

INDUSTRY 4.0 AND THE DIGITIZATION OF THE ECONOMY

- *Digital technologies, known as Industry 4.0, are at the heart of industrial policy strategies adopted by major developed economies.*
- *This new wave of innovations affects production and product development processes, consumer interaction, and business models.*
- *Brazil has a double challenge: incorporate new technologies and do it quickly to prevent the competitive gap with its main competitors from widening.*

Major industrialized nations have placed the development of Industry 4.0 at the heart of their industrial policy strategies with the aim of preserving and/or increasing their competitiveness.

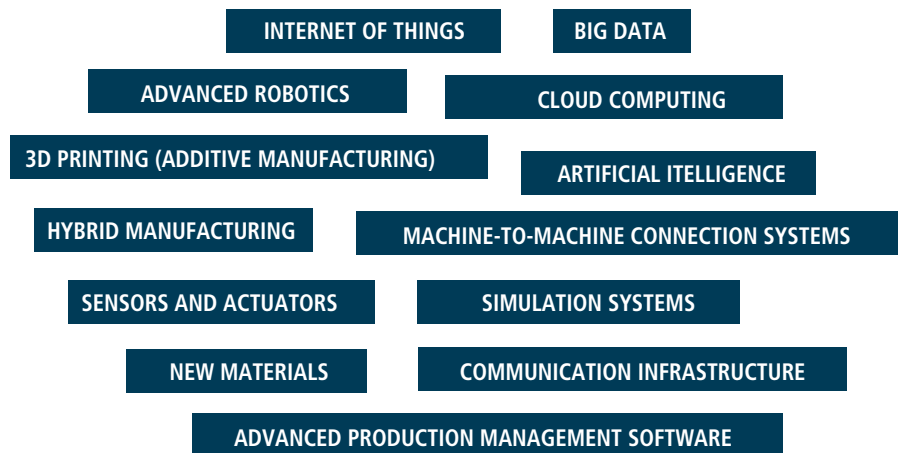
The advancement of other countries toward Industry 4.0 creates a double challenge for Brazil. The country not only needs to incorporate and develop these technologies, but it should also do it quickly in order to prevent the competitive gap with its main competitors from increasing.

The advancement of other countries toward Industry 4.0 results from the large-scale incorporation of digital technologies into industrial production. Through new processes, products and business models that were unthinkable a few years ago, Industry 4.0 has been transforming industrial production and holds the promise of making conventional production models gradually inefficient.

The impacts will extend far beyond productivity gains on the shop floor. This new industrial revolution will shorten the time to launch new products on the market, make production lines more flexible, enhance resource-use efficiency (e.g. energy) and even increase companies' ability to integrate into global value chains.

The Brazilian industry's ability to compete internationally depends on how companies will react and on the extent to which the government, in partnership with the private sector, will be able to promote this transformation and not create obstacles. This need will be imposed on some sectors earlier than on others. Initiatives aimed at developing Industry 4.0 in Brazil should focus on strengthening companies that will transition earlier to the new model and on encouraging the others to accelerate their move to the new technological wave.

MAIN ENABLING TECHNOLOGIES OF INDUSTRY 4.0



Source: NATIONAL CONFEDERATION OF INDUSTRY - CNI. Opportunities for Industry 4.0 in Brazil: Demand and Supply Aspects in Brazil. Brasília: CNI, December 2017.

Main recommendations

- 1 Needs and opportunities for the application of digital technologies in production chains should be raised**, taking into account the diversity and differences in companies' development stage.
- 2 Policies designed to disseminate and induce the adoption of new technologies should be prioritized.**
- 3 Specific mechanisms to promote technological development should be made available**, favoring digital technologies based on the specific challenges for Brazil's development.
- 4 Telecommunication infrastructure, especially broadband, should be expanded and improved.**
- 5 Regulatory aspects affecting the development of Industry 4.0 should be improved.**
- 6 Strategies for training and reskilling human resources should be developed.**
- 7 A governance model should be established to foster institutional links between the public agencies in charge of implementing Industry 4.0 and digitization policies**, as well as links between the public sector and companies, which is key to addressing the different situations faced by industry.

The full version of the document can be accessed through the QR code on the side or at: <http://www.cni.com.br/eleicoes2018/downloads/> This summary is part of the series Proposals of Industry for the 2018 Elections comprising 43 documents. The series, which is based on the *2018-2022 Strategy Map for Industry* is a CNI contribution to the new federal administration and presents analyses and proposals of priorities to increase Brazil's competitiveness. Any part of this publication may be copied, provided that the source is acknowledged. Brasília-DF, July 2018.

