

Ecole des Hautes Etudes Commerciales

HEC Alger

**Dissertation in partial fulfillment of the requirement for a
Master's degree in Business Sciences**

Major: Distribution & Supply Chain Management

Research subject:

**Digital supply chain applied in the ecotourism
industry**

The study case SocioTour Start-up Indonesia

Developed by:

Selsabil CHEBBOUBA

Supervised by:

Ms.Naima MESSAOUDI

Marketing Lecturer

6th promotion

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-Selsabil Chebbouba-

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Abstract:

Tourism sector is considered as the most complex in terms of demand and supply provisions and in order to attract its consumers the company finds sustainable solution as a context for the fierce market from where Ecotourism took a central place.

However; in today's connected world, the traditional practices of supply chain management are far from being sufficient to the consumer behaviour and as digitalization became a reality that the society is capturing and the economy is digitizing, for this main reason; the touristic product joined the game of the supply chain digitization for the value creation to attain the most accurate performance required for nowadays demands and perspective.

Tour operators with their importance and significance for both the consumer and the supplier as a centralized stakeholder took advantage of both tools "digitization of supply chains" and "Ecotourism" to turn their function into a highly agile and intelligent business.

Key words: digital supply chain, Ecotourism, Tour operator, Consumer, Supplier.

General introduction

General introduction

In the current economy, competitive advantage is the only way for a company or an industry to grow, and if it is illustrated in using a sustainable context, the firm acquires the finest weapon against fierce market circumstances. The tourism industry is no different.

This giant and complex sector, both dynamic and competitive, requires quick adaptability to the evolving needs and desires of customers. Also, the need to be environmentally responsible creates profoundly changing aspects, as it became a significant concern for all supply chains and more specifically the tourism sector, thus, the ecotourism takes a central position.

However, in today's connected world, the traditional practices of supply chain management are far from being sufficient as the customers are behaving digitally across a vast interconnected global community that requires a highly flexible structure. This major problem can be seen chiefly as the demand can unexpectedly peak because of additional charges and delays, which can very well push the client to satisfy its needs elsewhere.

Since then, several tourism stakeholders (air transport, hotels, tour operators and travel agencies, catering, car rental, wellness market) were the pioneers to take advantage of E-commerce. There is no question, in our case, of giving up the traditional structure of supply chain but of making this highly important function evolve into an agile, intelligent and –as it can be expected- connected structure. That can only be accomplished by applying information technologies through the business process of the new and extended supply chain.

For that, we decided to formulate this research aiming mainly to investigate the tourism industry in before and after adding the digital device in a general manner and from the perspective of SOCIOTOUR startup in ecotourism in a more thorough way. Using **qualitative** analysis to highlight the importance of implementing a digital supply chain to the ecotourism to create profit from one side, and add sustainable values to the business structure from another side. As a result, the overall question study to which this thesis will answer:

How does a digital supply chain contribute to the ecotourism industry?

For better encircling of this last one, we considered that it would be useful if we break it up into these following sub-questions:

- How does Supply Chain Management manifest in the ecotourism industry?
- How does Digital supply Chain add to the chain value of a business?

- How does the Digital Supply Chain create revenue and business value in the ecotourism sector?

For which we can propose the following hypothesis:

- H1: Supply Chain Management has its models in the ecotourism sector,
- H2: the use of information and communication technologies is the result of increasing digitalization of the consumer,
- H3: in the ecotourism sector, a digital supply chain is a tool:
 - Sub-hypothesis 1: for increasing value;
 - Sub-hypothesis 2: reducing costs;
 - Sub-hypothesis 3: optimizing the delivery delays.

To verify the affirmation or the cancellation of these assumptions, we will adopt the following methodology:

In-depth documentary research, through the consultation of several books, articles, specific websites as well as academic works related to our subject of studies, also internal documents of the company as well as qualitative research through semi interviews with experts in the field.

To accomplish our research, we will structure our work in three chapters:

The first chapter is devoted to the ecotourism supply chain, which firstly presents a general presentation of tourism supply chain management, then generalities in ecotourism and finally the ecotourism supply chain management.

The second chapter is dedicated to digital supply chain management, including general notions about the digital supply chain, digital supply chain management and more specifically, in the tourism sector.

The last chapter highlights the use of digital supply chain management in the ecotourism sector more precisely in SOCIOTOUR Start-up, including the company presentation, the survey approach, and the presentation of the results.

Chapters:

- ✓ Introduction
- ✓ Chapter one: The ecotourism supply chain.
 - Section 1: tourism supply chain management.

- Section 2: ecotourism.
- Section 3: ecotourism supply chain management
- ✓ Chapter two: Digital Supply Chain Management.
 - Section 1: E-Business
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 - Section 3: digital supply chain management in the tourism sector

Chapter three: The pragmatic study: the case of Indonesia.

- Section 1: Ecotourism in Indonesia
- Section 2: presentation of the enterprise
- Section 3: the results of the pragmatic study

Conclusion

***Chapter1: ecotourism
supply chain
management***

Introduction

This chapter will present the supply chain research and practice in the context of tourism sector from a general perspective and from an ecotourism view in a more thorough way.

Large tourism development effects negatively on destinations ; for this reason, interest turns to sustainability as the core of the business agenda. However, basing our research on tourism sector structure remains a crucial challenge for achieving consensus and developing coherent, sustainable tourism strategies. The present chapter examines the characteristics of ecotourism products, as well as concepts of the ecotourism supply chains. We have divided this chapter into three sections:

The first section will present the tourism supply chains and the uses of its management, in the second section; we will clarify the notion of ecotourism by highlighting the additional factors compared to traditional tourism. Finally, the last section will be devoted to the ecotourism practices and uses of supply chain management.

Section 01: Tourism supply chain management

1.1. Overview of supply chain management

1.1.1. Supply chain

From a macro point of view, a supply chain is a network of companies which are engaged in different functions ranging from the supply of raw materials through to the production and delivery of the final product to the target customers.

“From a micro perspective of a firm, a supply chain is a network of nodes which perform functions such as:

- procurement of raw materials,
- fabrication of parts,
- assembly of components and subassemblies,
- final assembly of end products
- Delivery of finished products to regional distribution centres/ customers”¹.

These functions are characterized by a flow of goods forward and a flow of information backwards.

1.1.2. Supply chain management

Since the 90s, we can talk about supply chain management (SCM). It is then necessary to differentiate between "supply chain" and "supply chain management". Supply Chain "is a coordination of companies that bring products or services up to the final customer ", while supply chain management refers to the tools and management methods used to optimize the entire chain².

« SCM is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders. »³

We suggest defining supply chain management as the management of the logistic activities; which aims to optimize the flow of materials, information and financial support to all actors in the supply chain.

¹Tourism Supply Chain Management: A New Research Agenda. (n.d). Retrieved from <http://ira.lib.polyu.edu.hk/bitstream/10397/1129/1/18-TSCM.pdf>

²AYADI, (S.): Outsourcing and Value Creation in the Supply Chain, in Review the Journal of Management Science, No. 236, RSG Edition, 2009, P.88

³Definition of: the international Center for Competitive Excellence (ICCE), 1994.

It includes all stakeholders from the suppliers of raw materials till the end customer, in order to distribute the final product with: the right quality, the right quantities, at the right time and in the right place.

1.2. Tourism sector

1.2.1. Tourism definition

“Tourism is defined as the interrelated system that includes tourists and associated services that are provided and utilized (facilities, attractions, transportation and accommodation) to aid in their movement.

While a tourist: -as established by the world tourism organization- is defined as a person travelling for pleasure:

- For a period of at least one night,
- But not more than one year for international tourists and six months for persons traveling in their own countries,
- With the main purpose of the visit being other than to engage in activities for remuneration in the place(s) visited”⁴.

1.2.2. Concept of the tourism supply chain

Because of the sector context evolves, the concept of supply chains changes. According to Porter (1980), every industry has an underlying structure, or a set of fundamental economic and technical characteristics, that gives rise to its operational and competitive aspects. That is, every supply chain varies according to the type of products supplied. Thus, determining the tourism industry features and its products is of great importance when describing a TSC.

“A tourism supply chain (TSC) can be defined as a network of tourism organizations supplying different components of tourism products/services such as flights and accommodation for the distribution and marketing of the final tourism products at a specific tourism destination, and involves a wide range of participants in both the private and public sectors.”⁵

⁴Haiyan (S); Tourism Supply chain management; Edited by Stephen Page, London Metropolitan University, UK; 2012; P4 retrieved from <http://www.prm.nau.edu/prm300/chap1-lesson>

⁵Ibid; Page 5

1.2.3. Tourism main activities and stakeholders

If we can include the variety of activities that globally describe the tourism supply chain in four main- points:

- Accommodation
- Transport
- Ground Handlers, excursions and activities
- Food and crafts

Moreover, the following figure is presenting in a detailed way the tourism stakeholders and all form of links between two (or more) of them composes a supply chain:

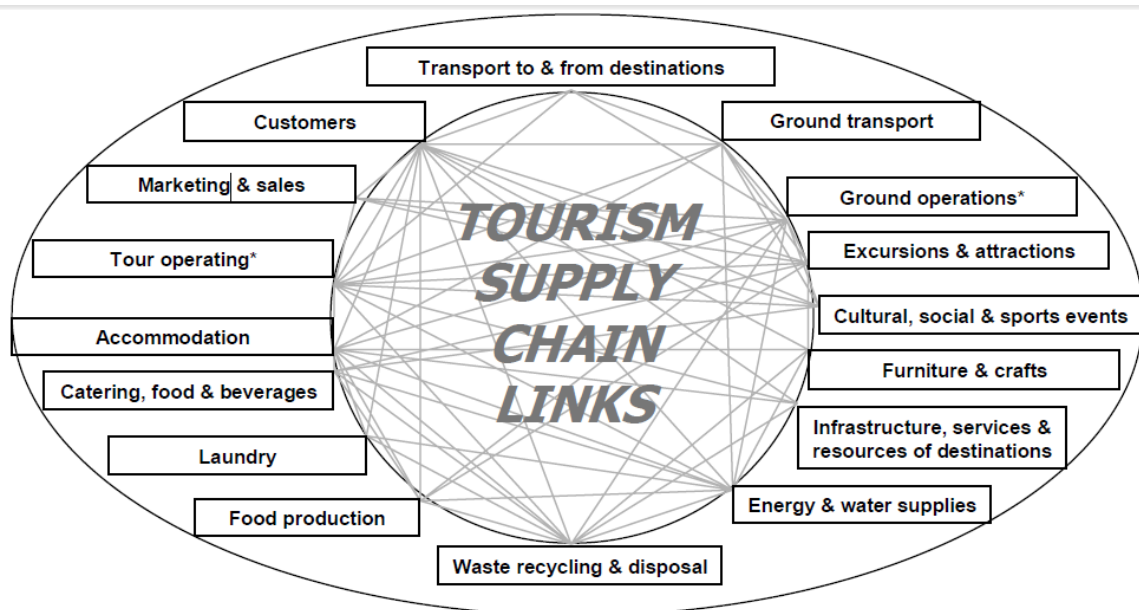


Figure 1.1: Tourism supply chain and their links

Source: Tourism Supply Chains A report from LeedsMet for The Travel Foundation; page 4

*Tour operating includes advertising, purchasing, package development, marketing and sales, and purchasing

*Ground operations include ground transport and excursions

As we can see in the figure above, the tourism supply chains involve many components: not just accommodation, transport and excursions, but also bars and restaurants, handicrafts,

food production, waste disposal, and the infrastructure that supports tourism in destinations. So, these parts have links somewhere and flows of goods, intangibles, information and funds.

A further aspect that we can say about tour operators is that:

- They play the role of the marketing of the whole experience to their customers
- They are the ones advising them about the tips, best destinations, experiences, so we can say that they play the central role of all these, and one of the common ways of attaining them.

1.3. Supply chain management in tourism

Supply chain management meets new challenges in the tourism sector, and to describe the successful model of TSC management, we have to define first the nature of tourism products and services in a general manner.

According to Haiyan (S), the leading five characteristics of tourism can be determined as follows:

- First, tourism is a coordination-intensive industry where different products/services (transportation, accommodation, attractions and other components) are bundled together to form a final tourism product.
- Second, as service cannot be stored for future use, tourism as a product is perishable.
- Third, tourists need to travel to destinations where tourism products are produced to consume these products. Tourism products cannot usually be examined before their purchase, which means that the sale of tourism products is very much dependent upon the presentation and interpretation of the products. Therefore, the tourism industry is a very information-intensive or information-dependent industry (Ujma, 2001).
- Fourth, tourism products are complex. Typically, they are heterogeneous and compound, consisting of many different service components such as accommodation, transportation, sightseeing, dining and shopping.
- Finally, the tourism industry often faces higher demand uncertainty and more complex dynamics than its counterparts because of intense competition among service providers. Many factors contribute to market uncertainty regarding the

demand for tourism products. For example, effective advertising can attract more tourists, whereas adverse word-of-mouth effect can lead to a fall in demand. The economic conditions in tourist-generating countries and regions often serve as a push factor, influencing the demand for tourism products in a particular destination.⁶

1.4.Tourism Supply chain management challenges

As any other sector supply chain management has its challenges and these confrontations play a significant role in determining the performance and efficiency of the supply chain, we can classify these challenges by nature as follows:

Socio-economic and cultural issues: that contain the contribution to the economic growth without passing over the well-being of local communities from preservation of cultural identity, respect for human rights of the local communities' to indigenous peoples' rights.

Environmental aspects include sustainable transport development and sustainable use of resources; reducing, minimizing and preventing pollution and waste, conserving plants, animals, ecosystems and protected areas, and conserving landscapes, cultural and natural heritage⁷.

The demand redundancy and complexity of prevision planning because of a lot of external factors; for example Tour operators that play the central marketing role in the chain for their possibility to influence the choice of customers' destinations and the activities' type.

Human barriers include resistance to change, a lack of qualified staff and training programmes, a lack of understanding and the inability to plan⁸.

⁶Haiyan (S); Tourism Supply chain management; Edited by Stephen Page, London Metropolitan University, UK; 2012; P6

⁷Sustainable Supply Chain Management In Tourism. (n.d.). Retrieved from <http://www.icrtourism.com.au/wp-content/uploads/2012/09/Sustainable-Supply-Chain>

⁸ Haiyan (S); P7

Section 02: Ecotourism**2.1. Sustainability development goals⁹**

The Sustainable Development Goals are 17 goals that the United Nations set to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. The Goals interconnect and in order to leave no one behind, and as Ecotourism operates in this area we should start by defining them for a better life targeting 2030, according to the United Nations website the goals are presented as follows:

Goal 1: End poverty in all its forms everywhere

Poverty is more than the lack of income and resources to ensure a sustainable livelihood. Its manifestations include hunger and malnutrition, limited access to education and other basic services, social discrimination and exclusion as well as the lack of participation in decision-making.

Goal 2: Zero hunger

A profound change of the global food and agriculture system is needed if we are to nourish the 815 million people who are hungry today and the additional 2 billion people expected to be undernourished by 2050. Investments in agriculture are crucial to increasing the capacity for agricultural productivity and sustainable food production systems are necessary to help alleviate the perils of hunger.

Goal 3: good health and well-being

Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development. Significant strides have been made in increasing life expectancy and reducing some of the common killers associated with child and maternal mortality, but working towards achieving the target of less than 70 maternal deaths per 100,000 live births by 2030 would require improvements in skilled delivery care.

Goal 4: quality education

The reasons for lack of quality education are due to lack of adequately trained teachers, poor conditions of schools and equity issues related to opportunities provided to rural

⁹<https://www.un.org/sustainabledevelopment/> 04/04/19

children. For quality education to be provided to the children of impoverished families, investment is needed in educational scholarships, teacher training workshops, school building and improvement of water and electricity access to schools.

Goal 5: gender equality

Providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large. Implementing new legal frameworks regarding female equality in the workplace and the eradication of harmful practices targeted at women is crucial to ending the gender-based discrimination prevalent in many countries around the world.

Goal 6: Clean water and sanitation

Clean, accessible water for all is an essential part of the world we want to live in and there is sufficient fresh water on the planet to achieve this. However, due to bad economics or poor infrastructure, millions of people including children die every year from diseases associated with inadequate water supply, sanitation and hygiene.

Goal 7: Affordable and clean energy

Energy is central to nearly every major challenge and opportunity the world faces today. Be it for jobs, security, climate change, food production or increasing incomes, access to energy for all is essential. Working towards this goal is especially important as it interlinks with other Sustainable Development Goals. Focusing on universal access to energy, increased energy efficiency and the increased use of renewable energy through new economic and job opportunities is crucial to creating more sustainable and inclusive communities and resilience to environmental issues like climate change.

Goal 8: Decent work and economic growth

Sustainable economic growth will require societies to create conditions that allow people to have quality jobs that stimulate the economy while not harming the environment. Job opportunities and decent working conditions are also required for the whole working age population. There needs to be increased access to financial services to manage incomes,

accumulate assets and make productive investments. Increased commitments to trade, banking and agriculture infrastructure will also help increase productivity and reduce unemployment levels in the world's most impoverished regions.

Goal 9: industries, innovation & infrastructure

Technological progress is the foundation of efforts to achieve environmental objectives, such as increased resource and energy-efficiency. Without technology and innovation, industrialization will not happen, and without industrialization, the development will not happen. There need to be more investments in high-tech products that dominate the manufacturing productions to increase efficiency and a focus on mobile cellular services that increase connections between people.

Goal 10: Reduce inequalities

To reduce inequality, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations. There needs to be an increase in duty-free treatment and continuation of favoring exports from developing countries, in addition to increasing the share of developing countries' vote within the IMF. Finally, innovations in technology can help reduce the cost of transferring money for migrant workers.

Goal 11: sustainable cities and communities

Cities are hubs for ideas, commerce, culture, science, productivity, social development and much more. At their best, cities have enabled people to advance socially and economically. With the number of people living within cities projected to rise to 5 billion people by 2030, it is crucial that efficient urban planning and management practices are in place to deal with the challenges brought by urbanization.

Goal 12: responsible consumption & production

Sustainable consumption and production are about promoting resource and energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and a better quality of life for all. Its implementation helps to achieve overall development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty.

Goal 13: climate actions

Climate change is now affecting every country on every continent. It is disrupting national economies and affecting lives, costing people, communities and countries dearly today and even more tomorrow. Weather patterns are changing, sea levels are rising, weather events are becoming more extreme and greenhouse gas emissions are now at their highest levels in history. Without action, the world's average surface temperature is likely to surpass 3 degrees centigrade this century. The poorest and most vulnerable people are being affected the most.

Goal 14: life below water

The world's oceans – their temperature, chemistry, currents and life – drive global systems that make the Earth habitable for humankind. Our rainwater, drinking water, weather, climate, coastlines, much of our food, and even the oxygen in the air we breathe, are all ultimately provided and regulated by the sea. Throughout history, oceans and seas have been vital conduits for trade and transportation.

Goal 15: life on land

Efforts are being made to manage forests and combat desertification. Two international agreements are being implemented currently that promote the use of resources in an equitable way. Financial investments in support of biodiversity are also being provided.

Goal 16: Peace, justice and strong institutions

The threats of international homicide, violence against children, human trafficking and sexual violence are essential to address to promote peaceful and inclusive societies for sustainable development. They pave the way for the provision of access to justice for all and for building effective, accountable institutions at all levels.

Goal 17: partnerships for goals:

A successful sustainable development agenda requires partnerships between governments, the private sector and civil society. These inclusive partnerships built upon principles and values, a shared vision, and shared goals that place people and the planet at the centre, are needed at the global, regional, national and local level.



Figure1.2: The sustainable development goals set by the United Nations

Source: Sustainable development goals, <https://www.un.org/sustainabledevelopment/> 04/04/19

As Ecotourism is interested in all these goals in a general manner, but the concentration of its efforts are on some goals specifically such as: goal 6, 11, 13, 14 and 15 and work on improving them, and with all the support these goals will be attained with time.

2.2. Ecotourism roots

There has a confusion surrounding the etymology of the term ‘ecotourism’, while there was a marvelous volume of literature on the topic, researchers agree on the fact that Ceballos-Lascurain was the first to coin the phrase in the early 1980s, He defined it as:

‘Traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas’¹⁰.

However, the term has been marked out further back to the work of Hetzer (1965), who used it to enlighten the complicated connection between tourists and the environment and cultures in which they interrelate. Hetzer identified four fundamental pillars that require to be followed for a more responsible shape of tourism. These include:

¹⁰Fennell (D); Ecotourism; LT international Ltd Padstow, Cornwall; 3rd edition; London; 2008; p 22 retrieved from <https://booksite.elsevier.com>

- Minimum environment impact
- Minimum impact on –and maximum respect for- host cultures
- Maximum economic benefits to the host country's grassroots
- Maximum recreational satisfaction to participating tourists

To sum up, the challenge of ecotourism is to maximize the profits of tourism while minimizing the environmental, economic, political, social, and cultural impacts.

According to Hetzer (personal communication, October 1997), the ecotourism concept was created as an answer to negative approaches of tourism especially from an ecological point of view when researches became concerned over the inappropriate use of natural resources and the first term that was proposed is 'eco-development' introduced as means to reduce improper use of resources in development.

The definition that is used these days and describes in the most accurate way ecotourism in my point of view, is Goodwin's definition:

'Ecotourism is: low impact nature tourism which contributes to the maintenance of species and habitats either directly through a contribution to conservation and/or indirectly by providing revenue to the local community sufficient for local people to value, and therefore protect, their wildlife heritage area as a source of income'¹¹.

We can add some facts to make clear and complete the definition with the forms that are included in the ecotourism sector:

- Low-impact tourism
- Adventure tourism
- Green tourism
- Anti-mainstream tourism

In a general way, we can say that ecotourism deals among the interaction with biotic devices of the natural environments. Ecotourism focuses on socially responsible travel, personal development, and environmental sustainability¹². Ecotourism involves travel to destinations where flora, fauna, and cultural heritage make the primary interest and attraction. Ecotourism is intended to offer tourists an insight into the impact of human beings on the environment and to promote more significant approval of our natural state.

2.3. Principles and characteristics of ecotourism¹³

¹¹Ibid; p 21

¹²Unique Ecotourism Activities Amp; Destinations In Malaysia ... (n.d.). Retrieved from http://adventurespartner.blogspot.com/2017/02/unique-ecotourism-activities-amp_2

¹³Chapter1 Ecotourism: Competing And Conflicting ... (n.d.). Retrieved from <https://booksite.elsevier.com/samplechapters/978075066878>

1. It must be consistent with a positive environmental ethic, fostering preferred behaviour¹⁴.
2. It does not denigrate the resource. There is no erosion of resource integrity.
3. It concentrates on intrinsic rather than extrinsic values.
4. It is biocentric rather than homocentric in philosophy, in that an ecotourist accepts nature mainly on its terms, rather than significantly transforming the environment for personal convenience.
5. Ecotourism must benefit the resource. The environment must experience a net benefit from the activity, although there are often spin-offs of social, economic, political or scientific benefits.
6. It is the first-hand experience with the natural environment.
7. There is, in ecotourism, an expectation of gratification measured in appreciation and education, not in thrill-seeking or physical achievement. These latter elements are consistent with adventure tourism, the other division of natural environment (wildland) tourism.

There are high cognitive (informational) and useful (emotional) dimensions to the experience, requiring a high level of preparation from both leaders and participants. (After Butler (1992), in Acott et al.1998).

2.4. Main actors in the Ecotourism System

Ecotourism involves numerous actors that can participate directly or indirectly in its supply chain; we can present them in a general way as follows:

- Visitors: or what we call ecotourists (defined in section 3);
- Natural areas and their managers, including both public and private spheres: attraction providers or touristic spots' managers;
- Local communities: people living in a defined area and share the same culture (traditions and the lifestyle of the region);
- Businesses, including various combinations of local companies, inbound operators, outbound operators, hotel and other accommodation providers, restaurants and other food providers...;
- The government, in addition to its role as a natural area manager;

¹⁴Intro to Ecotourism - Slideshare. (n.d.). Retrieved from <https://www.slideshare.net/reymarieoohlala/intro-to-ecotourism>

- Non-governmental organizations, such as environmental and rural development NGOs¹⁵.

Environmental impacts of tourism on the touristic areas:

Table 3.1 A framework for the study of tourism and environmental stress

Stressor activities	Stress	Primary response: environmental	Secondary response: (reaction) human
1 Permanent environmental restructuring			
(a) Major construction activity • urban expansion • transport network • tourist facilities • marinas, ski-lifts, sea walls	Restructuring of local environments • expansion of built environments • land taken out of primary production	Change in habitat Change in population of biological species Change in health and welfare of man Change in visual quality	Individual – impact on aesthetic values Collective measures • expenditure on environmental improvements • expenditure on management of conservation • designation of wildlife conservation and national parks • controls on access to recreational lands
(b) Change in land use • Expansion of recreational lands			
2 Generation of waste residuals			
• urbanisation • transportation	Pollution loadings • emissions • effluent discharges • solid waste disposal • noise (traffic, aircraft)	Change in quality of environmental media • air • water • soil Health of biological organisms Health of humans	Individual defensive measures local residents • air conditioning • recycling of waste materials • protests and attitude change towards tourists • change of attitude towards the environment • decline in tourist revenues Collective defensive measures • expenditure on pollution abandonment by tourist related industries • clean-up of rivers, beaches
3 Tourist activities			
• skiing • walking • hunting • trail bike riding • collecting	Trampling of vegetation and soils Disturbance and destruction of species	Change in habitat Change in population of biological species	Collective defensive measures • expenditure on management of conservation • designation of wildlife conservation and national parks • controls on access to recreational lands
4 Effect on population dynamics			
Population growth	Population density (seasonal)	Congestion Demand for natural resources • land and water • energy	Individual • Attitudes to overcrowding and the environment Collective • Growth in support services, e.g. water supply, electricity

Figure1.3: the impact of the Ecotourism on the environment

Source: Fennel (D); Ecotourism; LT international Ltd padstow cornwall; 3rd edition; London; 2008; Page72

2.5. Ecotourism Management: Strategy of Carrying Capacity

2.5.1. Carrying capacity definition

The tourism carrying capacity is an approach used to manage visitors in protected areas and national parks which evolved out of the fields of range, habitat and wildlife management.

¹⁵<http://www.fao.org> 12/12/2018

In these fields, managers attempted to determine the largest population of a particular species that could be supported by a habitat over a long period¹⁶.

Ecotourism uses carrying capacity as the primary strategy for its management to protect and maintain sites and natural parks on their initial state as well as working on empowering procreation of fauna, flora and cultural heritage in the concerned areas. Managing the concept appears to be a little bit simplistically, but it hides a lot of practical aspects in identifying and maintaining the desired conditions (Environmental, experiential, social and economic). It helps to draw the possibility of increasing the number of visitors in the region and at the same time on decreasing the amount of negative impact per visitor. Thus a proper value planning shows the sensibility of the procedure.

2.6. The environmental impacts of ecotourism¹⁷

In a research done by James Higham and Michael Lück in the department of Tourism in the School of Business of the University of Otago, PO Box 56,

Dunedin, New Zealand about ecotourism, they studied its impact in different perspectives and based on other researches and they present them as follows:

“Tourism in natural areas often places considerable stress on the environment, such as erosion, noise and air pollution, due to issues of access. Contrary to definitions of ecotourism, but credit worthy nonetheless, urban ecotourism is preferable in terms of the environmental impacts of transportation is critical of the ‘green veneer’ of ecotourism in remote areas of Norway; due to the environmental impacts of transporting visitors. In New Zealand many visitors to natural areas are transported by tour coach, fixed wing aircraft, marine vessels and helicopter, or transport themselves via private/rental vehicles and campervans. These means of transportation bring with them to natural areas issues of air pollution, noise and the development of infrastructures such as air strips, coach terminals, car parks and associated services. Where new areas are developed for recreation and tourism, compromise of aesthetic values and degradation of the environment often follow. All are considered to degrade the naturalness of the very resource that is attracting visitors in the first instance. Tourists

¹⁶Tourism Carrying Capacity - Wikipedia. (n.d.). Retrieved from https://en.wikipedia.org/wiki/Tourism_carrying_capacity

¹⁷Higham (J) & Luck (M); Urban Ecotourism: A Contradiction in Terms?; Department of Tourism, School of Business, University of Otago, PO Box 56, Dunedin, New Zealand; 2002; P46-48

participating in urban eco-tours may use existing infrastructure, including public transport to and from sites or departure points. Many such tours use 'hardened' environments that are regularly used by the local population.

Education: Many see education as the feature that distinguishes ecotourism from other forms of nature-based tourism. The highest aspirations of the ecotourism sector relate to changing the attitudes and values of visitors in an attempt to foster and encourage pro-environmental behaviour. The majority of visitors to ecotourism attractions in New Zealand consider it important to learn about the subject of their attention. Bearing this in mind, urban eco-tours present an important opportunity for mass education. Suggests that ecotourism should move 'beyond mere enjoyment to incorporate learning and to facilitate attitude and behaviour change'. In order to influence the travelers' attitudes and behaviour towards issues of conservation and protection, Markwell and Weiler (1998) argue that eco-tours must be intellectually challenging and emotionally stimulating. It has been noted that ecotourism in pristine natural environments is an exercise in 'preaching to the converted'. However many participants in urban eco-tours are not ecotourists per se but rather a more 'generalist' visitor type. This offers the opportunity for conservation issues to be communicated to a wider audience.

Financial viability: Demand for eco-tours in an urban environment offers a wide catchment of potential participants, more so than eco-tours in remote areas. This can be explained by relatively easy access to the site or departing point. The time and cost commitments of access dictate distance decay thresholds associated with travel to ecotourism operations in remote areas. However, once in the city during a holiday, a large number of tourists may add an urban eco-tour to their general sightseeing schedule. This suggests that capacity rates for such operations may be higher and more reliable. Higher capacity rates bring with it the opportunity to increase the guide: guest ratio and therefore provide a higher standard of visitor operation.

Seasonal patterns of urban tourism are generally less extreme than is the case at nature-based tourism operations. Tourism at urban destinations is usually dictated more by human or institutional factors, than natural phenomena associated with seasons and climate. It is worthy of note that all three operations presented in this article operate throughout the year with no period of closure to visitation. As such operational loadings are dictated by urban tourism patterns rather than the state of the focal species, this is likely to result in less extreme

seasonal patterns of visitation to urban ecotourism operations, allowing operators the chance to employ permanent staff and operate year round. These factors act to increase the financial viability of ecotourism operations.

Social impacts: Fennell (1999) presents a consideration of the social impacts of tourism and their relevance to ecotourism. He cites the work of Ryan (1991) who contributes a catalogue of factors that determine the extent to which social impacts associated with tourism are likely to occur. These include accessibility of the tourist destination, differences in cultural norms between tourist generating and tourism receiving zones, degree of exposure to other forces of technological, social and economic changes, size of the destination area and, therefore, density of the tourist population. Fennell (1999) proceeds to observe that ‘as ecotourism continues to diversify and exploit relatively untouched regions and cultures, there is the danger that (negative social impacts) will occur’. These factors suggest that urban destinations are less likely to generate negative social change than apply in the scenario described by Fennell (1999)’.

The research shows that Ecotourism has positive as it has negative impact on the different components of the touristic destination.

This is considered as a completely normal thing as anything we undertake has a positive and a negative side. But what we compare is the proportion of these effects with regular tourism, here we can see that it is less impactful and can be used as an efficient alternative.

Section 03: Ecotourism Supply chain management

3.1. Ecotourism supply chain

Nearly each ecotourism spectator witnesses the signing of structuring partnerships linking ecotourism actors. Such companies not only endorse the setting of unbiased objectives but also support the achievement of these goals through the employment of the varied proficiencies, talents and contributions each part can make. We can summarize the ecotourism supply chain in an elongated shape in the following figure:

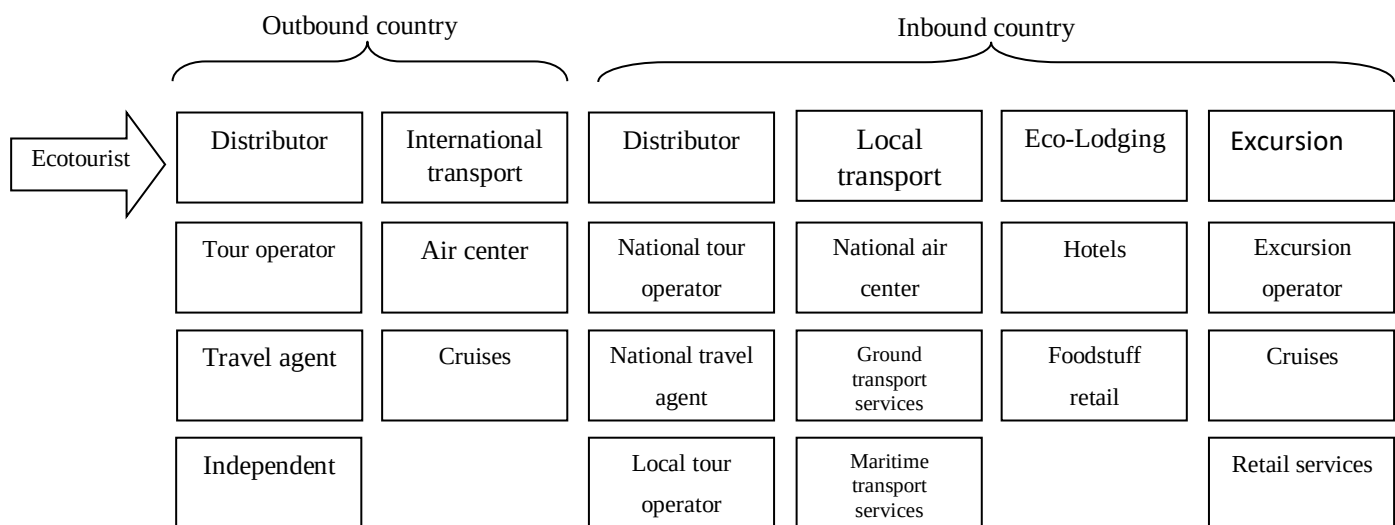


Figure1.4: the Ecotourism supply chain in its linear shape

Source: www.gvc.duk.edu (12/12/2018)

Ecotourist: is the individual who travels from his usual living place to another place for a temporary stay and to combine his satisfaction with sustainable goals.

Transport: constitute the agents that ensure the ecotourists movements with low-carbon emission.

Distributor: is an operating structure, system or linkage of various combinations or organizations through which a producer of sustainable travel products describes, sells or confirm arrangements to the buyer (ecotourism), taking in mind minimization of social, environmental negative impacts.

Eco-lodging: Eco-lodges can be located in pristine natural environments such as beaches, jungles and mountains or associated with cities, they have to highlight elements such as environmental responsibility and minimizing negative impact.

Their responsibility tends to be illustrated offering renewable and efficient energy sources, recycling services, eco-friendly toiletries, locally purchased food, organic towels, harmless clean-up products, water preservation systems and various additional sustainability-focused initiatives.

Excursion: Ecotourism excursions are pleasure trips and tours based on minimizing harm, consumption and waste; they are:

- Nature-based: reliant on the natural environment and often -but not exclusively- undertaken in protected spots;
- Environmentally and culturally educative – satisfying a desire for knowledge and changing people’s attitudes;
- Sustainably managed – adopting accessible content of sustainability.

Different interactions and possible supply chains in the ecotourism sector:

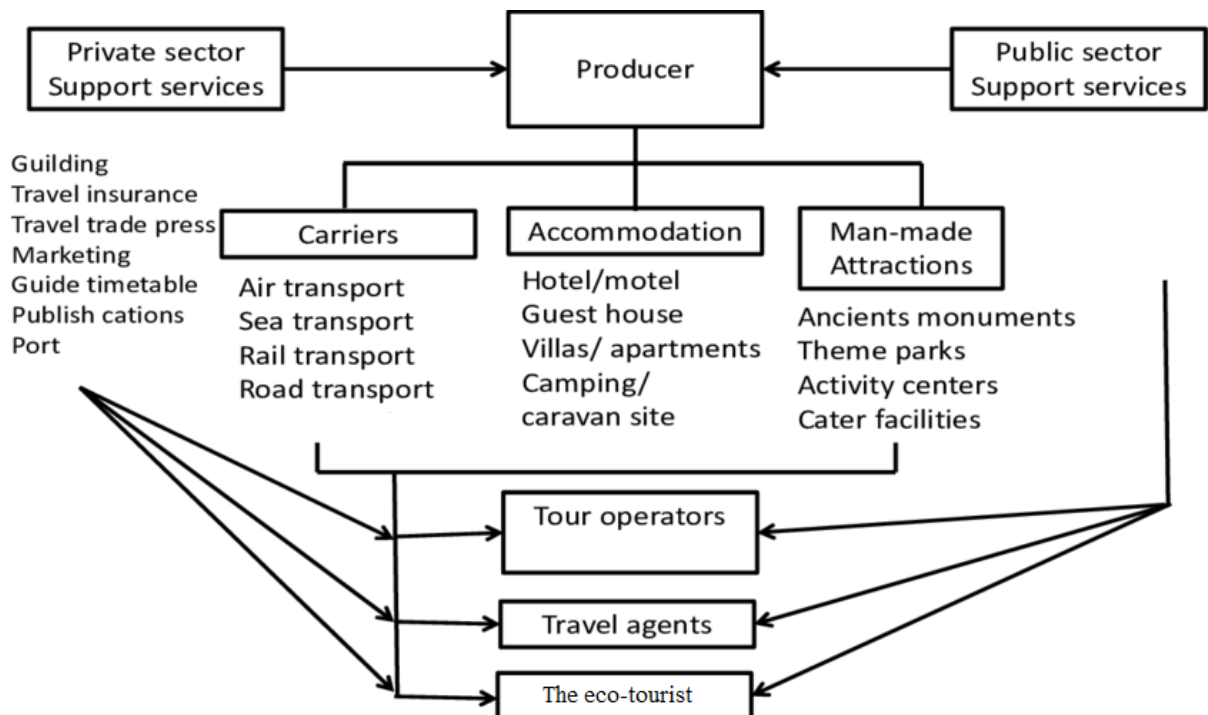


Figure1.5: Possible interactions in a supply chain in Ecotourism

Source: www.theresearchgate.com Behatia camelia (13/12/2018)

3.2. Ecotourism supply chain management

The management of partnerships between these actors varies across the situation but the most ultimate goal is attaining the optimal economic performance by costs reduction, and the specificity of this field is the concentration on the following:

- Provide environmental protection, accommodation and food;
- Encourage security and enforcement;
- Monitor and control impacts;
- Provide information, such as through interpretive programmes, guides, and orientations

3.2.1. Definition

“The supply chain consists of all parties who are involved in fulfilling a customer request, including the suppliers, transporters, warehouses, retailers and customers themselves. The most common GSCM practices involve organizations assessing the environmental performance of their suppliers, requiring suppliers to undertake measures that ensure the environmental quality of their products, and evaluating the cost of waste in their operating systems. However, GSCM practices also extend to the entire value chain (from supplier to consumer) when organizations inform buyers of ways to reduce their impacts to the natural environment. Each of these actions has the potential to reduce the direct and indirect environmental impacts of an organization’s final product.”¹⁸

3.2.2. Ecotourism supply chain management tools

Collaboration across internal departments is essential to maintaining healthy Green Supply Chain Management practices; an organization must coordinate its product design department with its marketing department and its suppliers to minimize waste and environmental impact at every node in the supply chain. However, traditional organizational structures generally are fragmented with purchasing departments operating separately from marketing and sales, and operations functioning independently from human resources, with

¹⁸Environmental Management Systems And Green Supply Chain ... (n.d.). Retrieved from <https://pdfs.semanticscholar.org/4243/ddaed83f4f1f4a6fa965>

each having their own goals. One way that organizations are managing these relationships is to implement 'product design teams' that include representatives from numerous internal departments as well as suppliers who discuss environmental issues throughout product design. These teams often rely on lifecycle analysis to ensure minimal impact from raw material extraction to final disposal. Which encourage cross-departmental coordination, implementing GSCM practices such as these requires an organization's internal departments and suppliers to reorient their operations so that they collaborate to pursue a common environmental goal.

In other instances, organizations that implement Environmental Management Systems build on their existing knowledge and proficiencies in pollution prevention and therefore can more easily address the environmental impacts of their supply chain. These organizations have invested in training their employees to improve the organization's environmental management and assess their production processes continually so as to eliminate inefficiencies. They also systematically evaluate and share knowledge about the organization's environmental impacts. By encouraging their employees to work together in teams and continually improve the organization's environmental performance, companies may be able to leverage their pollution prevention skills and environmental knowledge toward other integrated forms of environmental management such as Green Supply Chain Management practices. Environmental Management Systems therefore offer a management structure to support supply chain management decisions that affect the natural environment by calling a third party expertise to assess product inputs¹⁹.

3.3. Ecotourism planning²⁰

Ecotourism Planning and Protected Areas: When most of us think about planning for protected areas, we think about management plans for a specific national park or other type of protected area. Nevertheless, it is important to understand that planning for individual protected areas takes place within a more general planning context with several different levels and components. Each level impacts upon the others. The reason for this derives from the role that protected areas play in achieving national and local development goals, which should be based on the concept of sustainable development. General Management Plans are

¹⁹Darnall (N); Environmental Management Systems and Green Supply Chain Management; George Mason University, USA; 2008; p 36

²⁰Drumm (A); Ecotourism Development – A Manual for Conservation Planners and Managers Volume 1: An Introduction to Ecotourism Planning; The Nature Conservancy, Arlington, Virginia, USA. Second Edition 2005; P. 59-61 retrieved from <http://www.authorstream.com/Presentation/momiyummy-1445794-ecotourism-planning>

usually prepared for each individual protected area. These plans take the overall goals and objectives established for the protected area system and apply them to the natural and cultural situation of the specific protected area. The management plan will define the protected area's specific management objectives and a zoning scheme as well as establish strategies, programs and activities for achieving those objectives. The management plan is designed to provide protected area managers with the guidelines to manage their area for a period of five years or longer. More detailed plans will then be derived from the management plan. Conservation Area Plans (CAP) may be developed as tightly focused complements to general management plans or, in some cases, as alternatives. A CAP may identify ecotourism as a strategy to reduce threats at a site or as a source of conservation finance. In either case, an Ecotourism Management Plan (EMP) shows how thematic or programmatic plans such as an EMP will be based upon the general management plan and its recommendations. In some countries, management plans carry the force of law or ministerial sanction. In others, they are less strictly approved, and protected area managers have more liberty to apply them. Many management plans have been prepared over the years, and much has been learned about how to develop them. Some of the major lessons learned are:

- Protected areas must be planned as an integral part of the development of the region and country where they are located.
- Management objectives should orient planning at all levels.
- The best planning is carried out by a team of people that has representatives from different disciplines, institutions and points of view. Local community organizations, tourism operations and governments should be represented in the planning process team. Some of these representatives may also be in a good position to provide lodging, transportation or even some funding for the planning team.
- The effective interaction of these individuals creates a synergistic situation in which the whole becomes greater than the sum of its parts.
- Good planning depends upon the effective participation of all relevant stakeholders. With regard to an EMP, these stakeholders include all persons and institutions that will be involved in carrying out the ecotourism program within the protected area or other natural area. Protected areas will need commitment and support from all of these people and organizations, as well as from their own personnel, if they are to fulfill the high expectations that are established for them. The planning process must involve all of them in meaningful ways in order to obtain that commitment and support.

What is an Ecotourism Management Plan? An ecotourism management plan is a tool to guide the development of tourism in a protected area by synthesizing and representing the vision of all the stakeholders while fulfilling the conservation objectives for the site. It should result in a document expressing the stakeholders' recommendations for how ecotourism is to be carried out in a particular protected area. Typically, an EMP will be a detailed continuation of general guidelines established in a general management plan or CAP. The general management plan usually determines that ecotourism is the kind of tourism that is desired for a particular protected area and that ecotourism, or perhaps public use, will be a specific program to be carried out by protected area managers. The general management plan will also define the zoning configuration for the area, which in turn will designate those sectors that will be available for tourism purposes

The planning process should be open and transparent. Once the plan is completed, it should be publicized and distributed to stakeholders. The plan could be written as a separate document or included in the general management plan for the protected area. How long will it take to accomplish these steps from start to finish? The length of the planning process depends on several factors, principally:

- The availability and amount of funding. If funding is fully available at the beginning of the planning process, then this facilitates the EMP planning process.
- The complexity of the tourism/public use situation of the protected area. If there are already a large number of visitors, tourism operators and/or visitor sites, the plan may require a lot of data collection and analysis. On the other hand, when a protected area has little tourism but a lot of perceived potential, more evaluation of potential and resources needs to be done. The sheer size and number of actual and potential visitor attractions is also a factor.

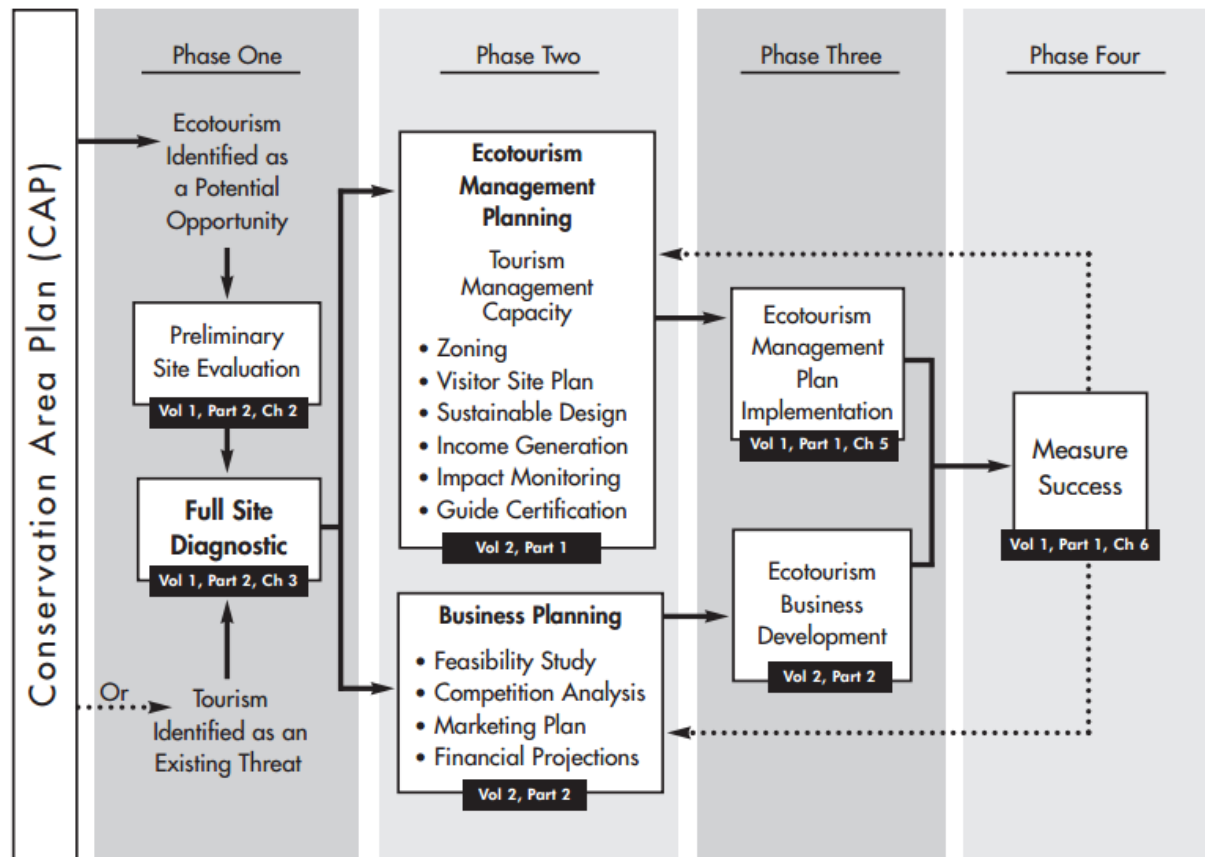


Figure1.6: study of an ecotourism project

Source: Drumm (A); Ecotourism Development – A Manual for Conservation Planners and Managers Volume 1: An Introduction to Ecotourism Planning; The Nature Conservancy; Second Edition; Arlington Virginia USA; 2005 P 61 retrieved from <https://app.grammarly.com/ddocs/512448787>

This figure explains all the steps included from the beginning of the planning phase till the execution and the success measurement, it also shows all the stakeholders concerned in this process, and the explanation is above in the section.

Conclusion

Coming to the ecotourism on its earliest days in Algeria is a significant step for either the theory or practice; because it permits us to study the field from all its perspectives to get ready performs for the future. Considering ecotourism for an alternative of mass tourism continues to viably develop in a lot of pioneer countries of tourism in the world, because its appeal lies on the safeguard of humans, culture and environment by improving their conditions, while at the same time activating economic opportunities for individuals and communities.

In this chapter, we talked about the key features that we need to study in the ecotourism in supply chain management, its actors, uses and tools. Making the customer in the centre of our attention is a duty, and in order to satisfy its needs, we can draw our attention to the thing that concerns all of us in our existence (environment, culture and well being of societies) as a competitive advantage.

Chapter 2: digital supply chain management

Introduction

If enterprises desire to get on the same timeline as most consumers, a digitized future of processes must be set. A crucial element will be the growth of traditional supply chains toward a connected, smart, and extremely efficient supply chain ecosystem.

The supply chain today is a series of mostly discrete, isolated steps taken through marketing, product innovation, development, manufacturing, distribution, and finally into the hands of the customer. While digitization brings down those walls, in addition to removing all virtual and existent barriers, making the chain a completely integrated ecosystem that is fully transparent to all the players involved, from the suppliers of raw materials, components, and parts, to the transporters of those supplies and finished goods, and finally to the customers demanding fulfillment.

These interrelated sequences depend mainly on several key technologies: integrated planning and execution organizations, logistics visibility, smart procurement and warehousing, and advanced analytics. The result would be for sure optimization of the different activities, a reduction and anticipation of disruptions within the supply chains, by fully modeling the network, creating “what-if” scenarios, and adjusting in real time as conditions change.

Once built, the digital supply “network” will offer a new degree of competitiveness and agile responsiveness enabling companies that get there first to control the market by providing customers with the most efficient and transparent service delivery.

This chapter will introduce the different perspectives, practices and abilities of this new strategy by showing at first a detailed presentation of the digital supply chain and networks and then extend the research on its management in a general manner to get at the end to give an image of its practices in the ecotourism sector.

Section 1: E-business

1.1.E-business

1.1.1. Definition

E-business (electronic business) has various definitions, and as we see everywhere, it is used in many different contexts. Historically; one of the first to use the word was IBM, in October 1997, when it launched a campaign built around E-business. Today, most essential corporations are rethinking their businesses in terms of the Internet in addition to its new culture, and capabilities and this is what some see as E-business.

If we can give some common definitions of E-business we choose the following: “E-business is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners, E-business includes customer service (e-service) and intra-business tasks”²¹.

Also; “E-business is the transformation of key business processes through the use of Internet technologies. E-business is a company that can adapt to constant and continual change e-commerce is the development of intranet and extranet is part of e-business, E-business is everything to do with back-end systems in an organization”²².

However, in practice, E-commerce and E-business are often used interchangeably.

A definition of E-commerce now is required, so E-commerce is:

1.1.2. Definition of E-Commerce

With the advent and initiation of the Internet in our lives, the term e-commerce began to include several actions we can present some of them as follows:

- Electronic trading or the buying/selling of physical products and of intangibles such as information.
- Steps involved in the operation on line, such as online marketing, ordering on internet, e-payment and support for delivery.
- The electronic provision of services: such as after sales support, on-line legal advice, electronic support for collaboration between enterprises (on-line design or virtual business consultancy teams).

Some of the definitions given to e-commerce in publications are:

²¹Zwass (M); Introduction to e-commerce; Stuttgart V Technical Publications; Germany; December; 200; p9
retrieved from http://www.sagepub.com/sites/default/files/upm-binaries/9598_019964Ch1.pdf

²²Ibid; P 9

“Electronic Commerce is where business transactions take place via telecommunications networks, especially the Internet”²³

“Electronic commerce describes the buying and selling of products, services, and information via computer networks including the Internet”²⁴

“Electronic commerce is about doing business electronically”²⁵.

“E-commerce, e-commerce, or electronic commerce is defined as the conduct of a financial transaction by electronic means”²⁶

1.2.The drivers of E-Business

If we want to compare between the countries in the E-businesses it is crucial to identify the key drivers, these drivers allow comparison and can be measured by some criteria that can draw attention to the stages of advancement of E-Business in each country. The criteria that can determine the level of advancement of E-Business are recapitulated and categorized as:

- 1- Technological aspect: The degree of advancement of the telecommunications facilities which offers access to the new technology for the business and the consumers.
- 2- Political aspect: it is illustrated in the role of government in creating legislation, initiatives and supporting the use and development of e-commerce and information technology.
- 3- Social aspect: integrating the level of advancement in IT culture and training which will allow both potential buyers and the workforce to understand to use the new technology.
- 4- Economic aspect: includes the general wealth and business health of the nation and the fundamentals that contribute to it. Also, they are influenced by:
 - Organizational culture: research and development (R&D); its keenness to innovate and use technology to achieve objectives.
 - Commercial benefits: in terms of cost savings and enhanced efficiency that impact on the financial performance of the firm.
 - Requirements of customers and suppliers: product and service.
 - Competition: the business keeps up with competitors and industry leaders.

²³: Ibid; p5

²⁴ : Ibid p5

²⁵ : Ibid p5

²⁶ : Ibid p5

Key drivers	Measurement criteria
Technological factors	- Telecommunications infrastructure Backbone infrastructure and architecture Industry players and competition Pricing Internet service providers Range of services available (e.g. ADSL, ISDN) Ownership (private or public sector) - Access to new technology developments - Bandwidth - Speed of development and implementation of new technology by industry
sector Political factors	- Number and type of government incentives and programmes to support the use and development of new technology - Legislation: number and supportive or restrictive laws and policies that govern electronic data, contacts and financial transactions. For example, laws that recognize and enforce the validity of electronic documentation, contracts and transactions in a court of law; the validation of digital signatures; the legal usage of electronic security measures such as encryption - Public policies: whether the government supports the growth of electronic transactions and processes. For example, filing tax returns to the Inland Revenue electronically, the national education curriculum and training
Social factors	- Skills of the workforce - Number of users online - The penetration rate of PCs - Level of education; computer literacy and IT skills - Culture of technophilia: a willingness and ability to adopt new technology and the speed at which technology achieves critical mass as in Japan
Economic factors	- Economic growth: GDP - Average income - Cost of technology (hardware and software) - Cost of access to telecommunications infrastructure: pricing structures and rates

	- Commercial infrastructure: the advancement of the banking sector; payment systems - Innovative business models
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Figure2.1: The key drivers of E-Business

Source: V. Zwass; Introduction to e-commerce; Macmillan Technical Publications; Stuttgart Germany; December 2001; P 9

1.3.The barriers to E-business

The drivers of E-business were summarised in the table above, and according to a research done Nir Kshetri in Bryan School of Business and Economics, in the United States about the barriers to the development of e-business and the focus was categorized on three aspects: economic, sociopolitical and cognitive. Also, which says that “while economic and sociopolitical factors focus primarily on the environmental characteristics, the cognitive component reflects organizational and individual behaviors”²⁷; which means that even if there are barriers that we consider external and debatably out of our abilities, there is also the part of individual and decision makers’ part in businesses and below there are more information explaining each barrier:

- 1- Economic barriers: Research has suggested that slow Internet diffusion leads to a low IT business value measured by performance and productivity. Barriers associated with the lack of economies of scale are widely recognized. A study found that small sizes of many Caribbean nations inhibited the development of “clusters” for the IT industry. Another study found adverse scale effects in the Tanzanian e-commerce industry. Slow Internet diffusion in developing countries can be attributed to market and infrastructural factors controlling availability of the information and communication technologies. In Tanzania, for instance, a lack of electrical supply, a low teledensity and a lack of purchasing power resulted in a low rural Internet usage. Moreover, manufacturers of Information and Communication Technologies products focus on large distributors often located in developed countries for their selling initiates. Unavailability of credit cards is also a major hurdle. Past studies have found such problems for B2C e-commerce in Russia, India and Latin America. In Asia, 35–40% of transactions are cash-based. Other aspects of financial systems are also underdeveloped. In the Caribbean, local banks do not process online credit card transactions or other forms of electronic payment systems. The Internet is also

²⁷Barriers to e-commerce and competitive business models in developing countries: A case study Nir Kshetri * Bryan School of Business and Economics, The University of North Carolina at Greensboro, P.O. Box 26165, Greensboro, NC 27402-6165, United States Received 22 December 2005; received in revised form 13 December 2006; accepted 8 February 2007 Available online 14 February 2007 p. 444 retrieved from http://libres.uncg.edu/ir/uncg/f/N_Kshetri_Barriers_2007.pdf

less attractive for traditional economic sectors (e.g., agriculture) that account for a significant proportion of developing countries' economies. For instance, a study indicated that cost savings from e-commerce – as a percent of total input costs – is only 2% for firms in traditional sectors such as coal compared to 40% in electronic components. Rapid growth of e-commerce in the US can be attributed to infrastructure already in place and an easy availability of a physical delivery system. Such systems are rarer in developing countries. In the Caribbean region, logistics challenges are among major barriers to e-commerce diffusion. It is difficult for small developing countries to attract FedEx and UPS to provide delivery services. Finally, bandwidth availability is low in developing countries. A lower bandwidth means that a longer time is needed to transfer data and hence a lower relative advantage of the Internet.

- 2- Sociopolitical barriers: Sociopolitical barriers can be explained in terms of formal and informal institutions. They often tend to be more difficult and time consuming to overcome than technological barriers. Social barriers are related with informal institutions. In Asia, personal relationships are important in businesses and anonymous online relationships threaten established interpersonal networks. Preference for personal face-to-face communications over e-mails and precedence of established relationships over the Internet's inter-personal efficiency also work against e-commerce. Political barriers are applied in an organized way by formally appointed groups. Many developing countries lack laws that provide legal validity of digital and electronic signatures (DES). Some developing countries treat Information and Communication Technologies products as luxury items and impose import duty, surtax, value added tax, sales tax, etc. Weak formal institutions also lower consumer trust in e-commerce and willingness to buy online. The literature provides abundant evidence that legal barriers are among major hindrances to e-commerce in the developing world. A survey conducted among Brazilian consumers indicated that the low e-commerce adoption rate was related to government regulations such as concern about privacy and security, lack of business laws for e-commerce, inadequate legal protection for Internet purchases and concern over Internet taxation. Likewise, in China, a lack of 'transactional and institutional trust' related to the weak rule of laws was a major impediment to e-commerce.
- 3- Cognitive barriers: Cognitive factors are related to mental maps of individuals and organizational decision makers. Some analysts argue that cognitive barriers are more serious than other categories of barriers in developing countries. Many effects such as inadequate awareness, knowledge, skills, and confidence serve as cognitive feedbacks.

For instance, the top management's a priori evaluation influences cognitive bias toward e-business. In developing countries, organizations' human, business, and technological resources, a lack of awareness and understanding of potential opportunities, risk aversion and inertia often lead to a negative cognitive assessment of e-commerce. Consumer's lack of awareness and knowledge of e-commerce benefits and their lack of confidence in service providers have also hindered e-commerce. For instance, in Latin America, a low rate of credit card usage can be attributed to the "lack of trust in than lack of access to" the credit card system. Another survey found that the degree of trust in the postal network for a package worth 100US\$ was strongly correlated with Gross National Product per capita. Likewise, concerns related to postal thefts were among major barriers to e-commerce in Trinidad. A final consideration with cognitive barriers is related to general and computer illiteracy and a lack of English language skills. Note that most software, human-computer interfaces and content on the Web are in English. Estimates suggest that half of the populations of developing countries cannot speak an official language of their own country. A lack of capability in English language has thus been a major inhibitor among non-English-speaking consumers, especially the older generation. In Slovenia, 75% of the population fluent in English used the Internet compared to only 1% of non-English speakers. The number of sites in languages such as Quechua (10 million speakers in Bolivia, Ecuador and Peru) or Ibo (15 million speaker in Nigeria)²⁸

1.4.The benefits of E-commerce and E-business

For any variable that joins the game, it adds and offers a plus in a general manner, here we can show some benefits of this change that touched the world, and we can divide these benefits among three stakeholders that were majorly affected: organizations, consumers and society.

- Benefits to organizations

- The target became more prominent, and the marketplace became international what used to be a single physical marketplace situated in a geographical region has nowadays become a borderless marketplace, including national and international markets. By becoming e-commerce enabled, businesses now have access to people all around the world. By consequence all e-businesses have become virtual multinational corporations.

²⁸Ibid p. 444-445 retrieved from http://libres.uncg.edu/ir/uncg/f/N_Kshetri_Barriers_2007.pdf

- Also; the cost of creating, producing, processing, distributing, storing and retrieving paper-based information has decreased.
 - E-commerce has revolutionized the way consumers buy goods and services; as now the consumer has the choice of participating in creating and processing the products and services by customizing depending on his requirements. We give the example of Ford, as we know in the past the customer can choose any colour as long as it is black, but now visiting the website of Ford the customer can configure a car according to his specifications within minutes. This way enables reducing the “pull” type of supply chain management, as it is based on collecting the customer order and then delivering through Just-In-Time manufacturing. And this helps the big industries to produce what they can sell and not producing to stock as components become quickly obsolete and with all the costs of their high technologies and processes.
 - The cost of the creation of E-businesses is cheaper than businesses which encourages the economy and gives the chance to innovative ideas and projects to see the light
 - Inferior telecommunications cost: The Internet is much cheaper than the one which is limited to specialized organizations and its certified associates. It is also cheaper to send an e-mail via Internet than express dialing.
 - Digitization of products and processes: in the case of software and music/video products, that could be downloaded, up-loaded or e-mailed straight to the customers in less than 24 hours which omits the time constraints.
 - Businesses could be contacted by customers or suppliers and vice versa at any moment.
- **Benefits to consumers**
- 24/24-7/7 access everywhere: allows customers to shop or accomplish other transactions at any time of the day, all year long, at any location no more time limitations as time now is the most expensive thing as everything is going very fast. For example, checking balances, making payments, obtaining travel and other information.
 - More choices: Customers not only have an entire variety of products that they can choose from and customize, but also an international competition by the selection of suppliers.
 - Price comparisons: Customers can shop around the world and conduct comparisons either directly by visiting different sites, or by visiting a single site where prices are

aggregated from many providers, example of Skyscanner website for travel products and services.

- Improved delivery processes: This can range from the immediate delivery of digitized or electronic goods such as software or audio-visual files by downloading via the Internet, to the online tracking of the progress of packages being delivered by mail or courier.
 - An environment of competition where substantial discounts can be found or value added, as different retailers compete for customers. It also allows many individual customers to aggregate their orders together into a single order presented to wholesalers or manufacturers and obtain a more competitive price, for example Letsbuyit website
- **Benefits to society**
- Facilitates delivery of public services: For example, health services available over the Internet (online consultation with doctors or nurses), and filing taxes over the Internet.
 - Flexibility: Enables more flexible working practices, which enhances the quality of life for a whole bunch of society, enabling them to work from home. Not only is this more convenient and provides happier and less stressful working environments, it also potentially reduces environmental pollution as fewer people have to travel to work regularly.
 - Connects people: Enables people in developing countries and rural areas to enjoy and access products, services, information and other people who otherwise would not be so readily available to them.

1.5.The limitations of E-commerce and E-business

Isaac Newton's once said in his 3rd Law of Motion that: 'For every action there is an equal and opposite reaction' and as we see that there was much hype surrounding the Internet and E-commerce and E-businesses over the last few years. Much of it is promoting that the Internet and e-commerce are the solution for all our problems and face all the constraints we had before which leads us to look for its limitations as we did for the benefits, we will present the same three perspectives: organizations, consumers and society.

- **Limitations to organizations**

- Lack of system security: There are numerous reports of websites and databases being hacked, and security holes in software are common. For example, what happened with Facebook and Cambridge Analytica scandal.
 - The time lack and the businesses that became under pressure to innovate and develop to exploit the new opportunities that pressure and curtail longer-term competitive advantage.
 - The increasing competition from both national and international competitors that leads to price wars and subsequent unsustainable losses for the organisation.
 - Problems older and newer technology: There are problems where older business systems cannot communicate with Internet infrastructures, leading to some organizations running almost two independent systems where data cannot be shared. This often leads to having to invest in new systems or an infrastructure, which bridges the different systems. In both cases this is both financially costly as well as disruptive to the efficient running of organizations.
- **Limitations to consumers**
- Computing equipment is needed for individuals to participate in the new 'digital' economy: which means an initial capital cost to customers. Basic technical knowledge is required of both computing equipment and navigation of the Internet and the World Wide Web.
 - Cost of access to the Internet: tariffs of internet
 - Cost of computing equipment: Not just the initial cost of buying equipment but making sure that the technology is updated regularly to be compatible with the changing requirement of the Internet, websites and applications.
 - Lack of privacy of personal data: There is no real control of data that is collected over the Internet. Data protection laws are not universal and so websites hosted in different countries may or may not have laws which protect the privacy of personal data.
 - Customers are unable to touch or feel goods being sold online or gauge voices and reactions of human beings.
- **Limitations to society**
- Breakdown in human interactions and relations: people got used to interacting electronically which might leads to an erosion of personal and social skills which

might eventually be harmful to the world that makes people more comfortable interacting with a screen than face to face.

- Social division: Possible risk that there will be a raise in the social split between technological and technical haves and have-nots; by consequence people who are not technically skilled become unable to get better-paid jobs and could form an underclass with potentially harmful implication for the social steadiness.
- Dependence on telecommunications and IT infrastructure and power: that constitutes a problem in developing countries because power, advanced telecommunications infrastructures and IT skills are not provided to all the society.
- Wasted resources: As new technology dates quickly all the old computers, keyboards, monitors, speakers and other hardware or software are thrown away.

Section 2: Digital supply chain

Digital technology is unsettling traditional activities and operations. Nowadays all businesses became digital. As a consequence, the impact on supply chain management is chiefly enormous. Industries cannot exploit the full potential of digital without re-inventing or even making slight changes in their supply chains. This drives us to look closely at how companies could generate higher levels of value by re-imagining their supply chains.

Before going into the detail of this research, a look at the Industry 4.0 is necessary.

2.1. Industry 4.0

“The fourth industrial revolution; A transformation in production and automation was brought on first by steam and water power (Industry 1.0), then by electrification (2.0), and more recently by the digital computer (3.0). Industry 4.0, digitization, is about companies orienting themselves to the customer through e-commerce, digital marketing, social media, and customer experience. Ultimately, virtually every aspect of business will be transformed through the vertical integration of research and development, manufacturing, marketing and sales, and other internal operations, and new business models based on these advances. In effect, we are evolving toward the complete digital ecosystem”²⁹.

The long road to Industry 4.0, the digitization of every aspect of business

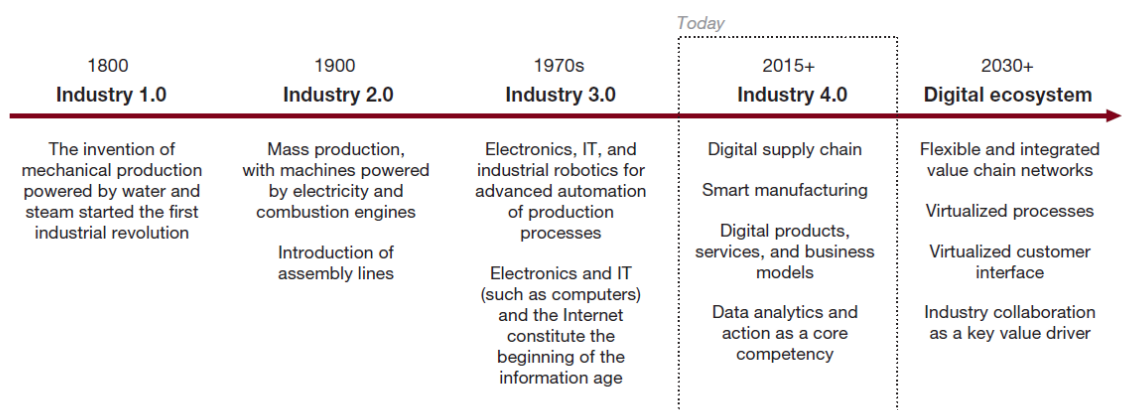


Figure2.2: the development of industries with time

Source: How digitization makes the supply chain more efficient, agile, and customer-focused; PWC; Munich; 2016; p 8

²⁹ How digitization makes the supply chain more efficient, agile, and customer-focused; PWC; Munich; 2016; p 7

Behind this colossal revolution of the industry, digital supply chain gets to the center of the activities as shown in the following table:

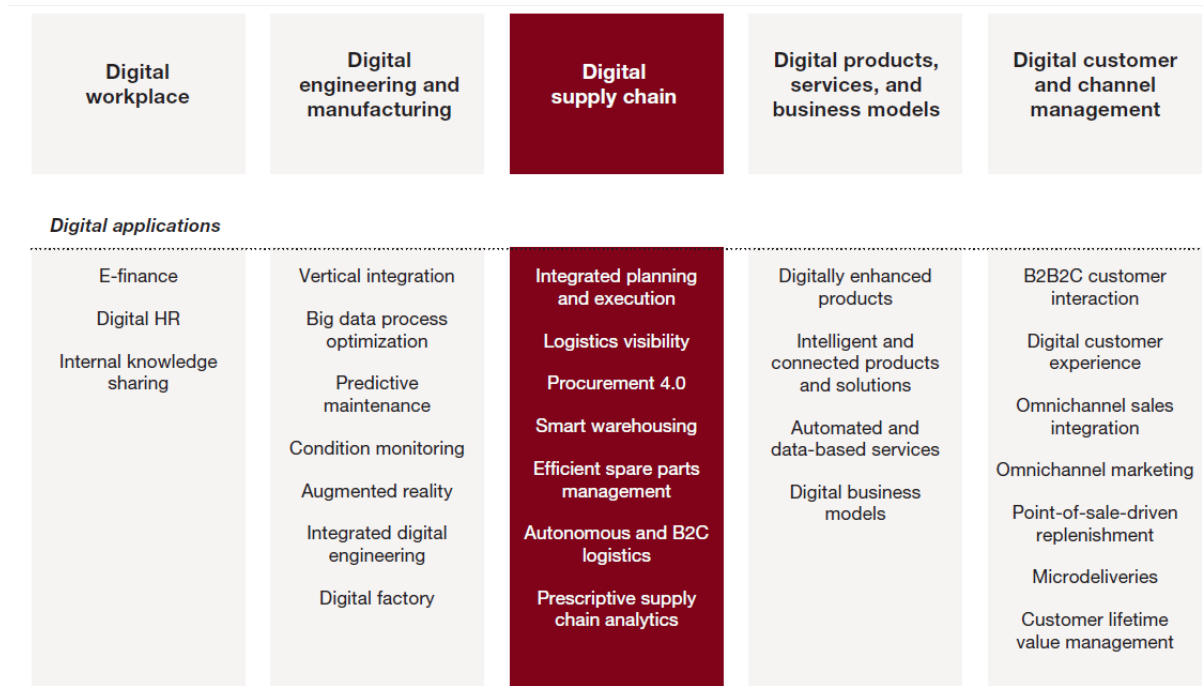


Figure2.3: the position of the digital supply chain with the other activities

Source: How digitization makes the supply chain more efficient, agile, and customer-focused; PWC; Munich; 2016; p 9

2.2. Definition of the digital supply chain

By using digital technologies, the business gets the power to drive a convergence of supply chain elements to capture huge savings and competitive advantages by nurturing networked processes.

“Optimizing the complete enterprise instead of individual functions; uniting designers, suppliers, manufacturers, distributors, logistics services providers, retailers and even customers; and inspiring new ways of thinking and working by enhancing visibility, collaboration and innovation”³⁰

2.3. The emergence of the digital supply chain

Over the last thirty years, logistics has changed dramatically: from a purely operational task that reported to sales or production and focused on ensuring the supply of materials for the production lines and products for the delivery to customers, to an independent supply

³⁰G.Harifan, A.Sharma, C.Newberry; The Digital Supply Network A New Paradigm for Supply Chain Management; Accentuate strategy; 2014; page 4

chain management service that in some companies is already being led by a Chief Supply Chain Officer. The focus of the supply chain management function has altered to advanced planning processes, such as demand planning or S&OP and even integrated S&OP, which have become well established business processes in companies of nowadays, while operational logistics has often been outsourced to a third-party.

While the supply chain function ensures business and management operations from customers to suppliers. Thus Industry 4.0 appeared.

This industry creates an interruption that requires the enterprises to rethink the design of their supply chain. Technologies have emerged altering the traditional ways of working. In terms of needs, trends and customer expectations and needs change the equation in addition of the need to adapt. In term of performance and opportunities; supply chains have the chance to reach the next level of effectiveness and efficiency, by emerging to digital supply chain business models, and as a consequence transform the company³¹

2.4. The changes made on SCOR Model from the traditional to the digital era

1996-2023:

Comment of the figure2.4 below: In 1996, the association of supply chain management APICS started working on the first SCOR model, developed its metrics using basic linear supply chain. At the time it was sufficient and functional because businesses started working with supply chain as a concept that exists but no one had a definitive definition of what is actually a “supply chain” and as simple as it is shown in the figure below starting by planning the product or the service to develop a new product or the launch of a modified version or even the same version that the competition offers, to directly go towards sourcing from external or internal suppliers to start the production or the making of the product or the service to finally deliver and here ends the supply chain any relation with the customer or listening to the reviews and feedbacks.

³¹ <https://www.mckinsey.com/business-functions/operations/our-insights/supply-chain-40--the-next-generation-digital-supply-chain> 31/03/19

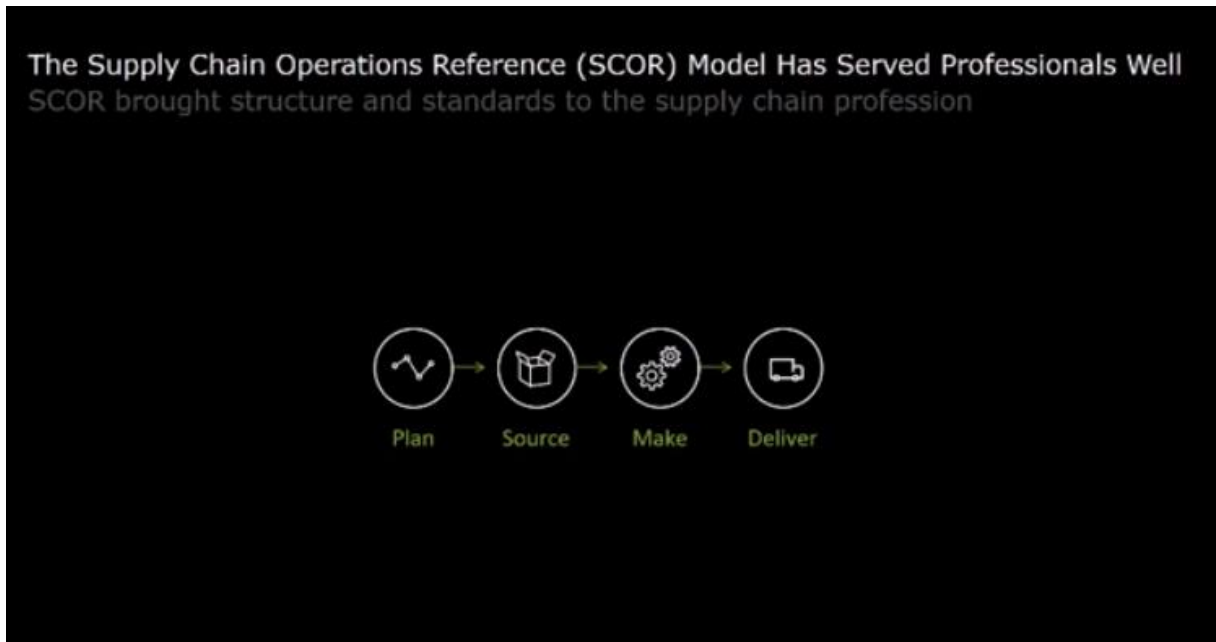


Figure2.4: the SCOR MODEL

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

Comment of the figure 2.5 below: Overtime, the model changed and developed into two other models adapting to new ways of doing business and also because supply chain became a vital process that is imperative in the customer experience as other processes. As the management paid more attention to developing concepts, ideas and the importance of innovation a step before “planning” appeared which is “develop”, an important step to know what the market needs in opposition to what innovation can make.

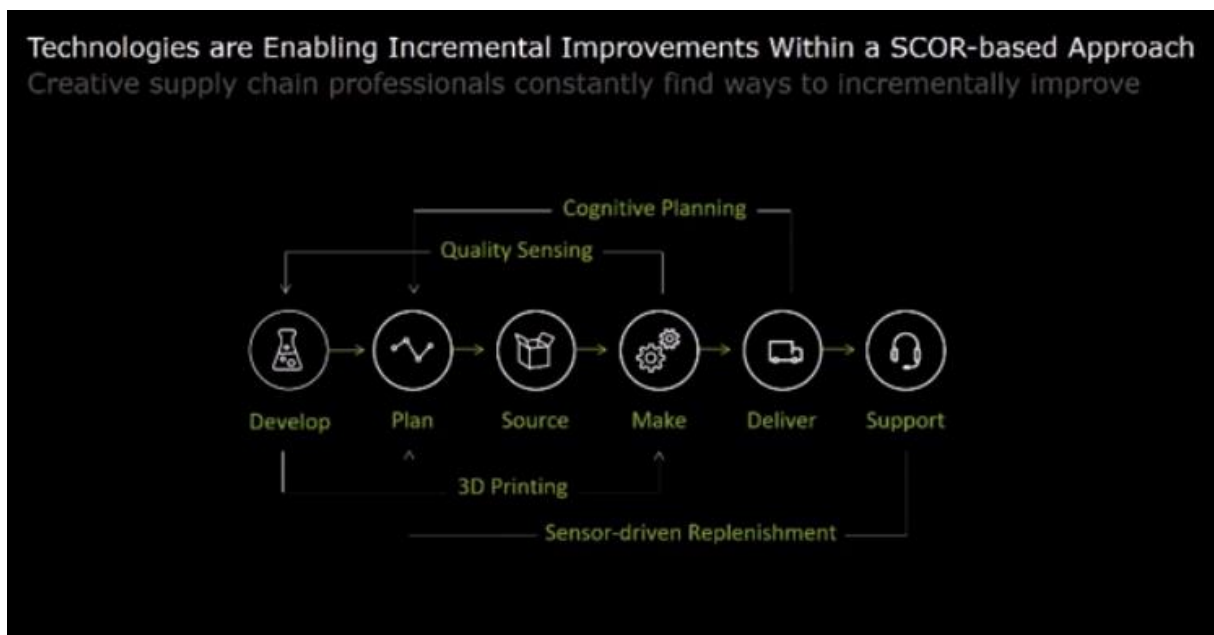
From the other side, another step was added at the end of the chain that is called “support”, a step that businesses saw the importance overtime to create a loyalty to their brands from a side because the competition became more fierce and the supply exceeded the demand, and to create things surely accepted by the market from the other side and the result is as following:



Figure2.5: the first modified SCOR model

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

Comment of the figure 2.6: The second model presents the same steps but creates connections between the steps of the change which represents in real life relations between departments. Seen as important for the feasibility of the “developing” and the “planning” with the capabilities of the available materials and machines of the business, this also helps the effectiveness of the chain by making the right product from the first time. This way we notice that the chain lost its linear form and took other dimensions.

Figure2.6: the 2nd modified version of SCOR model

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

The comment of the figure 2.7: The following graphic was proposed by Deloitte to the APICS to talk about the new form of the supply chain, and as it is shown; it represents the relation between the physical and the digital worlds, a presentation that we could call the next generation of supply chain with what we call the internet of things (including E-business and E-commerce). It is no more a simple chain with limited stakeholders with relations well defined but it is more dynamic and complex, especially by including data-bases, cloud computing to arrive to Blockchain and cryptography, a new system that records all the transactions made by the new E-currency Bitcoin or any other Cryptocurrency. And these information are maintained in several computers and linked in a network, where all concerned parts can visualize, learn, use and even in some cases modify them.

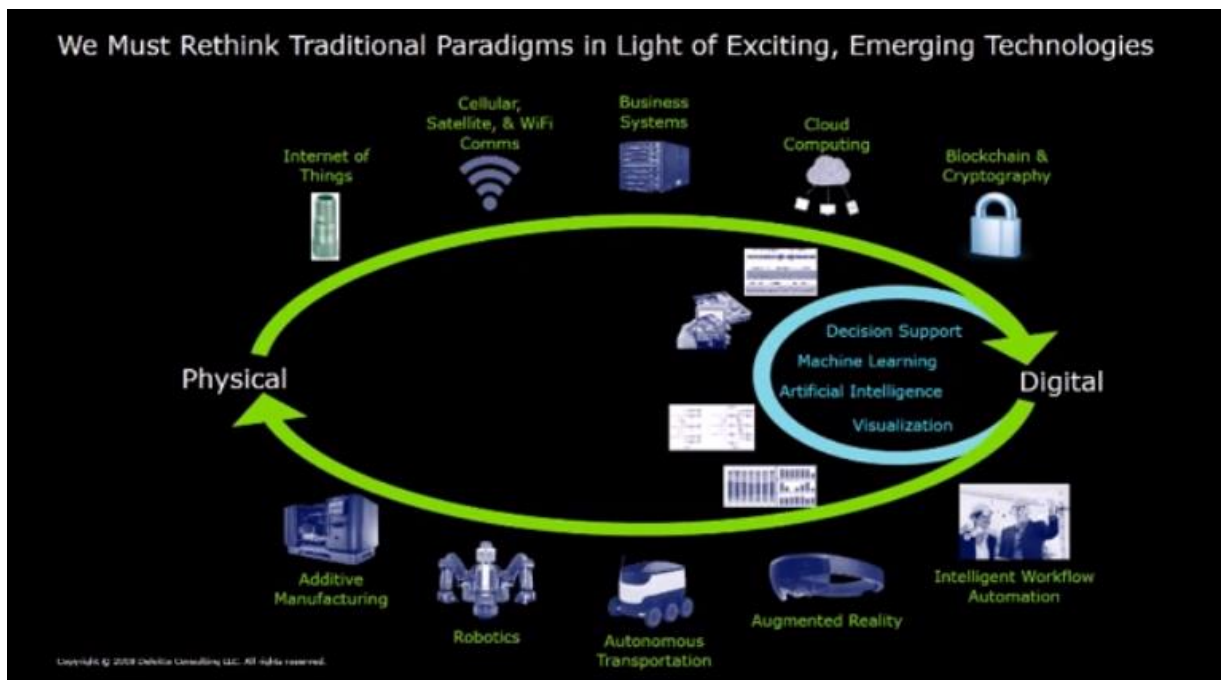


Figure2.7: the new form of the supply chain

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

The comment of the figure 2.8: The result of a dynamic supply chain network is the following where the chain is no more serial as the left but dynamic as the right, they made sure to incorporate technologies, data and smart components, we can see that all elements are related to each other and work in collaboration also, every node changed of name, function and relations with the other nodes.

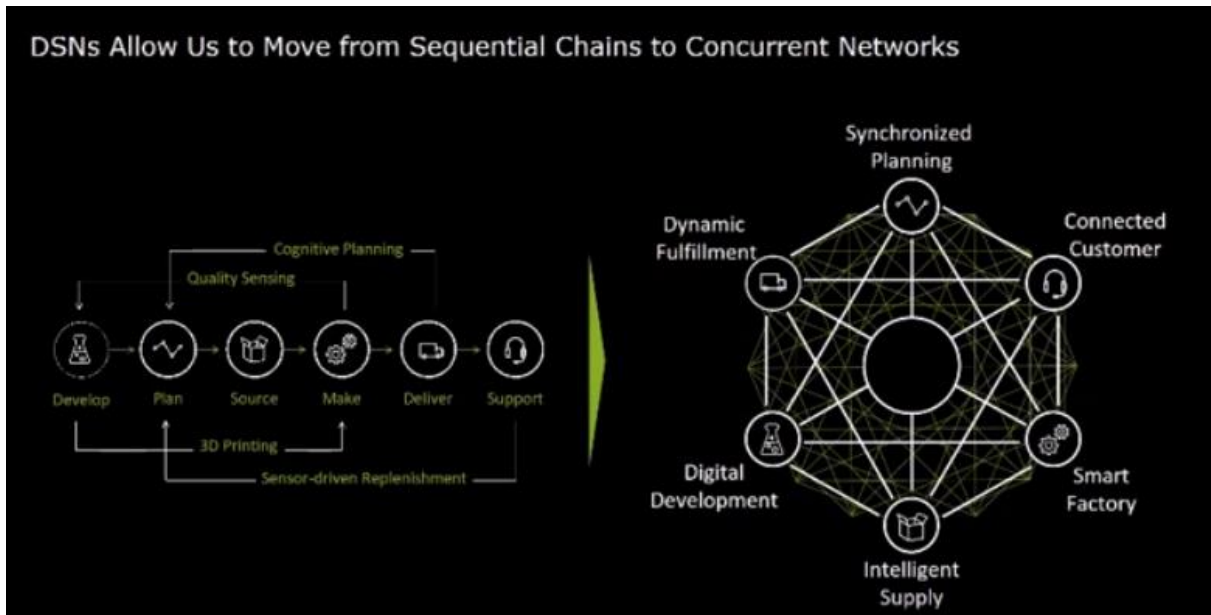


Figure2.8: the result of a dynamic supply chain network

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

The comment of the figure 2.9: And what is important currently or in the transition of businesses to digital world isn't to know how to manage inside the nodes because the transition is more less simple (in the eyes of the experts of APICS) the problem now is to know how to manage the relation between these nodes or what they call the digital disciplines, ways of work that permit to work and think differently and what is more important is to know how to master them, these disciplines are sensing (knowing that some product could be launched for some target) and the next step which is predicting (measuring the demand and the number of potential sales in the different regions). Followed by optimizing (which shows how we could lower our costs and gain in energy, money and time). And finally collaborating (which illustrates how the different nodes could work together to accomplish the goals).

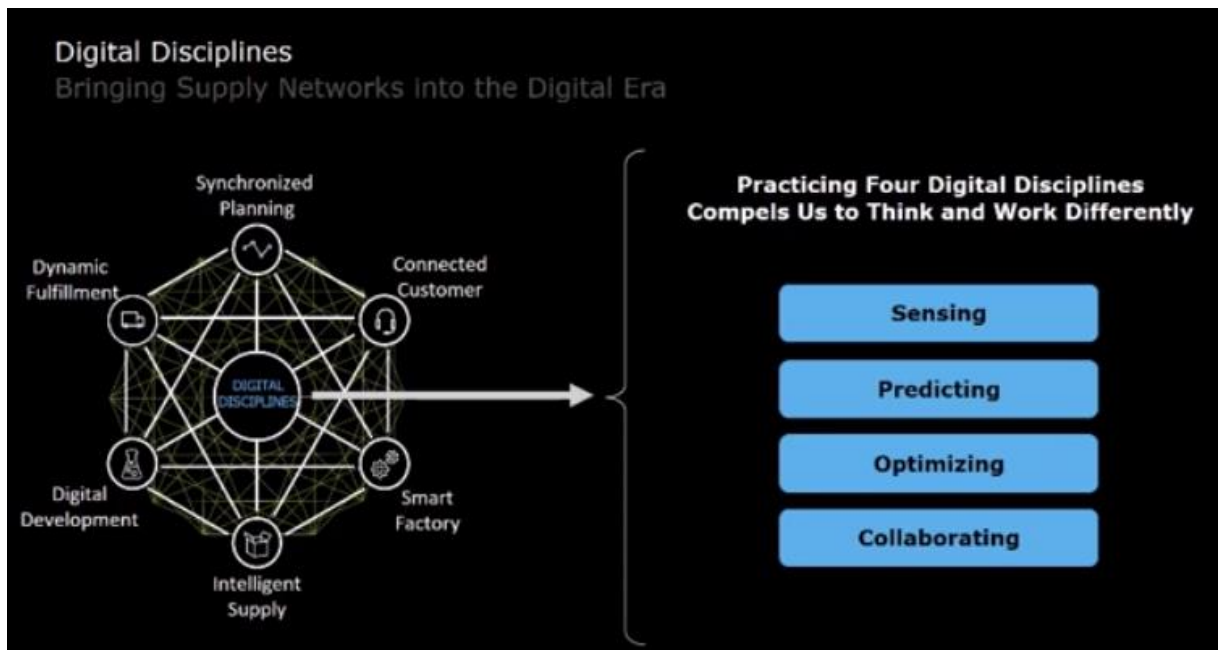


Figure2.9: digital discipline as a new way to manage the interactions in the network

Source: the SCOR model Digital Edition November 2018 conference; website www.apics.org 30/03/2019

2.5. Major trends affecting the supply chain strategy

- 1- Effective use of big data and advanced analytics
- 2- Overall network capability i.e. transportation management, last mile, autonomous vehicles, industry 4.0, 3D printing .etc
- 3- Digital transformation readiness and approach
- 4- Effective use of artificial intelligence, machine learning and cognitive computing applications
- 5- Increasing market complexity through acquisitions and mergers by E-commerce players
- 6- Need to accelerate organizational learning adaptation, and closing the supply chain talent gap
- 7- Consumer driven supply chain requirements in the omni-channel
- 8- End-to-end visibility, collaboration and leverage of the Blockchain solutions.
- 9- Impact of supply chain risk to organizational performance including global trade, natural disaster, and security (both physical and cyber)³²

Comment: The changes touching this world in general influence all businesses as they work as a response to the customers' needs and of course the consequence appears directly on

³²http://www.apics.org/docs/default-source/corporatedevelopment/scordigitaleditionvirtualkickoff.pdf?sfvrsn=22c3f9df_6_30/03/2019

the supply chains; in terms of visibility, human and material waste, rapidity and other aspects, for this main reason that many modifications should be implemented in all the supply chains, the management and operations execution and as a consequence a need to change SCOR model many times till getting its final image in the figure 2.9.

2.6. Characteristics of the digital supply chain network

In order to realize its objectives, the company must have and treat with efficiency four characteristics of the digital supply chain; these followings permit to the company a better financial performance as well as getting a competitive edge:

Connected: Connected is the basis and the foundation. Companies enjoy a brand new extensive visibility, outsized high levels of control. All connected together interacting with the entire business ecosystem in real time; with a possibility of reacting, interacting, communicating and even relating more completely with customers.

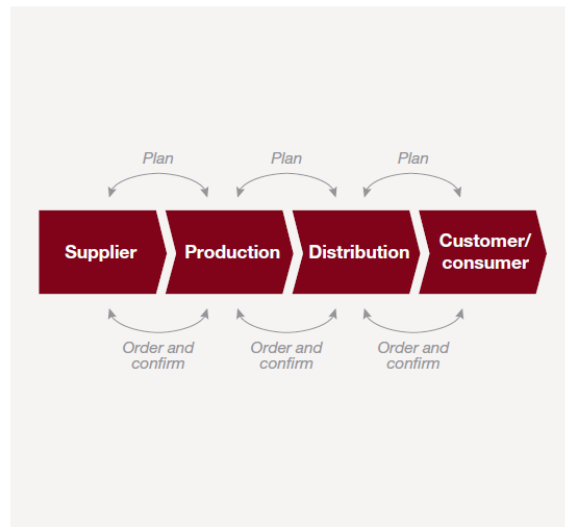
Smart: The connected benefit provides contact to data. Enterprises must expand their connectivity by using digital to turn that data into valuable useful information. The key is leveraging analytics, cognitive equipment and smart apps to offer the right information for decision making for an accurate management. This higher level of intelligence leads to the conception and creation of a smart network.

Measurable and scalable: flat scalability becomes more achievable when a supply chain has been imbued with high levels of connectivity and cleverness. Processes become easier to optimize and duplicate. Errors and anomalies are simpler to spot. Companies are better able to add or reduce partners and suppliers as needed. They also may become more effective at targeting niche markets, segments and customers.

Rapid: Speed is going to be one of the future's most vital currencies. The further ahead we look, the more companies' processes and priorities may well need to change as fast than their products. In response, they will need to use digital technology to analyze more quickly, adjust more rapidly and execute more efficiently.

After the placing in a whole new method of work the supply chain gets modified as a clear consequence, the following figures show the modification made on the shape of our chain:

Traditional supply chain model



Integrated supply chain ecosystem

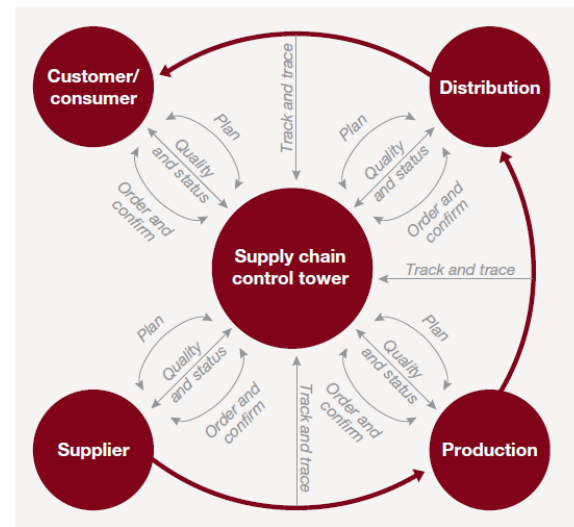


Figure2.10: from a traditional model to an integrated supply chain ecosystem

Source: How digitization makes the supply chain more efficient, agile, and customer-focused; PWC; Munich; 2016; p10

Comparison between the supply chain characteristics before and after digitization:

Limited view of supply chain	Transparency	Complete view of supply chain
Information delayed as it moves through each organization	Communication	Information available to all supply chain members simultaneously
Limited visibility to the entire chain, hindering meaningful collaboration	Collaboration	Natural development of collaboration depth to capture intrinsic supply chain value
End customer demand distorted as information flows along the material path	Flexibility	End customer demand changes are rapidly assessed
Different planning cycles resulting in delays and unsynchronized responses across multiple tiers	Responsiveness	Real-time response on planning and execution level (across all tiers to demand changes)

Figure2.11: a comparison between the characteristics of traditional and digital supply chain

Source: How digitization makes the supply chain more efficient, agile, and customer-focused; PWC; Munich; 2016; p11

2.7. Digital as a solution for supply chain gaps

In today's supply chains internet is seen as the solution to reach the potential effectiveness and prevent the existing waste in:

Planning: The supply chain planning benefits largely from advanced analytics (for demand prediction with the external and internal variables such as social network, trends, weather...) as well as from instant sales results. These new technologies enable a significant improvement of the demand forecast accuracy often reducing by 30 to 50% of forecast error (research done by McKinsey's Stuttgart office). another feature of this kind of planning is the addition of decisions considering pricing with the demand and supply planning; including all aspects such as the stock levels (vary with the forecast accuracy), expected demand, and capability to refill, then prices can be dynamically modified to optimize the overall profit made and minimize the inventories at the same time.

Logistics: takes an important step of change through a better connectivity, advanced analytics and automation because smart vehicles will lead to major cost reduction in transportation and product handling and at the same time provide benefits regarding lead times and lower environmental costs.

Performance management: in the past, dashboards were a major task, now data is available in real time from internal and external sources. This moves the performance management process from a monthly process to an operational one modified by exceptions. Also it's capable of detecting the root causes of a problem to handle them.

Order management: is improved by no-touch order processing, which lead to lesser expenses through automation of effort, and superior customer experience through direct and immediate responses.

Cooperation: The supply chain cloud forms the next level of collaboration in the supply chain where all stakeholders share the information and work on facilitating it and this reduces administrative costs and helps with time management.

The results of the quantitative research done by McKinsey & Company about the effectiveness of Supply Chain 4.0:

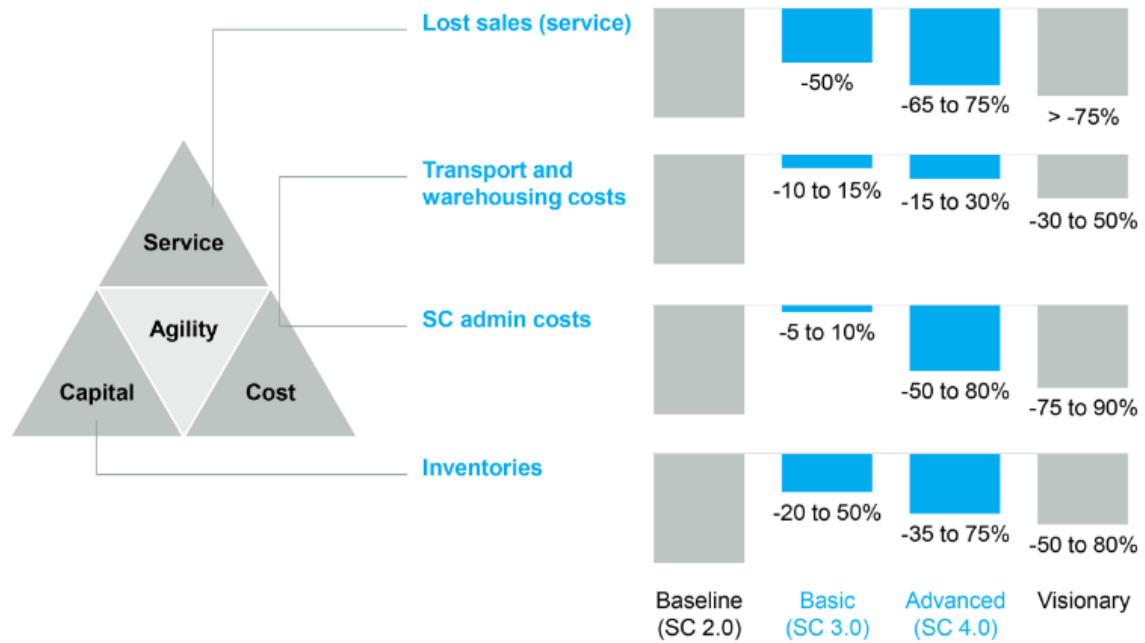


Figure 2.12: the effectiveness of supply chain 4.0

Source: article of a research done by McKinsey & Company published on the website www.mckinsey.com
30/03/19

Section 3: digital supply chain applied in the ecotourism industry

The quality of information or information in its large sense is the most important aspect that ecotourists are looking for, because knowing the best spots and destinations for ecotourism wasn't as easy as if you are targeted and without making an effort the information arrives to your digital device. With digitization of all the processes nowadays a lot of information are available for them, the problem in this era is the fact that there are a lot of information which makes clients confused and even if the product or the service is good maybe it won't get to the right customer for the thousands of posts we see every day.

And as the digital world is here to resolve problems and find solution, the right management is the only way to analyze and advance the right information to the right customer.

What's the core difference between today's supply chain and the digital supply chain? If you see yourself holding a computer or any other digital device and you use it to execute personal and professional tasks, duties and for pleasure; you constitute one of the nodes of the typical modern supply chain, a node that is linked to many others and that has history, data, provide the latest information on your current and learned to have a selection of information for you to make it agile, fast and well selected. Isn't this the definition of a supply chain?

Let's try and give a definition of the use of Industry 4.0 in ecotourism

3.1. Industry 4.0 in ecotourism

Industry 4.0 in ecotourism is the digitization of all information, data and companies operating in ecotourism specifically and tourism in a general manner and the goal is orienting themselves to the customer through e-commerce, digital marketing, social media, and the customer experience. Eventually, every aspect of the business as in any field will be transformed through the vertical integration of research and development, marketing and sales, demand and supply planning, activities region choice and other internal operations, all of this keeping in mind the importance of the social and green impact for the preservation of the concerned areas and communities.

3.2. Digital supply chain in ecotourism

By using digital technologies in ecotourism businesses (travel agencies, hotels, restaurants, attraction providers, transportation providers...); the business gets the control to

make a junction of supply chain elements to capture huge savings and competitive advantages by development networked processes by optimizing the complete company of chain instead of individual functions; uniting tourism developers, product innovators, suppliers, distributors, logistics services providers, retailers and even customers; and inspiring new ways of thinking and working by enhancing visibility, collaboration and innovation.

3.3. The benefits of applying digitalization in ecotourism businesses

- An ecotourism supply chain is as strong as its weakest link, connection, communication uniting all the chains makes the automation is the best solution for ecotourism, as there is no lack of information at any stage of the chain without the time lag.
- The value is instantly created with the automated process, because in the traditional supply chain, physical, geographical boundaries and distances that make the information late and not full which makes the ecotourism more expensive and takes time to get executed, this way the costs reduce by consequence the prices reduce, and the value creation increases.
- In tourism industry in general; the network keeps the business operating because it is the one bringing the customers and the clients, and also uniting the package suppliers on a single page, with digitalization the links are easily created with transparency of information, the easy search way, and the new word-of-mouth of customers with the help of the customer experience share on the platforms.
- Becoming more forward-looking, as ecotourism supply chain entities do the demand planning based on history and previous experiences, the new way is to follow the rates of visits and interests on the internet platforms to know where the opportunity is hidden.
- As internet is shared everywhere; the simple citizens became what we call a world citizen, where the acceptance of the differences between cultures is no more a problem (or at least it is reduced compared to the disconnected world), this point helps the communities to stay preserved and the ecotourists won't have an impact on their lives if they come to visit them.
- As the world organizations operating for the preservation of the natural and social preservation are now sharing information about consequences of the bad tourism on the fauna and the flora, the communities became more aware about the facts and trying to help to change this fact, which makes also ecotourism becoming a trend, which is beneficial as it is one the goals of ecotourism and by consequence encourages the investment in this sector

- Also; the cost of creating, producing, processing, distributing, storing and retrieving paper-based information has decreased.

3.4. The limitations of applying digitization on ecotourism

- The increasing number of ecotourists in the touristic spots might damage them without feeling; the example of the big number of ecotourists coming influences the life of the community.
- Analyzing the good from the bad information became difficult with the tons of information the customer receives every day, which leads to time, money and energy wasting, and that is completely against the principles of ecotourism
- With the increase of investments in these spots, and the misinformation the investors might finish by damaging the area if it's not under control.
- As internet came with the millennial generation the problem of older people targeting is minimal.
- Breakdown in human interaction: As people become more used to interacting electronically there could be an erosion of personal and social skills which might eventually be detrimental to the world we live in where people are more comfortable interacting with a screen than face to face, which is against the ecotourism fundamentals.

3.5. A concrete example of the value creation of technologies application in ecotourism sector

“How technology and creativity are being used for developing ecotourism: Peace and Unity as a shared value to overcome environmental problems”

This was a title an article showing how technologies can develop and contribute in the ecotourism sector. Located in the west of Senegal; the island of Niomoume saw a celebration of 3 days, a first of its edition of a festival that brought up all the traditions of the place to participate in their preservation

The following article published by Wordpress in its website and social media shows how the festival took place:

“On the 28th-30th December 2018, the first edition of the Festival of the Islands of Casamance successfully took place on the Niomoume Islands of the Casamance region in Senegal (Ceessay, 2019). The Festival was a three-day event that brings together the arts, the

Islands traditions, a conference and an Island tour all in the name of ‘peace and unity’. The event was attended over the three days by more than 1000 Island inhabitants, guests and visitors. The Festival was the first ever artistic and cultural gathering for Niomoume Island and its people. The Festival is an innovative event combining the creative industries, ecotourism under the umbrella of ‘peace and unity’ to come together to solve the Islands’ social, environmental and economic problems. Mr Sens Sagna a well-known and highly-regarded Senegalese artist who is based in the UK was the cultural ambassador of the first edition festival. MrSagna through his pride for his West African heritage, in addition to his vast artistic experience and skills wished to develop collaborations between the Creative Industries sector (an industry worth £133.3bn and accounting for 8.2 per cent of the UK economy). For this main reason the University of Manchester in a response to his offer decided to potentially support and advise with the Festival and the problems being faced by The Niomoume Islands and the West Senegal region.

MrSagna, Ambassador of the Festival explained that, “when the initial idea of the Festival was sent to me, I was immediately interested in getting involved and supporting a positive initiative and further understandings how of the creative arts and his skills and experiences could be drawn into the project” (Ceesay, 2019). He explained that this is the positive direction he would like to see the creative industries take in the future. He emphasized the importance that the festival has for bringing people together, to make the community well-known and for the opportunities it can create. He urged “all to embrace and support the future of the festival”.

MrSagna is collaborating with Dr Anita Greenhill in looking at the potential of skills development and knowledge enhancement on digital content-building in the creative industries, with a particular emphasis on the positive impact creativity can provide in the development of ecotourism (Oluwatobi Emmanuel Olaniyi, et al 2018, 593). West African cultural skills and knowledge, particularly those associated with their artistic traditions are considered the most developed in the world (Faola& Kalu, 2018). Therefore the unifying values that creativity produces as opposed to a predominantly economic focus in much development theory can be reconsidered. The potential value of the creative economy is increasing exponentially but the industry is still not fully understood and in many instances undervalued. Earlier feasibility studies (Greenhill, 2019) have demonstrated the impact the creative industries can have on social unity and the integration of marginalized groups.

Attending the festival has helped to build links and opened up potential routes for international collaboration and research within West Africa.

The initial findings from the research showed that, while creativity has the potential to improve the situation of marginalized groups; the artistic community is often caught between traditional knowledge and skills acquisition, and contemporary culture and economic reality (Greenhill, forthcoming). This is a situation that is mirrored in Senegal, where cultural initiatives are being developed which both promote the themes of peace and unity and look to encourage and support economic development. However, a lack of basic infrastructure (mainly digital infrastructure) across the country creates a series of challenges. Indeed, Senegal is the perfect place for the arts and healing to come together since the country continues to be the location for Africa's most protracted ongoing conflict (the Casamance Conflict). Alongside this, the Senegalese state has reaffirmed its desire to put culture at the heart of the issues of national economic and social development. This link is something that is helped by the fact that many West African performers often hail from conflict zones and so represent some of the most marginalized people in the world.

The growing use of culture, and in particular music, as part of more extensive efforts to address issues of peace and unity within Senegal is reflected in the Festival activities. The overall aim of the festival is to give all those who participate in a platform where they can develop their skills, cultural experiences and creativity. This festival is organised by Ousmane Samoure, one of the project's community partners, and looks to create a lasting legacy, which aids the development of the region (where there is a lack of necessary supplies of clean drinking water, medical provisions, electricity and internet provision, etc.). Crucially, these festivals operate in socially isolated areas and, in the case of the Festival of the Islands of Casamance, have never had a cultural festival before

The project looks to learn from these Senegalese initiatives and the stakeholders involved, in order to develop and join together similar work being carried out in South Manchester. This will be achieved by looking to establish a prototype for a structured process to creative production that generates social, cultural and economic value by focusing on

community-driven innovation (with an initial emphasis on the creative industries and technology)”³³.

This example and many others show the value creation of digital in ecotourism to the communities, countries and what nature offers without any damage, where investors can chase the opportunity to invest and the customers enjoy their time without future losses.

³³<https://ict4dblog.wordpress.com/2019/01/21/how-technology-and-creativity-is-being-used-for-developing-ecotourism-peace-and-unity-as-a-shared-value-to-overcome-environmental-problems-in-the-west-senegal-islands-of-niomoume/> 04/04/2019

Conclusion

In Algeria –as all other countries of the world- most enterprises recently created are digital in their networks or at least using E-commerce to sell and market their products or services, because the modern customer seems to become more digital and looks for agility as a solution for his needs. In the case of the old big enterprises, the big part is already operating on social media, but to be in contact with the customer; almost no flows are operated.

In the case of tour operators as any other business the connected, intelligent processes can help the execution of all the company's disciplines from planning, response to the demand, marketing, distributing, selling to the most important the customer's experience. As a consequence the tour operators could keep the customers loyal from a side and attract other customers with the experience sharing and reviews from the other side.

Connected tourism on the move, makes the sector operates with more smoothness and with defined triggers on the retail scenario. Its specificity, agility, rapidity and intelligence is what makes it particular.

***Chapter three: the
pragmatic study: the
case of Indonesia***

Introduction

This last chapter constitutes the culmination of research work. He translates our understanding of the theoretical notions developed in previous chapters. The purpose of this case study is to verify the extent to which the digital supply chains applied in Ecotourism sector have an impact on the value creation, and also the changes that touched Ecotourism with this huge revolution that the world is living.

Indonesia is country that is known by its high touristic potential by knowing Bali, Jakarta and so on; tourism constitutes more than 10% of the GDP of the country, also in these regions the Ecotourism starts progressing after the damage caused by bad human behaviors.

For this reason, Bangka-Belitung islands with many cultural and natural tourist destinations are the target for the launch of a new kind of tourism in order to start on a strong basis and empower a long-term investment.

Furthermore, this work was done in order to take the example of an experienced country in tourism in order to apply it in Algeria to follow their steps and learn from their mistakes in an accelerated way

This chapter will present the following:

- Section 1: Ecotourism in Indonesia
- Section 2: presentation of the enterprise
- Section 3: digital supply chain applied in the ecotourism industry.

Section 1: Ecotourism in Indonesia

1.1.Indonesia at a glance

Indonesia is a country which is constituted of over 17,000 islands spread between the Pacific and the Indian Ocean, known by its diversity; Indonesia is inhabited by more than 200 ethnic groups with over 300 spoken languages linking the two continents of Asia and Australia; a multitude of amazing landscapes and biodiversity stretching along the equator line; Indonesia is mostly tropical in its weather.

As the largest archipelagic country in the world, Indonesia is known with so many differences compared to other countries; the people, the cultures, the customs and traditions, the food, the animals, the nature, and everything that made it almost like 100 countries melted beautifully into one.

Every island in there is a unique mixture of natural splendors and different cultures of people who live upon it; we give the example of the Bangka-Belitung province where I spent my internship: the diversity in the origins, languages, religions and culture of people. We mostly find people that we call Malayous (people originally from Malaysia and share the same language), Chinese and Indonesians, these three origins affect the other aspects and give a difference that they use as a strength in my opinion.

Located in the heart of the world's precious coral triangle and along the Ring of Fire, countless wonders of Indonesia stretch from the mountain peaks to the depths of its vast seas. Along the diverse landscape, unique and diverse animals have made the archipelago their only natural habitat, including the legendary Komodo dragons, the soft giant Orang-utan (a preserved species of monkeys, the majestic Cendrawasih bird of paradise and much more. Beyond the surface of the sea, Indonesia's vast coral reef is considered the wealthiest and most diverse in the world; merely the ultimate paradise for divers and submarine enthusiasts.

With a rich history that goes back centuries, Indonesia is also home to some of the fascinating monuments of human civilization. Among them is the imposing Borobudur Temple in Magelang, in central Java, which is the largest still majestic Buddhist monument with all its spectacular features. Equally fascinating is the Prambanan Temple complex, one of the largest in Southeast Asia. (See Indonesia map in the appendix 2)

The following information is taken from the published template of the ministry of tourism about for ecotourism development in the future

1.2. Ecotourism concepts and development in Indonesia³⁴

1.2.1. Ecotourism Definition in Indonesia

Ecotourism in Indonesia is defined as “activities of responsible travelling in intact areas or in areas which are named according to the role of nature” The purpose of such activities is:

- “Being to enjoy the natural beauty
- Involving education, understanding, and supports conservation,
- As well as increasing the income of the local communities”

1.2.2. The Importance of Ecotourism for Indonesia

- to generate jobs and revenue, thus providing an incentive for preserving natural areas,
- to raise public awareness of the many products and services provided by natural ecosystems and biological resources and respect for traditional knowledge and practices
- To reconcile economic and environmental concerns and give a practical meaning to sustainable development

1.2.3. Indonesia Commitment to Ecotourism & Sustainable Tourism Development³⁵

Policies National Development Plan 2005-2025:

Tourism Development must also be based on the principles that tourism must protect and conserve the environment holistically

Tourism Act, Law no.10 Year or 2009:

Sustainability must encompass the natural, social, economic and cultural environment
Implication:

- Tourism destination development must be based on sustainability

³⁴ <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> retrieved from http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/images/02_PRES_WCBR4_MAB_INDONESIA_Purwanto.pdf

³⁵ <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> 20/05/2019

- Social and economic benefits may derived from tourism area without destructing the environment and local cultures
- Tourist behavior and code of ethics of tourism form an integral part in realization of sustainable development

1.2.4. Policy, regulation & guidelines

Tourism Responsible: Providing more rewarding holiday experiences for our guests whilst enabling local communities to enjoy a better quality of life and conserving the natural environment.

Development of Parks and Gardens: in 2011 Indonesia started to design a guideline on how to develop park and garden as public recreational center “PUSREKMAS”

PS: There are 50 National parks in Indonesia ranging from rain forests, endemic species, mountain, sea, rivers and etc. Of all the national parks, 6 are World Heritage Sites, 6 are part of the World Network of Biosphere Reserves and 3 are wetlands of international importance under the Ramsar convention. A total of 9 parks are largely aquatic.

Green Homestay Development: started in 2004 guidelines on how to develop homestay as “micro small medium enterprises”

The Adoption of Green Hotel Standard : an environmentally friendly and adopts energy conservation measures relate to environmentally policies, green product, community empowerment, waste management, energy efficiency (started in 2007)

Community Based Ecotourism: means of development whereby the social, environmental and economic needs of local communities are met through the offering of a tourism product, this program is actively developed in Komodo Island, Kayan Mentarang, Tanjung Putting, Sentarum Lake and Desa Pekraman (Bali).

Eco-Guide Standard: in 2009 Indonesia set up the standard for ECOGUIDE in order to increase professionalism and quality of guide as well as the ecotourism



Figure3.1: Scheme for developing ecotourism in Indonesia

Source: <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> 09/04/19

Comment: this scheme was set by the Indonesian ministry of tourism to show the responsibilities' sharing and plan on how the country could attain results in the ecotourism sector as Indonesia is one of the biggest ecotourism area with a huge number of protected sites by international organizations, because of that the government saw the necessity of investing in ecotourism to make it a source of revenue for the country from a side, and from the other side to follow the trendy image the ecotourism has nowadays, and as Indonesia is already prepared for such investment with its diversity in the different components, the stakeholders saw the big investment would be in the communities to accept, benefit and not

be negatively affected by this change. As shown in the following figure:

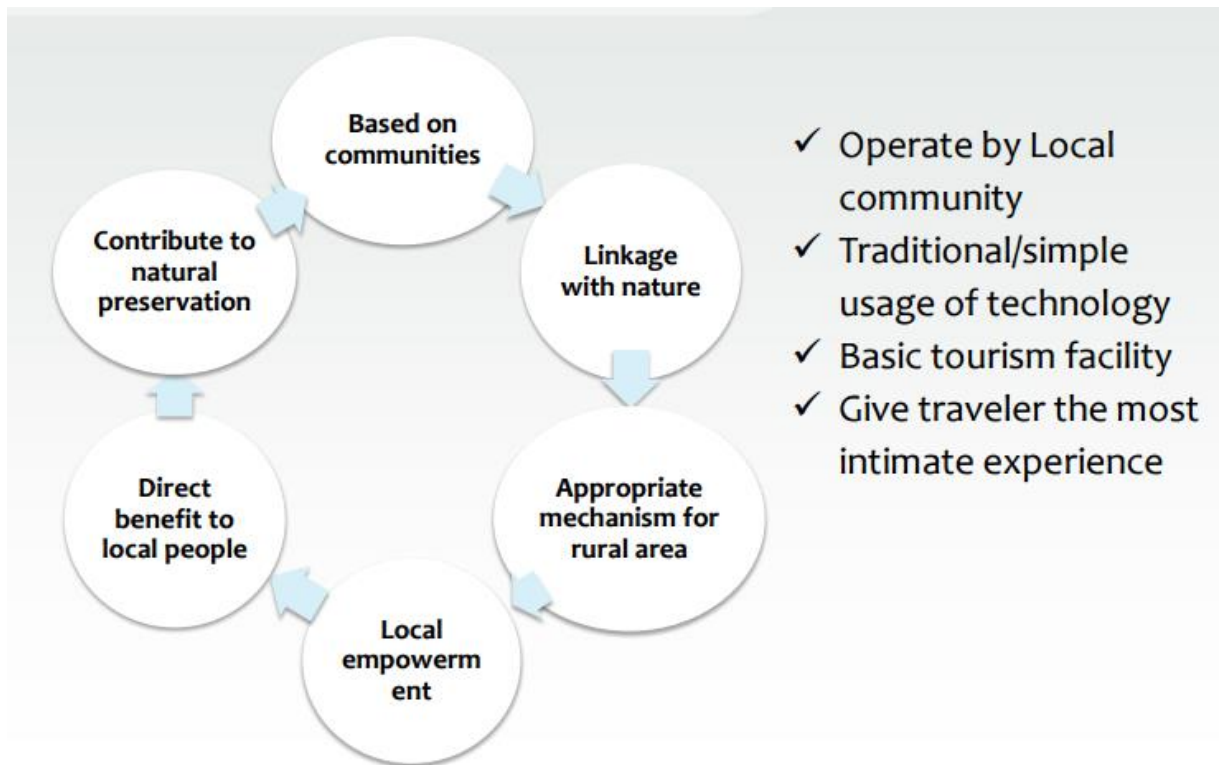


Figure3.2: Small scale model for ecotourism investment

Source: <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> 10/04/19

After the step of community acceptance of such investment without negative impact, the time is here for the huge capital and material investment or as they were called (large scale model) as following:

- Based on private investment
- Using high-end technology
- Responding to the environmental and social preservation

1.2.5. Destination Management Organization Model in Indonesia

Definition of DMO:

DMO is management of tourism destination

- Which is structured and synergized innovatively and systematically

- Containing functions of coordinating, planning, implementation and control of destination organization
- By means of network, information and technology which are integrated with the community participation, associations, industries, academicians, and government that share the same objectives, process and mutual interests
- In order to enhance management quality, volume of tourists' visit, length of stay, tourists' expenditures as well as benefits for local community.

Why We Need DMO:

1. Complexity of tourism management (multi-sectoral, multi-disciplinarian, multi-stakeholders and multi-actors)
2. Borderless Tourism
3. Destination Management System (Linkage and Value-chain – Tourism System)
4. Travel experience as a whole (arrival to departure)
5. Coordination and integration on tourism management and development
6. Weak tourism destination management scheme
7. Increased competitiveness

Operational phase of implementing ecotourism:

- 1- Planning: early phase to identify the issues and current problems
- 2- Implementation: second phase involving all stakeholders: community, private sector, and other parties
- 3- Controlling & monitoring: third phase to ensure conformance of implementation with valid regulations in order to achieve objectives and targets
- 4- Marketing: DMO promotes mature and ready destinations through integrated marketing, involving stakeholders and local communities

- 5- Funding: DMO funding is independently conducted by the stakeholders. The source of funding will be manager according to the roles and contributions of every DMO stakeholder.

The plan set by the government and the ecotourism program starters is set as following :

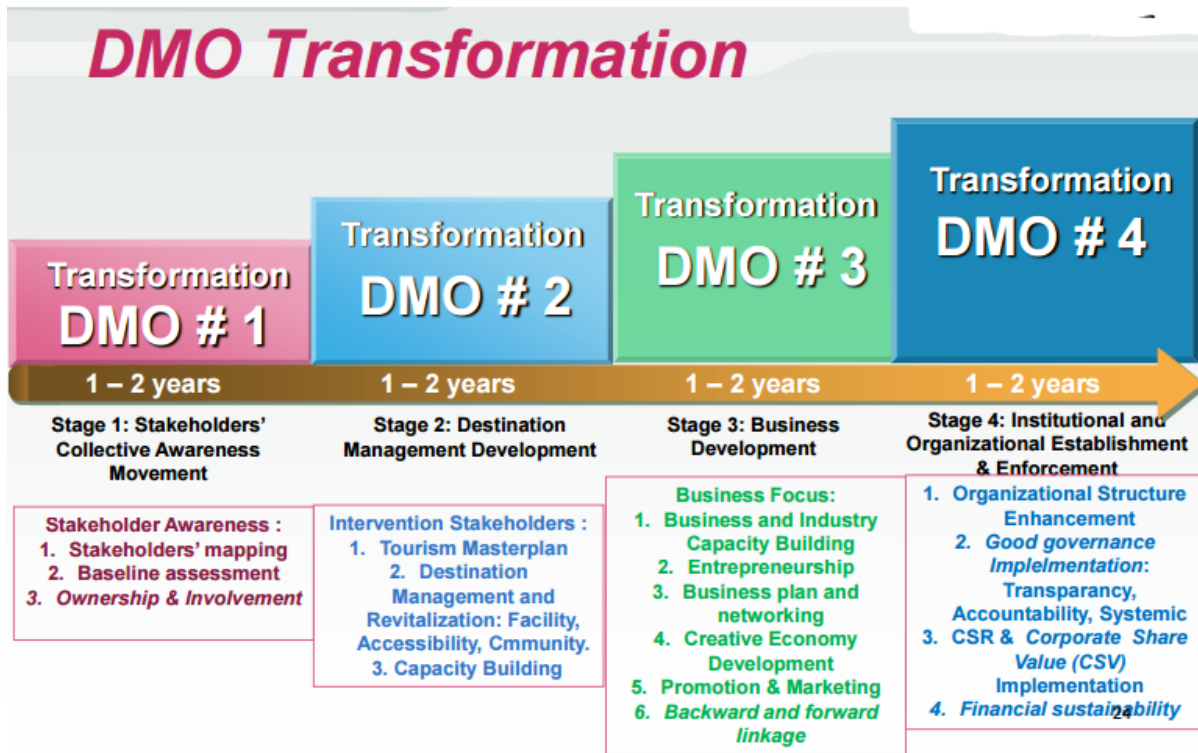


Figure3.3: DMO transformation

Source: <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> 10/04/19

1.3.Destination Management Organization programs

- Coaching and training relate to conservation
- Developing of Lhasa Island as the zone for commerce & cultural center
- Developing of rural tourism
- Waste management undertaken by Swisscontact with Local Government of West Manggarai started in 2012

1.4.Awards

In the end we could present the awards Indonesia got after getting into the ecotourism sector and the awards are as following:

- Trihita Karana: is an initiative base on local philosophy about harmony which implements promoting sustainability development which became a tool to prevent the impact of tourism development for nature and culture in Bali (2000)
- Citra Pesona Wisata Award by Ministry of Tourism and Creative Economy: is an award event held by the Ministry of Culture and Tourism of Republic of Indonesia in 2010 to the tourism actors which have adopted the principles of sustainable tourism / green tourism
- Earth Check: Indonesia is part of Earth Check a certifier of sustainable travel and tourism operators; with more than 1300 clients in over 70 countries.
- Green Hotel Award: is an appreciation and recognition of tourism stakeholders for adopting the ASEAN (association of south-eastern countries that have free exchanges between them) Green Hotel Standards into their services (started in 2007)

1.5.The region of concentration of the project (Bangka- Belitung)

The Bangka Belitung Islands are a province of Indonesia. Located in the southeast coast of Sumatra region, the province includes two main islands, Bangka and Belitung, and several smaller ones. The capital and the largest city is Pangkal-Pinang.

The province has an equatorial climate with tropical forests. Mount Maras is the highest point of the province and the island of Bangka, with a height of 699 m. There are several rivers in the province, such as the Sebuku River, the Baturusa River and the Mendo River. The province is ethnically, culturally and linguistically diverse; major ethnic groups, including Malays, Chinese and Javanese. Indonesian language is the official language of the province, while the local Malay dialect and the Hakka are the lingua franca of the province.

Historically, Bangka Belitung alternated in the kingdoms of Sriwijaya, Majapahit and Palembang, before becoming a colony of foreign countries: Dutch, British and Japanese. Bangka Belitung was a residence in the Dutch East Indies. At the time of Indonesia's independence, the region was administered by the provinces of Sumatra and South Sumatra. Bangka Belitung officially became the 31st province of Indonesia in 2000.

The diversity that the province has makes the rich story of the region that attracts tourists. While working and with the discussions with the government; the province has

always been an Ecotourism destination but only for local people of Indonesia, to avoid any destruction of the sites by the bad and non-responsible behaviour of tourists from around the world.

Now, that the government concentrate its efforts to empower and improve the region's conditions to launch the province as a destination for tourists in general and ecotourists in a specific way to attract them and let them know about the existence of the region to welcome them, for this precise reason our project was launched, and the results of the work as a team and a product innovator will be presented in the next section.

Section 2: presentation of the enterprise

2.1. Sociotour Start-up: “Traveling, Sharing, Happiness”

Was created in 2015, and realizing every year a turnover of 650 USD, SocioTour is an anti-mainstream digital tour package provider with social impact; it can be described as a platform that connects tourists to anti-mainstream tourist destinations, such as plantation, agriculture and livestock tourism sites. Tourists are not only treated to the enchanting natural beauty of Indonesia, but also the value of sharing with local people the tourist attractions visited. Anti-mainstream tour packages where tourists can learn to become farmers or professional breeders from the experts. The value we want to instill is traveling, learning and sharing.

In other words, SocioTour is a digital startup that operates in impactful tourism sector (social touristic entrepreneurship). On daily basis the start-up accomplishes many missions that we can present as follows:

- Organizing the activity of its first partners (villagers, farmers, breeders, ranchers, Fishermen who want their location to become a touristic area) and instruct them through the skills and expertise of each member of SocioTour members who are experienced in domains as: Community empowerment, product innovation, IT expertise, websites consulting and social media...So their location could become a touristic destination.
- Increasing investment in the area by launching investment programs for interested sponsors (an intermediate between tourists and businessmen, businessmen and businessmen...).
- Increasing knowledge sharing by launching education programs to share daily labor activities of farmers, ranchers, villagers, anglers and breeders communities with tourists.
- Playing the role of a tourism destination consultant, SocioTour has a platform providing anti-mainstream, social value and impact Travel packages.
- Managing SocioTour’s website to be connected to suppliers and clients also to get them connected to each other.
- Creating websites and managing them for the partners

SocioTour also participates in Environmental Empowerment through encouraging Ecotourism sector by proposing eco-friendly products and services.

The Start-up's main purpose is spreading social impact in Indonesia and encourage adopting it all over the world, through socially valued impactful Tourism, and show the world that we can travel, learn and enjoy at the same time

2.1.1. SocioTour's clients

With the large audience that the start-up receives for the organized activities and packages to discover the area of its activity "Bangka-Belitung province" we can divide the customers and clients into 2 main types:

- Villages representatives, villagers, farmers community, fishermen community, breeders; that want their location to become a touristic destination
- Tourists and businessmen interested in anti-Mainstream and social impactful tourism.

2.1.2. SocioTour suppliers

With the coordination and harmonization that SocioTour does by the nature of its activity, it is difficult to distinguish between the suppliers and the first type of clients because the enterprise uses the raw materials (lands, ships, farms...) owned by the villagers of the regions to make of them the product that could be launched and promoted within the tour package. SocioTour considers the following as its suppliers:

- Villages' representatives, villagers, farmers' community, fishermen community, breeders; that want their location to become a touristic destination.
- The transportation, homestay and catering providers.
- Suppliers of expertise and knowledge (that completes the enterprise's activity)

2.1.3. Partners

- The company considers the ministry of information and communication as her first partner in supporting the business as it was created as a part of program launched by the ministry (incubation of 1000 digital startups
- Investors and businessmen that allocate the support and the capitals in the clients' properties, which helps also in obtaining new clients (the investors' customers).

2.1.4. Experience sharing of a tourist

"7-9 May 2015, SocioTour worked with the Institute of Technology in Bandung, the tour provider received 79 tourists, which included 31 investors from the Institute of Technology of Bandung Alumni students to Bangka Belitung province. These tourists were

introduced to the potential of Bangka Belitung and invited to socialize and share inspiration with the community.

The output they got:

After enjoying the touristic destinations, seeing the potential and interacting and exploring the culture in Bangka Belitung, those 31 tourists agreed to become investors, for both capital and technology needs, to build an Integrated Tapioca Processing Plant, in collaboration with village communities.”

2.2. Description of the project

“Wonderful Bangka Belitung project is a collaboration project with Governor of Bangka Belitung, Indonesia to promote local tourism potential. The big aim of this project is to increase the number of tourists to Bangka, especially international tourist. Also, engaging the local people to be more aware of their local potential and coach them how to optimize it.”³⁶

The position I applied for was product innovator and the job description of the principle activities I had for the position was as following:

1. Exploring the tourism Place Target and interact with local people to see the potential of product with the tourism development team of the village
2. Identifying the potential product to be marketed from the raw materials available
3. Identifying the business model of the product
4. Giving workshops for the local enterprise about the product packaging and promotion channel
5. Synergize with all departments to achieve project's goal
6. Collaborate with tourism developer team to create SOP for tourism facilities (homestay, etc)

2.3. The project output

Working in a team of 3 product innovators, a videographer, a graphic designer, a digital marketer, 2 tourism developers with the guidance of a team leader and the start-up that worked together to coordinate between us and the local workers of the government.

³⁶ <https://aiesec.org/opportunity/984994> 11/04/19

The goal of our team was to develop tourism in Bangka-Belitung province and to empower the local people. We tried achieving this in collaboration with SocioTour start-up. In our first two working weeks we discovered the potential of the region as a tourist spot in order to develop the tourism and also to prepare an alternative for people who rely on the operations of the tin mining industry. We visited beautiful temples; we met the local people and tried the traditional food. The area for us was an unexplored paradise and we wanted to show the rest of the world its beauty. After that, we set several goals and targets that we used to achieve the overall goal during the project; we zoomed into the activities and entrepreneurs. And how we can help develop the local entrepreneurs that focus on the tourism market? Get to the town and promote to the Instagram page we created. As well as creating possibilities of transportation for tourists, all of this without excluding the focus on sustainability.

The results were as following:

2.3.1. In community development

- Local Business development:

During this period the product innovation team focused on identifying and analyzing the local businesses. By doing this, they created an overview of what the region has to offer and which areas have the most potential for both the tourism and the local community. The visits were aimed at the local restaurants, shops, tourist spots and factories (factories received more buyers after we established them on internet), and the work was accomplished with the top 6 spots that we felt needed to be developed

- Transportation: (Drivers)

Since there is no public transport available, we decided that for a successful implementation of a tourist package, it is necessary to train and cooperate with a local that could be employed as a driver. The first contact has been made with potential drivers to realize this.

- Guides:

Next to the drivers, and as part of developing the community, we aimed to train some of the people in the village so that they can work as tour guides in the future. We discussed this with two of the local volunteers and they studied to make it happen, and during the tour package trial they showed their abilities.

- School visits:

Furthermore, in the beginning of the project, the village head asked us to go to two of the elementary schools in the village. The tourism development team met with the principal of the schools and decided upon teaching English with a couple of games.

- Sustainability

Although we can not entirely change the mindset of the Indonesian population, we felt the responsibility to try to include some recycling activities in our tasks in addition to putting trash bins everywhere, also we chose persons to pick-up the trash on the main road periodically to influence the behaviour of others.

2.3.2. Tourism development

Tourism Development team worked on their part on the creation of a TIC (Tourist Information Centre) to prepare them for receiving tourists, in addition to the creation of a booklet that contain useful information about some aspects of the village (signs & information about the spots). In the end the team created a tour package out of the concerned spots (that we worked on) and made a trial with real tourists that bought the package (that included trying the drivers, the guides and the adequacy of the package itself).

Of course the work couldn't be completed without the pictures and videos the videographer created; the banners the designer made and the articles the journalist published on the local newspapers.

In the end, we can say that our goals previously set were achieved, also in order to sustain and keep the work going (because it needs time to get concrete sustainable results) we chose a group of people (from the local employees) responsible for the execution of the same plans we set at the beginning of the project until the second wave of the project (planned in 6 months from the end of the first wave).

Section 3: the results of the pragmatic study

For the writing of the practical part the use of scientific methods for the purpose of confirming or invalidating our hypotheses is required, also for answering the main problematic of the research, I chose developing a qualitative study, as well as employing a methodological approach adapted to the nature of this research.

The methodology used in the study is based on an interview (semi-structured) with the managers of the Start-up SocioTour (Mbak Farilyn and Hesih permawati) in addition to other experts in the field that will be presented thereafter, these interviews will be presented as an analysis for the purpose of knowing how digital supply chain could be applied in the Ecotourism sector.

I will be focusing on two main studies; the first which is an analysis of the interviews done with some experts and specialists of the domain in Indonesia, and the second is the presentation of the output of the project we were involved in.

3.1. The interview

Definition:

“This is the most common format of data collection in qualitative research. According to Oakley, qualitative interview is a type of framework in which the practices and standards be not only recorded, but also achieved, challenged and as well as reinforced. As no research interview lacks structure most of the qualitative research interviews are either semi-structured, lightly structured or in-depth”³⁷.

Semi-structured interview:

“Semi-structured interviews are those in-depth interviews where the respondents have to answer preset open-ended questions and thus are widely employed by different healthcare professionals in their research. Semi-structured, in-depth interviews are utilized extensively as interviewing format possibly with an individual or sometimes even with a group. These types of interviews are conducted once only, with an individual or with a group and generally cover the duration of 30 min to more than an hour. Semi-structured interviews are based on semi-structured interview guide, which is a schematic presentation of questions or topics and need to be explored by the interviewer. To achieve optimum use of interview time, interview

³⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194943/> 28/04/19

guides serve the useful purpose of exploring many respondents more systematically and comprehensively as well as to keep the interview focused on the desired line of action. The questions in the interview guide comprise of the core question and many associated questions related to the central question, which in turn, improve further through pilot testing of the interview guide. In order to have the interview data captured more effectively, recording of the interviews is considered an appropriate choice but sometimes a matter of controversy among the researcher and the respondent. Hand written notes during the interview are relatively unreliable, and the researcher might miss some key points. The recording of the interview makes it easier for the researcher to focus on the interview content and the verbal prompts and thus enables the transcriptionist to generate “verbatim transcript” of the interview”³⁸.

a) Advantage:

- Reassures the interviewer (in case of missing the idea, relaunch) and the respondent too (because he has the time and the freedom to express his idea clearly)
- Having the necessary collected materials according to the research problem.
- Allows a systematic comparison between the interviews.

b) Disadvantages:

It could turn into an interrogation. And we end up not really listening to the interviewee, because we are obsessed by the grid, we are not really attentive to the reactions of the individual. We reframe without stopping to see his opinion and we end up with no freedom for the interviewee.

3.2. The choice of the interviewees

To conduct well the study and to give an empirical dimension to the work, I conducted the interviews within the enterprise and outside of it, and for this I selected a sample of seven people. This selection is based on the positions held by these people who are related to the research topic.

To reach the objective of the study I interviewed this number of people who occupy positions that helped to reach the objectives and they can be presented as following:

³⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4194943/> 28/04/19

- 2 co-founders of the Start-up SocioTour: Mbak farilyn and Hesih permawati the selection of these persons were in matter of their responsibilities and their tasks in the company that have a direct and indirect relationship with our subject.
- Bambang BPJ: the president of the association of the hotels in Bangka-Belitung Province and the owner of more than 2 hotels in the region and more in other provinces like Bali and Jakarta, the reason of his selection is that he is responsible of the hotels in the region and he has a lot of information about their activities and collective plans in the future, also he is responsible of the launch of ecotourism in the region in his field of activity (hotels), and as a business man in the field of tourism, he could help the research in a lot of aspects.
- Chardian: the owner of 16 homestays in Bangka Island the name is « Charsy homestay Sungailiat » the reason of his selection is that he is operating in Ecotourism more precisely in community development, in addition to this he only works digitally. Chardian only recruits retired poor people to work for him, also he has some houses that he rents per month for poor people of the region, he is also known by helping with the collaborations he makes the laundry agencies, gym halls, cleaning agencies..., and his work didn't prosper till he got on internet (especially with foreigners), after seeing all this Mr.Chardian was the perfect interviewee for this study.
- Eko Wahyudi: the owner and founder of the eco-park in Bangka Island and businessman in Ecotourism sector in Bali (touristic complexes and hotels). Mr.Eko bought lands previously used for tin mining in Bangka Island, lands that was damaged and became full of holes all over them, after buying them he made sure to turn them into a touristic spot where people can come enjoy their moments and as he said "a spot where people can take pictures", so he made what they call "the eco-park" a green spot where people pay a symbolic amount of money in exchange of a free drink, also he precised during the interview that his Marketing strategy is based on how much people like and share the spot with their friends, families and on social medias with special hashtags to make it known, this strategy is from a side a way not to spend a huge budget on their Communication, and from the other side to make people believe that this spot is a good one based on their trust circle. After all these information I saw that he was an adequate person for this research
- Jake: Jake is a young entrepreneur, he operates in a lot of sectors like construction, prinary and of course Ecotourism, Jake created his Start-up JakeTravel on internet without a budget, only studying his potential (especially with foreigners) and posting pictures and videos of the best spots to visit in the region of Bangka Belitung, he ended up becoming the most known digital travel agency of the region and nearly the only one who operates

with internationals. During our stay in there he was taking in charge all our weekend trips with sharing some tips of consciousness about the nature.

- Julian: the president of Genpi Bangka community; GenPI is a tourism community formed by the Ministry of Tourism of the Republic of Indonesia, GenPI was created to promote for tourism in the concerned regions by focusing on digital promoting. Besides promotions, GenPI was also created to organize chill events that aim to attract tourists to come to the region. All their activities and meetings are Online, but once in a while they gather face to face in order to strengthen friendship between members of the GenPI organization, the organization was the one controlling our activity in the province and helping us realizing our goals by suggesting the right businesses to work with especially the ones needing a real help to develop. As the organization is the best that knows the tourism in the region I chose to interview their president to have his opinion concerning the subject.

3.3. The number of the interviewees

During my internship, and to do an internal and external research; I have been oriented by my supervisor in the company to all the concerned persons; these are the representatives and senior officials of the Ecotourism in general manner and Digital Ecotourism in a special case. Also finding agreements and repetitions in most information from their part shows that we got to the response to our research subject.

Concerning the interviews:

I have written down everything that was said by the interviewers during the interviews, and I have opted for the analytical method as a tool for processing the information acquired. For this I prepared an interview guide to frame it and get the maximum of information that benefit the research.

3.4. The interview guide

The first part of the interview guide has as an aim to show the situation of Ecotourism in the country (Indonesia) in a general manner and thereafter its situation in the province where I was involved for the internship; this part aims to introduce the subject of the research for the interviewees from a side, also to analyze the Ecotourism state and characteristics and problems in the region.

The second part in which I tried to focus the talk more on the impacts of Ecotourism and businesses related to it in different aspects: environment, economy, local community, modern interest and something attracted my attention in this part is that all the participants introduced the role and importance of the support of the government to launch and sustain Ecotourism.

After that, we drove the focus of the talk on Tour Operators as a business to frame the question in our sector of activity and to know more about the role that each part attributes to tour operators if its image is important and if it has an important contribution in the Ecotourism activities and destinations and the first word that the majority used and talked about is the promotion and the use of tour operators as an intermediate with customers and the last two points that were mostly mentioned by the tour operators managers are the services combination (the package structure and the services provided by the agency and its collaborators), and the activity organization (precisely about the organization of the activity of the collaborators like the farmers, the breeders, the fishermen.etc).

And finally the last rubric talks about adding of the digital variable to see what difference would it attach to this domain, mostly all responses were similar and from people that are operating only on digital area or using digitalization as the basis of their business and this includes: adding an important value to the business, cheaper than the traditional way and cost-friendly, fast in terms of research, share of information and customers' reviews, the special way for the target selection, the personalized organized packages (the easy way to modify and offer a customized product and service), reduction of countries' borders for its importance to attract money to come to the country by facilitating it and the last one if this variable is a motivator of investment for interested stakeholders.

The interview guide:

1. How could you describe ecotourism in Indonesia? Could you please present its characteristics and specificities?
2. How could you describe ecotourism in Banka Belitung Province?
3. What are its environmental effects?
4. If we could talk about the stakeholders in the ecotourism here what can you say about them?
5. Who are the key actors involved in the ecotourism value chain in Indonesia?
6. What are the local economic impacts of ecotourism?

7. Ecotourism in the community development. What can you say about it?
8. One of the nodes of the supply chain: Tour Operators in your opinion what contribution they add in the creation of an ecotourism product.
9. What value does the digital variable add to the ecotourism supply chain?
10. What is the contribution of this kind of investment to the country? To the region
11. In Tour operators case how could you illustrate and measure the value creation digitally? Can you give me examples? (Appendix 1)

3.5. Methodology: The qualitative analysis

The choice of the qualitative analysis returns to the fact that our theme is an experts' subject that needs information and clarifications from specialists and experts of the concerned field.

Information related to their businesses and obviously to our subject that could be used as examples, principles and fundamentals to other businesses' to rely on in their activity. By consulting the book "techniques d'étude de marché Ed4" to know how to analyze the information obtained during the interviews (which corresponds to our case) the part showing the principles of the content analysis in the most accurate because when the collection is complete, the researcher has a mass of raw data. Content analysis makes it possible to process this material. The different phases of the technique are summarized as following:

1. Manual transcription: It is the copying on paper the audio or video recordings of the interviews. Each silence, repetition or slip is carefully noted. This tedious work is still done by hand; voice recognition software will help speed up this phase.
2. Floating of 2 to 3 interviews to make the analysis categories: After a quick reading of two or three interviews, the researcher identifies themes, sub-themes, evocations, keywords that appear most often. These elements form the categories and subcategories of the content analysis.
3. Elaboration of an analysis grid (Codification): The different categories structure the analysis grid. The study leader repeats each interview, then ventilates the units of the speech (words, sentences, themes) between these categories; for simplicity, we group together related topics or synonyms in the same category
4. Vertical and horizontal analysis (Quantification): We calculate the frequency of appearance of the different categories. Two types of analysis are possible: The horizontal analysis evaluates the weight of the different categories x (or subcategories

xy) on all the respondents. The vertical analysis pursues the same objective, but works within the same interview.

5. Synthesis (study report): the study leader draws up a general summary of the results that he records in a synthesis report. The categories in the analysis grid can serve as a framework for the report's structure, but it should not be seen as a mosaic of excerpts from the interviews. If the conclusions are based on quantified indices, it should be borne in mind that these results cannot be generalized because the sample does not generally satisfy the statistical constraints required. On the other hand, it can be said that, for the groups or individuals questioned, this or that theme seems preponderant; a quantitative study will subsequently make it possible, if necessary, to verify whether the phenomena observed are generalizable.

3.6. The summary of the results of the interviews:

Categories:	Interviewee 1: Mbak farilyn	Interviewee 2: Bambang BPJ	Interviewee3: Chardian	Interviewee4: Eko Wahyudi	Interviewee5: Hesih permawati	Interviewee6: Jake travel	Interviewee 7: Julian Genpi	Total
Ecotourism activities: -Indonesia -BABEL Province	developed developing	developed developing	Developed Developing	Developed Underdevelo ped	Developed Underdevelo ped	Developed Developing	Developed Developing	100% 71%
-problems	Promotions	Tin mining, local don't care	Accessibility	Tin mining	/	Government support	/	71%
Sub-total	3/3	3/3	3/3	3/3	2/3	3/3	2/3	80.6%
Impacts of Ecotourism: -environment -local community -economic -government support -modern interest	Positive Positive Positive Important Positive (both)	Positive Negative acceptance Positive Important Positive for foreigners	/ Positive* Positive Important Positive (both)	Positive Positive Positive / Positive (both)	Positive Positive Positive Important Positive (both)	Posi/nega positive positive important* positive (both)	Positive Positive Positive Important Positive (both)	78.5% 85.7% 100% 85.7% 92.8%

Sub-total:	5/5	4.5/5	4/5	4/5	5/5	4.5/5	5/5	88.5%
Tour operators:								
-important contribution	Positive	Positive	Positive	/	positive	positive	Positive	85.7%
-promotion	Positive	Positive	Positive*	Positive	positive	positive	Positive	100%
-intermediate with the customer	positive	negative	Positive	positive	positive	positive	positive	85.7%
-services combination	Positive	/	/	/	positive	positive	Positive	57.1%
-activity organization	Positive	/	Positive	/	positive	positive	Positive	71.4%
Sub-total	5/5	3/5	4/5	2/5	5/5	5/5	5/5	79.9%
Digital variable:								
-adds a value	Positive	Positive	Positive**	Positive	positive	positive	Positive	100%
-cheap	Positive	Positive	Positive	/	positive	positive	Positive	85.7%
-fast	/	Positive	Positive	/	/	positive	Positive	57.1%
-target selection	Positive	/	/	Positive	positive	positive	Positive	71.4%
-personalized organized packages	positive	/	/	/	positive	positive	positive	57.1%
-reduction of countries' borders	positive	/	/	/	positive	positive	Positive	57.1%
-motivator of investment	positive	/	Positive**	Positive	positive	positive	Positive	85.7%
Sub-total	6/7	3/7	4/7	3/7	6/7	7/7	7/7	81.6%
Total	96.25%	73.21%	79.28%	65.71%	88.09%	97.5%	91.6%	82.6%

Figure3.4: the analysis of the data

Source: made by us

3.7. Analysis

1st Rubric: Ecotourism

As all interviewees (100%) judged that the ecotourism in Indonesia is “developed” with giving examples of spots, activities, clubs, agencies operating in this field, this gives our interview credibility that they will help the rest of the questions with experience and expertise, also the aim of the question was to describe the ecotourism in their country and the results were as following:

- Since 2017 ecotourism is one of the top projects of the government because all stakeholders understood that tourism supports the economy, the revenue coming from outside is 16 billion dollars (foreign exchange revenue),
- Ecotourism is a fast growing economy, very attractive and simpler than building an industry,
 - Indonesia government worked with a strategy of three pilots to develop tourism and ecotourism: 1st which is accessibility (with providing easy access to touristic destinations like building roads, airports, infrastructures and the easy entrance procedures with giving free visa to more than 146 countries that before was only for 15 countries. 2nd comfortability (with providing facilities like restaurants, hotels, homestays... to feel coziness). And 3rd attractions and as they described it (something to see, something to do, something to buy) to create an experience,
- Ecotourism became easier with the launch of all the intermediate platforms (like Booking, Traveloka...) on internet and the increase of the number of aircraft companies that helped the access of small businesses,
- The government started investing to encourage enterprises by consultancy and help to create start-ups in the field, which made the product of the Start-up SocioTour,
- Major specificities of current Ecotourism in Indonesia are: enjoy the beauty of nature, involve education, understanding, support conservation as well as increasing the income of the local communities.

Furthermore, most of the interviewees (71%) agreed on the fact that the ecotourism is “developing” in Bangka-Belitung province with the preparation of the infrastructures (the focus is on two special economic zones for tourism) and the preparation of the mindset of people to welcome tourists. By giving the reasons why ecotourism isn’t developed in the region they gave different reasons citing:

- Promotions: promoting for Ecotourism in the region is a new focus of the government,

- Tin mining in multiple places: as the region is rich with its tin resources the tin mining activity was a huge focus of local and governmental businesses for a long time which created a damage in a lot of lands
- The mindset of locals: who are described as: “not caring for the ecotourism” and also not being prepared with their state of mind to receive tourists.
- The accessibility: the airplane ticket from the capital to the region is expensive and reservation websites and agencies are not many in the region,
- The lack of government support: all interviewees agreed on the importance of the government support at a certain level, with their investment, strategy of development and the focus on the zone.

Analysis: with the advent of Ecotourism around the world as a need and a trend at the same time Indonesia was one of the first countries to apply it or to use, for the exceptional nature that it has and its important consideration as a destination for foreigners (especially westerns). So we could consider it as a reference in terms of knowledge and expertise in this domain and this part of the interview was conceived to introduce the talk and to know more about the characteristics in addition to the problems of Ecotourism in Indonesia in general and how the country is working to develop and create a new ecotourism destination next to the other provinces.

2nd Rubric: the impact of ecotourism

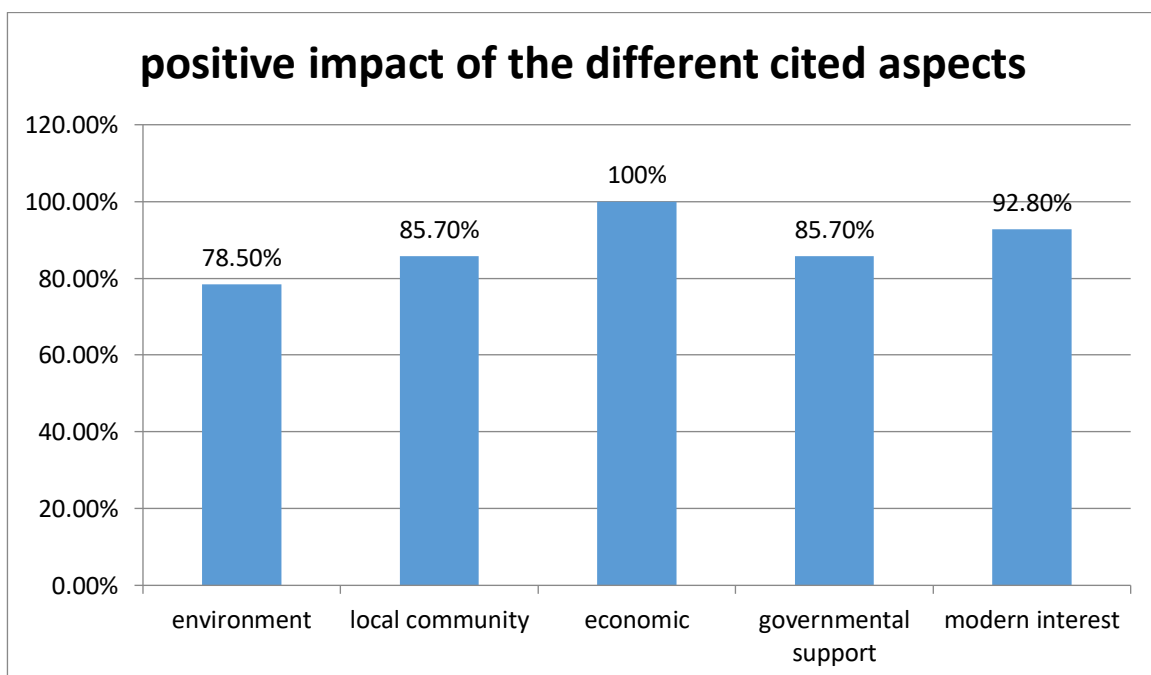


Figure3.5: positive impact of the different cited aspects

Source: Made by us

As any other added variable interviewees approved the fact that ecotourism has an impact on the concerned region in different aspects, the mentioned aspects are as follows:

- Environmental impact: 78.5% of the interviewees finds it positive
 - Fixing the damaged lands (the damage of tin mining),
 - Building new eco-friendly structures,
 - Reducing the negative impacts: like plastic, trash, buildings on the green lands...
 - Tourists planting, cleaning, treating animals: like an enjoyable experience with the two aspects of learning and helping at the same time,
 - Reconciling economic and environmental concerns and giving a practical meaning to sustainable development,
 - Maintaining clean and beautiful spots and as a result a biodiversity of the fauna & flora,
 - One negative impact mentioned; which is related to carrying capacity concept (the increase of the number of tourists which impacts the increase of need for accommodation).
- Impact on local community: it is positive in the point of view of the majority 85.7%
 - The increase of work opportunities and revenues,
 - Organize the community by helping them make a network, sell their services and stay with low cost (with homestays),
 - Ecotourism can be used as a source of community development: locals learn how to interact with visitors and it encourages small businesses to maintain their activities,
 - Community involvement in ecotourism management especially native because they know their region and how it could be explored in the accurate way,
 - One negative impact mentioned which is closing the existing jobs because the economy of the region release by an important part on Tin mining,
 - Embracing individual initiatives within the community,
 - Sharing the way of living by experiencing activities with locals such as homestays host families, festivals and the artisan goods,

- Community-based tourism permits communities to contribute in the modern global economy by building a sustainable source of income and preserving their way of living.
- A flourishing model of community-based tourism operates by the help of the existing community initiatives, utilizes community leaders and seeks to use local inhabitants so that income generated from tourism stays in the community and make the most of local economic benefits.
- Economic impact: all the concerned experts find it positive and a plus for the economy
 - Economic growth of the region
 - The increase of the foreign exchange revenue
 - Small & medium enterprises growth: handcraft providers, shops, farmers, breeders (because they provide to the restaurants and hotels), car rental, translators, tour guides,
 - Improvement of the living standards.
- The impact of government support: 85.7% of the concerned parts agreed on the fact that government support impacts a lot in a region and it is very important as it was mentioned a lot of times and during all the interviews. Also the Tour operators' managers see that the government should provide guidance, trainings and courses about Ecotourism in the region.
- The modern interest impact: 92.8% of the interviewees confirmed that Ecotourism becoming a modern interest of people around the world makes it an aspect that attracts all the supply chain and impacted the development of this field and people's acceptance. The only interviewee that described the locals as "not caring for ecotourism" was Bambang BPJ the president of hotels' association, he insisted on the point that this mindset didn't get to the Bangka region.

Analysis: this part shows the impact in different sectors of the social life, the interviewees answered with slight differences in mentioning the impact and this might be interpreted by the difference of the activities of the experts, but also repeated words of the same aspects over and over especially in the economic and the modern interest impact, where they used approximately the same words and this shows its exact impact.

3rd Rubric: Tour operators

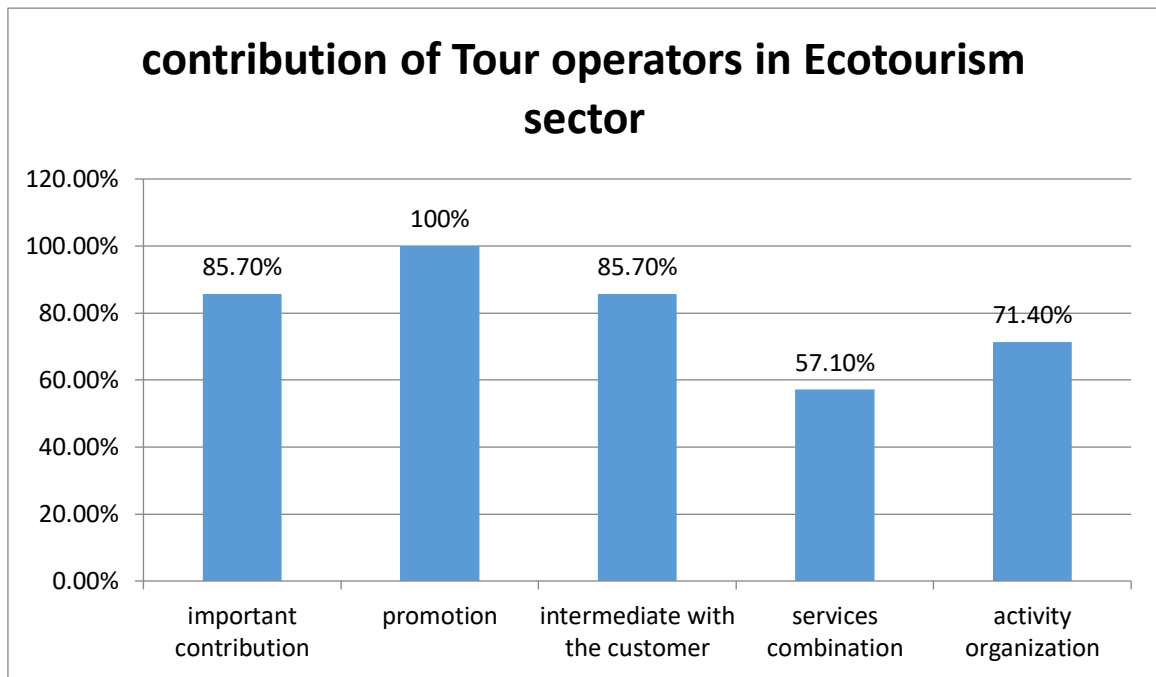


Figure3.6: contribution of Tour operators in Ecotourism sector

Source: Made by us

According to the tour operators role interviewees gave the following features:

- They are the intermediates between the customer and the service/product providers,
- The facade of the experience: with the organization of the Tour package, and the customer
- In the case of some Tour operators or travel agencies; help the services' providers in organizing their activities (with expertise and proficiency),
- The creation of an ecotourism product: such as combining different services or products to get the promised goods to the customers,
- Promotion of the touristic product existing in a certain zone to the world,
- Tour operators are the ones to bring tourists to a destination through their packages.

Analysis: the experts shared their perspectives of the role of the Tour operators in the domain which is obviously important, but we see that “external experts” described it in a superficial way, the way that the customer sees it and also the way that influences their activity (the façade of the experience) but “internal experts” described their own roles as a product creators and collaborators’ activity organizers.

4th Rubric: digital variable

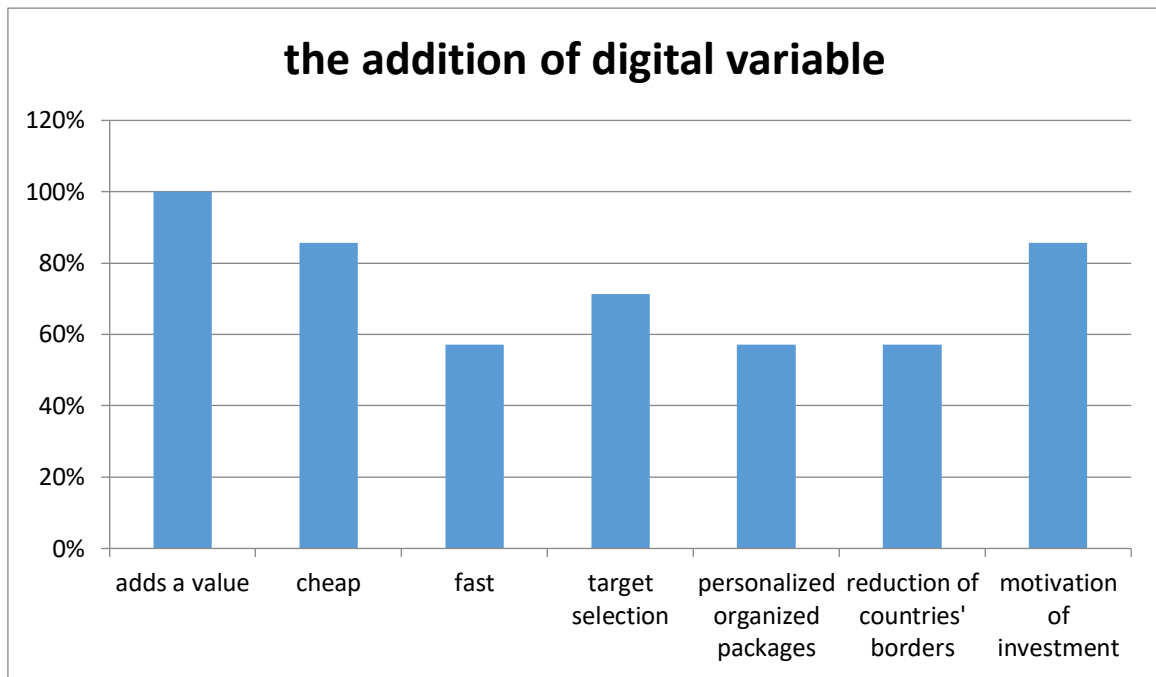


Figure3.7: the addition of digital variable

Source: Made by us

Some of the interviewees didn't mention the digital aspect till the question was asked and the others kept citing it as it is the reason of their existence on the market, or it helps their activity to sustain and get promoted. And the following features describe the value that digital variable added to their businesses:

- The use of digital marketing as an effective approach: the use of Social Medias, specialized websites and being referenced by Google,
- Cheapness compared to other investments: the access post of the information is cheaper than the traditional way,
- The new way of word-of-mouth method,
- The only way to launch products, packages and information for businesses present on internet only,
- It helps ecology in a general manner and ecotourism in a specific way because installing digitization permits to consume less materials (especially paper),
- Achieving the target easily: by the removal of distance barrier,
- Fast: with a single click thanks to the algorithms that internet providers installed (example of Hashtags too),
- A tool of promotion and distribution of products/services,
- Bigger scope of customers because digital world is borderless,

- Personalized organized package: the easy way to find a customized service or customize it as necessary,
- A motivator of investment: the easy access, cheapness, rapidity and limitless borders; makes it attractive to investors.

Analysis: the digital variable is the new aspect that interred all domains as a result of customer digitization which makes it necessary to study it and study the impact of applying it. And the stress was in the first place on using it as a tool for adding value, in addition its cheapness, and the majority mentioned that it is considered as a motivator of investment. And all impacts that were mentioned in our case are positive, this might be because the digital world is still growing and showing new easy tools and solutions but in the future as any other added variable it might show its problems, loopholes and disadvantages. But till now it is the answer to all businesses' problems, especially the new ones and the ones operating in Ecology sectors.

The interviewees gave approximately the same answers and agreed on a lot of aspects but we could see the difference in some responses with their features and I judge this returns to the difference of the operating businesses, the problems they face, the solutions they find or the used tools in their daily tasks and leadership positions. Cheap, adds a value and motivator of investment.

To confirm that the different aspects were mentioned by the majority of the interviewees because it confirms their importance the following figure shows the totals:

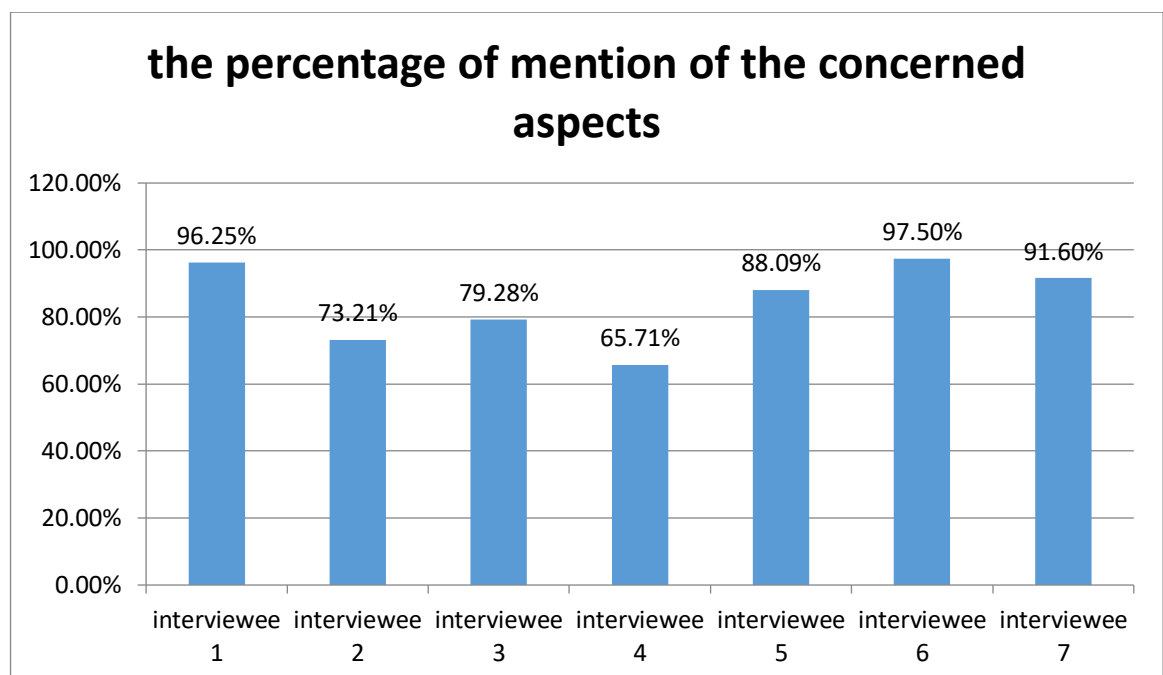


Figure3.8: The percentage of mention of the concerned aspects

Source: Made by us

Comment: All the interviewees mentioned the same aspects by more than 60% which shows that we are on the right way in selecting the correct information

3.8. The main stakeholders of the ecotourism sector that constitute its supply chain

During the interviews, and in order to get to answer to the first Hypothesis (that supply chain management has its own models in Ecotourism sector); I presented previously the models used in Ecotourism in Indonesia to make it profitable, and to do so there are key actors or players that are linked in a supply chain to make it work the way it is, and the mentioned stakeholders by the experts are as follows:

- The government: always mentioned in the first place as the stakeholder that helps in most operations (as a regulator, destination owner and manager
- The community: the participation of the community in this kind of business in primordial because they are responsible for a lot of activities with the visitors: tour guiding, interaction, shops, businesses, get the money generated to the concerned community, acceptance...
- Small and medium enterprises: all the S&M enterprises (the related products and services providers) but even the ones who are not concerned because they have to insure that their activity is not damaging the Ecotourism
- Hotels working with the concept (example mentioned: Swissbel and Novotel): because it's the place where the visitor spends time the most
- Homestays: to have a local cheap experience
- Travel agencies, Tour operators and related websites: because they are the first image of the tour package
- Nongovernmental associations and organizations: they guide the way the activities should be with trainings in addition to their indirect role of promotion

3.9. The internship results in terms of digital use

At the beginning of the internship, the government provided us with a limited budget (400 Euros for all the departments), because according to them the project is supposed to promote, develop and improve the Ecotourism in the region with only the use of raw materials existing in the working zones, but at the same time they provided for us native experts to help us find the right businesses and spots with a potential (as we set in the beginning of the project), and as the Start-up is operating on Digital we chose to follow the same path to promote to our project, to get results of goals set and to help businesses in need

And the results we obtained in terms of digital use:

- For tourism development: the package trial needed 6 tourists to try it, with the help of internet we sold them in less than 48 hours.

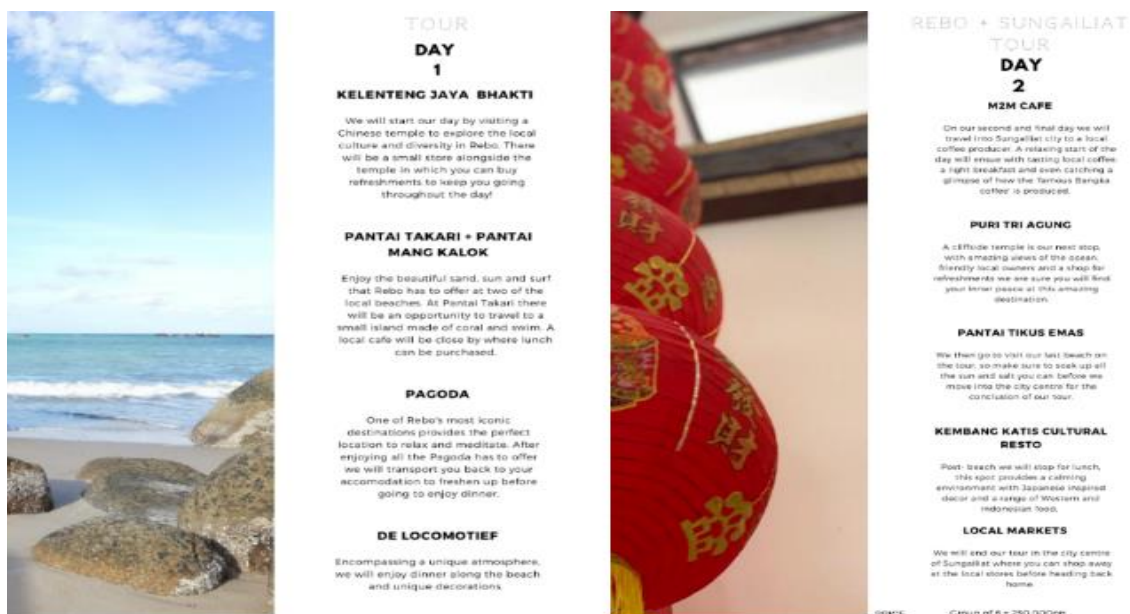


Figure3.9 : the Tour Package trial program

Source: documents of the enterprise

- For product innovation team: first of all setting several start-ups on E-commerce platforms and receiving orders in less than 24 hours. And this action pushed the experts to ask us to launch a workshop for the other start-ups managers, and by launching it on social medias we received 40 start-ups managers, and second the launch of the taxi drivers and guides of our tour package on social medias and the project's website. And third the launch of call for volunteers for specific temples (learn meditation, Kung Fu and travel) of specialized

websites and getting interaction from people around the world.



Figure3.10: example of the pages creation for the banana chips start-up

Source: documents of the enterprise

The launch of sales of banana chips of internet (social medias and E-commerce websites)

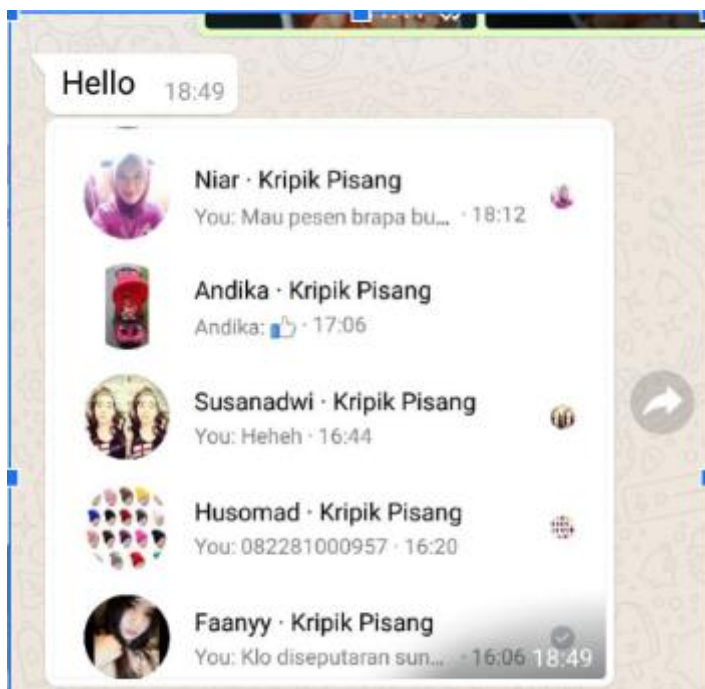


Figure3.11: the example of the orders received by the owner in less than 24 hours

Source: documents of the enterprise

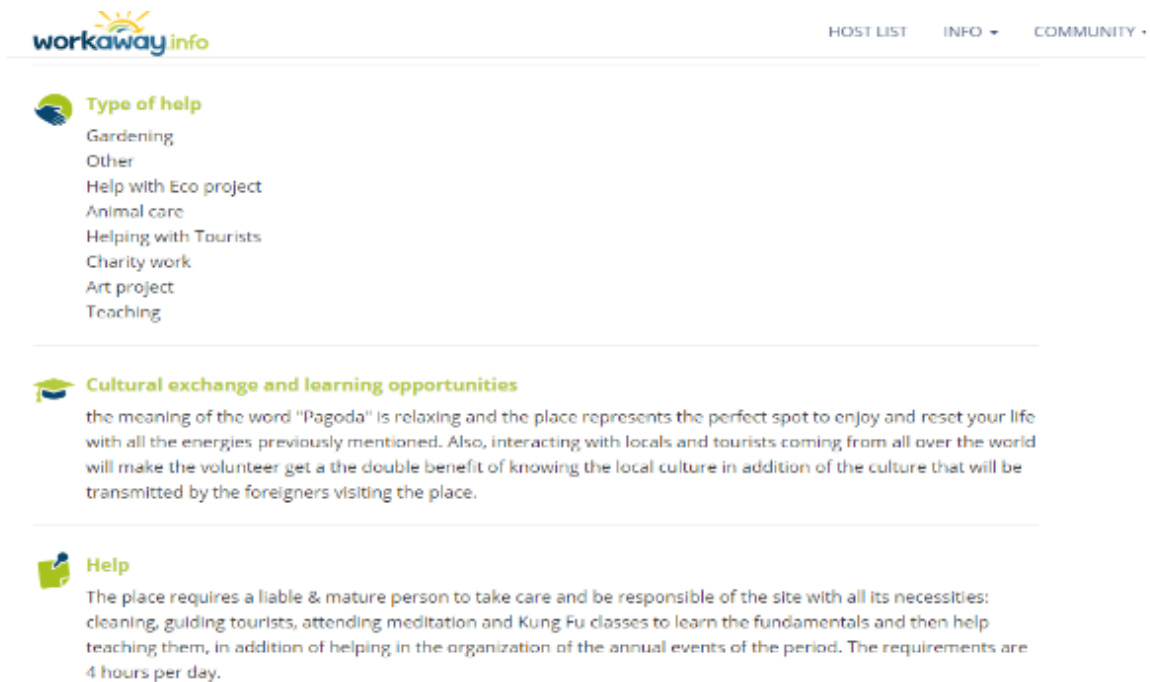


Figure3.12: example of the launch of call for volunteering for the concerned temple in specialized website

Source: documents of the enterprise

- For digital marketing team: they launched our project on social medias which helped in diffusing the information easily, quickly and with interaction, also the launch of the website for the long term projects of the concerned zone.

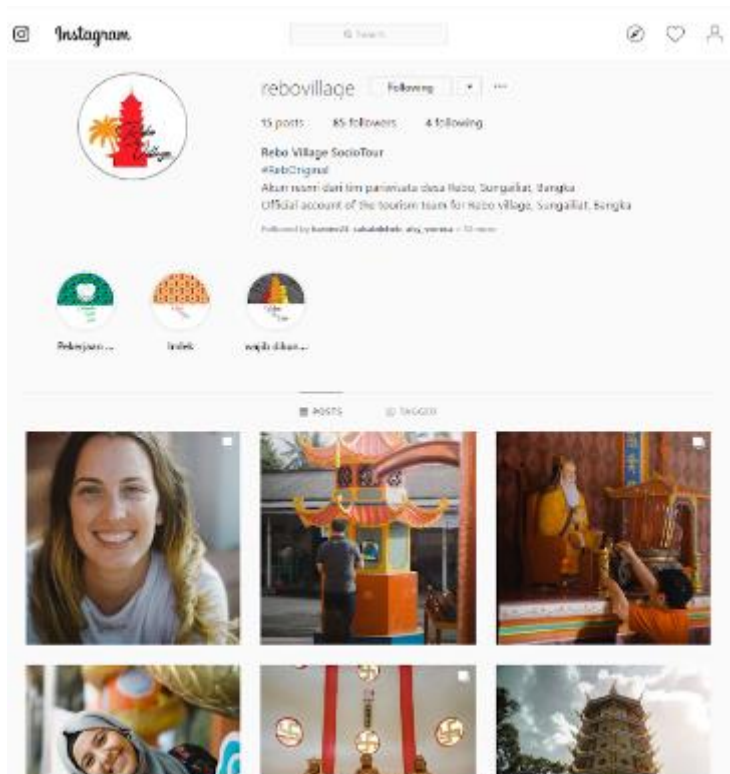


Figure3.13: the Instagram page created by our team for the project promotion

Source: documents of the enterprise

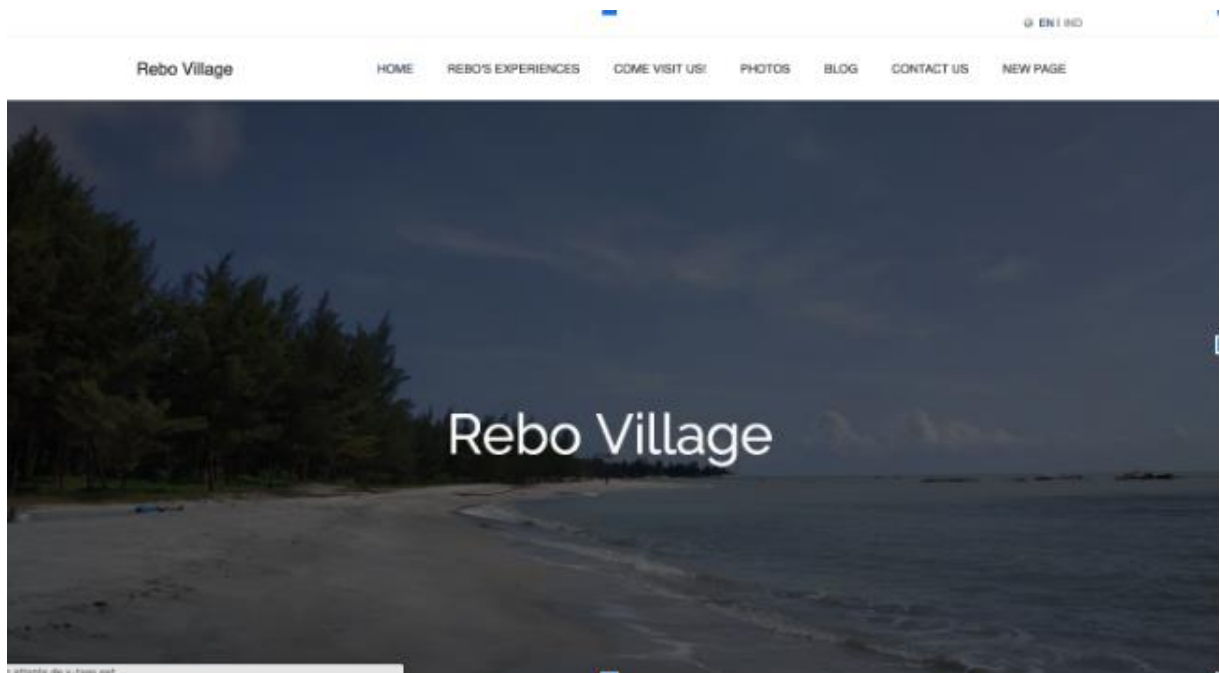


Figure3.14: The website of the activity village

Source: documents of the enterprise

PS: these results were conducted to the government at the end of the project

3.10. The constraints of the research

The interviews were conducted with the most accurate and capable stakeholders of ecotourism (and tourism in general) but the problem were mostly with the communication, most of them don't master English so I had difficulties explaining to them what the questions really mean so I can get the right answers that I'm looking for

The use of translators didn't really help (I used some translators) because they don't master our domain which makes a problem in the translation of information

For this main reason half number of the interviewees refused to be recorded (for their lack of English capacities) but all their answers were written and analyzed

Conclusion:

In this chapter I have tried, to concretize the different theoretical notions related to our research topic presented in the previous chapters.

Based on the analysis of the results of the interviews conducted with different experts of the domain as well as the analysis of the internal documents, I was able to observe how digital supply chain could be applied in Ecotourism sector and well as other sectors, and many other new concepts that appeared with the advent of digitization, and how the different nodes of the new supply chain are linked to each other and influence as well as getting influenced by each other.

I was able to summarize the results and the analysis of both the interviews and the internship results to get the maximum of information on this new era of supply chain management.

General conclusion

General conclusion:

The purpose of this research was to demonstrate the application and contribution of the digital supply chain in Ecotourism sector within SocioTour Start-up. In a country that is reputed with field since ages.

This led to three studies; the first was a literature search (secondary data mining) where I presented the key concepts of the ecotourism as well as studies of digital supply chain and its fundamentals. The second and third study were about both variables that drove us to use the observation method during the internship to pick the information we need thereafter collect the data from semi-directive interviews that allowed us to analyze using a qualitative methodology.

At the end of our research work, I tried to demonstrate the major roles played by the digital supply chain function and its degree of influence on the ecotourism sector within a company and in collaboration with the Indonesian government to measure the performance.

According to the qualitative study carried out within the internship, and through the interviews conducted with some experts and managers of the company, and the identification of various characteristics, problems, strategies that helped to reach and verify the assumptions previously defined that justify this study as:

- **Supply Chain Management has its models in the ecotourism sector:** as previously stated the stakeholders in the supply chains in this case are differently mentioned (like the government, non-governmental organizations...) and were cited as key actors for the good functioning of the ecotourism sector compared to the traditional tourism this drivers automatically to a different management of the supply chain and it is proved in the choice and management of the different components of the attractions, infrastructures and most importantly the different and special implication of the local community that works for the development of the local economy with a certain

mindset that allows to keep the circulation of the money between suppliers and distributors of the concerned region.

- **The use of information and communication technologies is the result of an increasing digitalization of the consumer:** the fast and affordable advantages of the use of information and communication technologies were benefits that came after the digitalization of the customer because its availability of internet attracted the businesses to be present and chase the opportunities presented in there in addition to their traditional presence on the market and this was proved during the observation of the augmentation of the sales of the Banana Chips start-up, the launch of the project on internet and the interaction got from the netizens on social medias, from another side the personalized organized packages with easy use with a single click that was mentioned by the interviewees proves the preference of a big number of consumers the digital area and it was taken as a serious motivator of investment in this field.

- **In the ecotourism sector, a digital supply chain is a tool**

Sub-hypothesis 1: for increasing value

Sub-hypothesis 2: for reducing costs

Sub-hypothesis 3: optimizing the delivery delays

Fast, cheap, target selection, personalized organized packages, reduction of countries' borders was an illustration and a response to this assumption by the interviewees as the use of digital supply chain is the brand new tool to increase, add and create a value in addition to the reduction of costs and the delivery delays with the organized algorithms of internet that facilitate and help the decision making.

As a result; the hypotheses we assumed at the beginning of our study are all confirmed. And in this research documents all the documents and analysis that prove the contribution of the digital supply chain management in the Ecotourism sector.

The importance of this study to Algeria is to understand the significance of ecotourism and to launch it on accurate basis with the use of the new trends and technologies that the science provides us under the digitization of the supply chains, by using the same strategies but applied on our society, economy and the nature of our country.

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Appendices

Appendix 1: Interview guide

1. How could you describe ecotourism in Indonesia? Could you please present its characteristics and specificities?
2. How could you describe ecotourism in Banka Belitung Province?
3. What are its environmental effects?
4. If we could talk about the stakeholders in the ecotourism here what can you say about them?
5. Who are the key actors involved in the ecotourism value chain in Indonesia?
6. What are the local economic impacts of ecotourism?
7. Ecotourism in the community development. What can you say about it?
8. One of the nodes of the supply chain: Tour Operators in your opinion what contribution they add in the creation of an ecotourism product.
9. What value does the digital variable add to the ecotourism supply chain?
10. What is the contribution of this kind of investment to the country? To the region
11. In Tour operators case how could you illustrate and measure the value creation digitally? Can you give me examples?

The appendix 2: Indonesia map



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³⁹ <https://sustainabledevelopment.un.org/content/documents/4488Nirvandar.pdf> 09/04/19

