

JULY 2020, VOL. 7

ENRICH MONTHLY

MONTHLY BUSINESS & INNOVATION NEWS COMPILED BY ENRICH IN BRAZIL



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ENRICH Monthly Success Story: Sustainable Urban Growth: International Cooperation in R&D&I as a Basis for Future

Dear Reader,

a warm welcome and thank you for your time and interest in our seventh edition of ENRICH Monthly in 2020.

With our July edition of ENRICH Monthly, we have prepared for you articles on **recent developments of research on COVID-19 solutions of Brazilian research** and innovation organizations. Besides the pandemic related activities, the Brazilian government has postponed the **Brazil's data protection regulations** until the August 14th. On page nine, you can read about what to expect from this new data protection law in more detail.

Despite the pandemic, various calls on proposals for bilateral projects are been announced. For instance, EMBRAPII is collaborating with two Swiss organizations and has recently launched calls supporting RD&I Projects and international innovation. For more calls, checkout the pages 14-16.

For our Success Story, we have interviewed Prof. Dr. Giacomo Pirazzoli who is the founding director of the CrossingLab think tank. He actively engages and initiates international projects on sustainable urbanism and agritecture 4.0 contributing to the UN's 17 Goals and the European sustainability goals.

We hope you enjoy reading the 'ENRICH Monthly' and we are happy to receive your feedback via email!

All the best for you, ENRICH in Brazil Team





Latest news from Brazil and Europe

Meet Startups Connected, a hands-on acceleration program supported by the Brazil-Germany Chamber

Startups Connected was developed to accelerate startups by connecting with large companies and vice versa. elected companies and startups work on a concrete innovation project, based on a business challenge. The Brazil-Germany Chamber supports the execution of these projects by facilitating interaction between the parties and offering agile Read more at: Startup Connected

The Spanish Bank Santander to Recruit 300 IT Specialists for New Innovation Centre in Brazil

Located in Onovolab, the innovation hub of the São Carlos district (SP), Santander has already begun recruitment of new graduates and experienced professionals in leading technologies. In June this year, Santander vowed to hire 3000 IT professionals worldwide as it pushes on with its digital transformation plan. Read more at: Finextra

EU-Mercosur Association Agreement: Conclusion of Negotiations on the Political Dialogue and Cooperation Pillar

The European Union and Mercosur concluded negotiations on the Political Dialogue and Cooperation part as well as on the Preamble, and on the General, Institutional and Final provisions of the EU-Mercosur Association Agreement. The agreement on the trade part was already reached in June last year. The negotiations, which

Read more at: European External Actions Service

Brazil Starts Producing Swedish Gripen Jets

Brazil has officially begun manufacturing fighter jets with the start of production at a new facility that makes sections of the Saab Gripen, Swedish aerospace company. Saab won a contract with Brazil in 2014 for 36 Gripen E/F aircraft. Saab's new aerostructures plant in Brazil has employed more than 70 workers, half of which will receive training in Sweden Read more at: Defence News

MCTI and EU Present Results of Studies on Startup Environments

The webinar "Study Sharing Good Practices in Innovation: Understanding European Startup Ecosystems to Promote Innovative Entrepreneurship in Brazil" with the mission to study the environment for innovative companies in the EU and to learn the policies up-close was attended by representatives of the MCTI, the EU Read more at: MCTIC Brazil

European Innovation Scoreboard 2020: Brazil Ranked as a Moderate Innovator

EIS provides a comparative assessment of research and innovation performance of EU countries and a comparison of the EU with other non-EU countries including Brazil. The EU is still a performance leader over BRIC countries, however Brazil's performance rate has increased at a higher rate than in the EU leading to a smaller gap

Read more at: European Commission



SHARING GOOD PRACTICES ON INNOVATION



The Ministry of Science, Technology and Innovation of Brazil (MCTI) held a webinar to launch the report "Sharing good practices on Innovation: understanding selected European startups ecosystems to foster innovative entrepreneurship in Brazil". The study is an outcome of the European Union (EU) - Brazil partnership in the context of the bilateral Science & Technology Cooperation Agreement, within the framework of the present EU Programme for Research and Innovation Horizon 2020 and the Sector Dialogues EU-Brazil initiative.

This project's main aim is to analyze how the European startup support policies and guidelines work and offer recommendations for the proposal for the "Brazilian Startups and Innovative Entrepreneurship Legal Framework", as well as to identify cooperation

opportunities between European and Braziliar startups.

The consultancy team, made up by Mr. Leonardo Piccinetti and Dr. Eduardo Felipe Matias, has examined the policy process issue which is one of the main aspects to understand the startups legal framework evolution and to foresee ways of potential development.

Through the analysis of the data collected, and thanks to the SWOT analysis, the consultants have created a setup of recommendations for improving the policy for stakeholder's engagement and overtaking the difficulties the Brazilian startups are facing nowadays.

For the full report click here.

Read more at: **Euraxess**





São Paulo Based Company Develops Fabric that Eliminates Novel Coronavirus by Contact

Researchers at Nanox, a São Paulo-based company supported by FAPESP's Innovative Research in Small Business Program (PIPE), have developed a fabric containing antimicrobial silver nanoparticles that has proved capable of inactivating the novel coronavirus SARS-CoV-2.

The material eliminated 99.9 of the viral load in a laboratory inoculum container after two minutes of contact.

The material was developed with the collaboration of researchers at Spain's Jaume I University as well as two Brazilian institutions: the University of São Paulo's Biomedical Sciences Institute (ICB-USP) and the Centre for Research and Development of Functional Materials (CDMF), a Research, Innovation and Dissemination Centre (RIDC) supported by FAPESP and hosted by the Federal University of São Carlos (UFSCar) in the state of São Paulo.

"We've applied for a patent on the technology, and we're partnering with two textile companies in Brazil that will use it to produce PPE such as face masks, hospital gowns and coveralls," Nanox CEO Luiz Gustavo Pagotto Simões told Agência FAPESP.

The fabric is a blend of polyester and cotton called polycotton and is coated using the pad-dry-cure with antimicrobial products created by Nanox containing two kinds of silver nanoparticles. Padding is a coating technique commonly used as a textile finishing method.

Read more at: FAPESP

FAPESP Creates Repository of Clinical Information to Facilitate Research on COVID-19

Brazil's first open-access repository of demographic, clinical and blood work data regarding patients tested for COVID-19 in the state of São Paulo and across the country is fully operational after completing a pilot stage and receiving feedback from the research community.

The repository holds anonymized data on more than 177,000 patients, 9,630 outcomes, and almost 5 million clinical examinations and laboratory tests performed nationwide since November 2019 by Fleury Group (a private laboratory chain) and two leading private hospitals in the city of São Paulo, Hospital Sírio-Libanês and Albert Einstein Jewish Hospital (HIAE).

Although the first case of COVID-19 was notified in February by HIAE, the period covered by the data will enable researchers to analyse patient histories and look for evidence of symptoms in patients treated before that. Fleury, HIAE and Sírio-Libanês will upload fresh data on a regular basis to the repository, which is hosted by the University of São Paulo (USP). All four institutions have contributed infrastructure, technology and personnel to facilitate data sharing.

FAPESP is in advanced talks with other public and private healthcare institutions, which are being invited to upload data to COVID-19 Data Sharing/BR.

The platform is the result of an initiative taken by FAPESP in partnership with USP with the purpose of sharing anonymized clinical patient data to support scientific research on the disease in various knowledge areas.

Three categories of information can be extracted from the repository: demographics (patient gender, year of birth and area of residence); clinical exams and lab tests, as well as patient movements and hospitalizations (when available); and outcomes (recovery or death). In a second stage, which is now being planned, COVID-19 Data Sharing/BR will also hold imaging data such as X-rays and CT scans.

The launch of the repository is part of the global open science movement to make research data publicly available for free. The momentum of the open science movement has been boosted by the COVID-19 pandemic.

Patient privacy will be protected, and approved users must analyse data within the platform. "They use an international standard that doesn't allow access to the raw data, but to an interface with a system that receives requests for analysis of datasets. The platform provides the results," Cláudia Bauzer Medeiros, a professor in the Institute of Computer Science at the University of Campinas (UNICAMP) and a participant in the project said.

Read more at: FAPESP



Brazilian Particle Accelerator Reveals First Images of COVID-19

Researchers from the National Research Centre for Energy and Materials (CNPEM), located in Campinas, carried out the first tests with Sirius, a Brazilian particle accelerator, using an essential protein for the life cycle of the new coronavirus (Sars-Cov-2).

The experiments resulted in 3D images of the structures of 3CL, one of the main proteins of the virus. With the results, scientists will be able to understand the biology of the virus and seek new drugs for COVID-19.

CNPEM will open its doors to receive researchers involved in projects related to the new coronavirus starting next July 13. The operation called "Manacá" puts Sirius, a new Brazilian electron accelerator, at the disposal of scientists dedicated to study the molecular details of the disease.

To make one of the most modern structures in the world available, researchers from CNPEM carried out tests with Sirius and were able to perform the unprecedented images of a coronavirus protein. The first results reveal details of the structure of this protein, which are important for understanding the

biology of the virus and supporting research that seeks new drugs for COVID-19.

"The sample analysed in the first Sirius experiments was the 3CL protein from SARS-CoV-2. It is one of the main proteins of the virus. This and other proteins are strategic targets for drug development, because when we are able to inhibit these proteins, it is possible to interfere with viral replication ", explains Daniela Trivella, research coordinator of the CNPEM task force against COVID-19, in an interview with Estadão .

"To interfere with the activity of a target protein, it is important to know its three-dimensional structure, that is, the position of each of the atoms that compose it. Identify your weaknesses, know where we can interfere to change your activity and impact the virus's life cycle. Synchrotron light techniques allow us to do this. We can also observe, on the atomic scale, how these proteins interact with drugs. These molecular details generate knowledge that is essential to support the search for new drugs and to understand the biology of the virus", adds Trivella.

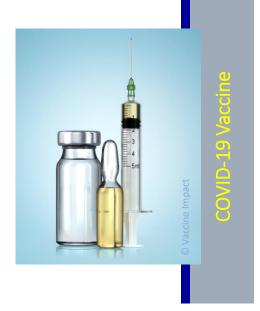
Read more at: Exame

Fiocruz will Sign an Agreement to Produce Vaccines by the University of Oxford

The Oswaldo Cruz Foundation (Fiocruz) will sign an agreement with pharmaceutical company AstraZeneca for the acquisition of batches and transference of technology regarding the Covid-19 vaccine developed by the University of Oxford.

This is an Advance Purchase Agreement in which the institution acquires the product before the end of the clinical trials, due to the global movement for mobilization and acquisition of vaccines. The agreement with AstraZeneca includes two production phases. The first consists in the production of 30.4 million doses before the end of the clinical trials, which would represent 15 per cent of the quantity necessary for the Brazilian population, at a cost of USD 127 million (BRL 681 million). The investment includes not only the vaccine batches, but also the transference of technology, so that the production can be fully internalized and national.

Read more at: Fiocruz







Joint Call MCTI and MS Chooses 90 Research Projects to Combat COVID-19

The Ministry of Science, Technology and Innovations (MCTI) and the Ministry of Health (MS) announced on Tuesday (7. July) the result of the joint public call for research aimed at combating Covid-19, consequences and other serious acute respiratory syndromes . In partnership with the National Council for Scientific and Technological Development (CNPq / MCTI), 90 researches were chosen in the areas of treatment, vaccines, diagnostics, pathogenesis and natural history of the disease, disease burden, health care and prevention and control.

Launched in April, the call foresees an investment of BRI 50 million (EUR 8.1 million): BRL 30 million (EUR 4.9 million) are from the National Fund for Scientific and Technological Development (FNDCT) and BRL 20 million (EUR 3.2 million) from the Ministry of Health, through the Department of Science and Technology of Secretariat of Science, Technology, Innovation and Strategic Health Supplies (Decit / SCTIE). CNPq received

2.219 proposals with a total value of BRL 1.7 billion (EUR 275.5 million).

The Minister of Science, Technology and Innovations, Marcos Pontes, highlighted the role of FNDCT resources, which made it possible to carry out the public notice, and said that the projects will prepare the country's health system for the future.

The announcement also has 50 approved teaching and research institutions. Of the 90 proposals that will be supported, most are on the prevention and control axis of Covid-19, with 38 proposals, followed by Health Care (17) and Pathogenesis and History of the Disease (10). The five regions of the country were awarded projects and 20 units of the Federation have at least one supported project.

Check the full results and projects chosen in the file below, as well as on the CNPq website: www.cnpq.br.

Read more at: ABIPTI



CNI Signs Agreement with Federal Government to Provide PPE for Guardianship Councils

The National Confederation of Industry (CNI) signed a protocol of intentions with the Ministry of Women, Family and Human Rights to provide personal protective equipment (PPE) to professionals working in Child Protection Councils. all over Brazil. The agreement aims to improve the working conditions of counsellors in assisting families in situations of vulnerability in this pandemic period of the new coronavirus.

According to the CNI president, the Guardian Councils play an important role in protecting and guaranteeing the rights of millions of Brazilian children and adolescents and must continue to play this important

role during this period of the pandemic. "CNI and the Social Service of Industry (SESI), which has experience in guaranteeing health and safety at work, are making themselves available to cooperate with the federal government in guaranteeing the safety of these professionals and the families served," he said.

According to the protocol, the CNI and the Ministry of Women, Family and Human Rights can define how the partnership will be implemented and how the supply of PPE will be made to the Guardianship Councils, according to the demand that will be forwarded to the Confederation.

Read more at: CNI News Agency



Investments in Research and Innovation are Essential to Face Future Pandemics

Investments in science and innovation, made by universities, research institutions and technology-based companies in the last decades, have enabled countries like Brazil to respond quickly to the challenges presented by the current COVID-19 pandemic.

Now, research and innovation efforts to tackle COVID-19 will enable nations to offer responses not only to future pandemics, but also to climate and energy crises or cyber attacks that threaten global society.

The evaluation was carried out by participants in an online meeting, promoted on July 8 by the Mobilização Empresarial pela Inovação (MEI), led by the National Confederation of Industry (CNI), to debate why investment in innovation will be essential in the post-crisis.

The debate was attended by Frederick Bordry, director of acceleration and technology of the European Organization for Nuclear Research (CERN), Jussi Manninen, vice president of VTT, Finland, and Antonio José Roque, director general of the National Center for Research in Energy and Materials (CNPEM). The meeting was moderated by Luiz Eugênio Mello, scientific director of FAPESP.

The investments made by FAPESP in recent years in projects developed by the company Magnamed , through the FAPESP Innovative Research in Small Business Program (PIPE), allowed the startup to qualify to sign a contract with the Ministry of Health in April to provide 6, 5,000 lung ventilators by August 2020, exemplified Mello.

Read more at: ABIPTI

Venture Capital Invested in Brazilian Startups Increases

The volume of venture capital invested in Brazilian startups in June 2020 totaled USD 156 million, spread over 33 rounds. The amount is 333% higher than the USD 36 million total seen in May this year, according to the study Inside Venture Capital Brasil, a survey conducted by Brazil-based open innovation firm Distrito. In the first half of 2020, VC investment in Brazil totaled USD 669 million, in a total of 167 rounds. In comparison with the same period in 2019, this is a decrease of 51% in relation to the USD 1.3 billion seen in the first half of last year.

Read more at: Forbes

The Data Center Market in Brazil is Likely to Grow

The data center market in Brazil is dominated by colocation service providers with an investment share of over 90%. Increased merger and acquisition activities have laid the foundation for significant investments in the industry.

Ceara, Rio de Janeiro, and Santa Catarina are the cities that witnessed investment in data center facilities in 2019. The investment in artificial intelligence (AI) and machine learning for cybersecurity and the introduction of the General Law of Protection of Personal Data in 2020 will boost the market in Brazil.

Read more at: Business Wire





Curitiba was considered one of the most promising innovation ecosystems in the world for the first time in the Global Startup Ecosystem Report 2020 ranking, carried out by Startup Genome, which analyses more than 140 cities in the world and is recognized as one of the most comprehensive in the sector. The capital of Paraná is the only one in Brazil to integrate the "Top 100 Promising Ecosystems in the World" and one of the four Latin American cities, along with Bogotá (Colombia), Buenos Aires (Argentina) and Santiago (Chile). The first place went to Mumbai, India.

In the survey, the organization highlighted the city's technological advancement in sustainable energy and transport, crowned by events such as the Smart City Expo, in addition to the USD 1.4 million (BRL 7.5 million) invested in Fohat, energy intelligence software startup, by the North American incubator. American Founder Institute in 2018, which provides solutions for giants like Bosch and Volvo.

In addition to Ebanx, the fintechs Contabilizei, Wuzu and Juno are presented in the report as examples of the growth and global recognition of Vale do Pinhão. The study even estimates that all technology-based companies in the city are currently valued at USD 2.2 billion (BRL 11.8 billion).

To build the ranking, Genome evaluated four main points: performance, talents, funding (ability to attract investments) and the potential for expansion of the ecosystem. What made Curitiba stand out was the good

score in terms of performance, which takes into account data such as the economic impact of the ecosystem on exit (settlement of the business), over a period of two and a half years. In this category, the capital of Paraná reached grade 7, while the leading ecosystem in this regard, Silicon Valley, was rated with an average of 9.7.

In addition to placing Curitiba in the main ranking, Genome also mentioned other innovation hubs in Brazil, such as São Paulo, Belo Horizonte (MG), Rio de Janeiro (RJ) and Florianópolis (SC). The capital of São Paulo, in fact, appears in 30th place in the "Top 30 Global Ecosystems" - released in the same report in which Curitiba was highlighted.

According to Cris Alessi, president of the Curitiba Agency for Development and Innovation, the success of the Curitiba ecosystem is due to the presence of all the necessary parts for an environment of high innovation, such as qualified professionals, good universities and diversity of industries.

"We have gained 10 years in three months in digital transformation with the support of entrepreneurs. Since the beginning of the quarantine, of the 1,500 artisans who went unsold at the Largo da Ordem Fair, 750 have created online stalls with the support of startups. Technology alone does not make a difference, what makes a difference is how it is used in favor of people", he reports.

Read more at: Gazeta do Povo





The European GDPR (General Data Protection Regulation) is one of the most influential consumer privacy laws that has affected 500,000 companies throughout the world. This law has played a crucial role in formulating another substantial privacy law known as the California Consumer Privacy Act that came into effect on January 1, 2020.

Similar to the European GDPR (General Data Protection Regulation), the LGPD (Lei Geral de Proteção de Dados Pessoais) law is a brainchild of the Brazilian government.

What Is the General Data Protection Law (LGPD)?

The National Congress of Brazil passed The Brazilian GDPR, also called the LGPD (Lei Geral de Proteção de Dados Pessoais), on August 14, 2018. The law will be applicable on August 15, 2020. The LGPD is a legal framework that provides an outline regarding the use and processing of personal data of Brazilian users regardless of where the data processor is located. This law is applied to organizations that offer their services to people in Brazil.

Where Is the LGPD Applied?

The LGPD law applies to individuals situated in Brazil. Moreover, companies that are processing personal data of Brazilian users have to abide by the LGPD law. It means that organizations or websites, operating from anywhere in the world, who collect the personal data of individuals who reside in Brazil will have to follow the LGPD law accordingly.

When Is the LGPD Not Applied?

There are different situations when the LGPD law does not apply. These situations are:

 An individual who is processing the data for personal purposes

- In the case that the data is academic, journalistic, and artistic nature-wise
- If the information has to be used for criminal investigations, national security, national defense, public safety, and punishment tasks.

How Is Personal Data Defined under the LGPD?

As per the LGPD law, data relating to an identified individual or an identifiable natural person is considered personal data. However, anonymous or anonymized data does not belong to personal data.

What Are Data Subject Rights According to the LGPD?

According to article 18 of the LGPD law, individuals have the following nine rights over their data processing:

- 1) They can access their data.
- 2) They can confirm the processing of their personal data
- 3) They can rectify incomplete, outdated or false data.
- 4) They can delete excessive or necessary information, which is not being processed under the LGPD.
- 5) They can hand over their data to other processors if requested.
- 6) Delete their data.
- 7) Exposure of third parties or subprocessors with whom the controller has shared the data.
- 8) Know about the consequences of denying consent.
- 9) Cancellation or consent revocation.

What Kinds of Obligations Does the LGPD Enforce on Companies?

- The LGPD (Lei Geral de Proteção de Dados Pessoais) law imposes the following obligations on organizations that include:
- Companies must inform, rectify, delete, anonymize, or provide a copy of the data in case the data subject requests.
- Companies should remove the data once the relevant relationship ends.
- Organizations must appoint a data protection officer for managing communications with the data subjects.
- Implement administrative and technical data security measures to secure personal information from data theft, unauthorized access, accidents, and other issues.
- Deliver data breach notification to the concerned parties including data subjects and local authorities in case of data violation.





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Major Similarities between GDPR and LGPD?

As already mentioned, the LGPD law is similar to GDPR. Both these customer privacy laws safeguard the individual rights of living persons. Furthermore, the personal data of legal persons is not covered in the GDPR and the LGPD.

According to the GDPR, the data subject is defined as the natural identifiable or an identified person. As far as the LGPD law goes, the data subject is related to a natural person. The GDPR indicates that the data controller or data processors are considered as businesses, public institutions, and not-for-profit organizations.

The same goes for the LGPD law as data processors, or what data controllers refer to as businesses, public corporations, and not-for-profit organizations. If we talk about anonymous data as per the GDPR, this type of data is not related to naturally identifiable or an identified person. Therefore, anonymous data is not processed under GDPR.

The LGPD law describes anonymized data as the data that relates to a data subject. However, the data subject cannot be identified, so it is not processed.

Key Differences between the GDPR and the LGPD

GDPR and LGPD differ with each other despite having various similarities. GDPR is applied to natural persons regardless of their nationality and place of residence. On the other hand, LGPD does not mention whether it applies to natural persons, regardless of nationality.

The personal data is processed through automated or non-automated means if the information is a part of a filing system in GDPR. Compared to GDPR, LGPD applies to any processing operation.

GDPR does not explain the process of anonymized data for profiling objectives. But, LGPD considers data as personal that can be used to create behavioral profiles of identified natural persons.

Companies have to appoint a Data Protection Officer

(DPA) who will communicate with the subject rights alongside the local authorities as and when required under the LGPD. However, according to GDPR, a Data Protection Officer (DPO) is only needed in certain circumstances.

What Next in Case of a Data Breach?

If a data breach incident occurs, the controller will have to inform both the data subject and the National Data Protection Authority (ANDP) through a data breach notification within a stipulated time period. A data breach notification should include the information comprising:

- Description elaborating the nature of the affected data
- Information about the data subjects involved
- The privacy protection actions that were or will be followed
- The risks resulted from the incident
- Description of the security measures applied

What Are the Penalties?

A financial penalty, which is 2 per cent of the company's Brazilian revenue of up to R\$50 million (EUR 11.2 million), will be applied per violation on an organization that does not comply with the LGPD law.

Wrapping Up

There is a strong likelihood that the LGPD will suffer the same fate as GDPR because most of the regulatory bodies in the country have an association with the Brazilian government. That said, consumers should not lose all their hope since there is a light at the end of the tunnel.

Due to the LGPD law, companies cannot take things for granted when processing their customers' information without obtaining their consent. Therefore, the LGPD law should be considered as a step in the right direction because it will protect the Brazilian users' digital privacy rights successfully.

Read more at: Tripwire





Brazil Enters the Group of the 20 Leading Countries in Solar Energy, with 16th Position

Brazil has joined the group of 20 leading countries in installed solar energy capacity in the world, after a strong growth in technology driven mainly by smaller installations, such as roof systems for homes and commercial buildings.

After adding 2,120 megawatts (MW) in new solar generation systems put into operation in 2019, the largest country in Latin America closed the year in 16th place in the global ranking of the source, said the Brazilian Association of Photovoltaic Solar Energy (Absolar).

This represented an expansion of almost 90 per cent last year alone, to an accumulated total of 4,533 MW in solar capacity, according to the entity, which cited figures from the International Renewable Energy Agency (Irena). "In 2019 alone, the sector brought BRL 10.7 billion (EUR 1.7 billion) to Brazil in new investments and more than 63 thousand jobs," said Absolar in a note. Despite the significant recent growth, the solar source still represents less than 2 per cent of the Brazilian electric matrix, according to data from the National Electric Energy Agency (Aneel).

The advance of the solar source in Brazil was driven last year by smaller systems, usually installed by consumers on the roof of homes and commercial establishments or on large plots.



These facilities, known as distributed generation, added 1,470 MW in capacity, more than double the contribution of large centralized generation plants (650 MW), said Absolar.

Distributed generation systems have grown rapidly in Brazil since the National Electric Energy Agency (Aneel) defined rules so that production can be deducted from the electricity bill of consumers who have invested in the facilities.

In the midst of the strong expansion, the agency started discussions last year to evaluate changes in the form of remuneration for technology installations, on the grounds that incentives granted to it could increase costs in the medium and long term for consumers who do not have these systems.

But Aneel's movement has come under heavy criticism from President Jair Bolsonaro and parliamentarians, which has caused the agency to postpone a decision pending legislative proposals on the topic.

Read more at: Reuters

Brazil is Among the 20 Countries with the Best Offer of Digital Public Services

The work carried out by Brazil in the provision of digital public services was recognized in the 2020 Electronic Government Survey, published by the United Nations (UN). The country moved up two positions and is now 20th among 193 nations in the Online Services Index (OSI). The world leader in offering online services is South Korea, followed by Estonia, Denmark and Finland.

Brazil ranked first in this regard in South America and second in the Americas, ahead of important countries like Canada, Chile and Uruguay and behind only the United States. According to the UN, the Online Services Index measures the use of information and communications technology (ICT) by governments for the provision of public services at the national level, including open data, electronic participation, multichannel service provision, mobile services, level of use by the citizen, as well as innovative partnerships through the use of ICTs.

Read more at: Ministry of Economy of Brazil



ELDORADO Institute Launches Unprecedented Research on the Behavior of Companies in Brazil in Relation to R&D and Innovation

ELDORADO launches an unprecedented study in Brazil that aims to assess the interest of companies in research, development and innovation in the area of Information and Communication Technology (ICT). During the study, which took place between October and November 2019 with 87 companies, hypotheses were raised and validated about how open innovation and ICT technologies are being discussed and applied in the market.

The survey showed that more than half of the sample does R&D in ICT and two thirds already make some investment in new market trends. However, 47 per cent of participants said they had little or no knowledge of new technologies.

The study also showed that there is a great opportunity for investment in P&DI in companies that earn up to R \$ 500 million, through existing government instruments. Those who do not yet use these resources cite bureaucracy and ignorance as the main factors for not using incentives.

In terms of innovation, 58 per cent of companies practice some type of open innovation, an index that is below the global average. Its main challenges are managing internal organizational change, identifying

new sources of innovation and managing the relationship with external sources of innovation.

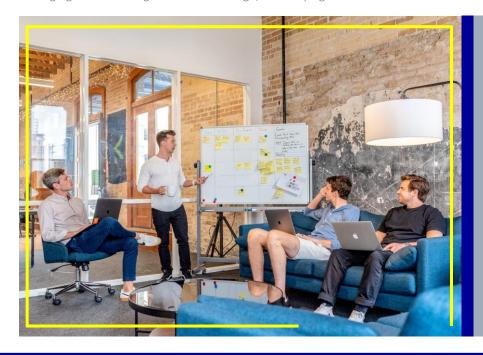
Those who practice open innovation, for the most part, enter into partnerships with universities, Institutes of Science and Technology (ICTs) and Research Institutes. According to the study, among the main factors of choice of ICTs are the infrastructure for R&D, technical know-how and quality of the solution / research.

Finally, the research also points out that to foster Brazil's competitiveness in innovation, it is necessary to act on different pillars, accelerating the transformation movement. These are:

- Increased understanding of partners in the open innovation system;
- Alignment between supply and demand for innovation;
- Simplifying access to resources;
- Expansion and simplification of access to credit for SMEs.

The complete study is available at this link.

Read more at: ABIPTI







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Brazil Receives OECD Endorsement on Science and Technology Recommendations

The Organization for Economic Cooperation and Development (OECD) recognized Brazil's adherence to a declaration and five recommendations by the entity in the area of science and technology. The decision attests that policies adopted by Brazil in the sector are in line with the principles, guidelines and practices required by the organization through these instruments.

The approved declaration deals with international cooperation in science and technology for sustainable development. The recommendations are: general framework of principles for international cooperation in science and technology; access to research data from public funding; principles to facilitate international technology cooperation involving companies; governance of clinical trials; and quality assurance in molecular genetic tests.

In May 2017, the Brazilian government requested the start of the membership process as a member of the organization. Before acceptance, nations need to adapt to an analysis of legislation and policies in several areas. So far, Brazil is fit for 90 of the institution's 252 reference instruments, which accounts for 35% of the total. It is the non-member country that most adhered to the organization's instruments.

Brazil's accession to the OECD allows the country to participate and influence the organization's decisions, expand the exchange of experiences with member countries, disseminate successful Brazilian public policies, in addition to assimilating the best global practices in public policies.

The role of the Ministry of Science, Technology and Innovations in this process was to analyze the content of the documents, verify the compatibility between the devices and the national legislation, as well as whether the recommendations and principles were adequate to the public policies of science, technology and innovations carried out by the parents.

The OECD is an international body founded in December 1961 with the objective of promoting "better policies for better lives", with a focus on improving global governance through the promotion of dialogue, the identification of international good practices and the solution to common problems in the most diverse areas of public policy. It currently has 36 member countries, in addition to the participation of several non-member countries in its discussions.

Read more at: MCTIC Brazil



The recommendations are: general framework of principles for international cooperation in science and technology; access to research data from public funding; principles to facilitate international technology cooperation involving companies; governance of clinical trials; and quality assurance in molecular genetic tests.



30th CORNET Call for Proposals

Since 01 July 2020, the 30th CORNET Call for Proposals is OPEN! Submission of project proposals is possible until 30 September 2020, 12 p.m. (CET, midday), via the CORNET Submission tool. Twice a year, CORNET issues Calls for Proposals for international Collective Research projects involving at least two different countries/regions. The calls follow a bottom-up approach: every topic that supports SMEs in their innovation efforts is welcome.

A CORNET project consortium consists of three pillars in each participating country/region:

- 1. SME organisation, association or cluster (depending on national structures),
- 2. research performer and
- 3. SME user committee with a minimum of
- 5 SMEs per country/region (the required number might differ depending on national

rules).

One of the participating countries needs to take the lead as project coordinator and has to submit the joint proposal within the stated deadline.

CORNET is a network of ministries and funding agencies that combine their existing funding schemes to increase the competitiveness of small and medium-sized enterprises (SMEs). In this way, CORNET supports new funding organisations worldwide to introduce pilot actions and schemes for pre-competitive Collective Research.

Further information about the application process and the budgets of all participating countries and regions is available here.

Deadline: 30.09.2020
Read more at: <u>CORNET</u>

IraSME Network: 26th Call for R&D Proposals

The 26th IraSME call for proposals for transnational R&D projects is currently open and will be closed on September 30th, 2020. The call is organised and funded by national and regional ministries and agencies participating in the IraSME network through their respective funding programmes.

IraSME is particularly happy to welcome Brazil as its network's most recent member. Brazil will be represented by EMBRAPII — Brazilian Agency for Industrial Research and Technological Innovation.

What IraSMF funds:

Development of new products, processes or technical services

Technical development from first idea to final prototype (before market launch)

R&D with significant technical risks for each funded partner

Minimum constellation: 2 companies from 2 participating countries/regions

Deadline: 30.09.2020.

For more information click here.



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EMBRAPII & Innosuisse: Joint Call Supporting International Innovation

EMBRAPII and Innosuisse work together to support international innovation projects implemented by partners from Brazil and Switzerland. Research institutions and companies have the opportunity to submit funding applications in regular calls for proposals. This partnership boosts knowledge and technology transfer and makes both countries more competitive.

EMBRAPII and Innosuisse are conducting a joint call for the first time. The call is open to innovations in all topics. The cooperation projects are focused in particular on applications from the following disciplines:

- Biotech and medtech
- Agriculture and food production
- Industry 4.0
- Advanced materials
- Information and communication technologies
- Clean energy & water
- Sustainable cities and communities
- Innovation and creativity (social, technical, cultural) und digitalization

The joint call focuses on research and development ranging from experimental of concept to technology demonstrated in relevant environment, leading to innovative solutions, which are considerably differentiated from comparable existing solutions in the market in terms of their functions, parameters or other features. They shall provide added economic, societal or environmental values, which have a significant market potential for Brasil and Switzerland. EMBRAPII and Innosuisse have opted for a two-stage evaluation process, to align the submitted applications with the common targets, synchronise the funding decision and allow for a fair chance of success.

Submission deadline for Pre-Proposals: 20.04.2020

Submission deadline for Proposals: 17.08.2020

For more information click here.

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VINNOVA & EMBRAPII: Joint Development of RD&I Projects in Any Area of Knowledge.

EMBRAPII and the Swedish innovation agency VINNOVA have an open public call for joint development of RD&I projects in any area of knowledge.

With this call, Vinnova wants to give Swedish actors such as companies or research institutes the opportunity to collaborate with Brazilian actors to carry out research and innovation projects starting in 2021.

Vinnova can grant up to SEK 2 million per project and the total budget in this call for proposals is SEK 6 million. By this we mean to

finance a maximum of 3 innovation projects. The support from Vinnova applies only to compensation for the Swedish players. The Brazilian players receive compensation from EMBRAPII Institut.

On the Brazilian side, there is no public notice.

Application deadline: 30.11.2020 at 14:00

For more information on the requirements click here.

Read more at: EMBRAPII & VINNOVA



Falling Walls Lab 2020 in Brazil

The Falling Walls Lab Brazil 2020 contest, sponsored by the German foundation Falling Walls, receives entries until July 31, 2020. The contest that rewards transformative ideas in Brazil has been organized by the German Center for Science and Innovation (DWIH) São Paulo since 2018.

Students, researchers, professionals and entrepreneurs from different fields of knowledge can participate in the contest.

This year, given the context of social isolation

due to COVID-19, all stages of the event will be in a virtual environment.

To participate, just have an idea, research or an entrepreneurial project, with the potential to solve real problems. Registration must be done through the contest website.

Deadline: 31.07.2020

For more information about the requirements

click <u>here</u>.

Read more at: ABIPTI

Startup Connected: DWIH São Paulo is Looking for Innovative Solutions to Sustainable Brazil

The "Sustainable Brazil" category of Startups Connected is aimed at German startups, primarily with solutions for the following SDGs: 2) Zero Hunger and Sustainable Agriculture, 4) Quality Education, 7) Affordable and Clean Energy, 9) Industry, Innovation and Infrastructure, 11) Sustainable Cities and Communities, 12) Responsible Consumption and Production and 13) Climate Action.

Since the "Sustainable Brazil" category is multidisciplinary, the enrolled startup must offer an innovative solution or solutions, primarily within one or more indicated SDGs, which has been developed in an academic or scientific environment. It's expected the startups have an interest in acting on a business level, as well as establishing scientific and R&D cooperation in Brazil. To do so, the startup must be willing to comply with the AHK acceleration process offered in partnership with DWIH São Paulo.

It is a prerequisite that the candidate startups are spin-offs born in public or private German universities or scientific, technology and innovation institutes. In relation to the entrepreneurs of these startups, young scientists, recent graduated from scientific institutes or still involved with academic activity, will be privileged. The evaluation criteria will be the profile of entrepreneurs, the innovative character of the solution and its impact, besides its potential and knowledge of the Brazilian market.

By winning the "Sustainable Brazil" category, the startup gains the opportunity to participate in the acceleration program offered by AHK São Paulo, as well as enjoy the DWIH São Paulo network for the construction of relations with partners, eventual customers and centers of excellence that can assist in the development or improvement of its solution for the Brazilian market.

Important: The "Sustainable Brazil" category is exclusive for german startups!

For more information on the deadline and detailed requirements click <u>here</u>.

Read more at: Startup Connected



Success Story

Sustainable Urban Growth: International Cooperation in R&D&I as a Basis for Future



by Elisa Natola, Brazilian National Council of State Funding Agencies

Rio de Janeiro. Based on an interview with Prof. Dr. Giacomo Pirazzoli for ENRICH in Brazil

This month, the ENRICH Monthly interview series spoke with Prof. Dr. Giacomo Pirazzoli who is the founding director of the CrossingLab think tank. The aim of the CrossingLab is to work on the transformations of the environment and of the territory today, in a context of real complexity, and with a special attention to innovation and experimentation, both in terms of the implications for the relevant fields, and for those outside them, in the national and international contexts. To ascribe value to "best practices", that is the processes of subsidiarity and participation, as well as to increase interaction and dialogue between the local and global levels.

As a practicing architect with a master's and Ph.D. degrees in architecture, Mr Pirazzoli has various successful projects not only in Italy but abroad as well. Having served as a member of the European Architects Council, Brussels, as well as the president of the State Academy of Fine Arts, Florence, besides performing many other institutional duties, most recently he took the responsibility of coordinating international affairs at the School of Visual Arts (EAV) of Parque Lage, Rio de Janeiro. At the same time, being an Associate Professor at the Department of Architecture (DiDa) of the University of Florence, since 2000, Mr Pirazzoli is leading

the CrossingLab think tank to cooperation activities with Brazilian governmental and research institutions as well as non-academics. Some examples are the Mackenzie University of São Paulo, Institute of Architecture and Urbanism of the University of São Paulo (IAU-USP) São Carlos, Brazilian Agricultural Research Corporation (Embrapa), Brazilian Ministry of Science, Technology and Innovation (MCTI)/ Funding Authority for Studies and Projects (FINEP), Brazilian National Health System (SUS), Oswaldo Cruz Foundation (Fiocruz), University of Braslia Gama, European Institute of Design (IED) Brazil etc.

CrossingLab has been acting in the past years as an incubator for research work such as GreenUP-a Smart City, Monocular Le Corbusier, Lina Bo Bardi Project, Heritage and New Technologies, leading to cooperation projects, including national conferences, international visiting professorships in Europe and abroad as well as workshops on innovation in sustainability and museums and cultural heritage. Its applied research framework focuses on several objectives which are a priority at the global scale (UN Sustainable Development 17 goals) and which may be primarily implemented to better connect Europe and Brazil, considering the converging objectives on both sides, especially in light of the European Green Deal by European Commission that has a great focus on sustainable cities and nature based solutions. Such approach gains strength also due to its innovation prototyping/applied research dimension, considering the effects of the current Covid-19 pandemics and its impact on environment, cities and its citizens.



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The Sustainability Track

Urban Resilience/Agritecture: GreenUP-a Smart City is a holistic urban farming strategy, mostly vertical due to notorious lack of horizontal farming land within metropolitan areas. As a vision, GreenUP-a Smart City is about turning any concrete-town into a beautiful edible forest — a façade, a roof or even a walkway of both existing or new buildings. This vision may turn the whole urban landscape into a biodiverse, organic, edible and healthy agritecture 4.0, including an air cleaning and CO2 balancing urban size green infrastructure.

With several options ranging from affordable lowtech to reasonably expensive hightech artificial intelligence release, *GreenUP-a Smart City's* systemic infrastructure may include water cycle bio-treatment (Zero Cycle), solar panels, wind turbines, waste recycling, up to heat island effect control.

Begun as an academic research, produced and published by CrossingLab as a "think global/act local" bottom-up tool, *GreenUP-a Smart City* had been discussed first at the Governing the Metropolis International Conference, in Paris 2012. Carried out thanks to nearly 200 people involved - botanists, engineers, architects, students, agriculture experts, urban planners etc. all working together across disciplines - *GreenUP-a Smart City* consists of several publications, collaborations and research partnerships in Europe (ENSAM-Ecole National Superieure d'Architecture Montpellier 2012; Munich University of Applied Sciences-School of Architecture, including 2 European grants at Munich University incubator, 2013), USA, Australia, China.

GreenUP-a Smart City first arrived in Brazil when Dr. Giacomo Pirazzoli happened to be an invited speaker by the European Commission at Europe-Brazil Climate Week Conference held in Rio de Janeiro in 2015. Few months later, a GreenUP-HUB had been set up at Faculdade de Arquitetura e Urbanismo-Universidade Mackenzie (in collaboration with CCBS-Centro de Ciencias Biologicas e da Saude) in São Paulo. This was instrumental to finally achieve an extensive state of the art knowledge to keep the whole GreenUP-a Smart City research appropriately grounded.

In practical words, the process followed several steps. First, previous historical approaches on urban farming strategies (e.g. from Middle-Age convents orchards in Mediterranean Europe to XIX Century Schrebergarten in Germany) have been systematically re-organized. The rediscovery of a poorly known treatise on "Piante Alimurgiche" (XVIII Century, Italy), on the other hand, paved the way to incredibly interesting steps towards Unconventional Edible Plants, which in Brazil turned to be know as Plantas Alimenticias Não Convencionais, an

issue actually gathering together some 140 thousand followers on Facebook.

Second, regarding the contemporary issues within metropolitan contexts, the term "activism" has been a significant key-word to select or even to get in touch with several peculiar bottom-up case-studies, the detailing of which has been instrumental to better increase the social side of urban farming. Moreover, Documentaries and independent video making production studios have been chosen to fill a permanent archive, also available for courses, lectures and public presentations.

Finally, a comprehensive overview of files available online has been organized both in English and Portuguese. This includes for instance do-it-yourself videos on design of farming tools (e.g. Arduino sensors to water plants), on innovative farming techniques (e.g. Singapore hydroponic vertical farms, the critical side of which is too often neglected), on organic fertilizer preparation as well as on recipes to cook vegetables while saving all vitamins and nutrition factors.

Given this research framework, including a relevant perspective survey on Brazilian organic farming background done with a great support of Ana Maria Primavesi and Ernst Goetsch who are experts in the field and who implemented "agrofloresta" which is an interesting kind of tropical permaculture, GreenUP-a Smart City is now ready for the design/built work. To complete this project phase, several applied research methodologies and approaches are needed. For instance, Heat Island Effect Control Project (in collaboration with the Gama Faculty of University of Brasilia and industrial partner Leonardo Group, for satellite monitoring); Small Spaces Edible Gardens (in collaboration with Embrapa-Hortaliças, industrial partner Felicita Empreendimento e Participações Ltda.); Healthy Towns, Healthier People (in collaboration with both Italian Ministry of Health and Ministry of Foreign Affairs); plus a couple of grassroots experimental projects with micro-entrepreneurs in São Paulo and Rio de Janeiro.

GreenUP-a Smart City Key Priority Areas: Urban Resilience after COVID-19; Healthy Food & Healthier Cities; HiTech+LowTech Agritecture 4.0; Edible Green; Depolluting Plants; Holistic Green Design & Social Commitment; Urban Self-Sufficiency; Green Education.

EU-Brazil cooperation on the mentioned themes is particularly promising, considering the large potential Brazil offers for implementing of such research & innovation fields, which are also key priorities for the EU, especially in the perspective of the incoming Research & Innovation Framework Programme - Horizon Europe.

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Museums and Cultural Heritage Track

Heritage and New Technologies: research focuses on new technologies (from 3D scanning & printing to Artificial Intelligence) for heritage survey preservation and restoration, from monuments to architecture and up to urban scale. Heritage and New Technologies ongoing research happens thanks to a main partnership with IAU-USP São Carlos and other partners such as the School of Architecture and Urbanism (FAU) of Mackenzie Presbyterian University and Faculty of Architecture and Urbanism of the University of São Paulo (FAU-USP) and DiDA University of Florence in the framework of cooperation activities organized by Mr Pirazzoli at Instituto Italiano de Cultura of São Paulo.

More often than not, the study of cultural heritage involves filming of a documentary or publishing of the research results to the broader public to raise awareness. Recently, a co-production agreement involving hitech movie processing has been signed between Italian and Brazilian producers. In this project, "Lina Bo Bardi: the architecture of the togetherness", a 70 minutes documentary on Italian-born Brazilian pioneering woman architect Lina Bo Bardi, is the prime focus. This project is a symbol of the strong cultural ties between Brazil and Europe that paves the way to new cooperation scenarios in the field of cultural industries, which are also a core target for the EU. The Lina Bo Bardi's film project acts as an example and a motivator for other partnerships, especially during situations similar to the current corona crisis, where adapting and responding to new circumstances is crucial for survival and success.

In order to promote a network of innovative and interactive public events, focused on EU-Brazil cooperation, a new project of the Marie Skłodowska-

Curie Actions Research and Innovation Staff Exchange (MSCA-Rise) aims to involve the University of Florence (CrossingLab and MICC-Multimedia Integration and Communication Centre), the KIKK Festival Namur (Belgium), the FILE Festival São Paulo and the FLIP-Festa Literaria Internacional Paraty towards the common goal of upgrading and implementing interactivity for public events both remote and in person.

Such initiatives are targeted at cultural and creative industries, which may be a starting point to furthermore connect Brazil and Europe, adapting to the circumstances created by the current pandemic, exploiting technological solutions and networks to keep the world tuned and connected, continuing to promote culture as a means for social and economic transformation.

In fact, EU's plans for recovery of the creative industries sector significantly affected by the Covid-19 pandemic have the goal of supporting sustainability, health and wellbeing. This aspect, in the overall global recovery strategies, may be boosted in cooperation between EU and Brazil, laying on the common cultural ties and on the mutual benefit principle, which entails economies, culture, technologies and societies.

Mr Pirazzoli's EU-Brazil connection

Mr Giacomo Pirazzoli landed in Brazil the first time in 1999 to study Lina Bo Bardi's outstanding architecture work as well as Lucio Costa and Oscar Niemeyer's Brasilia's plan. After that he deepened his research activity, networking with Brazilian key actors in this field, contributing to publications, workshops, conferences and multimedia contents. He has been an European Commission invited speaker at EU-Brazil Climate Week Conference held in Rio de Janeiro in 2015.

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During his stay in Brazil he developed projects in which he managed to merge his European essence and culture with the Brazilian, discovering opposites and alikes along the way.

The methodology developed within the concept of the *GreenUP- a Smart City* approach has found a fertile application in Brazil, due to the inspiring environment and matching of mutual priorities. An example is the GreenUP-HUB post-Doctoral programme, with seminars and workshops for students and colleagues, at the Mackenzie University, fostering knowledge transfer in the field of sustainable cities. Parallel activities have been held in Europe, bringing the Brazilian experience to the other side of the Atlantic, sharing knowledge and best practices on architecture and sustainable cities. Such activities have implemented a two-way exchange of experiences.

Brazil presents the most favourable climatic conditions to implement the *GreenUP-a Smart City* project, also thanks to the existing basic knowledge about family and organic farming, as alternative to industrial and agrotoxic farming. In such sense, the environment is a positive factor, not only for climatic, but also considering

human factors.

If on one hand, Brazil has been embracing the environment, also regarding the human aspects and receptivity, some episodes have caused some difficulty and challenge. In such respect, Mr Pirazzoli shared an experience, mentioning one story among others, in which implementing projects in vulnerable communities evidenced hampering factors linked to the context where poverty and criminality limited the possibility of local communities to put in practice the suggested and planned transformations. Managing funds in complex scenarios did not make the families involved, especially women, feel safe and comfortable. In such sense, a bottom-up approach is ideal, but not always feasible in its whole cycle.

We thank Prof. Dr. Giacomo Pirazzoli very much for sharing his valuable experience and knowledge on a very urgent and important topic of sustainable urban growth and being an "Ambassador" for increasing scientific and technological cooperation between Europe and Brazil.

Top tips from Prof. Dr. Giacomo Pirazzoli for a successful international collaboration

- Language is crucial to tune into the country.
- The human dimension gives support and enthusiasm to ideas: the EU-Brazil human and cultural ties and dimension can give breath to thoughts, initiatives and can inspire!
- Organization and timeline of planned activities need to be well planned, as the cooperating environment may not be aware of the needed responsiveness, procedures and timeliness embedded in the cooperation modalities.
- It is crucial to acquire funds and support for stepping from basic to applied research, so as in Europe, also in Brazil: it is crucial to seek public and private partnerships and funding to implement actions which have benefits on a multi-sectoral dimensions – governmental, private, environmental, social, among others.
- Brazilian multicultural heritages and ties are a cornerstone for building bridges with those cultures which compose its existence: for Europe, this can be an asset to build on, profiting of innovation to scale up

