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Artificial Intelligence, Implementation and Human Resources

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In this era of a new industrial revolution, dubbed as “Industry 4.0”, businesses are facing sizable technological challenges. Some refer to smart plants or the industry of the future. This revolution is characterized by the advent of new technology that allows for the “smart” automation of human activity.

The aim of this technological revolution is to increase productivity, efficiency and flexibility. In some cases, it means a radical change to the corporate value chain.

Artificial intelligence is an integral part of the new era. Dating back to the mid-1950s, it is typically defined as the simulation of human intelligence by machines. Artificial intelligence aims to substitute, supplement and amplify practically all tasks currently performed by humans[1], becoming in effect a serious competitor to human beings in the job market.

Over the past few years, the advent of deep learning and other advanced learning techniques for machines and computers have given rise to several industrial applications that have the potential to revolutionize how businesses organize the workplace.

It is believed that artificial intelligence could drive a 14% increase in global GDP by 2030, a $15.7 trillion potential contribution to the global economy annually[2]. The productivity gains in the workplace created by artificial intelligence alone could represent half that amount. It goes without saying that the job market will have to adjust.

A study published a few years ago predicted that within twenty years, close to 50% of jobs in the United States could be completely or partially automated[3]. In 2016, an OCDE study concluded that on average 9% of jobs in the 21 OECD countries would be at a high risk of automation[4], and some experts even go so far as to claim that 85% of jobs that workers will be doing in 2030 haven’t been invented yet![5]

At the very least, this data shows that while human beings are still indispensable, the job market will be strongly influenced by artificial intelligence. Whether due to the transformation of tasks, the disappearance of jobs or the creation of new trades, disruptions in the workplace are to be expected and businesses will have to deal with them.

The arrival of artificial intelligence thus appears to be inevitable. In some cases, this technology will lead to a significant competitive advantage. Innovative businesses will stand out and thrive. However, in addition to the major investments that will be required, the implementation of this new technological tool will require time, effort and changes to work methods.

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Implementation

As an entrepreneur, you have no choice but to adapt to this new reality. Not only will your employees be affected by the organizational change, they will also have to be involved to ensure its success.

During the implementation phase, you may discover that new skills will be required to adjust to your new technology. It is also very likely that some of your employees and managers will be adverse to the change. This would be a normal reaction since as humans we tend to respond negatively to any sort of change. A change in the work environment can lead to a sense of insecurity, requiring that employees adopt new behaviours or work methods[6] and dragging them out of their comfort zone. An employee's fears can also be the result of misperceptions. Potential impacts must be carefully considered before your new technology arrives.

The failure rate for organizational change is over 70%. It is believed that the high failure rate for the adoption of new technology is due to the fact that the human aspect is often overlooked in favour of the technological or operational benefits of implementing the technology[7]. Failure can lead to higher costs for introducing the new tool, productivity losses or the abandoning of the initiative. Advance planning is especially important when implementing artificial intelligence to identify any challenges related to its integration in your business.

It is important that smart technology be implemented by skilled employees who share the business' values to ensure the new system does not perpetuate unwanted behaviours.

To help with your planning, here are a few questions to stimulate discussion:

Implementation

What is the objective of the new technology, its advantages and disadvantages?
Who will be in charge of the project?
What skills will be needed to implement the technology in the organization?
Which employees will be responsible for implementing the technology?
What information and training should they be given?

Work organization

What duties will be replaced or affected by the new technology and how will they be affected?
What new tasks will be created after the new technology is set up?
Will positions be abolished, staff transferred or jobs lost?
What terms of the collective agreement will have to be considered in terms of transfers, layoffs and technological change?
What notice and severance should be anticipated if there are job losses?
What positions will have to be created after the technology is set up?
What new skills will be required for these positions?
How and when will new positions be filled?
How will the users of the technology be trained?

Communication

Who will be in charge of communication?
Should you set up communication tools and a communication plan?
In what form will such communication be made and how often?
When and how will employees and managers be informed of the arrival of the new technology, its purpose, its

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advantages and the impacts on the organization?
When and how will the job losses, labour transfers and new positions be announced?
What tools will be used to reassure employees and eliminate misperceptions?

Mobilization

What actions can be taken to engage employees and managers in the project?
What are the likely reactions to the change and how can they be lessened or eliminated?
What tools can managers be given to help them oversee the change?

This list is not meant to be exhaustive but it can be a starting point for considering the potential impacts of new smart technology on your employees. Bear in mind that good communication with your employees and their commitment could make a difference between the success or failure of the technological change.

Lavery Legal Lab on Artificial Intelligence (L^3IA)

Lavery has set up the Lavery Legal Lab on Artificial Intelligence (L^3IA) to analyze and monitor recent and anticipated developments in artificial intelligence from a legal perspective.
Our Lab is interested in all projects pertaining to artificial intelligence (AI) and their legal peculiarities, particularly the various branches and applications of artificial intelligence which will rapidly appear in companies and industries.

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1. Spyros Makridakis, *The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms*, School of Economic Sciences and Business, Neapolis University Paphos, 2017
2. *Sizing the prize*, PWC, 2017
3. Carl Benedikt Frey and Michael A. Osborne, *The future of employment: How susceptible are jobs to computarisation* Oxford University, 2013
4. Melanie Arntz, Terry Gregory, Ulrich Zierahn, *The Risk of Automation for Jobs in OECD Countries*, OECD Social, Employment and Migration Working Papers, 2016
5. *Emerging Technologies' Impact on Society & Work in 2030*, Institute for the Future and Dell Technologies, 2017
6. Simon L. Dolan, Éric Gosselin and Jules Carrière, *Psychologie du travail et comportement organisationnel*, 4th ed., Gaétan Morin Éditeur, 2012
7. Yves-Chantal Gagnon, *Les trois leviers stratégiques de la réussite du changement technologique*, Télescope - Revue d'analyse comparée en administration publique, École nationale d'administration publique du Québec, fall 2008

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