SMART TOURISM TOOLS:
LINKING TECHNOLOGY TO THE TOURISTIC RESOURCES OF A CITY

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1.INTRODUCTION

Information and Communications Technology (ICT), in recent times, has seen a period of rapid development and exciting innovation which have opened up a variety of new tools for tourists. In this research, these are referred to as SMART Tourism Tools and they are fast becoming major key instruments in the tourism industry on-site at urban touristic destinations. Furthermore, these SMART Tourism Tools tend to predominantly thrive within more technologically advanced destinations, i.e. SMART cities, where they can function effectively. For the purpose of this research, examples of these SMART Tourism Tools has focused upon: Mobile Applications, Augmented Reality & Near-Field Communication (NFC). Arguably, this selection covers a fraction of the innovations out there to discuss.

Tourism managers have, on average, little expertise of this subject and therefore the aim of this research is to provide the necessary knowledge for tourism managers in order to make smarter strategic decisions in regards to the use and implementation of tourism technology within destinations. It is proposed that SMART Tourism Tools are a plausible solution to the many problems facing urban destinations and the tourists who visit them. Therefore, the main objective of this research has been defined as: To understand the concept of SMART Tourism Tools within destinations and enable tourism managers to make SMART decisions when implementing technology into their touristic resources.

2.LITERATURE REVIEW

2.1 Tourism Destinations

There are many perspectives for defining the Tourism Destination. In a geographical way, Buhalis & Amaranggana (2013, pp. 556) defines tourism destination as "an area that selected by visitors which encompasses all necessary amenities such as accommodation, restaurant and entertainment". Buhalis (2000) argues that successful destinations are structured as containing the "6As of tourism destinations", which are:

1. Attractions: natural (i.e. waterfall), artificial (i.e. theme park), and/or cultural (i.e. festival).
2. Accessibility: transport systems consisting routes, terminals and public transport.
3. Amenities: services facilitating stay, accommodation, catering and leisure/activities.
4. Available Packages: 'intermediaries to direct tourist attention', i.e. information centre.
5. Activities: which motivates tourist visitation to a specific place, and lastly…
6. Ancillary Services: which are secondary to tourist needs (i.e. banks, postal, medical, etc.)
   (*Source: 6As framework by Buhalis 2000, pp. 98*).

Buhalis & Amaranggana (2013) go further by stating that it is important for destinations to maintain each of their 6As to remain highly competitive. However, considering that consumers are now more than ever involved in the co-creation process, destinations must also realise that "they need to interconnect all their stakeholders to facilitate a dynamic co-creation process to increase destination competitiveness" (Neuhofer et al. 2012, as in Buhalis & Amaranggana, 2013, pp. 557). Here lies the opportunity for destinations to evolve through technology.

2.2 Defining Urban Touristic resources of cities

The aim of the research is to understand where SMART Tourism Tools can align with an urban destination's resources, i.e. attraction, amenities, etc. within a touristic city. Therefore, referring to Bădiţă's (2013) work, she applies a modified version of Burtenshaw et al. (1991) model that highlights the multifunctional character of touristic cities. The following framework is very interesting as it brings forward the many aspects of a tourism city. In doing so, it can bring potential to fill in the gap of where SMART Tourism Tools are positioned within the many dimensions of a 'Touristic City'. The framework also links the type of user demand with the available resources of a tourist city which could also provide further SMART Tourism Tool understanding to user needs of services.
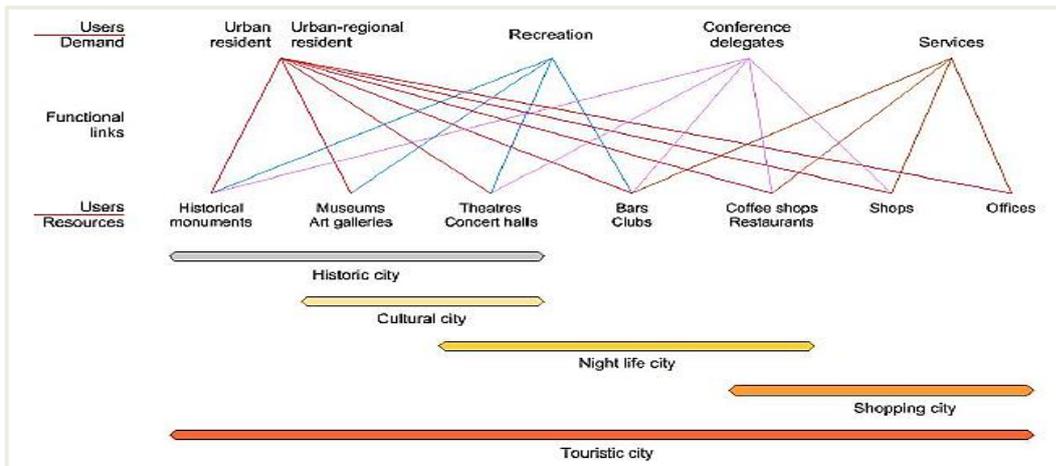

Figure 1 - the functional links between the demand and supply in a touristic city. Source: Bădiţă (2013).

Figure 1 shows that cities have a multifunctional character that determine a complex typology of visitors. These visitors have a high demand and use different resources in the city (Bădiţă, 2013). "According to the theory of 'overlapping cities' the tourist city is of several types which have different urban resources, such as: the historic city (with historical monuments, museums, art galleries, theatres and concert halls), the cultural city (with museums, theatres), the nightlife city (bars, clubs, cafes, restaurants), the shopping city (shops, cafes, restaurants) and the polyvalent city that includes all the above mentioned elements" (Burtenshaw et al., 1991 as cited in Bădiţă, 2013, p. 60). Burtenshaw's framework demonstrates for each of the urban resources there is a tourism demand and functional links are formed between the different types of tourism in the city; i.e. recreation, leisure, business, shopping, and the tourists.

2.3 SMART Tourism

SMART Tourism is reliant on four core information and communication technologies: IoT, mobile communication, cloud computing, and artificial intelligent technology (Guo et al., 2014), which are all pre-existing in the SMART city. These technologies connect the physical, information, social, and commercial infrastructure of tourism, and supplies SMART Tourism value to multiple stakeholders of a destination (Guo et al., 2014). Moreover, the development of SMART Cities also facilitates seamless access to value-added services for tourists of a city, like access to real-time information on public transportation (Buhalis & Amaranggana, 2013). The future direction of SMART Tourism is mainly reflected in intelligent: service, business, management, and governance (Yao, 2012 as in Guo et al., 2014, p. 59) which are important factors for destinations to consider. Furthermore, "based on the integration of hardware and software platform for information and services of SMART city, SMART tourism can be taken good advantage of to fully integrated tourism market, tourist attractions, government departments and relevant information and services of enterprises to promote the development of tourism" (Su et al., 2011, as in p. 1030). This brings forward the positive benefits destinations can enjoy through investment in knowledge and money on strengthening these technological products within the tourist area. So concluding on this, the developments within the SMART City concept, ICT, IoT and Tourism also encourages the formation of SMART Tourism Destinations (Buhalis & Amaranggana, 2013).

2.4 SMART Tourism Destinations

The travel and tourism industry has always been at the forefront of technology and has taken advantage of this relevant link (Buhalis & Law, 2008 as in Neuhofer et al., 2012, p. 38). Moreover, Buhalis and Amaranggana (2013) bring forward the concept of SMART Tourism Destinations in which builds upon the principles discussed.

In short, Buhalis & Amaranggana, (2013), state that SMART Tourism Destinations take advantage of the following:

- Technology embedded environments (IoT, Sensors, etc.),
- Responsive processes at micro and macro levels (Intelligent services),
- End-user devices (i.e. smartphones, etc.) and,
- Engaged stakeholders that use the actively use platforms to gain information, etc.

The overall aim is to enhance tourism experience, improve the efficiency of resource management and maximise destination competitiveness, additionally, increase consumer satisfaction whilst implementing sustainability aspects to the destination (Buhalis & Amaranggana, 2013, p. 557).

The principles of SMART Tourism Destination are to enhance the tourist travel experience, provide more intelligent platforms to gather and distribute information within destinations, facilitate efficient allocation of tourism resources and to integrate tourism suppliers at both micro and macro level aiming to ensure that benefits from the sector are well distributed to local society (Rong 2012 as cited in Buhalis & Amaranggana, 2013, p. 562). This can be done through providing consumer valued services, these can be in the form of SMART services or SMART Tourism Tools.

The development of SMART Cities facilitates seamless access to value-added services for tourists of a city, i.e. access to real-time information on public transportation. Systems initially were not set up for tourism consumption.

The main objective of this research has been defined as: To understand the concept of SMART Tourism Tools within destinations and enable tourism managers to make SMART decisions when implementing technology into their touristic resources. This paper seeks to fill the research gap by identifying opportunities and challenges as well as conceptualising a framework for SMART Tourism Tools towards enhancing destination competitiveness. Additional, this paper provides a start to a necessary insight into the highly complex, interwoven and complicated platforms that are required for any SMART Tourism Tools to operate. There is a clear need on both sides of supply and demand for the use of SMART Tools within tourism destinations. In this, the destination and tourist can both benefit greatly from the use of SMART Tourism Tools.

This research will lead to a new conceptual framework presented in *The Interrelated Triangle of SMART Tourism Tools*. This framework could be applied to all SMART destinations, however, destinations will be able to view different aspects of the framework that match their products and align with the appropriate SMART Tourism Tools.

This framework has the potential to aid and influence developments in providing the new and exciting products for tourists to enjoy while visiting their SMART destination. These products can offer tourism information, time-saving applications and more. Moreover, these SMART products have the potential to improve destination image whilst promoting the pre-existing tourism products. Thus, in doing so cities will be in tune with the market trends and staying incredibly competitive in the tourist urban destination choice.

3.METHOD

A combination of secondary and primary research methods was applied. The current state of Applications (APPs), Augmented Reality (AR) and NFC technology usage in tourism industry is investigated through desk research, by analyzing numerous examples from tourism organizations, universities and businesses. Primary qualitative research consisted of semi-structured interviews. A number of leading field experts have been selected and were interviewed in person or via Skype in order to gather in-depth findings. Interviews have been sought with professionals, educators, researchers and industry leaders within the tourism and technology field. It is argued that this form of qualitative method is highly beneficial for gaining information on the chosen topics whilst allowing freedom to investigate new and previously unknown areas. Furthermore, due to the emerging technologies and new innovations, little is known or appreciated about the subjects on a large scale. Therefore, this research has had to seek out a smaller sample size of knowledgeable persons to gain effective results. This research paper is designed to act as a guide for tourism managers to better understand the SMART Tourism Tools available, and where they can align with the touristic resources of their destination.

4.RESULTS

4.1 The origins of the SMART concept
Initially starting with the idea that technology can improve and deal with global issues, SMART Planet was down-sized to exist on a smaller experimental scale as SMART Cities. Since then SMARTness has evolved into a new way of thinking where technology alone can no longer resolve problems faced by large cultivations of people. In this, the information collected by technological systems can be used in order to make the right and SMART decisions. The SMART concept is necessary for destinations to create and enhance cities, not just for tourists but also for its residents. Better decisions lead to competitive destinations, the management of systems and the preservation of resources.

4.2 SMART Tourism destination
Technically speaking, any destination can become a SMART tourism destination by consisting of and involving the concepts of Soft and Hard SMARTness. As uncovered during primary research, the following definitions were also supported by the literature reviewed within.
- Soft SMARTness: collaboration, innovation, leadership (human capital)
- Hard SMARTness: Technology and infrastructure (Heart of SMARTness)

The concept of Soft and Hard SMARTness means that destinations cannot simply embed technology into their environment and automatically believe it is SMART, therefore, the Soft aspects refer to the human capital and the SMART decisions that can be made based on the information gained through technical systems.

The principle of SMART Tourism Destination is to enhance the tourist travel experience, provide more intelligent platforms to gather and distribute information within destinations, facilitate efficient allocation of tourism resources and to integrate tourism suppliers at both micro and macro level aiming to ensure that benefits from the sector are well distributed to local society. This can be done through providing consumer valued services, which can be in the form of SMART services or SMART Tourism Tools.

In terms of the future, as urbanised environments become even more ubiquitous and well connected through IoT, vast amounts of data will become increasingly more available and there is a clear demand for this information need while on-site already, SMART Tourism Tools act as an enabler to access resources. Highlighting the strong need for destinations to incorporate new technologies and provide the services reflecting demand not just for Gen-Y but the generations that are late adapters.

Several examples of SMART Cities:

- Vancouver: has the 'V-POLE' where anyone can approach the pole in the middle of the city to gain free Wi-Fi and links to useful apps. This simple product within a touristic city offers a lot of value and brings people together. Moreover, offering functionality adds to this that "Cities clearly understand that they should provide Wi-Fi everywhere because if you have it people will be sharing your destination, it's the wisest thing to do first".
- Dublin: Guinness brewery 'Augmented Reality tour'. No application required links directly to the facility free Wi-Fi at attraction and therefore no roaming fees even though a Web Based app. AR provides a digital visualisation to the process of beer in production, in essence x-ray vision through pipes via smartphone. Even though a beta project, it has positive reviews.

Interestingly, 'SMART' is just a 'BUZZ' word, to be a SMART Tourism Destination, many layers are required where the focus is not just on technology. In this, SMART thinking is crucial and that technology on its own is not enough to achieve desired goals.

4.3 SMART Tourism Tools
In this segment, the Term SMART Tourism Tool can be clarified that it has been formed on the basis of the concepts derived from: SMART + Tourism + Tools (ICT). Due to the high complexity, the technical functionality of these tools cannot be briefly detailed, although, they have been overviewed within. The following definitions on the SMART Tourism Tools (APPs, AR and NFC) will demonstrate the overall function each tool has.

Defining SMART Tourism Tools
Findings from secondary and primary research aided in the formulation of the following SMART Tourism Tool definition. The statement reflects the multiple aspects involved and shows the complex nature that it is. In addition to highlighting its physical attributes, benefits for the tourist and destination are outlined clearly.

"Smart Tourism Tools are a combination of mobile hardware, software and networks that enable an interactivity between tourists, stakeholders and physical objects. This communication allows tourists access to personalized services providing in some cases real-time information. The tracking and collection of Data via these systems enables stakeholders to manage destinations effectively and efficiently when making decisions".

The selected SMART Tourism Tools defined
As stated, this research has focused on three specific SMART Tourism tools: Mobile Applications, Augmented Reality & Near Field Communication. Based on the research, the following definitions have been formulated to represent their overall context.

4.3.1 Apps
Based on the primary research data coding has led to a definition of an Application as:

"An Application is a Small piece of software that enables a specific goal to be achieved through the exchange of information".

Within destinations, applications can provide a varied range of services. However, as interviewees support, applications used in the on-site phase can predominately provide information in which then tourists can make informed choices. For example, making reservations, finding directions, choosing local amenities, translation of menus, etc. In addition, applications allow Real-time communication between stakeholders and customers notably points out the usefulness of applications in cultural heritage where they can provide audio guidance in addition to more information. As the data is mentioned to be more important, a recommendation to be successful when creating new apps for a destination is to focus on a 'Niche' marketing approach. In this, trying to satisfy a small sector of a destination rather than filling an app with everything and doing it badly. Destinations should work on

their strategic partnerships with specialized companies to build niche apps and moreover, entice them to create good content. This is because creating your own app is too time consuming as development and maintenance is slow, complex and costly. Therefore, it is advised to utilise 3rd party platforms already established and entice others parties to use your data/content, for example, Booking.com does it better than creating your own destination app promoting accommodation.

Example recommended 3rd party application platforms:
- OJOO ('Gamify your world'): create own content and stories of travel to share with others. It is a City guide with a difference created on 3rd party software by the developers for the destination. Not just the normal attractions but themed (example, street art locations). Can be implemented by the destination and open for residents/visitors to create routes and notable sites.
- KRUMB (location-based app): publishers of content can hide it within a destination map. This is Gamification by hiding treasure around the city and increase customer experience. Participants go around the city looking for 'Breadcrumbs' of interesting content and has already been utilized by the Belgium city of Brussels. Treasure hunting content there has been very positive

These 3rd party apps re-enforce the previous arguments against destinations building their own apps and supports realization that the process to do so is very complicated.

In summary the utilisation of 3rd party applications can be far more effective combined with the destinations own content rather than building a new tool from the start (i.e. development, cost, etc.).

4.3.2 Augmented reality
Based on primary research data a definition on Augmented Reality is given:

"Augmented Reality is an overlay of information on top of the surrounding real-world environment to provide additional data on a current position. A device with a digital screen is required in order to superimpose this artificial layer of information, such as a smartphone or lens system (i.e. Google Glass)".

In a recurring theme, AR plays a colorful and exciting role in Cultural Heritage. An example of this have been highlighted in the use of AR at a Roman theatre where the user can point their phone at arena and see a gladiator fight, in essence 'see old times' and 'rebuild something destroyed' digitally. AR is digital support for what you really see including how we can see how things used to be. In addition to Cultural Heritage, AR can 'Guide us' and 'offer Points-Of-Interest' within applications like 'Google maps' offering 'Location-based services'. In the pre-travel phase, Marriot Hotels have considered the technology to even inspire customers to visit.

In terms of AR platforms, destinations consider implementing this visual tool in utilizing specialized companies like "LAYAR", a Dutch company. This 3rd party allows businesses to send its data to them where they will create the desired application. In doing so, reduces the strain on destinations to create and manage, thus reducing the financial burden commenting how it is difficult for big business to gain ROI on AR implementation. Therefore, it is recommended smaller companies utilizing other 3rd party APPs like google maps, TripAdvisor, etc. for small companies whom are unable create something for themselves can use similar services to benefit their own company.

Noteworthy examples of specific AR applications are; 'LAPIFICATION': allows users to experience the Northern Lights anywhere in the world and thus created a positively massive PR campaign for the brand Lapland. Users could hold up their device and using the AR app could see a virtual "Northern Light show". A clear demonstration of AR working for a destination outside of the destination. Beyond the usual beneficial points, AR brings the next. In this, AR 'provides people with great experiences' and makes life easier/convenient. Tourists want a 'unique experience which is how companies can now compete' and thus creating an attractive city with new ICTs.

Businesses can use ICTs to create something unique for clients showing them what that can receive on-site. Moreover, destinations can benefit by offering points of information in a new way that gives a uniqueness of that destination, providing a more complete experience and showing tourists a story. AR has a great future and offers unique value as it enables co-creation as tourists want to participate in the creation of experiences, AR enables this.

Another recurring topic on AR was wearable technology or otherwise known as Wearables. Obviously, an issue with smartphone AR is that the device must always be held in order to view contents meaning that wearables would be more convenient. Possibly options would be 'Lens Systems' such as 'Google Glass' and 'HOLO lens' by Microsoft.

In summary, this visual technology tool can enable destinations to create unique experienceS for tourists, especially when applied to Cultural Heritage. Furthermore, there is an importance for co-creation and allowing tourists to be a part of their product. Additionally, technologies should remain seamless, therefore convenient and natural in the tourist's use. Lastly, wearables are on the rise and recognition of this is notable.

4.3.3 Near Field Communication (NFC)
The primary research data also enabled a deeper insight into NFC.

Near Field Communication:

"NFC is short range wireless radio communication protocol that can function between a tag/chip that transmits data stored on it to an electrical device that read/receive the data. Further, NFC can be used to communicate between different devices without the need for configuration, for example, between two different smartphones/tablets pressed very closely together to send very small amounts of data like a picture or share information like contact details without the need for authorization/passwords".

NFC can be used at tourist places like museums where tourists can scan information points at paintings/sculptures/historical artefact and then their phone allows it to provide voice communication, for example translation in their native language for instance. This was also supported as a viable use of NFC, re-enforcing the need for instances to quickly receive useful pieces of information such as translation.

NFC connector's (tags) offer information and thus there is no need for tourists to carry a guide book all the time while visiting touristic location. As previously mentioned in literature, the move towards paperless travel. Furthermore, NFC tags dotted around the city at tourist locations can provide a Tourism Route through city, offering information at what they are looking at, history/facts, links to apps, and showing the next point-of-interest (POI)/NFC location of interest to go to.

At a train station, an NFC Smart poster can be located in view and if a user hovers their phone over the station name, the user would be instantly linked to the train website with their current location pre-loaded. The user would only then have to add their final destination to gain all the necessary information on the route they intended to take. This offers convenience and accelerates the access to information needs. Similar to the Smart poster, tourist Smart Maps can be imbedded with NFC tags. These Smart maps can allow the tourists to scan POI on the map to gain detailed information on background attractions on their device, thus enhance experience.

In regards to the acceptance of this technology by users, it is stated that not all phones are capable of NFC and therefore, the ability for tourists to use NFC within destination may be instantly impossible without a compatible NFC device. However, some hotels in Korea give smartphones to clients during their period of staying, providing smartphone function, free internet and calls. This not only gives the customer extra value but also the ability for the hoteliers to analysis visitor behavior.

To improve consumer acceptance, people need to be educated more on NFC and its use in daily life should be increased where it becomes normal. The benefits that can be highlighted to the industry is that NFC is extremely cheap, safer and cannot be manipulated. Also, it is more attractive than QR codes. Moreover, the technology is easier to implement now than ever before.

This section describes the prominent uses for NFC, notably the ability to access information easily and quickly. In addition, outlined considerations for implementation into surrounding environment and rewards of doing so, for the destination and the tourist. Further, user acceptance is improving due to companies like APPLE applying the newer and securer uses in NFC payment services. Overall, these 3 stated technologies, APPs, AR and NFC, are in essence able to enhance the tourist experience and in return create competitive destinations through providing added value, i.e. information, convenience, etc.
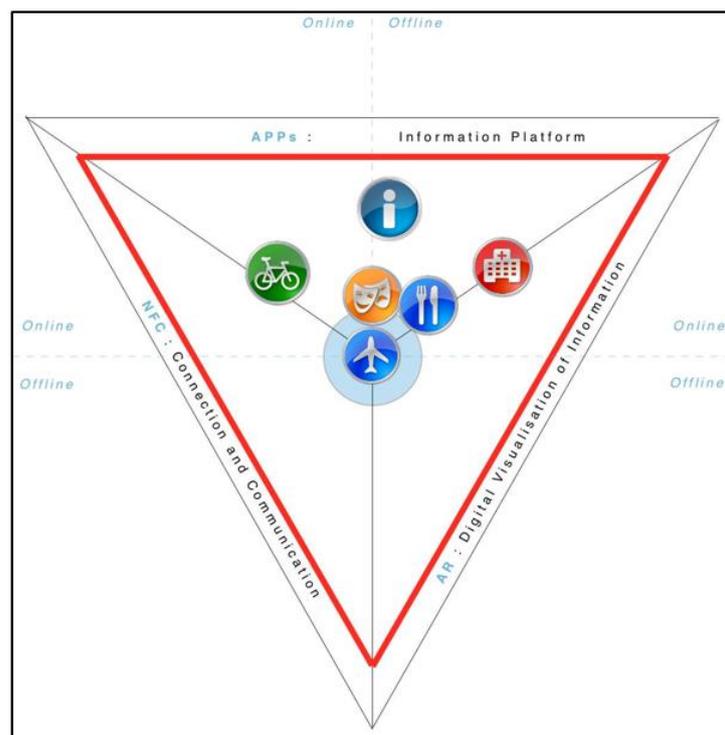
The SMART Tourism Tools Model

Figure 2. The Interrelated Triangle of SMART Tourism Tools

Key (table 1):

Symbol	Reference to 6 A's of tourism destinations (Buhalis, 2000 as cited in Buhalis et al., 2013)		
	Attractions		Available Packages
	Accessibility		Activities
	Amenities		Ancillary Services

The interrelated complexity of the subject is detailed throughout, and the first steps of a new conceptual framework are presented in *The Interrelated Triangle of SMART Tourism Tools*. This framework combines findings from secondary and primary research. Most notably, Buhalis (2000, as in Buhalis et al., 2013) 6 A's framework of tourism destinations (Attractions, Accessibility, Amenities, Available Packages, Activities and Ancillary Services) and Bădiță's (2013) framework on Multifunctional character of Touristic cities. It is the aim of the framework to demonstrate and visualise the link between technology and the touristic resources of a destination.

The triangle represents the interrelated connection these stated SMART Tourism Tools have. In this, they are displayed as individual items but closely linked and can be utilized by one another if

necessary. Applications have specifically been positioned above to demonstrate the umbrella that at times AR and NFC are required to function under applications to provide a platform to operate from. The red line positioned on the inner main triangle emphasizes the existence of these technologies (APPs/NFC/AR) inside and outside of the tourism context of a "Touristic City" (Badita, 2013). Thus, defining that SMART Tourism Tools can position themselves within many characteristics of the Touristic City (Historic, Cultural, Night Life and Shopping).

In addition, divisions have also been placed (blue dashed line) in order to show SMART Tourism Tools functioning on and offline. This is important in the travel context due to roaming charges and convenience to gain access to information in an unfamiliar location without connection. Lastly, the blue central circle represents the link that can exist between the different technologies, the closer to the center the closer the relationship for that tool and touristic resource usability.

The 6As of Tourism Destination by Buhalis (2000) integrated into the framework represent the different areas that can be considered as distinctive parts that form the tourism destination. Symbols are represented by: Attractions, Accessibility, Amenities, Available Packages, Activities and Ancillary Services (*see table* 1. Pg. 8). This use of the symbols visualizes the link between SMART Tourism Tools and the touristic resources of a destination. It is desired that the framework clearly displays the positioning and the reader can simply ascertain where the SMART Tourism Tools fit within their destination. Further, the on/offline attributes and the use that tool provides. For example, the available packages symbol in this case could represent a Tourist Guide APP. Therefore, its position shows that this is offline which is important for tourists wanting to gain local information without internet connection. Another example, the Accessibility symbol position in the middle reflects the diverse usability of the tool. It can be used to access transportation via NFC, provide navigation via AR and/or provide information on/offline via an APP.

This Conceptual Framework demonstrates the interrelated complexity of the subject. It brings together three different technologies and also brings forth the many different aspects involved in their functionality when applied to a touristic resource. Clearly, this framework requires further research, however, it provides the initial foundations through defining the SMART Tourism Tool concept and integrates the 6As of a tourism destination (Attractions, Accessibility, Amenities, Available Packages, Activities and Ancillary Services). It is argued that the simple positioning of the '6 A' symbols can enlighten the reader in regards to the positioning of SMART Tourism Tools within a touristic city.

4.CONCLUSION AND DISCUSSION

It is concluded that the best way in which destinations can implement the right SMART Tourism Tools within their touristic resources is to always ensure that the tourist experience is enhanced with the introduction of new ICT services. The conclusion of this research is that the following themes can achieve this objective: Seamless Connectivity, Sharing Economy, Financial, Visual Content, and Wearables. Furthermore, the presented framework offers a new and valuable visual insight into the link between SMART Tourism Tools and the Touristic resources available at city destinations.

Initially, starting with the idea that technology can improve and deal with global issues, SMARTness has evolved into a new way of thinking where technology alone can no longer resolve problems faced by large cultivations of people. In this, the information collected via technological systems can be used in order to make the right and SMART decisions to improve management of tourism destinations. This SMART concept is necessary for destinations to create and enhance environments, not just its visitors but also for its residents. Better decisions lead to competitive destinations, the management of systems and the preservation of resources.

The framework has brought 3 different technologies together and highlights the many different aspects involved in their functionality when applied to a touristic resource. It is clear that no one

specific SMART Tourism Tool aligns with one specific touristic resource. Therefore, this is why the framework incorporates the Touristic City concept (Red line) to reflect the Historical, Cultural, Night-life and shopping aspects of a touristic city.The framework demonstrates the ability of the Tools diversity by being able to move from one resource to another seamlessly and yet be still highly effective in its duty. Lastly, the conceptual framework has tried to visualise situational use with the inclusion of the 6 A's of a tourism destination. Symbols represent the different aspects of a destination resources and aligns them with potential SMART Tourism Tools. However, these symbols can be moved over the framework boundaries and thus potentially inspire creative thinking within teams to develop new uses for SMART Tourism Tools.

Due to the complex nature of the subject it is difficult to give a single round answer to what is the most appropriate tool to implement into all destinations as each destination differs from another. However, the conceptual framework presented in this paper is the first step to appreciating the opportunities available with the implementation of SMART Tourism Tools for destinations.

Benefits
The combination of secondary and primary research has sought to demonstrate the complexity in outlining the technical functionality of SMART Tourism Tools. Although, cannot be fully be detailed due to the high context of the subject. However, the above definitions on the SMART Tourism Tools APPS, AR and NFC describes the overall function each tool has and their relevance to tourism professionals seeking to implement innovative concepts.
In terms of benefits, expert interviews highlighted a variety of rewards SMART Tourism Tools were found to have for both destination and tourist. These are:

For destinations:
- Economic rewards: through investments in new innovations, promotion and the saving of unnecessary costs through utilising real-time data and understanding the city needs.
- Successful implementation of SMART Tourism has the potential to attract Foreign Direct Investment. Such investments can last a long time due infrastructure required to shape a destination thus ensuring its future sustainability.
- Meet the demands of evolving markets and provide layers of new digital content, thus extending the life of tired attractions.
- Big Data: gain the competitive edge by allocating optimal resources which may lead to sustainable tourism development. Tracking mass tourism and dealing with it informatively.
- Differentiation is key: offering digital services beyond the tangible and intangible attributes of a destination, such as scenery, attractions, heritage and local people to compete with similar destination with same assets.
- Forming digital communication channels to ensure that tourists and destination communicate during their on-site phase.
- Increase distribution channels for tourism providers.
- Cultural Heritage: preserve, re-build, entertain and re-live old times through Augmented Reality. Providing additional value in new digital and educational ways.
- Improve city services, transportation, etc. through better planning of services via data collection.
- Promotion of brand via inspiring tourists to share content on stakeholder platforms and SMART Tourism Tools.

For tourists:
- SMART Tourism Tools offer convenience via user-friendly interfaces, up-to-date information and affordability.
- Technology embedded environments can enrich tourist experiences and thus enhance destinations competitiveness

- Reduced expenses: ability to access offline digital information via SMART Tourism Tools. Further, ability to connect with destination free Wi-Fi services.
- Extension of services and re-vitalisation of tired attractions through providing new digital content on-site. Simply, extra layers of value.
- Constant availability and access to relevant information. Thus, greater decision-support and mobility leading to enhancement of experience at the destination.
- Inspiring on-site time through the provision entertainment and informed location based services. For example, the 'Exploration' in Augmented Reality displays the immediate visible surroundings and overlaid information on new content.
- Translation services: APPs/AR/NFC
- Navigation: To find locations but also to find new and unexplored POI's.
- Sustainable visitors: Paperless travel via APPs/smartphones.

The benefits listed above also provide insight into suitable situations that SMART Tourism Tools could be used for. However, it must be noted that one area that SMART Tourism Tools transpired often was within Cultural Heritage and therefore, tourism managers should strongly consider this resource as a big potential for SMART Tourism Tools.

In reference to the research goal, it can be defended that deeper knowledge and know-how has been presented for tourism managers to make a move towards SMART decisions when considering the implementation of SMART Tourism Tools into destinations. Moreover, as sought, a conceptual framework is now available based on this research that visualises the complex subject. Even though, this framework requires further research, it is clear that its potential is supported.

In conclusion, it can be verified that there is a link between SMART Tourism Tools and Touristic resources of a destination. The increasing demand for these services is already strong and is only yet to increase consumer demand. Additionally, the rewards that these services can provide destinations is also positive and therefore tourism managers should be looking beyond the contents of this paper to practically implement technologies within their own destination in the near future.

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