

The Role of Hospitality and Tourism in Industrial Transformations

There are three notable industrial transformations that have taken place over the past three centuries: Industry 1.0, concerning the mechanisation of work assisted by steam power, evolving from the latter half of the 18th century; Industry 2.0, characterised by mass production and the development of electric power, evolving from the latter half of the 19th century; and Industry 3.0, involving the digital revolution and including the development of information technology and industrial automation, associated with developments from the mid-20th century.

However, far more recently, there is evidence to suggest that we have slowly embarked upon another industrial transformation, Industry 4.0. This is characterised by further technological advancements, most notably the 'Internet of Things', where the internet interconnects everyday physical objects to other devices that influence rapid technological developments and change. Although this stage has yet to fully unfold, we have started to witness the development of rather impressive technological innovations in the hospitality and tourism industries, such as driverless automobiles, concierge robots, smart showers in hotels, electronic toll collection systems, staff-less restaurants, 3D food printing, and automated merchandising outlets. It is anticipated that improvements in artificial intelligence will encourage the extension of automation.

The hotel industry has started to utilise 'beacon technology', where Bluetooth beacons interact with guests' smartphones so as to regularly communicate with them during their stay, providing them with such information as special discounts, in-room dining offers, check-in and check-out instructions, and room upgrades. Such technology can strengthen a hotel's competitive strategy and contribute to consolidating its market position, such as working towards increased customer retention.

It is crucial, however, not to lose sight of the sustainable outcomes of smart technologies. Biotechnology, for instance, can assist hotels and tourism complexes to utilise novel sources of energy to reduce an over-reliance on electricity and water.

There has already been some rather premature speculation concerning the next industrial transformation: Industry 5.0. The logical assumption is that, in time to come there will be more emphasis on customisation and high quality production. This will be facilitated by significant degrees of consumer sovereignty and multiple levels of consumer choice. It is anticipated that the human dimension will be the core element of Industry 5.0, as individuals may no longer be dominated by advanced automation and robotic power.

Given that the hospitality and tourism industries are at the forefront of the production of a workforce, where the acquisition of soft skills is vital, then the next industry transformation could help to ensure that these industries play a key role in that transformation and in adapting quickly to change. Subsequently, there will be a wider need and demand for personalisation and customisation of goods and services to improve the intention, value, and proficiency of production.

Given that we are still coming to terms with the scope and extent of Industry 4.0, it is not easy to predict the direct and detailed impact that Industry 5.0 will have on hospitality industries, but certain sectors like food and beverage could be affected. Personal attention to product development could reappear as a key feature in the production process but at the same time co-exist with automation, despite initial challenges. Individuals would then be more mobilised to construct and shape personalized smart tourism and hospitality experiences, rather than simply be seen as passive recipients.

Personalisation can equate to more luxury products or products of quality,

such as highly customised forms of transport, craft beer, customised coffee, artisanal cheese, and specialty bakeries. The latter, for instance, may see advanced automation as a threat to the handmade principles of the profession but come to realise that it may be possible to retain artisan qualities through advanced automation, producing more products faster and at the same time retaining elements of authenticity and distinctiveness. Accordingly, Chad Robertson, the owner of Tartine in San Francisco, says, "We're trying to scale something super artisanal, but take full advantage of technology that's applicable... You can source your grain from a regional economy, you can fresh-mill it, and you can bake 20,000 loaves using robots." (excerpt from Robotiq: Industry 5.0: The Convergence of Robots and Artisans)

When it comes to artisanal cheese, which involves the production of smaller quality-driven batches based on a wider range of flavour-based compounds and natural packing compared to mass produced cheese, there could be a need to search for technological methods to mass produce such products and at the same time retain the natural qualities and purist values associated with traditional forms of cheese production. Therefore, we still have a long way to go to reach such expectations and discover ways to preserve conventional practices.

In Industry 5.0, the role of natural and human intelligence may well start to push back the frontiers of artificial intelligence. However, let's cautiously enjoy the unfolding era of Industry 4.0 and the technological surprises that continue to greet the hospitality and tourism industries, but also anticipate the potential and remarkable values that could be gifted by Industry 5.0. ■

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