

ROBOT TALKS: PUBLIC ENGAGEMENT EXECUTIVE SUMMARY

The Impact of Technological Change on Ontario's Workforce is a two-phased research and public engagement initiative by the Brookfield Institute for Innovation + Entrepreneurship (BII+E). This report summarizes what we heard about automation in the workplace from 318 stakeholders and participants in interviews and public engagement events as well as online survey responses. Taken together, these responses reveal a range of impacts brought on by automation: a variety of challenges that workers, businesses, educators and communities are facing; as well as a series of interventions that may alleviate the negative impacts tied to automation and maximize the benefits that this workplace shift can bring. Stakeholders recognize that automation is here whether people like it or not. Moreover, they said it is not a matter of accepting it or rejecting it – it is a matter of mitigating its negative impacts and extracting its benefits. Because automation means very different things in different industries – from robots building cars to software analyzing consumer data – and because different communities, employers and people will have different approaches and tools for responding, the impacts of automation will be varied. There will not, therefore, be a one-size-fits all solution to help workers adjust to the changes brought by automation.

AWARENESS OF WORKPLACE AUTOMATION:

- + Some are hopeful and embrace the changes; others are fearful or cautious.
- + Different sectors adopt automation for different reasons and to different degrees.
- + Automation has transformed the way some sectors like manufacturing operate although general knowledge about those changes is low.
- + People speculate about the broader societal impacts of widespread joblessness due to automation and how the government might need to respond with measures such as training supports and guaranteed basic incomes.
- + There is a desire for government to play a role in raising awareness and sharing up-to-date data about workplace automation.





DRIVERS OF WORKPLACE AUTOMATION:

Stakeholders told us that companies choose to automate for different reasons:

- + To save money on labour (because labour is getting more expensive) and to increase profits;
- + To reduce dependence on labour because labour is unreliable, unavailable, or difficult to access;
- + To respond to a need to innovate and compete globally;
- + To respond to consumer desire for innovative technologies and services;
- + To improve health and safety; and
- + To improve and standardize the quality of the output.

IMPACTS OF WORKPLACE AUTOMATION:

Stakeholders reported that the impact of automation on people and on workplaces is not necessarily predictable. Impacts are variable and can be contradictory in different settings. We heard that:

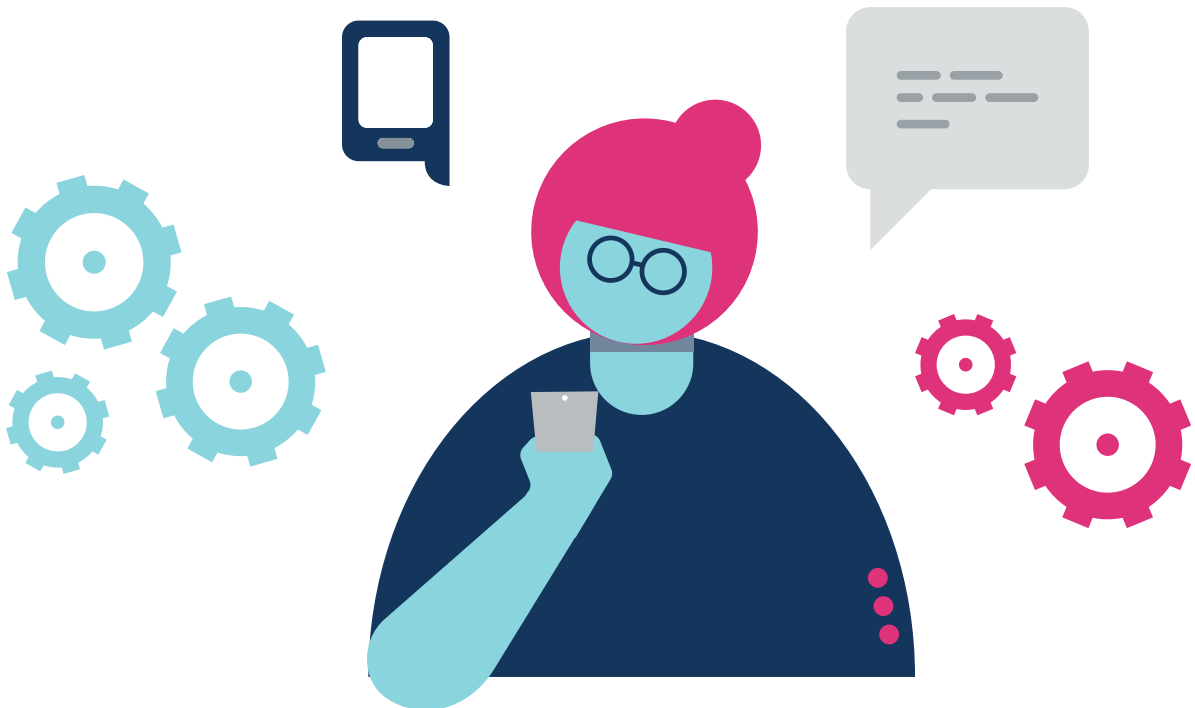
- + Automation may result in jobs lost through replacement of human workers by machines.
- + It may also result in jobs gained through increased productivity within a workplace.
- + Automation can reduce the amount of time employees spend on repetitive tasks and make parts of their jobs easier.
- + The shift to automation can create new, higher-skilled, higher paying jobs – but fewer of them.
- + Building rather than buying new technologies or machines can capture the jobs that are created by designing, building and maintaining new technology.
- + Stakeholders reported that automation can result in jobs being broken apart into tasks.
- + Automation can reduce the need for certain trade-related skills and can devalue artistic skills. When workers don't get to use their specialized skills they can feel demoralized.
- + While the experience of working within an automated workplace can be boring, automation can also be liberating by freeing people up for more complex tasks or by giving data clerks, service workers or farmers a break.



CHALLENGES ASSOCIATED WITH WORKPLACE AUTOMATION:

Participants in the engagement sessions reported many different challenges associated with technological change in the workplace. We heard that:

- + In some places employers struggle to fill jobs because people don't have the new technological skills they're looking for.
- + Certain skills are missing in the workforce – hybrid skills in technology, engineering, mechanics.
- + Soft skills are weak and employers report a need for critical thinking and problem solving skills in the workforce.
- + Employers think that colleges aren't training people for the right kinds of jobs although others report that employers may be too demanding in their expectations for new workers and need to embrace more on-site training.
- + The nature of networked businesses means that it is difficult for businesses to automate unless everyone in their networks do too.
- + Automation can augment some of the challenges women have always faced in the workplace and can reduce job opportunities for people facing multiple barriers to employment.
- + As business models change, there are challenges with retaining small and medium-sized businesses that contribute to community vitality.





ON TRAINING:

The topic of training was widely discussed in our engagement sessions. We heard that:

- + There is a tension between education providers and employers over what skills each should be responsible for instilling in graduates or workers.
- + Training workers presents challenges for employers: it costs money and takes time, trained workers may leave for other companies, and not all training is effective.
- + Employees learn new skills by self-teaching or participating in informal on-the-job learning.
- + Employers can be encouraged to invest in training through the provision of training grants.
- + Training needs can be met by fostering strong links between colleges, unions, government, and industry through consortium models.
- + There is demand for innovative and flexible training and skill recognition options such as badging to more closely meet workers' and industry's needs.
- + The government can play a role in recognizing the skills and credentials of newcomers to Canada who can help fill the skills gaps.





KEY CONSIDERATIONS FOR RESPONSES TO WORKPLACE CHANGE:

Several key considerations can be drawn from this public engagement initiative that may be useful for those influencing and developing responses to workplace change. We heard that:

- + Publicly-funded programs are good but they can be better. Programs funded by the Ontario government including Second Career, the Canada-Ontario Job Grant, and Skills Advance Ontario are effective but could be even better if expanded and/or made more flexible.
- + On-the-job training works best. In-house training or mentoring is one of the most effective means of developing or enhancing workers' skills.
- + Training should be approached collaboratively. A collaborative approach to change management maximizes the effectiveness of technological change in the workplace.
- + There are innovative training models that can be further explored. Training consortiums and other models that allows for small, self-contained training modules to be deployed where and when they are needed may offer solutions to some of the challenges associated with traditional training programs.
- + Ontarians are looking for more information on automation and its impacts. There appears to be broad interest in engaging in further conversations with government and across sectors about the implications of automation.

