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**A Virtual Technological Park,  
an innovation towards the Federal Institute Identity**

**FASE D1:** Definition of the Virtual Technological Park

**ETAPA D.1.1:** Report about the educational, social and economic impacts of the Aracati Digital experience, since 2014

**ENTREGA D1.1.2:** Virtual Technological Park Approaches

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# **A Virtual Technological Park, an innovation towards the Federal Institute Identity**

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## **ABSTRACT**

Nowadays, we have observed the positive expansion of several Federal Institutes of Technology (FI) campuses in small cities. However, most of these small cities are not prepared to offer facilities to absorb formed students, such as a job opportunity or facility to open their own business. As a consequence, these professionals end up accepting jobs that are not related with their formations or migrating to developed centers, where job offers in their areas are most attractive. In the latter case, we identify a paradox in relation to the IF mission once this institution tries to be a social transformation agent of the region, since these small cities lose the main subject of this transformation, the young people. Our proposal linked to the creation of Virtual Technological Park becomes an important component of FIs identity, which could be a safe mechanism to mitigate the negative results caused by these mentioned problems, as well as can increase the efficiency of the FIs. This is the **first** delivery of the FASE 01 of the project. It presents a **Report about the educational, social and economic impacts of the Aracati Digital experience, since 2014**, in the Federal Institute of Ceará, Aracati Campus.

**Keywords:** Technological Park, Innovation Management, Aracati Digital

## **Technological Park Approaches**

We believe it's a FI mission to help the students for their professional career in terms of creativity, initiative, management knowledge and other activities needed to make them entrepreneurs even though isn't in their plans. Therefore, creativity, initiative and management knowledge are important skills for any kind of professional activities.

In fact, there are two approaches in this Virtual Technological Park strategy (VIRTUAL TECHNOLOGICAL PARK, 2017):

- Pedagogical approach: creativity, initiative and management knowledge are very important for graduate students independently if they decide to become the owner of their business, a public or private employee.
- Citizen approach: the knowledge about the set up and management of a company can help the students to become a conscious citizen and to collaborate much better to the society.

The FI must open the students' mind for the perception of this understanding and motivate them to become an entrepreneur, independently of their professional choice. The process of the production and sales of products and services is not easy and evident for the students. However, this understanding is indispensable for the company survival. This kind of subject about business management hasn't been developed properly in pedagogical programs by the FI teachers.

Finally, these pedagogical and citizen approaches concern the educational fundamentals from "Escola Pra Valer" book (OLIVEIRA, 2016), inspiration source to the Virtual Technological Park proposed here.

## Some LAR Results

We can consider two classes of results from the LAR experience: RD&I and Education results:

Table 1 – RD&I and Education Results

Achieved Result	Discussions
RD&I Results	<p>Since 2014, the LAR Lab has performed many research projects from the governmental agencies, in special from the CNPq. The LAR Lab average is about 10 projects per year, involving 40 scholarship students.</p>
<ul style="list-style-type: none"> <li>• Scholarship student projects.</li> </ul>	<p>The most of these projects has served to guide the student TCC projects (Work of Course Conclusion) or as a solution for help the non-profit public or private institutions. We can highlight the following projects:</p> <ul style="list-style-type: none"> <li>• SISAPP to Peter Pan Hospital, supported by CNPq and Peter Pan Association</li> <li>• NextSaude to Aracati City, supported by FUNCAP</li> </ul> <p>These projects above and the other projects supported by the Government Agencies correspond the financial and economic investments around R\$2.000.000,00</p>
<ul style="list-style-type: none"> <li>• Energy Agency Projects</li> </ul>	<p>The second step on the LAR trajectory was the project demanded by ANEEL, the Brazilian Energy Agency, in collaboration with the IFCE-Fortaleza researchers.</p> <p>Financial and economic investments around R\$1.000.000,00</p>
<ul style="list-style-type: none"> <li>• EMBRAPII Projects</li> </ul>	<p>After EMPRAPII-IFCE Polo was inaugurated, the LAR lab started his collaboration with the private companies.</p> <p>Financial and economic investments around R\$5.000.000,00.</p>
<ul style="list-style-type: none"> <li>• Other projects</li> </ul>	<p>The LAR Lab has collaborated with many other institutions in order to find the innovation solutions for them:</p> <ul style="list-style-type: none"> <li>• Atlantico Institute: GISSA Project, supported by FINEP</li> </ul>

	<ul style="list-style-type: none"> <li>• Avicena Software and Services: GISSA Urgency and Emergency, supported by FUNCAP</li> </ul> <p>Nowadays, the LAR Lab has two researchers with FUNCAP Productivity Scholarships that involves 10 students and almost R\$300.000,00 for computer material, participation in scientific events and scholarship students.</p>
Education Results	<p>Likewise, the RD&amp;I Results, the Education Results play an important role in the Virtual Technological Park proposal. However, this kind of results are, naturally, more abstract than the RD&amp;I Results presented before. We consider here the pedagogical and social aspect provided by the LAR lab environment. It is very common we hear all the time that there are two kinds of students in the IFCE-Aracati Computer Science Course: the regular students and the LAR scholarship students.</p> <p>In the LAR Lab the students are involved on an intangible atmosphere, a fantastic pedagogical mix between the academic scenario and the market real scenario. These scenarios correspond respectively the academic projects and the projects related with the private companies encouraged by the EMBRAPII as mentioned before.</p> <p>Anyway, this pedagogical mix experience is very rich in terms of the entrepreneurship skill. It is a very important concept for the Virtual Technological Park and is not easy to find it in regular classes.</p>