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SNEAK PEEK OF WHAT'S INSIDE:

Dear Reader,

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

This second edition covers news and stories that show how science and technology and international collaboration contribute to tackling societal, environmental as well as economic issues faced by the world. For decades our industrial civilization sought to maximize profits and minimize costs neglecting the ethical issues and the impact on the environment. The business-as-usual attitude had many beneficent effects to the human condition overall. Yet, more often is the question raised whether it is sustainable. The complexity and the rapid proliferation of the problem requires a system-oriented thought and quick, resolute problem solving in multicultural and interdisciplinary work and research fields. In this regard, we have prepared for you an exclusive interview with Dr. Andrea Gassmann, a scientist working on the German-Brazilian research project REGINA and an expert between engineering and sustainable resource management. Brazil has the second largest reserve of rare earth metals in the world. However, at the current state the country is not optimally extracting these valuable resources. The aim of the project is to develop the on-site reserves in Brazil and optimise the entire value creation from metal oxide processing to application in high-tech products in a socially and environmentally compatible framework conditions. If REGINA yields desired results, this will fuel the Brazilian economy, as the country would become the second largest producer of rare earth metals and have a positive impact on the commodity price.

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

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Brazil-Europe Direct

Country Specific News

Ambassador Marcos Galvão Presented his Letters of Credence to the President of the EC Donald Tusk

On Thursday February 28th, 2019, H.E. Mr Marcos Bezerra Abbott Galvão, Head of Mission of the Federative Republic of Brazil to the European Union presented his letters of credence to H.E. Mr. Donald Tusk, President of the European Council. The European Council is the institution of the European Union (EU) that defines the overall political direction and priorities of the EU and consists of the heads of state or government of the member states along with the President of the European Council and the President of the European Commission.

Read more at: European Council's Website

Brazil Requests Compensation Over EU Curb on Steel

Brazil submitted on Monday, February 18th, 2019 to the European Union (EU) a request for compensation for the imposed tariffs on steel. The government also notified the World Trade Organization (WTO) that it may take countermeasures to balance its trade with the economic block.

On February 1st, the EU unveiled its plans to extend the safeguards tariffs enacted on July 2018 on metal imports from major exporting countries such as China, India, Russia and many others including Brazil for another two and half years. The decision was set into motion as a response to U.S. Presidents Donald Trump's metal tariffs. The EU steel safeguard tariffs comprise 28 product categories (e.g. laminated steel, pipes, and construction materials for roads and highways), from which Brazil is subjected to seven categories.

The requested compensation, according to Reuters, amounts to 180 million euros. The government, however, stated that it remains open to dialogue with EU.

If EU neither accepts to pay the claimed compensation nor is ready to negotiate, Brazil intends to place or increase tariffs on European products including powdered milk, as Reuters states.

Read more at: Folha de S.Paulo and Agência Brasil

Minister Marcos Pontes attends dinner with the King of Spain and meets Spain's Minister of Science and Technology

The Minister of Science, Technology, Innovation and Communications (MSTIC), Astronaut Marcos Pontes, met on Sunday (24th February) with Spain's Minister of Science and Technology, Pedro Duque, in Barcelona in an international mission. The meeting was part of the ministry's agenda at the Mobile World Congress (MWC) 2019, considered the largest event in the world in mobile technologies and innovation.

For Marcos Pontes, the partnership between Brazil and Spain can yield good results. "The Spanish minister, like me, is an astronaut. We have the same passion for science and technology, and the same concerns about using the benefits of technical knowledge in our countries", said the Brazilian Minister. Also on Sunday, the Minister attended dinner with the King of Spain, Philip VI.

The agenda of MSTIC in Barcelona continued until Thursday, February 28th. During the week, meetings were scheduled with representatives of the world's leading technology companies such as TIM, Amazon, Huawei, Claro, Oi and Telefonica, as well as visits to MWC technology fair booths and technology centres.

The delegation included, besides the Minister, the executive secretary Júlio Semeghini; the Secretary of Telecommunications Vítor Menezes; and Carlos Matsumoto, general coordinator of MCTIC's Multilateral Cooperation.

Read more at: MSTIC's Website


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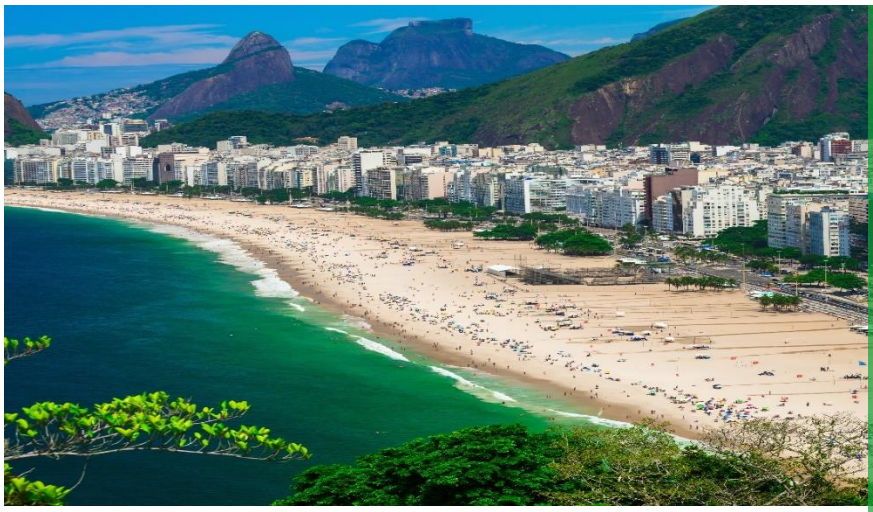
Ferrero partners with Liga Venturas, first Brazilian accelerator

Ferrero, an Italian brand of chocolates including Ferrero Rocher, Rafaello, Nutella, Kinder and Tic Tac brands, is conducting an open innovation project in partnership with Liga Ventures, an accelerator that specializes in generating business between startups and large corporations.

Named Ferrero Accelera, the goal of the partnership is to gain access to technologies and concepts created by startups and to implement improvements in the company's business, logistics and manufacturing processes. The company intends to stimulate the development of innovative projects that help to optimize the productivity and efficiency of the processes, besides stimulating in the company the mentality and form of work of the startups. The initiative also emerged in 2018, with a multifunctional Ferrero project, whose challenge was to think of opportunities that could help the company grow and after studies and analysis, the company decided to invest in the format of startups.

The program is looking for 4 startups that work on themes ranging from reverse logistics to team management and will last 4 months. The day-to-day acceleration will include not only regular meetings with Ferrero executives and executives, but also with the accompaniment of the Ventures League acceleration team, access to a network of mentors and partners, as well as a complete office in the heart of St. Paulo.

Entries for startups who wish to be part of the program are open and will go through April 14, 2019 and can be made through the link https://ferreroaccelera.liga.ventures/.



Brazil is Creating its Most Comprehensive Resource on National Biodiversity Using Digital Technology

Brazil is at the top among the 18 megadiverse countries. It hosts between 15 and 20 per cent of the world's biological diversity, with more than 120,000 species of invertebrates, about 9,000 vertebrates and more than 4,000 plant species.

The sustainable use of natural assets is critical to Brazil's present and future generations. But to do so while monitoring biodiversity loss and conservation efforts, it is crucial to understand the nation's resources first. With support from UN Environment and the Global Environment Facility, an initiative of Brazil's Ministry of Science, Technology, Innovation and Communications has been working to change this scenario, creating Brazil's most comprehensive resource on national biodiversity.

The Brazilian Biodiversity Information System currently brings together data and information from over 230 institutions, from universities to research centres, museums, state agencies, botanic gardens and zoos. Operational since November 2014, the system aims to support science, public policy and decision-making related to environmental conservation and the sustainable use of natural resources.

This is achieved by encouraging and facilitating digitalization and online publication, integrating openly accessible data and information on Brazilian biodiversity.

For researchers, the system is an invaluable asset. For example, a scientist researching an endangered species—like the maned wolf—can now find comprehensive information on the species, as well as publicizing his or her own work to a wider audience of fellow researchers worldwide. But the system has other practical uses as well. Farmers can use the platform to help calculate environmental compensation credits, or to decide which species to prioritise in restoration efforts—such as endangered flora, or plants that provide shelter and food for threatened wildlife species in the region. Finally, any user can contribute to the system by uploading photographs, documentation and information on biodiversity through the Citizen Science programme.

Read more at: UN Environment

Brazil and UN Environment make an important step towards conversation of biodiversity

Brazil – the Largest Economy but the Least Innovative Country in the BRIC Region: Who is to Blame?

Brazilian companies invest little in innovation. As a result, Brazil is consolidating as a producer of commodities and staying out of the modern economy. If the scenario does not change, the country will not be able to overcome its socioeconomic difficulties. This is what the study Intellectual Property, Innovation and Development: Challenges for Brazil, produced by the Brazilian Association of Intellectual Property (ABPI) points out.

In the survey, the ABPI says that innovation "is the main key to opening the door to sustainable development." But Brazil is not investing as it should in the area. The country ranked 64 out of 126 countries with the worst indicators among BRIC countries in the Global Innovation Index (GII), published annually by Cornell University, INSEAD and the World Intellectual Property Organization (WIPO). This is due to an aversion of entrepreneurs to the inherent risk of innovation and cost Brazil.

Public policies have been insufficient to encourage the development of brands and patents, the study points out. To make matters worse, the National Institute of Industrial Property (NIIP) had, by the end of 2017, 225,115 patent applications pending. The average term for analysis in Brazil is 10.2 years, while in Japan it is 1.3 years, and in the US and European Union, 2.2 years.

The ABPI emphasizes that, in order to improve this scenario, Brazil needs to increase the interlocution between academia researchers and companies. In addition, it should equip the NIIP better, so that the organ becomes more agile. The association also encourages civil society entities, such as the Brazilian Bar Association, to engage in demonstrating the importance of intellectual property.

The president of ABPI, lawyer Luiz Edgard Montaury Pimenta, says that the study is useful for the special secretary of Productivity of the Ministry of Economy, Carlos da Costa, to develop public policies for the area. The portfolio now commands NIIP, which, until the end of last year, was subordinate to the Ministry of Industry, Foreign Trade and Services.

Read more at (in Portuguese): Consultor Jurídico

Without investing in innovation, Brazil will not overcome economic problems

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The government of Brazil seeks technology-based ideas to contain public spending

The Brazilian government held a meeting with technology professionals to discuss the application of innovations in public administration. The "Challenge + Brazil - Hackathon of Design and Processes" was held in Brasília, on February 21 and 22. The initiative came from the Ministry of Economy, in partnership with the National Confederation of Municipalities (CNM), and was attended by students and public servants, in addition to the support of the National School of Public Administration (Enap).

A 19-hour marathon was held during the event to contemplate areas such as open data. In addition, there have been roundtables and workshops related to improvements and process analyses around regulatory aspects. According to the organizers, the aim of the action was to find ways to use technology to promote "more transparency, effectiveness and simplicity" in the public sector. Minister Paulo Guedes always reinforces the need to cut public spending - his staff says that Brazil "spends a lot and spends badly".

Washington Bonini, deputy executive secretary of the Ministry of Justice and Public Security, represented the minister Sérgio Moro. "There is no point in having absolute control of expenses, if the expenses are not realized and do not produce public value. The great challenge is to have tools that allow the control and effectiveness of public spending," he said.

At the same time, Paulo Uebel, Secretary for Debureaucratization, Management and Digital Government of the Ministry of Economy, reaffirmed his efforts to strengthen local governments and improve the lives of those who use public services. "We need to bureaucratize, give transparency and empower people who will use these resources."

According to Wagner Rosário, Minister of the Office of the Comptroller General of the Union, the promotion of meetings such as this helps even reduce bureaucracies and corruption. In an interview with TV CNM, he stated that "where there is corruption, there is bureaucracy."

Read more at (in Portuguese): Olhar Digital


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Brazilian Researchers are Seeking to Prevent Foodborne Salmonella

A research team from the State University of São Paulo (FCAV-UNESP) is seeking to prevent foodborne infections by investigating intestinal tract of poultry to find out which genes are essential in the survival of Salmonella.

Salmonella provokes inflammation in the guts of host poultry and uses it as a source to survive and multiply . This process is associated with two genes of the bacteria, tetrathionate (ttr) and propanediol (pdu). A successful identification of the gene would allow the researchers to create a vaccine that can be used in combating Salmonella infection.

The project, FAPESP, is led by Angelo Berchieri Junior, a professor at FCAV-UNESP, and project work was presented at the FAPESP Week London (February, 2019). The symposium is aimed to strengthen the cooperation between researchers from Brazil and UK.

The results of the study will also play an important part in the EU-Brazil trade, given the recent import bans that restrict 20 Brazilian poultry and beef plants to export to the EU. **Although Brazil has laws that control certain Salmonella serotypes, due to various reasons including corruption, some infection cases go undetected or ignored. Therefore, the Salmonella gene research project may offer a long-term solution in curbing Salmonella contamination.**

Read more at: Food Safety News

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European mobile banking startup wants to expand to Brazil

Fintech Startup N26 is Expanding its Services to Brazil

N26 has announced to launch its services in Latin America and the first stop will be Brazil. It is currently available in 24 European countries. Last year it has unveiled that the U.S. will be its next target market at some point during the first half of 2019.

The Fintech startup N26 is a German challenger bank. It has reshaped the retail banking experience, making the banking for smartphones simple, fast and contemporary. N26 enables customers to send money in real time with only few clicks and opening a bank account takes less than ten minutes. The bank is known for its no-nonsense approach, revolving around millennial ideals – customer focus, transparency, and trust. Its customer base grew rapidly since it was founded in 2013 and reached more than 2 million in 2018. N26 is Europe's first mobile bank with a full European banking license.

In 2018, N26 raised a total of USD 215 million from the world's most well-known investors, such as Alliany X, Tencent Holdings Limited, Li Ka-Shing's Horizons Ventures, Valar Ventures, members of the Zalando Management Team, and Earlybird Venture Capital. Earlier this year, it announced its USD 300 million Series D funding led by Insight Venture Partners, including GIC, Singapore's sovereign wealth fund.

For the expansion plans to Brazil, N26 is seeking to form a partnership with a local bank. However, there is no definite timeline as to when its services will available for the new market.

Read more at: Fintech Magazine, TechCrunch and N26

Building a new and Sustainable "Rare Earth" Industry in Brazil

by Dr. Anneken Reise, DLR

Bonn. Based on an interview with Dr. Andrea Gassmann for ENRICH in Brazil.

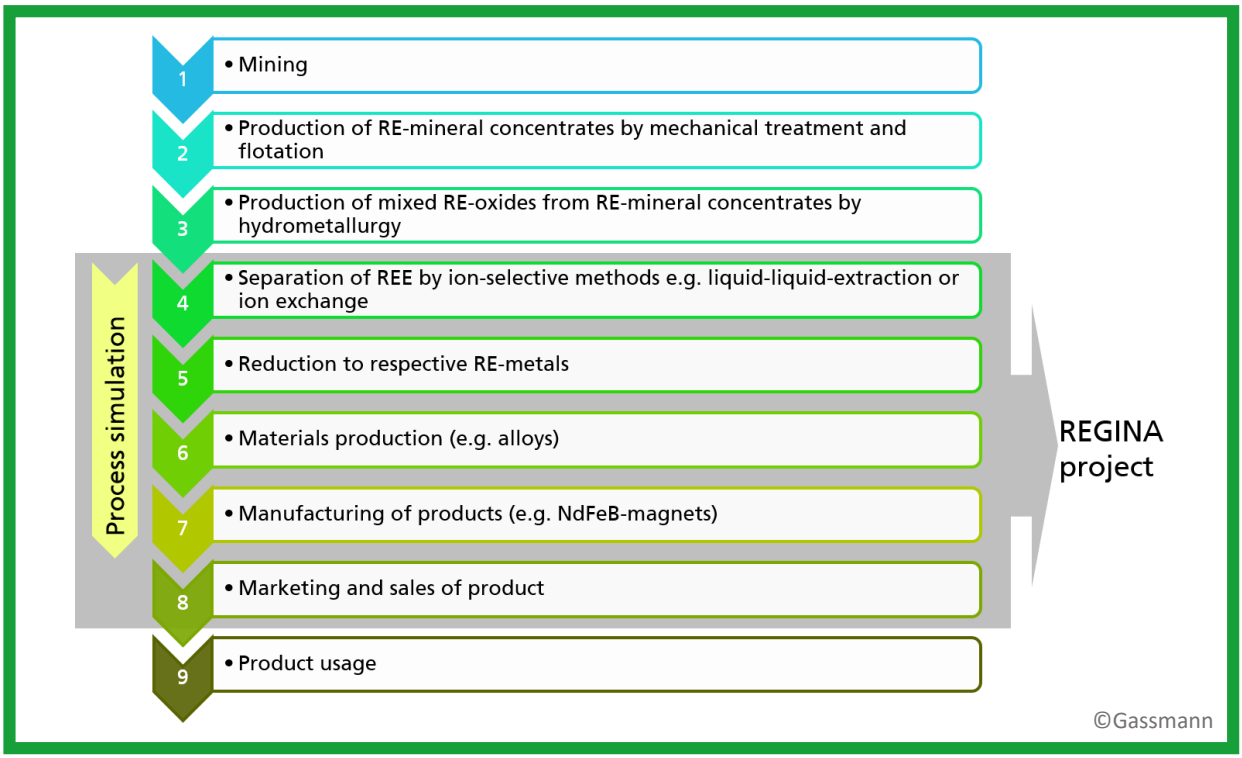
The ENRICH in Brazil interview series for ENRICH Monthly continues with Dr. Andrea Gassmann, a German scientist working at the Fraunhofer Project Group Materials Recycling and Resource Strategies IWKS. The purpose of this interview series is to share the stories of people and organizations that have established successful scientific and technological cooperation between Europe and Brazil.

Without them, a great deal of our essential modern technology would be inconceivable: Rare earth metals – known as "rare earths" for short – are used in wind turbines, LEDs, high-performance batteries and MRI scanners, to name a few. Unlike the name suggests, these metals are not actually rare, but their deposits are distributed unevenly around the globe. Today, over 90% of rare earth production takes place in China. However, the "REGINA" research project aims to change this: The project is developing new methods for sustainable processing and production of permanent magnets for industrial applications. REGINA stands for "Rare Earth Global Industry and New Applications".

With around 22,000,000 tons of rare earth metals in its reserves, Brazil has the second largest source of rare earth metals in the world, after China (55,000,000 t). However, these reserves are currently only being extracted and processed to a minor extent in the South American emerging market. The aim of the REGINA project is firstly to promote the on-site development of Brazilian reserves, and secondly, to optimise the entire value creation from metal oxide processing to application in high-tech products.

For this purpose, a consortium of German scientific institutions and companies work together with Brazilian partners from science and industry under the leadership of the Fraunhofer Project Group IWKS to set up a process chain for the production and marketing of high-performance permanent magnets from Brazilian resources.

As an expert on the interface between engineering and sustainable resource management, Dr. Gassmann works on the key areas of environmental impact assessment and the increase of resource efficiency. "With the support of German expertise, Brazil can become number two on the global rare earth market," Gassmann explains. "Social and environmentally compatible framework conditions along the entire value creation chain will be developed in collaboration with Brazilian business partners to create the basis for the predicate "green magnet" and thus offer a unique selling proposition that differentiates the product from other magnet manufacturers."



"Establish a personal contact to your partner or partner institution"

The collaboration started in May 2016 with a delegation of German partners visiting Brazilian representatives interested in the topic of rare earths and permanent magnets. At that time, funding was not yet in sight.

However, the German project partners submitted a proposal which was accepted as part of the programme "CLIENT II –International Partnerships for Sustainable Innovation" and funded by the German Federal Ministry of Education and Research. The project started in August 2017 and is still ongoing.

"During my Postdoc time at the TU Darmstadt we worked together with several Brazilian guest scientists, and I believe that these years of cultural exchange helped to find common grounds."

So far the greatest challenge in the collaboration has been the administrative part: "Administrative processes take a long time due to their complexity. Also language barriers do play a role, although our Brazilian colleagues are fluent in English, and many of them even do speak German. But the drafting of contract documents has been challenging."

Dr. Gassmann emphasizes that collaborating with Brazilian partners who are passionate about developing materials and technologies for the benefit of their country is of special importance to her. "The entire value-added-chain was non-existent. The mine in Brazil is actually mining Niobium, and rare earths are part of their mining waste. So one of our first challenges was to find out which elements relevant for magnet production were available, before developing sustainable marketing concepts for both Brazil and Europe."

In the future, German companies will have a broader market offer for magnets and rare-earth metals or compounds, which currently have to be imported almost exclusively from China. In the long term, both Brazil and Germany will benefit from an alternative supply of resources and thus be able to cover the supply of raw materials to major markets. In addition, mutual economic relations will be expanded and strengthened.

We thank Dr. Gassmann very much for her valuable insights and being an "Ambassador" for increasing scientific and technological cooperation between Europe-Brazil.

Dr. Andrea Gassmann