#### SMART CITIES, SMART TOURISM? THE CASE OF THE CITY OF PORTO

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#### Abstract

The so-called Smart Cities have been playing an important role in the academic literature as well as in the agenda of public policies. With the forward thinking of "creating" new urban development models, the cities intend to strategically positioning themselves and at the same time develop cooperation networks. Frequently using the Information and Communication Technologies (while as a means to an end and not as an end itself), the cities try to assure a greater economic competitiveness, the environmental sustainability and the reinforcement of citizenship (calling out to people to participate, in the scope of an inclusive logic and in an appeal to creativity and social responsibility). Even the 2020 European strategy promotes this development. The geographic scope of the study is limited to the city of Porto. This is justified by the fact that, in 2015, Porto was one the five European cities selected to participate in the *GrowSmarter* (model of organization of cities of the future), an ambitious project with the objective of making Europe more sustainable and environmentally intelligent.

Besides that, the *Portuguese Smart Cities Index*, 2016, points out the city of Oporto as the Portuguese city with better results in what concerns the main vectors of intelligence (policy, strategies and projects implemented, edification, mobility, energy and smart services). At the same time, in the international press, the city of Porto appears as a reference for its architectural wealth and as one of the more indicated European destinations for one who would like to enjoy quality holidays at a reasonable price. That is perhaps why *Shermans Travel* presents Porto as one of the top 10 destinations for intelligent tourists. The purpose of the present study is to understand if the emergence of smart cities can be in some way connected to the appearance of smart tourism. For such a purpose, we will study the city of Porto and a survey will be conducted among the tourists of the city. This article compiles some of the first results of the study, referring to the data collected during the months of August and September of 2017, and intends mainly to set out some hypotheses about the motivation for the choice of a tourist destination, that will be developed in future works.

**Key words**: Smart Cities, models of urban development, Tourism and Porto. JEL Codes:

#### 1. Introduction

The smart management of major cities is a priority for all countries and regions. This strategy will allow for a better quality of living and for the prosperity of the citizens. It will also ensure that the development and economic growth take place in a sustainable way. Thus, in a foreseeable context of growing demographic, environmental and energetic pressure in the major urban centres, it becomes urgent to raise the management bodies' awareness for the need to create ecosystems that are more intelligent and sustainable.

Portugal is no exception. That is why the number of initiatives that evaluate and monitor the main cities at different levels have increased in line with what has been consolidated at an international level as being the Smart cities areas of intervention. In these rankings, the city of Porto seems to stand out as well as in the subject of boosting projects that bring

the city closer to the vectors that are considered by the European and international benchmarking.

Therefore, the undertaking of this study is justifiable. It means to analyse if the assertion of the city of Porto as a Smart City is cause for attracting Smart Tourism in which the visitors take advantage of a set of measures that will provide them with a visit experience of renewed value.

This article, as already mentioned, compiles some of the first results of the study, referring to the data collected during the months of August and September of 2017, and intends mainly to set out some hypotheses about the motivation for the choice of a tourist destination, that will be developed in future works.

#### 2. Smart cities, Smart Tourism? The case of the city of Porto.

Technological development left its mark on the 20th century and continues to do so in the 21st century, causing cities to undergo profound changes. Among these, there is the ICT integration in society, from an increasingly younger age. It is the so-called knowledge society. According to Wolfe and Bramwell (2008), the economic prosperity of the cities is inextricable from the ability to interact and from the knowledge transfer between the specialized stakeholders, in the sense of building and maintaining the conditions for the required transformations for a new urban order, able to face the challenges inherent to a sustainable development.

At the same time, the growing number of people in the cities have transformed these in privileged spaces of inequality and social exclusion, of difficult planning and use of ground, of out of control consumption and excessive emission of energy, not to mention the pollution related problems (Vassalo, 2009). It is foreseeable that in 2030, five billion people will inhabit the urban areas. (Soares, 2012).

However, "cities are considered as centres of contemporary civilization and of civil society, having always been seen as a locus of innovation and culture", but also of economic growth, of health and education (Polezé, 2008 cit. por Rego, Nacarate, Perna & Pinhate, 2013: 546). In 2015, the biggest cities in the world represented 60% of the world's GDP (McKinsey, 2011, cit. Selada, C. & Silva, C. 2013).

Thus, it is understandable that the biggest environmental, social, cultural and economic problems as well as of urban planning are to be found in cities.

All of this justifies the growing interest of cities in making their policies more intelligent. To that end, they increasingly seek the help of specialized organizations. The cities care about meeting established golds and commitments. They are aware that the offer of *smart* solutions has increased and that the brought on transformations will radically change the way cities were thus far envisioned (International Electrotechnical Commission, 2014).

As a matter of fact, as indicated by Soares (2012) the presence of e-spaces are increasingly more common in the cities [...], in general, based on the *World Wide Web*, that were developed to explicitly intertwine the development agendas of each city (Graham, 1996 cit. Soares, 2012: 3). As such, for the completion of numerous objectives true virtual cities are built and turned into tools (political), from a mere improvement of communication between citizens and the local public authorities to the stimulus of tourism and increase of the level of competition.

It is in the context of all these changes, with strong impact in the urban centres, that expressions such as "global cities", "ground breaking", "scientific", "creative", "smart" among others, emerge as a way to monitor and solve problems (Castells, 1996).

In fact, the concept of smart city seems to be associated to the" use of information and

communication technologies in order to promote economic competitiveness, environmental sustainability and the quality of living of the citizens" (Selada, C; Silva, C: 2013:4). However, the development of smart cities is not just a process where technology offers technical solutions acquired by the city. To build a smart city you need a correct development of the surrounding environment, which demands intelligent solutions that are actually implemented.

As Lemos points out (2013), a smart city is above all a city capable of reinforcing the way the urban space articulates with the surroundings, surroundings seen from not only a geographical standpoint but also human. A smart city is a creative city where technology is within everyone's reach, promoting citizenship, a sustainable development and the general improvement of the living conditions of the inhabitants.

Thus, sustainable urbanization is advantageous: socially, it helps to improve the quality of living in the cities; economically, it reflects itself in the local economy; environmentally, it contributes to diminish the global warming problem, among others (PNUMA, 2011).

At the same time, the reinforcement of the population's awareness regarding sustainable practices have a positive effect in the social relationships and even in the life of its inhabitants.

As such, it is understandable that this time of development can be particularly demanding. It requires everyone's commitment, namely of the public and private and eventually of the whole community. Therefore, so that there may be a reduction of impact on the environmental resources of the city, it is important to promote an intelligent and efficient technologic development and of its integration and articulation with the existing infrastructures.

The integration of a *smart* technology allows adding value to a city. It helps to promote its efficiency, reduces costs and opens doors to new businesses and services improving the citizens living conditions. A true *smart* city requires the creation of a system capable of reaching and generating new opportunities for all (International Electrotechnical Comission, 2014).

Colin Harrisson (2014), emeritus engineer of IBM, reminds us that a Smart City seeks to solve real problems of the cities, may they be new or pre-existing, by means of a great quantity of information made available during the last decades. As such, "Smartphones,

Wifi, LTE<sup>3</sup>, optical fibre and other technologies are merely an implementation detail. The important thing is to create a city which is better in some aspect or other."

Weiss (2013) adds that for a city to be considered smart it must show its ability to invest in an intelligent way in different activity areas: economy, mobility, environment, human resources and intelligent lifestyles.

At the same time, the undeniable breakthroughs in the Information and Communication technologies sector have allowed for the platforms capable of surveying the cities performance at every level to multiply without forgetting the commitment towards sustainability.

This finding leads us to the issue about the rankings of the cities and to how the urban centres at a global scale are evaluated and classified.

#### 3. Rankings about "Smart Cities"

Next, we present some of the main national and international rankings that have as an objective to survey, evaluate and classify the different cities according to their "level of smart". Therefore, it is important to mention:

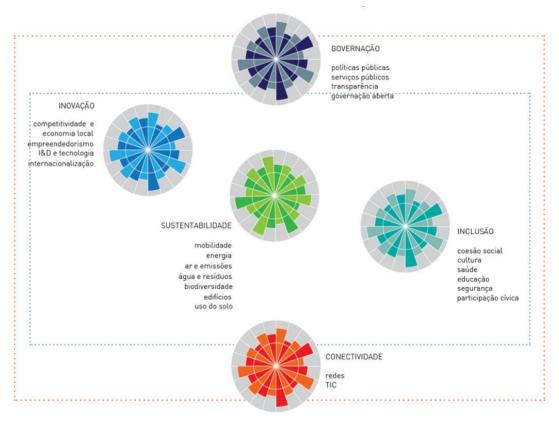
**INTELI** – Intelligence in Innovation is the managing entity of the Intelligent Cities Network of Portugal (RENER) and member of the Living Labs European Network. INTELI is a pioneer in the development of the first works and of the platform Smart Cities Portugal that combines all the entities such as companies, universities and other centres of knowledge involved in the creation of products and services that have impact on the improvement of the quality of city living. It includes the Rener-LL cities of which we shall speak of later on.

In the Smart Cities Index, promoted by INTEI, the positioning of the several urban centres in dimensions such as Sustainability, Innovation, Governance, Inclusion and Connectivity cover an evaluation range of 123 indicators.

#### The RENER LL - European Network of Living Labs

The starting point of Rener Living Lab (Rener LL) was the Pilot Network for Electric Mobility, created in 2009, which now covers other fields of work, ranging from energy, environment, social innovation, security, tourism and culture, run by the INTELI innovation centre.

Figure 1 – Dimensions and Sub-Dimensions of the 2020 Smart Cities Index



Source: rener.pt/projects/methodology

Besides aiming for municipality cooperation, the Rener LL also intends to ensure a national political representation in the liaison with ENoLL – European Network of Living Labs, by applying to the 2014-2020 European funds, namely the Smart Cities and Communities European Innovation Partnership, which contemplates pilot projects through Horizon2020, COSME, LIFE+ and other structural funds.

After participating, in 2013, in the Smart Cities World Fair, the city of Porto plays a ground breaking role in this process and, in May 2014, it sponsored the birth of the Smart Cities National Network, composed of 25 Portuguese cities.

One of the initiatives of the city of Porto, identified as a good practice that crosses-over the different dimensions, is the **Centre of Competence in Future Cities**, an undertaking of the Faculty of Engineering of the University of Porto, confirming the tendency for the creation of clusters with other entities of the city.

The city's ambition is at present projected in the Porto Living Lab, where the city converted itself, since 2013, in a permanent living experimental lab of good practices identified in other major cities.

#### The IDC - NOVA IMS

More recently, a new initiative arose from IDC and NOVA IMS that, in 2015, presented the first Portuguese Smart Cities Index with the purpose of evaluating the Portuguese municipalities and in this way to establish a point of reference for the development of future national cities. The recommendations presented follow a set of good practices in four key vectors: strategy, processes, culture, technology and data.

The analysis methodology of the "IDC Smart Cities Index" encompasses three driving forces and five vectors of intelligence, criteria according to which the cities must be evaluated:

These eight evaluation subcriteria subdivide themselves into 47 indicators. Some of which have not only an impact on the citizens quality of living, who experience the daily life of the city, but also in the direct perception that the visitors and tourists draw from their experience while on holidays, leisure or work. For example, the Wi-Fi points of access and the quality of the portals and digital apps for tourist, remarked in the "smart services & living" vector.

The first ranking, presented in 2015, took into consideration 50 Portuguese municipalities. The cities of Porto, Lisbon, Oeiras and Bragança received a distinction, followed by a set of 15 clusters of competing municipalities and 31 followers (Portuguese Smart Cities Benchmarking, 2015).

Table 1 - Driving forces and Smart Cities Index vectors

. a.b			
DRIVING FORCES	VECTORS OF INTELLIGENCE		
People	Smart Government		
Economy	Smart Buildings		
Information and Communications	Smart Mobility		
Technologies	Smart Services & Living		
	Smart Energy & Environment		

Source: IDC Smart Cities Index | Smart Cities Benchmark Portugal 2015

#### The case of the city of Porto

Below, we present a table that intends to clarify the reality of the city of Porto as to its different vectors of intelligence, in the Smart Cities Index, by taking into account all the previous considerations regarding the smart city concept, the items to be considered as well as the rankings of the cities.

It is important to mention that on, March 2015, the city of Porto asserted its position in this process by being selected as one of the 5 "beacon cities" that would work in close cooperation with GrowSmarter. This is a project from the European Commission, which intends to use 25 million euros to make Europe more sustainable and environmentally more intelligent. The "beacon cities" implement smart cities solutions, in areas such as advanced information and communication technologies and urban mobility with better

connections to energetic efficiency, including the city centres, suburban and industrial areas.

# Table 2 – Some endeavours of the City of Porto in line with the Vectors of Intelligence of the Smart Cities Index

#### CITY OF PORTO | VECTORS OF INTELLIGENCE

#### **Smart Government**

- Renewal of the corporate brand of the C.M. Porto (City Council of Porto) (Porto. Ponto.) and the creation of different platforms of communication and rapport with the citizen (eg. www.porto.pt a news portal about Porto.)
- The Citizens E-Helpdesk, with hundreds of on-line forms: balcaovirtual.cm-porto.pt | C.M. Porto
- Porto Digital Association this project places the City of Porto within the framework of the programme Portugal Digital, having as guiding principle to contribute for the evolution of an Information and Knowledge society, which are present in the Smart City concept.
- Project E-Cidadania, in the scope of the Public Administration E-shopping National programme
- E-shopping platform of the C.M. Porto | cmporto.tradeforum.pt

#### **Smart Buildings**

-EMMOM: environmental and structutal monitoring project that developos Wireless Sensorial Networks of the CISTER (Centro de Investigação em Sistemas Confiáveis e de Tempo Real), ISEP and INESC Porto

#### **Smart Mobility**

- Integration in the MOBI2GRID cross-border project which includes a Porto Vigo smart mobility corridor
- NORTINOV cluster CCDR-N, EGP, INEGI, INESC PORTO, TECMINHO, Deloitte & Touche and COTEC Portugal
- Prio.E: promotion of E-Mobility through electric taxis
- Andante Network Intermodal Transports, integrating CP (Portuguese Railways), Metro do Porto Subway), STCP and other transportation companies, centralized in the Mobilidade.AMP platform by Move-Me | http://mobilidade.amp.pt

#### **Smart Services & Living**

- Apps of the STCP Sociedade de Transportes Colectivos do Porto (Bus Network of Porto), such as SMS BUS, Widget, APP Android and IPhone, and free WiFi in the network buses
- Free Wifi Network in the Rede Municipal de Piscinas do Porto (Network of Municipal Swimming Pools of Porto) (REMUPI) | Porto Lazer
- SenseMyCity is the name of the app developed for smartphones with Android OS, in the scope of the Future Cities project that records the day-to-day activities of the users to assess situations that range from levels of fuel consumption to levels of stress.
- Proliferation of Co-Working spaces (e.g. Facts, Cool.Office, Porto i/o, among others)
- Visit Porto an on-line platform dedicated to Tourism, with information in 9 foreign languages (http://visitporto.travel)

#### **Smart Energy & Environment**

- MOBI.E pilot network- network of smart battery charging, that uses electric power from renewable sources to supply the electric vehicles | Novabase cluster, Critical Software, Siemens, EFACEC, Magnun Cap, CEIIA, REMOBI and EDP Inovação
- STCP Sociedade de Transportes Colectivos do Porto has established an environmental policy in which 55% of its fleet runs on natural gas
- Horta à Porta Project of urban vegetable gardens | LIPOR

Source: Elaborated by the authors

The combination of Smart Solutions, to be presented in an urban context, according to the GrowSmarter proposal, envisages satisfying the needs of three pillars of sustainability: social, environmental and economic. This is a project that is being put in to place by the Câmara Municipal do Porto (City Council of Porto), through the Department for Innovation and Environment.

In 2016, the Portuguese Smart Index, presents Porto as the Portuguese city with the best results in the main intelligence vectors (policy, strategies and projects implemented, edification, mobility, energy and smart services).

Already in 2017, the Municipality of Porto, participated for the first time in the Smart Cities Innovation Summit Asia (through one of its structures, the Porto Digital). The logic of this event is based on the creation of partnerships, on the share of knowledge and on the involvement of citizens and companies against a backdrop of the city as an experimental laboratory.

To this purpose, it is part of an integrated concept of "smart city", including the analysis of the five dimensions (Governance, Innovation, Sustainability, Quality of Life and Connectivity) and of the 93 indicators.

Desafios Porto, Porto Innovation Hub, Hackacity or ScaleUp Porto reflect well the strategy of the city of Porto in the sense of becoming a pioneer in Portugal as a smart city.

The Desafios Porto Program aims to make the greatest possible number of data accessible to the public advocating an integrated management and a more participatory and collaborative exercise of citizenship.

In the same logic of strengthening citizenship, Porto Innovation Hub organizes open sessions that aim to engage citizens in the transformation of the city in an innovative way, but also more socially responsible.

The Hackacity consists of real marathons based on production and valuation of Big Data, taking place in several cities of the world simultaneously. Already in 2017, the Portuguese programmers were called to Porto to participate in the third edition of the event.

The ScaleUp Porto is a new initiative which aims to enhance the competitiveness of the regional economy in particular by supporting the international "escalation" of innovative local technological startups.

It should be noted that these programs are linked to each other as part of an overall strategy that translates, ultimately, a new paradigm for the city of Porto.

#### Do Smart Cities promote Smart Tourism?

This convergence of the city of Porto with the Smart Cities' paradigms coincides with the increased influx of tourists to the city who naturally benefit from a set of infrastructures put in place to serve the citizens.

In the tourism promotion sector, Porto, in the last few years, has distinguished itself. This made it possible for the research to associate Smart Cities to a Smart Tourism in which the city visitors coexist with the locals and the city's facilities, infrastructures and communication platforms created by clusters that concern not only the central government, the City Council, Universities and Research Centres, business groups and, to some degree, the Tourism Promoters.

#### Table 3 – Awards and distinctions of the City of Porto, as a tourism destination

## CITY OF PORTO | SOME AWARDS IN THE TOURISM SECTOR

**2012:** Porto – Best European Destination from the Best European Destinations by the European Consumers Choice | www.europeanbestdestinagions.org

**2013:** Porto – Best of the 10 holidays destinations of choice in Europe by the Lonely Planet publisher, world leader in the publication of travel guides

Porto – 2nd place in the Travelers Choice Awards, awarded by TripAdvisor, in the sector of emerging European destinations and with the highest growth rate

Porto - "Gastronomic Award of the Year 2013" in the awards "The Best of the Year" of WINE magazine

**2014:** Porto – Best European Destination of Best European Destinations by European Consumers Choice | www.europeanbestdestinagions.org

Porto – TOP 14 of destinations for 2014 by the British airline carrier British Airways

Best European Destination of the Best European Destinations by the European Consumers Choice | www.europeanbestdestinagions.org

Francisco Sá Carneiro Airport – 3rd Best in Europe by the Airports Council International. It was also among the Top 3 between 2006 and 2011, having been chosen by the passengers, in 2007, as the best European airport.

**2015:** Porto – Nominated for the World Travel Awards, in the categories "Best City Break" and "Best Destination of Europe". In the same competition, the Ribeira of Porto was distinguished in the category of "Best Attraction of Europe".

Porto -"Best Emerging European Destination in Europe" and 3rd in the World by TripAdvisor

Porto - "Best Romantic Destination" in a vote of readers of USA Today site

**2016:** Porto – One of the most Romantic destinations in Europe, by European Best Destinations (EBD) promoted by European Consumers Choice | www.europeanbestdestinagions.org

Source: Elaborated by the authors

#### 4. Methodology and results

Here, we intend to introduce the methodology table that served as basis for the present study and therefore a brief description of the methodology and of the adopted procedures as well of the corpus of the research is befitting.

This is an exploratory study, of a quantitative nature, that combined documentary research with the creation and application of a survey to tourists in the city of Porto. To ensure a greater heterogeneity of the sample, different areas for the application of the survey were defined: Airport (Departures Area), Lello Bookshop (Clérigos), Ribeira of Porto and Palácio da Bolsa and surrounding area including tourist accommodations (hotels, hostels,...).

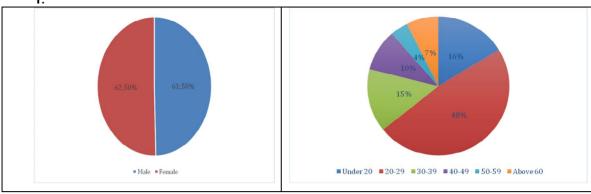
Regarding the corpus, the sample was composed of 123 respondents (collected between August and September 2017).

The questionnaire, composed of 12 questions, mostly closed, was directly applied. It was anonymous and in its introduction, the objectives of the study in question were made clear.

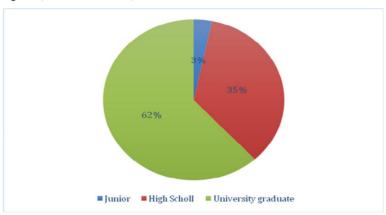
#### Presentation and discussion of results

1) Gender and Age: As one can see, there is a quite similar percentage between the female and male respondents. We should point out that more than 60% of the respondents are between the ages of 20 and 39 years old (which may justify some of the results obtained in the following questions).

1.



**2) Academic Background:** It should be noted the high percentage of tourists with a university degree (more than 60%).



## 3) Profession

For practical reasons, and as it frequently happens in questions related to professions, we chose to encode the responses. This procedure allowed us to obtain Table 4.

Table 4. Profession

Profession	Number	Profession	Number
Student	68	Banker	1
Retired	10	Chef	1
Administrative	5	Housekeeper	1
Teacher	5	Housekeeper	1
Manager	4	Journalist	1
Lawyer	3	Marine Biologist	1
Architect	2	Marketing Manager	1
Accountant	2	Musician	1
Kindergarten teacher	2	Personal Trainer	1
Engineer	2	Psychologist	1
Doctor	2	Quality Manager	1
Catering	2	Security Guard	1
Real Estate Agent	1	Web Designer	1
Babysitter	1	Youtuber (video creator)	1

## 4) Nationality and city of residence: Tables 5 and 6

Table 5. Nationality

English	46
German	23
French	18
American	8
Spanish	7
Japanese	4
Italian	4
Swedish	3
Austrian	2
Irish	2
Portuguese	2
Swiss	2
Greek	1
Hungarian	1

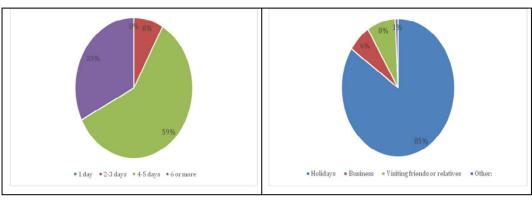
Table 6. City of residence

Berlin	13	Albuquerque, New	1
		Mexico	
London	13	Athens	1
Brighton	10	Barcelona	1
Lyon	7	Bern	1
Oxford	5	Bristol	1
Cardiff	4	Dusseldorf	1
Leicester	4	Erfurt	1
Newcastle	4	Hamburg	1
Bordeaux	3	Houston - Texas	1
Frankfurt	3	Madrid	1
Munich	3	Napa, California	1
Toulouse	3	Nice	1
Cadiz	2	Palermo	1
Leeds	2	Parma	1
Lille	2	Pisa	1
Liverpool	2	Portland	1
Magdeburg	2	Postdam	1
Manchester	2	Saarbrücken	1
New Jersey	2	Salt Lake City -	1
		Utah	
Osaka	2	Schwerin	1
Paris	2	Sendai	1
Pocatello-Idaho	2	Seville	1
Stockholm	2	Stuttgart	1
Vigo	2	York	1
Akihabara	1	Zurich	1

Here, it stands out, on one hand the great variety of the respondents' nationalities and on the other hand the predominance of European tourists (mainly English who represent more than 1/3 of the respondents).

We applied this question mainly with the purpose of finding out the type of cities of origin, notably in terms of size and urban development. We realized, in this case, that all respondents came from medium/ large sized cities.

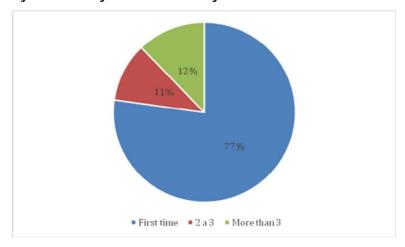
## 5) Duration and Purpose of the trip



It is noteworthy that none of the respondents intended to spend more than a day in Porto and that around 90% intended to stay in the city between 4 to 6 or more days.

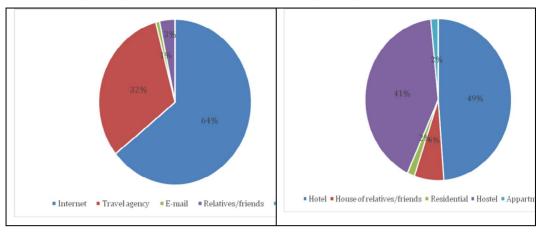
Holidays appear to be the main reason for the visit. Visits motivated by business reasons represent only 6,5% of the answers and visits to relatives and friends merely 8,1%. Nevertheless, we cannot dismiss the fact that the dates in which the survey was carried out may have influenced the results, as the months of August and September are, traditionally, months of holidays.

#### 6) How many times have you been to the city of Porto?



Almost 80% of the respondents stated that it was their first visit to the city of Porto. Nevertheless, 12% of the tourists indicated that they had visited Porto on three or more occasions.

## 7) How did you organize the trip? And where did you stay



It is important to point out that the internet is already the main support for organizing the visit (64,2% of the respondents) followed by travel agencies (31,7%).

Regarding accommodation arrangements, Hotels are still dominant although a significant percentage of the respondents chose to stay in Hostels (41,5%).

## 8) Which are the most important factors to take into account when it comes to decide on the travel destination?

1.	Events and entertainment
2.	Good safety and security
3.	Variety of cultural events and historical attractions
4.	Good accessibility and transports
5.	Accommodation facilities
6.	Environment
7.	The cleanness of city
8.	Wi-Fi Access
9.	Easy access to communications networks
10	. Good nightlife
11.	. The shopping facilities
12	Digital applications for tourists
13	. Online information about health and care
14	. Digital information available (transports, restaurants, traffic)

If we pay attention to the order in which tourists rank the different factors (presented here in a scale ranging from the most important to the least important), we will realize that on one hand, entertainment, safety, the variety of cultural events and historical attractions, environment, and good accessibility and transports are the more valued items. On the other hand, the digital applications for tourists, the online information about health and care and the Digital information available are the least valued. This fact raises important questions envisaged in the future developments of the present study.

#### 5. Conclusions

The growth of the cities has created imbalances and inequalities that the Smart City tries to overcome, with a policy of good governance of the municipalities of the future. The city of Porto has been at the forefront of these concerns, as can be seen by the recent national rankings and by the articulation of community programmes such as GROW SMARTER.

Giving continuity to the work developed during the last decade, the new executive of the C.M. Porto (city Council of Porto) has been working, since 2013, on a political cycle that regards the city as a brand (Porto. Ponto.) which has been positioning itself within the ranges valued by the Smart Cities Indexes, namely a governance that is in a closer proximity of the citizens. The Information and Communication Technologies support innovation and connectivity. This is a challenge that has been developed with other official bodies in a territorial cluster model as envisioned by the Smart City model.

Together with this project, the reinforcement of the reputation of the city of Porto as a tourist destination has been acknowledged with international awards and distinctions. Its citizens value the growing number and variety of tourists. One can see that the services created for the tourists are also used by the residents, in the same way that a smart city offers new tourism related arguments, valued by its visitors, as can been seen through our survey.

Nevertheless, contrary to what one would expect, some of the items that are more appreciated by the respondents do not totally inscribe themselves in the Smart Cities logic and on the resources that they provide, namely the "digital applications for tourists". At the same time, it is important to point out that a significant part of the sample corresponds to a profile for whom, in principle, the new technologies would be of particular interest: young respondents, with a high-level academic background and residing in major urban centres.

This conclusion suggests that from the moment when the technology component dimension becomes trivial, and no longer represents a competitive advantage as far as tourism destinations goes, by being considered as an extension of the individual himself, Smart Tourism should not give it privilege. A Smart City will have to provide other points of attraction for smart tourists in which the technology component is only a mean and not a means to an end per se.

Thus, a sensitive analysis, integrating information and knowledge may consider itself as one of the main aspects of any smart city or of a smart tourism destination (Baggio & Del Chiappa, 2015). Within this context, the demand is the first aspect that has to be taken into account since the tourist is the basis of the tourism system. Nevertheless, the demand exists (or the lack of it) when faced with a certain offer.

It is precisely here that lies the importance of a strategic planning of the tourism activity. In the particular case of a city, it even implies the involvement of the political power (may it be at a central level or local, Tourism Regions, etc.).

More and more frequently, local authorities appear to be aware of this fact as well as of the need of gradually building a competitive tourism by means of the specific features and the potential of each region.

## **Bibliography**

DEL CHIAPPA, G.; BAGGIO, R. (2015). Knowledge transfer in smart tourism destinations: analyzing the effects of a network structure. *In: Journal of Destination Marketing & Management 2015*, pg.2.

CASTELLS, M. (1996). The information age: economy, society and culture. Malden: Blackwell.

INTERNATIONAL ELECTROTECHICAL COMISSION (2014) . Orchestrating Infrastructure for Sustainable Smart Cities. *In: White Paper. http://www.iec.ch/whitepaper/pdf/iecWP-smartcities-LR-en.pdf* 

LEMOS, S. (2013). Cidades inteligentes no geral, Águeda em particular: Uma introdução às cidades inteligentes e o caminho de Águeda para o ser. In: II Conferência de PRU, VIII ENPLAN e XVIII Workshop APDR: "Europa 2020: retórica, discursos, política e prática". pg. 281.

REGO, J.A.A.R.; NACARATE, J. P. M.; PERNA, L.N. & PINHATE, T. B. (2013). Cidades Sustentáveis, *In: Simulação das Nações Unidas para Secundariastas*, 2013, pg.546, 563.

SELADA, C; SILVA, C. (2013). As Cidades Inteligentes na Agenda Europeia: Oportunidades para Portugal. *In: II Conferência de PRU, VIII ENPLAN e XVIII Workshop APDR: "Europa 2020: retórica, discursos, política e prática" 31.* 

SOARES, D.J. (2012). Cidades Inteligentes: um novo arranjo para o desenvolvimento. I*n: Enfagen 2012: Administração em destaque. II Encontro da Faculdades de gestão e negócios.* Uberlândia, MG, Brasil.13 a 15 de Junho de 2012.pg. 2

VASSALO, V.P.L (2009). *Certificação Territorial- Proposta de critérios de avaliação para área urbanas sustentáveis.* Dissertação de Mestrado Ordenamento do Território e Planeamento Ambiental. Universidade Nova de Lisboa, Faculdade Ciências e Tecnologias. http://run.unl.pt/bitstream/10362/5068/1/Vassalo\_2010.pdf

WEISS, M.C.; BERNARDES, R; CONSONI, F. (2013). Cidades Inteligentes: casos e perspetivas para as cidades brasileiras. pg.1.2.3

WEISS, M.C. (2013). Cidades Inteligentes como nova prática para o gerenciamento dos serviços e infraestruturas urbanas: Estudo de caso da cidade de Porto Alegre. Dissertação de mestrado em Administração de Empresas. Centro Universitário da FEI. Pg.54,55.

#### **Online References**

Associação Porto Digital |www.portodigital.pt

Câmara Municipal do Porto | www.cm-porto.pt

Centro de Competências para as Cidades do Futuro - Universidade do Porto | futurecities.up.pt

Direção-Geral do Território | www.dgterritorio.pt

Grow Smarter | www.grow-smarter.eu

INTELI - Inteligência em Inovação - Centro de Inovação | www.inteli.pt

Portuguese Smart Cities Index, 2016

http://www.inteli.pt/uploads/documentos/documento\_1357554966\_2590.pdf

RENER LL – Rener Living Lab | www.rener.pt

Smart Cities Portugal | smartcitiesportugal.net

Visit Porto | http://visitporto.travel

Revista Galega de Economía: http://www.usc.es/econo/RGE/benvidag.htm