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Executive Summary

Sustainable event is the process used to produce an event that particularly has concern for economic impact, social impact and environmental impact. Sustainability is a very important aspect in event creation, but the industry would need to balance the delivery of the events on time as well as being on budget. The conjunction of sustainable development event and an event, to be sustainable, must be held under conditions to ensure that future generations can continue to organize events. This implies that the events organized by current generations should minimize the use of natural resources and impacts in order to ensure that there will be sufficient resources to continue to hold events in the future.

Sustainable management is an inescapable concept that is slowly permeating all companies that at one time or another activity organized a fair, congress or working day. However, despite the strong commitment to the sustainability of a growing number of organizers, the many facets that make up with the challenge exceed their capacities and resources. To respond to these shortcomings and difficulties, in recent years there have been entities, both private and non-profit organizations that have developed initiatives and methodologies that facilitate the integration of the different dimensions of sustainable development in the management of an event.

This research study discusses how a sustainable event can be organized and what are the benefits of organizing sustainable events.

Background

Events are a gathering of people for a purpose. It is an opportunity to celebrate and also inspire people, but in order for this to go on (Grix & Lee, 2013). The mega event industry would need to truly look into the future to see whether the event is sustainable, if it is something that can repeat itself and the same amount of people will attend if not more (Jones, 2014). Sustainable event is the one that takes into account the negative impacts on the environment in which it develops and tries to minimize to the maximum to produce the least possible environmental impact in their environment. Its organization mitigates the high consumption of resources in a short time (water, energy, food etc.), waste generation, increased emissions of CO₂ by transport, accommodation, etc. (Ahmad et al., 2013). Sustainable event should also be able to leave a positive legacy in the community that hosts it from the socially and economically.

The sustainability management of events refers to the entire process including the design, implementation, commissioning and closure of a comprehensive management system of the environmental, social and cultural sustainability of an event of limited duration, i.e., having a beginning and an end (Starik & Kanashiro, 2013) and a determined and relatively short duration in time.

This concept is an important step in the sustainability management of events because it is not merely the application of good "standard" environmental practices which may or may not be worth fit any event, but goes beyond, designing and implementing a system of sustainability management planned and designed specifically for each event. Thus, through explicit management (and not by applying simple "good practices") results are optimized sustainability and sustainability management of the event is integrated into the continuous improvement of this.

Event organizers wishing to obtain quantitative improvements in the sustainability of their events can be implemented on a voluntary basis, a sustainability events management system (Musgrave & Henderson, 2015). The well-established sustainability event management systems can generate the necessary management structure for the optimum development of the sustainability of the events of an organization.

For organizing sustainable events, it is important to avoid utensils and cutlery throwaway containers in small fractions, use tap water and jars, separate waste by type and take the corresponding container, eating local, seasonal and / or ecological, prioritize lighting natural, use a climate suitable, avoid printing paper, use reusable and recyclable decorative elements, offer attendees information on means of transport available to get to the event, facilitating the movement public transport, ensure accessibility, without physical or sensory barriers exist that prevent the participation of all alike (Nicolaidis, 2015).

Contrary to popular belief, it is not more expensive to organize an event in a sustainable way. The fact of controlling and reducing resource consumption makes event organizers more efficient in their production processes, reversing obviously on savings time and costs. In addition

to that, from the business point of view, it adds value and makes the organizers more competitive. It also allows the company to project a consistent corporate image with its principles of Corporate Social Responsibility.

However, the 100% sustainable events does not exist, there will always be issues not have been avoided. The 'neutral carbon' event is one that takes into account these unavoidable emissions in the event, for which an estimate of the same is done and are offset by purchasing carbon credits volunteers from a project with clear environmental, social and economic advantages (Deng, 2015), thus securing the final balance of emissions is zero.

Project Aims and Objectives

As the importance of introducing sustainability as one of the criteria for organizing events, both for its material impact (such as major consumer of environmental resources) and for the opportunity it represents to promote culture of sustainability by both, the organizers and participants, to give their large capacity projection towards society. It is necessary to address the sustainability of events from the fields of management, environmental education and communication to have the least environmental impact and build a friendly environment for internalizing experiences in an environment respectful with the environment. Sustainable management is an inescapable concept, gradually seeps in all event organizing companies at one time or another (Mair & Whitford, 2013). They organize a fair, congress or conference. However, despite the strong commitment to sustainability of an increasing number of organizers, the many facets that make up make often the challenge exceed their capacities and resources.

It is believed that the realization of a sustainable event creates benefits both from the point of business perspective, as social and environmental, among which one could include the following (Schulenkorf & Edwards, 2012):

- Cost savings: By controlling the consumption of resources and make more efficient production processes, these actions translate into cost savings;
- Access to new more demanding and specialized markets;
- Public and moral duty to society, nature and the world we are living in;
- Improve the notoriety and be reliable with a general arrangement of sustainability or a methodology of corporate social responsibility;
- Contribution to advancement that meets the present needs without bargaining the capacity of future eras to address their own particular issues;
- Contribution to a procedure of progress towards an ideal in which propensities for generation, utilization and speculation permit individuals in the present and the future to appreciate the material, social and natural conditions that they give access to a decent life and a superior personal satisfaction;
- Contribution to the integration and reintegration of people at risk of exclusion;
- Assist in the development of new ethical markets and stimulate demand for sustainable products;
- Encourage the creation of focused work to environmental and social field

Keeping all the above mentioned benefits of sustainable events in mind, the aim for this project is to analyze sustainability in mega event, and how it creates challenges for the residence in developing countries.

The main objectives of this research study are:

- To discuss the importance of sustainability in developed countries;
- To explain the sustainability of Mega Events
- To describe how sustainable events can be organized;
- To show the benefits of sustainable events;
- To explore the different steps taken by the organizers to make an event sustainable
- To investigate the aspects of sustainable events which could be improved

Literature Review

Sustainability in Mega Events

According to Viehoff& Poynter (2016), from the moment the city is selected as the site, enters a phase of "planning by exception," in which the priorities for urban development are placed at the service of the mega event. These authors said that more than 720,000 people were displaced from their homes before the Seoul Olympics in 1988, and over 1.5 million were displaced in Beijing-the world record of displacement because of a mega sporting event (Viehoff& Poynter, 2016). These displacements occur mostly to provide land for the construction of stadiums and Olympic venues, and involve the mobilization of thousands of people to other parts of the city, unravelling in many cases their social networks and their work schedules. To date, 170,000 families have been displaced from the mega events in Brazil. However, many others could benefit. In preparation for the World Cup, Rio de Janeiro has doubled its efforts in security through the installation of Units Pacification Police (UPP), which aims to dismantle drug gangs and institute systems of community safety in more than 200 favelas

of city(Viehoff& Poynter, 2016). Despite the criticism it has received, this program for its repressive approach, many applaud their potential to combat insecurity in the city.

From the environmental point of view, there is growing consensus on the need to reduce the impact of planning and execution of mega events on the environment. Edizel & Ward(2016) assert that the carbon footprint of the World Cup reached about 2,753,250 tons of CO₂, of which 67.4% were the result of international travel emissions.Edizel & Ward(2016) further estimated that 600,000 foreign and 3 million local visitors move to the twelve World Cup host cities in Brazil, generating a carbon footprint similar to or higher than 2010. Davies et al (2013) are of the opinion that the infrastructure developed around these mega events also has a major environmental impact, since many of the works-stadiums and residential complexes for athletes, for example-are obsolete after the closing ceremony.

However, there are ways to mitigate this impact. For example, Smith (2014) said that the World Expo in Shanghai in 2010 incorporated a completely biodegradable vegetable pavilion and several structures rather than permanent works. The optimization of public transport systems, creating bicycle paths and the incorporation of vehicles using biofuel for mobilizing athletes and tourists are other fundamental methods to reduce the carbon footprint of these events.

To get an idea of the magnitude of the environmental and social impact of a mega-event organization Global Urban estimated that 73,000 people attended the football championship match in 2004 between Manchester United and Millwall in the United Kingdom-its travel, food and beverage consumption, waste products and a proportion of infrastructure left a footprint of 3,000 hectares(Viehoff& Poynter, 2016). The trips were the main contributors to it: 43 million

kilometres, an average of 591 kilometres per person, almost half of which were travelled in private cars.

It is recommended to take care of the following while organising a mega event (Edizel & Ward, 2016):

- Waste management;
- Materials;
- Climate and energy;
- Transport;
- Food;
- Water;
- Accessibility;
- Hotels;
- Parallel activities;
- Communication

How to organize Sustainable Events

The process of introducing sustainability criteria in an event must be linked from the beginning to the dynamics of design and organization of it (Coakley & Souza, 2013). It is important to integrate sustainability considerations into decision making throughout the process. For the sustainability, project is implemented successfully, it is essential to developers' commitment to the highest levels of responsibility. It is important to designate responsible work for the real fulfillment of these criteria and allocate human and economic resources necessary to achieve the set objectives. There are different stages of organizing a sustainable event and

establish what actions are needed to be implemented at each stage to make the event sustainable (Coakley & Souza, 2013).

To integrate sustainable management into all aspects of complex and multifaceted projects, potential organizers can rely on guidelines and best practices provided by the organization under whose auspices the mega sustainable events are organized (Ahmad et al., 2013). In an event there are multiple interactions and effects to the environment. To determine what actions should be applied to minimize their environmental impact, it is useful to identify what are those areas of the event with environmental impact, what are the impacts generated in each of them and what initiatives can be introduced to minimize them (Baade & Matheson, 2015).

- Administration and logistics: It includes internal administrative tasks and logistics. These tasks have numerous environmental impacts and also are included in the sustainability of events although they are less visible;
- Spaces and facilities: The choice of spaces where the event is organized is a key factor, as many aspects as consumption of energy and water or displacements depend on the chosen place;
- Mobility and transport: In celebration of an event, especially if it has an international reach, mobility is the main cause of emissions of generated CO₂. Therefore it is essential to promote more sustainable mobility;
- Responsible Consumption and materials: The celebration of an event involves consumption of many materials, depending on their characteristics. It may involve a great impact on the environment;

- Minimization and waste management: When an event is held it has to minimize and properly manage the waste generated;
- Services of restaurant and catering: The catering and restaurant service is one of the main generators of waste and its management becomes an aspect very visible by the audience. Therefore, it is important that these services carry out sustainability criteria;
- Dissemination of the information, documentation and signage: When an event is held, numerous materials are prepared to publicize the event (posters, promotional brochures) to give attendees information (program, plans, etc.) and for signalling spaces. The production of these materials can also be associated with environmental impacts;
- Communication of sustainability initiatives and awareness: It is very important to meet the initiatives to improve the sustainability of an event. This work is to be communicated effectively to the audience and actors involved (Baade & Matheson, 2015)

Benefits of Sustainable Events

The celebration of thousands of events, conferences, weddings, festivals and festivals of various kinds and sizes and, regardless of whether promoted from the public or private sector, are a proper social behavior of cultures. While they can be considered healthy for people, being a meeting point or leisure, one also has to consider the negative impact that occurs in the environment (Hall, 2012). Through a high consumption of resources in a short period of time, a significant increase in waste generation, such as glasses, bottles and plastic containers, metal, glass and paper, habitat degradation or even the generation of pollution noise and light, leaves their environmental footprints on the location and the environment surrounding it. Transform this paradigm of organization and management is the main objective of the Sustainable Events

Initiative, promoted by the Oxygen Foundation funded Biodiversity and Green Jobs Program Foundation (Hall, 2012).

There is no doubt that the professionals, the entities and enterprises organizers / promoters / sponsors, as well as locations and destinations related to the world of events, need adaptation and renewal toward social and environmental commitment, and to a renewed image and more sustainable social responsibility (Hartman & Zandberg, 2014), so that these efforts converge with those being developed by the public administrations, the productive sectors and civil society.

Minimizing the environmental impact of events by conducting an efficient and sustainable management must be the objective of all stakeholders involved in its organization, which is required a change leading to a respectful celebration with the environment which is socially just and economically viable (Hartman & Zandberg, 2014). There are a number of conditioning factors that favor at the time this progress is made more sharply towards global sustainability events. Sustainability applied in the field of event saves resources, has a positive impact on the image of the organizers and meets the increasing demand for sustainability by customers. Also, regardless of the ethical and technical conditions, the image of the organizations, companies and destinations related to the world of events, needs adaptation and renewal to a more responsible and sustainable corporate image; which is in line with efforts in this regard that have been developing from public administrations, the productive sectors and civil society.

Organizing events (whether conventions, shows or product launches) with sustainability criteria has a number of benefits beyond simply minimizing negative impacts on the

environment. Sustainable events are an opportunity to transform the values and commitment of the events' organizers. In addition to strengthening corporate image, it is also reaffirmed transparency and consistency with the general policy of sustainability and responsibility. Sustainable events, through immediate environment providers, reverse the investment made in the venue of the event (Hartman & Zandberg, 2014); thus, reducing the costs associated with transportation and logistics. The venue chosen can help to develop the socio-cultural environment and reverse in subsequent dynamism of the area. Sustainable event is an act of bilateral communication; feedback can allow effective communication to establish channels to meet the needs and expectations of stakeholders (Schulenkorf & Edwards, 2012). Finally, beyond the duration of the event, it provides sustainability criteria which make the legacy of the act perpetuated in time. Minimization and compensating of CO₂ emissions and less polluting materials etc. are the factors that contribute to reducing the ecological footprint.

Method

Research Approach

The objectives of the investigation are generally lead a study to depict a subject of learning, search for information to give satisfactory reactions to questions about phenomenon, significantly inspect an issue to get enough data to make certain projections, arranged thought conveyed by various authors with respect to a subject of study and present individual evaluations or worth judgments around a given subject.

Despite the way that there are particular strategies and philosophies open for coordinating research, yet for this particular research, the researcher uses desk research or secondary sources methodology of research. desk research is made through a movement of efficient and mindful steps that delineate substances or marvel with careful targets (Merriam, 2014). Its inspiration relies upon the improvement of data; it is reliable and it uses a method.

Justification for using Desk Research

The selection of methodology of research depends on the nature of the question of research and the theme of the research. In this exploration consider, the researcher utilizes desk research since it is most suitable and plausible for this research theme. A portion of the benefits of utilizing desk research are as per the following (Silverman, 2013):

- Desk research saves time and effort of data gathering;
- It diminishes cost of coordinating research;
- As it depends on the current literature and research studies which have conservative results, discretionary data research extends the learning;
- The acquiring of information from the accumulated data is a great deal less demanding;
- Desk research gives extended affiliation and conveyance and own contemplations of the researcher through impression of other studies;
- Secondary data sources are fused and impact the electronic databases, for example, printed sources and substance;
- Desk Research engages the declarations or conclusions that are made and can be affirmed

Data Collection

In desk research, the analyst uses discretionary sources of information accumulation, for instance, books, reference books, articles, journals, proposition, specific reports, pieces, monographs etc. The researcher first needs to find books, magazines, leaflets, general records, where the issue is tended to.

The sources are by nature in different affiliations focused on the work of different studies and make them available to individuals. Data sources such as the library, the document are made

with the specific components of giving optional sources dissemination and organizations of secondary sources, for example, databases, library, film library, music library or club and daily papers archives.

There are general, particular, open and private libraries. In the library periodicals, for instance, magazines, daily papers, brochures and weeklies are found etc. Daily papers distribute news, articles, and stories on legislative issues, economy, games, etc. The journals spread society at different levels, and contain feature articles, unpublished records, etc. The Bulletins give information about the field of work of different organizations, schools etc. The film library is proposed to discover, get, collect and disseminate motion pictures, tapes, slides, etc.

Ethical Considerations

One of the most important ethical issues of desk research is to consider and refer from where any idea is taken. Without proper referencing, it is seen as that the thought is researcher's own particular point of view, which is considered as a sort of copyright infringement.

Another basic thing is to ensure not to use any classified information. For example, keep away from using inward data of the organization since it may reveal some inside information to the general people which is not good for the organization. Actually, it is perfect to ask approval from the organization while using their classified information (O'Leary, 2013).

Never use such sources, which the analyst is not allowed to use. It is continually shielded to use such studies and records which are wholeheartedly available in libraries and in electronic databases.

Analysis and Discussion

Importance of Sustainability

Over the past 30 years, the world has been facing dramatic changes. Strong environmental impacts passed unnoticed in our eyes for a long time but now social inequality and associated environmental issues are no longer outside the social consciousness (Ciegis et al., 2015). However, its negative impact has achieved obvious to seek outlets as collective, driven as individuals we represent, generally showing a high degree of concern about these realities. According to Ghai& Vivian (2014), International communities have been working to build a sustainable world where social and environmental values are prioritized and whose sole purpose is the reduction of impacts current production chains related to consumption levels that are having tangible impacts on natural conditions of the planet.

Schmuck& Schultz(2012) said that these modifications of social behavior involving a change of mindset from the individual is reflected in society, which calls to engage with different private and public actors seeking to balance consumption levels and to consolidate a society in which the message is massive and inclusive, making the best environmental practices are the common denominator of both industries and companies and individuals.

Global population growth has grown exponentially and the pace seems to stop, especially in developing countries. In Sen(2013), consumption patterns of these populations increase, demanding an increasing number of goods that ultimately come from natural resources. At this pressure on natural resources, the impact on the environment caused agricultural and industrial processes adds. In many cases, malpractices in the process generate shortage of vital resources like water, forests and land, which regenerate at a slower pace who are exploited. All this has an impact on human beings and measures must be taken to address it in the best way

possible (Schmuck & Schultz, 2012). This is where the concept of sustainable development must move from theory to practice.

However, as this is a problem of global magnitude, it cannot be tackled by individual countries; public policies must be implemented multilaterally coordinated. In this regard, it is important that international leadership of any country or region that drives the changes needed to mitigate the serious problems they face is generated. In the international context, efforts to Guatemala as a country should concentrate on extending the Kyoto Protocol, in the context of Copenhagen, recognizing the limitations that this has had and seeking higher profits in the negotiations (Reid, 2013), such as recognition of forests and they are standing as carbon sinks.

Similarly, it is important to encourage greater participation as a country in different carbon markets that operate globally. This would promote projects within the framework of the Clean Development Mechanism (CDM), as the development of biogas and investment in renewable energy sources and improving national industrial processes (Dincer & Rosen, 2012). At the national level many environmental policies promoted by the government have failed because (Reid, 2013): a) for not taking into account the economic and social conditions in the areas of ecological importance and seek their protection in isolation b) focus solely on legislative restrictions on the majority of cases the government itself has no capacity to enforce.

Therefore, importance of sustainability must be seen from an economic and social perspective. It is important that people must be aware so they can understand that everything in this world is interconnected, and all our actions and decisions have a direct or indirect impact on the environment; for better or worse.

Impact of Sustainable Mega Events on Developing hosting Countries

If we consider all the approaches in assessing the sustainability of any mega event comprehensively on all goods and services involved in it and in any geographic scale.

Sustainability of events as objective and as a management scheme can also be adapted to the principles and objectives of CSR, so that the convener or a participant in an event leverages the contract is concluded to exercise their strategies of Social Responsibility, extend and confirm to society (Getz, 2013).

The profitability of hosting the celebration of the Olympic Games to a city is always controversial. Olympics held in Athens in 2004 exceeded its initial budget of 6,000 million euros; brushed 10,000 million, during the economic recession still seems to have a greater impact. Precisely for this reason, the search for formulas that capitalize on the extraordinary display of necessary infrastructure becomes increasingly imperative (Lee, 2013). One of the clear way of saving passes through energy efficiency and Brazil could apply it over the next Games in 2016, entering the annals of history with the first CO₂ emission free headquarters (Bizarro et al., 2016).

Rio de Janeiro plans to build an impressive multipurpose tower, named Solar City Tower not only to generate enough energy to meet consumer demand for the Olympic Village and the rest of the bay of Rio de Janeiro, but also to become a tourist attraction (Pitts & Liao, 2013). It is located 60 meters above sea level, is a plant power generation, which not only produces energy with solar panels located on the ground during the day -to the Villa and the city- but also the surplus energy is used to pump water to the tower from the sea and continue producing more energy at night through a system of turbines, precipitating water into a kind of urban waterfall to the pool.

From the tourism point of view, Rio de Janeiro and its sustainable waterfalls appeal is undeniable: its structure allows both the input and its capability to host major events; restaurants and shops are located below the impressive waterfall; also having an observatory more than 98 meters high, an urban balcony to 105 meters above the level, from where one can enjoy a 360 degree panorama and even a retractable platform for practicing bungee jumping located almost 91 meters high. A tower called to stand as a reference point, beyond the Olympic Games in 2016 at the Bay of Rio de Janeiro. If the Solar City Tower is brought to fruition, it would rise as a true monument to sustainability and incorporating a new element increasingly essential to the organization of a macro sporting event like the Olympics.

The mega-sporting events have a huge symbolic meaning for cities, regions and the country hosting them. When FIFA and the IOC (International Olympic Committee) announced to Brazil and Rio de Janeiro, respectively, as the hosts of the next great sporting events of the decade, then President Lula Da Silva said the Brazilian nation had finally gotten his "international citizenship". Several sport analysts, economists, politicians and intellectuals (Pitts&Liao, 2013; Getz, 2013), among others, have concluded that the success of a mega event cannot only be determined by the rate of television audience or the amount of revenue, but also tangible benefits and long - term economic and social level that these events bring to the host country.

Experts (Getz, 2013; Pitts&Liao, 2013) who study the issue of economic impact through sports mega-events argue that there is a very strong incentive on the part of organizers and authorities to justify substantial public subsidies. In that case, these mega-sports events would become catalysts for the development of not only sports but also urban infrastructure (Pitts&Liao, 2013). Different studies (Preuss & Schütte, 2016; Getz, 2013) estimate that a mega

event generates a direct impact on society through which the expenditure incurred by tourists, mega event stimulates local economic activity, reflected in increased employment generation, higher per capita and household income and an enrichment of government coffers. Several experts (Lee, 2013; Shipway& Fyall, 2013) argue that the mega event can help to stabilize tourism flows to a locality. This in turn can have a positive effect on the hotels and financial planning of other tourist facilities.

To give an example, the city of Belo Horizonte contemplated a tourism growth of about 200,000 foreign visitors, which translates directly into the construction of 40 new hotels. Similarly, the Northeast region of Brazil, which used to be considered as the poorest in the country, it has been developing rapidly in an important national and international tourist destination (Lee, 2013). The city of Fortaleza is already the favourite for approximately three million Brazilians per year, where the new middle classes in the country buy more land or developable properties. The local government has spent \$5.6 billion in Fortaleza to prepare its entry to the World Cup, an amount that was destined for a significant improvement in telecommunications and gentrification of urban areas and the installation of tourist attractions.

The three cities that have sports venues that can accommodate an average of 40,000 people, but none has a professional football team in first division that can generate resources to maintain their respective stadium functional and sustainable manner. This did not happen in Germany when it housed its most recent World Cup, as it had in most of their seats with sports infrastructure was in compliance with FIFA regulations and clubs generate a margin of respectable profit. However, in a country such as Brazil, there is no certainty about the return on this investment.

Brazil is undoubtedly the centre of the world in terms of major sporting events for this decade. The country has increased foreign direct investment by a considerable margin and is relying on these sporting events to promote national and international tourism market. However, the image of Brazil as a mega events host is not enough to ensure that investments in sports and urban infrastructure translate into frequent and profitable use of these resources. Brazil, which is grappling with slowing inflation and a possible housing bubble, not only is in charge of a party of impeccable football, but also respond to a population that understands the risks of inconsistency of the theory of economic impact in the context of sport and requiring redress its authorities for that modest spending of 14 billion dollars.

Conclusion

The contribution to sustainable development is one of the most important challenges to be addressed by the mega events and has become a key competitive factor for the future. The organization and holding of any mega event involves an ecological impact which should not be minimized. It is, therefore, important commitment to sustainability, socially responsible, caring and ecological events.

Although there is no regulation or standardized certification for sustainable mega events standards and certifications that attest to the growing importance this issue at international level, begin to appear. Thus, the only national standard in the world for planning and managing a more sustainable event, the label Green Globe certifies sustainable tourism which is limited to the event industry and conventions.

The commitment to sustainability must be started from the moment when a host country is planning a mega event, because not enough staging full of colourful and environmental messages to clean consciences. Since the beginning of the planning of mega events, one must include measures to protect the environment as the first objective should be to reduce the impacts against it. The International Olympic Committee in its Manual on Sport and Environment recommended that all steps that are needed to minimize the environmental impacts caused by a product from extraction of raw materials through the production process, the use of the product are integrated, their recovery and recycling, to permanently remove from circulation and evacuate or dispose of in a landfill. Moreover, it is necessary to implement measures to reduce environmental effects during and after an event. This means recycling, disposal and compensation.

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