

“Manufacturing a better future”
David Landsman, Executive Director, Tata Limited

The Manufacturer Annual Leaders’ Conference, November 2015

Introduction

This is a very special moment for me because it’s an opportunity to speak about a vitally important issue for the UK at a crucial moment and to just the right audience.

The issue is important because we in the UK, not just those of us in this hall, simply cannot afford to ignore manufacturing. I shouldn’t have to say that, but I think it does need saying. The moment is crucial because we are arguably at a crossroads for manufacturing in this country. And this is the right audience because it’s you here today who can really make things happen.

Pride in manufacturing

From a personal point of you, I am honoured to be here among people who I think we now call “the makers”, people who, when their children or grandchildren ask: “what do you do at work?” can answer very tangibly: “This is what I make...”

If you’ve read my bio, you’ll know that’s harder for people like me to answer that question, but I am fortunate that as something of a manufacturing outsider, from where I sit in the Tata group in Europe, I’ve got an inside view of some of the most exciting manufacturing stories happening today in the UK and beyond.

At the crossroads

This really is a crucial moment, not just because we are just over six months into a new Government and on the day after the spending review was announced, but because the crossroads is very real. Can we take the path towards the exciting new opportunities which are out there, and enable the UK to play a full part in the new Industrial Revolution which has already started? Or will we take the wrong road and end up as a footnote?

I believe – to be optimistic – that our options are far from closed. But I also believe – to be realistic - that we have not yet assured our place in the next industrial revolution. It’s there for the taking, if we – and that’s those in this hall but also UK plc much more widely – want to take it.

What we need to do is to make a clear, simple and persuasive case for manufacturing. We might think we shouldn’t need to do it, that it should be obvious. But experience suggests that it’s nothing of the sort, even in the country where the first Industrial Revolution started.

I want to start by looking at, and celebrating, what we've achieved so far, because – just as we all would in our own businesses – we need to understand what works if we're going to do better. Then, and again just as any sensible business-person would, I will take a look into what isn't working, and seek to identify why. Having done that, I will say something about what the future opportunities look like. Because it's quite clear that a greater emphasis on manufacturing can't for a moment be about a return to past glories. And it's only by seeing what the manufacturing of tomorrow might look like, that we will be able to make a convincing case for why we have to be part of it.

And finally, I'll say something about what we – as manufacturers and as a society – need to do to get from here to there. Because the environment is challenging, and we've got to engage with it. And remember, I'm both an insider *and* an outsider, so not all my ideas may be exactly the conventional wisdom.

Celebrating success

My first point then is that we should celebrate what has been achieved. To start with, it's beyond doubt that we wouldn't have been having this conversation ten, still less twenty, years ago. And if we had tried to do so, most people listening beyond this hall would have found it at best quaint, if not positively daft. We would have been talking about manufacturing mostly in the past tense, as something for children to study in history lessons or as something to go and look at in a museum at the weekend.

I'm not saying it was true then: of course, what you in this hall are doing today didn't all start yesterday. But it was certainly a widely held impression, particularly perhaps in London. Apart from a few specialists, it seemed that we didn't make much.

We'd watched the decline of the automotive industry, and it seemed unlikely that it would ever again play a significant part in our economy. And we were so good at services, especially financial services, that it made perfect sense for the country to focus on those alone – after all, don't the economists say that specialisation in trade is the way to go? Identify what you're best at and stick to it. I'm sure you all like to do exactly what the economists tell you.

Well, we all know what happened next, and now “rebalancing” has firmly entered the national political vocabulary. And it's not just about words.

You'd expect me to start with the automotive industry, where the UK is on target to beat the all-time record for car production. Where nearly 80% of cars manufactured are exported, making up over 10% of the UK's goods exports. Where there is production in each of the four nations of the United Kingdom, from North to South. This is why a global business such as Tata has chosen to show confidence in the UK automotive industry, investing not only in production and assembly but also in design and innovation in Britain too.

There is also an impressive story in aerospace, where the UK has 17% of the world's industry and where the UK sector has grown by 27% since 2010.

There are great stories in other areas of advanced manufacturing and in bioscience too. Britain's universities and broader research base, its traditions, the openness of the economy are vital factors for the success of manufacturing and, if we get the details right, they can continue to provide Britain with significant competitive advantage.

Overall, there have been some encouraging improvements in the figures for manufacturing. September's official figures show that manufacturing output rose by 0.8%, the largest monthly rise since April 2014 and double the expected rise. The manufacturing purchasing managers' index in September rose significantly to 55.5, suggesting a sound growth prospect. And September's trade deficit narrowed too.

In fact, in some respects the picture is arguably more optimistic than it appears. Although manufacturing's share of GDP appears stubbornly stuck at a little over 1/10, the changes in the structure of business make the figure rather deceptive. As servitisation becomes an increasingly important phenomenon, some of the output which would previously have been counted as manufacturing and is still firmly in the same value chain and calling for the same skills gets reclassified.

Outsourcing has a similar impact. People who were once employed by the manufacturer used to count towards manufacturing, now if they're employed by outsourced service providers, they drop off the figures, but their work still contributes to manufacturing.

An answer to the productivity puzzle

This isn't just a matter of creative statistics, because it demonstrates that manufacturing remains more relevant to our economic future than may at first sight appear. We need to get that message across, so I'm glad that John Cridland in his recent lecture on the 50th anniversary of the CBI made some of these points himself.

And when the UK is still grappling with the productivity puzzle, in short why the G7 as a whole is 17% more productive than we are, manufacturing makes a positive contribution. Productivity in some of our most important manufacturing sectors, including automotive and aerospace, have risen substantially and help to offset weaknesses elsewhere.

So let's start off with the success stories. There is a good story to tell and it's important we tell it. We have not, by a long way, failed at manufacturing. On the contrary, there are many great successes which continue to attract investment from around the world, including of course from the group I represent, from Tata.

Serious challenges remain

Unfortunately, this isn't the whole story. You can use the figures to paint a less rosy picture. Quarter on quarter most indicators at present show a decline, not a rise. And more recent bad news, to which I will return, is bound to have an effect.

Going beyond the headlines and despite the increases, signs of manufacturing growth are not sufficiently strong or consistent to enable us to have confidence that this rebalancing is, if you like, structural, rather than transient.

This demonstrates some real weaknesses, some of which apply more generally across the economy, while others hit manufacturing particularly hard.

Many have been in the making for many years. They include infrastructure gaps, tax regimes which seem to discriminate against capital-intensive manufacturing, the hollowing out of parts of the supply chain during the years when the prospects for manufacturing looked particularly bad, as well as a related skills shortage.

Each of these requires attention, in the ideal world as an integrated whole, but at the very least they all need attention. I'll come back to some of those later.

Steel

But it would be impossible for me to talk today about manufacturing without saying something about the crisis currently affecting steel in the UK.

This isn't the place to go into detail, but it goes without saying that recent headlines have demonstrated that the underlying situation is indeed grave.

Once again the roots of the problem we now face date back many years – you can choose between 10, 20, 50 even 100 – all in one way or another tell the story of the structural challenges of the industry.

The present problems include global over-supply, the high exchange rate of Sterling as well as energy costs which are uncompetitive as compared to our nearest European competitors, still less the US or China.

I should add that this need not have been such a disappointing story in other circumstances: Tata's European steel operations enjoyed their best year after acquisition in 2007, on the eve of the financial crisis.

Since that acquisition, Tata has invested substantially into the business not only into production but also into R&D including just a few weeks ago a new R&D Centre at Warwick University .

But, as Karl Koehler, CEO of Tata Steel Europe put it recently, the industry is struggling for survival in the face of extremely challenging market conditions. We believe it has a crucial role to play in rebalancing the economy, but we need an environment which encourages growth. And the problem is wider: inaction, at the European level in the face of unfairly traded imports threatens the future of the entire European steel industry.

Today, the industry I will continue to do whatever it can to ensure a sustainable future. I'm not going to speculate here as to what the UK steel will look like in a few years from now, as there are simply too many variables. But what is clear is that, to stand a chance, the British steel industry needs to be able to operate on a level playing field with its main competitors.

Which is why the Chancellor's announcement yesterday that some energy-intensive industries will be exempted from certain taxes is certainly to be welcomed, though as Karl commented yesterday, it is marginal in the context of the tax burden being faced by the industry today and given the many other pressures on it.

But there's a wider and very positive point to be made. Steel – and the other so-called foundation industries – have the potential for great innovation, cheaper, cleaner and more sustainable; and innovative high value added.

The Global Context

So, to return to our broad theme, the picture is definitely mixed. There has been progress. "Rebalancing" is real and in some cases has had substantial impact. But at the same time the indicators tell a depressing story which in other sectors has been played out in all too stark human and economic reality.

We still have a challenge on our hands. And we are living in a world in which others are seeing that challenge and rising to it.

Let me mention only one example: the Make in India initiative launched by Prime Minister Narendra Modi and on which he majored during his recent visit to the UK. In a coordinated and concerted campaign, the Indian Government has launched a series of major initiatives designed to facilitate investment, improve the ease of doing business, encourage innovation, protect intellectual property, and build best-in-class manufacturing infrastructure.

Of course, India's situation can't be compared directly with Britain's: the scale is entirely different as is the starting point. Anyway, in today's interconnected world we shouldn't see this as a zero-sum game: India does well, so the UK does badly. No: many British and European firms are exploiting the opportunities of "Make In India" enabling them – at the same time – to make their businesses at home sustainable and to grow them.

But it does remind us that it's a competitive world and that we need to get our act together too.

Responding to rapid technological change

So, how do we do that? First, we need to look forward not back. Let's not be misled by the "re" in "re-balancing". Restoring manufacturing to its rightful role in the economy cannot be about a return to a glorious past.

Instead, it has to be about preparing for the future, one which is uncertain but exciting and full of opportunities which Britain is well placed to take up.

We can't know what the future will bring, but we can all see the key trends. We need to be clear about what they are going to do to the sector and be clear – and bold – about explaining them more widely. Because there is no doubt that technology is bringing about radical change very quickly indeed.

As an outsider, who has come to the world of technology and manufacturing only recently, I'm conscious that I'm speaking to an audience that knows this very well. But I'm equally sure that this dynamic is not so well understood everywhere outside this hall.

So far, much of the technology which is most present in our lives has changed how quickly we do things rather more than actually what we do – or at least it can seem that way. An e-mail is fundamentally just a faster way of communicating what you would previously have put into a letter.

But the new generation will go much further. My colleague Chandra, who leads Tata Consultancy Services, our largest IT-based business, has argued that Artificial Intelligence will “abolish workflows”. When I first heard him make the case, not being an expert, I didn't fully grasp the implications of this, but it was immediately clear that he was on to something big. And when you think about it, I think you will agree that it really is. It changes not only how quickly you do things, not just how you do them, but the “things” you do themselves.

AI is of course not the only new generation technology which is rapidly coming upon us. The Internet of Things, big data analytics, alongside faster communication and processing power will be equally transformational for every aspect of our lives from medicine to traffic management.

And of course all of these innovations will contribute to the future of manufacturing itself. Technology which radically changes the processes fundamental to industry is certain to have a radical, if unpredictable, impact on our economy.

Let me mention a few of the consequences for manufacturing. Technological advances are going to blur – or perhaps completely destroy – the boundaries between engineering, design and IT.

Take another of my colleagues Gopichand Katragadda, who (in a sign of our recognition of the role which technology is going to play in our future) is Tata's first Group-wide Chief Technology Officer, summed up the blurring of the lines nicely by saying that a car is “now a supercomputer on wheels”. So, just as Google aspires to become part of the automotive sector, so companies like our Jaguar Land Rover are rapidly becoming part of the IT sector.

Indeed, JLR is developing technology that will use cloud-computing to push data from real-time driving experiences outside the car and to whoever needs them. So not only will your car have the information to avoid the potholes – good enough, you might think - but it will also be able to tell the local council that they need filling in.

Of course, this supercomputer still needs to be connected to the wheels, so there's still very much a need for mechanical engineering skills, but of a new kind.

Technology in various forms, including big data, is also helping to blur the boundaries between manufacturing and services, as both the demands of business and the pace of technological change make asset-light models more attractive to both suppliers and customers.

The new technologies will further intensify the trends towards globalisation, resisting predictable (and entirely understandable) pressures from those afraid of the future. That's because there will be opportunities as well as threats, new ways to solve human problems and to provide people with better and more personalised products and services more safely and more sustainably.

The shift in recent years of economic power towards the East has confirmed the emerging markets as significant beneficiaries, and we will surely see this continue. But it has also brought new opportunities to our part of the world and in the next phase will bring others. As value chains can be spread out further, and as emerging market costs rise, there is scope for more distributed manufacturing, leading to value-enhancing global collaborations and more reshoring.

We cannot of course be sure what this new world will look like. But I'm sure your own experiences will confirm that it is coming up on us rapidly.

What business needs to do

And for me there's a vital message here. As the boundaries which define manufacturing change and become blurred into IT in all its forms, manufacturing will become more not less important for the UK.

The skills, innovations and techniques we call manufacturing will become an inescapable part of the modern value chain, as in their older form they were a vital part of our past. We simply cannot afford to ignore manufacturing, any more than we can afford to ignore IT.

That's my first conclusion. My second is about what this means for our approach to business, and it may be not what you're expecting.

It's well known that the average age of a business today has fallen considerably compared with previous generations. Technology has a good deal to do with the change: if you think of some of today's largest businesses, they were unheard of a generation ago.

But it also has quite a bit to do with a tendency to short-termism in investment which undoubtedly contributed to the decline in manufacturing in this country.

Tata's perspective is different, as we're over 140 years old, in large part as a result of our heritage and our vision to create long-term value for all our stakeholders. But we know we mustn't be complacent that long-termism can be an excuse for a lack of agility in today's rapidly changing world. That's an important challenge, especially for a group as large as ours.

So my conclusion is that, if we are to be successful in securing the future for manufacturing, we need to seek out a combination of agility and long-term vision, of diversity and focus, which will come from an ecosystem made up of larger and smaller businesses working together.

Maybe that's always been the case. Certainly in today's accelerated business environment, we need to secure a sustainable contribution of the two.

Challenges for Government and Society

It's not just of course business which needs to adapt to the changing context. So my third point is that society, politics and governments need to understand and to adapt too, to take best advantage of the opportunities, to manage the risks in ways which secure broad support without becoming risk averse, and to ensure a fair slice of the cake for our national industry and people.

But, when so much of the change is driven by technology - which people like you in this hall understand best, we have to accept the responsibility not to act like an interest-group, but transparently and honestly to help society understand and manage the changes, finding collaborative ways to achieve the results we seek.

This calls for some redefining of the roles of business and Government. With such rapid change, with such potential, we mustn't fight yesterday's battles, as if technological process is something we can opt out of, or as if it would be better if the some of the manufacturing were better done out of sight somewhere else.

We need to identify where our relative strengths lie and play to them: for its part, business can deliver technology with the needed investment and can create outcomes. Government can enable, and convene, while creating a favourable environment for business. Business needs to respond to society's needs, to engage openly and explain itself. And both business and Government need to look continually outwards, to set the strategies for what we do at home with an eye always on the wider world.

Level Playing Field

In this context, I would like to come back to that much-used term "level playing field" which I mentioned earlier. In fact there are a number of similar pieces of jargon out there

which tend to cover up important points on which we need to be clear if we're going to engage with government, political parties, other stakeholders and the wider public, many of whom may – let's put it no more strongly – need some convincing about what we're saying.

Take for example "industrial strategy" or "industrial approach", take "sector strategies" or (less popular these days) "picking winners". Putting it bluntly, how do we resist the accusation that we're just asking for bungs from the taxpayer and instead make the positive case for the right role for government in supporting manufacturing?

I'm sure that no one in this hall would be asking for public subsidies for any part of manufacturing if that meant simply propping up a hopeless balance sheet or putting money into projects which have no chance of standing up commercially. No one is expecting a free contribution to profits. State intervention shouldn't be about making irrational decisions about capital allocation.

The kind of intervention we do need – and which we have seen with considerable success in recent years in some sectors – has to be capable of being justified against four criteria.

First, intervention can only make sense in areas with genuine commercial potential. We're definitely not talking about "picking winners" but equally we're not talking about 100% risk-free investment.

But the key test is whether business is prepared to share in the cost, as we have seen in recent cases like the Catapult Centres. And so it's excellent news that the Chancellor has announced that they will continue to be supported. I might also mention in the automotive sector, where JLR and Tata Motors are investing the lion's share in the new National Automotive Innovation Centre at Warwick, along with the UK Government in a long-term commitment. This is the first condition and manufacturing deserves a hearing when business is prepared to put its hand in its pocket.

The second justification for a role for Government is when the activity can't be done by one business or group of businesses alone, either because the initial level of investment is too great or because the partnership has to be much wider including academic and other institutions – the Catapults are an excellent example again, but not the only one.

Government has a role in supporting the early stage research, through the science budget. Again there was good news yesterday. And the same applies also to the intermediate stage, through the so-called "valley of death" between the early stages and full commercialisation. This is vital if we are to avoid the situation in which great innovations are made in Britain but turned into great businesses elsewhere because the support just isn't there.

This is a very modern role for government: using its unique capacity and capability not to direct, certainly not to fund fully, but to convene diverse groups which can innovate at different levels and provide our business with the opportunity to be world-beating.

The third reason for a Government role is where there is a broader economic or social benefit which goes beyond what a business can reasonably be expected to support on commercial grounds. There has to be a rational basis for capital allocation if a business is to remain viable: if there is a good reason for doing something which doesn't fit, then other sources of funding will be necessary, for example to support high levels of skills development.

My fourth and final argument takes us back to that over-used expression the "level playing field". You don't need to be a subsidy-junkie to need a business-friendly environment which allows you to compete. So is this an argument that we should throw out all the logic I've just described and, if our competitors subsidise an activity then we should do so even if the case otherwise isn't there?

Of course not. We have enough of our own history to know that irrational government intervention – call it politically-motivated if you will – doesn't create sustainable industries. In any case, as far as the European Union is concerned, the State Aids rules significantly constrain what Governments can do.

At the same time, it is important first that these rules should adequately allow for intervention in the three situations I just mentioned; and also that our Government should be prepared to act where the rules allow, as they have now undertaken to do both in respect of the taxation of energy-intensive industries and in public procurement rules where it is possible and right to take account of broader economic and social considerations.

Despite all these challenges, I think that the picture of manufacturing which today's developments paint is a compelling one, of a world in which we cannot afford to be left behind.

Selling manufacturing to future employees and investors

It can be a very exciting picture, both for those with the potential to work in manufacturing as well as for investors. But we in manufacturing need to work harder to attract both groups.

From where I sit, it's very clear to me that there is an exciting world open to the next generation of engineers in Britain. Sectors which once looked on their way out are now flourishing, new technologies offer new opportunities and there is a broad consensus in favour of significant investment in infrastructure which will span the next couple of generations at least.

The blurring of the lines between IT, design and engineering can make the opportunities appeal to people with a much wider range of interests and aptitudes.

It means that, at every stage from entry-level to the top, graduate and technician, there are good and – let's be frank about it – well-paid jobs to be had. And with the welcome renaissance in apprenticeships as well as the degree route, the opportunities are available, here and now. I am sure that this audience will be looking closely at the announcement on the Apprenticeship Levy and will want to see that it is implemented in a way which meets the promise of quality and affordable apprenticeships.

But the key message we need to shout about is: if you aspire to be a CEO or a start-up entrepreneur, engineering and the manufacturing skills offer an excellent starting point. Just ask my Indian colleagues in Tata: I often have the impression that almost all of them, whether in engineering roles or not, have started there.

Let's not be modest about it. We can honestly say, in today's environment, if you want to work somewhere smart, go into manufacturing.

But, as an outsider, I also want to deliver what is perhaps a less welcome message to the insiders. I'd like to see you opening your professions up more. Rule No 1 of good recruiting is don't go out to hire people just in your own image. And Rule No 2 should be make sure you avoid all the unconscious actions which mean you end up excluding people who like you.

Just as a good schoolteacher needs to be able to enthuse the student who hasn't yet developed a passion for her subject, so in manufacturing we need to make sure we

encourage those with aptitude who need persuading, and who don't necessarily see the world in the same way as we do.

One statistic alone, the 9% of the engineering workforce which is female, is clear enough evidence in itself that there is a very long way to go.

What is it that manufacturing is doing wrong? Wouldn't it be better for manufacturing if we could add many more successful and articulate women to the group of people standing up for it?

Part of the challenge is about how we sell manufacturing as an opportunity. I don't know what it was that motivated you in this hall to go into manufacturing. Perhaps we can talk about it during the breaks: I'd like to hear. But I suspect that there are many diverse routes and we should be encouraging all of them. To some the attraction may be the shiny product, to some what goes on under the bonnet, for some the processes and technologies, for some the ability to beat the competition, for others the opportunity to collaborate on projects which can make a real difference to people's lives.

Back to the "what did you do at work today, daddy? Or should I say mummy?" So I would like to ask you. Are we doing everything we can to make manufacturing exciting to as diverse a group of young people as we can, with all the motivations I just mentioned and more? Are we putting the sectoral interests and learned technical jargon to one side in favour of messages which actually appeal to today's youngsters? Are we showing them the real story?

Are we putting enough thought into clear messages, drawing on the insights about what young people, their parents and teachers need to hear from us? Are we multiplying competing initiatives or are we working together to get out to as many people as possible across the country? We know we have a mountain to climb, and it's only by working together that we're going to shift the dial significantly.

The other group we need to target are investors. I remember a year or so ago participating in a discussion on why it can be difficult to persuade the City of London to invest in new technologies in comparison, say, with investors in the United States. The suggestion was that investors don't know enough about technology and so tend to be risk-averse. Frankly, I thought this was ironic. Aren't we always complaining that some of the best engineers and STEM graduates leave STEM to go into financial services?

Let's not say that because they've "abandoned" us we should ignore them too. I would like to propose today that we think hard and practically about how we as manufacturers can engage with the large and potentially very influential constituency of STEM-trained people in the financial sector, and I would be interested to hear your ideas.

Conclusion

My conclusion – and this is where again I betray my own professional background – is that it isn't enough to be doing what we do well, we've also got crucially to be selling our successes

much more widely to all our stakeholders. It's great to see you all here, but what's happening at this great conference deserves to be heard well beyond this hall.

Ladies and gentlemen, I hope you've found something interesting in my outsider's inside view of manufacturing.

Since I somewhat unexpectedly found my way into your world, I've seen great excitement and potential, and massive opportunities for the UK. It's our job to make it happen, and to be both painstaking and creative in selling our case to those in government and wider society who have to come with us if we're to succeed. We must convince them that it really matters. Because we'll only have that better future if we manufacture it for ourselves.

Thank you.