

# Living without Boundaries: A Brazilian Observatory

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**Abstract.** This paper introduces the project: “Human Diversity: a lens on the Program Living without Boundaries”. The project “Human Diversity”, financed by the Brazilian Social Development Ministry, puts the “Design for All lens” on the Program in order to conduct studies and research with the aim to support the assessment as well as to help conducting and indicating adjustments to improve the Program’s implementation. In this work the focus is put on the tools, techniques and approaches that are being used to build up the “Brazilian Accessibility Observatory”.

**Keywords:** Universal Design, Brazilian National Plan, Accessibility Observatory.

## 1 Introduction

“I have no legs,  
But I still have feelings,  
I cannot see,  
But I think all the time,  
Although I’m deaf,  
I still want to communicate,  
Why do people see me as useless, thoughtless, talkless,  
When I am as capable as any,  
**For thoughts about our world.**” [1]

This poem written by little Coralie Severs when she was aged 14 sounds as a kind of wake-up call. Do we all have “...thoughts about our world”? And more: does the world have thoughts about everyone? In this sense everyone meant as the widest range of people possible: with and without disabilities.

**“...thoughts about the world”:**

What are the governments doing with this regard?

What is the society doing with this regard?

What are the companies doing with this regard?

In sum: what are we doing with this regard?

Motivated by all these questions the project “Human Diversity: a lens on the Program Living without Boundaries” intends to put the “Design for All lens” on the Brazilian National Plan on the Rights of Persons with Disabilities – also known as the “Program Living without Boundaries”. By carrying out studies and specific research on the theme the final aim of the project is to support the assessment as well as to help conducting and indicating adjustments to improve the Program’s implementation.

In this paper the Brazilian Program will be presented in section 2 followed by some similar initiatives in other countries in section 3. The project “Human Diversity” will be outlined in Section 4 with focus on the tools, techniques and approaches that are being used to build up the “Brazilian Accessibility Observatory”. The Final Remarks in Section 5 will highlight some stakeholders’ expectations and will provide information in how to access the interim results of this project.

## 2 Rights of Persons with Disabilities

According to the United Nations (UN) [2] about 10% of the world's population, approximately 650 million people, live with a disability. They are the largest minority in the world and about 80% of them live in developing countries. Among the poorest people in the world, 20% have some type of disability. Women and girls with disabilities are particularly vulnerable to abuse. People with disabilities are more likely to be victims of violence or rape, and less likely to get help from police, legal protection or preventive care. About 30% of boys and street girls have some kind of disability and in developing countries 90% of disabled children do not attend school.

For at least the last three decades the UN is undergoing an effort to set the needs and rights of people with disabilities as a priority on their agenda. More recently and as a concrete result, after years of efforts, the UN Convention on the Rights of Persons with Disabilities and its Optional Protocol was adopted in 2006 and entered into force on May 3, 2008. Since then countries around the world are being asked to ratify the Convention.

In Brazil, on 17 November 2011, the federal government reinforces the commitment of the country to the prerogatives of the UN Convention and launches the **Brazilian National Plan on the Rights of Persons with Disabilities** – also known as the “**Program Living without Boundaries**”.

The Brazilian National Plan is supported by 15 Brazilian Ministries as well as by the National Council on the Rights of Persons with Disabilities – “CONADE” - and has the main goal to ensure to all Brazilian citizens, without discrimination, the right to development and autonomy. Furthermore the Program has as a fundamental reference the finding that, although the condition of disability is present in different social groups and different ages, there is a close relationship between extreme poverty and the worsening of the disability. Motivated by these indicators, the Program pays special attention to people who are in extreme poverty.

With an investment of approximately US\$ 3,2 billion by 2014, the Brazilian National Plan focus its policies on the access to education, social inclusion, attention to health and accessibility. The main goals on these four areas are presented in tables 1-4 [3].

**Table 1.** Access to Education Goals (2011-2014)

<b>Access to Education</b>	Rooms with Multifunctional Resources (RMR)	Rooms with Multifunctional Resources -Implemented	15.000
		Upgrade Kits for the RMR	30.000
	Accessible School	Schools supported with money for accessibility	42.000
	Accessible School Transport	Accessible School Vehicles	2.609
	Pronatec - National Program of Access to Technical Education and Employment	Training-scholarship for persons with disabilities	Priority for persons with disabilities
	Inclusion	Federal Universities with accessibility projects	100%
	Bilingual Education	Sign Languages teachers, translators and interpreters hired	690
		Sign Language courses created	27
		Pedagogy courses created in bilingual perspective	12
	Benefit of Continued Provision of social assistance (BPC) in the school	Expand the amount of BPC beneficiaries (aged 0 to 18) enrolled in the school	72.000

**Table 2.** Access to Social Inclusion Goals (2011-2014)

<b>Social Inclusion</b>	Benefit of Continued Provision of social assistance (BPC) - Work	BPC beneficiaries inserted in social-assistance networks	50.000
	Inclusive Homes	Inclusive Homes	200
	Reference Day-Centers	A place to help, during the day, persons with disabilities in situations of dependency	27
	Benefit of Continued Provision of social assistance (BPC) - Changes	Normative modified	Carried out

**Table 3.** Accessibility Goals (2011-2014)

<b>Accessibility</b>	My Home, My Life II	Hired Adaptable Housing	1.200.000
		Installed Adaptation Kits	20.000
	Guide-dogs centers	Training Centers of instructors and trainers for guide-dogs	5
	National Program of Innovation in Assistive Technology	Creation of economic subsidy for innovation in Assistive Technology	Funding already available
		Creation of reimbursable funding for innovation in Assistive Technology	Funding already available
		Creation of economic subsidy for Innovation in Paralympic Sports Equipment	Funding already available
	National Reference Center for Assistive Technology	National Reference Center for Assistive Technology	Opened in July 2012
		Interdisciplinary Groups of Assistive Technology	20
	Microcredit	Creation of a credit line for the acquisition of assistive technology products	Funding already available
	Tax Cut	Published Normative	Carried out

**Table 4.** Attention to Health Goals (2011-2014)

<b>Attention to Health</b>	Early identification and intervention of deficiencies	Neonatal triage implanted (in Federal States)	27
		Hospitals equipped for neonatal hearing triage	175
		National information system in neonatal triage - implanted	1
	Therapeutic Guidelines	Published therapeutic guidelines	10
	Specialized center for rehabilitation	Specialized centers for rehabilitation - in operation	45
		Accessible vehicles acquired	88
	Orthopedic Workshops	Fixed orthopedic workshops	6
		Itinerant orthopedic workshops (terrestrial)	7
		Itinerant orthopedic workshops (fluvial)	6
		Qualified orthopedic workshop <sup>2</sup>	60
		Prosthetics and orthotics trained	660
	Dental Care	Centers of dental specialties	420
		Equipped surgical centers	27
		Trained oral health teams	6.000

### 3 What Other Countries Have To Say

According to the Organization for Economic Cooperation and Development/Development Assistance Committee (OECD-DAC) over 85% of people with disability are unemployed and just 4% of minors with disabilities have access to formal education. The UN Convention defined people with disabilities as those “who have long-term physical, mental, intellectual or sensory impairments”. Today 158 countries are signatories of the UN Convention. What can we learn with some of these countries?

**The United States** has a federal legislation covering the aspects of accessibility, as infrastructural requirements and web accessibility for instance (only applied to federal government agencies however). Each state in the country has its own policies and guidelines. According to the Annual Disability Statistics Compendium the US has a poverty rate, in 2012, of 29.2 percent among the population of disabled people ages 18 – 64; and the employment rate (in the same population) is of 32,7 percent. These data shows that despite the efforts made, there is still much to do.

**Japan** established its first national action plan in 1982, "The Long-Term Plan of Measures for Persons with Disabilities". Nowadays the Basic Programme for Persons with Disabilities is based on the concept of “rehabilitation and normalization” and is a guide providing the basic directions of measures for persons with disabilities to be implemented in ten years (2003-2012).

However, as stated by Tomoko Otake [4], Japan – like the US - appears to be experiencing difficulties with accessibility and social participation on the parts of people with disabilities, despite some attempts at increasing the accessibility in some areas of society. Otake goes further affirming that like the American goals, the Japanese government appears to have lofty goals in relation to people with disabilities, with mediocre results. This makes us think! The Plans are surely necessary. But...

#### “...thoughts about the world”:

How can we transform visions into actions and reality?

How deep is the impact of external factors in these Plans?

The President of the European Consortium of Foundations on Human Rights and Disability said that Europe is seeing a weakening of economic, political and social structures, referring to the current economic crises. In Portugal for instance the government national plan “Estratégia Nacional para a Deficiência (ENDEF | 2011-2013)” has suffered with the crises. Statistics [5] show that the population with disabilities in Portugal has a poverty rate 25% higher than the population with no disabilities. It also states that social security, technical support, technology services and funding programs also suffered cuts.

#### “...thoughts about the world”:

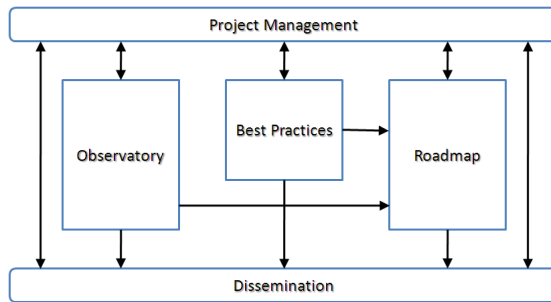
What is priority?

Who is priority?

## 4 Human Diversity: The Project

The on-going project “Human Diversity: a lens on the Program Living without Boundaries” started officially in December/2013 and will last for 18 months. The project is intended to support the ‘Brazilian Ministry of Social Development and Fight against Hunger’ in analyzing the implementation of the National Plan also called “Program Living without Boundaries”. The Brazilian government wants to make sure that the vision of the National Plan can indeed become true. They want to make sure that the proposed goals (Tables 1-4) for the timeframe 2011-2014 are achievable and if not they want to prepare themselves and take the necessary corrective steps and measures.

In order to comply with these needs the Human Diversity Project is organized in 5 Work Packages (Figure 1) as follows:



**Fig. 1.** Work Packages and their Inter-relations

- **Observatory:** which main objective is to structure a “Brazilian Accessibility Observatory” reflecting the survey held about the Program Living without Boundaries as well as its implementation throughout Brazil. Sub-section 4.1 presents the data collection and analysis tool as well as the Infographics technique that are being used to build up the “Brazilian Accessibility Observatory
- **Best Practices Mapping:** a one-stop-shop for best practices carried out in the accessibility world.
- **Roadmap:** which goal is to propose short/medium/long term actions based on the Design for All principles. This Roadmap will indicate necessary adjustments to the Program Living without Boundaries and will serve to assist the Brazilian Ministry of Social Development to conduct its implementation. The roadmap will comprise short-medium-and long-term actions.
- **Dissemination:** its objective is to increase the impact of the project by means of specific actions such as: the development of an accessible website for the project, the participation in meetings organized by the Ministry as well as by using techniques and tools, such Infographics (see sub-section 4.1), which allow us to exercise our belief that information generates change.
- **Project Management:** this work package is intended to carry out the activities needed to successfully achieve the expected results. The project follows the PMI<sup>1</sup> practices.

<sup>1</sup> PMI: Project Management Institute ([www.pmi.org](http://www.pmi.org)).

#### 4.1 Observatory: Tools, Techniques and Approaches

**Data Collection and Analysis.** The project will carry out a web-survey (online survey) with exploratory study characteristics in order to collect sample data. The sampling will include between 70 and 100% of the municipalities that have joined the Program Living without Boundaries. By the date, the total number of municipalities was 935, distributed as follows:

South Region: 192 municipalities

Center-West Region: 183 municipalities

Southeast Region: 107 municipalities

Northeast Region: 381 municipalities

Northern Region: 72 municipalities

The survey research technique allows obtaining data or information about features, actions, or opinions of a particular group of people, representing a target population - in this case the municipalities that joined the Brazilian National Plan.

For better understanding the technique adopted for collecting and analyzing the project's data, it will be presented below the online platform used in the project: Google Form, pointing out the macro-environmental context that allowed the emergence of this tool as well as the advantages of its use against other existing options.

From the 90s decade, with the internet network popularization, the society began to experience a new democracy within the ways of human communication and expression. According to Schmidt and Cohen (2013, p.3) the internet is among the few things that the human being has created and yet does not understand fully, and that today is configured as an infinitely multi-faceted exchange of energy and human expression channel.

Lévy (1999, p. 120) shows as a definition of this new scenario for communicating and exchanging based on networks, the concept of "universality", in which as much as the cyberspace expands, it becomes more universal. Schmidt and Cohen (2013, p.3) define this moment as the most anarchic experiment in history, in which the greatest impact of the spread of these communication technologies is their help in decentralization of power and control over the messages, transferring the control from institutions and government to individuals [6].

Within this universal communication context made possible by the network, many online surveys, free and collaborative tools have emerged. Their usage is increasingly common among researchers, due to their reduced costs, quick collection of data, ease audience segmentation and the automation of the results tabulation. Moreover this option also presents itself more convenient to the respondent who can choose the time, place and time dedicated to responding to the survey [7].

In order to select Google Form as the research tool to be used in this project, we evaluated eight different tools (SurveyMonkey, Obsurvey, Flisti, Insightify, Vorbeo, Polldaddy, Eval & Go and Google Form), considering the following criteria: easy usage, question formats, questions limit, answers limits, sending out format and data export formats.

Google Form was selected for being the only cost-free platform, with superior limit of questions (255) and answers (200,000). Moreover, among all analyzed tools, Google Form was the only one to allow exporting the data directly into a spreadsheet, an essential factor to increase work productivity [8].

The creation of a research form is done online, by using the address [www.docs.google.com/forms](http://www.docs.google.com/forms), where nine different types of questions are available: text, short text responses; paragraph text, long text responses; multiple choice, single choice; checkboxes for multiple selection of responses; dropdown menu answer; scale, for the classification of items in a numerical scale; grid, for selection of a point in a two-dimensional grid; date, to select a date on a calendar; and schedule for selecting a time of day or period [8].

When configured online the tool allows you to send the form by e-mail, social media or an online published address. Each respondent may access the form at the time they wish to provide their answers, which will be recorded in an online electronic spreadsheet. The owner of the form can follow responses in real time accessing the online spreadsheet, where you will also find an option of viewing the summary of responses, already presented with graphs and summary texts. If the researcher prefers, it can also be downloaded as a csv file format for viewing and manipulating data in another spreadsheet program [8].

Having said that, due to its democratic and universal nature of collecting and analyzing information, it was decided to use an online form to carry out the survey. Additionally considering the ease to manipulate the tool, the extension of limits of questions and answers as well as the diversification of export data formats, the online form tool selected to carry out the survey to set up the "Brazilian Accessibility Observatory" is Google Forms.

**Infographics.** In order to allow a better understanding of the way that the data will be displayed and disseminated in the project, the information graphic (infographic) format will be briefly presented pointing out some key drivers for its adoption.

To contextualize the adoption of infographics it is important to highlight that if one wants to influence decision-making, the way a information is presented is as important as its content [9]. A good presentation can be the first step to influence a perception.

According to Ramírez, Mas and Marzal [10], different ways of representing a product may affect the way concepts and aesthetic, symbolic and emotional attributes are transmitted to the target audience. Additionally having a memorable display is the first step to creating effective presentations of data [11].

Therefore to have a memorable way of showing this project's data and to ensure its proper perception, the infographic was chosen as the language format which can be operationally defined as a visual representation of data, information and knowledge in a graphical format through signs, symbols, tables, maps, among others. In doing so it is possible to give a complex message to the public in a creative, informative and neat way. [12,13,14]. Furthermore the infographic ensures that the image is not merely illustrative, but part of the information itself interacting with the verbal text which means that this format facilitates the information understanding by sending on a simple and objective way to the audience without compromising the credibility of the content [12,15]. Another relevant issue about the infographic's format is the new way



to read that they enable. If the verbal text is read in a linear way, the infographic communication enables the reader to determine where to start reading, even if influenced by an entry point of look [12]. Finally infographics allow a better space usage as they are characterized by the power of synthesis and simplification, becoming even more attractive to diverse audiences [12].

As for the conclusion, the choice of infographics format is justified by its enunciation autonomy and its role as messages simplifier, making them more attractive, objective and informative to the interlocutors.

## 5 Final Remarks

The “Human Diversity” Project team has partners which represent several segments of persons with disabilities. It is interesting to perceive how they are aligned considering their expectations about the Program Living without Boundaries.

**Their “...thoughts about the world”?**

Actions to help persons with disabilities realize their rights.

Besides the “Brazilian Accessibility Observatory”, the project will also carry out a mapping of best practices and will provide a roadmap to the Brazilian Ministry of Social Development. This roadmap will reflect where we are (the Observatory), where we wish to go (best practices) and how we intend to get there (Roadmap with short-medium and long-term actions). All these results (including the Infographics) will be available at the project web-site: [www.niide-u.ufsc.br](http://www.niide-u.ufsc.br). Everyone is invited to visit the site, to share the project results and to spread the word.

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