

HOW IS WORK CHANGING?

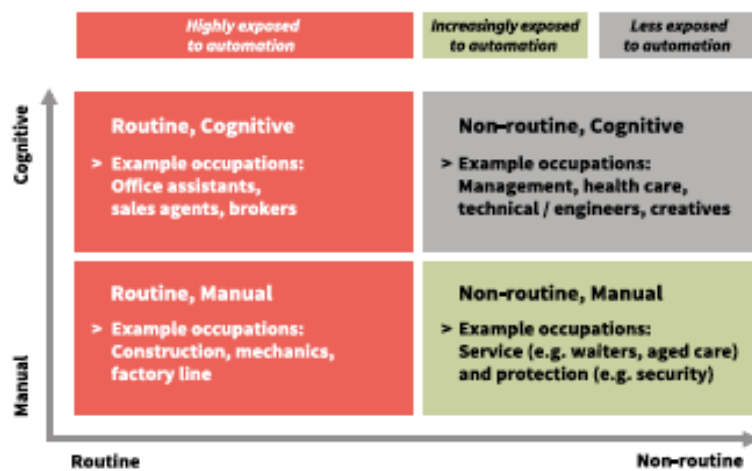
Young people already struggle with challenging pathways into work. Around Australia, nearly one in three young people are currently unemployed or underemployed. On top of this staggering underutilisation of our young talent, around one in seven young people who are not studying have completely stepped out from the labour force and don't appear in the unemployment figures. For those who are working (and not studying), the work is often part time. More than one in three 15 to 19 year olds (39%) who are not studying and one in four 20-24 year olds (26%) are in part-time work. Looking forward, the revolution in work for young Australians will be driven by three economic forces, one of which is detailed here:

AUTOMATION – EVER-SMARTER MACHINES PERFORMING EVER-MORE-HUMAN TASKS

Concerns that smart machines will herald the 'end of work' have abounded for the best part of two centuries. However as the snapshot of work over the past 25 years in Australia shows, unemployment has not been driven to astronomical heights by the introduction of new technology. Admittedly though, the people who make up the workforce has undeniably shifted towards skilled workers, and different groups have been winners and losers as a result.

To breakdown and understand the impact of technology (especially automation) on jobs, economists have classified occupations as being made up of cognitive (mental) and manual tasks, which are performed in either routine or non-routine ways (see Figure 1).

Fig 1. Smart machines will impact different types of jobs in different ways



Source: Adapted from Autor, Levy and Murnan (2003)

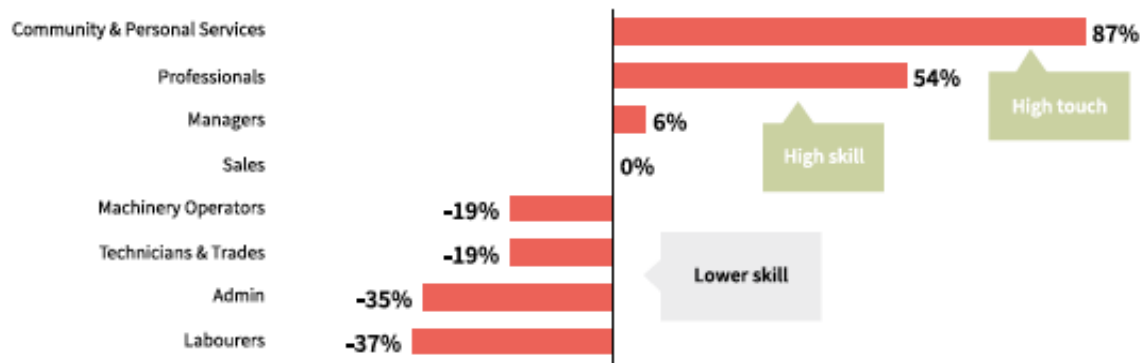
The impact of this change is that technology has affected the relative share of routine and non-routine jobs in our workforces. In other words, manual and cognitive jobs that involve repetition or routine, are well suited to smart machines and as a result, occupations like stock-brokers and factory workers have increasingly been 'taken over' by machines.

Non-routine work, which requires people to adapt, make decisions based on the specific situation or problem solving and creativity, are less exposed to the rise of smart machines. However, as smart machines learn to recognise visual and language cues and develop skills to adapt to situations (like driverless cars), the machines will increasingly compete for manual non-routine jobs and some cognitive jobs.

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The impact of smart machines is a global phenomenon and the Australian economy will be affected. Over the past 25 years, the highest jobs growth has been enjoyed in occupations that are either high touch or high skill (see Figure 2).

Fig 2. Occupations that are high skill or high touch have grown, while lower skill routine occupations have shed jobs, 1991 to 2015
% growth in # of jobs by occupation – growth in total labour force



Source: ABS, AlphaBeta analysis

There has been 87% growth in the number of jobs in community and personal services, and the number of jobs in professional occupations has grown 54%. The winners of this trend have been skilled workers and women. Conversely, medium and lower skill occupations have experienced either no growth or negative jobs growth. The people who have lost-out in this trend have been unskilled workers, and especially unskilled men.

Adapted from the "New Work Order" Report with permission from the Foundation for Young Australians.