

## Industrial Revolution 4.0: The Role of Technology In Existence Mastery Business and Implementation

**Nada Kustia Perdana Putri**

Universitas Airlangga Surabaya, Indonesia

Email: nada.kustiaa@gmail.com

### Keywords

*Revolution industry 4.0,  
Technology, Business*

### ABSTRACT

*This research aims to analyze the extent of the role of technology in implementation business to development era Which the more demand modern acceleration of regeneration. The evolutionary rotation cycle that will continue to be treaded by public throughout circles can create innovations new Which influence on business development. Research methods conducted in This study uses descriptive qualitative methods from various reference sources. Population Which function strengthen argument in study This is a number of districts/cities in Indonesia that can be taken with a simple sample size random sampling. From results study simple random sampling the, revealed that the emergence of this revolution causes many things to change such as machine technology that replaces operational systems. And also the results of research from all explanations state (1) Various site in application technology digital give convenience For coordinating every input and output of business actors. (2) Existing businesses can be revived with technology in various fields. (3) All aspects related to technology will enter the realm of the speed economy.*

### INTRODUCTION

The factor that led to the industrial revolution was that in the 16th century there was a scientific revolution with the emergence of scientists such as Galileo Galilei, Rene Descartes, Francis Bacon and the development of research with the establishment of research institutions such as The Royal Society of England, Royal Improving Knowledge, and The French Academy of Science (Anshari, 2020; Muljani & Ellitan, 2019).

A government Which wise And careful, Which will prevent people injuring one another, would free them to carry out the aims of the industry and their own awakening, and would not squander the labor of others aiding it (Meiryani et al., 2022; Rahardja et al., 2019)

Through technology machine learning and AI , in the industrial revolution 3.0 computers have joined play a role in digital development which is considered as " disruptive" or something capable create new market opportunities (Hertati & Syafarudin, 2018). Once accepted, now machine learning and AI exist in the stage the revolution (Ellitan, 2020).

Strategic alliances or organization and various descriptive and prescriptive information make the technology work or infoware (Cihuy, 2019). Therefore, the need for resources Power man Which competent follow changed in line with connection cooperation/alliance strategic and application of technology services in the field digital marketing (Abdullah, 2019; Aribowo & Halim, 2018). This strategy too become strength development economy in Indonesia. Network Internet Which until moment This almost as if become need tree Modern society has both positive and negative impacts. With the

opening of communication access via internet that unites all distances and time with only one container, there will be many what a great opportunity to get. The development of industrial technology is no exception which is expected to be able to create opportunities from the arrangement of facilities and instruments instrument in various elements (Farid, 2019; Putra, Sukri, et al., 2018; Sawitri, 2019).

This increasingly effective and efficient industrial growth is in line with the development of the revolution Industry 4.0 continues to spread throughout the world with various systematics brought and all the consequences. Researchers found various important roles that become indicators growth existence mastery business in implementation in life Which the more find the pinnacle of the era of globalization. The description of the elaboration of technological regeneration attracts discussion interest in studying the interference of the cyber world. The theoretical approach also directs objectless foreign Which automate rate development with various functions. The importance of subjective and objective in the revolutionary movement 4.0, collaborating with the world business enters the cyber army which is also a form of implementation of technology industry communication. However Also resulted decrease function source Power man physically because it has been replaced with a machine or robot. Implementation of attitude and performance body with the movement the more No needed For organize various problem general.

## **METHODS**

This research is included in the type of descriptive qualitative research with various sources reference. The population in this study are several districts/cities in Indonesia that can taken with the number of samples by simple random sampling of 20 districts/cities covers the provinces of North Sumatra, West Sumatra, West Java, Central Java and Banten. As well as from a number of another reference Which refer on work write scientific. This study uses secondary data obtained from the Central Bureau of Statistics in Indonesian Telecommunications sector, and also the Ministry of Industry of the Republic of Indonesia. Technique data analysis on hypothesis testing using path analysis. The purpose of path analysis is to look at the direct influence of technology users on the revolution industry, And attitude to influence every variable (Putra, Aryanti, et al., 2018).

## **RESULTS**

In the last five years, the use of Information and Communication Technology (ICT) by households in Indonesia show such rapid development. The percentage of the population that use telephone cellular Keep going experienced a surge And enhancement, known until 2019 it reached 63.53%. This growth in the use of mobile phones followed also by growth in household ownership of computers and internet access which reached 18.78% for computer ownership, and 73.75% for access ownership. Internet in House internet usage has also increased during the 2015-2019 period, which can be seen by showing an increase in the percentage of the population accessing the internet in 2015 around 21.98% to 47.69% in 2019. And conversely, ownership Fixed line telephones in households have decreased from year to year. In the year of 2015 percentage House ladder who owns and control or use telephone cable about 4.01% down to 43.51% on year 2019.

Modern humans cannot avoid how important technology is in life especially information and communication technology (Putra, 2018). Information Technology (IT) has become part of the very important in any business plan. Almost all of the companies are both large scale nor small use technology information as Wrong One activity Which very needed to provide improvements to managed business services. A container which is very precise and helpful in the application of technology collaboration with business is social media. With social media and various functions and uses that are very much needed by business people, then the relationship between brands and customers in the business world has no longer just buying and selling. There is more communication that needs to be built to improve customer loyalty. Personal approach such as understanding customer desires, providing mark plus, until exchange opinion become more important compared to only A customer service service through telephone. Now many brands Which try For pick up their customers first, rather than waiting for customers to arrive. Not only communication between regions/provinces, but between countries in all directions world (Aniek Rumijati et al., 2020; Khotimah & Arisandi, 2020).

Usage phenomenon digital in human life in revolution industry 4.0 can encountered in everyday society. Examples of facilities that can be used in exists role technology world business is computer And gadgets in context digitization usage eye Money ( e-money ), usage media digital ( e-media ), until develop fast film digital based.

Revolution industry 4.0 be marked with enhancement digitization manufacturing Which pushed by several factors which include increasing business intelligence connectivity, to to the development of new interactions between humans and machines. Technology plays a very active role throughout mastery the elements business. Various challenge from process nor results implementation mastery business by whole circle, para worker must own capabilities that machines cannot perform in order to maintain resource performance man.

A number of opportunity business in era revolution industry 4.0 among them :

1. Fintech (Finance technology)

Finance technology , which means financial technology, is a form of technological innovation developed in the financial sector so that financial transactions can be done quickly effective and efficient. The millennial generation is one of the main targets of the company fintech. Because many fintech companies provide convenience in management Money, Also give convenience in affairs transaction payment.

2. Software As a Services (SaaS)

Software As a Service is software that functions as a means of service and are online. The form of sales is in the form of B2B or business to business . Business example SaaS This is application the absence is Wrong One method attendance on line.

3. Cloud Hosting

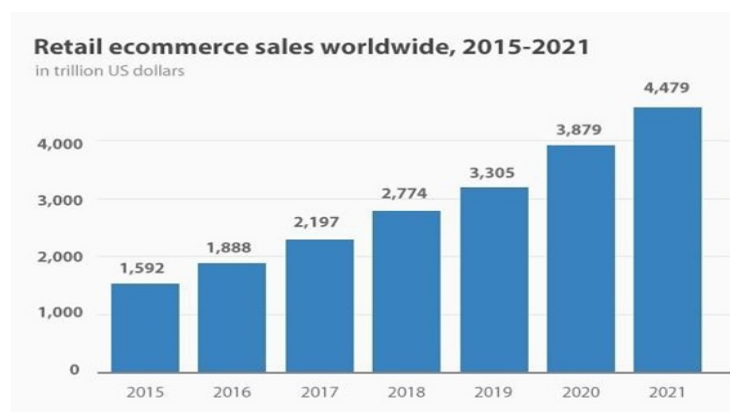
Cloud hosting is a type of web hosting that uses various servers for balancing load and maximizing uptime . For example, cloud as web from a number of different computer And everything will each other connected

4. Digital marketing

Digital marketing is something Activation promotion or activity marketing ( branding ) product nor service with use media digital.

5. On-Demand Service

On demand service is a business whose service system is based on or preceded by consumer demand. When there is an order from the consumer, the service provider will direct respond. Wrong One example provider service in form This is GoJek. Based on research results in a millennial generation population that ranges from vulnerable age 15-30 year, mastery business has reach target Which almost maximum. From 5 cities/regencies in Indonesia, with the participation of 50 people, get data recapitulation is taken that on average they are active users of technology and the internet natural world cyber. For various reasons, it was found that there was an adequate level of practicality And very easy for all activities buying and selling, can choose freely without must meet face to face with the seller, business people are also easy to promote merchandise as much as possible or periodically, until the development of technology very needed And be a factor main by progress A nation.



Based on the statistical data presented above, it can be seen that the opportunities provided by the global market for companies or brand owners in Indonesia is like a big giant interesting For conquered.

Since year 2011, Indonesia has enter Industry 4.0 Which be marked with increasing connectivity, interaction, and boundaries between humans, machines, and other resources Which the more convergent through technology information And communication (AirlanggaHartanto : 2018). Indonesia is Wrong One country biggest in world so that own potency as producer And user data Which very big. Not difficult find proof massive use of technology and data, because we can find it easily in life everyday. Growing fertile service e-commerce And service transportation online become proof real Which not indisputable from success utilization technology in land water. Besides that, there are many startup companies that are based on data and big data technology and emerging artificial intelligence . To encourage the use of big data technology For facing the industrial revolution 4.0.

## CONCLUSION

From data Which become source object study, found percentage user Communication technology is increasing from year to year. Modern man who became inventors and experts in the field of technology cannot deny that the acceleration rate of revolution Industry cannot be avoided with the existence of a border between humans and machines. Precisely with the presence of business intelligence connectivity, it makes its existence widespread in everything corner And various circles, gone limitations room nor time.

The role of technology bridges the relationship between business and social media as well various function and utility much needed by perpetrator business. By because of that, developments in the era of automating the policies of business actors in participating in each element rate technology industry. From the results of research on several information pages and a compilation of public figure arguments, as well as five areas related to users of technological facilities that apply them to mastery business, researchers can come to a conclusion that:

First, the industrial revolution 4.0 focuses on function focus on collaboration between technologies with the cyber world or better known as the electronic world. Industrial development rate which is increasingly rapidly automating the optimization of human resource performance beyond functions machines Which Keep going launching.

Second, technology doesn't stop at just a decade, meaning that it improves quality function too very needed along development era.

Third, implementation of systems run by programs in various technological instruments can produce mastery business everywhere circles.

Fourth, progress technology can become evaluation level progress something country.

## REFERENCES

- Abdullah, F. (2019). Fenomena digital era revolusi industri 4.0. *Jurnal Dimensi DKV Seni Rupa Dan Desain*, 4(1), 47–58.
- Aniek Rumijati, M. M., Soelistyo, A., Juliati, R., Eko Handayanto, M. M., Jihadi, M. S., Rahmad Wijaya, S. E., Rizki Febriani, M. M., Sandra Irawati, M. M., Sri Wibawani, W. A., & Uci Yuliati, M. M. (2020). *Kemandirian Ekonomi Dan Bisnis Indonesia Menghadapi Era Revolusi Industri 4.0* (Vol. 1). UMMPress.
- Anshari, M. (2020). Workforce mapping of fourth industrial revolution: Optimization to identity. *Journal of Physics: Conference Series*, 1477(7), 072023.
- Aribowo, H., & Halim, E. (2018). The Role of technology innovation to support the competitiveness in manufacturing industries in the era of industrial revolution 4. 0 (a Literature Study). *The Fifth International Conference on Enterpreneurship, Book Three*, 199–207.
- Cihuy, P. G. (2019). *Mencari Peluang di REVOLUSI INDUSTRI 4.0 Untuk Melalui Era Disrupsi 4.0: Queen Publisher*. Queency Publisher.
- Ellitan, L. (2020). Competing in the era of industrial revolution 4.0 and society 5.0. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, 10(1), 1–12.

- Farid, A. (2019). Fenomena Digital Era Revolusi Industri 4.0. vol. 4 (1), 47-58. *Jurnal Dimensi DKV Seni Rupa Dan Desain*.
- Hertati, L., & Syafarudin, A. (2018). How the implementation of the industrial revolution 4.0 management information system influenced innovation: the case of small and medium enterprises in Indonesia. *Journal of Asian Business Strategy*, 8(2), 52–62.
- Khotimah, K., & Arisandi, Y. (2020). Analysis Young Driver Behavior in "Z" Generation. *Journal of Social Science*, 1(3), 56–60.
- Meiryani, M., Aprilia, K. R., Warganegara, D. L., & Yanti, Y. (2022). Challenges of the Accounting Profession in the Era of the Industrial Revolution 4.0. *Proceedings of the 2022 International Conference on E-Business and Mobile Commerce*, 39–46.
- Muljani, N., & Ellitan, L. (2019). Developing competitiveness in industrial revolution 4.0. *International Journal of Trend in Research and Development*, 6(1), 1–3.
- Putra, A. S. (2018). *Paperplain Fundamental Create Application With Borland Delphi 7.0 University Of Mitra Indonesia*.
- Putra, A. S., Aryanti, D. R., & Hartati, I. (2018). Metode SAW (Simple Additive Weighting) sebagai Sistem Pendukung Keputusan Guru Berprestasi (Studi Kasus: SMK Global Surya). *Prosiding Seminar Nasional Darmajaya*, 1(1), 85–97.
- Putra, A. S., Sukri, H., & Zuhri, K. (2018). Sistem Monitoring Realtime Jaringan Irigasi Desa (JIDES) Dengan Konsep Jaringan Sensor Nirkabel. *IJEIS (Indonesian Journal of Electronics and Instrumentation Systems)*, 8(2), 221–232.
- Rahardja, U., Aini, Q., Graha, Y. I., & Tangkaw, M. R. (2019). Gamification framework design of management education and development in industrial revolution 4.0. *Journal of Physics: Conference Series*, 1364(1), 012035.
- Sawitri, D. (2019). Revolusi Industri 4.0: Big Data Menjawab Tantangan Revolusi Industri 4.0. *Jurnal Ilmiah Maksitek*, 4(3).