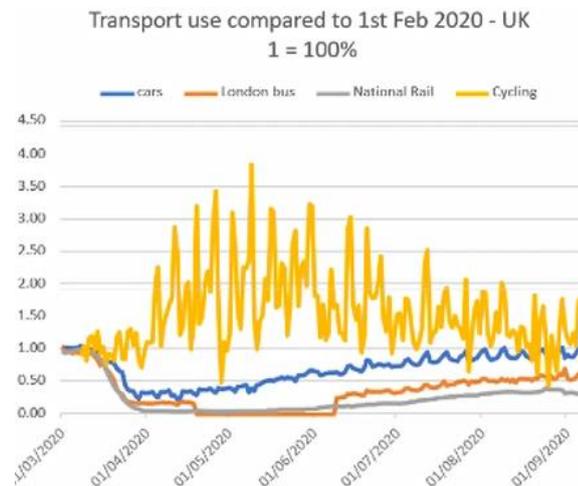# Teleworking: society, economy and environment

The covid crisis has shown that the theory of working from home, which had been voiced by professionals for many-many years, can be put into practice and can work in many areas. However, it also raises serious questions. The word CRISIS is of Greek origin and meant a fork in the road. The symbol of the opportunity to reconsider about where we came from and where to go next…

Transport professionals came up with the idea many years ago that the easiest way to solve the problem of traffic jams would be for a significant proportion of workers to work from home. The theory was then received with doubt even among experts of transport, and no one knew if it could all work in practice - until the spring of 2020.

In the spring of 2020, due to the COVID-19 epidemic, millions were forced to abandon their traditional commuting habits. All tried to continue working from home - learning about all the pros and cons of teleworking. Thus, the theory resting on shelves suddenly turned into a mass and even global practical experiment.

Travel change in mid-2020 in the UK: car (blue), bus (orange), rail (gray), bicycle (yellow).
Source: https://eionet.kormany.hu/az-utazasnak-oromot-kell-adnia-mobilitas-a-post-covid-vilagban

Short-term environmental results were great. In the first half of 2020, humanity has achieved the largest reduction in greenhouse gas emissions to date – unintededly. In some places, the problem of noise pollution has been completely eliminated, and in many cases air pollution has given only a fraction of the previous values. Many big cities have experienced the extent to which a reduction in car traffic contributes to a better quality of life - by eliminating noise and air pollution. Quarters that had experienced a constant car rumble beforehand could now hear spring birdsong for the first time.

In the social field, teleworking and distance learning are by no means such a clear victory. On the one hand, it is indisputable that the spread of epidemics can still be significantly slowed down by the application of medieval quarantine. This seems to be working now: reduction in the spread of COVID-
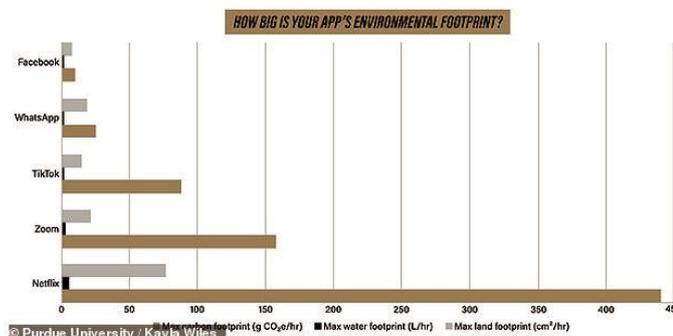
19 virus is closely linked to the severity of the austerity measures applied. At the same time, prolonged isolation, the cessation of traditional employee relationships, or diversion to online channels are also bringing about changes whose consequences today sociologists and psychiatrists cannot yet estimate. Yes, psychiatrists: human is a social being, and the lack of daily relationships and conversations can have very serious negative effects. The fact that the number of divorces jumped several times when the spring closures were released in 2020 is just the top of the iceberg. Today, we don't yet see what shortcomings distance learning leaves behind in children who haven't met (regularly) with their classmates for months and "banding" has either found themselves some (ambiguous) online channel or even dropped out of social contact for months. Millions of teenagers are getting used to permanently not hanging up their phones - and this seems to be very difficult to change. But what is even worst is that the number of people with serious mental health problems has also jumped, and so has the number of suicides.

People are looking for a way to meet, to talk. Dads, who haven't been to work for almost a year now, are now happily taking their child to the playground: they often have the opportunity to talk to their peers there alone - even if only (sometimes literally) cursorily. Others, after finishing work at home, go for a walk with their friends, jog, or have a can of beer in the park. This is understandable in itself, of course, but it does have a longer-term consequence: if it becomes massive to sit in a car and go to meetings in the afternoon and evening, then the environmental benefits of working from home may become negligible.

The question also arises as to how efficient is working from home in terms of energy consumption? There comes the issue of heating, cooling and lighting the homes. While shared copiers in large offices consume less and less specific energy, the main design consideration for small printers designed for home use is not energy efficiency but small size.

Online work itself requires extra energy. If someone attends a Zoom meeting, using the camera is responsible for emitting 1,000 grams of carbon dioxide per hour and consuming more than ten litres of water with it. If you prefer turning off the camera, you can reduce meeting emissions by up to 96 percent.

It may be interesting to compare internet platforms - based on their pollution. According to a study by researchers at *Prude University* titled *"The overlooked environmental footprint of increasing Internet use"* (https://www.sciencedirect.com/science/article/abs/pii/S0921344920307072?via%3Dihub), based on pollution per gigabyte of data traffic the environmental impact of Netflix was found to be exceptionally high. According to the research, Netflixing is responsible for emitting 440 grams of carbon dioxide per hour, far ahead of relevant data from Facebook, WhatsApp, TikTok or Zoom.

Source: https://greenfo.hu/hir/a-netflixezes-a-leggazosabb-de-a-kameras-zoom-meetingeles-se-piskota/

Research shows that the more and better quality video we use, the higher our carbon footprint will be. For Netflix, setting the resolution to "worse" could save 86% of emissions. So you might want to turn off the camera if you don't really need it. However, at meetings of the European Environment Agency (https://www.eea.europa.eu/) for example, participants are asked to leave the camera on to see each other's reactions.

Telework therefore requires a very serious energy demand. While Europe has set itself the goal of achieving carbon neutrality by 2050, and states are elaborating their scenarios to achieve this, do we include in this calculations the fact that household energy demand could increase by as much as one and a half to two times?

In economic terms, the damage of the covid crisis can only be compared to the damage of the 1933 crisis. At the same time, it should also be seen that millions of companies have faced the fact that it is not necessary, or not always necessary, to maintain and operate former office buildings. A company that has found a way to operate with minimal work at site during the covid crisis will hardly rush to reopen its offices. If employees also can work from home, why pay for huge office buildings to run them? The question arises as to what will be the long-term fate of the office buildings that have been vacant for months now.

The covid-crisis is said by many to be that while economic development overruled all other interests, environmental (e.g., animal husbandry conditions) and social (e.g., health) factors received disproportionately little attention. This, of course, is debatable. But it is likely that all three pillars of sustainable development will need to be taken into account when planning recovery, and we cannot ignore social aspects either.

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