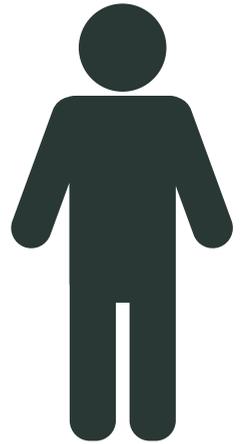
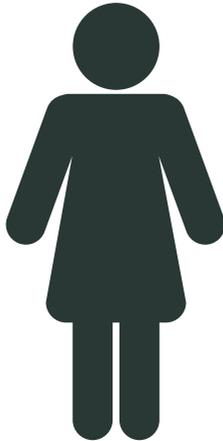


NORTH WEST BUSINESS LEADERSHIP TEAM



Productivity

Unlocking our potential

Solving the productivity puzzle in
North West England and nationally

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Productivity

Unlocking Our Potential

Solving the productivity puzzle
in North West England and nationally

A thought leadership report by:-



June 2016

NWBLT

The North West Business Leadership Team is an independent group of influential business leaders, who work together to promote the sustainable economic development and long-term well-being of North West England. It was launched by HRH The Prince of Wales in July 1989. Membership of the Team is made up of senior executives from the region's major businesses (see Appendix D). It operates as an independent business voice for the whole North West, thus providing valuable strategic support for the region's Local Enterprise Partnerships.

Further information regarding the work of the North West Business Leadership Team can be obtained by writing to the Chief Executive, NWBLT, Daresbury Laboratory, Sci-Tech Daresbury, Keckwick Lane, Daresbury, Warrington WA4 4AD or by visiting www.nwblt.co.uk

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EXECUTIVE SUMMARY

Our Goal

To drive significant improvements in productivity levels across all our principal employment sectors, rebalancing the North West economy and thus raising the overall competitiveness and prosperity of the UK.

The Challenge

The Northern Powerhouse initiative, combined with increased devolution of powers and responsibilities to our City Regions, provide an unparalleled opportunity to deliver a globally competitive and attractive region for business investment, benefiting the wider UK economy.

The UK is home to some of the world's most innovative and dynamic businesses, however, productivity is well below what it should be. Labour productivity is now 16% lower than anticipated and output per hour is 20% behind the G7 average – the worst position since 1991.

Tackling poor productivity matters to the country, and it matters here in the North West. We have one of the UK's largest regional economies, and can claim the greatest manufacturing output of all. We produce 9% of the UK's total exports and remain a cornerstone of Britain's industrial production.

However, the region has an over-reliance upon low-wage, low-cost industry and an abnormally high level of public sector employment. In 2012, GVA per job in the North West was £39,210 compared with £45,100 for the rest of the country. We lag behind the average UK productivity levels in all sectors except manufacturing; indeed Greater Manchester's productivity is £8.2 billion behind the UK average and continues to deteriorate.

Since 2012 the rate of increase in the North West has outpaced the national recovery as far as overall productivity is concerned, but there are huge variations between different sectors which must be addressed.

Delivering action to improve productivity

In the UK, 75% of the productivity gap is explained by weaknesses in management practice. Change will only be delivered if business leaders rise to the challenge of driving the fourth industrial revolution in a policy context that does not stifle action.

Juergen Maier, CEO of Siemens UK and Chairman of the North West Business Leadership Team, and Nigel Whitehead of BAE Systems, are two of our leaders who are helping to drive action as part of the national Productivity Leadership Group. Here in the North West the North West Business Leadership Team will support the national initiative by instigating a North West action programme. Greater priority must be given to relevant education and in-work training. Improved productivity should also be driven by increased investment in R & D and innovation, competition and a culture that nurtures, celebrates, and rewards enterprise.

The three key themes, together with the actions to be delivered, are as follows:

- 1. Promote leadership and ambition, sharing best practice and recognising excellence**
 - Participate in best practice transfer between sectors including Lean and Six Sigma.
 - Encourage the sharing of best practice across the North West manufacturing sector.
 - Encourage best practice in employment policy, including employee engagement and diversity and adoption of the Living Wage.
 - Award a North West prize for productivity performance.

- 2. Support increased innovation and investment in R & D**
 - Incentivise investment in innovation and technology.
 - Urge Government to increase investment in R & D annually to 2.5%.

- 3. Support and encourage local and national government to prioritise productivity**
 - Promote a quarterly Productivity Index, by LEP region and sector.
 - Provide a sound evidence base from business to support policy development and investment decisions across the North West.

The North West Business Leadership Team recognises that it does not have a monopoly of ideas for addressing our region's relatively poor productivity performance. We welcome further debate, both in respect of the specific suggestions above, but also with a view to identifying other potential solutions. The productivity puzzle, as it is sometimes described, is not merely an intriguing conundrum, it is a very serious challenge for the nation as a whole. But it also presents outstanding opportunities for unlocking our full economic potential – and the time for action is now.

1. INTRODUCTION

1.1 There is general agreement, and cross-party political consensus, that one of the most fundamental economic challenges the UK faces is to increase the nation's productivity. As the Business Secretary, Sajid Javid stated in 2015: *"Britain is home to some of the world's most innovative and dynamic businesses, yet our productivity – the rate of output per hour worked – is well below its potential. It takes a worker in the UK five days to produce what his or her counterparts in Germany can deliver in four."* Or as Chuka Umunna, as Shadow Business Secretary in May 2015 put it *"We need to see much more done, in particular around productivity. The ridiculous situation right now where people in our country who are doing amongst the longest hours in Western Europe but their output is less than an average worker in the G7. And that's because they're not being given the tools to do the trade."*

1.2 This unacceptable gap cannot be addressed unless a significant step change is made in UK productivity performance, including here in the North West where productivity is particularly poor. However it is not just a matter of regional concern and debate, it must continue to be a central plank of long term national economic policy. Productivity growth is a key determinant for raising living standards.

1.3 The introduction of the National Living Wage in April 2016 has provided a strong incentive for businesses to raise productivity. In addition it is crucial that action is taken by business to drive up skills levels via vocational 'in work' training if we are to drive up economic performance and thus avert the prospect of a significant rise in unemployment as a result of the new policy. In particular we must work together to ensure the delivery of high quality apprenticeships that meet the needs of both businesses and the local economy. The new apprenticeship levy lends added impetus to this priority, providing both a challenge to business and an invaluable opportunity for employers who choose to invest in the future skills they need.

1.4 The UK has now largely recovered from the global recession of 2008-12. Growth, though modest, is relatively healthy in most sectors and rates of unemployment and inflation are low. However, the post-recession UK economy has not experienced progress in terms of earnings and productivity. UK productivity fell, as one would expect, during the recession but rather than recover it has remained broadly flat ever since. Labour productivity (as measured in GVA per worker per hour) is now about 16% lower than one would have expected on pre-recession trends¹. Productivity levels continue to drop further behind the rest of the G7 and are now lagging by the most since 1991, with output per hour having fallen 20% below the G7 average by 2014. In March 2016, the Office for Budget Responsibility (OBR) further downgraded its forecast for productivity. In addition it reported that wage growth will be lower over the next five years than the 2.2 % previously forecast, at an average of 2 %.

¹ <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q201.pdf>

1.5 From a national as well as a regional viewpoint, the low level of productivity in the North West is particularly concerning. A recent analysis of the UK's core cities, carried out by the Commission for the New Economy, shows that Greater Manchester's productivity is £8.2 billion below the UK national average², a position that continues to deteriorate. Liverpool City Region's also falls well below the national average. The root causes of these shortfalls vary across the North West – in the Liverpool City Region for example, the level of economic activity is a significant factor. However, low productivity is also symptomatic of other shortcomings such as poor skills levels and outdated transport infrastructure. NWBLT set out its views and recommendations in these key areas in our separate "Bridging the Divide" and "The North West on the Move" reports (see www.nwblt.co.uk) and substantial and sustained investment in both skills and infrastructure is needed if a significant step change in productivity performance is to be achieved.

1.6 If the benefits of a more balanced national policy environment can be matched within our region by improvements in productivity levels across all our principal employment sectors, this would make a huge difference – not just to the rebalancing of the economy, and to living standards in the North West, but to the overall competitiveness and prosperity of UK PLC. This paper puts forward business leaders' ideas as to practical ways in which this could be achieved (see section 4).



North West business leaders convening for their regular thought leadership work.

² £8.2 billion productivity gap reflects the total productivity gap and not just the in-work productivity – source document North West Productivity Analysis.

2. THE CHALLENGE FOR THE NORTH WEST

2.1 The North West is one of the UK's largest regional economies and has the greatest manufacturing output, producing 9% of the UK's total exports³. With key strengths in such sectors as aerospace, automotive, chemicals and bio-manufacturing, the region should remain a cornerstone of Britain's industrial production. The outlook is however far from certain. Decades of under-investment in the North West's infrastructure, skills base and business support and innovation networks, has left much of the region struggling to compete in a rapidly advancing global economy.

2.2 The result has been too great a reliance upon low-wage, low-cost industry and an abnormally high level of public sector employment. All the region's LEP areas have a higher proportion of workers in low paid employment than the national norm, with the exception of Cheshire and Warrington. On average, North West workers earn 75p less per hour than those for the UK a whole. Low pay is a national issue but research by New Economy shows that there is potential for leadership and action at different levels to address the problem. The solution will involve a combination of remedies, which will vary to some extent from region to region, but will no doubt include greater priority being given to relevant education and training, including in-work vocational learning – enabling more employers to support a living wage policy by linking pay increases directly to the acquisition of skills and technical qualifications which help enhance productivity.



Graduation day at the University of Manchester

2.3 Failures in our region's educational and training system have contributed both to low levels of technical skills and a relative lack of leadership and management skills. The North West has also been held back by a severe lack of infrastructure investment, resulting in some very outdated transport and

³ Source is HMRC 2014.

communications networks. These areas are all identified in our 'Skills for Industry' and 'Transport Investment' reports (see 1.5 above).

2.4 Many of the skills issues can only be effectively addressed in our schools, which now operate in an increasingly complex policy environment and against ever more stringent funding constraints. It is clear that it is vital to drive up the ambitions of all our young people, inspiring them to achieve all that they can. Addressing the issue of ambition and aspiration is no easy task but one organisation that is making a significant contribution in some parts of the country is Teach First. Teach First has achieved great things, particularly in London and the South East. They are committed to ensuring no child's success in life is limited by how much their parents earn. At the present time Teach First has only limited coverage in the North West, but we at the NWBLT are committed to supporting its ambitions to substantially increase its' presence in the North West.

2.5 We also take some encouragement from the proposals now being developed in relation to the Northern Powerhouse but we continue to be hampered by delays in addressing the training priorities and in the provision of modern, efficient transport infrastructure.

2.6 Productivity performance is also driven by such factors as levels of investment in R & D and innovation, competition and the pervading enterprise culture, as well as the nature of the employment and the extent to which firms make best use of the latest digital technologies, thus enabling higher value work to be carried out per employee. Disruptive innovation should not be regarded as a threat to North West business, but as a significant opportunity to drive up productivity. Around a third of UK jobs are at risk of automation over the next two decades, but it is estimated that existing planned digital investment will create around 800,000 jobs over the next two years and according to the Centre for Economics and Business Research (CEBR) if Britain automated manufacturing to the same level as Japan & Germany, who have the highest recognised levels of



Embracing digital change.

automation technologies in the world, it would result in increased employment in the advanced manufacturing sector by 7%. The digital economy should no longer be seen as a distinct sector – digital change needs to be embraced by every business in every sector. A significant drive to improve understanding, skills and awareness of the benefits which digital technologies can bring to business must be a priority for action.

2.7 The challenge cannot of course be addressed by the North West in isolation. In considering our response, the North West Business Leadership Team has noted both the work of the national Productivity Leadership Group chaired by Sir Charlie Mayfield, and the Government's productivity plan "Fixing the Foundations: Creating a more Prosperous Nation".

2.8 Juergen Maier, CEO of Siemens UK and Chairman of the North West Business Leadership Team, and Nigel Whitehead of BAE Systems, are amongst the prominent business leaders engaged in driving action programmes across seven specific themes, as part of the national initiative. The national action programmes are as follows:-

- Improving leadership and management in manufacturing
- Accelerating the impact of digitisation
- Opening up the talent pipeline in the food and drink sector
- Improving progression and productivity in the retail sector
- Improving the diffusion of innovation in creative industries
- Aligning working practices and productivity
- Improving measurement and benchmarking.

See attached draft outline of the "Business Leadership on Productivity" (*Appendix A*).

2.9 The North West Business Leadership Team's determination to support, and contribute to, this national programme is driven by its concern at the particularly poor productivity levels across the North West. It is clear that the national themes being addressed by the Mayfield initiative also reflect specific business challenges and opportunities existing across our region. NWBLT therefore proposes supporting the national initiative through our own action programme, focusing particularly on three of the above fields, namely:-

- Improving leadership and process efficiency in manufacturing
- Accelerating the impact of digitisation
- Aligning working practices and productivity.

2.10 These are all themes on which NWBLT is well-placed to provide examples of leadership through the range of industry sectors covered by our member companies. Case studies from businesses such as Alstom, BAE Systems, BASF, Siemens and Unilever can be very informative – see *Appendix C*. For example, operations such as Siemens Industry's Automation and Drive Technologies Factory at Congleton, which has been increasing its productivity by 5.5% year on year since 2009, can provide valuable experience which can be applied more widely across the region's manufacturing sector.

2.11 The Case Studies included in *Appendix C* to this report represent merely those received from a cross-section of NWBLT members who have identified and agreed to share relevant experience for addressing some of the productivity issues here in the North West. It is intended, once a full range of best practice examples have been assembled, to stage a series of productivity seminars or workshops to help spread good practice, for the benefit of the region's – and the nation's – overall competitiveness and prosperity. In addition to examining the impact on productivity of strategic management decisions, these sessions could include such areas as measures to improve employment policies and employee well-being, to sharing information on how best to utilise new digital technologies and practical ideas for empowering staff and rewarding individual initiative.

2.12 The role of management and leadership in enhancing productivity is of course crucial. Research by the Centre for Economic Performance at the London School of Economics (LSE) shows that, across 34 countries whose productivity lags that of the US, 30% of their total factor productivity gap is explained by weaker management practices. In the UK, 75% is attributed to management practices.

Amongst the causes suggested are:-

- Relatively low educational attainment among UK management; Management lacking strategic focus and a development ethos;
- Relative lack of performance orientation (goal-setting performance rewarding), uncertainty avoidance and planning ahead.

2.13 The LSE research indicated that one contributing factor towards these national management and leadership weaknesses is a relatively high level of primogeniture family ownership. Here in the North West some of our most successful businesses are family owned and, so as to ensure that they have the best managers leading their growth strategy, they recognise the need to bring in non-family managers with the new skills required to support this. Working with the Institute for Family Business (IFB) on how to bring in non-family management for the first time, they are able to ensure effective communication between owners and managers, thus stimulating innovation and growth and spreading best practice.

2.14 Whilst there is some evidence that UK management practice scores are showing some catch-up, there still remain substantial variances between firms, sectors and regions. It has been suggested that the NWBLT should call for the creation of a Regional Productivity Index, in order to monitor productivity performance region by region. We believe it would be helpful to regularly measure performance here in the North West sector by sector and across the five LEP areas of the North West, so that specific issues affecting productivity can be identified and relevant issues addressed. At this stage these are merely ideas on which NWBLT would propose to collaborate with the relevant LEPs, with a view to sharing and spreading best practice.

3. THE PRIZE ON OFFER



3.1 Low levels of productivity impact upon wage levels and therefore directly affect the living standards of our communities. But real income growth can only be justified and sustained through improvements in productivity and competitiveness. Productivity defines the extent to which businesses can reward their staff, so it is in everybody's interest to achieve and maintain higher productivity levels. It is therefore useful to quantify the benefit which could be obtained merely by raising the North West's productivity to the current relatively modest UK average.

3.2 The research by New Economy mentioned at paragraph 1.5 above showed that, although productivity in the North West fell during the recession, the fall was not as abrupt as it was in the UK as a whole. Nevertheless it confirmed the magnitude of the gap between the region's overall productivity levels and the corresponding national figures. In 2012, GVA per job in the North West was £39,210 compared with £45,100 in the UK as a whole⁴. The report also noted that the North West lagged average UK productivity levels in all sectors except manufacturing. The New Economy research further revealed that "since 2012 the rate of increase in the North West has outpaced the national recovery" as far as overall productivity is concerned, but that there are huge variations between different sectors. See Table of Employment and GVA in the North West by Sector (2014) at *Appendix B*.

3.3 The evidence of this sectoral analysis suggests that an important element in solving the North West's productivity challenge may lie in helping the region's "lagging" sectors to catch up. For example, might sectors such as health and social care – and tourism and culture – benefit from working practices developed in other, more productive and therefore better paid, sectors such as manufacturing and financial services?

⁴ source: New Economy (May 2015) *Productivity and Pay in the North West*.

3.4 As noted earlier, the sectoral productivity gap is not merely a North West issue, it goes right to the heart of the national challenge too. For example, taking four particular sectors in which the UK's productivity lags seriously behind the US (wholesale and retail; admin and support; arts and entertainment; and transport and storage), closing the gap in these four sectors over the next decade would alone be worth £144 billion to the UK economy and an increase of 2.4% in annual real earnings in these sectors. If the UK could match the average productivity rate of the US, its GDP would increase by 31% – the equivalent of an extra £21,000 a year for every household in the UK. The benefit for the North West would of course be commensurately greater.⁵

3.5 The potential rewards for addressing our low levels of productivity, in the UK and particularly here in the North West, are therefore really tangible. And the evidence, from the other G7 nations and indeed from some sectors of the UK economy – aerospace and automotive, for example - is that we can achieve the necessary improvements. The examples we quote in this report from BAE Systems, in relation to its employment policies, and from Siemens Congleton on its Variable Speed Drive, demonstrate just how much can be learned from leading companies in sectors such as advanced manufacturing.

3.6 There is now a growing realisation that the key areas to be addressed are skills levels, technology and digitisation, infrastructure investment, management practices and workforce engagement/empowerment. In the final sections of this report, NWBLT puts forward some specific ideas which can contribute to addressing each of these areas here in the North West.



The Materials Innovation Factory at Liverpool University.

⁵ Source: ONS "International Comparisons of Productivity – Final Estimates, 2013" (Feb 2015) & HM Treasury "Fixing our Foundation" policy paper July 2015.

4. SPECIFIC IDEAS FOR ADDRESSING THE PRODUCTIVITY GAP IN THE NORTH WEST



MediaCityUK – standard bearer for the North West digital economy.

4.1 This section details some specific actions which the North West Business Leadership team believes will help to address the productivity shortfall this paper has documented. We recognise that these will all come at a cost, either to HM Treasury or in the case of seminars and workshops to the sponsoring companies, but we suggest that it is in the interests of both the public and private sectors, nationally and regionally, to face up to the productivity challenge now .

4.2 Promote leadership and ambition – sharing best practice and recognising excellence

(i) Best practice transfer between sectors.

NWBLT recognises that the large variances in productivity levels between sectors is partially explained by a relative lack of management efficiency techniques such as Lean and SixSigma in certain sectors, including service industries and some parts of the public sector. The employment of Lean and SixSigma is still rarely seen outside manufacturing industry.

Driving improvements in skills and awareness of the benefits which digital technologies can bring to business must also be a priority for action. NWBLT, whose members include some of the most highly productive businesses in the North West, could offer to stage free seminars and workshops, providing interested companies, not only within their own sector/supply chain but also including SMEs from across different sectors with the opportunity to appreciate the many benefits offered by such techniques. These sessions could also include a number of one-to-one mentoring classes for interested employers – from both the private and public sector – covering “LEAN in the Office” methodologies and the employment of digital technologies for increasing efficiencies and productivity.

Specific suites of cross-sectoral training targeted at whole supply chains should ensure relevant relationships are developed and new skills quickly utilised in a real world context. For example as health and social care become ever more closely integrated, there should be new opportunities to drive productivity improvements.

(ii) Best practice transfer in the manufacturing sector

There is significant evidence that the quality of both leadership and management within manufacturing SMEs is adversely impacting upon the growth of the sector and the productivity of the UK. The National Productivity Plan identifies this as contributing around one quarter of the productivity gap between the UK and US. This is a crucial challenge in the North West that requires positive action.

In the first instance the NWBLT will support the Greater Manchester LEP's positive response to promote the benefits of strong, growth-focused leadership. NWBLT will play an active part in promoting Manchester's "Network of Champions" – which spreads "best in class" management practice including the "5s" principles (sort, streamline, shine, standardize, sustain) and their contribution to manufacturing productivity and leadership.

Following the award by HM Government of a Science and Innovation Audit, the Universities of Lancaster and Sheffield, the Lancashire LEP, and various industrial partners including BAE Systems are working together to develop a North West Advanced Manufacturing Research Centre. The Centre would have an emphasis on supporting the research, innovation and skills in SME advanced manufacturing supply chains. The NWBLT believes this exemplar project is also key to boosting the region's productivity.

(iii) Supporting improvements in public sector productivity

Boosting public sector productivity is a particular priority nationwide and, with a higher than average level of public sector employment, the North West would stand to benefit considerably from addressing this issue. There is a pressing need for investment in the relevant training for public sector staff. At a time of diminishing public sector resources, one solution might be for regular training courses to be run on a cross-sectoral basis. This would not only offer benefits such as greater transferability of skills between sectors so as to benefit employees who move between sectors, but could also facilitate greater workforce flexibility and more innovative service solutions, thus improving overall productivity. The combination of the public sector's proven expertise in achieving efficiency savings, and industry's ability to generate growth, ought to work well in an innovative region such as the North West.

(iv) Encourage best practice in employment policy

Encouraging the adoption of best practice in employment policy across, and between all sectors, will strengthen employee engagement and empowerment. We will also encourage adoption of the Living Wage, linked to the provision of enhanced training for relevant qualifications.



Workforce skills and technology are key to increased productivity.

(v) A North West prize for productivity performance

Some examples of NWBLT companies successfully improving their productivity are shown in the Case Studies at *Appendix C*. In order to ensure that we are seen to recognise and reward those businesses who show themselves to be both ambitious and innovative in their efforts to drive forward their productivity, the North West Business Leadership Team proposes to introduce an annual awards programme for productivity performance.



The National Graphene Institute, Manchester.

4.3 Support increased innovation and investment

(i) Incentivise investment in innovation and technology

This action must sit in line with a long-term strategy for research and innovation. In most advanced economies, companies investing in R&D and innovation generate around 50% of the increase in their nation's productivity. Here in the UK, just 12% of industry creates 50% of productivity. So there is a massive opportunity to grow the number of companies investing in R&D and productivity.

We have a great record for turning our R&D into output but do not currently invest anywhere near enough in our R&D (1.7% of our GDP, compared with 2.85% in Germany and 4.15% in South Korea). It is time to seriously incentivise investment in R&D and also to make greater use of schemes such as those funded by Innovate UK, which typically achieve a return of £6 GVA for every pound invested. We put forward the following proposals which we believe could all contribute significantly to addressing the problem.

(ii) Encourage Government to increase investment in R&D to 2.5% by 2020

As a nation we seriously under-invest in R&D (around 1.7% of GDP as stated above) and our ratio of Government R&D spend is the lowest of all the G7 at around 0.2% of GDP (source: OECD/Whitehall and Investment Group). Levels of R&D investment vary considerably between sectors but generally there is a clear correlation between the levels of R&D investment and productivity achieved. In particular we call for annual increases in Government investment in R&D during the current Parliament, so as to raise the proportion of GDP invested in R&D to at least 2.5% by 2020. In the North West there is a very low ratio of public, as opposed to corporate investment, in R&D compared with other UK regions.



Jodrell Bank, Cheshire.

(iii) Incentivise corporate investment in technology

Investment in the benefits which digital technologies can bring to business needs in our view to be incentivised. Such incentives could take the form of an extension to capital allowances, so as to assist businesses with the cost of investing in technology to improve their productivity. The existing system for granting capital allowances should be reviewed and extended, with a view to incentivising productivity-enhancing technology investments in the same way as they are given on energy efficient technology. Alternatively it has been suggested that “performance bonds”, underwritten by the Treasury would de-risk the investment, with HM Treasury receiving repayment of the loan with a rate of interest based on the profitability gains from the investment. Such a proposal would need to be carefully designed so as to minimize administrative complexity and cost, but it could be of particular benefit to regions like the North West and the bonds would offer an alternative to grants in an era of constrained Government spending, thus delivering productivity benefits but at a low net cost. Of course, any such investment stimulus also needs to be accompanied by incentives to boost investment in technology skills.

In addition more effective deployment of technology through the North West's clusters and supply chains would have significant multiplier effects across the regional economy. This would also contribute significantly to businesses overcoming the labour cost disadvantage we suffer by comparison with low income economies, thus facilitating import substitution.

4.4 Supporting and encouraging local and national government to prioritise productivity

(i) Encourage the publication of quarterly productivity performance tables

The publication of quarterly productivity performance, measuring GVA per employee, sector by sector and by regions (or LEP areas), would be a valuable tool for enabling effective monitoring of performance against national productivity. As is shown by the table at Appendix B, there are large disparities between the North West's most, and least, productive sectors. Certain industry sectors, such as construction, are inevitably going to generate lower GVA per worker hour on account of their labour intensive character. There are also wide disparities between different LEP areas. However, greater awareness of the relevant disparities is an essential first step towards identifying sectors where improvements in productivity can be achieved, as well as identifying areas requiring support and informing appropriate remedial action. In relation to regional productivity, in some sectors the agglomeration effect may also need to be considered.

(ii) Provide sound business evidence to support policy development and investment asks

As the individuals who will be ultimately responsible for many of the key factors which contribute towards improved productivity, we recommend that elected City Region Mayors be given the support necessary to oversee their area's productivity performance, such that the policy and support mechanisms available for business to drive up productivity are constantly reviewed. Neither they, nor those directly responsible for delivering improvements, eg in schools and infrastructure, can be expected to do so without fully understanding today's employer needs. For example, periodic skills audits carried out by the relevant



Investment in modern transport infrastructure is an essential requirement.

LEPs could be one way of enabling delivery organisations to address up-to-date business needs. The inclusion of employability in the criteria of a new Teaching Evaluation Framework for Universities could also contribute valuably to productivity.

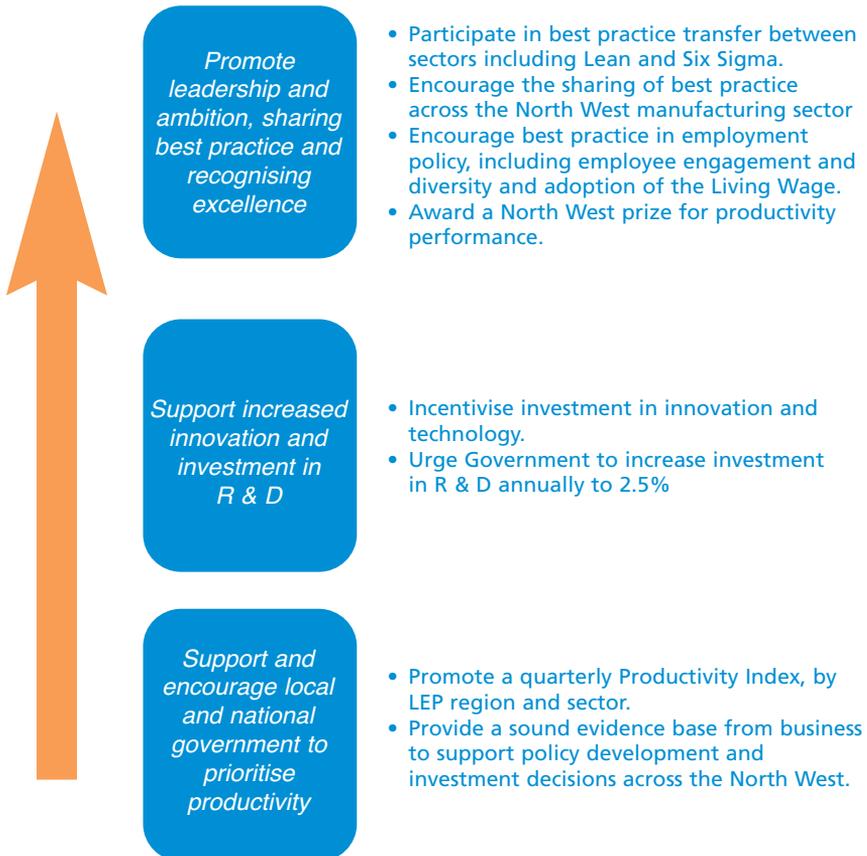
Similarly, a requirement for evidence from business on the relative merits of key infrastructure projects needs to be maintained. Businesses need to recognise that it is in their interests to readily provide clear and reliable evidence in this regard. We at NWBLT will be happy to work with Transport for the North and other relevant partners so as to help provide a robust evidence base regarding business needs from across the North West.

4.5 NWBLT recognises that it certainly does not have a monopoly of ideas for addressing the North West's relatively poor productivity performance. We welcome further debate on these issues, both in respect of the specific suggestions above but also with a view to identifying other potential solutions. The productivity puzzle, as it is sometimes described, is not merely an intriguing conundrum, it is a very serious challenge for the nation as a whole. But it also presents outstanding opportunities for unlocking our full economic potential – and the time for action is now.

We therefore conclude this report with a number of proposed commitments – see next section entitled "Delivering Action".

5. DELIVERING ACTION

The North West Business Leadership Team will help deliver a globally competitive and attractive region for business investment by:-



Appendix A

Business leadership on productivity

Background

In the HMT Productivity Plan, 'Fixing the Foundations: Creating a More Prosperous Nation', the Chancellor, George Osborne, noted that: "Some of the country's most senior business leaders, convened by Sir Charlie Mayfield, Chairman of the John Lewis Partnership, have written to the government making the case for taking forward a business-led action group for productivity. The work will be practical and grounded, driving direct action to enhance productivity in different sectors and workplaces across the UK." (2.13)

A group of business leaders have come together to form the Productivity Leadership Group, chaired by Sir Charlie Mayfield, to provide strategic leadership for improving productivity in UK businesses.

Seven work streams have been established to examine particular productivity issues each led by a member of the Productivity Leadership Group. These work strands will drive practical and grounded action to enhance productivity in specific sectors and business areas to develop insights that can be applied more broadly across the economy.

The seven work streams are:

Leadership and management in manufacturing – led by Professor Juergen Maier (Siemens) and Sir Andrew Witty (GSK)

Studies of UK management practice suggest we have a good share of world-class businesses, but a long tail of laggards. Faced by a rapidly evolving global economy, the UK manufacturing sector will need to be agile to maintain and improve its competitiveness and productivity.

The continued globalisation of manufacturing value chains, the intensification of global competition, the rapidly changing consumer demands, the increased scarcity of resources and the introduction of new technologies will all have consequences for products, processes and business models.

These trends will be better handled by a manufacturing sector with a strong culture that encourages high-performing leadership and management at both senior and operational levels; appropriate uptake of innovation and new technologies to drive growth; and engagement from employees to identify and deliver opportunities to improve manufacturing processes.

This work stream, led by Professor Juergen Maier (Siemens) and Sir Andrew Witty (GSK) will explore how to develop this culture across manufacturing businesses in the UK. The Group, which also includes senior business leaders from Toyota, Jaguar Land Rover and Perpetuum, plus other business organisations such as the CBI, EEF and Sharing in Growth, aims to create a blueprint for the industry that will educate and inspire the next generation of world class British manufacturers.

Accelerating the impact of digitisation – led by Phil Smith (Cisco)

Increasing computer power and new applications are transforming society and creating new business opportunities. But while the UK is one of the most

digital-ready marketplaces on the consumer side, there are too few businesses embracing the potential of new technology. Barriers include leadership capability, digital skills deficits, investment in infrastructure and cultural factors. Making the most of the opportunities offered by the digital economy will be a significant source of productivity gains, innovation and competitiveness. The UK has the potential to lead globally in the application of disruptive technologies for economic gain.

This work stream, led by Phil Smith, CEO of Cisco and Chair of the Tech Partnership, will focus on how to make the most of digitisation across the economy by targeting action on key areas, which have the potential to have the greatest impact on productivity. The work will produce a replicable process or toolkit that can be applied to other sectors and businesses where improved and increased use of digital technologies could offer similar benefits.

Better workplace practices – led by Nigel Whitehead (BAE Systems)

How employees are engaged at work and how their skills are used all make a positive difference to productivity. Organisations in the top quartile of employee engagement scores have 18% higher productivity than those in the bottom quartile. Yet only one-third of employees say they are actively engaged at work.

UK employers also report that 16% of their workforce have skills and qualifications above those required by their current role and only 12% of establishments in the UK adopt a critical mass of high performance working practices.

This work stream, led by Nigel Whitehead of BAE Systems, will explore ways in which models of employee engagement can contribute to raising productivity in the workplace, including using skills effectively. Working with Airbus, Rolls Royce, TUC and other partners, it will seek to identify practical examples and actions that could be applied through the supply chain and in other sectors to build a wider community of practice to share learning and insights, build capability and improve performance on the ground.

Opening up the talent pipeline in the food and drink manufacturing (FDM) sector – led by Dame Fiona Kendrick (Nestlé UK)

The food and drink industry is the largest manufacturing sector in the UK, accounting for almost 19% of total manufacturing turnover (£98.1bn). However, the industry suffers from severe skills issues and over a third of the FDM workforce is expected to retire in the next seven years. This risks undermining the ability of the sector to maximise productivity improvements.

This work stream is led by Dame Fiona Kendrick of Nestlé UK working with the Food and Drink Federation and with representation from apetito, Mars Chocolate, Mondelez International, Premier Foods and the National Skills Academy for Food and Drink. The Group aims to explore how to improve the talent pipeline and skills base for the UK FDM industry to raise productivity. It is undertaking research to understand the barriers faced by FDM businesses in attracting talent and upskilling its existing workforce and will identify cases of best practice in order to generate solutions and learnings for wider industry and government.

Improving progression and productivity in retail – led by Sir Charlie Mayfield (John Lewis Partnership)

The UK labour market is highly effective at getting people into work, but it is also important that more people are able to progress at work, rise up the ranks and increase earnings. Limits on progression can be particularly acute in some industries, leading to lost potential.

The UK retail is the largest private employer in the country with three million employees. This increases to four million employees including the wholesale market, or 13 per cent of the total workforce. Therefore, productivity improvement in this industry is particularly important for delivering long-term economic growth. The retail sector is complex with a very diverse employee population and it is rapidly changing. The industry will need to change the way it operates and consider how to re-design jobs to introduce higher paid roles with higher levels of responsibility, enabled by innovation, better management practices, use of technology and investment in training and development.

Led by Sir Charlie Mayfield, Chairman of the John Lewis Partnership and working with the British Retail Consortium, this work strand will explore how to improve pay and progression in the industry, which would lead to higher productivity. It is undertaking a range of research to better understand and frame the problem to identify industry-led solutions.

Improving diffusion of innovation in the creative economy – led by David Abraham (Channel 4)

Britain has a successful and growing creative economy. But to compete more effectively on a global stage, the industry's absorptive capacity for innovation must be the best it can be. Absorptive capacity is a firm's ability to recognise the value of new information, assimilate it and apply it to commercial ends. Improving the flow of ideas and innovations through to new products and new processes will directly increase productivity.

This work strand, led by David Abraham of Channel 4, will explore how innovation and new ideas in the creative economy can be leveraged to enhance UK productivity. The group will explore how ideas and innovations are being generated in the UK and how this compares internationally; identify constraints to absorptive capacity and how these can be addressed; and explore how absorptive capacity can be stimulated across the wider economy by improving the creative process in other industries.

Improving measurement and benchmarking – led by Jeremy Anderson (KPMG) and Sir Ian Davis (Rolls-Royce)

To achieve the greatest performance, businesses need to be able to benchmark their performance and understand where there is room for improvement. Evidence suggests that most firms aim to meet a target of average performance, rather than aiming to be the best and can be prone to overestimating their performance relative to the average.

This work strand, led by Ian Davis of Rolls Royce and Jeremy Anderson of KPMG working with McKinsey will explore how better measurement can drive productivity improvements in the UK. The aim is to develop business-relevant actionable insights that can help businesses benchmark their productivity position and support decisions on the interventions needed to improve productivity.

Appendix B

Table of Employment and GVA in the North West analysed by sector, 2014

North West	Employment, 2014	Gross value added, 2014	GVA per employee
Primary industries	60,500	£3,477,400,000	£57,477.69
Agriculture, forestry and fishing	19,300	£429,500,000	£22,253.89
Mining and quarrying	1,300	£88,600,000	£68,153.85
Utilities	39,900	£2,959,300,000	£74,167.92
Construction	164,000	£5,954,900,000	£36,310.37
Manufacturing	389,700	£24,216,000,000	£62,140.11
Advanced manufacturing	178,800	£12,016,600,000	£67,206.94
Food and drink manufacturing	57,300	£3,244,000,000	£56,614.31
Textile manufacturing	26,100	£1,320,400,000	£50,590.04
Other manufacturing	127,500	£7,635,000,000	£59,882.35
Transport and storage (including postal)	176,200	£6,157,000,000	£34,943.25
Wholesale and retail trade	584,400	£23,158,600,000	£39,627.99
Motor trades	59,500	£2,499,600,000	£42,010.08
Wholesale	160,900	£3,780,000,000	£23,492.85
Retail	364,000	£16,879,000,000	£46,370.88
Personal services	36,800	£1,305,600,000	£35,478.26
Business, financial and Professional services	683,600	£32,907,500,000	£48,138.53
Business services	210,200	£5,423,700,000	£25,802.57
Employment activities	109,500	£2,765,500,000	£25,255.71
Financial services	121,800	£8,438,000,000	£69,277.50
Professional services	242,100	£16,280,300,000	£67,246.18
Cultural and creative	442,100	£12,297,500,000	£27,816.10
Creative industries	70,400	£2,286,700,000	£32,481.53
Digital	65,700	£4,341,800,000	£66,085.24
Sport	48,100	£865,000,000	£17,983.37
Tourism and culture	257,900	£4,804,000,000	£18,627.37
Science and R&D	42,200	£1,206,200,000	£28,582.94
Public sector	1,003,500	£29,810,300,000	£29,706.33
Education	311,600	£10,615,600,000	£34,068.04
Health and social care	529,100	£12,746,300,000	£24,090.53
Public administration	162,800	£6,448,400,000	£39,609.34
Total	3,583,000	£140,492,600,000	£39,210.88

Source: New Economy, "Productivity and Pay in the North West", May 2015.

Appendix C

Case Study 1 – Application of ‘Lean’ tools and a continuous improvement culture (Alstom Transport)

Alstom has driven productivity improvements of 38% on the West Coast Main Line over the past 10 years. This has been predominantly achieved by the application of Lean tools (including 5S) and the establishment of a continuous improvement culture. Many good practices have been captured from the manufacturing sector and transferred into service. Often there is a ‘Lean’ focus within the traditional production departments, with lesser focus on the support functions including supply chain, engineering and finance – however Alstom has equally applied a focus in these non-production environments to ensure the service provided to the end operator/ maintainer is on time, in full and to the required cost.



Staff have been upskilled to take advantage of technology and improved business processes. Additionally, there has been a heavy investment in training of all staff in lean philosophy, and their subsequent engagement via Continuous Improvement and Kaizen activities.

The results have not just been contained to productivity; the techniques and cultural changes have driven improvements in Safety, Reliability and Availability of the Service.

The extra capacity generated has been fully utilised to grow the business over this period.

Additional enhancements in productivity are now being generated as they invest further in condition based maintenance philosophy, where their North West depots are driving the Alstom Global R&D projects in this field. An example is £5m investment in Train Scanner at Manchester’s Longsight Depot, where exams are being automated and digitised by high speed cameras and laser measurement systems. The application of ‘Big Data’ is now set to take the

business forward on the next part of its journey to drive further productivity improvements.

Case Study 2 – Better Employee Retention and Productivity (BAE Systems)

One of the challenges BAE Systems Maritime Submarines has faced over the last 10 years is how to both double in size whilst also dealing with a gap in the 30 to 45 age bracket caused by the downsizing of the shipyard in Barrow-in-Furness during the 1990's. As with many organisations, the Submarines team developed

a Lean capability but rather than buying this in, they have recruited and developed their own expertise which has the benefit of being more agile in terms of dealing with the immediate challenges faced by the business.

One example of this is the work the Lean team have been doing with the local Further and Higher Education College, Furness College. Instead of purely training the leadership population in the lean values and principles, they developed a programme called "Training the Lean Way" which was aimed at the Lecturers who directly trained the apprentices destined for the Shipyard. Rather than training the lecturers in how to train the subject matter of lean, they were shown how to use Lean in an Educational environment where the values and principles were embedded in every day working. The benefits for embarking on this approach were easy to sell. To the college they could remove waste and make their working lives far easier. To BAE Systems we had apprentices delivered to us at the end of their first year who were well versed in the foundation tools of Lean through practical experience. This experience in turn generates a positive tension within the business to help spread the Lean way of working.

As well as supporting Furness College they have also supported a number of local SME suppliers who may not be able to afford their own tailored Lean training. This again has mutual benefit in that the SME can make their operation more efficient whilst BAE Systems sees an improvement in the predictability and reliability of delivery into their build programme.

Case Study 3 – Research and Innovation (BASF)

BASF Construction Chemicals, based in Cheadle Hulme, Cheshire is a world leader in the provision of reliable, customer-oriented solutions focused on the needs of the construction industry. For more than 100 years, BASF's innovations have become today's industry benchmark; as the company has supplied globally customised solutions that perform in ever-changing environments and challenging conditions.

By connecting with its customers from project start-up, BASF provides solutions ranging from product selection and training to application consultancy.

Under the Master Builders Solutions brand, BASF's comprehensive product range is comprised of market-leading innovations and application expertise for



construction, maintenance, repair and renovation of structures. Their outstanding technologies include solutions for underground construction, concrete admixtures, waterproofing solutions, sealants, concrete repair and protection, performance grouts and flooring solutions.

Case Study 4 – Siemens Digital Factory, Congleton, Cheshire

This pioneering site has a clear focus on the future – how the market is developing and the capabilities they need to develop going forward. They have also brought R&D closer so that products can be developed in far shorter lead times.



“Drive” is the main product manufactured by Siemens at Congleton. The Congleton factory makes and supplies more than 1.2 million variable speed drives into 78 countries. Its products are used in a range of motor control applications including conveyor systems, production machines and cranes.

The company has defined an ambitious new ‘North Star’ vision and ‘Congleton 2020’ five-year strategy – 10 themes to help it on its journey towards world-class. This has already resulted in significant business improvements including the adoption of virtual reality technology. Siemens’ 3D cave has allowed it to test product, work station and factory layout concepts in the virtual world before making them a reality.

Continuous improvement is central to Siemens Congleton’s culture. It uses its Siemens Production System – including 5S, continuous improvement process,

Lean in offices, Lean cell design, project management and Six Sigma – to meet a tough productivity challenge from its stakeholders: a 5.5% year-on-year price reduction.

A pioneering 'Junior Factory' is run by a mix of 30 commercial and technical apprentices/graduates aged 16 to 21 and acts as a small factory within the main factory. It supplies a number of fan assemblies to the main production lines and the apprentices/graduates are given total responsibility for running every aspect of the manufacturing processes from the industrial to the financial.

Siemens Congleton's focus on its employees has resulted in sustained productivity gains of around 6% year-on-year and employee engagement of more than 85%.

Case Study 5 – Open Innovation (Unilever)

Unilever is one of the world's leading suppliers of fast-moving consumer goods. Unilever's products are used by an estimated 2 billion people daily, and are central to its mission of making sustainable living commonplace. Unilever Research and Development, with its largest site based at Port Sunlight, Merseyside, is a leader in the use of Open Innovation, pioneering new ways to create value from partnerships. Since 2008 the company has grown from a €38 Bn Turnover company to a €49 Bn Turnover company (2014). During that time, much of the marketplace innovation Unilever has landed has included technology sourced from partnerships. Whilst Unilever's Turnover has increased by over \$11 Bn, over the same period R&D spend has been held constant, driving a much higher innovation output for its R&D investments. This increase in productivity has been enabled by a number of drivers – one notable driver is the increase in the number of project deliverables in the innovation portfolio dependent on partnership. This now stands at close to 80%, up from below 40% in 2010.

To maintain future productivity gains in R&D, Unilever is increasingly focussing its R&D spend on building future winning capabilities in and around its major sites. In the North West Unilever has increased its investment in R&D, but has done so in large part with strategic partners. Most notable is the £ 65 Million investment made by Unilever, the University of Liverpool and The Higher Education Funding Council (HEFCE) in the Materials Innovation Factory. This new facility would never have happened without partnership, and will see over 100 Unilever R&D staff work side by side in the Liverpool knowledge quarter with some of the leading Materials Chemists in the Nation. The facility, due to open in 2017, will be open to other third parties, and will be world leading in its approach to harnessing automated and high throughput materials science to Unilever's Homecare and Personal Care businesses.

Appendix D

THE NORTH WEST BUSINESS LEADERSHIP TEAM

TEAM MEMBERSHIP, MAY 2016

Life Presidents: His Grace The Duke of Westminster,
Lord Thomas of Macclesfield, Sir Alan Cockshaw and Neville Chamberlain

Juergen Maier (Chairman)	Chief Executive, Siemens UK
Mike Blackburn (Deputy Chairman)	North West Regional Director, BT
Simon Allport	Senior Partner – Manchester Office, EY LLP
Steve Anderson-Dixon	Chief Operating Officer, Trinity Mirror – Regionals
Jackie Arnold	Head of Strategy, BAE Systems Submarine Solutions
Professor Janet Beer	Vice-Chancellor, University of Liverpool
Richard Carter	Managing Director, BASF UK & Ireland
Jan Chaudhry-van der Velde	Managing Director, Merseyrail
Charlie Cornish	Group Chief Executive, The Manchester Airport Group
Kevin Crotty	Chief Financial Officer, Bruntwood Ltd
Fiona E Gibson	Managing Director, Products Lead UK & Ireland, Accenture North West
Iwan Griffiths	North West Regional Chairman, PricewaterhouseCoopers LLP
Jonathan Hague	VP Open Innovation, Unilever R&D
Steve Hodgkinson	Brammer PLC, Group Company Secretary
Jonathan Holt	Manchester Office Senior Partner, KPMG
Michael Hulme	MD Trains and Modernisation, Alstom Transport UK
Sandy Lindsay	Chair, Tangerine & The Juice Academy
Patrick McGrath	Human Resources Director, Virgin West Coast Trains
Ben Miller	Office Managing Partner Liverpool, DLA Piper UK LLP
Steve Mogford	Chief Executive, United Utilities plc
Peter Nears	Strategic Planning Director, Peel Group
Malcolm Pike	Head of Manchester Office, Addleshaw Goddard
David Pinder	Chief Executive, Baxi Heating UK Limited
Mark Preston	Group Chief Executive, Grosvenor Group Limited
Graham Ramsbottom	Chief Executive, Warrants Investments, part of the Grosvenor Estates
Nick Roberts	Chief Executive Officer, Atkins UK & Europe
Professor Dame Nancy Rothwell	President & Vice-Chancellor, The University of Manchester
Keith Rudd	Director, Arup & Partners Ltd
Professor Mark E Smith	Vice-Chancellor, University of Lancaster
Alan Torevell	Chairman, Dewhurst Torevell
Richard Topliss	Regional Managing Director, RBS Corporate & Commercial Banking North
Professor Tim Wheeler	Vice-Chancellor, University of Chester
Tony Wilson	Partner, Hill Dickinson LLP
Geoffrey Piper	Chief Executive, NWBLT

