

## The 4<sup>th</sup> Industrial Revolution: work, workplaces and labour regulation

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The Fourth Industrial Revolution is associated with developments in and applications of new technologies including through automation, robotics, nanotechnology, big data, quantum computing, 3D printing, energy storage and internet/social media business platforms (Schwab, 2015). Manifestations of these new technologies include driverless vehicles, modular construction, online education and health platforms, web based business systems and industrial robots. New industries will emerge and existing industries will decline (Berger and Fry, 2016). The potential efficiencies and gains associated with the technologies have been highlighted (WEF, 2016), and these include cost reductions, 24/7 operations, new services, improved services and extending market reach. However, as with past transformations, the clear implication of these developments is that many jobs will disappear across all sectors, that many jobs will be transformed, that work and workplaces will be different, new jobs will emerge and new skills and training will be required (Byhovskaya, 2017). Robots work 24/7, are not injured on the job or take time off, they do not belong to trade unions and they do not have workplace grievances. At the macro level the implications include polarization globally with gains to those who own and have access to the technology; national divisions between those jobs/occupations displaced and those benefiting from the technology; and broader implications for tax, retirement, labour regulation and welfare systems. Already the gig economy is developing in a certain direction that may be further boosted in this age where change is destined to be perennial (Ras et al., 2017). In this stream we invite submissions that examine micro issues (linked to specific technologies and specific industries and jobs); and macro changes that examine sector, national and international applications of the 4IR. The stream welcomes proposals that investigate the implications of 4IR for work, workplaces, trade unions government policy recommendations, and labour regulation. Included under these headings are job quality, career development, training and education, and strategic HRM. Studies of specific industries, occupations, nations and policy proposals are welcome.

### References

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