



RESEARCH ARTICLE

## DEVELOPMENT OF INDONESIAN TOURISM LAW IN THE TOURISM INDUSTRY 4.0

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### ABSTRACT

This article provides an overview of the effects of tourism industry 4.0 on the development of Indonesian tourism law. So that the laws and regulations in the field of Indonesian tourism are able to facilitate the principles of service trade in the General Agreement on Trade and Services (GATS). With the ratification of the WTO Agreement, Indonesia must abide by these principles by not ignoring national interests in order to foster good relations with each WTO member. Therefore, the Government of Indonesia is expected to be able to utilize some of the exclusion rules in the GATS to provide opportunities for Indonesian tourism businesses to prepare themselves in the global tourism services trade competition. The development of Indonesian tourism law now, is in a position to be able to facilitate the development of the global tourism service business with the 4.0 industrial revolution which introduces applications on intelligent devices and artificial intelligence speeds that cannot be dammed. Mapping the impact of globalization and any efforts that must be made by the Indonesian government in developing tourism laws so that they can take advantage of the globalization of world trade in tourism services.

### KEYWORDS

Indonesian Tourism Law, Tourism Industry 4.0.

## 1. INTRODUCTION

Tourism Industry 4.0 originated from the adaptation of the tourism industry following the irruption of general industrial development which has now reached the fourth revolution, namely industry 4.0. Therefore, speaking of tourism 4.0, we cannot be separated from the industry 4.0 itself.

Klaus Schwab in his book *The Fourth Industrial Revolution* said that the fourth industrial revolution, in the end, will not only change what we do but also change who we are. Our identity will be affected, as will all related matters: privacy, understanding of ownership, consumption patterns, time devoted to work and leisure, how we develop our careers and improve our skills to meet others, and maintain relationships.

Industry 4.0 is used as a new industry paradigm that includes a series of future industrial developments with the use of the latest technological elements such as Cyber Physical Systems, Internet of Things (IoT), Robotics, Big Data, Cloud Manufacturing, Augmented Reality (AR), etc., which enabling the industrial environment to be increasingly intelligent (Pereira and Romero, 2017).

The following illustration of the development of the industrial revolution starting from the first industrial revolution to the fourth industrial revolution:

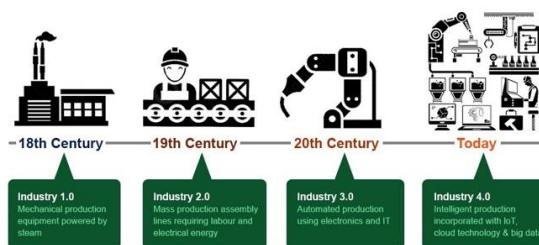



Figure 1: Resources: <https://techtupah.com/evolution-of-industrial-revolution-4-0/>

The use of advanced technology in Industry 4.0 has had a disruptive effect on many sectors, including the tourism sector. Therefore, the industrial revolution 4.0 has had the same effect on the tourism sector so that the term tourism 4.0 emerged. Development of the tourism industry by using technology used in industry 4.0 that enables the tourism industry to be smarter, more effective and efficient.

The development of Tourism 4.0 globally actually began in European countries. Portugal is a country that was allegedly using the term tourism 4.0 for the first time in 2016. Finland, Italy, Spain and Turkey became the next countries to use this term. Meanwhile Spain is the most successful country in developing this approach (Saša Zupan Korže et al., 2019).

The Minister of Tourism of the Republic of Indonesia for the 2014-2019 period, Arief Yahya, revealed that Tourism 4.0 is Millennial Tourism born

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along with big data technology, the behavior of travelers collected via apps & sensors, processed to create a seamless & personalized traveling experience. So it can be concluded that tourism 4.0 is an adaptation of the tourism sector through industry 4.0 which enables the sector to be smarter, so as to provide convenience and valuable experience for tourists.

Peceny, Urška Starc et al (2019) have developed the concept of a technological ecosystem that is an "enabler" for the development of tourism 4.0 as in the following figure (Peceny et al. 2019):



**Figure 2:** Resource: (Peceny et al. 2019)

The following is an illustration of ICT supporting Tourism 4.0:

IoT (Internet of Things) is any technology connected to the internet, usually consisting of devices, networks and applications (DNA). With this technology, tourists who travel independently appear, commonly referred to as "Self-organized holidays & independent travelers". So that the tour will lead to an individual and very personal.

In terms of tourism service providers, this technology can contribute to cost reduction, because with the internet, tourism service providers can save time and expenses from geographical barriers. For example tourism service providers can easily enter foreign markets and reach more customers, and conversely customers can easily reach these tourism service providers.

Big Data is data obtained from digital traces of tourists obtained from various sources, such as social media, tourist portals, business applications, chat bots and others. This data can be obtained directly, so it is very useful for speed in decision making. With this big data, actors in the tourism industry such as tourism service providers or destination managers can easily obtain data about tourist behavior such as movements, preferences, purchasing decisions, activities carried out and others.

Augmented Reality (AR) is a form of application whose use is highly dependent on additional hardware requirements, namely inbuilt cameras from mobile devices (Smith et al., 2015). Augmented Reality is a technology that combines two-dimensional and or three-dimensional virtual objects into a real three-dimensional environment and then projects these virtual objects in real time. Unlike virtual reality that completely replaces reality, AR merely adds or complements reality (Vallino et al., 1998).

In Tourism 4.0, Augmented Reality technology can enable tourists to carry out activities such as booking hotels, accessing information while at a destination, navigating to and around a destination, translating text or signs and conversations, finding alternative dining and entertainment options. only through the application on a mobile device or smartphone. Therefore this technology can revolutionize the experience of traveling from tourists to become smoother & easier, interactive, and simpler.

Virtual Reality (VR) is a technology that allows users to interact with the environment that exists in the virtual world that is simulated by a computer, so that users feel they are in that environment. According to the American Libraries Association in Jamil (2018) Virtual Reality is a simulation of images or entire computer-generated environments that can be experienced using special electronic equipment, which allows users to "be present" in alternative environments such as in the real world against virtual objects and three-dimensional (3D) information ) with additional data such as graphics or sound (Jamil, 2018).

In tourism 4.0, Virtual Reality has a very big role. The trend is seen that, tourists are starting to show great interest in this technology, along with tourist sites that are starting to use this technology as artificial tourist

attraction instead of attraction to real reality. For example in Guizhou, China has a theme park that presents the largest Virtual Reality Entertainment there. Several airlines such as Qantas have also launched programs that feature virtual destinations such as Kakadu National Park, Great Barrier Reef and Hamilton Island for first class passengers (Manjari et al., 2018).

In Indonesia itself there has been a virtual reality theme park at Neo Soho Mall, Jakarta under the name Kovee Jaya VR Theme Park. This amusement park is claimed to be the first virtual reality theme park in Indonesia.

Mixed Reality (MR) is a combination of the real and virtual worlds to produce new environments and visualizations using holographic technology. MR allows tourists to visualize virtual objects as if they are objects that actually exist in their presence and can also interact with them.

MR is a new technology of developing and refining AR and VR technology. This MR technology was initiated by Microsoft which developed a product called Microsoft Hololens.

In the implementation of Tourism 4.0, Namco's Theme Park, became a Theme Park in Japan that first adopted this Microsoft Hololens technology in the world of tourism. And my prediction, this technology in the future will be very developed and very attractive to tourists.

Technology-based Business Models are tourism business models that adopt digital technology

Mobile Technology is a technology that drives innovation and monetization in the field of tourism service providers. With the integration of mobile technology in tourism, it will make it easier for visitors or tourists to do tourism activities before he comes to the destination, at the destination and after the destination.

At this time, there are at least four mobile devices that can be integrated in the field of tourism such as smartphones, smart watches, wristbands and eye glasses. For example, American Airlines has adopted this technology for boarding passes, gate changes, and baggage claim notifications on Apple Watch, Uber allows customers to order drivers and driver arrival notifications via smart watches. Hotels that work with Apple Watch allow guest check-in / check-out, review reservation details, or unlock doors using the Apple Watch. Theme park has also adopted this technology for example in the queue system on each vehicle using a barcode system that can be scanned via a smart phone, wristband or smart watch.

Artificial Intelligent (AI) and Robots are technologies that are gaining popularity in the tourism sector, especially in the hotel and restaurant sub-sectors. Artificial Intelligent is artificial intelligence that is added to a system which in this case is a robot system.

Some hotels and restaurants have adopted this technology, for example the Marriott Hotel in Belgium, using a robot named Mario to welcome guests. Pizza Hut has announced it will use robots as waiters who can process food / beverage orders and process payments. Royal Caribbean also uses robots as bartenders (Saša Zupan Korže et al., 2019)

Chatbots is a chat service using an automatic system or auto responder. If in ordinary chat services, the media chat is only a tool to chat between people, which means we chat with people who are the opposite person or who reply to our conversation. If the chatbot reply to the conversation or respond is a robot that is set as an autoresponder.

Chatbot services that are commonly carried out in the tourism sector for example facebook messenger, wechat, viber and others. A concrete example using this chatbot is the Dutch airline, KLM, was one of the first to implement the use of chatbot to notify passengers for boarding passes and other notifications (Peterson et al., 2018).

## 2. METHOD

This research belongs to the type of descriptive analysis research. To describe and explain the tourism industry 4.0, multi and interdisciplinary methods are used with a literature and case study approach. The object of this research is the regulation of tourism in Indonesia, especially in anticipation of the industrial revolution 4.0.

For the purpose of data collection, the location of the study was chosen from the Ministry of Tourism of the Republic of Indonesia. In this research, tourism is defined as an activity that provides accommodation, transportation, food, recreation and other related services such as telecommunications, information, entertainment, and money exchange services. In the trade of tourism services involves various aspects of human life such as: economic, cultural, social, religious, environmental, security and other aspects. The aspect that gets the most attention is the economic aspect. Related to this economic aspect, tourism is said to be an industry. Even tourism activities are said to be a business activity oriented in providing services needed by tourists (Wysa utra et al., 2003).

The informants of this study consisted of the owner of tourism services and members of West Java ASIATA, the Head of West Java Culture and Tourism Office, and several workers in the field of tourism. The main data source in this study was obtained through interview techniques, observations, and legal documents relating to tourism in Indonesia.

Data validity testing is done by triangulation. While reliability testing is done by (1) checking the transcript to ensure that no errors were made during the process of preparing the transcript, and (2) ensuring that there were no errors in providing the code and interpreting the code. Because coding is done always check and make sure there is no same code with different definitions.

Data obtained through this study were analyzed through three stages, namely data reduction, data display, and drawing conclusions.

### 3. RESULTS & DISCUSSION

In the first Tourism National Coordination Meeting at the beginning of 2019, the government through the Ministry of Tourism has launched tourism 4.0 as a strategy to work on millennial or generation Y tourists born between the 80s and s. 2000s.

In terms of opportunity demand, this segment is actually quite exciting to work on through the concept of tourism 4.0. But in terms of destination or supply side, it needs strong infrastructure. Just an example of how the internet network in Indonesia, in terms of coverage, is there no blank spot?, Does every destination already have a WiFi network? Does the destination have implemented a booking system, payment system or queuing system using digital technology?

From a number of studies on Smart Tourism in several destinations in Indonesia and the results for the questions above, it turns out that it cannot be applied equally in the destinations in Indonesia. Because in addition to ICT infrastructure and facilities that have not been evenly distributed, also the understanding of stakeholders about tourism 4.0, smart tourism or digital tourism is still not good and relatively confusing.

So you can imagine if the understanding of the tourism community alone does not fully understand about the tourism industry 4.0. then you can imagine the deregulation that must be made by the government, of course, requires a very mature study process. As an illustration of the existence of the Tourism Law until now it seems not yet a popular thing. This is most likely due to the focus of attention given to the tourism sector as an activity in the economic field. In addition, in Indonesia, the development of the legal sector is still not seen as a medium to change the fabric of people's lives. Therefore, the purpose of writing this article is more directed towards an effort to invite readers to form a framework of thought that is comprehensive and integrated in the framework of the preparation and enforcement of Tourism Law. This paper does not constitute a critical review of Law No. 10 of 2009 concerning Tourism (Law No. 10 of 2009), so discussion of a number of articles of Law No. 10 of 2009 will only be done as long as there is relevance to the purpose of writing this article.

The first problem that must be understood is the understanding of the term tourism law itself. On a practical level, tourism laws are formed with the aim of providing protection to those who are entitled, not to those who merely have power. John Locke said "he who would get me into his power without my consent, would use me as he was pleased when he had got me there, and destroy me too when he had a fancy to it" .1 Therefore, when talking about the establishment and enforcement of Tourism Law, then the first question that must be answered is in the interest of whom?

This question must be answered thoroughly because if not, there will be

various conflicts of interest that will ultimately interfere with tourism development itself. As an example, it can be seen the connection between the issue of terrorism which is a "big enemy" of tourism and the problem of law enforcement, which actually starts with the issue of conflict of interest.

Tourism is actually not only related to problems that are purely in the economic sphere. Social, cultural and environmental protection issues are also part of tourism because in essence these activities bring people from different social and cultural status backgrounds and they consume non-renewable resources in tourism destinations. Not only that, the tourism sector can be said to touch the entire field of community life, with their respective potential problems. Therefore, a very appropriate illustration is expressed as follows: "Tourism is like fire. It can cook your food or burn your house down" (Elliot and Bickersteth, 41).

The description above also contains an understanding that the definition of Law no. 10 of 2009 is not the same as Tourism Law. Tourism Law has a much broader scope and in essence is a combination of all kinds of relevant laws and regulations, in accordance with the definition of "tourist" itself. The United Nations World Tourism Organization (UNWTO) defines:

*"A visitor is a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise".4*

The definition of "tourism" according to Article 1 Number 1 of Law no. 10 of 2009 as follows: "Tourism is a travel activity carried out by a person or group of people by visiting certain places for recreational purposes, personal development or learning the uniqueness of tourist attractions that are visited in a temporary period."

Thus, an understanding of Tourism Law is a very important factor especially for policy makers in determining the success of sustainable tourism development. This understanding becomes increasingly important when there are large-scale industrial changes such as the industrial revolution 4.0. this course will impact on the tourism industry in Indonesia. The success or failure of enforcement of Tourism Law in Indonesia in general will be a medium for foreign tourists to assess the condition of a country as a whole as a tourism destination.

In order to be able to implement the Tourism Law that is in line with the goals of sustainable tourism development, attention cannot only be focused on theories that state the benefits of tourism, namely as the largest industry in the world and contributing to efforts to reduce poverty, create jobs and increase foreign exchange earnings. Therefore, it is necessary to understand first the interests of tourists and the interests of people who live in a tourism destination. From the perspective of tourists, the first thing that needs to be understood is the motivation that drives a person to travel.

The motivation for traveling in general can be described as follows:

1. Pleasure, with the aim of "running away" for a while from daily routine;
2. Relaxation, rest and recreation, with the aim of maintaining a healthy body and mind. This was done, among others, by visiting a different environment from what he saw everyday, where the environment gave the impression of peace and health;
3. Health, which is visiting places that can help maintain health or cure disease;
4. Participation in sports;
5. Curiosity and culture, which is currently increasing in quality because of the development of information technology and improving the quality of education. Motivation that becomes the background of someone to make a visit like this is the desire to see tourism destinations that have very high historical and cultural values or that hold very important cultural activities, such as music festivals, art festivals, theaters and so on;

6. Ethnic and family. Specifically with regard to ethnic equality, people can be motivated to visit a place because it is considered as the place of residence / birth of their ancestors;
7. Spiritual and religious
8. Status and prestige, with the aim to show others that a person has a high social status and prestige because he is able to travel to a particular tourism destination; and,
9. Professional or business, for example activities attending a meeting or conference.
10. Meanwhile, local residents also have financial and non-financial interests. In terms of financial interests, of course, local residents expect an increase in income, business opportunities and employment opportunities. Non-financial interests can be obtained in the form of improving the quality and quantity of infrastructure and services. However, there are other interests of the local population that have a profound effect on the development of tourism, namely:
  - i. not become a victim of exploitation;
  - ii. guaranteeing the stability of the structure of social life in society (for example, to avoid conflicts between young people who have better competence than senior people who lack expertise, between women and men, etc.);
  - iii. guarantee that there will be no negative impacts on the commercial use of cultural elements;
  - iv. guarantee not excessive materialism and individualism;
  - v. guarantee not to lose access to natural resources; and,
  - vi. guarantee of safety and comfort (for example not disturbed or expelled by migrants, there is no increase in prostitution, the use of illegal drugs, and so on). After understanding the two interests, the other important thing that needs to be determined is to determine whether the interests of tourism or local residents will be a priority when there is a conflict between the two intended interests. (R.W. McIntosh, in Basuki Antariksa, 2011)

Theoretically, the interests of the local population take precedence and sacrifice the interests of tourism development. This argument is based on the thoughts expressed, among others, by M.L. Narasaiah as follows:

*"Tourism...depends a lot on the existence of unspoiled nature and landscapes, as well as a healthy environment. If nature is plundered, landscapes are destroyed or water, energy and soil resources are over-exploited, the economic basis of tourism is also undermined".(M.L. Narasaiah, 2004)*

In addition, Richard Sharpley stated that sustainable tourism development emphasizes on "... human development and well-being, while the environment is also a factor that both take into account." (Sharpley, 2009) Thus, if factors - these factors are not the focus of attention, the sustainability of tourism development will be threatened. This also implies that the approach which prioritizes economic growth in the short term is actually damaging to the concept of sustainable tourism development.

In relation to the tourism industry 4.0, it seems that this phenomenon occurs because the development of ICT has caused tourism activities to become unlimited as a result of high internet speeds and various efficiency and effectiveness in various tourism activities. Then, the question is what are the attractions of the tourism industry 4.0? In this regard the Ministry of Tourism of the Republic of Indonesia introduced the tourism industry 4.0 aimed at millennial tourists with multiple growth targets. Millennial tourists accounted for 50% of all inbound foreign tourists to Indonesia with a projected growth of growth.

Data from the Ministry of Tourism and Culture in 2019 states that, Malaysia in the 4.0 tourism program is targeting a 4-fold growth in 2030, while Spain is the most successful country in tourism 4.0. The tourism industry 4.0 aimed at millennial tourists is characterized by changes in behavior that tends to be more independent and individual. For example, Chinese millennial tourists formerly known as "group tourism" are now

more likely to become individual tourism. This can be seen from the statistics of Chinese tourist arrivals to Indonesia about 70% are individuals with ages 15-23 years as much as 23%. Therefore now many countries have prepared the development of the tourism industry 4.0, one of the most successful and benchmarking countries is Spain. The country has implemented tourism 4.0 in several of its main destinations by building digital ecosystems ranging from inspiration, arrival, destination, to all-digital post-trips reflecting the era of tourism 4.0.

Indonesia is currently preparing a grand strategy for the tourism industry 4.0. The major strategies in question include the Strategic Theme: Wonderful Indonesia Digital Tourism 4.0; Strategic Imperatives for Transforming Tourism HR to Win Global Competition in Industry 4.0; 5 Technology Enabler; 9 Key Initiatives for Discipline Executions; and Pentahelix Collaboration Approach. (Kemenpar, 2019)

The key in the industry-era tourism grand strategy 4.0 is Human Resources or HR and this is like the program set by President Jokowi this year which is to focus on HR. Like it or not, there has been a change in market behavior. All have shifted towards digital and currently the world industry has shifted towards the digital industry in the 4.0 era. Changes in market behavior are also followed by changes in consumer behavior that is increasingly mobile, personal, and interactive and this becomes the nature of digital, which is increasingly digital, more personal.

In the tourism industry, changes in consumer behavior are seen when 70% search and share has gone through digital. The travel agent industry can no longer rely on walk-in service for ticket reservations and choosing tour packages. Changes in consumer behavior affect the tourism market driven by millennials. Millennials are always digital, mobile, interactive and the numbers reach 50% of the number of foreign tourists inbound to Indonesia. Who controls the community of young people, it is he who has the potential to win the future market. That is why the tourism industry 4.0 is able to bring up many startups in the field of tourism.

Head of Design Section for the Empowerment of Information and Communication Technology Creativity Sonny Sudaryana revealed that startups in the tourism sector in Indonesia have now reached 17.7%. But this is still needed more validation in order to map tourism potential by presenting startups in the tourism sector.

### 3.1 The Role of Tourism Law

The most important task that must be carried out by policy makers in anticipating the tourism industry 4.0 is to map all the potential and problems that will arise for the acceleration of the tourism industry that relies on ICT in the tourism industry in Indonesia. The mapping in question is not only doing a SWOT analysis, but also doing strategic planning so that the tourism industry in Indonesia can run sustainably. So that the mapping activity can identify how much the needs of the travelers without ignoring the people who live in tourism destinations.

Apart from that the tourism law is able to regulate that the development of tourism can synergistically have a positive impact on all parties. Why does this have to be a priority? Tourists generally do not have long-term interests in the stability of social, cultural and environmental preservation in tourism destinations because they are not the owners of the area. As with the local population, they are very dependent on the quality of social conditions, culture and environmental preservation, because it is the owner and has a very close psychological and historical relationship with tourism destinations.

In connection with the description above, Article 4 of Law No. 10 of 2009 has explained that the purpose of developing tourism is in the framework of: increasing economic growth; improve people's welfare; eradicate poverty; overcoming unemployment; preserving nature, environment and resources; promote culture; lift the nation's image; foster a sense of love for the motherland; strengthen national identity and unity; and, strengthen friendship between nations. This article should be translated that if one of the elements is not met, then tourism should not be developed in a tourism destination. However, there is an issue that must be a concern because it might cause problems in the long run. Article 5 letter g of the law states that one of the principles of the administration of tourism is to "comply with international agreements in the field of tourism". Therefore, stakeholders in Indonesia and especially policy makers must be actively involved in the process of drafting international

agreements in the field of tourism, because it might be possible that there are rules in the game that are not in accordance with the national principles set out in the administration tourism.

When then it has been determined that tourism activities do not conflict with the long-term interests of the people who live in tourism destinations, then the next problem that needs to be managed / managed properly and correctly is its implementation. The various activities that must be regulated in the Tourism Law are at least the following:

1. The implementation of tourism must be adjusted to the local wisdom of tourism destined. This is in accordance with Article 5 letters a and b of Law No. 10 of 2009. If this principle is ignored, then local residents will see tourists as "bullies" who must be driven out of tourism destinations.
2. The implementation of tourism must be aimed at helping the realization of travel motivation. Tourists should not be seen as "prey" who will be drained of financial resources in the short term. Loyalty to tourists is not built through the relationship of "buying and selling" but through a feeling of "being accepted" at a tourism destination. This principle is related to Article 4 of Law No. 8 of 1999 concerning Consumer Protection which explains the rights as consumers, such as: the right to comfort, security, and safety in consuming goods and / or services; the right to correct, clear and honest information about the conditions and guarantees of goods and / or services; etc. Meanwhile, Article 20 of Law No. 10 of 2009 establishes the rights as a tourist, i.e. to obtain: accurate information about tourist attractions; tourism services according to standards; legal protection and security; health services; protection of personal rights; and, insurance protection for high-risk tourism activities. In addition, Article 21 grants the right to tourists who have physical, child and elderly limitations to obtain special facilities according to their needs.
3. SME'S must be fully protected from the possibility of bankruptcy due to the presence of large and / or multi-national companies. However, the term "protected" should not be interpreted as an effort to prevent SME'S from competition, but rather to increase its capacity so that one day it is able to compete with large and / or multi-national companies. This principle is in accordance with Article 4 letter d of Law No. 20 of 2008 concerning Micro, Small and Medium Enterprises. In addition, Article 16 paragraph (1) 6 of the same law stipulates obligations to the Government and Regional Governments to facilitate SMEs in the fields of production and processing, marketing, human resources, and design and technology. Meanwhile, Article 17 requires the Government and Local Governments to create a backup policy for SMEs and facilitate partnerships with large scale businesses.
4. Infrastructure development is destined for tourism and its arrangement. Structuring tourism destinations that do not pay attention to artistic aspects can reduce the quality of the attraction of the destination. This is one of the advantages of tourism destinations in developed countries compared to those in developing countries<sup>16</sup> In this regard, there is a challenge that must be answered, namely how to balance the interests of improving welfare with the protection of cultural heritage.
5. Protection of the quality of the environment, including matters such as the level of sea water clarity and cleanliness, noble cultural values, the number of tourists who can visit at a certain time, and so on.
6. Protection of security, political stability and provision of funding facilitation schemes in the operation of tourism businesses.<sup>18</sup>
7. Guarantee regarding business continuity, not only in the tourism sector, but also other supporting sectors such as the aviation sector. As is known, the survival of the tourism sector is very dependent on other business sectors. In addition, if a country has an airline that is able to compete at the international level, the airline will automatically promote tourism destinations in the country.
8. Fair business competition. This principle is in accordance with Law No. 5 of 1999 concerning Prohibition of Monopolistic Practices and

Unfair Business Competition.

9. Protection of Intellectual Property Rights (IPR) for the work / craft that is a supporting sector of tourism, including those that are part of Traditional Knowledge (PT) and Traditional Cultural Expressions (EBT). Specifically with regard to PT and EBT, problems can arise when there is no legal protection of the two types of cultural heritage, which can then cause local residents to be unwilling to show their work for fear of being copied / hijacked.
10. Standardization in various fields. Standardization is very important especially in relation to international tourism, because it functions as a "bridge" between tourists' perceptions of tourism destinations and goods and services consumed, with tourism destinations as producers. However, it should be noted that standardization cannot be done in all respects, because tourism contains things that are unique (not available elsewhere). For such matters, standardization can only be carried out on relevant general aspects, for example related to health or safety standards.
11. Encouraging tourism service companies to avoid lawsuits. Lawsuits due to losses suffered by tourists, both in financial, physical and mental terms, carry the risk of reducing the competitiveness of tourism destinations. According to Barth and Hayes, in general such lawsuits arise as a result of tourism labor resources that are poorly trained or well prepared.

### 3.2 Challenges of Tourism Development 4.0. in Indonesia

The main challenge for Indonesia in the development of tourism 4.0. is a problem that is not directly related to the tourism sector, namely natural disasters and infrastructure. Although infrastructure can be considered as a symbol that an area is very energetic or not traditional, if the infrastructure is not met and access to tourist destinations is very difficult, then it is likely that the development of tourism will be disrupted.

It seems that these two problems will not be resolved as long as the Indonesian government does not build infrastructure that supports tourism and prepares disaster mitigation that often happens in Indonesia. The problem lies not in the lack of disaster management technology or infrastructure development such as Mass Rapid Transportation (MRT), but Indonesia's carrying capacity to "feed" its residents has been exceeded. For example, the level of loss suffered by DKI Jakarta is Rp. 28.1 trillion per year - other sources say up to Rp. 46 trillion, and according to JICA research results even reached Rp. 65 trillion - then the population and traffic congestion problems can no longer be considered as part of the progress of DKI Jakarta as a metropolitan city.<sup>24</sup> Therefore, Tourism Law must be able to reach a complete settlement of population in DKI Jakarta. If the problem has been resolved, the development and application of flood and MRT technology can show significant benefits for tourism in DKI Jakarta (Basuki Antariksa, 2018)

In addition, there are various other issues that also have the potential to disrupt tourism development plans in Indonesia. These problems include: weak urban development planning; weak law enforcement regarding land use; lack of availability of adequate public facilities (including for people with disabilities); insufficient signage for foreigners; the problem of the low quality of the environment; water resource quality; inadequate waste management system; and, the problem of high crime rates.

Some Thought Contribution to the Ministry of Tourism

It is time for Kemenpar to no longer try to achieve all the benefits that can be obtained. Kemenpar must start thinking about providing "technical assistance" to other regions in Indonesia in order to be able to establish itself to be like Bali, so that the distribution of the population will be spread more evenly. Thus, tourism development in Bali will be directed towards the achievement of the objectives as described in the previous section of this paper. To achieve these goals, adequate regulation and courage are needed to implement it consistently. This principle is also in accordance with the obligations imposed on the Government and Regional Governments by Article 23 paragraph (1) (d) in the form of supervision and control of tourism activities in the context of preventing and mitigating various negative impacts on the wider community.

Associated with the hot tropical climate in Indonesia, regulations need to be formed regarding efforts to save the environment, especially protecting

forests from forest encroachment. This will give the impression that Indonesia is a country that applies the concept of green tourism. In addition, these efforts will be able to support tourism activities on a large scale outside the building complex. If tourism activities are only carried out in buildings that have air conditioning (AC) facilities, then it is likely that most small and medium-sized businesses will not have access to be involved in running their businesses. Thus, the utilization of electrical energy and air conditioning can be reduced. However, this concept must also be supplemented by regulations regarding spatial planning and adequate cleanliness and implementation, so that tourism activities in the open space in question can take place safely and comfortably.

To reduce the use of motorized vehicles (which have a huge impact on the formation of greenhouse gases), infrastructure that encourages tourists to feel comfortable staying for long periods in a tourism destination must be developed. For example, infrastructure for pedestrians must be made as comfortable as possible in the sense that it is not too narrow, arranged so that it does not become a land contested between pedestrians and traders, and so on. This concept can help support the development of other concepts that are currently known as "slow tourism". The concept encourages tourists to stay longer at tourism destinations and not to travel too often by using a vehicle.

In the context of developing a new Bali into an international tourism destination, the Government of Indonesia must begin to make policy changes in service patterns from the application of Minimum Service Standards to Quality Service Standards. An example of the application of Quality Service Standards is in the implementation of culinary tourism, even if food is served to tourists and traditional food served by local residents must meet health standards at the international level. Thus, the Government of Indonesia (Kemenpar) is obliged to conduct guidance and facilitation for local residents and establish regulations for supervision of the application of the Quality Service Standards referred to.

Based on the author's experience in the field, one of the extraordinary attractions of a tourism destination is its regular and artistic spatial layout. For example, in areas suitable for viewing beautiful scenery around it should not be erected too many high-rise buildings, because it will spoil the view. As additional information, in the city of London (England), a house can have a value of £ 1,000,000 just because its position is very strategic as a medium to see the beautiful scenery in the city, and that does not include house prices. This issue is a challenge that is certainly very heavy for the Government of DKI Jakarta, considering that urban planning in this region is very disorganized, so a foreign writer in a book issued by travel guide producer Lonely Planet called it "overweight capital".

Reducing crime rates in Indonesia's tourist destinations must be an important agenda in the enforcement of Tourism Law. The former Secretary General of the United Nations, Javier Pérez de Cuéllar, has since 1995 stated that "violence is anathema to tourism".

### 3.3 Tourism Industry Development

Tourism 4.0 or tourism 4.0 is the name for current tourism trends from processing big data collected from a large number of tourists, to create a personalized travel experience. It is based on various modern high-tech computer technologies. This term comes from a new paradigm in industry, known as Industry 4.0.

The Ministry of Tourism (Kemenpar) introduced the development of the tourism industry 4.0 or tourism 4.0 aimed at millennial tourists with multiple growth targets. Tourism 4.0 aimed at millennial tourists is characterized by changes in behavior that tends to be more independent and individual. implementing tourism 4.0 in several of its main destinations by building digital ecosystems ranging from inspiration, arrival, destination, to all-digital post-trips reflecting the era of tourism 4.0.

The industrial era 4.0 is marked by the birth of cyber-physical systems which combine the capabilities of humans and machines (robots). Various technological advancements 4.0 enable the realization of various applications that are able to enrich traveler experience on the one hand, and drastically boost the productivity of the tourism industry on the other.

Tourism 4.0 is currently the trend of developing tourism in a number of countries in the world. Now many countries have prepared tourism

development 4.0 of which the most successful is Spain. The key in the industry-era tourism grand strategy 4.0 is Human Resources.

#### Case in Purba Volcano, Jogjakarta

Quoted from [gunungapipurba.com](http://gunungapipurba.com), Nglanggeran Tourism Village, is one of the Tourism Villages that has evolved along with the use of technology used. There are 3 major stages carried out in the development process, namely Conscious Potential, Managing HR, Building networks while building digital identity. The manager of Nglanggeran Tourism Village is dominated by young people who are close to technology, in collaboration with all elements of the community and supported by the government and other stakeholders. Pentahelix collaboration is also very much felt in the Nglanggeran tourist village.

Good practices in management and also the use of technology are positively invited and involved in the FGD for the Development of Tourism HR Strategy 4.0 by the Ministry of Tourism of the Republic of Indonesia. Being one part of the components of the development of Indonesian Tourism HR development strategies. One of the innovations using technology in the Nglanggeran Tourism Village is the use of E-Ticketing.

## 4. CONCLUSION

This 4.0 industrial revolution will fundamentally change and disrupt the tourism industry because of the realization of cost value (more for less), experience value (personalized), and platform value (resources sharing ") that travelers will enjoy. In general, it can be said that the tourism industry 4.0 provides benefits in the economic field based on creativity or intellectual abilities of its human resources.

The tourism industry 4.0 inevitably we must respond wisely and wisely so that the resulting output becomes positive. Change in mindset, ways of working and patterns of community building must be carried out with good collaboration. So an anticipatory step is needed, bai, in terms of deregulation, business processes and human resource management so that the existence of change is maintained. If all three are carried out jointly, Indonesia can optimally benefit significantly from tourism. Good deregulation, in this case the Tourism Law can support the sustainability of the tourism industry on an ongoing basis. Likewise, business processes need to be adjusted to the times so that the needs of the tourism market can provide significant added value but are effective and efficient. This is where the role of human resources plays an important role in the tourism industry 4.0. As a country with a large population, demographic bonus can certainly be an advantage of Indonesia to compete so that Indonesia remains a major destination for destinations other than Bali.

Finally, amidst the rapidly changing tourism industry, creativity is one of the keys to promoting new tourist destinations by inviting various influencers to promote Indonesia in the virtual world. Psychological definitions of creativity generally contain two separate components. In the first place, creativity requires that we make something new, or a new combination of existing elements. This is the element of novelty or innovation ... However, re-novelty is not enough. To be creative, the idea must also be useful, or valuable, This second part of the definition is reflected in the emphasis on 'problem-solving' in psychological creativity tests and in the argument that creative ideas must demonstrate 'fitness for purpose' ". (Chris Bilton: 2007)

Therefore, if understood in depth, all kinds of activities which later became the tourism industry 4.0. and generate economic benefits, in fact it is definitely based on the intellectual creativity of its human resources. If not, then any activity will not become an industry because it will not produce economic profits.

The tourism sector 4.0 should also be part of the creative industry because it really needs creativity to make a certain geographical area as a tourism destination. The key word is to create "attraction" in the region. For example, when a beach in a certain geographical area will be promoted as a tourist attraction, the beauty of the beach itself may not necessarily attract the attention of tourists, because there are thousands of beaches around the world. A certain creativity is needed to make the beach different from other beaches so that it attracts the attention of tourists. Using social media such as YouTube, Instagram, Facebook, Twitter and other social media is very important in order to encourage the development and management of the tourism industry in each tourism

destination. There are 2 (two) important things that must be regulated in the development of the tourism industry 4.0. First, tourism 4.0. always based on research and development, therefore the Law of Tourism must be able to provide space for new ideas that are innovative. Second, there must be recognition of the success that has been achieved through these innovative new thoughts. This means that Tourism Law must be able to provide IPR protection for creativity that supports the successful development of tourism destinations.

If the regulations regarding the two matters above are inadequate, then industry 4.0. in the tourism sector will not develop properly because people will not be motivated to come up with new ideas given the lack of respect for them. In addition, the motivation referred to also will not increase when each person freely unlimitedly imitates an idea produced by someone who can produce economic benefits. This condition will actually encourage growth. All of this proves that proper restrictions by the Tourism Law can guarantee what is referred to as sustainable tourism development.

## REFERENCES

- Andrejczak, M. 2009. Hasbro Hitches Sales to Transformers Sequel. (<http://www.marketwatch.com/story/hasbro-hitches-bigger-sales-to-transformers-sequel>, diakses 6 November 2011.
- Antariksa, 2010b, op. cit., 3.
- Antariksa, 2010b, op. cit., 6.
- Antariksa, B. 2010a. Global Code of Ethics for Tourism: Sejauh Mana Kepentingan DKI Jakarta Dalam Pembangunan Kepariwisataannya? Makalah dalam Pendidikan dan Pelatihan Kepariwisataan Tingkat Dasar Tahun 2010. Jakarta, 14 Oktober 2010: Dinas Pariwisata dan Kebudayaan Pemerintah DKI Jakarta.
- Antariksa, B. 2010b. Penegakan Hukum Kepariwisataan Dalam Rangka Meningkatkan Daya Saing DKI Jakarta Sebagai Destinasi Pariwisata Internasional. Makalah dalam Pendidikan dan Pelatihan Kepariwisataan Tingkat Lanjutan Tahun 2010. Jakarta, 8 Desember 2010: Dinas Pariwisata dan Kebudayaan Pemerintah DKI Jakarta: 3.
- Antariksa, B. 2011. Peluang dan Tantangan Pengembangan Kepariwisataan di Indonesia. Makalah dalam Sosialisasi dan Gerakan Sadar Wisata. Solok, 12 Oktober 2011: Dinas Kebudayaan dan Pariwisata Provinsi Sumatera Barat: 1-2.
- Antariksa, B. 2011. Peran Kerjasama Internasional di Bidang Kepariwisataan. Laporan Penelitian Individual, Pusat Penelitian dan Pengembangan Kepariwisataan. Jakarta: Kementerian Kebudayaan dan Pariwisata: 3-6.
- Neolaka, A. 2011. Kerugian Akibat Kemacetan Jakarta Rp. 46 Triliun. (<http://economicandbusinessanalysis.blogspot.com/2011/06/kerugian-akibat-kemacetan-jakarta-rp-46.html>, diakses 5 November 2011.
- Beeton, S. 2006. Community Development through Tourism. Collingwood (Australia): Landlinks Press.
- <sup>9</sup>Narasaiah, M.L. 2004. Globalization and Sustainable Tourism Development. New Delhi: Discovery Publishing House.
- Bilton, C. 2007. Management and Creativity: From Creative Industries to Creative Management. Oxford: Blackwell Publishing: 3.
- Bosselman, F.P., Peterson, C.A., and McCarthy, C. 1999. Managing Tourism Growth: Issues and Applications. Washington, D.C.: Island Press: 52.
- Cronin, P.M. 2004. Foreign Aid. Dalam Cronin, A.K. and Ludes, J.M. (Ed.). Attacking Terrorism: Elements of a Grand Strategy. Washington, D.C.: Georgetown University Press: 254.
- Decrop, A. 1999. Tourists' Decision-Making and Behavior Processes. Dalam Pizam, A. and Mansfeld, Y. (Ed.). Consumer Behavior in Travel and Tourism. New York: The Haworth Hospitality Press: 108.
- Dickinson, J. and Lumsdon, L. 2010. Slow Travel and Tourism. London: Earthscan: 1.
- Garelli, S. 2006. Menjadi No. 1 di Abad ke-21: Kiat Bangsa, Perusahaan, dan Individu Memenangkan Persaingan di Era Baru. Jakarta: PT. Gramedia Pustaka Utama: 6.
- Hall, C.M. and Page, S.J. 1999. The Geography of Tourism & Recreation: Environment, Place and Space. Oxon (UK) and New York (USA): Routledge: 203.
- Jamil, M. 2018. Buletin Perpustakaan Universitas Islam Indonesia, 1(1), 99-113.
- Korže, Saša Z. 2019. From Industry 4.0 to Tourism 4.0. Innovative Issues and Approaches in Social Sciences, Vol. 12, No. 3
- Kunkel, L.M. 2008. International Tourism Policy and the Role of Governments in Tourism in the Context of Sustainability. Norderstedt (Germany): GRIN Verlag: 9.
- Lelieur, I. 2003. Law and Policy of Substantial Ownership and Effective Control of Airlines: Prospects for Change. Hants (England): Ashgate Publishing Limited: 68.
- Manjari, Ratih M E. 2018. Introducing Tourism 4.0: What is It and How Do We Get Here?
- Minghetti, V. and Montaguti, F. Cities to Play: Outlining Competitive Profiles for European Cities. Dalam Mazanec, J.A. and Wöber, K.W. (Ed.). Analysing International City Tourism. The Netherlands: Springer-Verlag: 181.
- Peceny, Urška S, Jurij U, Simon M, Vesna K & Tomi I. 2019. Tourism 4.0: Challenges in Marketing a Paradigm Shift. IntechOpen
- Pereira, A.C. & Romero, F. 2017. A review of the meanings and implications of the Industry 4.0 Concept. Procedia Manufacturing 13, pp. 1206-1214.
- Peterson, T. 2018. Artificial Intelligence in travel and tourism
- Pfiffner, J.P. 2008. Power Play: The Bush Presidency and the Constitution. Washington, D.C.: The Brookings Institution
- Rabo, A. 2010. Enchanted Sites, Prosaic Interests: Traders of the Bazaar in Aleppo. Dalam Scott, J. and Selwyn, T. (Ed.). Thinking Through Tourism. Oxford: Oxford International Publishers Ltd.: 118, 121, 124.
- Rodič, B. 2017. Industry 4.0 and the New Simulation Modelling Paradigm, Organizacija, Vol. 50.
- Selby, M. 2004. Understanding Urban Tourism: Image, Culture and Experience. London and New York: I.B. Tauris & Co. Ltd.: 14.
- Sharma, K.K. 2004. Tourism and Regional Development. New Delhi: Sarup & Sons: 3.
- Sharpley, R. 2009. Tourism Development and the Environment: Beyond Sustainability? London: Earthscan: 45.
- Smith, R. 2015. Smart Tourism: Linking technology with the touristic resources of city destination. NHTV University of Applied Sciences, Breda
- Vaisutis, J. Indonesia. Lonely Planet: 99. (<http://books.google.co.id/books>, diakses 6 November 2011.
- Vallino. 1998. Interactive Augmented Reality, Ph.D. Thesis, Department of Computer Science, University of Rochester, Rochester, NY
- Walle, A.H. 2010. The Equitable Cultural Tourism Handbook. The United States of America: Information Age Publishing, Inc.: 162.
- World Tourism Organization Understanding Tourism: Basic Glossary. (<http://media.unwto.org/en/content/understanding-tourism-basic-glossary>, diakses 7 November 2011.
- [www.lembakakonsumen.org](http://www.lembakakonsumen.org)