

Mr Chancellor,

It seems slightly inappropriate on this occasion that we have asked everyone to turn off their mobile phones or other mobile devices, because today we are honouring Warren East, and in all probability he has played a small but critical part in the functioning of almost every one of these mobile devices that have now, hopefully, been switched off.

Let me explain. If you are in the fast moving tech business world, or if you are part of the wider British business community, you will probably know exactly who Warren East is and what he has done. If you are not, or not yet, in the case of the graduates sitting here today, the influence of the modest gentleman you see before you may come as something of a revelation.

Warren is an engineer by training and is still an engineer inside. He is an engineer who became the Chief Executive of a major British company and a global leader in microchip technology. The company he led is called ARM Holdings and it designs microchips. When I say “British company” I mean a company based in Cambridge, exporting its designs from Britain and contributing handsomely to Britain. When I say major, this is a business with an annual turnover of around \$1.1Bn per year. When I say microchip design – well I shall have to come back to the microchips in a moment.

Warren East was born in Monmouthshire in Wales, did his engineering degree at Oxford and joined ARM in 1994. In 2001, he was appointed as CEO having worked his way up through the ranks over the previous seven years. He stepped down from the CEO role last year after a dozen years at

the helm with the company flying high, and with a value around ten times where it was when he took over – the sort of sustained growth that most senior executives can only dream of.

ARM now designs the basic architecture for billions of microchips every year and ARM chips are everywhere. Clearly, there are hundreds in this room, busy processing the data around our heads. The range of ring tones never ceases to amaze me but I don't think we can hold Warren East responsible for that.

A staggering 95% of all mobile devices contain an ARM chip, averaging out at around 2.5 chips per device. There are now estimated to be in the region of 50 billion microchips with the ARM architecture at their core across planet earth. That is about 7 or 8 chips for every man, woman and child on the planet; a truly staggering statistic.

But the growth of a British business, celebrated though it should be, is not why we are honouring Warren East today in Newcastle. The shareholders have every reason to be pleased with that growth and the country honoured him this year for his national contribution with a CBE. What we are honouring today is more to do with how this was done, what it says, and the potential influence of this remarkable business and engineering achievement in the future.

So now let's talk about the microchips. The graduates sitting out here in their gowns know better than I do, that there are microchips everywhere. With every year that goes by, the connection between the things they are in grows – “the internet of things”. Your television and your iPhone may look different but increasingly they are similar in the way they operate, they are

just different sizes. If they cannot do it already, they will soon be able to talk to each other and then in turn to a whole range of other “things” in your life from your central heating thermostat to your SLR camera probably also to your adolescent son’s, irritatingly overused, games console. Frankly, I find this whole concept so terrifying that it hurts my head, but it is the reality. The genius of what ARM has done, led by Warren and his team, is that they saw what was coming and built a business to fit.

You see, ARM does not make or even sell microchips, it sells designs that have at their heart a common architecture so that, whoever their customer is, they can take the design and build on that common ARM architecture in any way they wish. For those in the room, I suspect entirely to my right, who may be struggling with this concept as I did, I shall have to use an analogy. Good chefs use stock, they will construct large volumes of stock to use in their cooking and that stock will impart body and flavour in a multitude of ways; it can be reduced and combined with a range of components to make a sauce, converted to a soup, built into a risotto or, if you are Heston Blumenthal, it can probably be freeze dried and turned into an exploding edible microchip that you can then use for seasoning. Think of ARM chips as that stock, less delicious, but more useful and infinitely flexible in terms of their future use.

Because the basic architecture is the same it allows enormous innovation across a broad base, so rather than ARM dictating the design, they open up the possibilities for others to innovate, design and develop. ARM do not have a culture of telling people what to do with their chips, they work closely with their customers. By keeping their own margins down they allow their customers to be clever and innovative. This is a different type of business model to those based on the jealous guarding of intellectual

property and the dash for quick profit. The ARM model is collaborative, sustainable, refreshing and good for all concerned.

It is not just the business model that is sustainable. With so much data to process across the planet, managing temperature and energy use is critical and here again, ARM chips look like being a winner, generating less heat for more efficient use.

So, what of the future for Warren East, this remarkable leader who helped to transform an industry? He is only 52 and decisively stepped away from the CEO role last year with the company excelling, recognising that, however good you are, new leadership is important from time to time. He might have a little more time to ski and to sail on the north Norfolk coast, maybe a bit more family time. However, he appears to be as busy as ever, and continues to share his expertise through non-executive director roles in a range of companies. He is also using his expertise to support government initiatives to help us better capture the smartest British ideas, develop them and find ways of taking them to market.

And the man himself? He would be the very first to acknowledge the role of his team and quite rightly, but after all of this, the innovation, the tough decisions, the business success and the work that has gone in you might well feel he deserves some trappings of luxury, a chauffeur driven car or luxury yacht perhaps..... not a bit of it. In this world of vastly over-rated celebrity and increasingly visible divisions between rich and poor, Warren East is the CEO who prefers to use public transport. And the favourite mobile device of the man who has made such a contribution to how the world now works, which of the many ingenious devices and electronic toys that must surround

WARREN EAST : DCL

this technological icon, which one is his favourite? The answer, I am reliably informed, is his fountain pen.

Mr Chancellor, this University likes to honour people who demonstrate, through their word and their deeds that things can be done differently, done better, done with humanity and still make a difference. One of our institutional challenge themes is “sustainability” so if you can do these things sustainably we would also want to celebrate that. Warren East has grown a sustainable British business into a world power with extraordinary reach and even happy shareholders. He is continuing to contribute his knowledge and experience for the benefit of all. This could be an inspiration for any of us, but particularly perhaps for the new Newcastle graduates who are sharing this occasion. It is for these reasons that I present him to you for the degree of Doctor of Civil Law honoris causa.

Citation by Professor Jimmy Steele, 11 July 2014