Community Engagement for Sustainable Neighbourhood Transformation

The Case Study of VIVA O CENTRO – Cidade Alta – Natal – Brazil

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ABSTRACT

This paper reports the research to diagnose the economic, social and cultural recovery of the main Neighbourhood Cidade Alta of Natal (The Capital of Rio Grande do Norte State in Brazil). Due to poor planning the fast change of urban local commerce to shopping centers led to a sudden degradation of the most lively Neighbourhood of Natal, which concentrated most of the commercial, cultural and social activities. We will report the vision, strategy, action plan and activities of VIVA O CENTRO movement which brought back the vitality to Cidade Alta neighbourhood. It is an extraordinary successful movement involving all the Cidade Alta stakeholders from business owners to citizens engaged in an enthusiastic partnership with the public authorities and other institutions. The analyzed activities will be described and a methodology has been derived to be part of the Human Smart Cities co-design and co-creation tools. Cidade Alta is considered a Human Smart City case study, developing and applying the good practices for urban requalification and sustainability public policy through innovation and participatory involvement of all the stakeholders. We will describe the following activities from ideation to deployment and assessment of impact: 1) Creation of a common vision and strategy based on the community WINs (Whishes, Interests and Needs) methodology. 2) Action plan to implement the chosen activities. 3) Selection criteria for partnerships and negotiation strategies. 4) Stakeholders engagement and creation of a "Wave of Sustainable Enthusiasm". 5) The fundamental role of culture as a driver for people attraction and active involvement. 6) Strong marketing and communication plans. The role of mass media namely the social networks for awareness and interactive discussions 7) Urbanistic requalification of buildings and infrastructure. Selection criteria, design, planning, licensing, public and private funding and opportunities. 8) Training activities to support better services quality. 9) Organization of a large number of culture events covering music, dancing, ballet, poetry, theatre, street entertainment, gastronomy. 10) Large number of

exhibitions of paintings, photos, handcrafts, ceramics, traditional objects, antiquing, books, cinema. 11) Urban arts. 12) Urban maintenance of streets and other public spaces. Streets dedicated to people only. Cycling lanes. 13) Strong and trustful collaboration with security authorities. 14) Development of partnerships with the municipality and other institutions creating a common vision and strategy for VIVA O CENTRO. 15) Activities towards the integration of Cidade Alta innovation ecosystem. Partnership with local University – IFRN and ITCART the Culture and Art Incubator. 16) Street public lighting improvement and maintenance as well as decorative lighting. Streets cleaning. 17) Awareness and coaching aiming at citizens behavior transformation. 18) Encouragement of social interaction and support to the organization of common interest groups activities.

1. Introduction

Cities face new challenges every day to create prosperity and ensure good quality of life to its citizens ss 50% (82% in Brazil) of the human population is currently living in urban areas, the uncertainty about the social models resulting from the digitalization of the society calls for particularly decisive participatory actions from public and private authorities in cities.

However, the "smartness" of a city cannot be limited to the advanced processes put in place to ensure monitoring, interaction and processing of data collected by ICT infrastructures, and this regardless of the strategic importance of such aspect. Cities are smart when they take full advantage the human capital of its citizens, create innovation ecosystems where the new dynamics of wealth and jobs creation takes place and promote new forms of participatory governance. In short, when they become Human Smart Cities.

Figure 1. Human Smart Cities

ICT infrastructures enabled by the Internet of Things (Ability to address and interact with physical objects) and Cloud (Computing on demand) solutions promote a better management of critical infrastructures but also offer a yet unexploited potential for new personalised services (e.g. apps based on Open data) and novel types of dialogue

between Authorities are engaging in new approaches to face and adjust to these transformations. Such new approaches are being addressed in innovative projects experimenting new governance models, engaging and empowering citizen in the co-creation process of novel city services. In doing so, these experiments and projects contribute to the materialization of the concept of Human Smart City created by A. Oliveira, author of this paper.

Human Smart Cities use digital technologies as an enabler to connect and engage government and citizens, aiming to rebuild, recreate and motivate urban communities by stimulating and supporting their collaboration activities, leading to a joint increase of social wellbeing with the new technological trends that are emerging such as Big data, Open data and ubiquitous communications, all leading to a digital society, new ways of living and sharing knowledge are occurring. This transition towards a digital society is having a significant impact in the whole society, impacting significant the transformation leading to the Digital Economy.

In this paper the authors also argue that the City challenges are more effectively addressed at the scale of the Neighbourhood and they provide cases and experiences that demonstrate the viability, importance and impact of this model based on many examples of MyNeighbourhood project, which is seen as a testbed for many other Human Smart Cities implementation. Álvaro Oliveira coined the Human Smart City as:

"In the Human Smart Cities the focus is the wellbeing, quality of life and citizens happiness. The urban innovation ecosystem works as a Living Lab where information technologies are used together with participative and collaborative methodologies to co-design, co-create and solve the social, economic and sustainability problems in line with the principles of the economy of common good, generative commons, mission oriented projects and the UN-SDG framework".

The project has created and applied the MyN methodologies and tools based on Design Thinking, Living Labs and Gamification to engage the participation of citizens and discuss, understand and rank their WINs (Wishes Interests and Needs). These activities are based on a strong personal interaction between all the stakeholders through meetings, seminars, workshops, hands-on experiments and being supported by social network connectivity and specific apps based on the MyN open platform developed in the context of the MyNeighbourhood project.

Other new aspects are emerging that need to be tackled such as the citizens privacy invasion and control (i.e.: Face recognition) as well as the manipulation of information (Fake news) and distortion of democratic processes. The human population is being manipulated and exploited by a few global companies that are running out of control without a Regulatory Framework taking care of legal business compliance, such as tax evasion.

The VIVA O CENTRO case is presented in detail focusing on the community engagement and sustainable Neighbourhood transformation.

2. From Smart Cities to Human Smart Cities

The concept of the Smart City was created by the traditional ICT industry aiming to explore a new market opportunity. The technology "pushed" solutions failed to engage the citizens and the public authorities who didn't take ownership of the "smart" services. In our research we developed new models to engage citizens and public authorities in the co-design and co-creation of services to solve their.

In addition, combining information provided by sensor networks with smartphone apps (specially viable when open access to public data is implemented) allows the personalization of city services as to fit the needs of a specific citizen according to his position, profile, and patterns of behaviour

The concept of Smart Cities evolves to further value the provision of a smart environment for smart living of people, with smart governance and economies, favouring innovation and the exploitation of all human capital available. Cities can only be smart if they exploit data analytics with the purpose of ensuring "smartness", not only in terms of the automation of routine functions, but also in understanding, monitoring, analysing and planning the city, improving the quality of life of its citizens and building a trusted governance model engaging and empowering the citizens in the co-creation of solution for collective social challenges.

Citizens are calling for a more effective representation and listening of urban constituencies, overcoming an eroded trust between them and the authorities. In reality, the explosion of mass participation based on Social Networks confirms a "demand from the streets" that are calling for openness, transparency and trust in the governance and political system. The described scenario justifies the need to evolve the concept of Smart Cities by refocusing it again on citizens, their needs and an open collaboration with the public authorities as it is outlined in Fig. 2 in the case of Natal in Brazil.
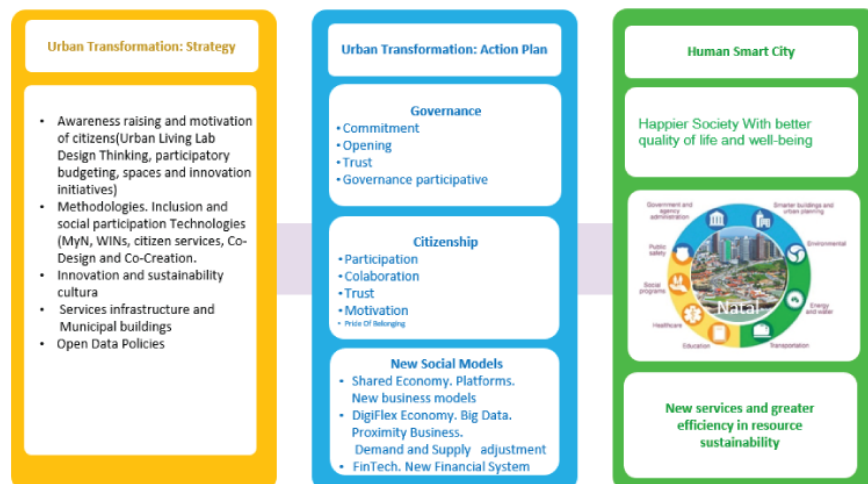

Figure 2. Natal Human Smart City Transformation Roadmap

The Human Smart City concept is built on emergent, sustainable models for urban living, working and governance enabled by Future Internet infrastructures and services (FIWARE). At the core of the vision is the human perspective, as gained through the

application of citizen-centric and participatory approaches. The Government implements and supports an ecosystem of urban innovation (Urban Living Lab), where the virtual communities are encouraged to migrate to the physical environment to meet together and to discover their common Wishes, Interests and Needs (WIN Methodology), co-designing and co-creating solutions. In the Human Smart Cities, the information technologies are used to solve social problems, economic and environmental issues, focusing on the welfare and happiness of citizens.

The Human Smart City approach has gained increased support from City governments across Europe and beyond as well as the Smart City research community, as it more effectively addresses sustainability (COP21) key challenges such as low-carbon strategies, the urban environment, sustainable mobility, urban retrofitting and social inclusion through a more balanced, holistic approach to technology

3. Participation and Collaboration. Urban Living Labs and Innovation Ecosystem

Although the quality of life, improved across many dimensions with the evolution of technology, the social cohesiveness of the small groups does not seem to have equally benefited. It is still weak and diluted and cities have lost the strength of inter- personal social interaction that used to make people feel more connected to each other. However, from a social point of view, citizens seem to be in a great need of a sense of belonging and identity, looking for further social inclusion and social integration.

In such scenario, the wellbeing and quality of life of citizens is impacted by challenges such as demographic shifts, gentrification, sustainable housing, mobility, environmental impact, food and water sustainability, health care support, and security and safety. Solutions for these challenges became a priority.

The fast growth of ICT enabled services namely the pervasive computer devices and social networking are driving the environment for democracy innovation and societal transformations at all levels of our society. Citizens are becoming more knowledgeable and demanding in their needs. Civic collaboration and participation has been increasing, strengthening the commitment to the common good and the democratic dynamics, where general interests prevail over individual interests. The transformation is based on new approaches and new models namely citizen driven innovation, (Urban Living Labs), focused on the co-design and co-creation of City services are emerging.

Design thinking methodologies are used to support the co-design and co-creation of solutions. Gamification methodology is used to stimulate and sustain the citizens motivation to participate in the creation of the Human Smart City. In the MyN a social-digital environment (Technical platform and social innovation methodologies and tools) has been created to stimulate and support a closer interaction between people, their places of physical dwelling and their material, social and environmental concerns. Proudness and sense of belonging comes to life and scales up to the Human Smart City.

The Human Smart Cities Concept was created from the natural evolution of Living Labs to Urban Living Labs which are at the core of the urban innovation ecosystem driver of the urban transformation leading the urban transition to the Human Smart Cities and the Digital Economy. Oliveira has coordinated and participated in several – large scale

projects (Such as Fireball, Peripheria, CitySDK, Citadel, Storm Clouds, MyN-FIWARE and MyNeighbourhood) in 27 European Cities, addressing many aspects of the urban transformation from services to management and from participation to open, transparent and participative leadership leading to a powerful improvement of the democratic processes based on trust and participation.

MyN was initially implemented in four large scale European pilot located in Lisbon, Milan, Aalborg and Birmingham. These pilots were the seeds to launch the City wave of enthusiasm to replicate the results to other neighbourhoods of the pilot cities and promote growth to other Cities in Europe and beyond.

The successful application of the MyN bottom up approach with top down support is clearly demonstrated in the Natal Human Smart City and the citizens engagement methodology and wave enthusiasm creation is detailed in the case of the project VIVA O CENTRO

4. Human Smart Cities Implementation Methodologies

4.1. Introduction

MyN methodology is built on a socio-technical system allowing existing communities to interact in a synergic way, in order to:

- Strengthen and widen a sense of belonging from a single community to the neighbourhood.
- Assure mutual interdependency characterized by a multiplicity of urban dimensions (social, economic, environmental...).
- Redirect the singularization mechanism of contemporary urban societies towards a highly connected ones.

4.2. Methodology Phases

Phase 1: Context analysis.

The context analysis phase consists in the identification of the stakeholders, the existing projects and all the factors that are considered to have influence in the social context and in the solution creation. The field work consists of interviews, guerrilla observation and post-it sessions that creates a link favouring the listening and the talking amongst the main actors, including citizens, professionals, experts and volunteers. This methodology allows the MyN team to gain the trust of the target community. The data collection during this phase results in the identification of WINs of the citizens.

Phase 2: Co-design

During the Service Design action, the data collected in the Context Analysis is used to co-design and co-create solutions and services. Several meetings and workshops are held to share and crowdsource ideas. Design Thinking is used to co-design services together with the local citizens and other stakeholders. Some tools are used to facilitate the citizens interaction and to progress faster to results.

Phase 3: Deployment

Through the MyN platform the City Government can easily implement activities as participatory budgets, citizen data mapping, well-being services, participatory decision taking, complaints management These methodologies bring the city to a huge transformation,ultimately innovating democracy.
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4.3. Deployment Phases

The solution deployment of MyN is based upon three key phases:

- Phase 1: Rebuilding Neighbourhoods;
- Phase 2: Empowering Neighbourhoods;
- Phase 3: Scaling up Neighbourhood Value.

Phase1 – Rebuilding neighbourhoods is characterized by the use of Living Lab methodology to create a wave of enthusiasm focused on a common vision and deploy MyN platform and methodology to build upon and improves existing City Information open data and Apps, enabling local residents to connect with each other and share resources – user data such as time, assets and knowledge, - to improve their own neighbourhoods. One of the goals of this phase is to embed a gamification layer in the MyN portal that motivates users to keep returning, do more for their neighbourhood and engage their friends to set up a new MyN site in their own neighbourhood.

Phase 2 Empowering Neighbourhoods, the MyN platform is used to feed a citizen query or need into a 'Neighbourhood Advisor System'. The aim is to establish a database that will understand the request and map it against potential outcomes – ranging from a relevant existing app to direct contact with others in the neighbourhood who can help or potential crowdsource options to create new solutions.

Phase 3 Scaling Neighbourhood Value, aims at ensuring that the MyN Platform offers a quick and easy one-stop portal for people to add local content, ideas applications and needs about their own neighbourhood. The goal is to make ideas and apps widely and openly available – whether newly created or already existing. The government and public administration is challenged by the need to improve the quality of the services provided to the citizens. This is a big challenge, because it clashes with the inertia of bureaucratic structures and requires higher flexibility of the structure and a positive attitude towards innovation. It is important to include all the actors of the cities (and therefore of the neighbourhood) in the co-creation of consistent and coherent solutions, by stimulating citizens' creativity.
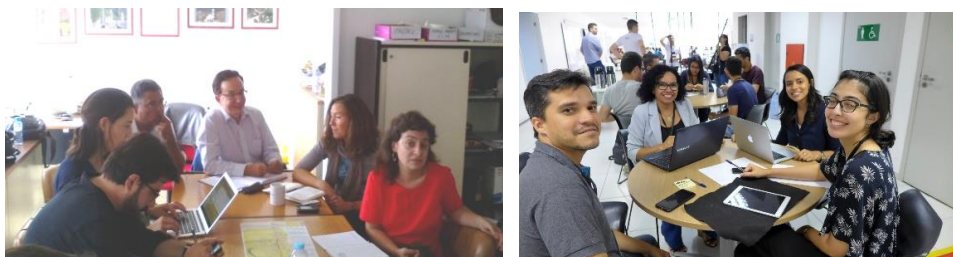

Figure 3. Co-design Meeting held in Mouraria (Lisbon-Portugal) and Ribeira (Natal-Brazil).

The Human Smart City services provide:

- The creation and strengthening of the neighbourhood culture. Recovery of local values. Participation. Feeling and proudness of belonging. Participation and collaboration behavior transformation
- Integration of the Innovation Ecosystem. Living Lab Methodology. Entrepreneurship stimulation and support. Crowdsourcing and open innovation.
- Democracy Innovation. Open and Transparent Government. Listen and talk to the streets policies.

About one hundred different services have already been co-designed, co-created and implemented in the context of MyN. The Natal program included a set of about 30 projects nspired by Oliveira and managed and driven by Irani Santos, authors of this paper. Furthermore, the success of the initiative was achieved at a time of serious finance shortage mitigated by effective and enthusiastic partnerships articulated by Irani Santos the Director of Natal Human Smart City at the Municipality. In particular, the partnership between the Municipality and the UFRN-IMD, the Federal University became an extraordinary case of achievement based on collaboration, "making more with less".

The municipal political cycle has slowed down the initiative which is expected to be full stream again in the very near future. Natal is on the top of the wave of the Human Smart Cities being one the best examples of the SDGs implementation at worldwide level.

4.4. MyN Platform

The MyN platform provides technological solutions to help the recreation of a lost sense of neighbourhood that is rooted in the local place, were people share the same Wishes, Interests and Needs The MyN platform combines Web technologies, existing products, social networks, semantic technology and gamification to ensure the engagement of the citizens. UFRN, has adopted the FIWARE Platform to develop the Human Smart City Services and today the IMD – UFRN has a large group of researchers and extensive knowledge to develop new application and services of the Human Smart City.
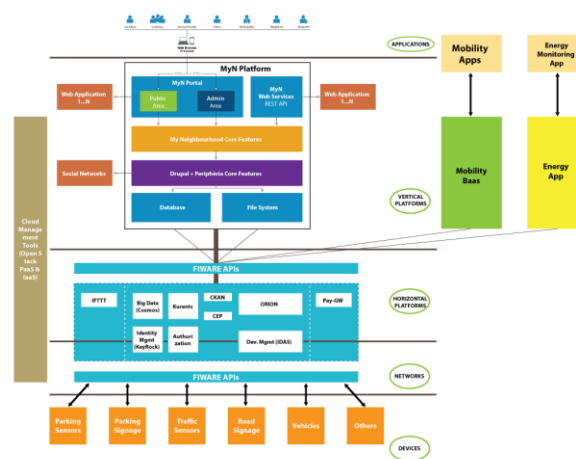

Figure 4. The MyN Open Platform

The Platform Architecture takes into consideration the bottom-up design process derived from the co-design activities, enhancing the human focus.
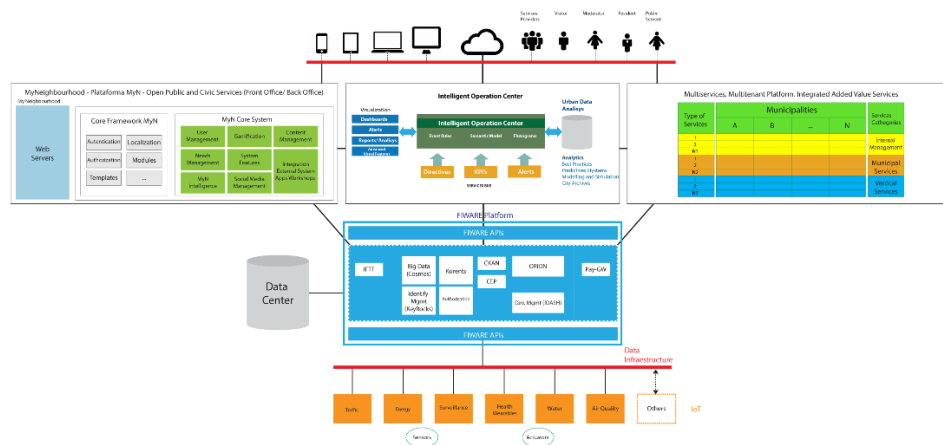

Figure 5. MyN Platform Multitenant Multiservices Architecture

The stand alone MyN platform serving a Neighbourd is being enhanced to deliver services to the City and clusters of Multicities, supporting multitenant services

5. VIVA O CENTRO Case. Vision, Strategy and Implementation

5.1 VIVA O CENTRO

Natal Center is the location of VIVA O CENTRO project. Natal is the capital and the largest city of the Rio Grande do Norte State – Brazil. The city population is approximately 900,000 inhabitants. Natal is located in the Brazilian. The city was founded on December 25, 1599. Natal was first visited by European navigators in 1501 Christmas, (During the 1501–1502 Portuguese expedition), who named the spot "Natal", the Portuguese translation for Christmas

One of the main economic activities of Natal is tourism, derived from the exuberant beauty of natural landscape and the very mild tropical climate presenting amazing beaches of warm waters and inviting waves for water sports, beautiful sand dunes and national park reserves. The next pictures show the location of Cidade Alta in the Natal map, fig. 6. In Natal Center there are several buildings with great cultural value such as the Solar Bela Vista, the Grande Hotel, the Memorial Câmara Cascudo icon of the Potiguar culture.

Figure 6. Location of VIVA O CENTRO in Cidade Alta, Natal – Brazil

The Center of Natal had been the focus of the city's commerce until 30 years ago, a time when shopping centers had not yet arrived and the streets and shops were buzzing with economic and cultural activity, as enthusiastically tells us Delcindo Mascena the VIVA O CENTRO's great driver, businessman and owner of AVOHAI.

With the arrival of shopping malls people began to leave the center for lack of vision of the public institutions that did not understand that the abandonment of local commerce and culture would only lead to social inequality, the degradation of cultural and material values. of the city center. Customers, business owners and residents have progressively abandoned the center that has gone into physical degradation of buildings, infrastructure and services including the abandonment of security forces and basic sanitation and ongoing maintenance services. The population complained strongly to municipal and other institutions, but was not heard and the exodus continued in the face of the lack of vision and responsibility of municipal services. The few survivors suffered another blow during the 2017 Christmas season with the disappearance of all policing, which increased personal and material insecurity. In desperation the shopkeepers closed the shops and were about to give up fighting for survival.

Figure 7. The degradation of Natal center before VIVA O CENTRO project

That was when Delcindo, enraged and uncomfortable with the situation, took to the street trying to convince the businessmen not to close the stores because then it would be the end with no return. During 2018 Delcindo was firmly determined to stimulate private initiative to assume what public services namely the municipality had ignored. Thus began a convincing and engaging work that materialized in a first meeting with 4 entrepreneurs in June 2018.

The second meeting was structured and already had 45 entrepreneurs committed to co-design and co-create a strategy for the revitalization of the center of Natal with the mission of: revitalizing local commerce and culture and improvements in urbanism, services. and security. In this context, problems such as inadequate and defective lighting without public maintenance were identified.

Figura 8. Delcindo Masceno President of VIVA O CENTRO

The VIVA O CENTRO project was taking shape and the strategy to implement it became clear. Faced with the problem of lack of funding from the private and public sectors, it became obvious that the first step would be to take action on their own and articulate partnerships based on the wave of enthusiasm that was in the meantime

emerging. In this sense it was essential to create a social group where all the news were shared and still are and a strong communication plan began to emerge. The first partnerships were made with the Municipality and with the Command of the Metropolitan Police. This was a fundamental transformation that immediately improved security. Certainly the power of information sharing and constant motivation were instrumental in accelerating membership and engaging traders, citizens and residents in the same wave of enthusiasm, wanting to participate and collaborate.

"VIVA O CENTRO" was born from which the initiative of four entrepreneurs led by Delcindo. The articulation process raised the participation to 300, including several local institutions and the growth of the movement gave rise to the creation of the Association VIVA O CENTRO (Avicen). The organization has stood out from the development of various revitalization actions of the Center of Natal, namely the area known as Beco da Lama.

Figure 9. VIVA O CENTRO president discussing future plans with A. Oliveira

With the movement growth and the actions becoming visible in the interest of dissemination in the media developed and contributed to accelerate the process, drawing the attention of those involved to the importance of using idle spaces and also harmonizing common uses and interests. Consequently, this phase contributed to the process of space appropriation by local traders and society.

Figure 10. Delcindo, Oliveira and Rezende in VIVA O CENTRO action

Public and private partnerships have been one of the many drivers to collaborate, support and fund and support the initiatives of VIVA O CENTRO.

Figure 11. Representatives from some of the most important Partners

Education and training activities are delivered by different institutions and include formal education target to children, elderly people, students support, etc. Cultural exhibitions are also on the agenda such as, literary fairs.

Figure 12. Advertising poster for a Literary Fair in Beco da Lama, Natal Centro

Citizens Engagement and participation drives the creation of the wave of enthusiasm a basic requirement for the Human Smart City Methodology. Openness and transparence are essential to achieve trust and the participation and collaboration of citizens.

Figure 13. VIVA O CENTRO engagement and participation of all the stakeholders from citizens to authorities

Collaborative activities are delivered with enthusiasm by participative empowered citizens feeling positively about the sense of belonging and proudness of local culture aiming at the accomplishment of VIVA O CENTRO objectives.

The communication plan has been very skillfully managed and no doubt has contributed strongly to the dissemination, amplification and acceleration of VIVA O CENTRO initiative attracting every day more people and relevant stakeholders to engage in the project.

Figure 14. Public communication of VIVA O CENTRO

Funding by different sources is being progressively accessed despite the difficulties. The public awareness of the cultural, social and economic results is opening this access and citizens voice is also requesting adequate action from politicians and other opinion makers and power decision managers.

The Crowd sourcing of ideas is part of VIVA O CENTRO open democratic culture very much in tune with the Living Labs methodology.

Policing was one of the first and most visible improvements that initiated the citizens behavior transformation driven by improvement of personal and material security.

Figure 15. Policing and security, fundamental improvements brought by
VIVA O CENTRO

5.2 Local cultural revival

Cultural events are an essential part of the culture revival of Natal Center: classic ballet, contemporary dance, popular and folk dance, etc.

Figure 16. Culture thematic activities such as ballet and contemporary dancing.

Cultural education activities are part of the strategy to create a sustained environment to carry on the transformations led by VIVA O CENTRO.

Local artists support is also part of the strategy reinforcing their self-esteem and feeling of Common Good.

Figure 17. Local artists performing

Street Entertainment is one of the drivers to attract people and make them aware of the deep transformations of Natal Center, being today an icon of culture, wellbeing and beauty.

Figure 18. Popular entertainment bringing life to the streets

Urban Art and Graffiti has been from the start a main driver of the transformation described at the beginning of this paper. It has been a very successful partnership involving one of the best Brazilian artist Dicesar Love that created a magnificent masterpiece transforming Beco da Lama from totally degraded dark place in a very beautiful and attractive walking street dedicated to leisure and entertainment. It should be mentioned excellent collaborative work involving a group of local artists oriented by the inspiration and artistic knowledge of Dicesar.

Figure 19. Urban Art and Graffiti transform the Ugly Center into a colourful and attractive

neighbourhood

Large scale popular events are reviving the center of Natal. Traditional São João festivities, Carnival shows, Christmas decorations are attracting thousands of citizens to participate and enjoy. It is reported that some of these attract up to 10.000 people thus increasing exponentially the number of customers for the downtown commerce.

Figure 20. Large scale popular events

Public Exhibitions organized and disseminated in a systematic way, covering all aspects of Natal Center local culture such as: literature, paintings, drawings, sculptures, ceramics, handcrafts, embroidery, etc are also part of the culture revival driven by VIVA O CENTRO.

5.3 Natal Center Requalification

Public lighting is fundamental to contribute to the people security and also to highlight the beauty of the surroundings. When VIVA O CENTRO started public lighting was practically inexistent due to lack of maintenance of the municipal services. Adequate lighting was a very first step of the project paid by the shop owners and soon taken over by the municipality. This contributed substantially to the security improvement. Today the plans for LED efficient lighting and intelligent control are under way and it is expected that Natal Center to be the first totally intelligent lighting neighbourhood of Natal. Christmas lighting and decorations were a very effective initiative from the municipality contribute to attract a new wave of customers for Christmas shopping

Street Repaving has been implemented by the municipality and is making driving and walking more comfortable.

Sanitation and waste cleaning has been taken care by the municipality under the orientation and suggestion of the VIVA O CENTRO and the participative engagement of the citizens.

The buildings requalification is also changing and making more attractive the neighbourhood of Natal Center. The municipality, the institutions, the owners and the citizens are demonstrating a participative and collaborative initiative that makes VIVA O CENTRO an example of Human Smart Cities.

Figure 21. Buildings requalification by shop owners and residents

Streets and shops decoration are happening everywhere making shops and streets spaces more attractive and enjoyable.

Systematic maintenance of public infrastructures is under the responsibility of the municipality with close advise and overseeing of VIVA O CENTRO and participative citizens.

5.4 Human friendly actions

Walking Streets and Accessibility facilities have been managed by the municipality making the neighbourhood closer to a sustainable and green district.

Parking and hiring of cycles and Bike paths are encouraged and supported.

Figure 22. Biking adoption at Natal Center

Children playground and entertainment is also taken care of involving the participation and collaboration of parents, teachers, animators, etc.

Figure 23. Advertising Children entertainment

Local gastronomy support has been provide to revive the local culture and new entrants.

Figure 24. Festival of Gastronomy at Natal Center

New restaurants, bars and live shows are supported and becoming part of the attraction, leisure and entertainment of the neighbourhood.

5.5 Innovation and quality improvement of services

      Services Quality and training of workers is provided by relevant institutions under the partnerships negotiated by VIVA O CENTRO.

Figure 25. SESC training for service quality

      Customer experience creation is part of the new shopping experience providing at the same time not only the selling of a product or service but also fulfilling the emotional desires of the costumer in the right environment.

Figure 26. Oliveira and Zé Reeira a traditional and popular legend

      Co-design and Co-creation of the VIVA O CENTRO Living Lab is the transformation methodology in place and will be the driver for the present initiatives and the creation of the future TODAY.

Figure 27. Discussing the co-design and Co-creation of the VIVA O CENTRO Living Lab

Modernization of information systems is underway at private and public levels. This requires substantial investment well applied to improve drastically the efficiency and management of the activities. A clear strategy for this Digital Transformation implementation is underway following Urban Living Lab methodologies of co-design and co-creation for Human Smart Cities**.**

New marketing tools and digital marketing approaches are being adopted and technical expertise is creating the opportunity for new.

6. Engagement of Public and Private Institutions.

The articulation process for the requalification of the Natal Center, which gave rise to the project "Live the Center" was, from the outset, linked to the engagement of a group of local entrepreneurs who in turn motivated public and private institutions towards the development of actions necessary to transform the reality of the Neighbourhood.

Figure 28. Representatives of public institutions supporting the VIVA O CENTRO

The articulation with the local public power was the starting point for the group of entrepreneurs to start proactively dialoguing, in face of the demands related to public policies that contemplated the revitalization of the Center's basic services, necessary for the urban space to begin to develop. be used. In this phase, the constituted group scheduled regular meetings with the Mayor and Secretaries to outline intervention actions

in the neighbourhood. The mayor has assigned a technical project monitoring team to carry out the tasks according to the identified demands to achieve Natal Retrofitting, Innovation and Sustainability. Among the actions, the following were performed: lamp replacement and maintenance of the public lighting of the center, installation of trash bins along the main avenues, tree pruning, street cleaning and street recapping. In addition, it was later set with the mayor, a schedule of permanent actions and the creation of cultural events in the place, as well as the insertion of the Natal Center in the cultural events of the municipality.

Figure 29. Support by Álvaro Dias, the mayor of Natal and the Municipal Assembly

The second step was the involvement of the Military Police and State Government to discuss reinforcing the security of the neighbourhood. This action was considered fundamental so that the merchants and population could transit the place more safely, given the high crime rate in the neighbourhood. From this articulation, the Military Police began to work frequently in the neighbourhood, with the support of local merchants and the population itself.

The third step was related to institutional visits of commercial and business representation, including: Chamber of Shopkeepers of Natal (CDL), Federation of Commerce of Goods, Services and Tourism of the State of RN (Fecomércio) Brazilian Micro Support Service and Small Business - Sebrae RN-Rio Grande do Norte Industry Federation- FIERN- to discuss initiatives and strengthen trade in the region. From these articulations, the following actions were conceived and carried out: elaboration of a strategic action plan for the recovery measures of the neighbourhood, consultancy services for entrepreneurs working in the Centro region, diagnosis of the commercial activity of the projects. to analyze actions such as customer service, training courses, among others.

Figure 30. Support by Fátima Bezerra, the Governor of Rio Grande do Norte State

As meetings and institutional articulations were held, the "VIVA O CENTRO" movement grew and the enthusiasm of people, entrepreneurs, local traders, and public and private institutions increased.

Figure 31. IFRN Meeting to discuss the Revitalization of Culture and Urbanism of Natal Center

Concurrent with this articulation process was the involvement of the local media and the interest of the media in publicizing the Project. Access to communication facilitated greater involvement of partners, political interest, the collection of claims related to the proposed actions, and the curiosity of the population to visit the neighbourhood, which provoked the revitalization of commercial activity, cultural initiatives and by end the requalification of the neighbourhood.

7. Dissemination at City and Global Level

A wide dissemination and evangelization work of MyN methodologies and tools as well as the MyN platform has been and is being performed on a global scale promoting the benefits that can be achieved by citizens, local authorities and business organizations. A package of MyN consultancy services was created and the MyN platform has being integrated in the FIWARE as the solution for the Human Smart Cities.

We have created the Human Smart Cities Manifesto which was publicly announced and signed in Rome on the 30th May 2013, with the aim to exchange experience, best practice cases aiming to create a critical mass that may influence the policy changes required to make MyN a business success. In October 2013 the Human Smart Cities Network was launched in Bologna attracting initially 70 cities. This number has grown to a Network of 100 Human Smart Cities until the end of year 2013. A large number of Human Smart Cities events focused on MyN have taken place in Europe and beyond creating and inspiring the Global Human Smart City movement.
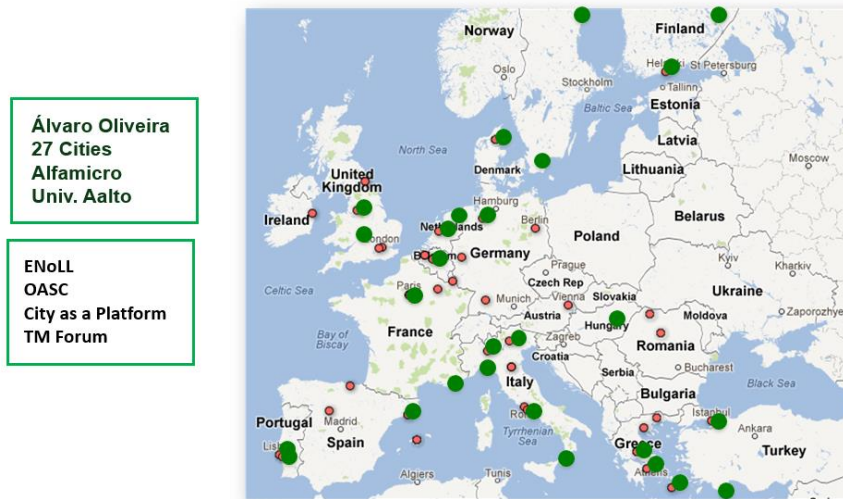
Figure 31. Human Smart Cities Network, more than 200 cities in Europe

The Human Smart Cities Network has triggered other specialized initiatives such as OASC (Open and Agile Smart Cities), Interest Groups under the EnoLL (European Network of Living Labs) guidance, the City as a Platform Movement and the FIWARE Foundation-TM Forum interoperability and standardization Actions.

The city challenges call for transformational changes in the way we work, live, and play and require the optimization in the usage of public resources. Urban policies should consider the participation of citizens and engage their innovation capacity as the most valuable resources. The final goal is the proactive co- creation of the urban transformation leading to the Digital Economy, the creation of wealth and jobs and the increase of the citizens quality of life and happiness.

8. Future Work and Conclusions

Human Smart Cities empower citizens to co-design and co- create solutions for their Wishes, Interests and Needs, recreating a new sense of belonging and identity, leading to a better and happier society.

The Human Smart City eases the interaction with the city administration: makes it easier for citizens and business to share needs and priorities to the city administration; reduces the need for time consuming face-to-face interactions with and removes the need for bureaucratic processes by facilitating greater neighbour-to-neighbour exchanges within a neighbourhood context.

The MyNeighbourhood and related projects has been as a powerful test bed for the validation and implementation of the Human Smart Cities vision, methodologies and technologies. MyN is based on the premise that neighbourhoods represent a heretofore untapped, yet powerful, catalyst for Human Smart City transformation. The case of VIVA O CENTRO described in the paper illustrates clearly the benefits of the methodologies.

Human Smart Cities use technologies as an enabler to connect and engage government and citizens, aiming to rebuild, recreate and motivate urban communities, stimulating and supporting their collaboration activities leading to a joint increase of social wellbeing. Human Smart Cities "hear and speak" to the citizens; policies and supporting services make the city government more open, transparent, participatory and efficient - a mirror of the citizens' will. Human Smart Cities empower citizens to co- design and co-create solutions for their Wishes, Interests and Needs, recreating a new sense of belonging and identity, leading to a better and happier society.

Our current research has enlarged the scope to Participative Societal Design (Seija Kulkki) in the context of the Economy of Common Good (Jean Tirolle) to address the social inequalities (Joseph Stiglitz) through Innovation (Paul Romer and Clayton Christensen) Digital Transformation (Alvin Toffler and Jeremy Rifkin), Connectivity (Richard Florida), Cognitive paradigm (IBM Research Labs) Mission Oriented Projetcs and Programs (Mariana Mazzucato) using the Framework of industrial and innovation clustering Policy (Mira Amaral) and Livinig Labs and innovation Ecosystems (Álvaro Oliveira and Tujia Hivikoski).

Figure 32. Current Human Smart Cities research inspiration

The diagnostic and analysis of VIVA O CENTRO activities allows us to conclude that a very effective model, methodologies and tools have been implemented, allowing to achieve the main objectives of the VIVA O CENTRO mission: revitalization of local commerce, urbanistic requalification, cultural recovery and enrichment, effective security. The outcome of our research confirms VIVA O CENTRO as a very effective implementation of the Human Smart Cities methodology. Following are the results achieved so far:

- Very effective and enthusiastic collaboration between the business, citizens and public authorities at Municipal and State Government levels;
- Exponential growth of people visiting, shopping and entertaining at Natal Center. Very attractive financial business results;
- Revival of Natal Center Culture. Wide variety of cultural and entertainment attractions;

- Requalification of Natal Center Neighbourhood bringing new urban life and inspiring many activities of all sorts.
- Strong entrepreneurship culture and support driving the business growth as well as the culture and social activities.
- Generation of new jobs created by the larger flow of customers on site;
- Popular recognition outreach and place promotion activities being carried out spontaneously;
- Excellent daily public communication providing stimulating reports and emotional interviews on TV, radio and newspapers. This is a many driver of the transformation in progress;
- Drastic improvement of personal and material security. Military police, municipal guard, private security and civic awareness and empowerment;
- Very strong and effective partnerships with business support organizations (SEBRAE, FIERN, SENAC, SESC, CDR, FECOMERCIO etc.);
- Partnerships with innovation institutions such as: IFRN and ITCART the Culture and Art Incubator and others;
- Partnerships with UFRN and other technology institutions and companies are being handled to address the digital transformation

In conclusion the VIVA O CENTRO project has achieved in a very short time all the requalification target indicators established for the initiative. The very successful results demonstrate the merits of the participative methodologies driving the demanding requirements of Human Smart Cities.

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