HOW TO PREPARE YOUR WORKFORCE FOR THE FUTURE OF PHARMA

AN SRG GUIDE

Creating tomorrow's world

www.srgtalent.com

INTRODUCTION

The future of pharma is being increasingly shaped by the fourth industrial revolution, where new technologies are advancing pharmaceutical operations, spurring new collaborations, enhancing patient pathways, and connecting manufacturing processes to optimise efficacy and accuracy.

In this climate of change, employees across the industry, from researchers to process engineers, face the challenge of evolving their skill sets to keep pace.

Meanwhile, leaders must navigate the complexities of integrating new technology, while managing teams, and maintaining performance.

As the skills gap in the pharmaceutical industry widens, leaders must consider how to harness the potential of Industry 4.0 in Pharma while establishing a sustainable skills pipeline to secure business continuity.

In this whitepaper, we'll delve into the key drivers shaping the future of pharma today, providing insights to support decision making, and provide actionable talent strategies.

Read on to discover:

- Harness Industry 4.0: How your workforce can keep pace
- How to bridge the talent gap: Why pharma companies need to act now
- Ideas to address the skills gap through new talent and retention
- How to fuel collaboration: Why more organisations are working together

HARNESS INDUSTRY 4.0: HOW YOUR WORKFORCE CAN KEEP PACE

Industry 4.0 heralds a new era for pharmaceutical manufacturing where artificial intelligence, robotics, advanced computing, and the internet of things (IoT) combine to connect systems, improve agility, and activate continuous improvement.

The impact of Industry 4.0 echoes through pharmaceutical organisations, transforming not only manufacture but drug discovery and development, creating an inter-connected network of technology and data that powers innovation.

Today, 86% of pharmaceutical companies are investing in advanced technologies[1] including AI, synchronised databases, as well as extended reality and quantum computing to optimise efficacy across discovery, development, and manufacture.

Opportunities to strengthen pharmaceutical operations

The expected return on investment from drug development is drastically falling.

While in 2010, returns averaged 10.1%, in 2019 ROI dropped to just 1.9%[2].

The future of the industry relies on finding new, innovative techniques to speed up discovery and development without compromising the quality and accuracy of the process, and Industry 4.0 is leading the way.

Industry 4.0 has the potential to strengthen pharmaceutical operations across areas including:

Today, 86% of pharmaceutical companies are investing in advanced technologies including AI, synchronised databases, as well as extended reality and quantum computing to optimise efficacy across discovery, development, and manufacture.

HARNESS INDUSTRY 4.0: HOW YOUR WORKFORCE CAN KEEP PACE

R&D

Rising at an annual rate of 8.5% above price inflation, R&D costs are accelerating fast[3]. Meanwhile, patent expiry and loss of exclusivity are driving a cumulative loss of $209 billion across developed pharma markets[4].

While costly to set up, AI can help to address pipeline gaps and accelerate novel compound discovery, powering an estimated 81% of biopharma revenue growth[5].

Manufacturing and quality control

Industry 4.0 transforms Quality by Design from a reactive, to a continuous process across manufacturing where connected systems enable real-time monitoring, and processes automatically adjust based on data.

AI-enabled software is at the heart of this process, powering technology including computer vision quality control, digital twins, predictive maintenance, and collaborative robots to optimise manufacture and reduce human intervention in production.

Computer vision-based quality control achieves this through analysing images of finished products to detect deviations on the factory line. Meanwhile, collaborative robots (also known as cobots), are powered by an integrated software system to act out a series of steps, such as moving materials, taking and analysing samples, all while conveying information back to the central process machinery controls.

AI can help to address pipeline gaps and accelerate novel compound discovery, powering an estimated 81% of biopharma revenue growth

HARNESS INDUSTRY 4.0: HOW YOUR WORKFORCE CAN KEEP PACE

Digital twins are digital replicas of a process, or activity that are analysed to understand, evaluate, predict, and optimise performance. They play a valuable role in helping to mitigate risks, deviations, and disruptions before they occur. Digital twins are often based on data but can integrate empirical and mechanistic simulations to generate high-resolution models with real-time data to assess and optimise performance.

Supply chains

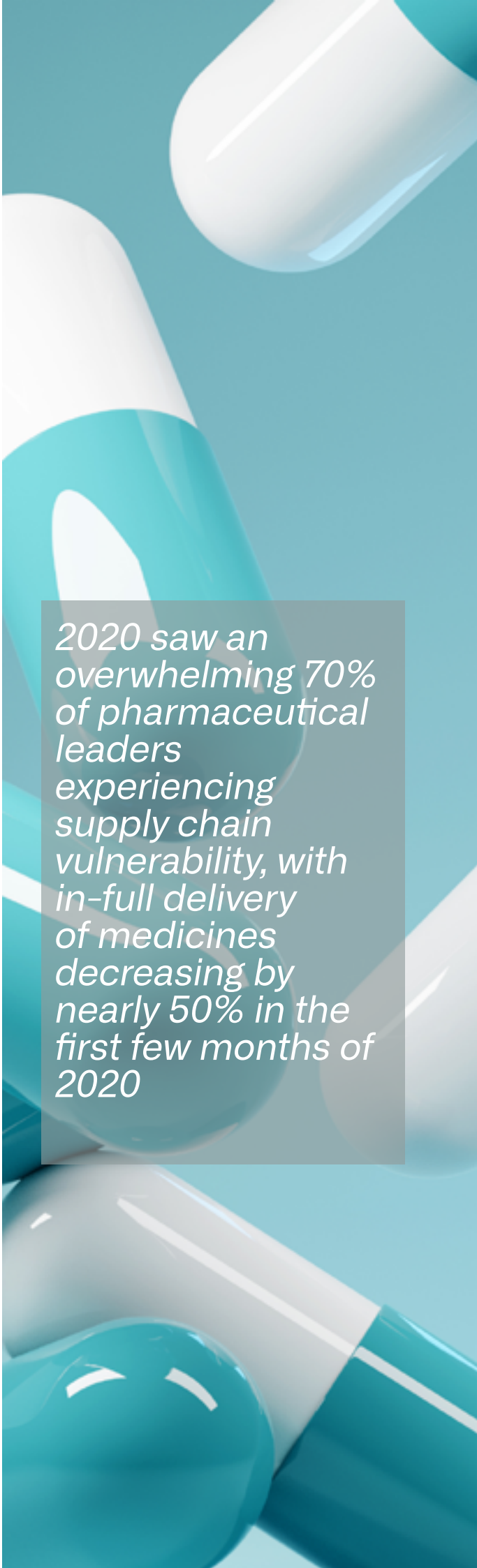
2020 saw an overwhelming 70% of pharmaceutical leaders experiencing supply chain vulnerability, with in-full delivery of medicines decreasing by nearly 50% in the first few months of 2020[6].

Supply chain information including raw materials variability and global tracking of materials across facilities can be made more resilient using the internet of things (IoT).

Put briefly, the IoT is an online network of interconnected devices, sensors, instruments, and equipment that helps to bolster and improve the visibility and trackability of operational procedures, including supply chain management.

Commercialisation

New markets are expanding across pharma – In 2022 alone, 13% of the Global GDP was spent solely on healthcare. Today, 50% of millennials are opting for on-the-go care at pharmacists and retailers over primary care[7].



2020 saw an overwhelming 70% of pharmaceutical leaders experiencing supply chain vulnerability, with in-full delivery of medicines decreasing by nearly 50% in the first few months of 2020

HARNESS INDUSTRY 4.0: HOW YOUR WORKFORCE CAN KEEP PACE

Technology can provide a valuable way to evolve and expand market reach and access, with virtual-physical interactions with healthcare providers supporting flexible treatment.

Patient support

While the over 60+ population was at 900+ million in 2015, by 2025, the group's population will exceed 1.4bn[8].

Remote reporting and monitoring to increase patient reach and improve accessibility will be essential to sustain high levels of care to large patient cohorts.

Technology such as wearable monitoring devices and apps can play an instrumental role when it comes to making monitoring accurate and accessible.

Preparing your workforce for success

Research from McKinsey reveals that most pharmaceutical companies are still in the early stages of digital transformation. Less than 40% of organisations currently have a fully implemented digital strategy[9].

The International Society for Pharmaceutical Engineering (ISPE)[10] note that culture plays a key role in unlocking digital success.

ISPE recommend establishing "a culture of collaboration for all business units responsible for the production process, technology and quality". This approach helps to ensure a holistic implementation of control strategy implementation and opens the potential for continuous improvement.

The International Society for Pharmaceutical Engineering (ISPE) note that culture plays a key role in unlocking digital success.

HARNESS INDUSTRY 4.0: HOW YOUR WORKFORCE CAN KEEP PACE

Leaders can prepare their workforce to harness Industry 4.0 by building a culture where:

- Audit trails for critical information are built to detect design-space changes, rather than to micromanage individuals.
- All departments are confident and well equipped to produce risk-based evidence.
- Improvements to organisational culture are proactive and based around improving the experiences of all stakeholders, including the workforce.
- Reskilling opportunities are established, and well communicated to make the most of latent potential and empower employees with digital capabilities.

BRIDGE THE TALENT GAP: WHY PHARMA COMPANIES NEED TO ACT NOW

"The demand for skilled STEM professionals, especially in science and clinical verticals, continues to skyrocket, compelling employers to think of ever-more creative ways to attract new employees and to retain their current workforce. In the UK, we have seen challenges following Brexit and how this has affected the talent pool from Europe, while across the globe and particularly in the US, we have witnessed first-hand the changes in personal priorities that have influenced career moves such as "The Great Resignation", as people look for a better work-life balance."

2022 Global Science Employment Report

As pharmaceutical organisations make the shift towards digital, new roles are emerging and existing ones are rapidly transforming. In the next decade, more than 90,000 pharmaceutical jobs are estimated to disappear and be replaced by up to 120,000 new roles[11].

In this climate of transformation and evolution, the skills gap is becoming increasingly apparent.

80% of pharmaceutical manufacturing facilities are experiencing a skills mismatch[12] , and 50% of executives say that recruiting experienced staff is challenging[13] . As organisations struggle to find experienced talent externally, attention is beginning to shift towards upskilling alongside recruitment to strengthen resources.

BRIDGE THE TALENT GAP: WHY PHARMA COMPANIES NEED TO ACT NOW

Skills shortage trends in pharma

McKinsey's global research on the pharmaceutical sector reveal a mismatch between executive and front-line employee perspectives on social and emotional skills. While executives do not see these skills as a priority, frontline workers rank 'comfort with change' and 'continuous learning', as critical for success[14].

Priority disciplines

A report from the Association of the British Pharmaceutical Industry (ABPI) delves further into technical skill bases[15]. Their research reveals that while general and core skills gaps have improved, there remain critical areas of concern.

The APBI's research reveals skills shortages in the following 7 disciplines, listed in order of priority:

1. Chemometrics
2. Formulation Science
3. Physiological Modelling
4. Computational Chemistry (including Chemoinformatics)
5. Pharmacokinetic/Pharmacodynamics Modelling
6. Epidemiology and Pharmacoepidemiology
7. Engineering in Manufacturing

BRIDGE THE TALENT GAP: WHY PHARMA COMPANIES NEED TO ACT NOW

5 of the above priorities rely on data and computational informatics, reflecting the essential nature of digital capabilities in today's pharmaceutical landscape.

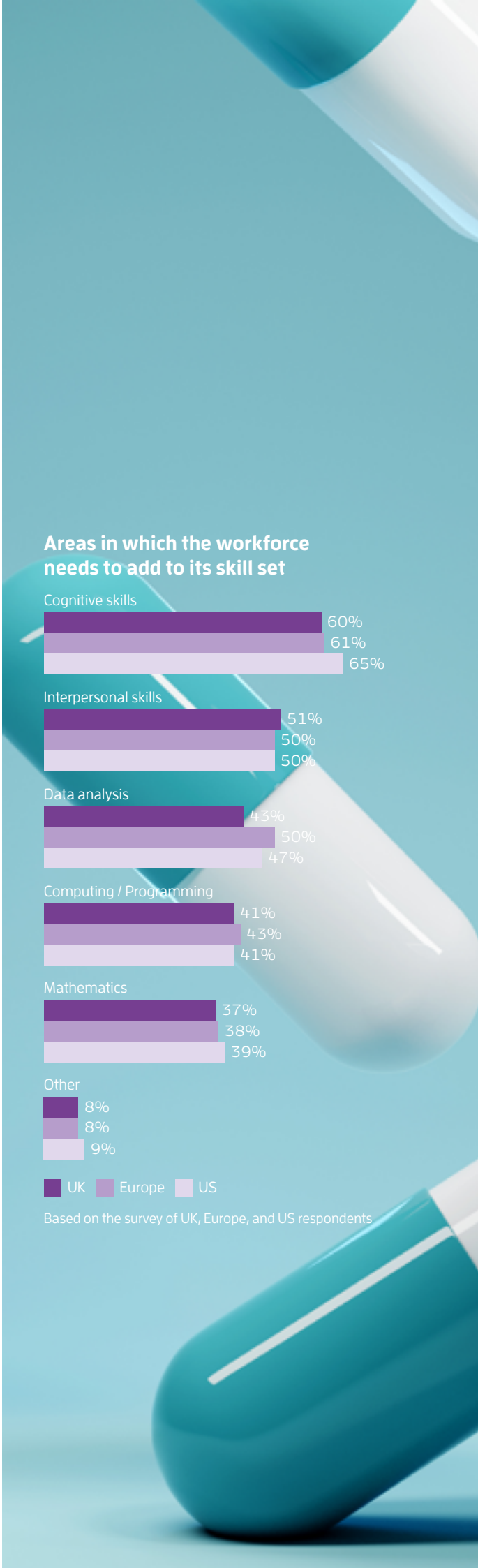
Priority core skills

SRG's 2022 Global Science Employment Report addresses employee perspectives on the skills gap, including the core competencies and skills needed for future success. The report asked respondents where their current workforce needs to add to its own skill set, in order to future-proof operations[16].

64% of UK respondents, 67% of those in Europe, and 71% of respondents in the US believed their line of work was lacking in one or more of the following skills:

- Cognitive (defined as critical thinking, inquiry skills, problem solving, creativity and adaptability)
- Interpersonal skills and collaboration
- Data analysis
- Computing or programming
- Mathematics and science

Notably, 40% or more of respondents in all regions said that data analysis, computing and programming skills were lacking in their organisation, reflecting a holistic need for technological competencies across STEM that is likely to increase talent competition.



IDEAS TO ADDRESS THE SKILLS GAP THROUGH NEW TALENT AND RETENTION

Future shortages

Respondents to the APBI's survey[17] revealed an additional 7 future concerns for skills shortages in the pharmaceutical industry specifically, including:

1. Computational science
2. Clinical Pharmacology/Translational Medicine
3. Physician Pharmacology
4. Pharmacometrics
5. Computational Systems Biology
6. Data Science
7. Statistics

These key concerns show how the effects of skills evolution spurred on by digitalisation will likely have a sustained effect on workforces in pharma, driving a computational, mathematical, and digital focus not only today, but in the future.

Bridging the skills gap: strategies for success

Outlining the long-term vision for the life sciences sector, Professor Sir John Bell's Life Sciences Industrial Strategy (LSIS) report states that the industry's success is "closely tied to the ability to train and recruit the best possible workforce, equipped with a breadth of critical skills."[18]

With this in mind, the following 7 strategies are built around empowering and upskilling teams at scale.

IDEAS TO ADDRESS THE SKILLS GAP THROUGH NEW TALENT AND RETENTION

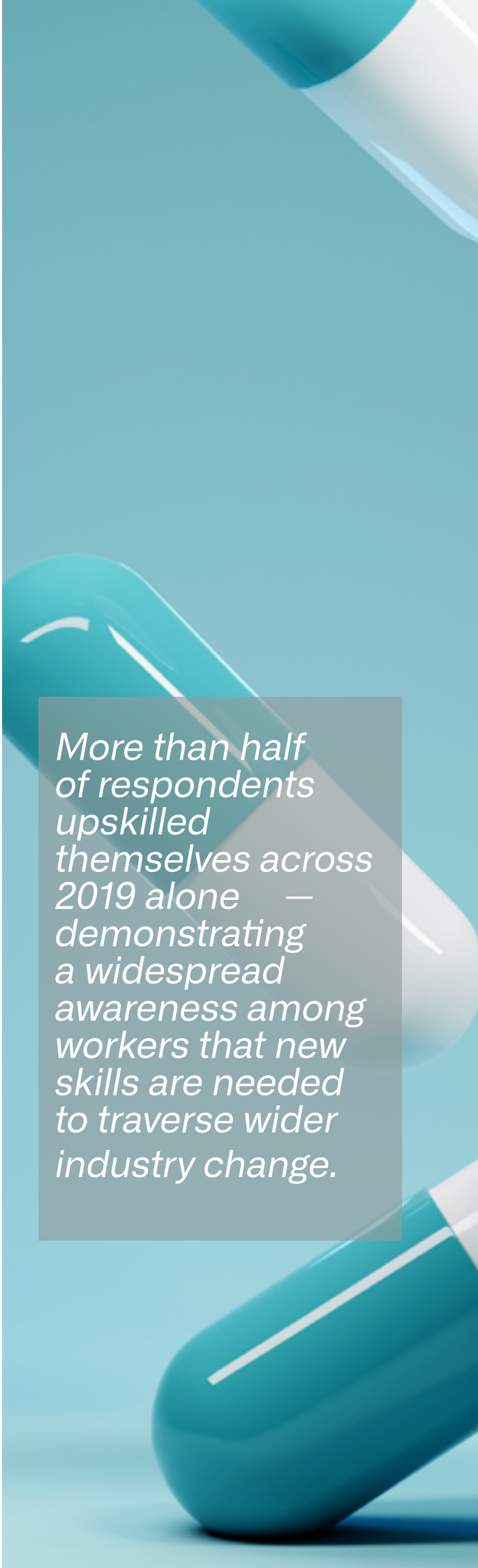
7 strategies to upskill your workforce

1. Encourage self-reliance and self-learning among employees

More than half of respondents upskilled themselves across 2019 alone[19] — demonstrating a widespread awareness among workers that new skills are needed to traverse wider industry change. Actively encouraging this inclination and positioning it towards core business functions is a cost-effective way to stay ahead of the curve.

2. Maintain crucial support mechanisms

While employees should be empowered to be more autonomous with their learning and development, this does not give employers the green light to dismantle support structures. For self-learning to become truly embedded across an organisation, L&D governance needs to be integrated with overall business strategy. This will ensure employees are directing their learning towards company goals and will provide them with the necessary support when needed.



More than half of respondents upskilled themselves across 2019 alone — demonstrating a widespread awareness among workers that new skills are needed to traverse wider industry change.

IDEAS TO ADDRESS THE SKILLS GAP THROUGH NEW TALENT AND RETENTION

Case Study

At QIAGEN[20], company culture is built around ensuring every employee has the opportunity to contribute their ideas, perspectives and ambitions, and generate actionable support.

This is achieved through global employee workshops with all employees and senior leaders. Additionally, professional development opportunities are intertwined within the employee experience to ensure that all employees upskill according to their motivations.

"Being the industry's employer of choice by attracting and developing top talent is one of our global goals. To achieve this, QIAGEN creates a work environment that empowers and involves employees at all levels. We are convinced that the professional and personal development of our employees is an integral factor in creating value for our customers, patients, colleagues, partners and shareholders"

Lucy Colgan, Talent Acquisition Specialist, QIAGEN

3. Forge strategic partnerships with academic institutions

Having an alliance in place with a school, university or STEM research centre can help fast-track bright young talent into the right positions at your business. On an industry level, this consolidates and strengthens two of the core routes into a career in life science: academic education and vocational education.

IDEAS TO ADDRESS THE SKILLS GAP THROUGH NEW TALENT AND RETENTION

This, in turn, provides the workforce with more career agility — boosting vital skills like adaptability and flexibility in the process.

4. Set up internal training bodies or online academies

Building an in-house training program carries two key benefits: it equips employees with sufficient organisational knowledge and ensures they have the most up-to-date industry know-how. While some firms may not have a sufficient training budget, reskilling existing employees is a much more worthwhile investment than the costly task of hiring new employers to address skills shortages. Moreover, a targeted training scheme optimises the onboarding of new staff and frees up valuable time.

5. Launch an apprenticeships initiative

Though some SMEs with smaller budgets may be reluctant to take on apprentices, government financial assistance (the UK government's Apprenticeship Levy is a prominent example) is incentivising such schemes. And while apprenticeships may not address immediate skills shortages, they represent an economical way to prepare your workforce for the future.

6. Expand the candidate search

Your company's recruitment marketing strategies should take a proactive, multichannel approach.

Building an in-house training program carries two key benefits: it equips employees with sufficient organisational knowledge and ensures they have the most up-to-date industry know-how.

IDEAS TO ADDRESS THE SKILLS GAP THROUGH NEW TALENT AND RETENTION

This includes keeping vacancies up-to-date on the website, spreading the word on social media, and adding more touchpoints to the candidate journey. Attention should also be paid to employer branding - if a company is perceived as undesirable to work at, applications will remain low.

7. Leverage the expertise of older employees

Given that more than a million people over the age of 65[21] work on a part-time or consultancy basis in the UK, life-science companies would be foolish not to call upon such a skill set. Aside from providing the valuable experience that may otherwise be lacking, such staff can be deployed as mentors for promising young employees. In turn, younger staff can share the tech and digital skills that can often be underdeveloped among older employees.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

Collaboration in pharma has evolved past outsourcing – new workforce ecosystems are beginning to emerge, where in-house employees work alongside a diverse mix of external contributors.

From technology firms specialising in AI, to insourced teams to repair skills gaps, successful companies are forging partnerships to ensure they maintain consistent access to the best talent, both inside and outside of their core teams.

How AI collaborations improve drug discovery

Less than 10% of drug candidates that make it to clinical trials progress to market[22].

A lack of knowledge on the 3d structure of drug compounds and targets, as well as a reliance on animal models that fail to accurately represent human physiology, are just two factors underlying this limited success rate.

Jackie Hunter, CEO of Benevolent Bio, a division of Benevolent AI, says that half of those failures are fundamentally due to a lack of efficacy. In an interview with Ernst & Young[23] she describes how the frequency of failures shows that "we're not picking the right targets", and that "even a 5 or 10% reduction in efficacy failure would be amazing".

By leveraging data and machine learning, AI technology can improve efficiency across every stage of the drug discovery process, including:

Jackie Hunter, CEO of Benevolent Bio, a division of Benevolent AI, ...describes how the frequency of failures shows that "we're not picking the right targets", and that "even a 5 or 10% reduction in efficacy failure would be amazing".

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

- Initial prediction of the target protein's role in disease
- Design of in silico compounds from libraries to improve structural knowledge
- Novel target identification
- Prediction of the structure-activity relationship
- Prediction of ADMET properties
- Selection of ideal patient population for clinical trials
- Observation of adverse effects

AI-enabled research: Astra-Zeneca's success story

AstraZeneca began working with Benevolent AI, a clinical-stage AI drug discovery organisation in 2019 in order to identify new targets for chronic kidney disease, and idiopathic pulmonary fibrosis.

Since then, Benevolent AI's Platform has identified two novel targets that have been experimentally validated and selected for AstraZeneca's portfolio[24].

Professor Maria Belvisi, SVP and Head of Research and Early Development at AstraZeneca discusses positive impact of the partnership,[25] saying "our ongoing collaboration with Benevolent AI has enabled us to leverage the world's available scientific literature and our in-house experiments, all brought together

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

through machine learning to identify previously unrecognised links."

How partnerships strengthen pharmaceutical operations

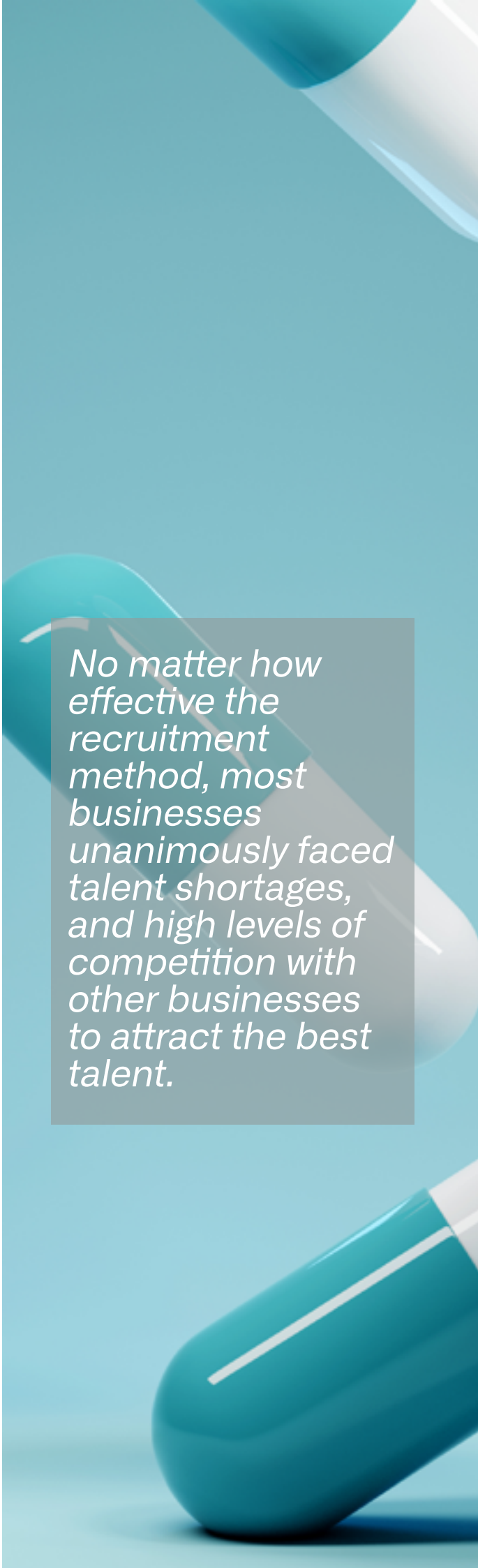
Rising competition for talent has led to many businesses being unable to scale at the pace needed to meet the requirements of developing projects. During the pandemic, this became particularly clear as workforce shortages led to bottle necks in the manufacturing process, inhibiting the potential of COVID-19 therapies and diagnostics with a shorter lifecycle.

Some pharma businesses with robust connections into the talent market, had a greater capacity to scale alongside priority projects during COVID-19. However, no matter how effective the recruitment method, most businesses unanimously faced talent shortages, and high levels of competition with other businesses to attract the best talent.

Whether choosing permanent staff, external contractors or an integrated onsite scientific service, organisations are faced with an array of viable options for talent acquisition to navigate according to their needs, and priorities.

A reputable, experienced and forward-thinking recruitment consultancy, such as SRG, can offer holistic talent services often combining multiple recruitment options to generate a powerful and tailored approach for clients.

No matter how effective the recruitment method, most businesses unanimously faced talent shortages, and high levels of competition with other businesses to attract the best talent.



HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

Recruitment experts such as SRG work with world-leading pharmaceutical organisations, combining permanent and contract recruitment options to create a one-point-of-contact talent system that streamlines and amplifies the overarching recruitment strategy.

For example, SRG have worked with international drug delivery mechanism specialists Quay Pharma, helping to reform and optimise their recruitment strategy by overcoming a non-targeted approach to talent acquisition, and low headcount.

By appointing an on-site recruitment business partner to manage end-to-end recruitment, and equipping them with expert resources, consultants and talent pool, SRG comprehensively optimised the organisation's talent strategy. This support enabled the rapid placement of 27 roles, on top of the creation of an improved overall talent strategy, and formal processes to streamline and enhance future talent acquisition.

Meanwhile, onsite scientific services are proving a successful alternative for organisations across the pharmaceutical sector. Scientific service businesses integrate a fully trained team of lab professionals onsite to deliver the work needed, following a scope of work, while proactively managing training, ensuring compliance, continuity and back-office support (payroll, HR administration).

Synergy[26], SRG's onsite scientific services business provides an example of this service in action.

srgtalent.com

SRG have worked with international drug delivery mechanism specialists Quay Pharma, helping to reform and optimise their recruitment strategy by overcoming a non-targeted approach to talent acquisition, and low headcount.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

Synergy worked with Cignpost Diagnostics, a COVID-19 screening and onsite testing provider, and rapidly grew an agile rapid response team of 300 experts, despite industry labour shortages. Synergy's agile approach and capabilities are in part down to its links to the talent sector. Unlike many other organisations, Synergy is embedded within the SRG group and benefits from direct access to the best talent - this enables Synergy to consistently deliver responsive and scalable workforce support.

How to navigate the management of an agile, diverse workforce

According to research from McKinsey, talent management is the most powerful way to achieve laboratory success[27].

Of the six core practices influencing lab productivity, talent management was the most closely correlated with success, and the most accessible opportunity for improvement. Talent management was defined in the research as managing talent effectively and appropriately throughout the employee journey, from selection and recruitment to development and rewards.

This means that in environments where talent was recruited for potential into diverse teams, well nurtured, and recognised, performance and productivity accelerated.

However, given the complexity of the laboratory environment, these talent management practices can be challenging for leaders to reliably establish.

According to research from McKinsey, talent management is the most powerful way to achieve laboratory success.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

McKinsey's research found that all surveyed researchers (including industry leaders) described talent management as the area most in need of improvement[28].

Over the course of the COVID-19 pandemic, laboratory management has become increasingly vulnerable to industry demand[29].

Scaling an exponential influx in production has been a core challenge for a sector traditionally designed to sustain a customised volume of tests for the local health sector.

Under these pressing circumstances, resources were largely deployed across laboratories without an efficient communication network.

Current industry changes have led to the following key challenges:

- Rapid expansion demand of testing capabilities
- Laboratory medicine and personnel shortages
- Heightened productivity demand

5 key leadership strategies for laboratory managers

1. Prioritise your people

Laboratories rely on two fundamental resources; equipment and staff.

Leaders must prioritise their staff according to their laboratory's goals, ensuring that test types, employee skill sets, and equipment types are all optimally aligned to enable the best possible performance.

Over the course of the COVID-19 pandemic, laboratory management has become increasingly vulnerable to industry demand.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

Regularly evaluating staff to understand their developing skill sets, and interests in other areas is important to recognise underutilised potential and enable better task scheduling.

When a leader can allocate staff to tasks that match with their skills, they not only facilitate the success of the project, they improve employee motivation and productivity.

Research shows workers selected for a project based on research experience are more likely to achieve project success, and have a better overall performance compared to their peers[30].

2. Enable professional growth

Research shows that a laboratory professional's growth is linked to total organisational success[31].

Laboratory managers should familiarise themselves with their own personal strengths and weaknesses. To enable successful leadership, laboratory managers should foster self-awareness, ensuring that the mission of the organisation remains at the core of their work, and strategy even across busy periods.

Meanwhile, investing in your team and enabling the professional growth of staff is an equally important area of focus. The dynamic nature of the clinical laboratory requires a workforce with a growing skill-set to match the technological developments and innovations in the sector.

Facilitating this means taking the time to provide further opportunities in areas of expertise, and potential.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

This could be as simple as senior team members mentoring new researchers in solo sessions or providing annual personal development plans.

3. Communicate plans for the unexpected

As has become evident over the course of the pandemic, alternate work planning can rapidly become crucial to business continuity. It's important to align your alternate work planning with the needs, and goals of your organisation.

Staff should understand what alternate work plans could look like, and information on where to seek advice outside of the laboratory in case of an emergency should be made readily available.

By working with a specialist recruitment agency, businesses gain access to expert recruitment consultants who proactively work alongside organisations to ensure that talent selection and recruitment is conducted in a receptive and flexible fashion, enabling businesses to scale appropriately with the best talent.

These recruitment specialists could also activate flexible recruitment solutions through local onsite engagement to meet the changing needs of businesses, while looking for additional routes to contribute value. Expert advice and guidance could be offered around pay-rate benchmarking, market trends, high performer profiling, employee engagement surveys, exit interviews and early talent programmes, to support an agile and effective talent strategy.

HOW TO FUEL COLLABORATION: WHY MORE BUSINESSES ARE WORKING TOGETHER

4. Create opportunities for succession

When a core manager leaves, the laboratory can quickly become vulnerable and in need of strategic direction. If the previous manager has established development plans and supported potential leaders in developing the key attributes required to succeed, the laboratory can better recover and avoid costly interruption.

By creating opportunities for succession, laboratory leaders help support both the future of the laboratory and the career progression of their high-potential staff.

5. Align staff with a common goal

In the resource-constrained environment of the laboratory, managers have a crucial responsibility in the meaningful existence and success of the organisation. Leaders that have a vision of what their work will accomplish, communicate this to staff, and evolve strategies for realising that vision, improve the motivation and productivity of the workforce. This is because they are better able to negotiate for resources, and support systems to achieve their goals.

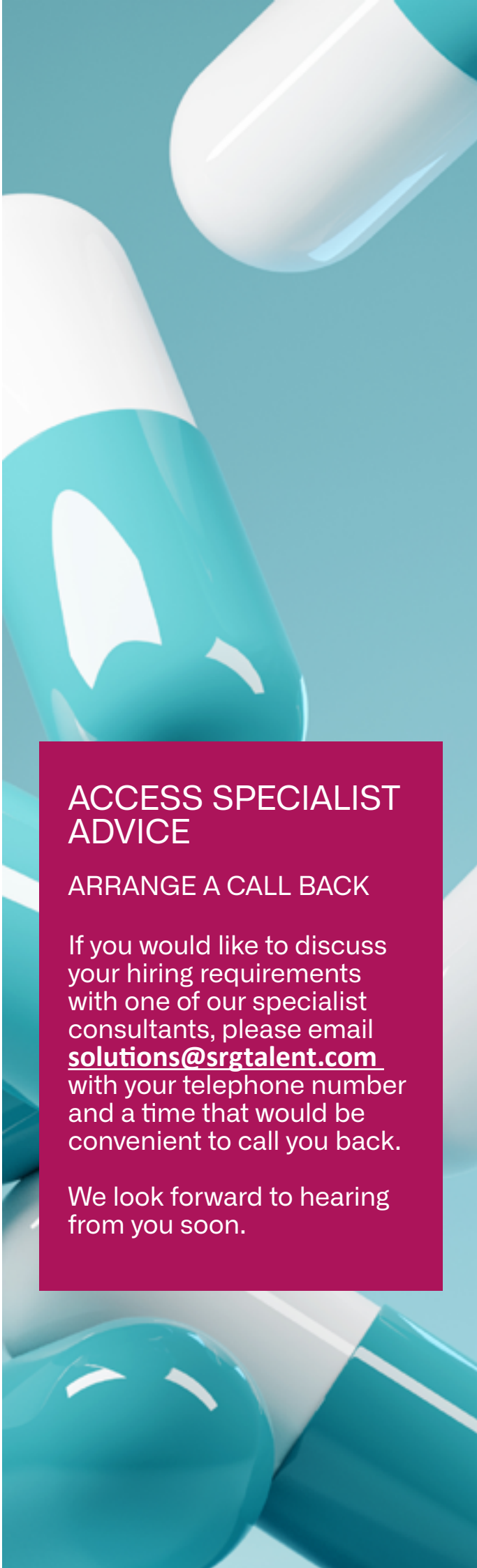
CONCLUSION

Digitalisation is rapidly transforming the pharmaceutical landscape and paving a route to faster, more efficient drug discovery and development. In this climate of transformation, leaders across the industry are focused on upgrading workforces to meet new demands through initiatives including upskilling, recruitment, as well as new collaborations to strengthen organisational capacity, and improve technological access.

Key takeaways

- Rapid digitalisation in the sector is driving the need for new skills
- Optimising talent management is crucial to curb skills shortages
- Collaboration and cross-brand drug development are creating a dynamic talent landscape

At SRG, our specialist team of pharmaceutical consultants are on hand to guide, and support your candidate attraction and retention strategy, connecting you with the expertise you need today. From contract work, permanent roles, to using our own scientific teams that deliver your goals, we have the capacity to not only fulfil your business requirements, but also help your business thrive and future-proof itself.



ACCESS SPECIALIST ADVICE

ARRANGE A CALL BACK

If you would like to discuss your hiring requirements with one of our specialist consultants, please email **solutions@srgtalent.com** with your telephone number and a time that would be convenient to call you back.

We look forward to hearing from you soon.

REFERENCES

1, 3, 4, 5, 7, 8: Accenture: Accelerating growth through tech partnerships

2: Deloitte: Intelligent drug discovery

6: Xcelpros: Top 8 Challenges of Pharmaceutical Supply Chain in 2021

9, 11, 12, 14: McKinsey & Company: Pharma operations: Creating the workforce of the future

10: IPSE: Pharma 4.0™: Hype or Reality?

13, 15, 17:ABPI: Bridging the skills gap in the biopharmaceutical industry

16: SRG: 2022 Candidate Attraction and Retention Guide

18: Gov.uk: Life sciences industrial strategy update

19: SRG: 2021 STEM Survey

20: Qiagen

21: AVIVA: Working after retirement - the facts

22: National Library of Medicine

23: EY:Biotechnology Report 2017. Beyond Borders. Staying the course

24, 25: Benevolent

26: SRG: Synergy Scientific Services

27, 28, 30: McKinsey & Company: How the best labs manage talent

29: Wiley Online Library: COVID-19-another influential event impacts on laboratory medicine management

31: National Library of Medicine: Leadership in the clinical laboratory: strategies for change

srg

Creating tomorrow's world

www.srgtalent.com