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# **ENERGIZED BY CHANGE: a Case Study in corporate Culture change at Brazil´s Itaipu STP**

**Angela Behrendt, Ph.D**

[angela@gpsinnovation.es](mailto:angela@gpsinnovation.es)

**Andalusia Science and Technology Park - Spain**

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**3 a. Making STPs liveable and lovable**

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**ENERGIZED BY CHANGE: a Case Study in corporate  
Culture change at Brazil´s Itaipu STP**

**Angela Behrendt, Ph.D.**  
Founder & CEO, GPSinnovation. Andalusia Science and Technology Park, Málaga. Spain  
Researcher, University of Málaga. Spain.  
E-mail: [angela@gpsinnovation.es](mailto:angela@gpsinnovation.es)

**María Angélica Jung Marques, M.Eng.**

## Abstract

Parque Tecnológico Itaipu (PTI) has been established a decade ago at the quarters of the workforce that built Itaipu, the world largest hydroelectric power plant in terms of generation, located at the Paraná river bordering Paraguay. Created to stimulate and promote regional development and in particular the trinational border region of Brazil, Paraguay and Argentina, its initial focus has been on water, energy and tourism, related to the importance of neighbouring Iguazú Waterfalls. Today, PTI leads and participates in major scientific, economic and social projects to promote revenue and employment in the region. By designing and implementing a culture of creativity and innovation that will allow the Park to become a high performance organization as well as a catalyst for creativity with important local, regional and other spill-over effects, a change process is on its way. This paper shows the history and motivations that led PTI to this important step.

**Keywords:** Innovation, creativity, complexity, Whole Brain Model®, Science and Technology Park, change process, culture.

## 1. Introduction

Sometimes it is hard to define what makes a great place, but you know it when you experience it. Great places lure people in with activities, working, feeling a sense of connection. Placemaking doesn't just occur in affluent communities, Silicon valley or vacation hotspots. PTI, a Brazilian Science and Technology Park, decided that they would become such a vibrant public place that would transcend geographic and demographic boundaries.

In the Theme 3.a. **“Making STP’s liveable and loveable”** this paper presents a case study that shows the design and implementation of a culture of creativity and innovation which aims to make PTI a great place to work, to be, to connect with.

Every organization has its own unique culture. However, the concept of culture is so abstract that is difficult to explicitly capture and explain it. How do you go about changing the way things are done in an organization? Much of this is down to organizational culture.

Organizational culture are the habits and accepted norms that underpin how we work and what is and isn't acceptable in our workplace. It can be defined as a cognitive framework consisting of attitudes, values, behavioral norms and expectations shared by organization members. This shared set of basic assumptions governs our behaviour at work and so needs to be considered in any change initiative.

When the Foundation that runs PTI (FPTI) envisioned a goal of becoming an STP with an explicit culture of creativity and innovation, it was a dream of a small group of people. Founded only a decade ago and with many other priorities running, in this Tech Park creativity did not appear at the top of the list. Yet, the need was very evident. PTI knew that breakthrough results in a challenging environment require radical thinking and dramatic change. To get there, it would have to harness the best thinking, the most productive collaborations and the active engagement of every employee.

At IASP's Raleigh Conference in June 2009, FPTI's CEO, Juan Carlos Sotuyo, explained this demand to GPSinnovation. Fearing verticality, bureaucracy and conservative, hierarchical management, the move was towards constructive attitudes and behaviors - towards the “...you know it when you experience it” feeling.

“...We have so many visitors coming on a daily routine. We want them to feel that creativity and innovation is in the air, they should smell it even if they cannot define it...”

was the CEO’s own description of their goal.

After an initial prospective visit that same year, GPSinnovation proposed to address the dual nature of change - People and Process - to ensure a smooth transition to the desired stage. In May 2011, FPTI decided to embark on a journey of transformational change to reach new levels of excellence and to become a more liveable and loveable place.

## 2.1. The Background

Itaipú, the world’s largest hydroelectric power plant in energy generation, is located at the Paraná river, being a binational project with Paraguay. In 2012 the accumulated production was 98,2 million MWh and in 2013 another world record seems to be achieved. In 2003 and after expanding its mission, Itaipú Technological Park (PTI) was created. Established a decade ago in the quarters of the workforce that built the dam, it was created to stimulate and promote regional development and in particular the trinational border region of Brazil, Paraguay and Argentina. Its initial focus has been on water, energy and tourism, the latter because of the importance of neighbouring Iguazú waterfalls for the region and Paraná Basin III. Creation and diffusion of knowledge are top on the list. Today, PTI has become one of the leading science and technology parks in Brazil and Latin America.

PTI has an area of 116 hectares which will soon be expanded by another 40 hectares, all in high-impact setting of tropical rainforest taking care of high environmental sustainable standards. Recreational opportunities in the grand green space are offered to cultivate community. Amenities include football fields where National Women Soccer team trains, bike and jogging trails, several restaurants and cafeterias, a theatre for 2.000 visitors, a library, an art exhibition area of 800 m<sup>2</sup>, pharmacy, bank, language school, handicraft shop, post-office and other services. Infrastructure accounts for 38.914 m<sup>2</sup> and is currently expanding. In 2011 126 events, some of them international, with over 33.000 visitors were held. Three universities have their campus on PTI site: Unioeste, UAB and the newcomer UNILA. The latter will soon move on their own Oscar Niemeyer designed premises with 10.000 students (5.000 Brazilian nationals, 5.000 from Latin America). Two PhD courses are offered: one in Engineering and the second in Law. Science Station is the name of a prize-winning science-diffusion program. Over 30.000 primary school children and 220 teachers from almost 300 public schools have participated in this playful approach to science, in particular in math, human and biological science. In 2009 an astronomy center was inaugurated. Almost 50.000 visitors, mainly students and teachers, from various countries have visited this unique and also prize-winning unit which aims to train teachers in astronomy as well as disseminate space science knowledge in the region. PTI also runs Itaipú’s visitors program (Complejo Turístico Itaipú) which in a short time has developed to one of the main regional attractions after the the Iguazú waterfalls: the visit of the dam, the powerplant, the PTI itself but also the Biological Animal Reserve, the Ecomuseum, a test drive with electric car and the mentioned Astronomy Pole are a must. Visitors from around the world enjoy and appreciate this unique tour where science, technology and environmental care come so close together and show so much commitment.

PTI’s science, technology and innovation programs include projects related to renewable energies (biogas, observatory, hydroinformatics, social technologies, dam security, corporate university Itaipú, automatization and simulation research labs, sodium batteries, hydrogen batteries, water, environment, etc).

In strategic partnerships with Itaipú power plant, with governmental agencies, companies, foundations and educational institutions PTI constantly invests creating research labs, e-learning platforms as well as educational, technological and scientific projects. Regional

development being one of the key issues, PTI leads and participates in several top projects to promote employment and revenue in the region. Many relate directly to knowledge transfer to socially excluded population of the region like the “Trilha Jovem” program which trains young people from poverty backgrounds in tourism skills and helps them finding jobs.

Entrepreneurship is heavily sponsored through various programs and excellent facilities: incubators, pre-incubators and business condominiums encourage students and future entrepreneurs to develop their business ideas.

PTI’s mission to develop and encourage regional development and to outreach to the community is clearly undertaken: not only the near-by city of Foz, but also the State of Paraná, neighbouring Paraguay and Argentina are benefiting. Farmers, school children, students and teachers, socially excluded populations, tourists from around the world, entrepreneurs, scientists are some of the beneficiaries of PTI’s actions.

In this highly demanding, very dynamic and complex situation, the challenge for PTI was to ensure an organizational culture that responds to changes in the competitive global and local landscape and defines the critical elements to create and sustain a competitive innovation ecosystem. Innovation has never been a static area but more and more the challenge is to find new ways to respond creatively to the impact of external economic conditions.

The client required a highly integrated systematic approach, a roadmap for the development of innovation capabilities and a culture that would encourage positive behaviors.

## **2.2. Culture of Creativity and Innovation**

Work organizations offer a person far more than merely a job. From the moment individuals first enter a workplace to the time they leave, the experience and commitment very often changes their lives in terms of rhythms, relationships, demands. In brief, work marks people.

Any organizational culture consists of long standing rules of thumb, a somewhat specific language and ideology that assists the individual’s daily experience. They help to cope with and make sense of a given problematic or complex environment.

For most organizations change is inevitable. Cultural issues are becoming increasingly important and a source of a strategic competitive advantage. The role of culture in organizations as an intangible force is undeniable: it can provide a sense of identity, generate commitment to the mission and clarify and reinforce standards of behavior.

In the midst of change, organizations and leaders are aiming to create an institutional framework in which creativity and innovation are accepted as basic cultural norms. Openness and trust influence the change process, compelling new ideas help people think and act in new ways. Highly creative people are an asset to any organization. They prosper when their employees are creative.

Creativity and innovation can promote a liveable and loveable work space. The present case study is an example of the change process towards a more liveable and loveable STP.

## **2.3. The Intervention**

With decades of experience, GPSinnovation knew that idea generation may not even be the most important part of the new innovation architecture.

In addition to generation of new ideas came creating dialogues around specific needs, develop strategic options and not only ideas, openness to do things differently and to be hyper-alert to changing market and economic conditions. Because of the complexity of the

multiple project approach at PTI, there was an increasing need to think in terms of the overall architecture of the Park's innovation activities, to address the more critical innovation portfolio and the ability to view where they can find future growth and regional impact.

The commitment of PTI leaders to transformation has been deliberate and significant. To create and implement a culture of creativity and organization that will allow FPTI to become a high performance organization and a catalyst for creativity, helping thus the region to become more prosperous and fair, at the same time being ready for complex growth situations is the project's goal.

#### (i) Method

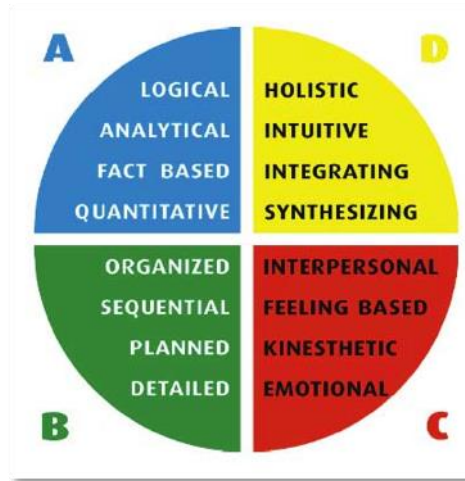
Being an internationally experienced Certified Practitioner and facilitator in Whole Brain® methodology and having PTI's goals in mind, GPSinnovation's Dr. Angela Behrendt started the project design. Specialized in applying Whole Brain Thinking and Herrmann tools, it included the necessary steps to change patterns and practices within PTI.

Leaders realized that the methodology could serve as a jumping-off point and framework for a new way of delivering knowledge to their people. The Whole Brain® methodology and approach helps individuals understand preferred thinking styles and develop skills to broaden their thinking beyond them but also communicate across diverse thinking styles in order to achieve better results. It provides a consistent framework for addressing the underlying challenges: change process, communication, creative problem solving, strategy, conflict resolution, team work, talent support, learning, collaboration, work climate, leadership and others. It means building a launching platform for changing mindsets, building the desired culture, developing leadership skills and improving collaboration in all areas within the organization and outside.

The goal was to ensure that all stakeholders understood the terminology, processes and best methods. Over 400 individuals - Directors, Executives, Middle Managers, trainees, staff - have embarked on the process of harnessing Whole Brain Thinking® by taking the HBDI (Herrmann Brain Dominance Instrument®). They have learned how to use these insights to bring a new thinking approach to their work at the STP. The HBDI® Assessment is the instrument at the core of Herrmann International's Whole Brain Model® which is based on decades of research on the brain and thinking.

We all have access to these specialized thinking modes. The Herrmann model not only identifies preferred thinking skills but also indicates the preferred teaching and learning strategies of each type of thinker. By drawing on the combined analytical, organizational, interpersonal and strategic skills it takes to succeed today, organizations are able to better use its brainpower. When staff put Whole Brain Thinking® to work, they approach problems, communications and planning more effectively while breaking out of self-limiting patterns that can interfere with productivity, innovation and creativity. With better thinking, organizations achieve better results. Competitive advantage comes with them.

Figure 1: Herrmann Whole Brain Model



## ( ii) Design

Organizational change is a very broad area. It addresses a variety of time spans, interests in broad patterns and types of change. A few issues which we saw as important help us understand the design and position in this case.

*Time* relates not only to the before and after analysis but also to the micro-processes of change at work. The close and intensive ethnographic field work that is being undertaken since February 2012 has allowed to access carefully and deeply to change efforts in real time. Most of last year was spent in Brazil. Interviewing a variety of people, delivering a survey and observing different events as well as interacting on diverse levels helped to better understand. *Need* for change talks about the drivers and the logics behind the process. Change typically involves a wide set of phenomena and aspects known as the *content*: meanings, values, behaviors, technologies, systems, infrastructures, identities, networks and power relations are some of it. Another theme that is taken into consideration is the possible interest of *actors* of change.

The project seeks to develop creative and innovative capabilities and implement a culture that fosters collaborative work and trust. Its goals are:

- allowing a deeper knowledge of each participant's thinking preferences, promoting talent and opportunities
- contributing to improve team's performance, promoting collaboration and trust
- obtaining PTI's culture profile taking into consideration its initial attitude towards innovation
- increasing transparency in the decision-taking process company-wide
- developing new processes that will help to unblock
- building new structures that allow better innovation practices
- helping to increase PTI's reputation on a local, regional, national and international level

The process started in early 2012 in three phases:

- awareness, meaning a shared comprehension of the concepts of creativity and innovation
- an innovation audit
- designing an Innovation Master Plan

As all change processes, it was made clear that the project requires a long-term commitment, needs resources as well as an explicit leader's participation.

Although already in May 2011 the first workshops to raise awareness were held and along the year 97 participants were trained, the systematic approach began in February 2012. At the same time the innovation audit started, resulting into PTI's Innovation Master Plan.

The Innovation Audit is a proven method to improve innovation. It examines key indicators, determines strengths and weaknesses and identifies ways of improving innovation throughout the organization. Through one-to-one interviews GPSinnovation analyzed the attitudes and behaviors that shape the culture of creativity and innovation. What is stopping PTI from implementing great ideas and how can obstacles be overcome? In parallel, an anonymous survey was handed to the entire PTI population.

The Innovation Audit reported about what was working well in terms of culture and processes and also what is inhibiting innovation. The outcomes of the PTI Audit clearly identified issues and obstacles to innovation and helped to better understand of what is needed to inspire positive change. In April 2012, the results were presented in an Action Plan to top and middle management for approval.

(iii) Implementation and interaction

Once the basic tools had been created, PTI worked on a rapid rollout plan. All workshop flows and all tools used during the workshops were specially designed such that the holistic outcomes became highly probable by equally and simultaneously focusing on people and processes. Using Whole Brain Thinking® to find common ground, PTI started its transformation in several stages during 2012, the first phase named "Creating spaces". It involves informing and reaching commitment from participants.

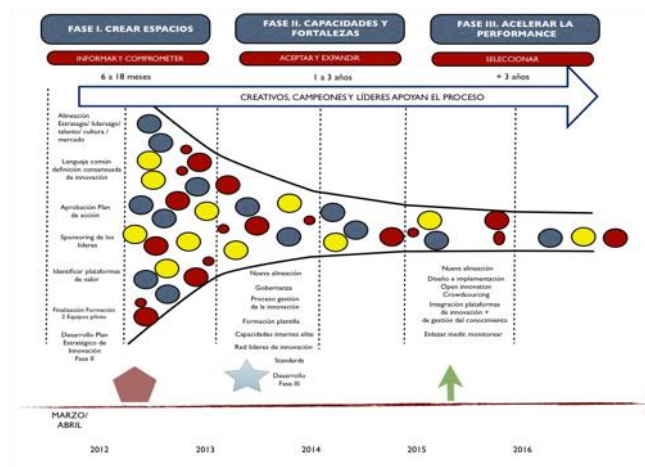


Figure 2: PTI's Innovation Master Plan

Stage 1 was to train all staff and chosen external collaborators in Whole Brain Thinking® and creativity and innovation basics. Over 400 participants completed the HBDI® Assessment and learned about their thinking preferences and the application of Whole Brain Thinking® during 2011 and 2012. Surveys revealed that a large majority strongly recommended sharing the program with all throughout the Park and related institutions to enhance not just communication but interpersonal understanding, creativity and team effectiveness. In total, 14 customized training sessions were conducted between May 2011 and December 2012.

Stage 2 was to train two voluntary pilot groups through specially designed "tools". It allowed them to learn about themselves, about their team's skills and about leadership as change agents. Whole Brain Thinking served as a framework to continue their training on communication, team-building, leadership, creative problem solving, change and conflict solving. In total, 12 tailor-made workshops were conducted during 2012.



Stage 3 involved engaging senior management to champion the change. They attended two workshops to learn how the Whole Brain Model® applies to group dynamics and their leadership. A sign of their active interest and involvement in the project, it allowed to distill essential ideas about the future ahead. They took place in March and September 2012.

Stage 4 was to train a group of 14 internal facilitator's in Whole Brain Thinking® methodology through Herrmann's Certification Program. It was customized and delivered by GPSinnovation together with Herrmann Europe's director from Paris, France in November 2012. It is one way of ensuring the ongoing application of the Whole Brain Model as a tool for transformational change.

### 3.1. Looking ahead

The **second** phase named "Capabilities and Strengths" creates a deeper understanding about the challenge from different angles. The purpose is to create a global comprehension of this emerging opportunity and to provide frameworks and communication tools for people from different functions, locations, hierarchical levels to have consistent conversations about creativity and innovation beyond their personal interpretation. This phase is about "Accepting and Expanding".

Since all change and innovation is eventually carried forward by people, special attention is put on team building, inclusion of as much diversity as possible and open and trustful cooperation between functions and levels. Building momentum is a key requirement for spreading the vision and engaging a growing circle of players outside the core team.

Through regular assessments of existing innovation climate and review of various indicators GPSinnovation is identifying interrelated gaps, the next taking place in June 2013. Success measurements criteria are being developed at present. They will be identified in four quadrants.

### 3.2. First Results

With the program in place since January 2012, PTI is reporting several tangible results. First, staff at all levels have described the program to be enhancing their understanding of themselves, their colleagues and the scope of PTI's business. It has reinforced the Park's global "connected thinking".

In addition, since the beginning of the cultural transformation it began to recognize that one of its greatest challenges was to foster an environment where staff could develop creative approaches and also the need to attract and keep motivated and open-minded thinkers. Integrating Whole Brain Thinking into the training programs gives PTI a tangible way to develop those skills in all.

But perhaps the greatest achievement to this point is the cumulative effect the knowledge of individual thinking preferences and Whole Brain Thinking® has had on PTI. The program has begun to build a critical mass since almost all have been profiled using HBDI and have been trained to think outside their respective comfort zones. Clearly, there is a more "Whole Brained" organizational approach.

Leader's behavior has inspired the team's commitment to innovative thinking and is encouraging personal growth for individuals. It continues to push the organization to leading-edge excellence.

Among the ways to embed the language and the approach of Whole Brain Thinking® into the culture, PTI is providing a variety of on-demand resources to fulfill the ongoing need for support and development. It is changing their in-company communication as well as their external communication. Internal and external presentations are "whole brained". Teams are

being formed under this framework to ensure diversity. Whole Brain Thinking® now permeates the system and has become integrated into different programs and everyday language of staff members. They explore opportunities to incorporate HBDI® Profile into training, seeing great potential for its use.

The case is in progress. Organizational change is driven by a variety of external and internal conditions and actors. These do not automatically force change in a particular direction. Change is thus not quite a neat and linear process. The approach applied at PTI provides a general framework for understanding and emphasizes the significance of studying and practicing change from a micro perspective. Changes are treated as more or less continuous and is analyzed on a permanent basis. It focuses on the complexity and dynamics as well as on the context in which it takes place.

An important element is how people relate to change in terms of their identity positioning: how they understand themselves and their own thinking preferences as well as their interests relating the change program. Sensemaking is a key word at PTI's program. It has to be since it aims to make PTI **a more liveable and loveable place energized by change.**

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