

A NEW PRODUCTIVE ECOSYSTEM



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In the digital era, technological innovation entails significant changes in the way we produce goods and services. The current approach to new industrial technologies is focused on generating, gathering, processing, and managing large amounts of data. The industry, and most especially manufacturing, is talking of a new productive paradigm: Industry 4.0 (i4.0) Advances, such as the Internet of Things, processes digitisation and automation, collaborative robots, virtual and augmented reality, collaborative and simulation software, and big data analytics give way to a new type of hyper-flexible manufacturing that can adapt quickly to changes in the market and the different requirements of different processes, from design to marketing. Thus, a generation of smart factories is born.

The i4.0 paradigm brings both challenges and opportunities to businesses, workers, and the economy in general. On the one hand, implementing diverse and increasingly more accessible information technologies can help reduce production costs and increase productivity. In turn, this translates into a greater offer of added value and a larger demand for highly skilled workers and, therefore, higher income rates. On the other hand, these opportunities put greater pressure on market competition, driving those who lag behind into bankruptcy. In addition, software and/or hardware automation puts pressure on the labour market as it may reduce the demand for low skilled workers.

In Mexico, foreign investment during recent decades has significantly contributed to job creation and the establishment of mature manufacturing industries; such as automotive, aviation, and electric-electronic that use processes and technologies that are typical of i4.0. However, investment alone is not enough if devoid of a strategy for long-term industrial development. In this regard, ProMexico, from its domestic and international offices, supports business opportunities, conducts leading-edge research, and promotes cooperation efforts to develop Mexico's industry. For example, it is about to complete a study on the country's capabilities in the automotive industry of the future and the main opportunity areas in the sector. Likewise, ProMexico has created Route Maps (long-term growth strategies) for the space and aerospace industry, Mexico's i4.0, the Internet of Things, and medical devices, among others. It also seeks to foster digitisation of manufacturing industries and collaboration among Triple Helix actors (government, industry, and academia).

There is no doubt that, thanks to technological innovation, the manufacturing sector is facing important challenges and opportunities. It is vital, then, to join efforts to increase the capabilities of both staff and industries to make the most of this new productive ecosystem.

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