### ALLIANCE MANCHESTER BUSINESS SCHOOL MAGAZINE



The future of work
How the pandemic transformed working lives

**Levelling up**Why the North West lags behind

**Green agenda**The Manchester Festival of Climate Action

**Data science research** Blazing a trail



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**GUEST FOREWORD** 

### SEIZING THE MOMENT

**Tony Danker**, Director General of the CBI, on the many challenges ahead for business.

Tony Danker is also an alumnus of The University of Manchester.

he UK needs a new growth story. After a disappointing decade where low growth, low productivity and low investment prevailed, we've reached an inflection point. What we do now will define the decade ahead. We can choose to continue as we are. Or we can choose to invest, to innovate and focus on growth instead.

I'm not for a moment suggesting that this is easy. Since starting my role as Director General of the CBI I've spoken to hundreds of business leaders across the length and breadth of the UK. Regardless of the sector they're in or the size of their organisation, I'm hearing similar things. The day-to-day pressures of inflation, energy prices, labour shortages, and learning to live with COVID and its variants, are taking up much of their time. They simply don't have the bandwidth to look further ahead.

I get it. It's hard to plan for the next decade when you don't even know how you'll get through the next six months. The problem is we can't put the future on 'pause'. It's coming whether we like it or not. So we need to get business in the best possible place to take advantage of the new markets and new opportunities that will emerge in the decade ahead.

### Dynamic economy

Last year the CBI published 'Seize the Moment', an economic strategy for the UK. It describes how business can transform the UK so it becomes the most competitive, dynamic and future-focused economy in the world. Seize the Moment sets out what we need to do to make the UK a place where business is at the heart of social progress, working in the service of the nation.

Our research identifies six business-led opportunities that the UK could capture by 2030 – there are £700bn worth of opportunities up for grabs – and recommendations on how business can pursue them. There are prizes within reach for businesses looking to reach net zero, adopt new technology, export more successfully, and in many other areas too.

We know that the UK government has its own plans for growth, but our view is that they're not ambitious enough. With business taxes rising this year to pay down the debt we've built up during the pandemic, the government is inadvertently putting a lid on investment.

Businesses need to invest in their people, in their communities, in technology and in the transition to net zero. And they need the best and brightest people from our universities and colleges to help write that growth story.

### New growth story

That's why the CBI is calling for a new growth story. One where we challenge government to raise its ambitions and demand bold interventions and policies in pursuit of growth.

This isn't wishful thinking. We've done it before, for example with the offshore wind market and the 'super deduction' tax incentive, so we know we can do it again. None of the people I speak to in government or in business want low growth to become the default. We want to do better than that. In fact, we must do better than that.

There are plenty of levers that government can pull to encourage investment and innovation by businesses, which in turn will generate growth. They might be through better regulation, or by setting out business models and funding commitments for green markets, or by working more closely with businesses so they can build the workforce of the future. Government doesn't create wealth and prosperity – business does that – but it can create policies and frameworks that enable growth.

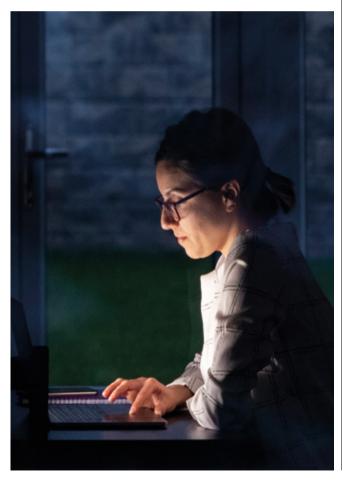
Businesses must play their part, too. They need to invest in their people, in their communities, in technology and in the transition to net zero. And they need the best and brightest people from our universities and colleges to help write that growth story.

As I see it, only by working together can we raise our growth ambitions. As when we do, we'll help the UK reach its potential and truly seize the moment.

### **CONTENTS**

# The Future of Work

Sir Cary Cooper	07
Debra Howcroft	09
WEI news	10
Anthony Rafferty	11





### **Climate Action**

Frank Geels	13
MBA viewpoint	14
Yasmine Chahed	17
Duncan Shaw	18





### Closing the Gap

North West Productivity	21
Kieron Flanagan	23
Mark Hughes	24



### **Data Drive**

Julia Handl	27
KTP Jackson Lees	28
BAE Systems	30
News Round Up	31



Healthcare Challenge

**34**Doing Good





Reimagining Business



A World of Change

Last Word

5

# THE FUTURE OF WORK

The pandemic has transformed how most people work. But what does the future now hold for the workplace?



The time has come for health and wellbeing to be treated as a key strategic issue in organisations, says **Sir Cary Cooper.** 



Sir Cary Cooper is the 50th Anniversary Professor of Organisational Psychology and Health at AMBS, and founder of the National Forum for Health and Wellbeing at Work.

nterest in workforce health has never been more intense with the pandemic catapulting the issue to the top of the public health, business and policy agendas. Indeed the human resources (HR) and occupational health professions have been in the spotlight like never before, advising CEOs and boards about safe working, the health of frontline workers, and the wellbeing of the new army of home workers.

But perhaps more than anything the pandemic has forced employers to think deeply about the ways that investing in workforce health can enhance agility, resilience, resourcefulness and productivity both during the pandemic and beyond.

During any major crisis there are many aspects of business that suffer, but it is people and their mental health who often bear the brunt. Levels of stress, anxiety, insecurity, and instability in employees all increase which – if unmanaged – can result in an unsettled and unproductive workforce. If organisations prioritise the health and wellbeing of their staff then they can not only survive a crisis but come out of it stronger than before.

### Strategic issue

The impact of the crisis will be felt for decades to come. New ways of living and working have had to be adopted almost overnight, while the scale and pace at which organisations have had to change and adapt is unthinkable.

But what the pandemic has shown once and for all is that the issue of employee wellbeing is no longer a 'nice to have'. It is absolutely not about 'mindfulness at lunch' sessions. Instead, it needs to be a strategic issue for every business and organisation, just like sustainability, diversity or productivity. Indeed, addressing wellbeing properly actually creates long-term sustainability for a business or organisation.

In my view every organisation now needs to have a non-executive board director who has specific responsibility for health and wellbeing, an individual who holds that organisation to account in terms of how they treat, trust and value their workforce.

The key point here is that this individual will be a board member who has responsibility for HR but is not actually the head of HR themselves. The reason being is that in the vast majority of businesses and organisations directors of health and

wellbeing do not sit on boards. Therefore you need someone on the board who is looking at this from a far more strategic viewpoint.

### Metrics

In order to do this he or she will need a clearly defined set of metrics, and this is precisely an area of work that myself and colleagues at the National Forum for Health and Wellbeing at Work are currently taking forward.

Some of these metrics will be very subjective such as employee satisfaction, how workers feel they are managed, how they feel about hybrid and flexible working, and whether they are happy with their hours of work. Others will be objective, such as specific physical and mental health metrics, stress-related sickness absence figures, staff turnover, levels of absenteeism, and levels of accidents and injuries.

The end goal here is that the organisations are then able to select the range of metrics that are most relevant to their business. From my own discussions with HR managers and CEOs over many years this is something that they are desperate for, and the time has come to make them real

Every organisation now needs to have a non-executive board director who has specific responsibility for health and wellbeing, an individual who holds that organisation to account in terms of how they treat, trust and value their workforce.

### Line managers

When it comes to health and wellbeing, during the pandemic perhaps no group came under more scrutiny than line managers whose capacity to manage the rapid pivoting of working arrangements, while exercising stewardship over the human resources under their care, was tested daily. For these individuals, the responsibility for ensuring that workforce wellbeing and productivity were being protected was intense.

As we come out of COVID-19 this scrutiny will not go away, especially as debate rages about what hybrid and more flexible working will really mean in practice for organisations and how they will deal with it. I believe it will mean HR departments negotiating with each employee about what exactly works for them. But it also needs to be a contract, it has to be what the employer wants as well. For instance there will be days when an employer needs you in the office – but the point is that it won't have to be every day.

Let's face it, hybrid and flexible working are here to stay and we are not going back, and the evidence is clear that the vast majority of organisations are now going to work a hybrid model.

### **Empathy**

In this new world of work we crucially need line managers who can recognise when people are not coping and who have the correct social skills to deal sensitively with them and show genuine empathy. If people aren't feeling great, are there things you can do to improve that? How do you pick up the cues? How can you really tell in an online call how someone is feeling?

Right now all organisations need to be doing an audit of line managers to find out which need training in this regard. For instance if someone has been recently promoted how do you ensure that there is a parity between their technical and social skills?

Some argue that line managers bear too much of the burden of managing all aspects of employee health and wellbeing. If that is true, then we need to be ensuring that we enhance their capability and enable them to be the most important custodians of the link between health and productivity.

### Books

All of these themes are explored in much greater depth in two books I have recently edited. In the first, *The Healthy Workforce: Enhancing wellbeing and productivity in the workers of the future*, I've teamed up with Stephen Bevan, head of HR research development at the Institute for Employment Studies.

And in the second, Managing Workplace Health and Wellbeing during a crisis, co-edited with lan Hesketh, we explore how several organisations and businesses in the UK specifically responded to the COVID-19 crisis and lessons learnt.

In this new world of work we crucially need line managers who can recognise when people are not coping and who have the correct social skills to deal sensitively with them and show genuine empathy.





of the pandemic, says Debra Howcroft.

of two days or fewer spent in the office after the pandemic.

the office after the pandemic.

Almost a third would like to work entirely from home, with the hassle and expense of commuting a commonly cited bugbear.

### Team culture

While the growth in hybrid working brings many positives, adapting business operations to cater to this new model in the long-term will create a raft of issues for employers to navigate in the future. So, what should they prioritise in the years ahead to make the home office futureproof?

During lockdown, it was well documented that people missed socialising with their colleagues. Camaraderie in the office does more than just strengthen relationships and build teams, it helps to create a sense of collectivism which provides employees with a valuable support network and potential outlets to spread out unmanageable workloads.

The lack of face-to-face interaction is a particular problem for new starters and junior team members, with video-based meetings offering limited opportunities to get to know their fellow teammates. Finding new, innovative ways to bring people together and build a team culture will need to be a focus for employers in the years ahead.

### Increased workloads

While many of the employees we spoke to relished not having to commute to the office, some had found that

their work-life balance had been negatively impacted by increased workloads. A third reported that the volume, intensity and pace of their work had noticeably increased, with 40 per cent believing their mental health had worsened as a result.

It's unlikely there will be a one size fits all for employers in the wake

In some instances employees had found that their manager expected them to complete their usual shift 'no matter what', and had asked to make up their hours in the evenings and weekends. This could pose a particularly significant issue for single parents and sole carers in the future, especially given the likelihood of interruptions and distractions in a home setting. With work and home life increasinaly blurred. a focus on finding ways to support employees in this respect should be a priority.

While the relocation of white collar workers to the home environment was initially viewed as a temporary stopgap, this is now looking more like a watershed moment for the future of working practices.

### Physical health

There's also likely to be a tide of issues linked to physical health in the future. During lockdown, the ergonomic deficiencies of home offices, compounded by the lack of workstation risk assessments, meant more than a third of the workers we surveyed had found their physical health had worsened, with stiff shoulders and necks, numb arms and sore eyes frequent complaints.

Aside from physical discomfort, homeworking also increases financial costs, and the problem of workers having to buy their own equipment and pay for additional utilities will only continue if employers don't put in place frameworks to fund equipment and overheads at home.

Another issue is the growing prominence of monitoring software and surveillance, and its impact on employee privacy. While data protection law places significant limits on employers monitoring their staff, too few employees are aware of their rights.

Tougher regulation, along with trade union consultation, is vital for preventing employers' excessive use of electronic monitoring and digital surveillance, both in the office and when working at home.

Debra Howcroft is a Professor of Technology and Organisation. This is an edited version of an article co-written with Phil Taylor and Dora Scholarios from the University of Strathclyde.

he pandemic has dramatically shifted our working lives. While the relocation of white collar workers to the home environment was initially viewed as a temporary stopgap, this is now looking more like a watershed moment for the future of working practices, particularly with a growing roster of large firms making the switch permanent.

It's long been a widely held belief that digitalisation will transform the way we work. However, prior to the pandemic, the take up of sustained homeworking was marginal. In 2019, just over 5% of the total UK workforce worked from home the majority of the time – a staggeringly small proportion in hindsight. This slow adoption can largely be attributed to a lack of trust-based working arrangements prior to the pandemic.

According to our recent survey of more than 3,000 office workers across the UK it's unlikely there will be a 'one size fits all' blanket return to the office now all restrictions have lifted. Crucially, almost 80% of employees we spoke to said they would like a working week



rofessor Jill Rubery, Executive
Director of the WEI, has been
appointed to a new advisory
panel on the future of work
and employment. ReWAGE (Renewing
Work Advisory Group of Experts) is a
SAGE-style expert advisory group on
work, and consists of a select group of
senior UK academics and researchers
from universities and research
institutes across the UK.

### Academics from the Work and Equalities Institute (WEI) are playing a major role in helping shape the future of work.

### Jill Rubery appointed to new advisory panel

ReWAGE has funding from the Economic and Social Research Council (ESRC) and forms part of a major review into the future of work in the wake of the pandemic which has adversely affected the labour market in so many ways. The group says that even as the health crisis becomes more manageable, the jobs crisis is intensifying and transitioning back to a healthy labour market and maximising new opportunities for reorganising work are important.

However it says that responsibility for the entrepreneurship, innovation, education and training that supports the creation of new jobs is currently spread across three government departments, while some responsibility is also devolved to the governments and administrations of Scotland, Wales, Northern Ireland, and the English regions.

It says this fragmentation poses a challenge to government aspirations to 'build back better', 'level up' and ensure 'just transitions' across the UK.

Therefore a strategic and coordinated approach supported by expert advice from a specialist group is essential.

### Opportunity

Said Professor Rubery: "This is an exciting opportunity to bring together experts from a variety of disciplines and perspectives to identify key issues in renewing work post the pandemic. It also provides coordinated advice on the current state of evidence on what policies may or may not be helpful in building a more effective and inclusive labour market."

### AMBS to research equality policies across Europe







Dr. Stefania Marino

Professor Miguel Martinez Lucio and Dr. Stefania Marino have been awarded a major grant looking at how equality policies and regulation at work have developed across different European countries.

The three-year £566,000 project, entitled 'The Politics of Equality: The Evolving Nature of Equality Agendas at Work in the UK and Europe in a Context of Political Uncertainty' is financed by the ESRC and also involves partners at the Grenoble Ecole de Management.

### Comparisons

The project will look at the UK in comparison with France, the Netherlands and Spain, countries that are seen as having engaged – albeit in different ways – with expanding equality at work for a diverse range of workers across different dimensions. The project will also involve meetings with EU organisations.

Dr. Marino, Senior Lecturer in Employment Studies, said: "The research builds further on the tradition of comparative international research developed within the WEI as an approach to better understand social phenomena and build informed policy advice.

"It provides an opportunity to explore how nations measure against, reflect on, learn from, and share with others their experiences and policies in relation to employment issues."

### Timely

Miguel Martinez Lucio, Professor of International HRM and Comparative Industrial Relations, said the research study was particularly timely given the heightened awareness of gender and race issues in both the workplace and wider society.

"In recent years we have seen increased debate around the language and politics of equality, and in some contexts the enforcement of equality legislation is proving to be challenging. One of the key aims of this project will be to outline the main challenges that have arisen due to a range of political, economic, and social factors, and to identify how these are influencing the nature of equality strategies and the substantial progress that has been made."



nthony Rafferty, Professor of Employment Studies, has been appointed the new Director of the Work and Equalities Institute (WEI). He takes over the role from Professor Jill Rubery who becomes Executive Director of the WEI with responsibility for the Institute's international networks.

Professor Rafferty said he was honoured to be taking up the role at a time of such huge change in the world of work.

"Because of the pandemic there has never been a time in recent history where issues around work and equality have been so front and centre. COVID-19 has not just impacted our working lives today, but has also made us think about the long-term future of work.

"It has made us rethink the world of world, rethink the nature of cities, rethink the way we collaborate and interact with

### New WEI Director Anthony Rafferty discusses his priorities

each other and, crucially, also rethink sustainability in terms of how we get to work and how often we travel."

He said the pandemic had also reshaped many debates such as the wellbeing and global talent management agendas, and highlighted a lot of previous inequalities in the labour market.

"If you take a theme such as gender inequalities then research into this subject is even more essential in the wake of COVID-19. Big economic or social crises often have a major impact on gender relations, as was the case with the 2008 financial crisis and the decade of austerity that followed. These are precisely the kinds of research questions we now need to be asking."

### **Themes**

He says the Institute will continue to focus on its existing four central themes – business transformations and the future of work, fair treatment at work, inequalities and the life course, and employment regulation and representation. It will also be open to developing new agendas and continue to engage at the policy level nationally and internationally around equality and diversity issues.

"There is right now a really strong case for the proper evaluation of equality policies as I don't think there is enough concrete evaluation of what works and what doesn't. How exactly do we strengthen policy interventions at the national, local and organisational level? What are the HR management policies that you need? There is a need for a stronger evidence base and we need micro level detail about what kinds of interventions work."

### Productivity

Professor Rafferty said he was particularly excited about working with colleagues at The Productivity Institute which is based at AMBS.

"Working with the Institute is great for us because issues of equality are issues of productivity. The quality of the match between a worker and a job is central to productivity, and inequality has a big role to play in leading to mismatches.

"Discrimination and poor social mobility can become embedded in society and people are too often not given the right opportunities and that leads to the underuse of skills or unrealised potential. And people who underutilise their skills often have poor wellbeing. These are precisely the kinds of structural issues that we look forward to researching too."

Professor Jill Rubery added: "It has been a privilege to be the first Director of the Work and Equalities Institute. I have had wonderful support from colleagues during my four years in post and I am very pleased to be able to hand the directorship over to Anthony whose vision and commitment to research in work and equalities will ensure the continuing success of the Institute."

Because of the pandemic there has never been a time in recent history where issues around work and equality have been so front and centre.

# CLIMATE ACTION



Academics and students from AMBS took part in the recent Manchester Festival of Climate Action which considered the challenges at the forefront of the climate crisis.



### FROM HERE TO NET ZERO

rofessor Frank Geels'
presentation at the Festival
discussed the importance of not
only focusing on climate targets
but also on the need to much better
understand the process of change.

In particular he stressed that low carbon transitions do not start from scratch and that transitions can typically take up to 30, 40 or even 50 years. And while setting targets is important, he stressed that implementation-oriented policymaking must be a key part of the drive to decarbonise.

"Initially you have a period of experimentation, followed by stabilisation in small market niches, followed by diffusion into mainstream markets, followed by overthrow and reconfiguration. However low carbon transitions are different to past transitions in that it is not just one single technology that needs to break through. Each system – whether electricity, mobility, or heat – has multiple innovations."

### Electricity

He said that decarbonising electricity production had been a success story for the UK, which has cut greenhouse gas emissions by 72 per cent since 1990. Three major technologies have driven this change, namely the shift from coal to gas, the growth of renewables (wind, solar, and bio-power), and electricity demand reduction resulting from energy efficiency improvements in appliances.

"The key here is that these technologies were supported by increasing state intervention, such as policies to phase out coal and traditional light bulbs, financial support for renewables deployment, and the carbon floor price, which taxes coal. So we have seen a strong shift from a hands-off to an interventionist approach through a raft of targets, financial subsidies and regulations. Policymakers have really shaped markets."

### Mobility

With mobility he said the situation was more complicated. "Car use is deeply embedded in our lifestyles and infrastructure, and continues to grow. Although auto-mobility increased by 10 per cent between 2007 and 2019, emissions from passenger cars have fallen by 12 per cent in that period. Drivers of emission reductions were more fuel-efficient vehicles, the doubling in rail travel, increasing use of biofuels, and the rise of electric vehicles (EVs) which in 2020 accounted for more than 20 per cent of all new car sales.

"Again, policy has been key in driving this, focusing particularly on EV subsidies for buyers, investment in charging infrastructure and support for EV plants, and legislation to end of the sale of new petrol and diesel cars by 2030."

But he said that on the whole the government had taken a relatively 'hands-off' approach, leaving it to the market to decide.

### Heat and buildings

Emissions from buildings in the UK have gradually decreased since the 1990s due to incremental measures such as double glazing, loft insulation, cavity wall insulation, and energy-efficient boilers. However he says in recent years they have begun to creep up again, due to weakening policies.

"Back in 2006 there was a zero carbon homes policy, but it was very ambitious in terms of its timeframe and volume housebuilders lobbied against it and by 2015 it was scrapped. Then we had the 2013 Green Deal flagship policy which was an absolute disaster and led to a drop in retrofits.

"No substantive policy has replaced it in the building sector. What is particularly important is that there are no dedicated agencies driving change in the heat and buildings domain and the coherence and strength of policies has decreased since the mid-2010s."

### Innovation

In summary, Professor Geels said one of the reasons for success in reducing electricity emissions was that many radical innovations were implemented. Mobility has seen lots of innovation too, but only a few new technologies have been widely adopted and the number of more radical innovations remains very small. Meanwhile in the heat sector there are a lot of radical innovations, but only a few have been used at scale.

"There are many opportunities, but lack of policy is one of the main reasons why change has not been very transformative so far. All this serves to prove the importance of robust policymaking in driving the UK's net zero ambitions."

Lack of policy is one of the main reasons why change has not been very transformative so far. All this serves to prove the importance of robust policymaking in driving the UK's net zero ambitions.



Frank Geels is a Professor of System Innovation

### **HELD TO ACCOUNT**

**Jenni Rose** hosted a panel debate with MBA students exploring how teaching accounting needs to change to reflect climate change risks.



enni Rose, Senior Lecturer in Accounting and Finance, was joined by MBA students Hassan Ahmad, Nkem Igwe and Sian Leake to discuss what climate change means to them and how their current studies will help inform the decisions they make during their own business careers.

As she explained:
"This is the issue that
our students most care

about. In fact we have never had an issue that so many of the people we are teaching care about, so it is vital that we capitalise on that. Ultimately I am hoping that the people I am teaching will be rising to the top of their organisations by 2050 when a lot of the promises that corporations are making now will run out. So those that I am teaching will be in a position to make a difference."

She says accounting provides the perfect framework for understanding broader issues around climate change. "Our students are not just learning about how things happen and what they need to do, but also about the wider picture and how things can be different and better. Ideas such as adding a provision for nature to income statements is a perfect example. Even the nuts and bolts of financial reporting directly relate to net zero accounting and carbon accounting."



Nkem Igwe

Before taking up her studies at AMBS Nkem Igwe was chief accountant at a business in Nigeria. She says she was attracted to studying at AMBS because she had interests in sustainability and wanted to see the world from a different perspective. "The emphasis on original thinking really got my attention and AMBS has a very good reputation with sustainability. What also impressed me about the

School was that it wasn't just saying it, it was doing it.

"Through my studies I now look at sustainability from every angle. Companies are now looking for how well you are investing in sustainability and how much you care about it before you invest.

AMBS is consciously bringing sustainability into every aspect of

what we do, into every subject.

"In our cohort we have people from about 30 different countries. A lot of people are going to go back to their home country, or other countries, or stay here in the UK. But we are all living with this knowledge now, this is preparing us for the future."

She added that all companies are now held accountable for how they are impacting the environment positively. "There is now a struggle between 'are we here to make profit' or 'are we here to do good', but a lot of people are leaning towards 'we can make profit and do good at the same time'.

"Accountants have an incredibly important role to play. When you go and look at what people are reporting as their sustainability impacts, you are checking to see that this is true. If this is wrong that has a huge impact on the reputation of that company."



Hassan Ahmad

Hassan Ahmad's background is as an accountant in the food manufacturing industry and says since starting his MBA he can see the direct impact that accountants can have on the environment.

"I used to think that I needed to be a biologist or scientist to have an impact. But here at AMBS I am discovering a whole new way of thinking about how companies which take the

environment into consideration can create long-term and sustainable profit.

"On the MBA we have modules about leadership, markets and strategy, and accounting and finance, and across all these subjects the consistent theme is sustainability. I totally agree with what others on the course say in terms of this MBA being an excellent way for the global business leaders of tomorrow to fully grasp these subjects and be armed with the knowledge we need."

He says he already knows that when he applies for his next job he will definitely be taking into consideration the impact of the environment. "If I get two job offers and the first company cares more about the environment than the second then I will accept the former. Or if I have a leadership role in a company and they don't emphasise sustainability enough then I will be the one imposing measures to take the environment into consideration. It is very important to plant the sustainability seed firmly in the front of people's minds."





People now realise that sustainability has to infiltrate all areas of business. It needs to be part of strategy, part of operations. It is not something that you can 'do on the side'. It needs to be an integral part of the business.

MBA student Sian Leake is an environmental scientist and for the past six years has been working in an engineering consultancy.

Most recently she has been working in the field of the water environment with a focus on rivers and how to restore and protect them, and on how to introduce more nature-based solutions to infrastructure development.

As she explains: "I chose to take the MBA because my role is currently quite technical in terms of analysing lab reports and working with different teams within the engineering sector. I believe that environmental and sustainability issues are really important and I need my clients to take them more seriously.

"But if I want them to take them more seriously I'm going to need that business advisory skillset, to show them how this is going to impact finances and how there are reputational issues associated with it too. Undertaking an MBA allows me to have a better influence with clients as I understand the different factors within the strategic decision making process."

### Sustainability

She says she chose AMBS because it's the top-rated MBA school in the UK for corporate social responsibility and sustainability. "I thought that's perfect. I'm still going to get that business experience but there will still be a focus on CSR and sustainability."

Sian says she was surprised how CSR and sustainability appeared in all of her modules.

"I definitely wasn't expecting it in accounting. But this is going to be important for accountants to take seriously, to value nature and have it as something more tangible so that clients can start to take it more seriously."

### Measurement

"In the environmental sector we have been trying to value nature and the different types of services that it provides. But it is a really difficult thing to measure because people have different methodologies. We need one clear, consistent approach that all companies are using so that it's comparable and verifiable.

"Accounting is a good way to help us do that because there is the legislative route and there are policies and standards that all companies are bound by. That is something we need for sustainability so that we can show our clients just what they are getting from nature."

### Strategy

She says the MBA has already been really useful in terms of understanding how sustainability fits into so many different elements of business and how it cannot be set aside as a tick boxing exercise. "People now realise that it has to infiltrate all areas of business. It needs to be part of strategy, part of operations. It is not something that you can 'do on the side'. It needs to be an integral part of the business.

"As MBA students we can now take this learning with us and apply it in the real world. As time goes on we will see a big shift of companies moving towards a more well-rounded, sustainable approach to business.

"But right now we need businesses to take sustainability more seriously and to integrate it into all aspects of their activity to limit the climate impact of their operations. Tackling climate change will be a collective effort."

### Other sessions at the Festival looked at subjects including productivity, value-added accounting, and what a post COVID-19 green recovery should look like.



### **Green recovery**

During his session Jonatan Pinkse, Professor of Strategy, Innovation and Entrepreneurship, discussed what an effective green recovery should look like. His answer was that a green recovery was ultimately about "how we are going to change mobility, how we are going to change industry, and how we are going to change our own behaviour".

He specifically discussed the multi-billion sums that governments across the world have pledged to the green recovery in the wake of COVID-19, and the particular challenges of enforcing green policies.

"When a green recovery builds on something that is already happening you can do implementation faster because everything is in place and you can pour more money into those schemes," he said. "But the downside of using existing programmes is that you are still doing what you used to do and you are not being ambitious enough. And right now the goals needs to change. The net zero goal needs to be central, whereas in the past green policies did not have climate change as central and policies existed for all kinds of other reasons."

He added that the world needed a raft of new policies. "The climate crisis is unprecedented and needs deep structural change to industries we depend on. Innovation in this context takes a lot of time but it's not impossible, just look at the relative success of electric vehicles over recent years. Sometimes you have to put business in a position where there is no other choice and that needs bold policy."

### Productivity

Bart van Ark, Professor of Productivity Studies, and Elvira Uyarra, Professor of Innovation Studies, discussed whether greening the economy can drive productivity. They were also joined for the session by Lauren Pamma, Programme Director at the Green Finance Institute, and Kevin Lambert, Resource Efficiency Lead at Manchester Growth Company.

Professor van Ark conceded that greening the economy was a complicated topic, not least in terms of its impact on business performance. Professor Uyarra added that the public sector also played a key role in terms of providing a "sound, coherent, stable and credible" environment for public policy that is long-term and which helps drive private sector investment.

"The amounts of investment required to meet 2050 targets are huge in areas such as transport and buildings," she said. "What are the technological solutions that can support the decarbonisation of transport? How do we know which activities are sustainable in terms of supporting the transition? And how do we guide investment?"

### **Bottom line**

Paolo Quattrone, Professor of Accounting, Governance and Society, hosted a thought-provoking session discussing the shift to value-added accounting and how environmental impacts can become part of the bottom line.

He began the session by asking a deliberately provocative question as to whether accounting can save the world. "I do not know whether accounting can save the world, but it can create the conditions for saving the world. The reason is that most of the social and environmental problems that we have are related to the production of services and goods, and the externalities that this production generates.

"Accounting is actually a wonderful framework to understand how services and goods are provided, what inputs we have, how we account for them, what values we generate and how we distribute value. We tend to forget that."

During the session he reflected on the current structure of the income statement, asking whether it was as much a "political" statement as an income statement, and discussed how it was drawn up in the interests of one very specific stakeholder, namely the shareholder.

Instead he suggested a new form of income statement which included a small but very important modification. "How about a line which accounts for provisions to a fund for nature? Why not create a value added statement for nature which reflects all the externalities that are created when you produce something?"



team of experts at AMBS has published research, commissioned by the Financial Reporting Council (FRC), to explore how leading companies are using scenario analysis to disclose climaterelated risks for their businesses.

The research indicates that many businesses are uncertain of the effects of climate change on their organisation and argues that mapping out these uncertainties now will put businesses in a better position to mitigate any potential consequences associated with climate change.

The research highlights the various approaches companies have adopted, instances of good practice, typical challenges faced, and the common steps taken to conduct climate-related scenario analysis. The work forms part of the activity undertaken by the Centre for the Analysis of Investment Risk (CAIR) at AMBS, which provides research expertise on wide-ranging aspects of investment decision-making and governance.

### Outcomes

Dr Yasmine Chahed, Visiting Research Fellow at AMBS, said: "Efforts to limit global warming vary across the world's nations and businesses have to prepare for many possible outcomes and eventualities. That's why projects like this are so important in helping to shape future regulatory strategy, and how that's delivered. The climate challenge is huge and scenario analysis is critical in tackling this issue, and in facilitating the transition to a greener economy.

"Our research hammers these points home and indicates that many businesses are uncertain of the effects of climate change on their organisation. It's clear, then, that mapping out those uncertainties now will put businesses in a better position to overcome the obstacles that lie ahead."

### Scenarios

Professor Paolo Quattrone, Director of CAIR, added: "It's clear that dealing with future scenarios around the climate crisis needs to be baked into a company's strategic approach. What will increase your ability to deal with the unknown relates to how you govern the process of exploration and sense-making of the future. The research has confirmed that governing the process of interaction among teams and communication among functions is key in making sense of the uncertainties surrounding the effects of climate change on businesses."

Co-investigator Dr Robert Charnock added: "What the research showed first and foremost is that companies acknowledge that climate change will impact their sector and business model. Exactly what those effects will be still remains unclear to many. That's where scenario analysis comes in, as it helps assess and plan for uncertain futures.



Dr. Yasmine Chahed is a Visiting Research Fellow

"The companies with the most mature approaches had developed these by going through multiple iterations, where each of their climate scenario analyses built on the lessons learned and skills developed during previous exercises."

### Importance

Professor Fiona Devine, Head of AMBS, said: "The climate emergency is more pressing than it's ever been, and conducting research in this space is vital for the future prosperity of businesses, particularly as premium listed companies will now need to report against the taskforce on Climate-related Financial Disclosures (TCFD) recommendations in their annual reports. We're proud to be working with the FRC on such an important initiative, and to be carrying out such work in this area on an ongoing basis."





Communities across the world have an important role to play in providing a local resilience capability to prepare, respond, and recover from climate-induced emergencies. This was the subject of another session at the Festival.



n recent years AMBS has been at the forefront of helping cities and local governing authorities to become more prepared for climate-induced disasters, in particular through the promotion of a global standard for disaster volunteers, and a specific session at the Manchester Festival was chaired by Professor Duncan Shaw who has been leading this work.

As he said: "Across the University we have been talking a lot about the need to build capability within our communities. What that means is enabling communities to be able to respond to major incidents and emergencies. For instance here in the UK one of the highest risks on our national risk register is major coastal flooding and that will be affected by changes in our climate.

"As an international community we are very vulnerable to disaster risks and as a result we have to take action to address those risks. We need to constantly remind ourselves that more needs to be done."

Professor Shaw took the opportunity during his session to discuss the recent launch in the UK of the National Consortium for Societal Resilience [UK+], which he co-founded, and which brings together local government authorities to develop new ways of engaging communities in building their own resilience.

### House of Lords report

Aside from the Manchester Festival, Professor Shaw was also recently cited in a major report on how the UK can better build resilience and plan for risks.

The report from the House of Lords Select Committee on Risk Assessment and Risk Planning 'Preparing for extreme risks: building a resilient society' follows on from evidence Professor Shaw gave to the Committee last year.

The report says the pandemic has placed a spotlight on the government's planning for the most serious risks facing the UK and has exposed the UK's risk management system as "deficient and too inflexible to provide the protection our nation needs".

For instance, it says the risk of the failure of ageing critical infrastructure such as nuclear power stations, dams and bridges

grows day on day without sufficient intervention. In the report Professor Shaw is specifically cited in a chapter which discusses how the UK population is not widely engaged in building resilience and planning for risks. It quotes Professor Shaw saying: "We need to take a strategic approach to supporting communities, to supporting the public to prepare for and respond to emergencies, given that the public are usually the first to arrive at and the last to leave a disaster."



Duncan Shaw is a Professor of Operational Research and Critical Systems

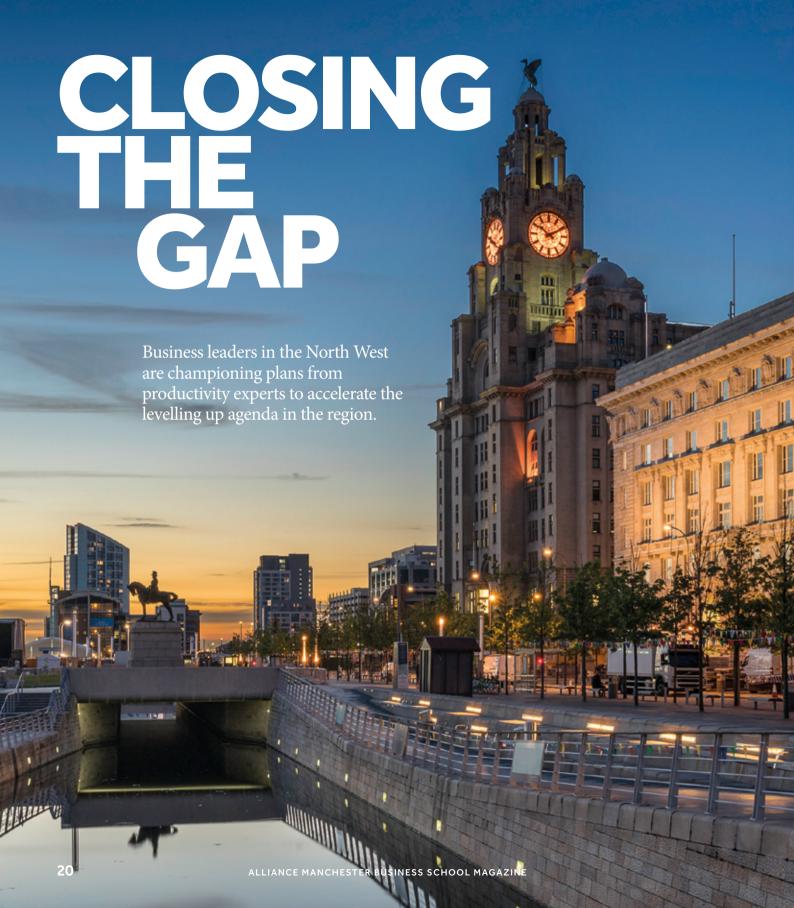
### Risks

The House of Lords report stresses that a pandemic is only one of many risks facing the country. But it says it offers a unique opportunity to take stock of the UK's risk assessment and risk management process. "We must assess and strengthen our national resilience to ensure that we are better prepared for the next crises," it says.

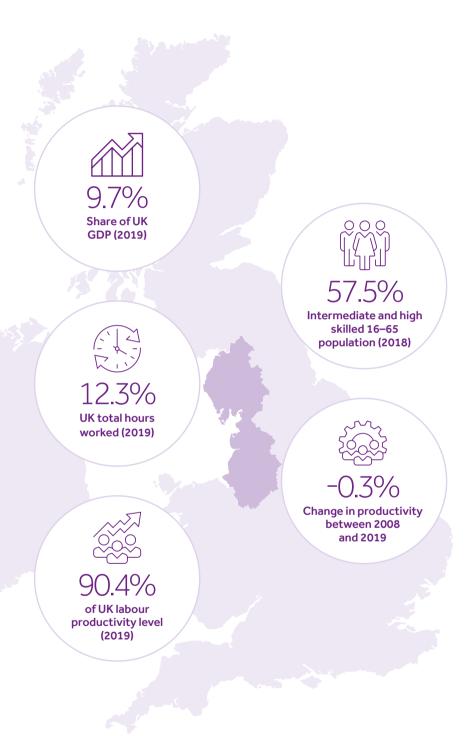
Echoing the founding values of the NCSR+, the report says the UK must adopt a whole of society approach to resilience, one which emphasises the important role played by all sections of society in preparing for, adapting to, and recovering from the effects of risk

Reflecting on the report, Professor Shaw said it raises the ambition to enhance whole-of-society resilience. "Through the NCSR+, local governments are working to collaborate even more closely with their local communities and organisations, and with each other, to pursue this national endeavour. Everyone has a meaningful part to play in the resilience of our society so collaboration is key across whole-of-society actors."

As an international community we are very vulnerable to disaster risks and as a result we have to take action to address those risks. We need to constantly remind ourselves that more needs to be done.







runtwood, North West Business Leadership Team, and former Siemens UK chief executive Juergen Maier are among those calling for a re-think when it comes to addressing the North West's productivity challenges. The call comes on the back of the release of a Productivity Insight Paper for the North West of England, created by The Productivity Institute and its North West Regional Productivity Forum, both based at AMBS.

The Paper highlights the strengths of the region, including its large and very productive manufacturing sector, as well as its leading R&D assets, life sciences, energy and digital industries. But it also outlines productivity gaps, identifying the obstacles preventing the North West and its sub regions from gaining ground on UK average productivity levels.

### **Priorities**

The report's authors have called on the government to prioritise policy areas that focus on the region's strengths, such as: factoring in improving within-region connectivity through local transport connections; strengthening coordination and collaboration between businesses, government and universities; unlocking demand for skills and strengthening basic conditions for creating a productive workforce; and digitalisation.

Dr. Marianne Sensier, Research Fellow at AMBS and co-author of the report, said:



Dr. Marianne Sensier

"We need to recognise the true scale of the productivity problem here in the North West. What is clear is that addressing the North West's productivity challenges cannot

be delivered with the same historical approach. It will require a sophisticated mix of coordinated policies – incorporating education and skills, R&D, innovation, health, planning, and transport investment – and long-term commitments that respond to specific local circumstances. But not acting now, and failing to better leverage our strengths as a region, means we risk remaining trapped in a low investment, low skill and low productivity equilibrium."

### Business leaders give their views on what needs to happen now to address the North West's poor productivity record.

Jennifer Halliday, Chair, North West Regional Productivity Forum



"The time has come for business leaders and boards to really engage on the topic of productivity, to set targets and to initiate projects that will really move the dial, and drive the inefficiencies out. These are often embedded deep within an organisation's processes, and may not be easily visible to boards or to senior management. We need to take a cold hard look at the facts around productivity and really understand the factors preventing businesses from reaching their full potential. Let's focus on the key drivers. In many cases, there are common themes, particularly around skills and digitalisation. Businesses should learn from others and reach out for support."

Jessica Bowles, Director of Strategy at Bruntwood and member of the North West Regional Productivity Forum



"We do have a problem in our hands, but crucially, what this Paper highlights is that by businesses working together and with academic institutions and government both local and national, we do have the tools to fix it. The region has many assets, but it's about leveraging those strengths in the right way – be it our manufacturing skills, expertise in health planning, or knowledge in life sciences. Only then can we start to reduce the gap and shift the dial on productivity in a meaningful way."

Juergen Maier, former Siemens UK chief executive and current Northern Powerhouse Partnership Vice-Chair



"It is disappointing that the North West continues to fall behind other UK regions on productivity, but the green industrial revolution holds the key to reversing this. By investing at scale in future industries like hydrogen and those based on new materials like graphene, we can create many new companies that are at the cutting edge of technology and invest in skills that create the high productivity sectors of the future. We now have the chance to do this with programmes like HyNet, an innovation programme for hydrogen and low carbon energy across the North West, and these need investment at scale from both the public and private sector."

Professor Barry Leahey MBE, CEO at Playdale Playgrounds, Be the Business Fellow, and member of the North West Regional Productivity Forum



"Business, government and universities must work together if we want to level up the North West. We simply can't afford to wait around. Lacklustre business investment during the pandemic is a concern and progress on productivity has gone backwards – compared to not only our global competitors but other UK regions – as a result. We need to leverage the expertise of our region's most productive businesses and find mechanisms to share their tactics for success with businesses that want to improve."

Emma Degg, Chief Executive of the North West Business Leadership Team, and member of the North West Regional Productivity Forum



"We are not lacking in ambition and we see exciting new opportunities emerging across the North West. From the Liverpool City Region's Freeport to Net Zero North West, we are at the forefront of positioning the UK as a leader in clean energy and sustainable manufacturing. However, productivity remains a significant challenge and continues to hinder growth. If we are to ensure all our communities benefit from the opportunities before us, we must take action. This excellent report from The Productivity Institute could help to drive significant improvements in productivity across the North West, raising the overall competitiveness and prosperity of the entire country. The time for action is now."



**Kieron Flanagan** reflects on the causes of the North West's productivity gap and how it might be addressed.

he North West has a long-term productivity problem, with the productivity gap widening over the past 15 years. But there is much that policymakers can do.

The UK's productivity challenges are well documented, and the North West is a lagging region in a lagging nation. In 2018, productivity, measured by Gross Value Added (GVA) per hour worked, stood at £32.10 – 8% below the UK average. This gap has widened over the past 15 years.

Indeed, London and the South East are the only regions to consistently outperform the UK average. These disparities are not a new phenomenon. Estimates suggest a consistent productivity gap between London and the South East, and the rest of the country, over more than a century.

### Sub-regional differences

There are also marked differences in productivity performance within the North West. For instance Cheshire performs relatively well, whereas Merseyside, Lancashire, Greater Manchester and Cumbria all lag behind.

At a local level, the differences are even more striking. Cheshire East, with its high-value life sciences and chemicals activity, is the 19th most productive of the UK's 170 NUTS-3 areas, whilst North East Greater Manchester, within the same travel-to-work area but still suffering from the scarring effects of deindustrialisation, ranks 160th. High and low productivity areas are distributed throughout the region, and are often neighbours.

### High value

The most productive local authority districts in the North West are in semi-rural and urban fringe locations – Cheshire East, South Ribble, Halton, and Pendle – areas with concentrations of very high value (but relatively low employment) advanced manufacturing, life sciences, aerospace and chemicals activity.

The location of these industries reflects natural advantages or a legacy of contingent past business and policy choices. Their high productivity performance is typically down to a small number of highly productive companies, masking underperformance in other sectors and smaller firms.

### Causes

The North West Productivity Forum Green Paper analysis suggests that low productivity in the North West is the result of chronic underinvestment in key growth drivers such as hard and soft infrastructure, R&D activity, and human capital. Many of these challenges affect other parts of the UK, but the North West is particularly afflicted. This may be due in part to:

- > long-term scarring effects from industrial decline
- the legacy of worklessness, ill-health and deprivation this has left in many places
- a pattern of public spending oriented towards ameliorating these human and social costs of poor productivity, rather than towards productivity-enhancing investments in infrastructure, skills and innovation
- > a lack of opportunities including finance for high growth potential firms
- > mismatches between skills supply and demand (including significant problems on the demand side)
- > absence of the critical mass of activity necessary to drive growth in the main urban centres of Liverpool and Manchester
- decades of over-centralisation and micro-management from Whitehall, with a consequent hollowing out of capacity in local government – made worse by austerity cuts.

Can the most productive local authority districts in the North West are in semi-rural and urban fringe locations – Cheshire East, South Ribble, Halton, and Pendle – areas with concentrations of very high value (but relatively low employment) advanced manufacturing, life sciences, aerospace and chemicals activity.

The North West needs a concerted effort, at scale, over decades, to address these issues. This will require a major and long-term commitment by central government. But it will also require a renewed commitment to devolution as a process, and an investment in the capacity to analyse, make and implement policies at the local and regional levels.

We need to look again at finance and support for growth and innovation, at the benefits of exposure to international competition, and at our ability to adopt and adapt practices and technologies from anywhere in the world. And we need to look at not just the workforce but also the management skills that might be required for a more digitally enabled, net zero economy.

In research terms, we urgently need to also look critically at the quality of regional productivity data, to ensure we are tackling real problems that matter to people's lives and futures, and not just statistical phantoms.

 $Kieron\,Flanagan\,is\,a\,Professor\,of\,\,Science\,and\,\,Technology\,\,Policy\,and\,\,academic\,\,lead\,for\,\,the\,\,North\,\,West\,\,Regional\,\,Productivity\,\,Forum.$ 



The head of a major business support organisation in Greater Manchester has been appointed as an Honorary Professor of Productivity and Innovation at AMBS.

ark Hughes MBE is Group Chief Executive of The Growth Company which provides business support, finance, training, and accreditation services to thousands of businesses across the Manchester city region and nationally.

He said he was thrilled to be joining AMBS and that his appointment would build on the extensive collaboration that already takes place between The Growth Company and The University of Manchester.

As he explained: "Just like the University we are a major anchor institution in Greater Manchester (GM), driven by furthering its prosperity that is inclusive and sustainable. We already have a number of ongoing projects with the University and I see this appointment as a great opportunity to further build on that work."







### **Synergies**

Mr Hughes said that there were obvious synergies between The Growth Company and the work of researchers based at The Productivity Institute.

"One of the key drivers of the Growth Company is to improve the value of the GM economy, and productivity and innovation are key to that. The real challenge for our organisation is how we can help embed improved productivity in a far greater proportion of businesses so that we have a greater number of more productive businesses across GM.

"What I see on a day-to-day basis is that some business leaders have a specific focus on productivity and embrace it, making the productivity challenge a specific project within their organisation. But most companies focus on the underlying drivers and components of productivity and could benefit from a greater understanding and focus on the wider picture.

"The key questions around productivity for me are 'what is the evidence base for change and improvement at the business unit level?' And how can we get the evidence base into those types of businesses that most need it? It is all about the communication and application, and that is down to the actual skills that managers have. Only by coming at productivity through people do you actually make improvements."

### Pandemic impact

Mr Hughes added that the pandemic had intensified the debate around productivity. "In the pandemic some businesses have thrived, some have disappeared, and most worked exceptionally hard to get through it. But what we know is that COVID-19 has turbocharged digitalisation and innovation, and if you look at sectors such as retail and hospitality it has led to companies completely reinventing their business and delivery models driven by the need to go virtual.

"In so doing many have also experienced improved productivity as an unintended consequence as they have gone about further enhancing the consumer experience. The question now is how these companies can build on this and how we can help them become higher value and more productive.

"This is also a very interesting moment in terms of the productivity debate, so

turbocharged digitalisation and innovation, and if you look at sectors such as retail and hospitality it has led to companies completely reinventing their business and delivery models driven by the need to go virtual.

strongly linked as it is with the wider levelling-up, innovation, sustainability and skills agendas. There is now definitely an opportunity for a better dialogue about what can be done well at the local level, and how national and local can work together effectively.

"At the end of the day the UK actually has some of the most productive businesses in the world, so we know we have the underlying abilities. It is just that we don't have enough of these businesses compared to some other countries and that's where we need to improve."

Bart van Ark, Managing Director of The Productivity Institute and Professor of Productivity Studies at AMBS, said: "The Productivity Institute, which is a nationwide research organisation headquartered in Manchester, aims to contribute to tackling the productivity problem at national and regional level, including at our home base in Greater Manchester. Mark's appointment speaks to the latter, given the widely acclaimed role he and The Growth Company are playing in the Combined Authority to support productivity through innovation. We are looking forward to working with him."



# In many practical settings, AI tends to be most successful as a tool to augment rather than replace decision-making.

**Julia Handl** explains why AMBS is developing increasing links with companies in the field of decision sciences.

he recent announcement that AMBS now has five Alan Turing Institute (ATI) fellows speaks volumes for our strength in data sciences.

The UK's National Institute for Artificial Intelligence recently announced more than 400 fellowships for 2021/22 across its 12 university partners, with The University of Manchester now home to 33 fellows. At AMBS Dr Richard Allmendinger, Professor Yu-wang Chen, and Dr Manuel Lopez-Ibáñez were all appointed new fellows for 2021/22, while myself and Dr Nadia Papamichail had our fellowships renewed.

These fellowships further cement the increasing links that we are developing with companies in the field of decision and sciences, areas which are becoming increasingly important to them as they seek to analyse and make use of the mass of data that flows through their businesses hour by hour, day by day.

### Constraints

Part of our role when talking to businesses is to explain the practical constraints of Al (Artificial Intelligence) and to discuss some of the common misconceptions surrounding the use of Al and machine learning.

For instance, it is not uncommon for individuals to equate Al and machine learning, when it might be more appropriate to think of machine learning as just one subset of Al. Even in data-rich environments, certain problems may be more suitably tackled using traditional operations research such as simulation and optimisation techniques. In many practical settings, Al tends to be most successful as a tool to augment rather than replace decision-making, so consideration needs to be given to aspects of human-computer interaction and the design of effective decision support tools.

### **KTPs**

One area where we are seeing increasing activity with business is around Knowledge Transfer Partnerships (KTPs), which are a really effective model for collaborations in the field of Al. A successful Al project depends on both strong technical skills and excellent domain insight, and KTPs achieve this by sending technically skilled experts to be embedded directly within the relevant teams of a company.

Also, we are finding that our fellowships with the ATI have great value for companies, as they open up an additional range of opportunities for engagement and joint funding applications and increase the visibility of the work.

There is also a really strong internal talent development angle to many of our collaborations with companies. KTPs are designed specifically to help both with the



Julia Handl is a Professor in Decision Sciences

translation of state of the art knowledge into practical industry problems, and the transfer of the associated knowledge to teams within the company.

Where MSc and PhD students are involved in collaborations this brings tangible benefits for both sides. Companies and organisations often go on to recruit our students directly, benefitting from this first-in-line access to our graduates. Our students gain practical experience in the translation of their technical skills, valuable work experience and, potentially, a direct route into their first job.

### Teaching

Another area where our work is gaining greater traction is in how Al is now embedded into a greater range of teaching programmes. Our Business Analytics programme is designed to equip students with a broad and powerful toolkit of techniques ranging from operations research over data science to decision-making. AMBS also looks after the Business and Management pathway of the Data Science MSc, The University of Manchester's cross-faculty flagship programme in Data Science.

At AMBS we recognise that data literacy and the interpretation of data are becoming essential skills, and there isn't one area of our business school that isn't touched by this agenda. At the end of the day, being able to make sense of data is really important, not only to arrive at good decisions yourself but also to assist with interpreting information provided by others.

A management Knowledge Transfer Partnership (mKTP) with law firm Jackson Lees Group (JLG) is looking at how advanced data science techniques can be combined with behavioural psychology profiling to tackle complex work processes.

Ithough many law firms are looking at how Artificial Intelligence (AI) can be used to develop leaner processes and quicker turnaround times in routine legal transactions, it is rare to combine this with psychology profiling. Yet studies have shown that consumer values and opinions have a big impact on attitudes and behaviour. As such a trailblazing mKTP between AMBS and North West law firm JLG is focusing on how psychographic characteristics can affect client and JLG adviser interactions within the specific legal process context.

### **Profiling**

Brian Cullen, CEO of The MAPD Group which owns JLG, said the group had already been looking at personality profiling among its staff for some time in order to understand how more positive staff attitudes and better internal collaboration can translate into more positive customer experiences.

As he explained: "This particular project will look at how we can now translate this work into creating a more positive culture and experience with our customers. Legal case management systems have always tended to be designed by lawyers for lawyers, so by their nature they are very technical and process driven which can be unhelpful for customers. We want to look at how we can completely reinvent the system in order to create a better customer experience."

JLG was already a member of The University of Manchester's Law and Technology Initiative which enhances understanding of emerging technology trends that are already transforming virtually all aspects of the legal sector. On the back of this relationship it was put in touch with AMBS when it began thinking about combining data science with behavioural profiling.

As Cullen adds: "The academic route always seemed the most logical route for us with this project as it can be very difficult to find consultants who specialise in both psychology and Al. Collaborating with a university, and the whole notion of learning from each other, really appealed to us too. In terms of its organisational psychology offer, we were not only impressed by the breadth of AMBS research but also by its ability to translate this into a business environment '

### Track record

AMBS academics involved in the project include Senior Lecturer in Organisational Psychology David Hughes, and Senior Lecturer in Information and Decision Systems Nadia Papamichail.

Dr. Nadia Papamichail. who is also an academic director of the Law and Technology Initiative, said: "AMBS has a track record for delivering successful Knowledge Transfer Partnership projects in collaboration with legal services firms. This work aims to develop emotionaware Al tools that embed cognitive capabilities into people, processes and





technologies, and will develop an endto-end Al-driven system for delivering personalised customer experiences. An Al Application Developer will work alongside an Organisational Psychology Associate to design and build a suite of Al-driven tools such as chatbots and cognitively enhanced workflows."

Dr. Hughes added: "When you hear the words 'law, technology, and Al', rarely do you expect the next word to be psychology. But that is what makes this project so exciting. Scholars within AMBS have a strong track record of bringing together seemingly disparate fields in order to generate cutting-edge policy and practice. Here, too, we have assembled an expert team of psychologists and data scientists to develop a genuinely creative

and innovative programme that will use psychological assessment to improve lawyer-client relations within a broader Al client management system."

### Strategic management

Unlike a more general Knowledge
Transfer Partnership (KTP) where business and academia join forces to develop a specific product or service, an mKTP is built around identifying strategic management-based initiatives to increase business effectiveness and improve management practices. JLG has benefited from a 50% grant contribution towards the eligible project costs from the Department for Business, Energy & Industrial Strategy (BEIS). ■

\*For further information and advice on accessing KTP or mKTP funding please contact Joanne Summers at joanne.summers@manchester.ac.uk



### AMBS is to embark on a collaboration with major UK defence company BAE Systems after securing funding for an Industrial CASE (ICASE) PhD studentship

he four-year project, worth around £130,000, is funded by both BAE Systems and the Engineering and Physical Sciences Research Council (EPSRC), and starts this year.

It will look at the use of more automated decision support tools in the defence industry, and especially at the use of Reinforcement Learning (RL) algorithms within military scenarios. In particular, BAE Systems is currently working up concepts for the next generation of naval vessels and developing semi-automated intelligent decision aids which are being incorporated into its INTeACT combat management system product.

### Knowledge

As part of the process the company is keen to tap into the knowledge of data scientists who can help it integrate decision sciences methodologies into its software in the safest way possible.

Dr Richard Allmendinger, Business Engagement Lead at AMBS and Senior Lecturer in Data Science, said the results from the project will help develop further confidence in the deployment of RL algorithms in the military field, and especially in operational scenarios where environmental conditions inevitably differ from simulated environments.

"The project is all about understanding how defence systems software can deal with uncertainty better and draw on prior experiences to make informed decisions. It is also about the industry itself learning further about developing the necessary governance processes associated with the increased use of machine learning technologies.

"What BAE Systems is particularly interested in from us is a further understanding of the methodologies involved, because in this area the technologies are so complex that no one person is capable of digesting all the information available and fully understanding it. But this is not about replacing people, it is about making decision support tools work better."

### **Algorithms**

The study will conduct research into the trade-off between the generality of RL training environments and real-world performance. It will also look at how the performance and robustness of RL algorithms can be characterised within a changing environment, and whether the performance drop-off thresholds can be measured and predicted.

Dr Allmendinger said the ICASE scheme was an excellent platform because there were clear benefits for both the company and the university partner. "ICASE studentships not only provide an opportunity for PhD researchers to gain first-hand experience of working outside an academic environment, but the student is also analysing real-time, real-life projects which could potentially



lead to wider commercialisation, so there is really strong impact. Such schemes can also typically lead to additional projects between the university concerned and the company."

### Understanding

Simon Mettrick from BAE Systems said: "The current ICASE PhDs at The University of Manchester have been hugely helpful in deepening understanding of trust in artificial intelligence and potential applications of computer vision. This opportunity promises to do the same for reinforcement learning."

Louise Bates, Head of Strategic Partnerships at The University of Manchester, said: "This is another great example of The University of Manchester partnering with BAE Systems to address a real world challenge, and it further demonstrates the value of our strategic partnership."





AMBS PhD researcher Thu Trang Dinh has been recognised by one of the most prestigious organisations in data science. She attended a Data Study group organised by The Alan Turing Institute in London, and at the end of an intensive three-week exercise was awarded a Learning Machine Award which recognises individuals who absorb new skills, tackle unfamiliar methods, and are not afraid to try new techniques.

The study groups attract students from across the UK and are run as intensive 'collaborative hackathons' where researchers are set specific challenges and work together on real-world problems.

Her group was set a challenge by the UK Dementia Research Institute which wants to generate predictions for the effects of Alzheimer's associated genetic variants on cell-type specific gene regulatory mechanisms.

Her own PhD project at AMBS is looking at how machine learning methods can help predict exchange rate movements. As she explained: "Predicting and forecasting accurate exchange rates can bring a host of benefits for policymakers and any business that trades abroad, and I am currently working on a machine learning predictive model that incorporates many different sources of information. Banks and financial institutions are today starting to use machine learning much more widely and this is just one example of the benefits it can bring."



A data science expert has been awarded a Simon Industrial and Professional Fellowship at AMBS to research on the role of trust in Al systems. Dr. Darminder Singh Ghataoura is Director of Al & Data Science within the Defence & National Security division of Fujitsu UK, and was brought in by the company to build and lead its offerings and capabilities in Al, data science and data strategy.

He has now started a six-month Fellowship looking at the important areas of trustworthy Al and Al decision making in the defence sector and elsewhere. For example he is looking at how simulation techniques and gaming technologies could be used by the defence industry to help address supply chain logistics in specific scenarios.

As he explained: "As the defence industry integrates Al into its systems and missions there are questions about the role of trust in human-machine teams. To address these concerns there have been continuing technological advancements that look to build trust into Al systems by enhancing system functions and features like transparency, explainability, auditability, reliability, robustness, and responsiveness.

"However little effort has been made to address solutions which exploit research on human attitudes towards 'machine-teaming', accounting for the differences in people's perceptions and experiences, especially within dynamic and changing environments such as a battlefield scenario."



Andreea Avramescu, a PhD researcher in Decision Sciences at AMBS, has been awarded a prestigious SPECIES Scholarship award. The scholarship aims to promote evolutionary algorithmic thinking and winners spend three months at a partner institution carrying out research. Andreea has chosen to undertake her research placement at the University of Malaga and her project examines the complex optimisation problems involved in the optimal design of supply chains.

As she explains: "I am particularly interested in optimisation problems addressing social sustainability issues in the fields of logistics, supply chain management, and applied optimisation. I have previously worked on topics related to international migration, social media data, sentiment analysis, cryptomarkets, drug consumption, and illegal supply chains in both industry and academia."

Her PhD research, under the supervision of Dr. Richard Allmendinger at AMBS, draws on tools from operations research and machine learning to guide the optimisation of the manufacturing tasks and delivery strategies of personalised medical products.



>>>>>

ealthcare is a labourintensive enterprise requiring consistent development and, at times, transformation. Beyond any moral imperative, healthcare systems are essential to the effective functioning of society. Health is wealth.

If we were in any doubt before COVID-19 this is now an established truism.
Across the globe, healthcare systems are facing many challenges and opportunities, many of which have been revealed, highlighted or amplified by the pandemic.

Some are depressingly familiar such as the challenges of working across boundaries and responding compassionately and in a timely manner to mental health problems. Others are exciting and full of hope such as the intelligent use of data to address inequalities, and promises associated with digital healthcare. And some are new such as how to manage the fallout from the pandemic, not least in terms of its impact on the workforce to deliver care.

### Local challenges

Such global challenges apply more locally too, as reflected in the ten priorities for the English NHS in 2022/2023 which was recently published. These included:

- Workforce investment and strengthening the compassionate organisation culture needed to deliver outstanding care
- > Responding to COVID-19
- Delivering significantly more planned investigations and operations to tackle the elective backlog
- Improving the responsiveness of urgent and emergency care and community care capacity

Across the globe, healthcare systems are facing many challenges and opportunities, many of which have been revealed, highlighted or amplified by the pandemic.

- Increasing timely access to primary care (including GP services)
- Maintaining continued growth in mental health investment to transform and expand community health services and improve access
- Using data and analytics to redesign care pathways and measure outcomes with a focus on improving access and health equity for underserved communities
- Achieving a core level of digitisation in every service across systems
- Returning to and improving on pre-pandemic levels of productivity
- > Establishing integrated care boards with local authorities

### Workforce

What is the likelihood that any of these priorities will be met? What is the evidence from before the pandemic that any of these are realistic or that there is the political will to support implementation?

All these priorities are contingent on tackling the NHS workforce challenges. Namely, tackling staff shortages, burnout, low morale, defensive routines, the variable quality of leadership and

management, and competition for workers between other service sectors and healthcare systems.

### **Pressures**

There were ominous signs well before COVID-19 struck of the pressures on the NHS. Targets for increasing the GP workforce weren't being met (with actually fewer GPs in 2020 than there were in 2015), waiting times in A&E were growing, and social care was struggling to fill vacancies, exacerbated by Brexit.

Hospital bed occupancy was also too high with winter pressures becoming not just routine but all year round pressures. Behind all this were disappointing figures in comparison with our European neighbours in relation to hospital bed capacity and in terms of numbers of nurses and doctors in proportion to the population.

### First-hand experiences

Many of these themes were explored in a book that I (Professor Chambers) co-authored last year. Organising care around patients: stories from the frontline of the NHS features true accounts of experiences of the NHS as

narrated by carers, people with mental health difficulties, those suffering debilitating long-term conditions, and those difficulties associated with older age.

The book is a call to action for healthcare professionals, managers and politicians to reframe services to provide more patient-centred care, whilst also setting out a vision of a kinder and better organised post COVID-19 NHS.



Naomi Chambers is a Professor of Healthcare Management



Ann Mahon is a Professor of Health Leadership

# DOING GOOD

How multinationals can make profits while also addressing the needs of underserved communities is the subject of a major research project.





For companies to satisfy both their quest for economic performance and also to make a contribution towards sustainable inclusive development, a good opportunity lies in addressing the relatively untapped needs of underserved populations in emerging markets.

n developing countries multinationals are often blamed for only serving the elite population. In these emerging markets, they also rely on local governments to create infrastructure that supports their activities, thus sometimes diverting resources from underserved communities within that country.

So how can multinationals increase profits while also addressing the needs of these underserved communities? This is precisely the issue that will be explored indepth in a major five-year research study, funded by the ESRC and co-headed by AMBS and the University of Birmingham.

The project will look at how UK multinationals can create value for marginalised communities and reduce inequalities while still turning a profit. In particular, the study will focus on the experience of UK multinationals operating in Brazil and Colombia

### Disadvantaged communities

Co-lead investigator Axele Giroud, Professor of International Business at AMBS, said most business and entrepreneurial initiatives targeted at disadvantaged communities have traditionally been undertaken by NGOs or by local small and medium enterprises.

"Although some local large companies have successfully served poorer consumers, it is rare to find multinationals from advanced markets actively engaging with poorer communities. This really matters because multinationals are such important and sizeable players in these emerging markets.

"The central question we will pose in this study is how can multinationals incorporate marginalised communities into their activities. To date there has been little research conducted on how multinationals from advanced markets engage with local stakeholders in countries such as those in Latin America, even though it has been emphasised by the UN that collaborative efforts by businesses, society and governments are necessary to achieve Sustainable Development Goals (SDGs)."

### SDGs

The study, entitled Creating competitive advantage by serving marginalised communities: UK multinationals and inclusive development in Latin America, will explore how multinationals can contribute to the achievement of SDGs by addressing the needs of underserved populations and marginalised communities in emerging markets, while also providing expectations of long-term economic return to their shareholders.

Added Professor Giroud: "For companies to satisfy both their quest for economic performance and also to make a contribution towards sustainable inclusive development, a good opportunity lies in addressing the relatively untapped needs of underserved populations in emerging markets.

"We want to look at how multinationals can contribute to the achievement of SDGs by creatively serving disadvantaged populations in emerging markets, and create competitive advantage at the same time. How can they do good

while also achieving their economic objectives?"

The project began at the start of this year and it is hoped that the outcome of the research will contribute to a much broader understanding and identification of sustainable business practice by multinationals, in both theory and practice.

As Professor Giroud added:
"We will create an online platform to
disseminate key results and demonstrate
value creation by multinationals for
underserved communities. We will
also run a series of multi-stakeholder
workshops to demonstrate the benefits
of bringing different players together.
Indeed, it is only by talking to a variety of
stakeholders that we can truly find ways
to identify good practice and identify
exactly what some firms do really well."

The £1m project is being run in conjunction with co-lead investigators Professor Pervez Ghauri from the University of Birmingham and Dr. Jorge Carneiro from the FGV Sao Paulo. The funding from the ESRC is the result of an effort to promote collaborative work based on an agreement between ESRC-UKRI and the FAPESP Research Foundation in Brazil.



## REIMAGINING BUSINESS

Professor Ken McPhail, chair of the British Academy of Management 2022 conference committee, looks forward to this year's conference which is being held at AMBS.





is a Chair in Accounting

here has never been a more pressing time to reimagining business and management as a force for good. Indeed, achieving the **UN Sustainable Development** Goals confronts us with the need to completely re-imagine the purpose of business.

For instance we are increasingly aware that reaching net zero will require fundamental transitions both in the way we live and our economy. There is a world of difference between the structure of our current economy and the one required to limit global warming to two dearees C.

Closer to home there is a huge difference in prosperity between regions of the UK. Inequalities related to social groups across the regions may already have changed the face of UK politics, and as the flesh is put on the bones of the government's levelling up agenda, difficult questions are being asked about the role of businesses in reinforcing inequalities, not just about what they can do to reduce them.

There is a world of difference between the structure of our current economy and the one required to limit global warming to two degrees C.

### Challenging our thinking

These profound shifts challenge the way we think about and practise business and management, raising fundamental questions about whether sustainable and inclusive productivity growth is possible and - if it is - the new roles business, the public sector and third sector will have to play in attaining it.

However, as if these challenges weren't big enough, there is another huge difference between the preand post - COVID business landscape within which they will need to be addressed. Changes to work patterns and supply chains, combined with labour and skills shortages, are converging on firms, managers and employees in ways that could change the world of business for ever.

Does the post-pandemic world provide us with new opportunities to plan for new organisational futures? Will we be able to reimagine a new workplace that enhances the health and wellbeing of our workforces, creating 'good work' for all? Or will standard economic and business thinking stifle our ability to reimagine and innovate?

### Impact

In this new era where the wider societal impact of our research, teaching, and scholarship has never been more important, the current business and management research ecosystem seems to be getting in the way of producing knowledge that is ultimately helpful in addressing the challenges facing business and society.

There remains a huge aulf between the kind of partnerships and co-produced research that is required to address these challenges and what we currently do. If business and management scholars are to have a role to play in creating 'the best of all possible worlds' do we also need to change the way we understand, measure and reward good research and good teaching? How will we produce the business and public leaders, managers. engaged scholars and agents for change that we need?

### Conference

I am thrilled that we will be able to debate these most pressing issues right here in Manchester this summer at BAM 2022, our 36th annual Conference, where business and management scholars, policy setters and business leaders will grapple with these questions.

The conference will consist of keynotes, high-level panel discussions (streamed online and in-person), professional developmental workshops and live paper (full and developmental) presentations.

Indeed, there is a clear link between the conference theme Reimagining business and management as a force for good and the research interests of many colleagues across AMBS.

I for one am certainly looking forward to seeing their work and the research of academics from across the world showcased at this year's conference.

\*The conference is being held between 31st August and 2nd September. For further details visit <a href="mailto:bam.ac.uk/events-landing/">bam.ac.uk/events-landing/</a> conference

### A WORLD OF CHANGE

The University of Manchester's Middle East Centre recently celebrated its 15th anniversary. Founding Director **Randa Bessiso** reflects on what has been achieved.

Manchester pioneered access to global business education in the Middle East with the introduction of the Global Part-time MBA for working professionals, bringing a top faculty-led MBA programme within easy, flexible and convenient reach for working professionals...

he Middle East Centre has come a long way since opening in Dubai in 2006. Among other notable milestones, we have witnessed a global economic crisis, a global pandemic, and the world has been digitally transformed.

The key milestone for the Centre was in 2017 when it was renamed The University of Manchester Middle East Centre, having been part of AMBS for its first 10 years. The change reflected the growing significance and opportunities of the region for the University and reaffirmed the decision to 'set up shop' in Dubai, United Arab Emirates, as it transformed into a world class regional and international hub for business and finance. From this point the centre has been at the epicentre of the University's activity in the region.

### **Pioneer**

We believe The University of Manchester pioneered access to global business education in the Middle East with the introduction of the Global Part-time MBA

for working professionals, bringing a top faculty-led MBA programme within easy, flexible and convenient reach for working professionals looking to accelerate their careers, switch roles, or even become entrepreneurs, all supported by the dedicated team at the permanent regional centre.

From the early modest beginnings of our first Global MBA cohort (just 20 students) in 2006, we now have a growing portfolio of part-time Master's programmes and have today supported almost 3,000 part-time students and graduated nearly 2,000.

We also support and nurture a growing alumni community across the region, where networking is at a premium and a serious business. Over the course of the last 15 years, the Centre has developed our own networks, from the very supportive authorities in the UAE to a wide range of industry connections and professional bodies across the region. Together, our aim is to support the community and provide a very rich and rewarding experience for students, and lifelong relationships with graduates.

### Connections

Many of our earliest students are still closely connected to the University in the region and some have become Ambassadors, Adjunct Faculty and Teaching Assistants on the Global Parttime MBA, reflecting the quality of our students and the progress they have made since graduating. It's very gratifying that today many of our new students join us following a referral or recommendation from an alum.

As one of the University's global centres – and the largest and still the fastest growing – our faculty-led



programmes bring our top academics to the region, as they lead the regular face to face student workshops or conferences we host in Dubai. Academics speak very highly of the quality and diversity of students we support at the Middle East Centre and are always very pleased to visit the Emirate.

They are not alone. Many students from other centres within the University's network also choose to attend workshops in Dubai because of the opportunity to network with our regional students and to explore the attractions and opportunities of this dynamic, world-class city and region.

### **Business-friendly**

Choosing Dubai as the location for the Middle East Centre was a straightforward decision thanks to its business-friendly approach and the support of the local authorities. Since then, we have grown our regional community tremendously across the region, and actively engage with corporate partners, professional bodies and the UAE and Dubai authorities, through a range of partnerships and collaborations.

Our 15th anniversary celebration also coincided with the UAE's 50th anniversary and our objective is to continue to play our part in supporting the region in achieving its ambitious visions and be a very big part in our students' lives and careers.

Looking ahead, we continue to share the University's aim which is to create impact and to make a difference across all three elements of the mission, comprising learning, research and social responsibility.



Dr. Zulfa Al Disi, PhD, MBA, MSc Postdoctoral Researcher, Qatar University

"Earning an MBA degree from such a prestigious university made me proud and very self-confident. The MBA was something that I really needed at that stage of my career and it certainly made a difference."



Tim Shelton Global Product Owner, Arcadis International Limited, Dubai – United Arab Emirates

"Collaborating with like-minded motivated people who wanted to change their organisations as well as their careers gave me the confidence to speak out and articulate my ideas about contemporary business challenges."



Eng. Faisal Haddawi, MBA CEO – Abdullah Abdulaziz AlRajhi & Sons Holding Co Riyadh – Kingdom of Saudi Arabia

"The 'pay back' of an MBA is not really financial, it's more about changing your attitudes and behaviours, expanding your horizons, along with the knowledge and education."

"I decided to study the Global Part-time MBA in 2006 to support my role in quality assurance management as I came from a science background and needed the additional broader knowledge. I completed my MBA in 2010 and attended the graduation ceremony on campus in Manchester, in 2011.

The MBA certainly contributed to my professional career as a QA Manager and then directly to my second Master's degree, leading on to the PhD and eventually my role as an academic researcher. When I started the MBA, I wanted to improve my management skills. However, since graduating my career goals have changed and I decided to revisit an earlier ambition in the academic scientific field.

The MBA workshops in Dubai were great learning experiences, and all my fellow students contributed a lot. Dissertation writing was difficult but I have to admit that the learning outcome was great and this has helped me a lot with my academic scientific career.

The MBA led to some very interesting and useful developments and I learned how to manage my time and then devoted time to handling balance sheets and learning how to persuade others. Earning an MBA degree from such a prestigious university made me proud and very self-confident. The MBA was something that I really needed at that stage of my career and it certainly made a difference."

Tim Shelton is a prominent alumnus and Middle East regional ambassador of The University of Manchester who has used his Global MBA experience to support his career as he grows his role on the back of a wave of digital transformation sweeping across his company and industry.

He has recently moved from his regional position to a global leadership role while remaining in the Middle East. He initially trained as a quantity surveyor and the MBA helped him acquire a broader understanding of business, and additional skills. Arcadis saw his potential to assist in the digital transformation process.

As he says: The MBA played a big part in my move to a new global role with Arcadis, building on my experience from a domain expertise and also from a strategic perspective – technology, people and processes. The MBA taught me a lot with a heavy focus on the 'Manchester Method'.

"Digital transformation is a major opportunity for the company and the industry. From my own experience on the Global MBA, collaborating with like-minded motivated people who wanted to change their organisations as well as their careers gave me the confidence to speak out and articulate my ideas about contemporary business challenges. This wave of digital transformation hit my career at the right time, as I moved into middle management, so the MBA set me up for success."

Faisal Haddawi was recently promoted to the role of CEO of one of the Gulf's largest family-owned holding groups. In the early 2000s, there weren't many techno-commercial people in Saudi Arabia and it was challenging to find opportunities to learn and develop. However, he found the University's new Middle East Centre in Dubai and the newly launched Global Part-time MBA, which pioneered blended learning in the region. He joined the programme in 2007 and graduated in 2010.

As he explains: "I started my career as a regular engineer. My three years with Manchester really changed the way I looked at business and boosted my career from the outset. Without the MBA I would not be in this position. The Global Part-time MBA is not an easy journey and the University's Middle East Centre team deserves credit for the fantastic support it provides, even arranging an MBA exam during a business trip in Budapest. There's a great team of staff and academics from who I learned many things.

"The 'pay back' of an MBA is not really financial – it's more about changing your attitudes and behaviours, expanding your horizons, along with the knowledge and education. Most importantly, I learned how to change myself and I'm so proud to be part of this community."





Professor Fiona Devine, Head of AMBS

### LAST WORD

s my colleagues at the Work and Equalities Institute (WEI) remark in this issue, this is a watershed moment for the future of work and working practices. As WEI Director Anthony Rafferty notes, the pandemic has not just impacted our working lives today. It has made us think about the long-term future of work, about the way we collaborate with each other in the workplace, and about the place of work in our lives overall. How much we will commute to work and by what means will affect our carbon footprint too.

Closer to home, the pandemic has also made business schools think about their own ways of working. In response to COVID-19, schools initiated great change to their ways of working, with the move towards online teaching, hybrid working models, and virtual seminars and conferences the most obvious examples. Now we find ourselves asking how the move to online learning will accelerate. deepen and widen in the world of business education. Most, importantly, what is the balance between face-to face and online learning?

### Blended approach

Here at Alliance Manchester Business School (AMBS) the jury is still out on what that balance might be. We know that our students really like a blended approach - such as we offer on our Global MBA – and really value in-person teaching and learning.

These considerations are just as relevant to lifelong learning and the wider executive education market too. As we come out of the pandemic, finding new and innovative ways to bring staff together and further develop team cultures will be a central focus for employers.

Indeed at AMBS, where we run a number of customised programmes, we are already seeing the popularity of professional development open programmes on the rise. Such programmes not only give learners the opportunity to acquire new leadership skills. In addition, they generate significant networking opportunities, and there is every indication that the market for executive education is likely to grow significantly.

### Societal impact

Meanwhile, in the aftermath of the pandemic, another major trend we are seeing across business schools is a renewed focus on the wider benefits to society of their teaching and research. and increasing alignment with the UN's Sustainable Development Goals (SDGs). The University of Manchester is already well ahead of the game in this context after last year being named the world's number one university for action on sustainable development in the Times Higher Education Impact Rankings.

The University was praised for its success in embedding SDGs in areas such as teaching and research practice, public engagement activity. and responsible campus operations. The award shows how taking societal commitments seriously affects all aspects of a university's operations, including its physical infrastructure, management, and procurement. The whole environment in which we research and teach has to be considered.

### Delivering change

Precisely these points were discussed at the recent Manchester Festival of Climate Action which considered the challenges at the forefront of the climate crisis (see page 12). In one session Jenni Rose, Senior Lecturer in Accounting and Finance. hosted a panel debate with three of our current MBA students exploring how teaching accounting needs to change to reflect climate change risks.

As one of our students Nkem lawe succinctly put it during the event: "Through my studies I look at sustainability from every angle. Companies are now looking for how well you are investing in sustainability and how much you care about it before you invest. AMBS is consciously bringing sustainability into every aspect of what we do, into every subject."

No matter how we deliver our learning in the future – be it online, blended or in-person – we must not lose sight of these core substantive messages along the way either.

SPRING 2022

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