

# Towards an Industry 4.0 In Tunisia



## Enabling Tunisian industry to be more competitive through industry 4.0

With the emergence of new technologies, the boundaries between the physical and digital worlds are blurring, giving life to an interconnected 4.0 factory in which people, machines and products interact. Industry 4.0 is a challenge and a real opportunity for Tunisia's industry. To this end, the **Tunisian Ministry of Energy Industry and Mines** and **GIZ**, mandated by the **Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ)**, have been working since November 2018 on a roadmap to implement an initiative for the transition of the Tunisian industry to an Industry 4.0. Entitled "Towards an Industry 4.0 in Tunisia", this initiative is part of the GIZ Tunisia Digital Transformation Program. It is expected that this initiative will have an important impact on job creation in the digital area and thus, contributing to the GDP improvement.

What is Industry 4.0? Industry 4.0 refers to a new phase in the Industrial Revolution that focuses heavily on interconnectivity, automation, machine learning, and real-time data. By creating an intelligent networking of machines and processes, the productivity and flexibility are enhanced along with an improved ROI.

Part of this initiative, several activities are implemented on three levels: strategic, operational and awareness raising. At the strategic level, the aim is to build strategic partnerships between the different actors involved in the ecosystem (universities, ministries, federations of industrials, etc.) and create a network to develop a national strategy for Industry 4.0 in Tunisia.

In this respect, we co-organized the 2<sup>nd</sup> edition of the **Smart Industrie 2020** fair in collaboration with the **Tunisian Agency for the Promotion of Industry and Innovation (APII)** and the **Tunisian Union of Industry, Commerce and Handicrafts (UTICA)**.

During the panels of **Smart Industrie 2020**, several interesting exchanges have taken place. Mr. Mohamed Balghouthi, an expert in economic intelligence, explained during one of the panels discussions at the Smart Industrie 2020 fair that "the Tunisian model is generally based on technologies that are already dead. The digitalization induced by the transition to Industry 4.0 will therefore create value and transform the industry in Tunisia". Continuing in the same direction, Professor Khaled Ghedira stressed that "the arrival of Industry 4.0 will induce a creative destruction, making certain professions disappear and leaving the place for other types of professions to appear".



Photo: Closing ceremony of the Industry 4.0 Hackathon organized during the Smart Industrie 2020 fair

Within the strategic plan of this initiative, a governance structure and working groups are being implemented for themes related to: I4.0 Funding mechanisms, the Future of Work and the Ecosystem I4.0. The main purpose is to support the transition toward an Industry 4.0 in Tunisia by providing new funding mechanisms, by identifying the required competencies and by understanding the future role of potential actors in the Tunisian I4.0 ecosystem.

As part of our operational activities, we tend to support the development and implementation of concrete Industry 4.0 solutions in the Tunisian SMEs. Among the activities achieved so far, the implementation of support services for SMEs through **two Industry 4.0 Centers in Sousse and Sfax** in collaboration with **Franhafer IPA of Stuttgart**. These centers will work jointly to offer a platform of information and specialized services aiming to accelerate the transition of Tunisia's industrial SMEs to the industry 4.0 movement. In addition, GIZ has concluded a two-year collaboration with the Fraunhofer IPA in Stuttgart in order to assist local partners and the GIZ in the conceptual phase of the centers, implement the first activities and services with the local structure to support SMEs in Tunisia, and strengthen the capacities and skills of the centers' staff. One of the services offered by the centers is an "Industry 4.0 Readiness Check" for interested industrial companies which gives them a detailed report on their level of maturity regarding industry 4.0. Another service is, for example, to identify a specific problem for a local industrial company and offer assistance during the industry 4.0 solution development, in collaboration with local as well as international technology providers.

#### Mentions légales

##### Editor:

Deutsche Gesellschaft für  
Coopération internationale (GIZ) GmbH

Siège de la société  
Bonn et Eschborn

Route  
Code postal et lieu, pays  
T +49 61 96 79-0  
F +49 61 96 79-11 15  
E [info@giz.de](mailto:info@giz.de)  
I [www.giz.de](http://www.giz.de)

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Together, GIZ, the two Industry 4.0 centers and Fraunhofer IPA, are also organizing the Tunisian **lab of tomorrow challenge** dedicated to Industry 4.0 formulated as follows: *How might industrials companies in Tunisia use industry 4.0 technologies with a focus on clean production?* The Tunisian lab of tomorrow challenge shall facilitate sustainable solutions adapted to the specific local needs and circumstances in order to support Tunisian companies to accomplish the shift to a modern, sustainable and globally competitive industry 4.0 and, at the same time, to be better prepared to manage the effects of health/pandemic crises (e.g. COVID-19). Over time, the Tunisian lab of tomorrow challenge will enable the development of at least five generic industry 4.0 technological solutions that can be implemented in many Tunisian industries to pursue these objectives.

This initiative is also focused on promoting the Industry 4.0 concept in order to ensure a better understanding of its practical aspects by all stakeholders at all levels (students, project owners, industrials, decisions makers, etc.). This requires a well-established communication around Industry 4.0 concept and an implication of all potential stakeholders. Part of the ongoing activities, an **Industry 4.0 mobile demonstrator** is being designed to vulgarize the I4.0 concept inside the regions of Tunisia. We also support the organization of several events (SITIC Africa, Tunisia Digital Summit, I4.0 hackathon and challenges, etc.).

There are more interesting activities to follow, like supporting the development of industry 4.0 Tunisian startups! If you want to learn more about our activities or how to get involved in the growing Industry 4.0 community in Tunisia, feel free to reach the contact below.

##### Contact :

Ons Obba, Technical Expert, Digital Transformation Program  
E : [ons.obba@giz.de](mailto:ons.obba@giz.de)