## TECHNOLOGICALLY-UNDERDEVELOPED REGIONS:



Draft position on the challenges of the Future of Work

- In technological terms the world is divided between countries that are at the forefront of technological development and those that are not. Conditions vary less by regional context than by level of development. Technologically leading countries include the United States, Canada, China, South Korea, Japan, Taiwan, Singapore, Australia, Germany, Holland, France, Sweden, the UK, and Russia. These are countries with welldeveloped tech sectors that are capable of producing leading-edge digital technologies. Other countries tend to 'consume' the tech these countries produce.
- 2. There are many factors that influence technology adoption, among them labour cost, labour qualifications, regulatory barriers, social acceptance, and the existence of supporting infrastructure. For example, automated facilities are dependent on reliable energy supplies. The context of the technologically under-developed world with regard to technology is different from the context of the developed world.
- The limited number of technologically-developed multinationals, or national companies limits the capacity for national or regional private capital to lead tech development in technologicallyunderdeveloped regions.
- 4. This means that **tech will be deployed by a combination of developed-world transnationals and tech companies, international funding bodies, and the state**, since they are the only ones who have the resources to do so. This means that high tech machinery will probably be deployed in and around ports, airports, mining and the extractive sector more generally.
- However, the biggest tech impact on these regions will be the use of employee monitoring, surveillance and benchmarking tech alongside the development of digital platforms that contribute to the informalisation of employment.

- 6. The bulk of this software will be designed according to criteria set in countries other than where it is being used, which negatively impacts workers. For example, algorithms designed for tall people in one country will not work well for short people in another.
- 7. The development of better software, smaller sensors and better communications is leading to the **increasing digitalisation of the global economy**. This allows the automation of some functions and better control of processes as a whole. It can enable the increased use of remote-control technology. Many of these technologies could be used to benefit workers and improve conditions, but can also be used to opposite effect.
- 8. Digitalisation is leading to the increased use of process and employee monitoring technology because these impact the most vulnerable cost sector-labour costs, and because they are relatively cheap to introduce in comparison with robots and other types of machinery. These technologies produce data that can be used to monitor the work process, a kind of 'digital Taylorism'. Software can then identify areas for saving.
- 9. The data produced by these technologies is linked to benchmarks that are embedded in algorithms. These compare workers to their peers or to an ideal, and are linked to rewards or sanctions. They are a labour discipline technology. At the moment workers have no input into these benchmarks or how the technology is used.

- 10. Where workers are contracted by a digital platform, such as Uber, they are managed by algorithms that determine jobs, pay rates, work location. They make the **work process transparent to bosses and customers**, but the algorithms are not transparent to the workers who work under them. In the underdeveloped world workers often have to work for several platforms in order to make ends meet.
- 11. The platforms are undermining formal labour relations in regions where informality is already the dominant form of employment.
- 12. **Data is produced by workers** during their work, and yet it is owned and used either by their direct employer or by the provider of the technology. And workers have no control over how it is used.
- 13. Data can be used to reorganise labour processes, but also to control them. Data is an expression of power. The creation, use and ownership of everincreasing amounts of data by private companies is creating a huge social challenge. Whoever owns data can decide what is done with it. It changes the power balance between companies in favour of those who control their own data, or who control the data of others. It does the same between countries.

- This creates a powerful economic dynamic in favour of tech monopoly, which is why the World is seeing the development of tech titans like Facebook, Google, Amazon etc.
- 15. Data is also the basis for the software that analyses it, and for software that can 'learn' – commonly known as Artificial Intelligence (AI). AI promises the ability to use data to resolve problems more rationally and effectively. But it will only do so in within the limits set by those who set the parameters of the problem to be solved. Private ownership of data will inevitably mean problems will be defined by private interest.
- 16. Technologically underdeveloped regions have no large digital companies of their own. This means that their data is produced by them, but it collected, processed and owned by others. Technologicallyunderdeveloped countries produce no AI of their own, and this means that its data will not generally be used to resolve their problems as defined by themselves.
- 17. The problems presented by foreign collection, ownership, control and use of data can be likened to a form of **'digital colonialism'** that has impacts on workers in the workplace, but also on society more broadly. In many countries it is seen as a national security issue.

