

Dutch Blockchain Coalition

Report of the Biochemistry
Innovation Mission to Brazil by RVO,
Topsector Chemie and Ministry of
Economic Affairs and Climate

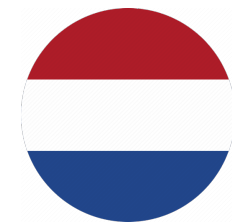
19 februari 2024

Yvo Hunink de Paiva

Exploring
Digital Product Passports

for use in the
Biochemical Industry

between
Brazil and **The Netherlands**



The three things we want you to remember

Summarizing the advice surrounding digital product passports to the stakeholders of the NL/BRA biochemical sector.

Don't wait for 2028!

Don't wait for 2028 to work on Digital Product Passports (DPPs) for usage in Dutch/Brazilian trade of biochemicals, as legislation is planned to be operational at that point.

Pick a product!

Organize around a single biochemical product to pioneer in DPPs that is key to the relationship, but not too complex or political.

Learn collectively

Structure the international collaboration in the shape of a learning community, using existing mechanisms of Topsector Chemistry and NWO.

- ChemistryNL (Topsector Chemie) as the initiator
- The Ministry of Economic Affairs and Climate as the supporter
- The Dutch Enterprise Agency as the organiser
- The Innovation Attaché Network in Sao Paulo as the local executor

Of a mission of Dutch organisations to Brazil.



Rijksdienst voor Ondernemend
Nederland

Innovatiemissie bio-grondstoffen voor chemie Brazilië

Gepubliceerd op: 3 augustus 2023 | Laatst gecontroleerd op: 24 oktober 2023

Ontwikkelt u innovatieve manieren om uit biomassa bouwstenen voor de chemische industrie te produceren? Wilt u weten wat uw kansen zijn in Brazilië? En wilt u contacten met Braziliaanse kennispartijen, bedrijven en overheden opbouwen of versterken? Meld u dan aan voor de innovatiemissie 'Circulaire bio-economie' naar Brazilië.

Deel 



Maandag
11 december t/m
05:00

Vrijdag

15 december

16:00



Perdizes

Visited places

A coalition of 17 Dutch organisation, for 5 days Brazil, traveled to 4 cities and visited 10 organisations.



Meet the Delegation

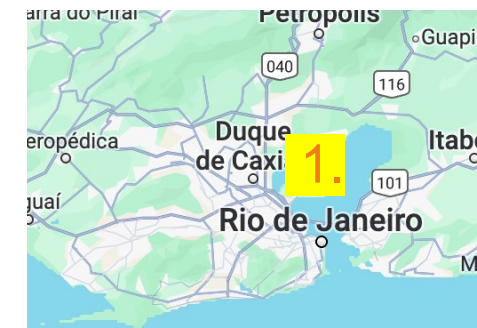
Companies



Research



Government & foundations



- 1 a. Petrobras Centro de Pesquisas
- 1 b. SENAI CETIQT (Centro de Tecnologia da Indústria Química e Têxtil)
- 2 a. National Research Center on Energy and Materials (CNPEM)
- 2 b. The State University of Campinas (UNICAMP)
- 2 c. Braskem Research Center of Renewable Chemicals
- 3 a. Raizen 2G bioethanol plant Costa Pinto
- 3 b. ESALQ (Agricultural campus of University of São Paulo)
- 4 a. The São Paulo Research Foundation, FAPESP
- 4 b. Reception at Consul-General Wieneke Vullings
- 4 c. Oxitenno – chemical company

- **Scaling up** of high-value applications such as materials and chemicals in biomaterials, such as production of biobased polymers
- **Transition-oriented applications** in sectors like aviation and shipping where no alternatives will be available in the medium term, such as biofuels and biogas
- **Phasing out** of incentives for low-value applications such as electricity and heat generation



ChemistryNL is the name of the Top Sector Chemistry and executes the mission-driven topsector and innovation policy (MTIB) of the Ministry of Economic Affairs and Climate.

The policy of the 10 Top Sectors in The Netherlands aims to create opportunities from global societal challenges in the field of climate, food, health, circularity and safety, wherein the Dutch Blockchain Coalition with its close relation to the Top Sector ICT plays a cross-cutting role through all challenges.

Why Brazil? Nexus between Brazil and The Netherlands

As defined by Chemistry NL (Top Sector Chemistry)

- **Shared Commitment to Sustainability:** Fostering economic growth while preserving our planet.
- **Biodiversity as a Strength:** Brazil boasts unparalleled biodiversity. Innovative research and development, can unlock the potential of these resources for sustainable products with the highest added value.
- **Creating Synergies in Trade:** From bio-based chemicals to sustainable materials, joint ventures can stimulate economic growth.
- **Policy Alignment:** Work together to establish a regulatory framework that encourages investments in the biobased sector.
- **Education and Skill Exchange:** Building a sustainable future requires a skilled workforce. Foster knowledge transfer.
- There are [existing collaborations](#) since 2011.

Why the Dutch Blockchain Coalition (DBC)?



The majority of the delegation and the contact person of the visited organisations had a strong focus on chemical engineering. This questions why the DBC wanted to participate in this innovation mission.

In 2023 the DBC [published a report](#) on traceability of sustainability information through supply chains of renewable fuels. Therefore we have built a network within this sector, as well as have developed knowledge and insights in what problems the sector face. The report showed that the concept of digital product passports is essential to the future compliancy and trustworthiness of the biochemical sector.

Apart from this, DBC is funded by the ministry of Economic and Climate Affairs, and sees the interest of the ministry in biochemicals from Brazil as an impactful case. Furthermore, DBC is connected to Topsectoren ICT, the IT variant of ChemistryNL, and therefore also aligned with the policy objectives and industry needs from those public private partnerships.

Last but not least, is the writer of this report currently living in Brazil, which gave the opportunity to strengthen international ties with closer proximity.

Digital Product Passports

A continental shift towards more sustainable products.



Within the European Eco-design for Sustainable Product Regulation (ESPR) Chapter III art. 8, the concept of a digital product passport is introduced. This will be **the key instrumentarium used in sector and product related regulations** expected in the future.



Where ESPR creates the general outline of product passports, the product specific elements are captured by so called 'delegated acts'. The first act including this is the battery legislation. **The focus areas of future 'delegated acts' include packaging materials and chemical products, and therefore have high relevance to the biochemical sector of Brazil.**



Delegated acts are expected to go into operation from 2028. **This means that as early as 2028, bio-chemical products could only be placed on the market if a product passport is available.**



The Dutch Blockchain Coalition has been shaping the pathway towards Digital Products Passports for some years. The standards being used for the first EU compliant Battery Passport are (nearly) identical to the protocols used in our use cases, such as renewable fuels, vehicles, soil and salt. Moreover we also apply the same standards to digital identity for individuals and organisations, **creating an holistic and interoperable trust network.**

Main Conclusions from the Trip

Brazilian companies **have not yet realised the impact of the EU regulation** that are coming up, and the concept of a digital product passport is new to them. An introduction to this has led to worries regarding maintaining compliancy of biochemical products exported to the EU after 2027.

There is a clear **need for defining a pioneering product** on which efforts of creating Digital Product Passports could focus, so that Brazilian companies exporting the EU can prepare for expected regulations. Potential products are:

Options are 2nd gen bio-ethanol (E2G), bio-butadiene, bio-methane, SAF, Lignin or others.

There is a mature ecosystem to support a multi-stakeholder collaboration, with a focus on research and development. Considering the newness of the DPP topic **the framing of an international learning community fits as a collaboration form** within that ecosystem.

Options are through Topsectoren Human Capital with Topsector Chemie in the lead, or through a call with NWO/FAPESP in line with the existing format of the joint calls.

What information would collaboration partners like to get out of this trip?

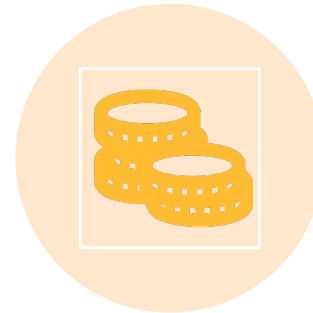
Examples are:

- What are the specific research questions surrounding digital product passports for the connected organisations?
- What Dutch and Brazilian research institutes would be willing to participate in a research community surrounding digital product passports?
- What would the deliverables of the learning community be?
 - *Options are prototypes, integrations in existing systems, or policy advice on delegated acts.*
- Who is able to finance this learning community?
- What product is most critical for the collaboration between the Netherlands and Brazil?
 - *Options are 2nd gen bio-ethanol (E2G), bio-butadiene, bio-methane, SAF, Lignin*

Things we continue working on



Receive more information about learning communities with Topsectoren Human Capital



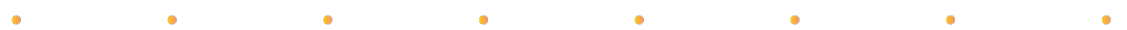
Get key players to support a learning community, such as Topsector Chemistry / Topsector Energy / Min. Of Economic and Climate Affairs / NWO



Collect the relevant research questions from all defined organisations that have relevance to the digital product passports, that could be the basis of a learning community.



Get both IT and Chemical departments of the relevant Dutch research institutes together for finding synergies.



<https://www.eurekanetwork.org/open-calls/globalstars-brazil-2024>

Globalstars call for projects with Brazil

FROM OCTOBER 1, 2023 AT 21:00 SAO PAULO TIME
TO MAY 16, 2024 AT 17:00 SAO PAULO TIME
THE CALL CLOSES ON 16 MAY 2024

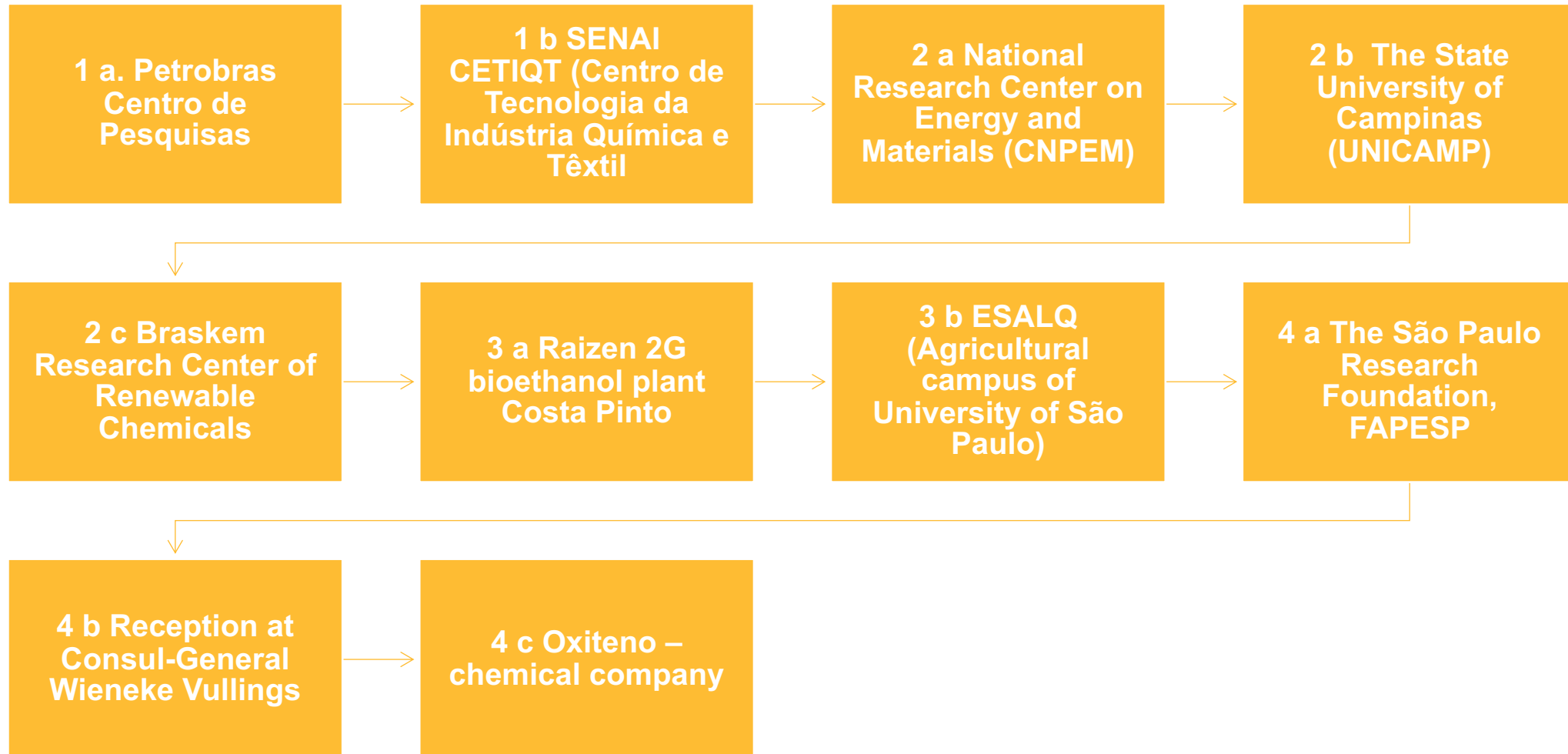
The national funding bodies from Brazil, Belgium (Flanders), Czech Republic, Netherlands, Portugal, South Africa, Spain and Türkiye have allocated funding for organisations collaborating on international R&D projects in all fields of knowledge.

You can submit your R&D project application for this call for projects **between 2 October 2023 and 16 May 2024 at 18:00 BRT / 22:00 CET**. Your project consortium must include at least one organisation based in Brazil and another one in any Eureka participating country in this call.

The parties listed above must be unrelated parties (i.e. no direct, indirect, beneficial or constructive ownership interest between these parties.)



All Visits of the trip





Dutch Blockchain Coalition

connect and create

 dutchblockchaincoalition.org

 [@BCcoalitionNL](https://twitter.com/BCcoalitionNL)

 [Dutch Blockchain Coalition](https://www.linkedin.com/company/dutch-blockchain-coalition/)

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