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Use Of the Open Journal System Platform - Ojs as A Tool for The Development of The Technological Showcase of The Federal Institute of Education, Science and Technology of Rondônia (IFRO)

Alberto Meireles Oliveira de Almeida[1], Marcio Rodrigues Miranda[1,2] and Leonardo de Azevedo Calderon[1,3,4]

[1] Postgraduate Program in Intellectual Property and Technology Transfer for Innovation - PROFNIT, Federal Institute of Education, Science and Technology of Rondônia - Campus Porto Velho Zona Norte, Porto Velho - RO, Brazil

[2] Federal Institute of Education, Science and Technology of Rondônia - Campus Porto Velho Calama, Porto Velho - RO, Brazil

[3] Osvaldo Cruz Foundation, Fiocruz Rondônia, Porto Velho - RO, Brazil

[4] Federal University of Rondônia, Porto Velho - RO, Brazil

Abstract

An institution that has a portfolio of intangible assets of intellectual property products may, through business planning and management, use it as a way to establish contracts and transfer technology to other organizations, enabling financial returns and partnerships. The present study proposes the creation of a technological showcase for the dissemination of the institution's technology assets using the Open Journal System - OJS platform. The survey of intellectual property assets was carried out through prospecting in the Databases of the National Institute of Intellectual Property (INPI). The qualification of the technological showcases was carried out through the information present on the websites of 41 institutions of the Federal Network of Vocational and Technological Education. The use of the OJS Platform for the construction of the IFRO's technological showcase was developed considering the criteria of usability, usefulness of the content, adequacy of information and accessibility and interaction (http://vitrinetecnologica.pvhzonanorte.ifro.edu.br).

Keywords: Patents; Technological Portfolio; Technology Transfer.

1. Introduction

Innovation is increasingly becoming the great agenda of the public and private sectors. The incessant search for the development of innovative technologies, aiming at sustainability in general, moves society towards the

constant implementation of instruments that provide actions that enable productive sectors, integrating research, innovation and technology transfer (SANTOS et al. 2019 p. 50).

In terms of innovation and intellectual property, the Federal Institute of Education, Science and Technology of Rondônia (IFRO) stands out, which makes up the Federal Network of Professional, Scientific and Technological Education, created by Law 11.892/2008, which has a the largest technological portfolio regarding patent filings among the FIs in the northern region of Brazil.

Despite the recent creation, IFRO already has ten campuses, among which three with a profile of courses and infrastructure in the agricultural area, Campuses Ariquemes, Cacoal and Colorado do Oeste; industrial such as Vilhena, Ji-Paraná and Porto Velho Calama; one with profile in services Campus Porto Velho Zona Norte; one in the area of services and health Campus Guajará-Mirim; and Campus the São Miguel do Guaporé , which still does not have a complete definition of the area of operation (IFRO 2018).

One of the ways to provide greater development of intellectual property assets is through legislation that promotes incentives for innovation and scientific and technological research. Thus, we can highlight the Industrial Property Law (Law n. 9,279/1996), the Innovation Law (Law n. 10,973/2004) and the Legal Framework for Science, Technology and Innovation (Law n. 13,243/2016), later regulated by Decree n. 9,283/2018 (SANTOS et al. 2019).

The aforementioned legislation are considered major advances for innovation, merging the academic sector with the productive sector, with the general objective of producing, for example, a greater number of intellectual knowledge that can provide benefits to society in general (SANTOS et al 2019).

IFRO, using the aforementioned legislation, aligned these objectives to its strategic planning and created mechanisms to promote its innovation policy. Thus, Resolution nº 26/CONSUP/IFRO, of October 3, 2011, stands out, which presents the Internal Regulations of the Technological Innovation Nucleus of the Federal Institute of Education, Science and Technology - NIT/IFRO, having as one of the objectives, coordinate actions and participate in activities to generate innovative technology, products and processes.

Another important milestone within the IFRO is the search for standardizing aspects related to innovation, intellectual property and the transfer of technology, creations and scientific productions of the IFRO, as well as the rights arising therefrom, thus, the IFRO approved Resolution No. 30/CONSUP/IFRO, of December 17, 2013, which presents the Regulation of the Innovation Policy of the Federal Institute of Education, Science and Technology of Rondônia.

As a result of the Innovation Policy, IFRO became one of the largest patent depositors of the Federal Education Network and, in 2018, it was the largest patent depositor among all members of the Federal Network of Professional, Scientific and Technological Education, according to the ranking published by the National Institute of Industrial Property (INPI)[1]. However, it does not have any technology transfer agreement registered with the INPI. And, consulting the IFRO website, it appears that it does not have an organized and categorized portfolio of its intellectual property filings and records.

[1] https://www.gov.br/inpi/pt-br/acesso-a-informacao/estatisticas-preliminares/arquivos/documentos/ranking_ maior-depositantes_res_2018.pdf

In this sense, it is noteworthy that the creation of a portfolio of technologies developed at an institutional level, in order to bring the innovation assets developed to the attention of the general public and enable the formation of partnerships between universities, companies and society, aiming at the transfer of of technologies to generate innovations is essential for the success of policies to encourage innovation (PIRES, 2018).

IFRO being an institution that stands out in the deposit of intellectual property, it does not have the means to disseminate and make public its deposited and registered technologies. Thus, the institutional challenge is to present a way to bring the IFRO closer to the productive sectors and society, using the products resulting from intellectual property as a means to assist in the transfer of existing and future technologies.

Among the main strategies of Science and Technology Institutions, technological portfolios, technological showcases or innovation portals stand out, demonstrating that resources aimed at disseminating technologies through their own channel are important for the connection between academia, private companies and public bodies to carry out partnerships (JUNGMANN 2010).

Although there are several models of technological showcases or innovation portals developed by institutions, the use of the Open Journal System - OJS platform is something totally new in this segment, which is a platform normally used for the publication of scientific journals, being easy to assimilate and replicability and free (Dias et al 2011) The main features of the OJS Platform are summarized by Dias et al (2011), and described below : a) remote management of the platform ; b) flexibility for managing editors, handling sections and dedication to review processes; c) on-line submission of files ; d) the registration of users (authors and readers) is carried out without the need for intervention by the system administrator; e) content indexing, the system generates indexes for the texts included in the journals , facilitating search engines; f) the users of the magazines can be notified by e-mail of the occurrences carried out in them; g) Online help, the system has several options that provide help to users.

In this way, the OJS platform allows the automation of several processes for the operation of a technological showcase without the need for prior knowledge in web development or website creation. The present work aims to present a proposal for the dissemination of industrial property generated in the IFRO, through an exclusive portal for the dissemination of the institution's intellectual property showcase using the Open Journal System Platform - OJS

2. Research Methodology

2.1 IFRO's Intellectual Property Survey

In the first stage of the research, a survey of the intellectual property registered by the Nucleus of Technological Innovation of the IFRO was carried out, more precisely the patent documents and records of computer programs. To carry out the aforementioned survey of data referring to patent deposits and computer program registrations made by the IFRO Technological Innovation Nucleus, the database of the National Institute of Industrial Property (INPI) was used, the search criterion being the CNPJ of the institution. In addition, information on the institutional website was used in order to obtain accurate and measurable data.

2.2 Federal Network of Professional, Scientific and Technological Education Technological Showcases

In the second stage of the research, the websites of 41 institutions of the Federal Network of Professional, Scientific and Technological Education (FNPSTE) were accessed. Subsequently, a mapping of its forms of dissemination of existing intellectual property was carried out. The keywords used were: Patents, Intellectual Property, Technological Showcase, Innovation Management, Technological Portfolio, Intellectual Property Catalog and Technology Repository.

For the qualification of the technology showcases of the 41 institutions of the FNPSTE, the evaluation of the quality of service perceived by the user of the information present on websites was carried out , through the following criteria: i) usability; ii) usefulness of the content; iii) adequacy of information; and iv) accessibility and interaction (YANG et al 2005).

Regarding the classification of websites, the following categories were used based on design : i) Complete, which provide detail pages for each technology; ii) In social media, platforms for social interaction; iii) Patent database, environments that offer metadata about patents and make patent documents available for download, but do not offer any information of a promotional nature, do not bring contacts for negotiation or inform if the technology is available for licensing; iv) Low interaction, websites that do not have navigation or search features and do not systematically provide detail pages (MEDEIROS et al 2019).

2.3 FNPSTE Technological Showcases

The third step consisted of finding ways to create the IFRO Technological Showcase from the data obtained in the two previous steps. The Open Journal Systems (OJS) platform is an open source platform used worldwide for publishing academic journals online. For the development of the showcase, the installation and configuration of a server for OJS was carried out, in a virtual machine that could materialize in the product of this research. As for the installation of OJS in the most up-to-date version (OJS 3.3.0.3), a server was used to install and host OJS, with the following configurations:

PHP >= 5.5 with MySQL or PostgreSQL support (OJS >=3.1.2 would require PHP >= 7.0).
MySQL >= 5.x (or PostgreSQL >= 9.1.5) with data storage and connection using UTF8.
Apache >= 1.3.2x or >= 2.0.4x or Microsoft IIS 6.
Operating system: Any OS that supports the above software, including Linux, BSD, Solaris, Mac OS X, Windows.

After installing the IFRO server, the OJS electronic address was created, which made it possible to register the Journal, the administrator, create logins and passwords and provide the control panel for editing and assembling the journal on the platform.

Next, the Electronic Magazine was developed, which would house the institution's technological portfolio. Thus, using the administrator email and password in the OJS control panel, the Create Magazine command is used, being mandatory to edit the following fields: Magazine Title, Acronym, Name of the main contact, E-mail and Name of the Technical contact. As optional data editing to create the journal, there are: Abbreviation,

Publisher, Electronic ISSN, Printed ISSN, Journal Abstract, Editorial Team, About the Journal, Telephone, Institution/Affiliation, Sections and Categories.

The next step consists of the Website Settings, starting with the Appearance, where it is possible to choose the Theme to be viewed on the magazine page, highlighting that some themes are already installed in OJS, however, it is possible to increase new themes through from the use of theme Plugins to be installed in the software, and in the magazine created, the Base Bootstrap 3 (Readable) theme was installed, which allows a clean and modern look for the technological showcase.

Another site configuration step consists of the descriptions, where it is possible to edit data for readers, authors and librarians who access the journal. Afterwards, it is necessary to choose the languages of the site, being able to choose English and/or Portuguese. It is also possible to define the navigation menus to be displayed on the main page of the site, logo, footer, header, as well as enable or disable the publication of news.

With the creation of the Journal, the inclusion of Editions, Sections and Categories for the journal begins, aiming at the correct distribution of data and classification of the assets to be submitted. The next step is to make Submissions to the journal, in this way, the administrator starts the registration of the information that he intends to publish, thus, each intellectual property asset is submitted individually, with basic data such as Title, Subtitle, Abstract, Year, Authors being registered, Keywords, inclusion of PDF files, Permission and disclosure, Edition, Category, Cover Image and Publication Date. After registration, the Edition is published and made public on the website of the created Electronic Magazine.

As for its development, the IFRO's technological showcase was divided between patent deposits and computer program registrations, since the institution currently has only these two types of intellectual property assets registered with the INPI. Within the category Patents, they were divided by the annual filing date, thus, there are the following sections in the technology showcase: 2015; 2016; 2017 and 2018, which are the years that the active deposits appear on the INPI website. Within the Computer Programs category, all computer programs registered by IFRO at INPI were included.

It is possible to insert graphic material referring to each of the intellectual property assets, highlighting the accessibility of the images for people with visual impairments, since the OJS allows a detailed description of the image used so that those who need it can have access to the audio description of the images.

3. Results and Discussion

3.1 IFRO's Intellectual Property Survey

A survey of the IFRO Intellectual Property registered with the INPI was carried out and the first patent deposited by the IFRO dates back to 2014, which demonstrates that only after the start of the implementation of the innovation policy by the institute did the positive results of property begin. intellectual. Another factor observed is that in 2018 there were more patent filings than in the other years combined. Finally, it should be noted that there is no deposit made in the years 2019 and 2020.

In the INPI database, 96 patent records and 5 computer program records were found. An important fact is that IFRO ranked 13th in the Ranking of Resident Invention Patent (PI) Depositors 2018, totaling 30 filed patents (INPI 2018)

It is also noteworthy that in 66 patents deposited there is co-ownership between IFRO and the Federal University of Rondônia (UNIR), demonstrating the importance of open innovation for technological development. It was also sought to analyze the situation in the year 2021 of patent applications filed by the IFRO with the INPI and, according to Graph 7, it appears that 71% of the deposits are active, adding up to a quantity of 69 deposits in force and 28 void numbered deposits.

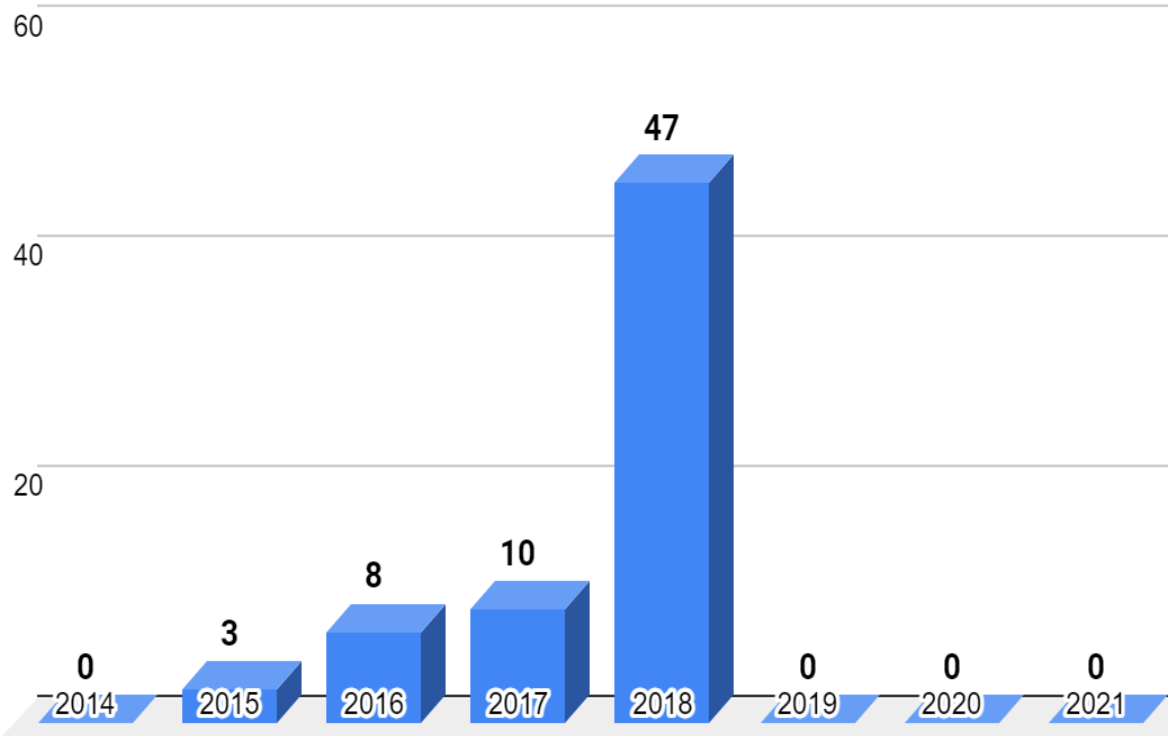

Figure 1 – Distribution of active patent filings per year, according to patent status in 2021.
Source: Prepared by the authors of this article based on the analysis of the INPI Patent Base (2021).

Thus, it appears that 29% of the patents deposited by the IFRO over the years had their numbering annulled in the INPI records, for the following reasons: i) lack of compliance with a formal requirement; ii) numbering canceled for not complying with art. 19 of the LPI; iii) untimely compliance with a formal requirement, pursuant to Art. 21 of Law 9279/96 and Art. 7 of Normative Instruction 31/2013.

In the detailed analysis regarding the annulments of patent numbers, it was found that most of the losses were due to errors in filling out the descriptive report, claims, abstract and drawings of patent instruments, which demonstrates that the Institution lacks training of civil servants regarding the rules and regulations governing patent filings.

As for the number of software registrations carried out by IFRO, the first registration is dated 2016 and a total of 04 computer programs. It is important to highlight that the software called +Leite was developed by the Brazilian Agricultural Research Corporation (Embrapa) in partnership with the Federal Institute of Rondônia and is widely used, with more than 5,000 (five thousand) downloads. The application has been used to study

the milk production efficiency index of dairy farms, and can be obtained from the following link: https://play.google.com/store/apps/details?id=com.embrapa.maisleite.

As for trademark requests, in a search in the Intellectual Property Report of the NIT/IFRO, only the trademark was found under application no. As for industrial designs and integrated circuit topography, no IFRO records were found in INPI.

In this way, it was noticed that the IFRO has great potential for disclosure of technology assets, however, what is verified is that there is a lack of disclosure of the technological portfolio and lack of incentive for industrial property registrations and the search for means of technology transfer.

3.2 FNPSTE Technological Showcases

After the survey, it was possible to visualize that the technological showcases of 17 FNPSTE Institutions have links or websites destined to patent documents, computer programs, industrial design, integrated circuit topography, geographical indications or brands. in 24 institutions could not find materials referring to the disclosure of available intellectual property.

In Figure 2, it was possible to see that there is a predominance of low-interaction websites, which are characterized, in most cases, for being a simple listing of records deposited by institutions at the INPI. In 36.6% of the FNPSTE institutions, there was a lack of means of disclosing intellectual property assets, which could be classified as incomplete *websites or under construction.*

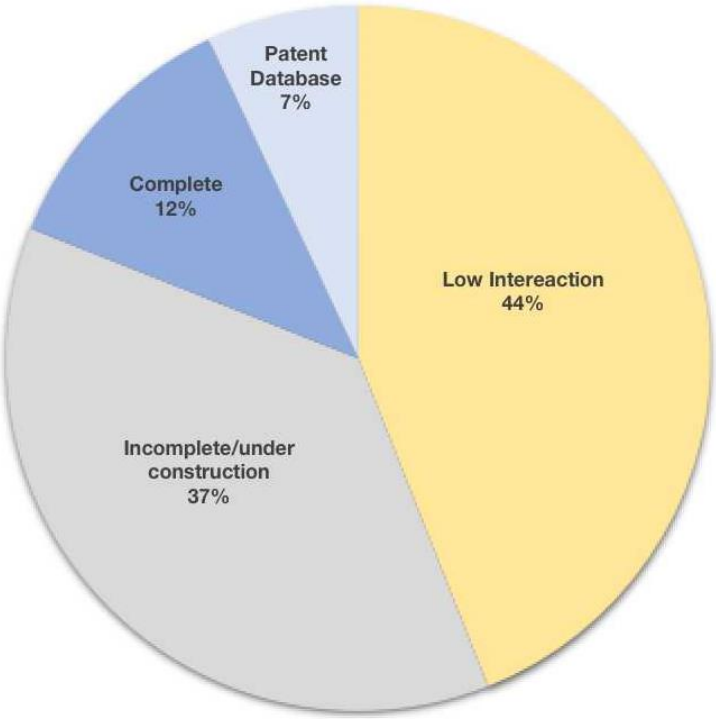

Figure 2. Design characteristics classification of the websites for the dissemination of technology assets of the Federal Network of Vocational Education, Science and Technology according to Medeiros et al (2019) classification.

Source: Prepared by the authors (2022).

As a result of the research, it was possible to see that 26 institutions have a website for the exposure of intellectual property assets in a structured way (Table 1).

Table 1. Federal Institutes and their respective technology asset disclosure websites.

FEDERAL INSTITUTE	INITIALS	WEBSITE	CLASSIFICATION*
Federal Institute of Espírito Santo	IFES	https://agifes.ifes.edu.br/	Complete
Federal Institute of São Paulo	IFSP	https://integra.ifsp.edu.br/vitrine	Complete
Federal Institute of Minas Gerais	IFMG	https://integra.ifmg.edu.br/	Complete
Federal Institute Farroupilha	IFFarr	https://integra.iffarroupilha.edu.br/vitrine	Complete
Federal Institute of Rio Grande do Sul	IFRS	https://integra.ifrs.edu.br/vitrine	Complete
Federal Institute of Pará	IFPA	https://www.proppg.ifpa.edu.br/vitrine-tecnologica-do-ifpa	Patent Database
Federal Institute of Mato Grosso	IFMT	https://inovacao.ifmt.edu.br/category/vitrine_tecnologica/	Patent Database
Federal Institute of Pernambuco	IFPE	https://www.ifpe.edu.br/o-ifpe/pesquisa-pos-graduacao-e-inovacao/inovacao	Low Interaction
Federal Institute of Santa Catarina	IFSC	https://www.ifsc.edu.br/vitrine-tecnologica	Low Interaction
Federal Institute of Ceará	IFC	https://ifce.edu.br/prpi/patentes-e-registros	Low Interaction
Federal Institute of Sertão Pernambucano	IFSertão PE	http://nit.ifsertao-pe.edu.br/index.php/sobre/vitrine	Low Interaction
Federal Institute of Rio de Janeiro	IFRJ	https://portal.ifrj.edu.br/vitrine-tecnologica	Low Interaction
Federal Institute of Piauí	IFPI	https://sites.ifpi.edu.br/vitritec	Low Interaction

		/	
Federal Institute Catarinense	IFC	https://nit.ifc.edu.br/category/vitrine-tecnologica/	Low Interaction
Federal Institute of Rondônia	IFRO	https://portal.ifro.edu.br/organograma/59-conteudos-do-site/733-coordenacao-do-nucleo-de-inovacao-tecnologica-nit	Low Interaction
Federal Institute Goiano	IFGoiano	https://www.ifgoiano.edu.br/home/index.php/nit/9841-vitrine-tecnologica-do-if-goiano.html	Low Interaction
Federal Institute of Alagoas	IFAL	https://docs.google.com/spreadsheets/d/1AcP-O5TzoL4fHbM-UX-omE4d0BrKG3Vh3T0hJs4bw5Pw/edit#gid=226085380	Low Interaction
Federal Institute of Sergipe	IFS	http://www.ifs.edu.br/coordenacao-do-nucleo-de-inovacao-tecnologica-cnit/propriedade-intelectual-cnit	Low Interaction
Federal Institute of Maranhão	IFMA	https://prpgi.ifma.edu.br/agencia-ifma-de-inovacao-agifma/propriedade-intelectual/	Low Interaction
Federal Institute of Sudeste de Minas	IFSudesteMG	https://wwwdev.ifsudestemg.edu.br/institucional/pro-reitorias/pesquisa-posgraduacao-e-inovacao/inovacao/portfolio-de-oferta-tecnologica	Low Interaction
Federal Institute of Sul de Minas	FSulde Minas	https://nit.ifsuldeminas.edu.br/index.php?op-	Low Interaction

		tion=com_content&view=article&id=66&Itemid=43	
Instituto Federal Fluminense	IFF	https://sites.google.com/site/nitiffluminense/	Low Interaction
Federal Institute of Amazonas	IFAM	http://www2.ifam.edu.br/proreitorias/pesquisa-e-inovacao/ppgi/nit/registros-de-propriedade-intelectual	Low Interaction
Federal Institute Baiano	IF-Baiano	https://ifbaiano.edu.br/portal/nucleo-inovacao-tecnologica/galeria/	Low Interaction
Federal Institute of Goiás	IFG	http://www.ifg.edu.br/cite?showall=&start=5	Low Interaction
Federal Institute of Norte de Minas	IFNMG	https://www.ifnmg.edu.br/publicacoes-nit	Low Interaction
Federal Institute of Brasília	IFB	https://www.ifb.edu.br/campus-ceilandia/60-institucional/institucional34/4500-2-o-ifb-possui-patentes	Incomplete/under construction
Federal Institute of Mato Grosso do Sul	IFMS	https://www.ifms.edu.br/assuntos/pesquisa/empreendedorismo-inovacao/nucleo-de-inovacao-tecnologica-1	Incomplete/under construction
Federal Institute of Amapá	IFAP	https://ifap.edu.br/index.php/inovacao/nit#:~:text=O%20N%C3%BAcleo%20de%20Inova%C3%A7%C3%A3o%20Tecnol%C3%B3gica,bem%20como%20o%20desenvolvimento%20de	Incomplete/under construction

Federal Institute of Tocantins	IFTO	http://www.ifto.edu.br/ifto/reitoria/pro-reitorias/propi/nit/propriedade-intelectual	Incomplete/under construction
Federal Institute of Roraima	IFRR	https://boavista.ifrr.edu.br/pesquisa/NIT/guia-de-registro	Incomplete/under construction
Federal Institute of Triângulo Mineiro	IFTM	https://iftm.edu.br/inovacao/arquivos/	Incomplete/under construction
Federal Institute of Paraná	IFPR	https://reitoria.ifpr.edu.br/institucional/pro-reitorias/pro-epi-2/agif/propriedade-intelectual/	Incomplete/under construction
Federal Institute of Rio Grande do Norte	IFRN	http://parcerias.ifrn.edu.br/portfolio/index.php	Incomplete/under construction
Federal Institute of Paraíba	IFPB	https://www.ifpb.edu.br/prpipg/inovacao/propriedade-intelectual	Incomplete/under construction
Federal Institute Sul-Rio-Grandense	IFSul	http://pelotas.ifsul.edu.br/nucleos/nit	Incomplete/under construction
Federal Institute of Acre	IFAC	https://www.ifac.edu.br/oifac/pesquisa-inovacao-e-posgraduacao/nit	Incomplete/under construction
Instituto Federal da Bahia	IFBA	http://www.vitrinetecnologica.ifba.edu.br/acervo/	Incomplete/under construction
Colégio Pedro II	CPII	http://www.cp2.g12.br/blog/propgpec/pesquisa/	Incomplete/under construction
Federal Center for Technological Education Celso Suckow da Fonseca	CEFET-RJ	http://www.cefet-rj.br/index.php	Incomplete/under construction

Centro Federal de Educação Tecnológica de Minas Gerais	CEFET-MG	https://www.cefetmg.br/	Incomplete/under construction

*According to Medeiros et al (2019) classification as follows: Complete/Social Media/Patent Database/Low Interaction.

Source: Prepared by the authors (2022).

It is noteworthy that in all the websites of the Federal Institutes, at least one web page was found that addresses intellectual property, innovation and technology. With the survey of Table 1, it was found that of the 26 Federal Institutes that have a technology website, it was possible to extract that 15 websites are named technological showcases, 06 *websites* are named portfolio of technologies, 04 websites are named Intellectual Property Registries and 01 website it's called the Technological Innovation Nucleus (Technology Transfer Offices - TTO).

The websites classified as low interaction, with a total of 19, only have a simplified statement of technology assets, containing only information such as: title, deposit/registration number, deposit date, inventors and institution contact. Thus, these sites, for the most part, are limited to providing a simple listing of the information contained in the INPI database, not providing any further interaction with the technological product or with the depositor institution.

Websites classified as patent database are those that provide documents on patents such as Portable Document Format (PDF) and means of contacting the applicant, but do not go into depth about the patents or provide more accurate information about the assets. In general, these sites have the following characteristics: title, filing/registration number, technology description, filing date, inventors, institution contact, technology development degree/stage/maturity, field of application, objectives, applications and differentials.

In the 05 Federal Institutes technology websites that contain structured and cataloged material, it was possible to notice that in general they have the following information in the technology assets: Title, abstract, Inventors, order or registration number, date, use of images or videos, benefits and technology advantages, means of contact and the stage of development. Thus, according to the classification presented by Medeiros et al (2019), these are websites about technology that proved to be complete, enabling greater interaction between stakeholders, technological products and the institution.

It was also found that 4 Federal Institutes have an identical and well-structured model of technology exposure, through the Integra platform - Innovation Portal, which was developed by IFRS and is also used by IFSP, IFFar and IFMG. The other institutes have their own platforms and different designs in a technology showcase format.

3.3 Development of the Technological Showcase using the Open Journal Systems Platform - OJS

As for its development, the IFRO's technological showcase was divided between patent deposits and computer program registrations, since the institution currently has only these two types of intellectual property assets registered with the INPI. Within the category Patents, they were divided by the annual filing date, thus, there are the following sections in the technology showcase: 2015/2016/2017/2018, which are the years that the

active deposits appear on the INPI website. Within the Computer Programs category, all computer programs registered by IFRO at INPI were included. Data referring to patents and computer programs can be seen in Figure 3.

Figure 3. Proposal for structuring the Technological Showcase.
Source: http://vitrinetecnologica.portovelhozonanorte.ifro.edu.br/index.php/patentes/issue/archive

It is possible to insert graphic material referring to each of the IFRO's intellectual property assets (Figure 4), highlighting the accessibility of images for people with visual impairments, since the OJS allows a detailed description of the image used to that those who need it can have access to the audio description of the images.

Figure 4. Proposal for the graphic *layout* of the Technological Showcase.
Source: http://vitrinetecnologica.portovelhozonanorte.ifro.edu.br/index.php/patentes/issue/archive

The technological showcase contains information about technological products and software, such as: Title; inventors/authors, abstract, INPI case number, economic sector, stage of development, program/patent information, ownership, contact/email information, useful links and filing date and publication date (Figure 5).

Figure 5. Proposal for publications in the Technological Showcase.
Source: http://vitrinetecnologica.portovelhozonanorte.ifro.edu.br/index.php/patentes/issue/archive

Within the technological showcase there is also a news portal about intellectual property and innovation (Figure 6), as well as the means of accessing the IFRO's NIT, forms for submitting invention patents or utility models by interested parties, property manuals industry, applicable legislation, public notices in the area of innovation and other related information.

Figure 6. Vitrine Tecnológica news portal proposal.
Source: http://vitrinetecnologica.portovelhozonanorte.ifro.edu.br/index.php/patentes/issue/archive

With this, within the IFRO technological showcase website, based on the patents and computer programs found, the entire collection of industrial property of the institution was registered, demonstrating a new channel for the dissemination of the IFRO's technological portfolio. The technological product of this research is available at: http://vitrinetecnologica.pvhzonanorte.ifro.edu.br/ .

4. Conclusion

The OJS Platform presented flexibility and usability for the development of the technological showcase of the intellectual property registered by the Technological Innovation Nucleus. Considering the criteria of usability, usefulness of the content, adequacy of information, accessibility and interaction for the development of the technological showcase, it was possible to deliver a product classified as **Complete,** providing the details of each technology deposited by the Federal Institute of Rondônia, allowing the automation of several processes for the operation of a technological showcase without the need for prior knowledge in web development or website creation.

5. Future Perspectives

With the research and product developed, it will be possible to solve the problem identified as: lack of dissemination of technologies registered by the IFRO in the INPI and consequent lack of mechanisms to facilitate fast and clear communication between the Science & Technology Institutes, Private Companies and Public Bodies. Thus, the challenge of this project is to present a way to bring the IFRO closer to the productive sectors and society, using the products resulting from intellectual property as a means to promote the transfer of existing and future technologies.

In this way, considering that the transfer of scientific and technological knowledge is important to give society access to new products, processes or services and, with that, to leverage the economy of the State and the Country through new products and processes accessible to the consumer, makes if necessary, an efficient channel for disseminating the technologies that the institution has mastery of.

Therefore, solving the problem of the lack of publication and disclosure of IFRO's intellectual property assets will be solved through a free, free and easy-to-use platform, which will meet the needs found in the institution. In this way, contributing to bring academia closer to the public and private sectors, seeking to sell the assets in the consumer market and new financial returns and recognition of *know-how* for the research and development institution.

6. References

BRASIL. Lei nº. 9.279, de 14 de maio de 1996. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l9279.htm. Accessed in July 18, 2021.

BRASIL. Lei nº. 10.973, de 2 de dezembro de 2004. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/l10.973.htm. Accessed in July 18, 2021.

BRASIL. Lei nº. 13.243, de 11 de janeiro de 2016. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2016/lei/l13243.htm. Accessed in July 18, 2021.

BRASIL. Decreto nº. 9.283, de 7 de fevereiro de 2018. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/decreto/d9283.htm. Accessed in July 18, 2021.

Dias, G.A. et al. Technology acceptance model (TAM): avaliando a aceitação tecnológica do Open Journal Systems (ojs). Informação & Sociedade, v. 21, n. 2, 2011.

IFRO. PLANO DE DESENVOLVIMENTO INSTITUCIONAL IFRO: 2018-2022. Disponível em: https://portal.ifro.edu.br/images/ifro-pdi-interativo-20180209_pagina-simples.pdf. Accessed in July 25, 2021.

IFRO. Resolução nº 30/CONSUP/IFRO, de 06 de abril de 2018. Disponível em: https://portal.ifro.edu.br/consup-nav/resolucoes/2018/8516-resolucao-n-30-consup-ifro-de-06-de-abril-de-2018. Accessed in July 25, 2021.

IFRO. Resolução nº 26/CONSUP/IFRO, de 16 de julho de 2019. Disponível em: https://portal.ifro.edu.br/consup-nav/resolucoes/2019/8462-resolucao-n-26-consup-ifro-de-16-de-julho-de-2019. Accessed in July 25, 2021.

INPI – INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL. 2018. Disponível em: http:// www.inpi.gov.br/menu-servicos/patente/classificacao-de-patentes. Accessed in July 20, 2021.

Jungmann, D.M. A caminho da inovação: proteção e negócios com bens de propriedade intelectual: guia para o empresário / Diana de Mello Jungmann, Esther Aquemi Bonetti. – Brasília: IEL, 2010.

Medeiros, D.N. et al. Vitrines Tecnológicas: o Design de websites sobre tecnologia de instituições públicas de ensino e pesquisa brasileiras, In: 9° Congresso Internacional de Design da Informação, Belo Horizonte, 2019.

Pires, M.C.F.S. Política púbica de incentivo à inovação: uma proposta de criação da vitrine tecnológica na Universidade Federal de Alagoas (UFAL). 2018.

Santos, W.P.C. et al. PROPRIEDADE INTELECTUAL. In PROFNIT, Conceitos e aplicações de propriedade intelectual; V. 2). Org. Wagna Piler Carvalho dos Santos. – Salvador (BA) : IFBA, 2019. 532 p.

Yang, Z. et al. Development and validation of an instrument to measure user perceived service quality of information presenting Web portals. Information & Management, v. 42, n. 4, p. 575– 589, may 2005.