IUPAC 49th General Assembly World Chemistry Leadership Meeting

Marcos De Marchi
Chairman of the Board - Abiquim
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Brazil: a natural ability for the chemical industry
Rich in oil, gas, biodiversity, minerals and rare earths.

Abiquim
ABIQUIM – WHO WE ARE

- Founded in 1964
- Non-profit organization
- 191 member companies
- Small, medium and large sized chemical industries
- Carriers and specialized service providers
- International Council of Chemical Associations (ICCA)
ABIQUIM – OUR GOAL

WE WORK ACTIVELY PROMOTING THE INCREASE OF COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT OF THE CHEMICAL INDUSTRY WITH PRODUCTION IN BRAZIL.
RESPONSIBLE CARE PROGRAM

Atuação Responsável®, Abiquim’s trade mark corresponding to the international initiative of the global chemical industry aims to demonstrate its voluntary commitment to continuous improvement of its performance on health, safety and the environment.

Joining the Atuação Responsável® program is a membership condition to be affiliated to Abiquim.
THE IMPORTANCE OF THE BRAZILIAN CHEMICAL INDUSTRY

2 MILLION JOBS

10% OF BRAZILIAN INDUSTRIAL GDP

8th WORLD LARGEST Chemical Industry

3rd LARGEST Industrial GDP

113.5 US$ BILLION 2016 Net Sales
INNOVATION

• Brazil invests 1.3% of GDP in R&D (MCTIC).

• The goal of the Brazilian Government is to reach 2% of GDP by 2020 (National Strategy for Science, Technology and Innovation – MCTIC).

• Developed economies have rates above 3% of GDP.

• The Brazilian Development Bank (BNDES) and the Brazilian Innovation Agency (FINEP) offers credit and grants for R&I.

Brazilian Research Corporation on Industrial Innovation (EMBRAPII)

• 34 Units of excellence ready to develop innovation projects with companies.

• Over US$ 100 millions.

• Up to 90% of granted support for pre-competitive research.
Over 50 new laboratories and 25 new applied research centers are being created by CNI, the Brazilian National Industry Confederation. Biomass, biosynthetic, building technologies, ceramics engineering, defense, electrochemistry, integrated solutions in metalworking, IT, metallurgy and special alloys, mineral technologies, nanotechnology, polymers, renewable energy, welding, and not only.
RAW MATERIALS POTENTIAL IN BRAZIL

BRAZIL MAY BECOME THE 5TH LARGEST WORLD OIL PRODUCER.

GAS PRODUCTION WILL NEARLY TRIPLE BY 2030.

THE HIGHEST BIODIVERSITY IN THE WORLD.
CHEMICALS PRODUCTION FROM RENEWABLE RAW MATERIALS

LARGE MINERAL RESERVES, SUCH AS RARE EARTH ELEMENTS.
We consume 50% more than what the planet can produce, absorb and regenerate.

16% of the world's population consumes 78% of resources.

2/3 of the population does not reach income to be part of the consumer market.

1 billion people without access to safe drinking water.

Source: WWF - Relatório Planeta Vivo 2010
Global market for renewable chemicals is expected to grow from US$ 3.6 billion to over US$ 12 billion by 2020.

It is estimated that by 2025 ~40% of the world economy will be based on biotechnology.

Source: Rennovia and IHS, 2013.
BRAZIL IS AN AGRICULTURAL POWERHOUSE

• Among the world’s top producers and exporters of sugar, ethanol biofuel, orange juice, coffee, soybeans, beef, poultry, pork, tobacco and forest products.

• New agricultural practices being developed, putting Brazil at the cutting edge of innovation, research and development in agricultural techniques, technologies and productivity gains.

• Sustainable agriculture: Brazil has in place a public policy* aiming to promote sustainable agricultural technologies with high potential for mitigation of GHG emissions.

(* Plano Setorial de Mitigação e de Adaptação às Mudanças Climáticas para a Consolidação de uma Economia de Baixa Emissão de Carbono na Agricultura – MAPA)
BIOBASED CHEMISTRY IN BRAZIL

• Brazil offers competitive feedstock prices in low eco footprint conditions, it has plenty of land and suitable climate.

• Long history and knowledge using sugar-cane as source of chemicals and energy.

• Experience in the production and distribution of biofuels on a large scale.

• Developments with other renewables such as wood and soybean.

• Training in the development and management of biomass production: EMBRAPA.

• Has fast-track for patent analysis on green technologies.
SUSTAINABLE DEVELOPMENT: Shared Responsibility

Government and Intergovernment Organizations

Private Organizations

Civil Society
THE “HOMEWORK” OF THE BRAZILIAN CHEMICAL INDUSTRY IN SUSTAINABILITY

Reduced by 43% the generation of waste during processes

19% decrease of electricity consumption per ton

36% reduction in the volume of water captured in its processes

29% reduction in CO2 emissions

From 2006 to 2015

Source: ABIQUIM – Responsible Care Performance Index. 2016.
CHEMICALS SOLUTIONS FOR EMISSIONS REDUCTION

THE INDUSTRY OF THE INDUSTRIES

- CHEMICAL INDUSTRY
  - Disinfectants
  - Polymer membrane filters

- MOBILITY
  - Biofuel

- BUILDINGS
  - Thermal insulation

- AGRICULTURE
  - Fertilizers

- CUSTOMER / END USER
  - Flexible packaging
    - Intelligent packaging

- SANITATION AND TREATMENT OF WATER
  - Medicines

- HEALTH
  - Medicines

- PACKAGING
  - Medicines

- AGROCHEMICALS
  - Fertilizers
  - Disinfectants

- POLYMER MEMBRANE FILTERS

- BIOFUEL

- BUILDINGS
  - Thermal insulation

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THE BRAZILIAN CHEMICAL INDUSTRY BELIEVES

✓ The Chemical Industry is an ESSENTIAL PART OF THE SOLUTION and A KEY PARTNER OF THE COUNTRIES to achieve the UN sustainable development goals, by helping other industrial sectors and agriculture;

✓ INVESTMENT IN INNOVATION, NEW FORMS OF COOPERATION and NEW BUSINESS MODELS are essential for the development of this new sustainable economy;

✓ Brazil has the conditions to become one of the WORLD LEADERS OF LOW CARBON ECONOMY;

✓ Large INVESTMENTS AND INCENTIVES are needed to transform brazilian potentialities in competitive advantage;

✓ The HISTORICAL ACTIONS AND EFFORTS OF THE BRAZILIAN CHEMICAL INDUSTRY TO REDUCE EMISSIONS, WATER AND ENERGY CONSUMPTION are a positive track record to further steps.