Proposal for the 41th German Brazilian Commission on Economics Cooperation

to install a German Brazilian Innovation Dialog

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Hamburg, Germany

with the support of

EMBRAPII and Fraunhofer-Gesellschaft

Ministério da Ciência, Tecnologia e Inovação
Ministério das Relações Exteriores
Ministério do Desenvolvimento, Indústria e Comércio Exterior

Bundesministerium für Bildung und Forschung
Bundesministerium für Wirtschaft und Energie

A. Background:
Germany and Brazil have developed during more than 30 years instruments of consultations in the field of economy and science, through the bilateral Commissions of Economic Development and the Commission for Science and Technology. Both have different rhythm agendas and participants.

In 2010 in Munich a very successful idea to build up a bridge between the both commissions in the field of innovation was launched including entrepreneurs, academia, institutions and governments to fulfill a dialog gap between both activities. The Ministry of Foreign Relation of Brazil has recovered this initiative and encouraged the participants in the last Mixed German Brazilian Commission for Science and Technology to launch it again in Hamburg during the next GB Meeting for Economic Development in 2014.

B. Objectives:
Innovation is a priority for Germany and Brazil in order for both industries to be competitive in the global market. Both have developed programs and agendas in companies, institutions, financing institutions, education and academia. There are many joint projects between both countries in the innovation field. Fraunhofer-Gesellschaft and EMBRAPII agreed to build up an efficient support for innovative projects. The objective of this Initiative is to inform, to address and advocate ideas, projects, and programs to increase the performance of the cooperation's between both sides. The driver of this Initiative (or Forum) should be the entrepreneurship and the institutions that perform innovation in Germany and Brazil.

C. Initiative or Forum:
During the German Brazilian Commission for Economic Development the Initiative or Forum should have an ordinary meeting with an appropriate negotiated agenda. The coordination of the agenda should be done by the entrepreneurship with the inclusion of the respective institutions and governments. The meeting should bring effective contributions to the Commission to be informed and followed up by proposed and accepted actions.

D. Composition:
The coordination should be done by both entrepreneurship representations and respective institutions/or governments.

The invited participants should be the institutions and entrepreneurs, which are involved in the Innovation Agenda of both countries. CNI and BDI and AHK should indicate the representatives for a period of 2 years as well as the government.
The EMBRAPII and Fraunhofer-Gesellschaft should have permanent seat in the Forum.
The organization of such a Forum should be similar as the experiences with other Commissions (Agribusiness, SMEs, etc.).

E. Organization:
The organization of the event during the German Brazilian Commission should be done through the CNI-BDI-AHK that organizes the Conference.
A virtual secretariat should be created as platform to inform and communicate, managed by the Brazilian side of CNI and MCTI, for the next half year, when the group meet again.
CNI, BDI, Fraunhofer, Embrapii, BMBF, AHK should be involved in the communication committee. During this time the organization of the virtual secretariat should be decided.

F. Decisions
The GB Innovation Dialog Group, **GBI** decided to develop three initiatives to be developed in aprox. 6 months until the next meeting and three distinguished area.

1. Innovation Funding Embrapii, Fraunhofer
2. Innovation in Bionenergy and Biotecnology
3. Cooperation between INPI and DeutschesPatentamt

For those three areas the group prepared the annex with descriptions.

ANNEX 1

Result and Recommendations
German Brazilian Initiative - Cooperation for Innovation
Chapter: Innovation in Bioenergy and Biotechnology

Brazil has developed technologies in the Bioenergy field supported by bio combustion policies substituting fossil energy through renewables. Through this worldwide largest program, which includes automotive technologies for flex fuel engines, Brazil became the largest producer of fuel ethanol from sugar cane. Driven by this success other raw materials and new processes for new materials or products became focus of attention. Up stream users are the chemical, pharmaceutical and other industries. The production of ethanol from lignocellulosic biomass, 2nd generation (bioethanol), and new developments, e.g. diesel from sugar cane are presenting interesting opportunities.

Germany has developed innovative products and processes for chemical and other industrial applications. The raw material base of these products is traditionally fossil, while the share of renewable raw materials is growing steadily. High prices of fossil origin raw materials are one important incentive for the development of renewables, another one is the effort to improve sustainability impacts.

Brazil and Germany are developing innovative bio-based processes and products that can address sustainability needs and consumer demand for bio-based products.
The cooperation of companies and research institutions is intensifying. The scope of this chapter in the Forum is to identify selected areas of interest and institutions which could cooperate. The following areas of interest were identified:

a. Process of 2nd generation bio ethanol from bagasse or cellulose
b. Process of biodiesel from the sugar cane
c. Biopolymers & Biometics' as functional products or biomaterials
d. Biobased chemical building blocks and biobased chemicals

EMBRAPII as the new Institution to promote Innovation in Brazil, together with Fraunhofer Gesellschaft are interested to identify institutions in the own countries countries who together with industrial partners are systematically investing in R&D in the identified fields.

Companies like BASF, Bayer, Braskem, Evonik HENKEL, Evonik, or Oxiteno are interested to identify fields of cooperation between Brazil and Germany in R&D and innovation.

Once establishing the German Brazilian Innovation Forum our recommendation to the German Brazilian Mixed Commission is until the next Forum in 2015 to focus on :

1. confirming that the above identified fields are the priorities for both countries
2. identifying common R&D interests in this field
3. identifying running programs in Brazilian and German research Institutions
4. identifying Companies of both countries which have interest in in joint projects.
5. delegate the coordination of such effort to CNI and Ministry of Science, Technology and Innovation on the Brazilian side and BDI and Ministry of Higher Education and Research on the German side

Coordinator: Antonio do Vale, Michael Todd, HENKEL.

ANNEX 2

Result and Recommendations
German Brazilian Initiative - Cooperation for Innovation
Chapter: Innovation in the Automotive Sector

Brazil has an important economic growth potential expected to bring the country to the top 5 world largest economies by 2030.
Brazil has the 8th largest automotive fleet in the world with a density of vehicles per 1000 people of 1/3 of Germany.
The German OEs are in strong positions in all market segments supported by German system and part suppliers operating in the country with a total participation of 23% of the autoparts and systems market.
Due to market demands new technologies for comfort, safety and energy efficiency are to be introduced and localized in short term, requiring more development capability of the supply chain to make this available to support the OEs market position and growth, against a growing competition of newcomers, mainly from the Asian area.
Further a competitiveness improvement in the supply chain is necessary to face the fierce competition generated by the overcapacity expected for the next years.
CHALLENGES

- Strengthen German presence in the autoparts segment
    - Develop competence for the new technological demands from the market in the hole supply chain
    - Increase productivity through investment in process an automation
- Increase R&D capabilities to support local market demands

Being so the automotive chapter of the to be created innovation forum suggests:

- Production in the next 6 months an overview of the already existing cooperation in the areas mentioned and proposal of prioritization elimination and inclusion of initiatives as necessary
- Revitalize of the cooperation of the 2 countries in the patent management process to offer a more secure and efficient patent process in the Brazilian market

Coordinator:,Wilson,Bricio

ANNEX 3

Result and Recommendations
German Brazilian Initiative - Cooperation for Innovation
Chapter: Innovation Funding

Intensifying the international commerce in uneven economies is a quite complex challenge. Since countries with lower technological development are fragile to global competition, the most common action adopted by these less developed countries are market protection measures in order to maintain their market shares in the short-term.. These barriers are born from the pressure of business organizations and workers unions as a natural – but short-lived – reaction to preserve their economies, and consequently their jobs. Therefore, governments of less developed countries tend to close their markets. We can observe that phenomenon again since 2008.

Unfortunately, this leads to a loose-loose situation: Less developed countries experience a further increasing technological gap in industry, and a delay in the development of their markets. More developed countries loose market shares due to exclusion from large markets. The global result will be a loss in global wealth and social benefits. The only way to turn this into a win-win situation is joint innovation. This will reduce the risk for local economic collapse in less developed countries and consequently opening their markets. This in turn opens these markets for more developed countries. So, accelerating the gap reduction between nations via joint innovation will result in more open markets and global wealth.

By evaluating the global industrial value chains, it becomes obvious how innovation is already today the basis for value generation in high technological content products. For example, Brazil needs to import high-tech jet turbines and avionics to maintain the existence of an innovative aircraft industry. Closed markets would both punish the more developed countries in terms of market share, and Brazil that would not be able to maintain a globally competitive aero-space industry. More than that, many businesses with local markets would not grow or even survive without the input of international suppliers of technological intense products or capital goods. In this case the workers unions and producers organizations would ask for a open market in order to get their components, capital and other goods that are necessary for their production value chains. Another good example is the agricultural business in Brazil. It demands equipment and systems ranging from harvesting to processing, which are embedded with many imported components and subsystems. This allowed Brazilian agriculture to increase its productivity by a factor of 3 over the past decade.

So, developing well-planned mechanisms to increase the speed of innovation in industry is a promising strategy for opening markets and increasing global wealth. This basic mechanism would target the increase of public and industrial investment in research for innovation as the main indicator. Our proposal is to establish a joint strategy between Germany and Brazil.

The Fraunhofer Society in Germany has been a benchmark on how to orient science and technology competences towards innovation in industry. If implemented in developing societies it could rapidly decrease the innovation gap between uneven nations. It could lead to more open markets and global wealth as a secondary goal.

Brazil is just now implementing a new system, aiming at promoting research for innovation in industry. It is called EMBRAPII – Brazilian Enterprise for Innovation in Industry. It has been launched by December 2013 with a prospective budget of US$ 1 billion for the next 4 years. It is based on the Innovation Units called EMBRAPII Units, where part of a science infrastructure already in place may get additional funding if their activities are enhanced towards innovation in industry.

Proposals for Consideration:

- Fraunhofer has been a partner in the selection of the EMBRAPII Units and in the development of R&D projects. We would like to boost and optimize this cooperation.
- Next step would be the establishment of public funds to support cooperation in R&D topics of interest in Brazil.
- We agreed to collaborate on identifying possible sources of public funding between EMBRAPII and Fraunhofer. This could include existing or new public programs (including EU funding on the German side).

- This should include an innovative model to include Fraunhofer services from Germany effectively. This requires consideration of fast decision processes and predictable low taxation of payments for such services to Fraunhofer.
- Topics of future meetings of the Joint Forum should include presentations of running cooperation projects (e.g., EU/Brazil project RESCUER, Joint Cimatec/Fraunhofer/Industry projects), surveys and evaluations of existing financing programs in Brazil and Germnay, and proposals to increase cooperation among both countries.

Coordination: Mr. João Fernando G. Oliveira – oliveirajfg@gmail.com or joao@embrapii.org.br
Participants: Mr. Dieter Rombach – dieter.rombach@iese.fraunhofer.de
Mr. Tilo Pfeifer – Aachen
Andrea Mandalka
José Luis Gordon

ANNEX 4

Preliminary AGENDA

Limited only for invited delegates

1. **Welcoming remarks** **14.30h**
   Moderation by Ingo Plöger AHK- CNI
   Secr.Exec. Alvaro Toube Prata Ministry of Science and Technology Brazil MinR
   Stefan Schneider Ministry of Science and Research Germany
   Min. Mauro Borges Minister Trade and Development Brazil

2. **Developing Innovation Funding**
   The idea is to develop a support funding for running innovation projects of EMBRAPII and FRAUNHOFER Gesellschaft which needs additional support of manpower, techniques, labs, to fulfill an ongoing project.
   João Fernandes de Oliveira Embrapii – CNI
   Dieter Rombach Fraunhofer Gesellschaft

3. **Innovation in Bioenergy and Biotechnology**
   Brazil is developing technologies in Biotechnology and Bioenergy's coming from the agriculture production to develop fuel and biotechnology products. Cooperation in the field of new generation of production, processes and products are in the scope of the Brazilian Institutes. Germany has signalized a high interest to participate in this field.
   Caio Carvalho Canaplan – ABAG
   Antonio do Valle Pres. Henkel America Latina- AHK Dr.
   Michael Todd VP Adhesive Technologies, Research Henkel
   Ricardo Gent Deutschen Industrie Vereinigung Biotechnologie
   Pedro Wongtschowski Board Member Oxiteno,
   João Fernandes de Oliveira EMBRAPII
   James R. Gasson Fraunhofer Gesellschaft

   Recommendation to the Mixed Commission:

4. **Innovation in the Automotive Sector**
   The Innovation program in Brazil for the automotive sector is inducting the supply chain to invest in innovation, development and production in Brazil. The major challenge is to develop the supply chain to manage the innovation process. The cooperation between the Tier 1 and their suppliers is the target of the program with the support of the institutions.
   Wilson Bricio ZF - AHK
   Besaliel Botelho Bosch,- AHK
   João Fernandes de Oliveira EMBRAPII
   Christian Rudelt BDI

5. **Open agenda for new issues and ideas to be evaluated**
   Participants Marcos Souza MDIC Inovation

6. **Platform for Information and Communication of the Initiative**
   Wilson Bricio / Rudelt / P Wongtschowski MEI- CNI BDI

7. **Recommendation for the Mixed Commission**
   Brazilian side: Ademar Seabra Itamaraty
   German side: D. Rombach Fraunhofer

8. **Closing remarks** **17.30h**
   Secr. Alvaro T. Prata / S. Schneider / P. Wongtschowski/ D. Rombach