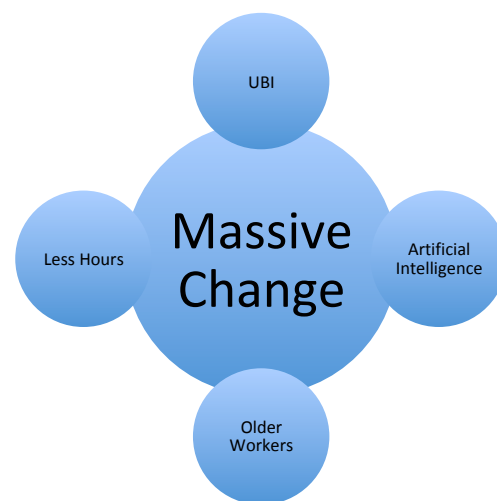# Massive change in Human resources

Dr Tony Miller

Introduction

There are currently four factors that will make the biggest changes in our lifestyle and the way we work. What is interesting is that all the four factors are likely to take place within the next five years, many by 2020.

1. The aging workforce

The first is to do with an **aging workforce**. In the West the aging skilled workforce is becoming a big problem. Governments are realising that pension funds are insufficient and moves across the world are to raise the age of retirement. Retiring at 70 has been

proposed and looks like being implemented. In the UK one suggestion is to raise the age to 73 before 2020.

In America 16.6% of the population will be over 65 by 2020, in Germany 21.6%. (Roth CBS)

In Japan the 65's and over account for 51.7% of the workforce – including women (Nikkei Asia review 30.6.2016)

Three important factors about age and employment:

- Governments are probably unlikely to be able to support them if they don't have substantial private pensions
- Employers have invested a lifetime of training and education in seniors – why let them go?
- The massive increase in robotics complement an aging workforce perfectly.

The work opportunity for the young does not look good the evidence of this can be seen everywhere, fresh graduates ending up working in coffee shops or in other low paid semi skilled work.

Less hours of work

Linked with the rapid advancement of technology, also the aging workforce and certainly robotics the working hours are reducing. Reported in the Financial Times –February 2018. Germany's work force has successfully negotiated a 28-hour working week.

The significance of this will be to accelerate, robotics and artificial intelligence use. It will also give employers the opportunity to right size their organisations with the massive financial benefits that it would bring.

Rightsizing is already becoming a key management tool and for good reason.

Artificial Intelligence

The speed at which this technology is advancing is breath taking. It is coming to all fields of work and leisure and of course operates 24/7.

Artificial intelligence and deep learning are rapidly growing and expanding into every area of business life. A qualified doctor, a specialist in cancer diagnosis may take two or three hours looking at x-rays to correctly diagnose the symptoms that the patient may be suffering. Using deep learning the same work can be carried out using artificial intelligence in .03 of a second. The artificial intelligence is more accurate than a panel of doctors. Artificial intelligence is also being linked to robotics; we have seen this with self-drive cars. The reality is on the West Coast of America large articulated trucks have been using this system for years. So we have here a combination of artificial intelligence and robotics on a scale never seen before.

Artificial intelligence can be broken down into three main groups. **Process automation**. Process automation looks out automating mainly back office type jobs. Where ever transactions or information processed in it is probably the area process automation take place. NASA has recently taken this approach in their HR function and reported that 86% of the HR transactions were carried out without any human intervention. It is fair to say and if you can outsource a task and almost certainly it can be automated.

How far has automation gone with transportation?

Automated heavy lorries are already successfully in use on the west cost of America. Unmanned planes are in use primarily by the military and according to Tim Baraclough(3.2018) of BAE Industries UBER will be using the Volocopter to transport passengers in an unmanned electrically powered helicopter by 2020.

As far as passenger cars are concerned the innovations and most likely usage will be in America as the road grid type existing system is more suited to automated car transport at level 3 and beyond. Just compare the road system of New York or San Francisco with central London for example. Already ; Dubai UAE, in the Middle East is starting trials on an automated taxi service and unmanned flight transporter for passengers using the Ehang 184 pilotless electric plane.

Cognitive insight. This is the area where there is potentially massive improvement incrementally. This is the area of artificial intelligence where what we refer to as deep learning takes place. The intelligence learns adapts refines and becomes better and better at what it does. I've already given the example in the medical profession where deep learning can do a job in .03 of a second compared to a professional doctor who would take 2 to 3 hours. The deep learning gets so advanced that it actually becomes better every time it carries out the function. Certainly this example the deep learning can outperform a group of doctors for accuracy and of course there is no comparison with the time.

Cognitive engagement. This group looks at projects or systems that actually engage people. Such as intelligent agents, health

treatment recommendation and product and service recommendations. This technology is still in its infancy but is rapidly growing. Is likely that this technology will impact on customer service agents, sales agents and call centres.

Universal Basic Income (UBI)

What is it? Universal basic income (UBI) is a model for providing all citizens of a country or other geographic area with a given sum of money, regardless of their income, resources or employment status. The purpose of the UBI is to prevent or reduce poverty and increase equality among citizens.

UBI is also known simply as basic income. According to the advocacy group Basic Income Earth Network (BIEN), the essential principle behind basic income is the idea that all citizens are entitled to a liveable income, whether or not they contribute to production and despite the particular circumstances into which they are born.

BIEN lists the following five defining characteristics of basic income:

1. **Periodic**: Distributed in regular payments,

2. **Cash payment**: Distributed as funds rather than, for example, vouchers for goods or services.

3. **Individual**: Each citizen (or adult citizen) receives the payment, rather than each household.

4. **Universal**: All citizens receive the payment.

5. **Unconditional**: Recipients are not required to demonstrate need or willingness to work.

In the most common UBI implementation, identical periodic payments are made to all individuals and the tax system ensures that funds are returned to the system from those with higher incomes. Usually, the amount is gauged for subsistence: enough to take care of the individual's basic needs but not enough to provide a lot of frills.

UBI is one example of a guaranteed income model. The main alternative model is a guaranteed minimum income (GMI) system, sometimes called a basic income guarantee (BIG), which involves varying needs-based supplements designed to ensure that all citizens have enough to live on. In that system, only low-income

Recently, UBI has been in the news as one way proposed to support a workforce displaced by automation. Musk, Zuckerberg and many others believe that robots and AI-enhanced software may replace most human labour in a not-too-distant future scenario sometimes called the robot economy.

Critics of guaranteed income argue that it would be too expensive to implement and would create a disincentive to work. Proponents, on the other hand, believe that it could be cheaper in the long run, considering the effects of poverty, and that, furthermore, it would promote creativity and entrepreneurship among those freed from the struggle to.

Who is driving UBI in 2018?

The people leading this push towards UBI are names that you would recognise. Mark Zuckerburg owner of Facebook, Travis Kalanick co founder Uber, Elon Musk former CEO and owner of Tesler, Stephen Hawking, and Bernie Sanders (U.S. Politician)

The person who is referred to as one of the Gods of Silicone Valley Sam Altman 33 years old owner of Company Y Combinator; valued at 80 million dollars.

Why do we need it?

The rapid advance in use of robotics and Artificial intelligence particularly deep thinking will change the face of employment, as we know it by 2020. The unemployed and the unemployable will increase: unless the world is prepared to accept a rapid increase in crime and the gulf between the have's and have not's there seems little option. For sure the world will never go back to a growth situation in employment**.**

Are people happy at work?

Apparently not; the figures for the UK and Germany seem very similar. 33% of the population are not happy at work. This surprisingly high figure, if the same worldwide would be a big boost for pro UBI advocates.

What do the figures look like and is it viable?

The cost of Universal Basic Income (UBI) is often misunderstood and greatly exaggerated. It then presents simple, " back-of-the-

envelope" estimates of the net cost of a UBI set at about the official poverty line: $12,000 per adult and $6,000 per child with a 50 % " marginal tax rate." These back-of-the-envelope calculations present a greatly simplified UBI scheme meant not as a practical proposal but as a method to obtain a ballpark estimate of the cost of UBI in isolation. Even with simplifying assumptions, these figures are

several times more accurate than many common but exaggerated estimates. Key findings of this study include the following. The net cost — the real cost — of this UBI scheme is $539 billion per year: about one-sixth its

often-mentioned but not-very-meaningful gross cost of about $3.415 trillion. The net cost of this UBI scheme is

- Less than 25 % of the cost of current U.S. entitlement spending,
- Less than 15 % of overall federal spending, and
- About 2.95 % of Gross Domestic Product (GDP).

The average net beneficiary is a family of about two people Making about $27,000 per year in market income. The family' s net benefit from the UBI would be nearly $9,000, raising their income to almost $36,000.

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