

# Mind of the Universe - Robots in Society: Blessing or Curse?

Final Challenge: Basic Income as last safety net for sustainable employability in a robotic society.

Koen Klokgieters



# Management Summary

## Situation & Challenge

Speed of development and synergy of AI and Robots boost automation of many task that used to be performed by humans. “*This drives labour out the economy and wages decline to zero. In the limit, labour is fully immiserated and ‘technological unemployment’ follows*”\*. The power in society will even more shift from labour towards capital owners. This creates a disruptive social disbalance between the haves and haves-not\*\*. Governments lack instruments (e.g. regulatory and tax) to provide a sufficient solution.

The key challenge:

- How to design, build and implement a solution for sustainable employability in a robotic society.

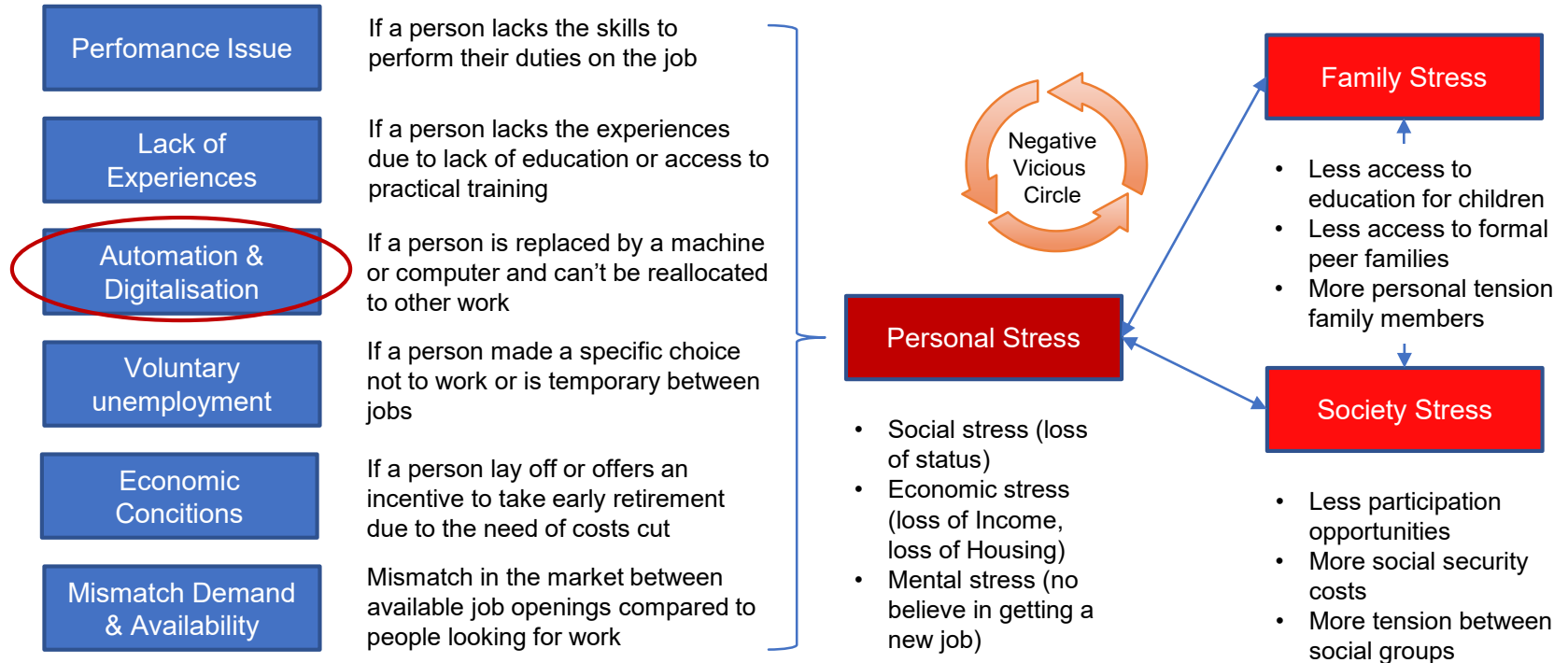
## Approach & Solution

- Define cause and effect employability
- Define impact robots on employability
- Role of different stakeholders in society
- Define possible solutions

Solution:

- ☐ Shared responsibility for employer and employee for employability
- ☐ End to End employability services
- ☐ Basic Income as last safety net for unemployability

# Understanding the causes and consequences of potential unemployment for the individuals, families, as well as society as a whole.



# Almost every working person needs to upgrade the skills in order to adapt to the near future Robotics Society

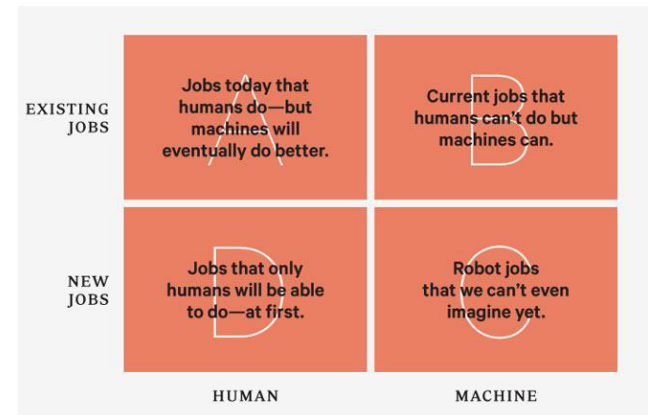
*The vast majority of respondents to the 2014 Future of the Internet canvassing anticipate that robotics and artificial intelligence will permeate wide segments of daily life by 2025, with huge implications for a range of industries such as health care, transport and logistics, customer service, and home maintenance. But even as they are largely consistent in their predictions for the evolution of technology itself, they are deeply divided on how advances in AI and robotics will impact the economic and employment picture over the next decade.*

*Half of these experts (48%) envision a future in which robots and digital agents have displaced significant numbers of both blue and white-collar workers—with many expressing concern that this will lead to vast increases in income inequality, masses of people who are effectively unemployable, and breakdowns in the social order.*

*The other half of the experts who responded to this survey (52%) expect that technology will not displace more jobs than it creates by 2025. To be sure, this group anticipates that many jobs currently performed by humans will be substantially taken over by robots or digital agents by 2025. But they have faith that human ingenuity will create new jobs, industries, and ways to make a living, just as it has been doing since the dawn of the Industrial Revolution.*

Source: Elon University, The 2014 Survey: Impacts of AI and robotics by 2025

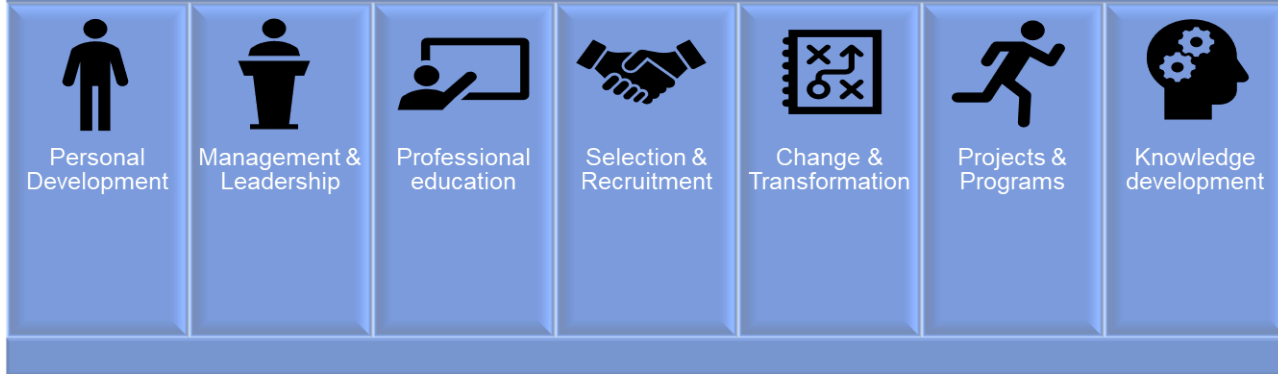
One way or the other, the majority of the workforce will be in transit of their current jobs (need to update the skills or loose work at all).



Source: Kevin Kelly Gear, Better Than Human: Why Robots Will — And Must — Take Our Jobs

At first the update of skills is a shared responsibility of employer and employee in order to ensure future employability

## Full Service Employability Support



Employability Readiness



For each organisation, it will be compulsory to install a Full Service Employability Support. This service platform is to ensure an active policy and applied services in order to ensure the future employability of current employees. Financing is based on contribution of Employer, Employee and Governmental support. The service can be organised in a collective Industry Sector specific society. Each company of this sector will contribute based on the level of transition to more automation / digitalisation.

# For those, not able to stay employed, basic income will overcome personal stress and motivate active participation to society

Favor	Against
<b>Poverty and vulnerability reduction</b> Poverty and vulnerability will be reduced in one fell swoop.	<b>Conspicuous spending</b> Households, especially male members, may spend this additional income on wasteful activities.
<b>Choice</b> A UBI treats beneficiaries as agents and entrusts citizens with the responsibility of using welfare spending as they see best; this may not be the case with in-kind transfers.	<b>Moral hazard (reduction in labour supply)</b> A minimum guaranteed income might make people lazy and opt out of the labour market.
<b>Better targeting of poor</b> As all individuals are targeted, exclusion error (poor being left out) is zero though inclusion error (rich gaining access to the scheme) is 60 percent <sup>3</sup> .	<b>Gender disparity induced by cash</b> Gender norms may regulate the sharing of UBI within a household – men are likely to exercise control over spending of the UBI. This may not always be the case with other in-kind transfers.
<b>Insurance against shocks</b> This income floor will provide a safety net against health, income and other shocks.	<b>Implementation</b> Given the current status of financial access among the poor, a UBI may put too much stress on the banking system.
<b>Improvement in financial inclusion</b> Payment – transfers will encourage greater usage of bank accounts, leading to higher profits for banking correspondents (BC) and an endogenous improvement in financial inclusion. Credit – increased income will release the constraints on access to credit for those with low income levels.	<b>Fiscal cost given political economy of exit</b> Once introduced, it may become difficult for the government to wind up a UBI in case of failure.
<b>Psychological benefits</b> A guaranteed income will reduce the pressures of finding a basic living on a daily basis.	<b>Political economy of universality – ideas for self-exclusion</b> Opposition may arise from the provision of the transfer to rich individuals as it might seem to trump the idea of equity and state welfare for the poor.
<b>Administrative efficiency</b> A UBI in place of a plethora of separate government schemes will reduce the administrative burden on the state.	<b>Exposure to market risks (cash vs. food)</b> Unlike food subsidies that are not subject to fluctuating market prices, a cash transfer's purchasing power may severely be curtailed by market fluctuations.

**Debate in Europe** – European Parliament's committee on Legal affairs (JURI) adopted a report on "Civil law rules on robotics" which considers the legal and economic consequences of the rise of robots and artificial intelligence devices. The report argues that development of robotics and AI may result in a large part of the work now done by humans being taken over by robots, so raising concerns about the future of employment and the viability of social security systems, creating the potential for increased inequality in the distribution of wealth and influence. To cope with those consequences, the report makes a strong call for basic income.

Source: IASScore.ie, Universal Basic Income: A conversation(Economic Survey Chapter – 9)

## How to finance UBI?

- ☐ Existing bureaucratic welfare program spending
- ☐ Consumption taxes (VAT)
- ☐ Financial transaction taxes
- ☐ Tax expenditures (subsidies, deductions)
- ☐ Robot taxes
- ☐ Carbon taxes
- ☐ Patent fees
- ☐ Income and property taxes
- ☐ Savings from reduced governmental costs (health, crime)

Source: Gerald Huff , Principal Software Engineer at Tesla Motors

# Current experiments and examples of Basic Income programs

Alaska has had a guaranteed income program since 1982. The [Alaska Permanent Fund](#) pays each resident up to \$1,200 a year out of oil revenues.

In 2017, the [Hawaii state legislature passed a bill](#) declaring that everyone is entitled to basic financial security. It directed the government to develop a solution, which may include a guaranteed income.

In [Oakland, California](#), the seed accelerator Y Combinator will pay 100 families between \$1,000 to \$2,000 a month.

[Stockton, California](#), is planning a two-year pilot program for fall 2018. It would give \$500 a month to 100 local families. It hopes to keep families together, and away from payday lenders, pawn shops, and gangs.

[Canada is experimenting](#) with a basic income program. It will give 4,000 Ontarians living in poverty C\$17,000 a year or C\$24,000/couple. They can only keep half of their income from any jobs they have.

In 2017, [Finland began a two-year experiment](#). It gave 2,000 unemployed people 560 euros a month for two years, even if they found work. The recipients said it reduced stress. It also gave them more incentive to find a good job or start their own business. The [Finnish government was supposed](#) to extend the trial to employed workers in 2018. Researchers wanted to see if that would help them get better jobs, as well. But the Finnish government scrapped the expansion before it began. It is exploring other social welfare programs instead.

A pilot program in [Utrecht, Holland](#), pays 250 people 960 euros a month.

[Scotland is funding research](#) into a program that pays every citizen for life. Retirees would receive 150 pounds a week. Working adults would get 100 pounds and children under 16 would be paid 50 pounds a week.

[Taiwan may vote on](#) a basic income. Younger people have left rural areas in search of decent wages. Some have even left the country to look for work. A guaranteed income might keep them from emigrating. It would also help the senior citizens left behind who live in poverty. The country only spends 5 percent of its [gross domestic product](#) on welfare programs. The average for developed countries is 22 percent.

Under the proposal, the government would pay NT\$6,304 per month for children under 18 and NT\$12,608 per month for adults. It would cost NT\$3.4 trillion, or 19 percent of GDP. To fund it, Taiwan would levy a 31 percent tax on earnings above NT\$840,000 per year. As a result, the program would raise the incomes of two-thirds of the population. The richer third would lose NT\$710 billion.

In 2016, [Switzerland voted against](#) universal income. The government proposed paying every resident 2,500 Swiss francs per month.