"Now is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

- Winston Churchill

It's hard to fathom that Y2K was seventeen years ago. Remember the widespread fear that technology would collapse around us in the belief that everything that computers touched would be engaged in a catastrophic breakdown as the date changed from 1999 to 2000? Of course, with the exception of some minor software glitches the millennial was ushered in without a hitch.

Yet this past month brought us the WannaCry cyber weapon that targeted the Microsoft Windows operating system, infecting more than 230,000 computers in 150 countries that had not applied the security patch supplied more than two months earlier. Funny how times have changed.

At a recent conference, Mark Barrenechea (CEO of Open Text) discussed the future of technology noting that by 2025 there will be four billion connected internet users and more than one billion connected devices. This will require business models to be reinvented in all industries with artificial intelligence ("AI") being at the forefront of not just criminal activity, but many corporate growth engines as well.

For example, **WABCO** Vehicle Control Systems is laying the technology path to autonomous driving for long haul trucking. By the end of this year, platooning of trucks is expected to begin. Platooning means that the trucks, although with a driver, will be driven in convoy by computers that operate synchronized driving and braking, resulting in 10% cost savings in fuel alone. This is the first step to eliminating truck drivers all together which is expected around 2021.

In late 2016, **McDonald's** announced a nationwide roll-out of touchscreen kiosks to replace employees normally positioned to be client-facing – many more are coming. **Marble** is a 20 person start-up in San Francisco that is building and deploying a handful of robots in a partnership with Yelp. Customers place an order using a

Yelp app, which then allows them to opt-in for robot delivery right to their doorstep. AI is also implemented to employ automated online assistants that can be seen as "avatars" on web pages.

Descartes Systems Group, a global leader in logistics, utilizes web-crawling "bots" to search government sites daily, aggregating changes to customs data in over 50 countries to ensure clients have the most up-to-date customs information for cross-border transport. In our own industry, algorithmic trading employs AI to make trading decisions in a fraction of an instant.

Driverless trucks and cars, automated fast food, medical imaging, inventory management, even the judicial process – all have AI applications that are in testing or implementation phases right now. However, the challenge of AI in the economy demands serious analysis and an effective, thoughtful policy response.

Continued technological change will improve investor returns – displacing labour with technology will improve business efficiency and profits. However, this increased prosperity will come at an enormous cost to today's social norms. There are implications to dislocating and removing opportunities for the unskilled workforce. As an example, according to some reports, trucking employs over 3.5 million people in the US with even more around the developed world.

Despite the protectionist rhetoric south of the 49th parallel, no amount of protectionist barriers will stop the increasing human displacement by AI. But, according to an interview with US Treasury Secretary Steven Mnuchin in March, "It's not even on our radar screen....50-100 more years" away. This is neither an effective nor thoughtful policy response from an administration ostensibly focused on job creation.

In many ways, technology has been a blessing but, in many other ways, may become a curse. While we easily survived the Y2K panic, investors and policymakers alike will need to better understand the changing business models under AI applications and the resulting impact to social change.