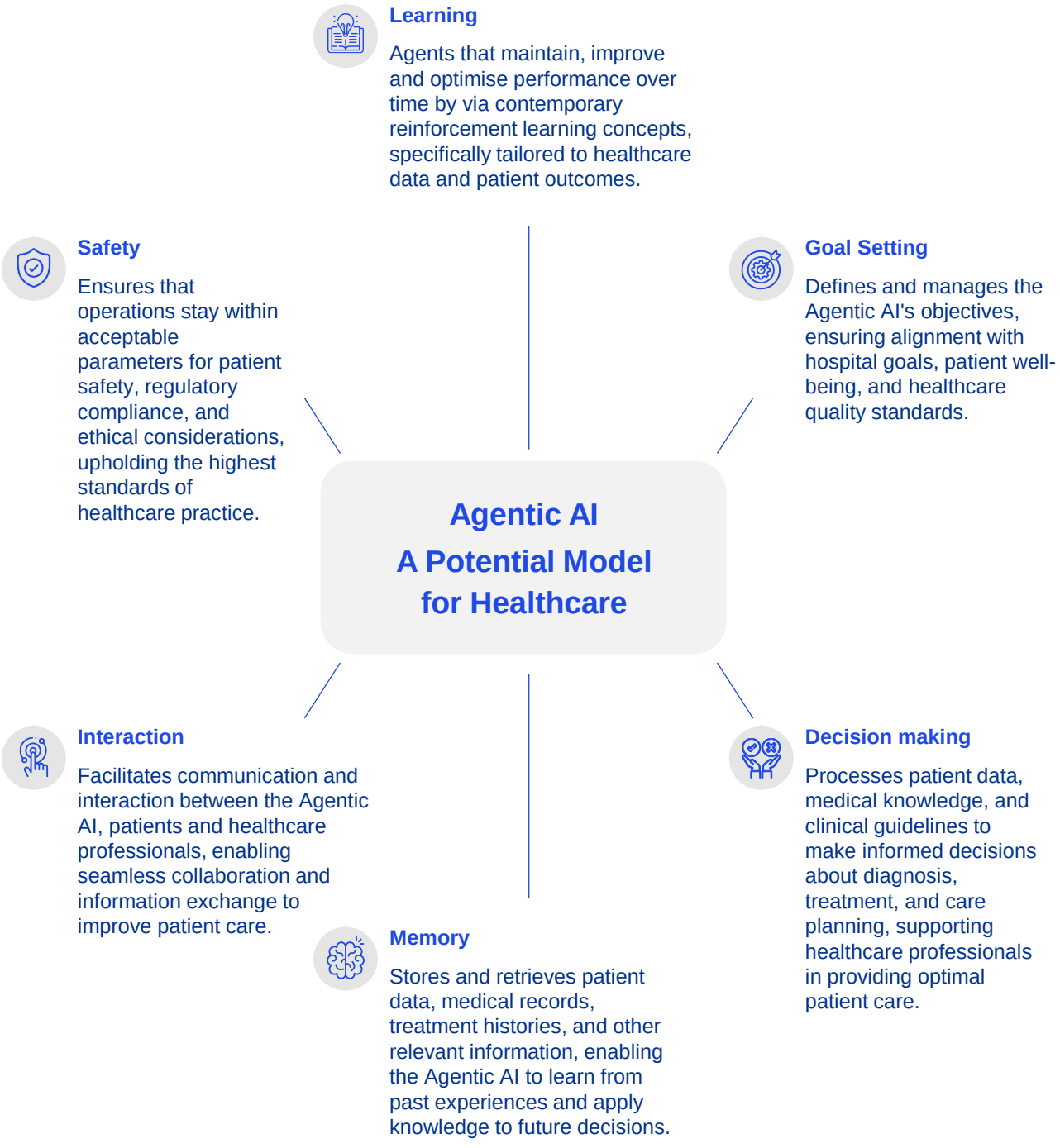
Future View: Agentic AI
A paradigm shift in healthcare delivery

While this report analyses current ways of working and surfaces opportunities to increase performance in existing job contexts over the next 3 years, we are seeing emerging thinking around agentic AI systems that have the potential to revolutionise how we deliver healthcare delivery over the next decade. Agentic AI in healthcare would comprise an interconnected network of AI Agent clusters that combine to form a semi autonomous system, working with healthcare professionals and patients to automate processes, improve performance and enhance care outcomes – especially through personalised care and scaling of automated patient interactions and medical professional support. The potential structure of such a system is proposed below:-



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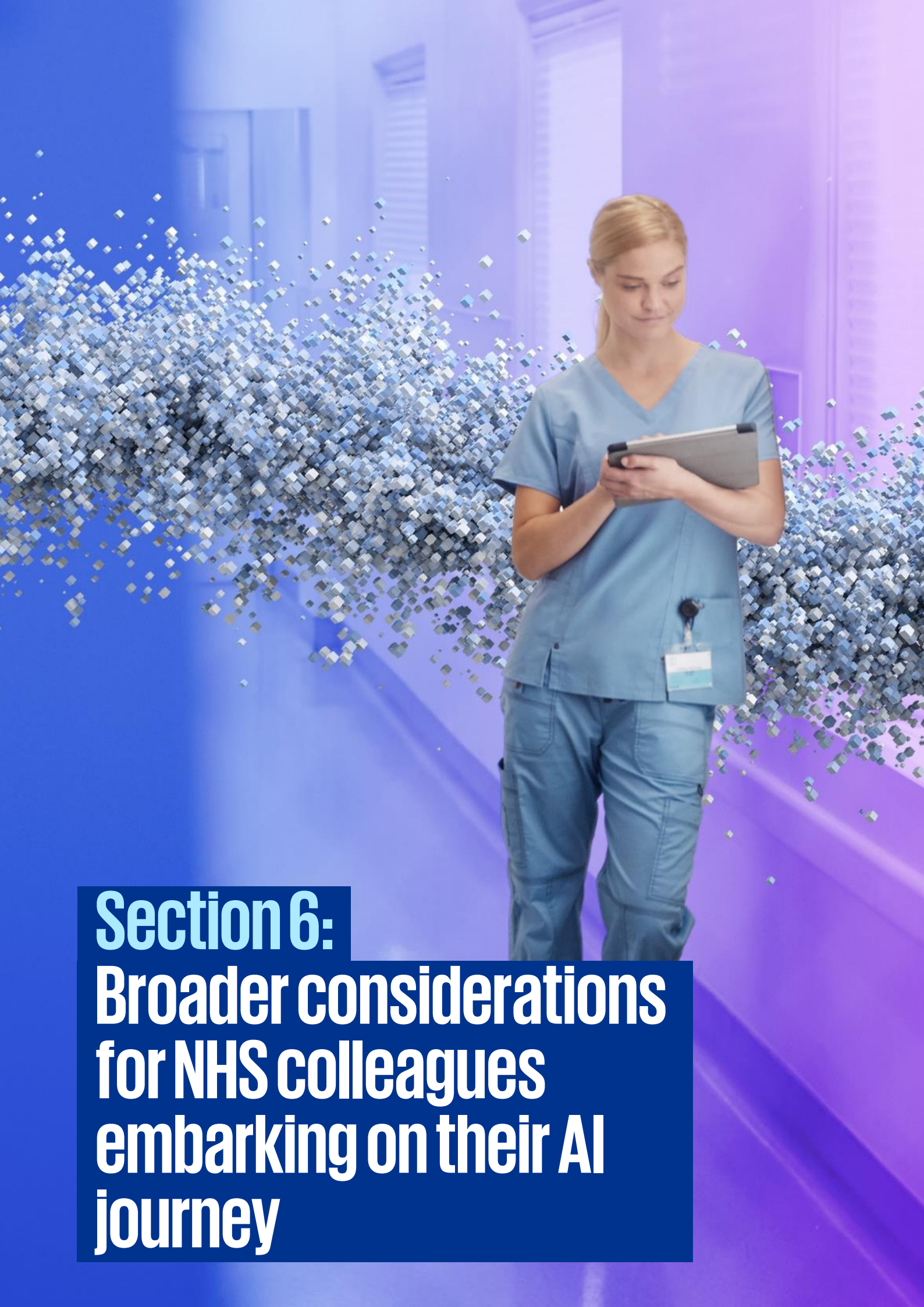

Section 6: Broader considerations for NHS colleagues embarking on their AI journey

Compliance with legal requirements

Implementing Gen AI in healthcare organisations presents a unique set of challenges and opportunities, especially in the context of compliance with legal and legislative requirements. As Gen AI technologies have the potential to revolutionise healthcare delivery, diagnostics, patient care, and administrative processes, ensuring their compliant implementation is crucial. Here's what healthcare organisations need to do or be mindful of when implementing Gen AI:

1. Understanding regulatory frameworks

First understand the specific regulatory frameworks that apply to Gen AI. This includes general healthcare regulations, data protection laws, and any emerging guidelines specifically addressing AI in healthcare. For instance, in the EU, the GDPR sets strict rules on data processing, which directly impacts AI applications. Similarly, the U.S. Food and Drug Administration (FDA) has been working on a regulatory framework for AI and machine learning-based medical devices.

2. Ethical considerations and bias mitigation

Implementing Gen AI requires a strong focus on ethical considerations and bias mitigation. Healthcare organisations must ensure that AI systems are developed and used in a manner that is ethical, non-discriminatory, and promotes equity. This involves training AI models on diverse datasets to reduce bias and implementing robust testing procedures to identify and correct any biases that may exist.

3. Data privacy and security

Given the sensitive nature of health data, ensuring the privacy and security of patient information is paramount. Organisations must implement Gen AI solutions that comply with data protection laws, such as HIPAA in the U.S. or GDPR in the EU. This includes ensuring that AI systems are designed with privacy in mind (privacy by design), conducting regular data protection impact assessments, and ensuring that data processing activities are transparent and secure.

4. Transparent and explainable AI

Transparency and explainability are key components of compliant Gen AI implementation. Healthcare organisations must ensure that AI systems are transparent in their operations and decisions can be explained in understandable terms. This is important not only for regulatory compliance but also for building trust with patients and healthcare professionals. Implementing explainable AI (XAI) practices helps in understanding and justifying AI-driven decisions, especially in critical areas like patient diagnosis and treatment recommendations.

5. Continuous monitoring and evaluation

The dynamic nature of AI technology requires continuous monitoring and evaluation to ensure ongoing compliance. Healthcare organisations should establish processes for regularly assessing the performance, safety, and compliance of AI systems. This includes monitoring for any deviations in performance, updating AI models with new data, and reassessing compliance as regulations evolve.

6. Collaboration with regulators and stakeholders

Engaging with regulators, industry groups, and other stakeholders is crucial for navigating the regulatory landscape of Gen AI in healthcare. Collaborative efforts can help in understanding regulatory expectations, sharing best practices for compliance, and influencing the development of AI-friendly regulatory frameworks.

7. Training and education

Healthcare organisations must invest in training and education for their staff on the ethical use, risks, and regulatory requirements of Gen AI. This includes educating healthcare professionals on how to work alongside AI tools, understanding the limitations of AI, and ensuring that human oversight remains a key component of AI-augmented healthcare delivery.

8. Implementing robust Governance Structures

Finally, implementing robust governance structures is essential for overseeing the ethical and compliant use of Gen AI. This involves setting up dedicated committees or working groups focused on AI governance, ethics, and compliance. These structures should have clear responsibilities, including reviewing AI projects for compliance, overseeing risk management processes, and ensuring that AI implementations align with organisational values and regulatory requirements.

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Trusted AI framework

Embracing a Trusted AI Framework empowers healthcare organisations to navigate the complexities of AI adoption with responsibility and foresight. By prioritising the 10 pillars below, organisations can create an environment where AI technologies are not only effective but also aligned with the core values of patient safety and quality care. This proactive approach fosters a culture of trust and accountability, ensuring that all stakeholders—patients, healthcare professionals, and regulatory bodies—can confidently engage with AI systems.

As organisations commit to these principles, they not only enhance operational efficiency and clinical outcomes but also pave the way for a more sustainable and equitable healthcare system. Ultimately, the Trusted AI Framework will serve as a cornerstone for innovation in healthcare, driving advancements that respect ethical considerations and prioritise the well-being of patients.

How organisations should aim to deploy Gen AI responsibly and sustainably

The Trusted AI framework rests on ten ethical pillars across the AI lifecycle:

Fairness

AI solutions should be designed to reduce or eliminate bias against individuals, communities or groups.

Reliability

AI solutions should consistently operate in accordance with their intended purpose and perform at the desired level of precision.

Transparency

AI solutions should include responsible disclosure to provide stakeholders a clear understanding of what is happening in each solution across the AI lifecycle.

Security

Robust and resilient practices should be implemented to safeguard AI solutions against bad actors and misinformation, or adverse events.

Explainability

AI solutions should be developed and delivered in a way that answers the questions of how and why a conclusion was drawn from the solution.

Safety

AI solutions should be designed and implemented to safeguard against harm to people and property.

Accountability

Human oversight and responsibility should be embedded across the AI lifecycle to manage risk and comply with applicable laws and regulations.

Privacy

AI solutions should be designed to comply with applicable privacy and data protection laws and regulations.

Data Integrity

Data used in AI solutions should be acquired in compliance with applicable laws and regulations and assessed for accuracy, completeness, appropriateness and quality to drive trusted decisions.

Sustainability

AI solutions should be designed to be energy efficient, reduce carbon emissions and support a cleaner environment.

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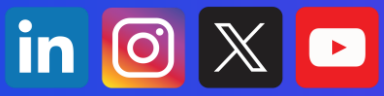

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