

Democratising Scotland's Data Talent

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Campaign Sponsor

MERKLE

Value of Data

DM
Data &
Marketing
Association **A**

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/ Foreword



Developing talent is business's most important task – the sine qua non of competition in a knowledge economy.

Now more than ever, this quote from management guru Peter Drucker is pertinent to data skills and talent nurturing, and to the progress we're making in Scotland's aspiration to become 'the data capital of Europe'.

As a passionate data professional, first hearing of this goal - with the promise of significant inward investment and the dedicated focus that the Data Driven Innovation (DDI) Programme would provide in terms of achieving it - was great news; a recognition of the many years spent fighting the good fight for investing in data skills and helping Scottish businesses see the value that data could bring to their organisation.

To realise our collective ambition, Scotland's data economy must recognise the need to continue to embrace fundamental change and reap the rewards investment in data can bring. A key aspect of this is continuing to fund enhanced data skills while adapting the way we nurture talent.

A relentless focus on helping the data economy recognise the value that investment in data brings is a continuous theme for DMA Scotland. It remains our belief that a philosophy of nurturing and promoting data talent must embrace all of the touchpoints where 'data' should be taught and used, from classroom to boardroom.

We now challenge all stakeholders in our data economy to widen the scope of their data talent nurturing efforts, by shifting the focus of investment to a wider pool of current and future employees. In so doing we can truly deliver on the Value of Data promise; failure to do so will arrest the ongoing growth of Scotland's data economy.

Our paper, Democratising Scotland's Data Talent, brings together insight and commentary from across the data industry. It also seeks to provide direction that we believe will contribute to addressing the imbalances we see in the development of data skills data skills and nurturing of talent.

Taking action now is crucial in a time of constant change when the Coronavirus pandemic is undoubtedly disrupting norms in our daily and professional lives. We urge you to become part of the debate and continue to fight the good fight in helping Scotland, by broadening the scope of how we build and harness data skills and talent, become the data capital of Europe.

Howard Barber,
Vice-Chair, DMA Scotland

/ Foreword - Merkle

Our Merkle office in Edinburgh is a hub to both our Analytics and Performance Media teams. Both are passionate about offering opportunities to entry level candidates through our Early Careers programmes. We know that the Digital and Data Marketing industry suffers from both a war for talent and a lack of talent diversity and so our aim is to offer an inclusive environment that enables candidates to launch their career in our industry.

Our Scottish leaders are passionate about nurturing talent. For example we have just launched a mentorship programme in conjunction with Black Codher; a training programme designed for black women to learn new coding skills. Championed by Vicky Byrom, our Analytics VP in Edinburgh, we now have 8 UK leaders who have volunteered to mentor a student every week for the duration of the course to help support them with their work enabling them to achieve whilst inspiring them to pursue a career in the Digital and Data sector.

This is just one example of the many initiatives we are running across our business to help provide opportunities for entry level talent. We do not see diversity as a tick box exercise. It runs through the core of everything we do and every decision we make with our most senior leaders driving these initiatives.

Hanna Neuborn

*Senior Director, Talent Acquisition Lead – EMEA
Merkle*

/ Introduction

Despite the many challenges being forced on business by the Covid-19 pandemic there remains a huge opportunity for Scotland to achieve its goal of becoming 'the data capital of Europe'.

The nation already boasts a vibrant technology sector, not least in and around Edinburgh where large financial services firms have set up shop and the Data-Driven Innovation programme (DDI) is up and running.

As data plays a more important role in the daily lives of professionals and citizens alike, so a raft of new data-focused roles is being created. It's fair to say a level of data literacy is needed in most modern professions, even when it isn't always central to someone's daily activity.

But recruiting for data roles is difficult. Experts point to issues including a limited pool of talent prompting a skills shortage; disparity between public and private sector salaries; and unconscious bias in the hiring process.

So how can Scotland ensure it is creating a constant stream of skilled employees to staff the spectrum of data roles that firms need to fill?

In this paper - the latest instalment of DMA Scotland's Value of Data campaign - we call on a range of experts to examine the potential post-Covid data talent pool; and suggest ways to find and engage with the right people, even those who haven't considered a career in data.

Then we focus on the growing business case for action: how organisations can recruit and train a more diverse workforce, strengthening their team's data skills and customer relationships into the bargain.

Finally we set out an overview of the DMA Scotland Talent Hub's programme to spark conversations about data skills among employers, academic experts, recruiters and others who have a key role to play in shaping an exciting future for Scotland's data industry.

Ultimately, success means pulling together to democratise data roles and build a workforce that is far more diverse - in every sense of the word.

/ Data Skills - New Challenges



Now is a perfect storm. There are skills shortages in tech roles here and globally. What can be done to make data roles relevant, engaging and inclusive?

Alison Muckersie,
Programme Lead, DDI Skills Gateway.

Even before Covid-19 struck, many organisations were starting to reconsider how to recruit for roles in a burgeoning data economy.

In nine British cities - including Glasgow and Edinburgh - tech companies account for a fifth of all employment¹. Covid hasn't poured cold water on the sector. The number of advertised vacancies has climbed 36 per cent since early June - the highest rise outside healthcare - according to Tech Nation.

Data-Driven Innovation (DDI) - a 15-year programme that forms part of the Edinburgh and South East Scotland City Region Deal - states 90% of jobs already require data skills. In Scotland, employers expect big data and analytics to be the most urgent emerging technology skills need in the future, according to research by Skills Development Scotland (SDS).

The digital industry offers parallels: according to the report, 48% of firms had digital technology vacancies pre-pandemic, largely due to a lack of required skills and too much competition for candidates with the skills required. The World Economic Forum has also voiced concerns about a data skills gap².

Constantly changing economic circumstances are affecting data roles across all sectors. But data's value to employers is even more important in a harsh environment.

Data is coming to the forefront of daily life as never before: witness the high-profile deluge of graphs and stats around Coronavirus and an economy in flux.

Scotland already has a strong platform for growth in data and everything to gain from future growth that looks bright.

¹ <https://www.thetimes.co.uk/article/tech-firms-blaze-trail-with-huge-jobs-drive-jbr507j07>

² <https://www.weforum.org/agenda/2019/03/the-digital-skills-gap-is-widening-fast-heres-how-to-bridge-it/>

So what might hold us back? Let's take a look at some emerging barriers to success:

1) Constant Change



After Covid, firms that didn't think they needed data now see things differently.

Paul Moir,
Global Resourcing Manager, Insights



The pandemic has heightened the existing data skills issues. As we move forward we must respond to the creative industries' needs with both skills and innovation support to explore hybrid (physical and digital) business models that will assist recovery and adaptation to a new normal.

Caroline Parkinson,
Sector Lead - Creative Industries, DDI

The pandemic is inevitably affecting employment across many sectors and the full effects won't be known for some time.

Brexit will also shape workforce requirements. While some fear the UK will miss out on data talent choosing to study and work elsewhere, others believe it's an opportunity to call on data-driven expertise from other locations - such as Asia - to fill roles while homegrown talent is honed.

Meanwhile, a survey of UK advertising agencies by Campaign magazine³ found only one large agency had even begun to investigate a perceived sectoral ethnicity pay gap.

All of these issues point to the current high level of flux in business which could add further challenges to the growth of the data sector.

³ [https://www.campaignlive.co.uk/article/one-top-uk-agency-reveals-ethnicity-pay-gap-blm-audit/1693815?bulletin=campaign_breakfast_briefing&utm_medium=EMAIL&utm_campaign=eNews%20Bulletin&utm_source=20200909&utm_content=Campaign%20Breakfast%20Briefing%20\(263\):&email_hash=](https://www.campaignlive.co.uk/article/one-top-uk-agency-reveals-ethnicity-pay-gap-blm-audit/1693815?bulletin=campaign_breakfast_briefing&utm_medium=EMAIL&utm_campaign=eNews%20Bulletin&utm_source=20200909&utm_content=Campaign%20Breakfast%20Briefing%20(263):&email_hash=)

2) Diversity In Reverse?

Ethnicity isn't the only worry around diversity in data employment. There is clearly potential for inclusive employment practices to be diluted as many businesses seek to rebuild from Covid's shattering blow: McKinsey found 27% of global firms had already shelved D&I strategies by May 2020 (source: Financial Times).

A recent survey by Harnham⁴ laid bare the data industry's diversity issues, including a 70/30% job split in favour of men.

The report also states three quarters of roles are held by white men, while just 37% are aged over 35. And, while almost a fifth of the UK workforce state a disability, just 3.3% of data employees do so.

Yet diversity and inclusion still matter greatly and can power business to recovery: according to the Wall Street Journal, the 20 most diverse companies in the S&P 500 achieved higher operating profit margins than the bottom 20 (12% v 8%). The risk of D&I being sidelined is therefore a cause for concern.



Make your recruitment strategy focus on diversity. I would be doing a terrible job if I only recruited people like me.

Duncan Bain,
Senior Data Scientist, ScottishPower

3) Defining The Skills Gap

Where does digital end and data begin? That's a huge issue when considering skills requirements and the curriculum for all levels of education and training.

Too often, data skills are thought of as specialisms in computer science or maths but the lines are increasingly blurred, with the terms often interchanged. Lots of communication roles require data knowledge, for example; still more modern jobs in a range of sectors mean employees need a grounding in Excel.

A thriving data economy requires construction of clear pathways from classroom to boardroom, open to people from all backgrounds. That begins with a debate about what's data, what's digital, and how potential employees can understand the difference to advance their careers.

⁴ <https://www.harnham.com/harnham-uk-data-analytics-diversity-report-2021>

It matters: Experian research shows 80% of firms rank data as one of their most valuable assets, but only a third (30%) have a formal data literacy programme in place. Data was also ranked by employees as the biggest skills gap in the IDM Professional Skills Census 2018⁵. Urgent investment in ongoing training is required from businesses but isn't always forthcoming: less than a fifth of respondents reported receiving data training by their employer.



I don't think we have this [digital/data] issue at ScottishPower because of the way we're structured. However, it's often the perception in the marketplace. We make a point of listing backgrounds in the sciences and social sciences as being desirable in our ads to try to widen the pool.

A larger part of the challenge, and one we can't address solely as employers, is persuading entrants their skills in adjacent disciplines might be valuable in data - sometimes more valuable than raw coding ability.

Duncan Bain,
Senior Data Scientist, ScottishPower

4) Undervalued Talent

While the signs are good for Scotland's data economy, salaries must remain competitive. Some observers worry a 'brain drain' could be the consequence of undervaluing skills.

This could come in the form of people quitting for roles in other countries but may just as likely involve a shift to jobs in other sectors, for example from relatively low-paid public sector data positions to better-rewarded private sector work.

Even in the private sector pay issues and a skills shortage could give rise to a 'merry-go-round' of talent or feed a contractor culture, which experts fear would inflate staff costs to unsustainable levels.

⁵ https://www.theidm.com/uploads/ckeditor/IDM_Skills-Census-Report_V13.pdf



The public sector is on a journey to understand what a 'data-driven future' means for them. We need to help employers develop new ways to value data skills, such as introducing processes to retain and develop specialist skills, or the public sector will continue to train people who then move into the private sector.

Gemma Cassells,

Public Services Lead for DDI Programme at the University of Edinburgh

These and other challenges reveal creases in Scotland's roadmap for data excellence. Yet with the sector already on a firm footing, goals can be realised by focusing on the compelling business case for growth.

/ Data For Good: Benefits Of Diverse Skills



Look how important data has been during the pandemic. Everybody has become a data citizen as you are trying to understand what the numbers mean for you. It helps with communication of the importance and growth of the data economy.

Anna Scott,
*Project Delivery Manager,
DDI Skills Gateway (Data Skills for Work) at The Data Lab*

There are myriad benefits to building an even stronger data sector in Scotland by widening its skills scope. Let's examine some of the main outcomes to help build a business case for identifying and developing data talent:

Improving Data Literacy

Society as a whole stands to benefit if data skills are improved across the board. As part of its programme, DDI focuses on three levels of data literacy: data citizens, data workers and high-end data professionals.

Ideally, all citizens would understand what data is created by individuals and communities, for example via Smartphones, and be confident with new technology and responsibilities surrounding it.

Then there is the imperative to help workers whose roles will be altered by Artificial Intelligence understand what their future career looks like. The picture isn't necessarily bleak, because as some roles are taken over by tech others will be created for workers as they are given the opportunity to retrain. Carers working alongside robots, and fleet managers overseeing autonomous details are two examples of roles that will evolve and require new skill-sets.

Finally, as the tech economy grows specialist data skills will be required, from engineering to data visualisation and communication. Skills in these areas are currently at a premium and strategies to boost them are to be welcomed. As an example, the Scottish Government has extended its Digital Start Fund to people changing careers, which will include data science training, with DDI also aiming to build on the initiative.



Skills open doors. For many data workers it shouldn't need to be more complicated than knowing how to gather, interpret and present information. We're not expecting everyone on our programme to become high-end professionals, but we want to begin them on a journey to consider what they could do next in data.

Alison Muckersie,
Programme Lead, DDI Skills Gateway

Demystifying Data

It's fair to say a proportion of the public is sceptical about the use of personal data by organisations. Some professionals are just as cautious: two fifths of firms polled by Experian believed their workers don't trust data insights used by their employer.

Greater data literacy would doubtless tackle some of these misgivings and misconceptions. Wider acceptance of data's use in many facets of society would benefit the sector no end. It will be vital to educate people about the value of data, whether in their personal lives or work.

At present, there's evidence that even established data skills programmes prefer to label interactions as 'digital' when involving the public and even some professionals, to avoid "scaring people with data" as one expert puts it.

This reluctance to teach individuals and workers about data as a force for good must be tackled through continued education and advocacy. The Edinburgh Living Lab - a partnership between the University of Edinburgh and City of Edinburgh Council - seeks to involve communities in and around the city in data-driven initiatives including local services design. The programme has been well attended, and although the pandemic has meant switching to a remote format its leaders believe it could be replicated elsewhere.



Most community participants would not specifically say “I’m data literate” because of The Living Lab, but they do have an understanding of how they could use information to advocate for what their communities need, which fits our definition of data literacy and our ethos.

Gemma Cassells,

Public Services Lead for DDI Programme at the University of Edinburgh

A Route To Profit

Ultimately, commercial organisations’ twin objectives should be to better understand their target market and to boost profits. Data is the key to both.

At present there is a gap between articulation of the data skills problem and the delivery of potential solutions - such as creating and organising the right blend of skills to underpin successful business outcomes. That means recognising data impacts every role across an organisation and not keeping those skills in silo.

A more diverse workforce featuring employees from a wide range of backgrounds is far more likely to represent a broad customer base. Adding customer knowledge to a team’s ability to better target individuals through data expertise is a potent mix.

If increasing data literacy and reducing scepticism leads to better business, that’s a powerful commercial case for investment in the skills that are necessary to drive the sector forward.

This begs the question: who has those skills in the ‘new normal’, post-pandemic - and how can organisations attract them?



A more diverse workforce means you’ll reach more customers, because different perspectives are represented within your organisation.

Anna Scott,

Project Delivery Manager

DDI Skills Gateway (Data Skills for Work) at The Data Lab

/ The New Data Talent Pools

DMA Scotland has identified three key pools employers should tap for talent to create a more diverse workforce and bring in wide-ranging data skills.

Each group is set out below, featuring an overview of individuals to target; a closer look at their challenges and opportunities; and some of the existing initiatives under way to encourage them to choose a career in data.

Pool One: Starting Out (5 To 24)

- Primary and secondary school
- School leavers
- Vocational
- Apprenticeships

Schools

Who are they?

It's important to note not all children have access to technology from an early age. Those who do, however, are also underserved by the classroom and extra-curricular opportunities.

Awareness is children's biggest barrier: do they realise data roles are vital, widespread and accessible, and which subjects they will need to study?

As part of the solution, emphasis should be placed on teaching girls: digital skills - and data, it follows - are far more attractive for boys (84%) than girls (56%)⁶.

In addition, females represent just a fifth of pupils studying National 5 Computing Science⁷.

⁶ <https://www.skillsdevelopmentscotland.co.uk/media/42478/tackling-the-technology-gender-gap-together-2.pdf>

⁷ <https://www.scotlandis.com/blog/gender-imbalance-in-tech-industry-starts-at-school/>

Who's targeting them?



Data has to be seen as a cool place to go - that it's the job of tomorrow but the opportunity is now. What's the pathway to get into data roles, and how can schools, careers advisers and universities help young people join the dots?

Paul Moir,
Global Resourcing Manager, Insights

Moves are afoot to remedy the lack of focus on skills that will prepare tomorrow's workforce. The Scottish Government's Enhanced Digital Strategy for school learning got under way in 2016⁸. Meanwhile, DDI has reshaped its education programme during the pandemic to create a virtual community of 'hub schools'. They are knowledge sharing centres that collaborate on training and best practice for data-driven learning among children.

DDI has also gained insight from a curriculum mapping project, which has identified where data skills are already being taught across the curriculum. Meanwhile, the team has also worked with SQA on the development of a National Progression Award in Data Science, the subject's first school-based qualification in Scotland⁹.

In 2019, more than 70 schools from across Scotland took part in the Digital Schools Awards¹⁰: a national scheme to promote, recognise and encourage new approaches to the use of digital technology in nursery, primary, special education and secondary schools.

The ceremony saw a total of 114 schools recognised for their digital efforts and, for the first time, nursery schools were officially recognised by Education Scotland for their commitment to promoting digital skills in the classroom. Could a similar scheme be introduced for data?

⁸ <https://www.gov.scot/publications/enhancing-learning-teaching-through-use-digital-technology/pages/1/>

⁹ <https://www.sqa.org.uk/sqa/91458.html#:~:text=5%20and%206,National%20Progression%20Award%20in%20Data%20Science,level%204%2C%205%20and%206&text=They%20are%20the%20first%20school,future%20employment%20in%20this%20area.&text=The%20qualification%20is%20available%20through%20schools%2C%20colleges%20and%20training%20providers.>

¹⁰ https://digit.fyi/first-scottish-nurseries-recognised-at-digital-schools-awards/?inf_contact_key=f4633ace61ec98fbd-624f1055050a69a680f8914173f9191b1c0223e68310bb1



It is important for the education system to address the gender imbalance in STEM through the school curriculum, but it is essential that industry takes strides to attract and retain women in STEM careers. 70% of women with a STEM qualification leave STEM, but we are dealing with a skills shortage and we can't afford to lose any talent due to poor recruitment and working practices or lack of progression opportunities for women.

Aileen O'Hagan,
Industry Recruitment Co-ordinator, Equate Scotland



Employers will need support, and the government should do more in my view. It's important for schools to make sure that people from diverse backgrounds have the same opportunities throughout schooling; so when they begin their journey into the working environment they aren't harbouring negative thoughts about the world and their opportunities.

Miles Skelton,
Founder, MVMNT

School leavers

Who are they?

The plight of school leavers is recognised. According to ONS figures in September 2020, more than one in eight 16- to 24-year-olds (13%) were unemployed, compared to the UK jobless rate of 4.1%.

The Prince's Trust found more than one in three young people have "lost hope" of landing their dream job due to the pandemic. Some 44% had lower aspirations for the future¹¹ and this rose to half of children from poorer backgrounds.

Coronavirus has affected the entire learning spectrum. While online courses will undoubtedly suit some students better, there's a risk they'll miss out on vital face-to-face mentoring from experienced workers in many sectors. For example, they may have some qualifications but limited exposure to learning soft skills.

Even after leaving school, apprenticeships and vocational training are crucial for many young people. There's no reason why this shouldn't be a golden opportunity to teach and nurture data skills that will be needed for many future roles.



Apprenticeships are a key part of both the UK and Scottish Governments' strategies and marketing should be part of this conversation for its future talent needs. There are apprenticeships available for creative, data and broader marketing roles from marketing executive levels to managerial positions. It is a key opportunity for the UK data and marketing industry to diversify its workforce.

Kate Burnett,
General Manager, DMA Talent

¹¹ https://www.bbc.co.uk/news/business-54329554?xtor=ES-208-%5B36066_News_NLB_Wk41_Tue_29_Sep%5D-20200929-%5Bbbcnews_princes_newsbusiness_princes%5D

Who's targeting them?

In September 2020, the UK government launched its Lifetime Skills Guarantee¹². Prime Minister Boris Johnson announced, "We are short of skilled construction workers, and skilled mechanics, and skilled engineers, and... hundreds of thousands of IT experts," while also admitting, "...our post-18 educational system is not working... to endow people with those skills."

The policy is set to expand apprenticeships to now include SMEs as well as larger firms. It also gives every student a flexible life-long loan entitlement to four years of post-18 education; extends 'digital bootcamps'; and funds free A-Level equivalent technical courses.

In Scotland, SDS is supporting more than 12,000 employers to offer apprenticeships through the Our Skillsforce¹³ programme. The mission of the Scottish Apprenticeship Advisory Board (SAAB) is to give industry a leading role in developing apprenticeships¹⁴. Meanwhile, the DMA has become an Intermediary Ambassador for technical education. The programme, run by DfE via the ESFA, sees DMA Talent champion apprenticeships, T-Levels and traineeships to members and prospective employers¹⁵.

Modern Apprenticeships are also proving a success. They help employers develop their workforce by training new staff and upskilling existing employees. Data analytics is one of the five MA frameworks.

In Modern Apprenticeship Statistics¹⁶ (June 2020), covering publicly funded MA activity, SDS reports apprenticeship starts increased to 29,035 in 2019/20, a little over the government's target of 29,000. However, the proportion of Modern Apprenticeship starts for 16-24s dropped to 61%, down more than 6% on the previous year.

It's encouraging to note 'IT and other services' is one of the top four occupational groupings by volume of starts - increasing each year since 2013/14 - while of all starts to STEM frameworks, almost two thirds (64%) were aged 16 to 24.

Nevertheless, with many disparate schemes targeting this talent pool it can be difficult for employers to know where to start.

Pool Two: Academia (16 To 30)

- Undergraduate, graduate, post-graduate
- College students and leavers

¹² <https://feweek.co.uk/2020/09/29/prime-minister-boris-johnsons-speech-on-adult-skills-the-full-text/>

¹³ <https://www.ourskillsforce.co.uk/>

¹⁴ <https://www.apprenticeships.scot/about/scottish-apprenticeship-advisory-board/>

¹⁵ <https://www.decisionmarketing.co.uk/news/dma-talent-joins-scheme-to-champion-apprenticeships>

¹⁶ <https://www.skillsdevelopmentscotland.co.uk/media/46765/modern-apprenticeship-statistics-quarter-4-2019-20.pdf>

Who are they?

As one of the groups most badly affected by the shockwaves of Coronavirus, graduates with an eye on a specific career may suddenly find themselves shifted onto alternative paths.

Meanwhile, there is a need to raise awareness among employers of skills that are nurtured and developed in the data field across a variety of courses at undergraduate level and to consider MSc data science courses for potential employees.

Academia should also consider promoting data skills development through non-data focussed courses, widening the pipeline of talent to include people who may think of data skills as different to the way employers currently view them.



How are universities, the industry and recruiters working together to recognise the variety of skills that are required to fulfil data roles and accommodating that through the process; and how can businesses look at the skills they already have and recognise the value in them? That would help identify gaps in what base skills are expected of new talent.

Kate Burnett,
General Manager, DMA Talent

Who's targeting them?

In summer 2020, First Minister Nicola Sturgeon unveiled what was dubbed a “youth guarantee”¹⁷. The Scottish Government aims to ensure young people do not carry the “economic scars” of Covid-19 into adulthood.

Under the proposals, everyone aged between 16 and 24 in Scotland will be guaranteed an opportunity at university or college, an apprenticeship programme, employment including work experience, or participating in a formal volunteering programme.

SDS states¹⁸ that the ecosystem that delivers skills and learning in Scotland must operate efficiently, supporting learners to smoothly transition into employment.

¹⁷ <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-53971947#:~:text=Young%20people%20will%20be%20guaranteed,scars%22%20of%20coronavirus%20into%20adulthood.>

¹⁸ <https://www.skillsdevelopmentscotland.co.uk/a-human-future-strategic-plan/scotland-2035-a-human-future/>

Through increased understanding of demand in the economy, and responsive skills planning and provision, it aims to ensure that the broader skills and learning system effectively meets the current and future demand of Scotland's economy, employers and people.

Meanwhile, the UK Government and the Office for Students has created a £24m fund for AI and data science conversion courses to persuade graduates to study for new skills¹⁹.

DDI is working with several colleges to develop courses that will introduce students to data science, contextualised in different subject areas to develop data literacy more widely - for example in the public health module of a nursing qualification.

But there is still likely to be a misunderstanding of data roles if perceptions of



Employers expressed an interest in [creating better links between education and industry] but did not necessarily know how to do this effectively. They also identified that as employers they can lack the knowledge and resources to understand how to effectively communicate the sector to young people, and to explain what these job roles and opportunities are in a simple and engaging way.

Skills Development Scotland²¹



Equate Scotland supports the recruitment, retention and progression of women in STEM... by supporting employers, training providers, colleges and universities to create inclusive working and learning environments through training and consultancy, as well as supporting women in these industries; by providing career development and networking opportunities.

Aileen O'Hagan,
Industry Recruitment Co-ordinator, Equate Scotland

¹⁹ <https://www.decisionmarketing.co.uk/news/new-blitz-to-combat-2bn-data-science-skills-shortage>

²⁰ <https://www.marketingweek.com/everything-that-matters-this-morning-21-september-2020/>

²¹ <https://www.skillsdevelopmentscotland.co.uk/media/42478/tackling-the-technology-gender-gap-together-2.pdf>

Pool Three: Getting On (25 To 60)

- Needing or wanting lifestyle/career change, unaware of choices
e.g. ex-military
- Neurodivergent and other diverse groups

Who are they?

They make up the vast proportion of the total workforce. They're seeking a change, often through necessity due to their career being cut short by Covid. They're the potential hidden heroes of data: pilots forced out of aviation, oil & gas experts fleeing a burning industry, ex-armed forces personnel who'd be ideal in data-driven jobs.

They're neurodiverse people, or from a range of overlooked ethnic backgrounds.

They're also mums returning to work after bringing up children, 1 in 6 of whom are struggling to find childcare (Financial Times). Equate Scotland says barriers include a lack of flexible working and senior part-time roles; access to training or upskilling opportunities; gender stereotyping and a lack of role models.

Some of these groups may have been shut out of the academic route to data skills, unsure of or unable to take the existing, narrow paths. They may not have had the start in life or access to technology to aid their education. They may have talent but simply lack the confidence to know where to start.

What's certain is that data and creative skills haven't yet been mapped to the needs of employers, leading to a lack of clear role definitions and rigid recruitment processes. And even if there is a hiring spree from wider talent pools, is there an infrastructure in place to support training and development to 'top up' data skills - particularly in an era of remote working?



The hardest thing for us is something we can't do a lot about - getting people into the industry to begin with. I would love people from more challenging backgrounds to come into the industry because they are experiencing some of these issues we are trying to resolve and they have some of the best ideas.

Duncan Bain,
Senior Data Scientist, ScottishPower



Can we target Scotland's service industry for quality, brilliant client-facing and behavioural skills now available because of Covid? We can get them to reconsider data by highlighting it's not just number crunching, you can translate raw data to add value to businesses and customers. We've got to strike while the iron is hot

Paul Moir,
Global Resourcing Manager, Insights

Who's targeting them?



If you want to increase ethnic minority employees, for example, review all your previous interviews and analyse what you might have done wrong. There's gold locked in that data. But there's also lots of work to do internally regarding inclusion, otherwise you will spend time and money trying to recruit people you are not set up to keep.

Miles Skelton,
Founder, MVMNT

Since more than 11 million people in the UK lack basic digital skills, according to a Lloyds TSB consumer digital index survey, upskilling and reskilling should be high on the agenda for government, academia and employers.

The City and Guilds Group, which helps people acquire skills to get into work and develop their career, says a "permanent solution" is needed to tackle long-term unemployment.

Fair Start Scotland²² is the country's first fully devolved employment support service, which aims to help people further removed from the labour market who want help to find and stay in work. It is funded by the Scottish Government, which has committed an additional £20m above UK Government funding in each year of Parliament; committing up to £96m overall.

The UK Government has targeted workforce issues by unveiling its Data Strategy²³, which includes a focus on data skills for a data-driven economy and “data-rich lives”. The Data Lab is named in the strategy as part of the Alan Turing Skills Task Force for national leadership in data skills, “to improve the leadership and facilitation of new and better collaborations between industry, the public sector, universities and institutes”.

For its part, DDI believes the inclusive growth programme it champions can be the start of a journey towards a potential data career for anyone who feels left behind, such as parents and the unemployed. It is set to partner with third-sector organisations for the employability initiative. Additionally, it will pilot a Skills Credit Scheme in 2021, part-funding learners to access data skills training.

The DMA works with DDI to run the Creative Data Academy²⁴, with the aim of expanding the course. The one-day and three-day events are a way to highlight to young people opportunities in data and marketing, allowing students to see if data is for them.

Elsewhere, Edinburgh University's Business School has unveiled a new course aimed at helping creative industry professionals to create data-driven companies²⁵.

Local initiatives are also playing a part. Erskine²⁶ is a charity which helps ex-servicemen and -women. It is repurposing a branch in Bishopton, Glasgow that will retrain people into jobs through its rehabilitation centre. The reskilling unit will include database and IT skills.

Auticon²⁷, which has a presence in Scotland and has already made a big impact in England, finds roles for autistic people to develop skills they will need for employment. RBS²⁸ is one of its partners. The business works with organisations to consider aspects that are often overlooked, such as where they sit in an office.

22 <http://www.employabilityinscotland.com/fair-start-scotland/>

23 <https://www.gov.uk/government/publications/uk-national-data-strategy/national-data-strategy#data-1-2>

24 <https://dma.org.uk/talent/creative-data-academy-2>

25 <https://www.business-school.ed.ac.uk/event/developing-a-data-driven-creative-company>

26 <https://www.erskine.org.uk/aged-veterans-fund-supports-erskine-veterans/>

27 <https://auticon.co.uk/>

28 <https://www.rbs.com/rbs/news/2019/02/royal-bank-of-scotland-partners-with-auticon-to-offer-jobs-to-au.html>



How do we work with local employers to encourage them to further diversify their workforce and look at opportunities to upskill their existing workforce?

Alison Muckersie,
Programme Lead, DDI Skills Gateway

/ In Summary

All the evidence we've gathered suggests three things: Scotland's data sector is open for business; skills development is being boosted from many quarters; and yet, overall, support is disparate.

If business is to get the data talent it deserves - from traditional sources to stones still unturned - and Scotland really is to become the data capital of Europe, who will align every initiative and tell people from all walks of life that a dream job in data can be theirs?

/ The Road Ahead

Driving Scotland forward as an influential location where data roles can flourish will require a creative, collaborative and determined approach across all sectors.

DMA Scotland's Talent Hub will lead the data and marketing sector's approach to making that a reality.

Below is an outline of our suggested framework for successfully working together:

Recommendations for government

- Working with legislators and DDI to ensure diversity and inclusion are embedded into the aim of making Scotland the data capital of Europe
- Career Guidance
- Supporting the National AI Strategy for Scotland's aim of ensuring no one is left behind in Scotland's data, digital and AI expansion
- Working with government to ensure training and reskilling provides the talent to plug industry employment gaps, and offer new skills and good working opportunities for those who have lost jobs due to Coronavirus

Industry guidance and support

- Provide guidance on practical steps to increase diversity e.g employer guides to autism and other neurodiverse conditions
- Support groups to gain confidence and presence with learning and mentoring
- Work with government departments and communicate with members on issues related to talent and skills, such as apprenticeships - in partnership with organisations such as Skills Development Scotland, Glasgow Caledonian and Heriot-Watt Universities - and junior internship opportunities
- Investigate the potential to redirect the Apprenticeship Levy, helping businesses develop digital marketing and data science skills within their current workforce
- Devise and deliver sector-based events and networking opportunities to improve understanding of recruitment and training issues, collaborating with partners such as FinTech Scotland

Career guidance

- Provide a home for careers information for people wanting to enter the industry, and for young people to find jobs within DMA member companies
- Invest in a new membership category for students and apprentices, and promote progressive open learning

- Allocate DMA resources to improve people's employability, skills and ambition, helping them connect to industry
- Deliver a programme of events and sponsorship around qualifications alongside likeminded organisations eg The Data Lab

We're inviting you to comment and add your voice and ideas as we develop the programme. Please contact DMA Scotland's Community Manager Lisa McLauchlan: lisa.mclauchlan@dma.org.uk

/ About the campaign

The Value of Data

A campaign born in Scotland - and led by DMA Scotland – we join forces with partners and advocates across the UK to reshape the understanding of the true worth of information.

We want to elevate and champion the role of data through this campaign – from the classroom to the boardroom - and help organisations responsibly deliver value to their customers.

If we can put data on the balance sheet people might start to appreciate it more and begin to look after it. There could be real behaviour change.

We will create an engaging, navigable roadmap through a challenging ethical and legal landscape to allow bold, innovative and data-led approaches to customer engagement to thrive.

And we'll do it all with a future-focused, nurturing approach to local and young talent.

/ Campaign Sponsor

Merkle

Merkle is a leading data-driven, technology-enabled performance marketing agency. We specialise in the creation and delivery of unique, personalised customer experiences that drive performance across all platforms and devices. We call this 'people-based marketing' and, with over 25 years' experience, we are proud to be recognised as a global leader.

Performance marketing focuses on creating testable campaigns with measurable outcomes. Results are judged on how well a campaign has performed, the value of your customer relationships and the loyalty earned against your marketing investment. But what sets us apart is our truly customer-focused approach.

We employ individualised targeting and personalised messaging that works as a key driver of performance. It takes personalisation to another level, delivering unique and tailored customer experiences in real time.

Marketing campaigns optimised to the individual level - simple to understand, not so simple to achieve.

But that's what we do.

We help brands transform their marketing into people-based marketing that works. Using a combination of first- and third-party data, we create, target, and measure the highly customised customer experiences that not only drive immediate results in the form of today's response and conversion, but also build on tomorrow's increased loyalty and customer value.



/ About the DMA

The [Data & Marketing Association](#) (DMA) comprises the DMA, Institute of [Data & Marketing](#) (IDM) and [DMA Talent](#).

We seek to guide and inspire industry leaders; to advance careers; and to nurture the next generation of aspiring marketers.

We champion the way things should be done, through a rich fusion of technology, diverse talent, creativity, insight – underpinned by our **customer-focused principles**.

We set the standards marketers must meet in order to thrive, representing over 1,000 members drawn from the UK's data and marketing landscape.

By working responsibly, sustainably and creatively, together we will drive the data and marketing industry forward to meet the needs of people today and tomorrow.

www.dma.org.uk

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