INCOBRA

INCREASING INTERNATIONAL STI COOPERATION BETWEEN BRAZIL AND THE EUROPEAN UNION

# Action Plan on Sustainable Use of Bioresources

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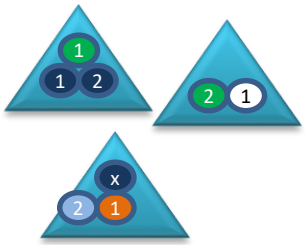
# Action Plan:

# Sustainable Use of Bioresources

# List of Hot Topics

## Potential Hot Topics




I. **Sustainable Bioeconomy**: Strong focus on integration of food and feed stock as well as rational and effective use of industrial and agricultural waste/effluent

II. **Food Security**: Based on the aim of zero food waste (waste streams from agri-production to house hold consumption) and well balanced nutritional status

III. **Smart Cities** – Urban systems for transport, energy, and resource distribution based on integrated sensors and connected appliances and machines.

IV. **Advanced Manufacturing** – Automated de-centralized manufacturing techniques that enable new products while improving resource efficiency to zero-waste.

V. **Solutions for the Elderly**

VI. **Sustainable Use of Biodiversity for New Therapies and Conservation of Biodiversity** – Conserving bio-diversity for genetic research and advances in healthcare, and industrial processes.

VII. **Gene Therapy** – Research into genetic approaches for treatment of various health issues and conditions.

VIII. **Adaptation of Agriculture to Climate Change** - Exploring technologies and techniques that can maintain and improve agricultural output in the face of changing climate conditions.

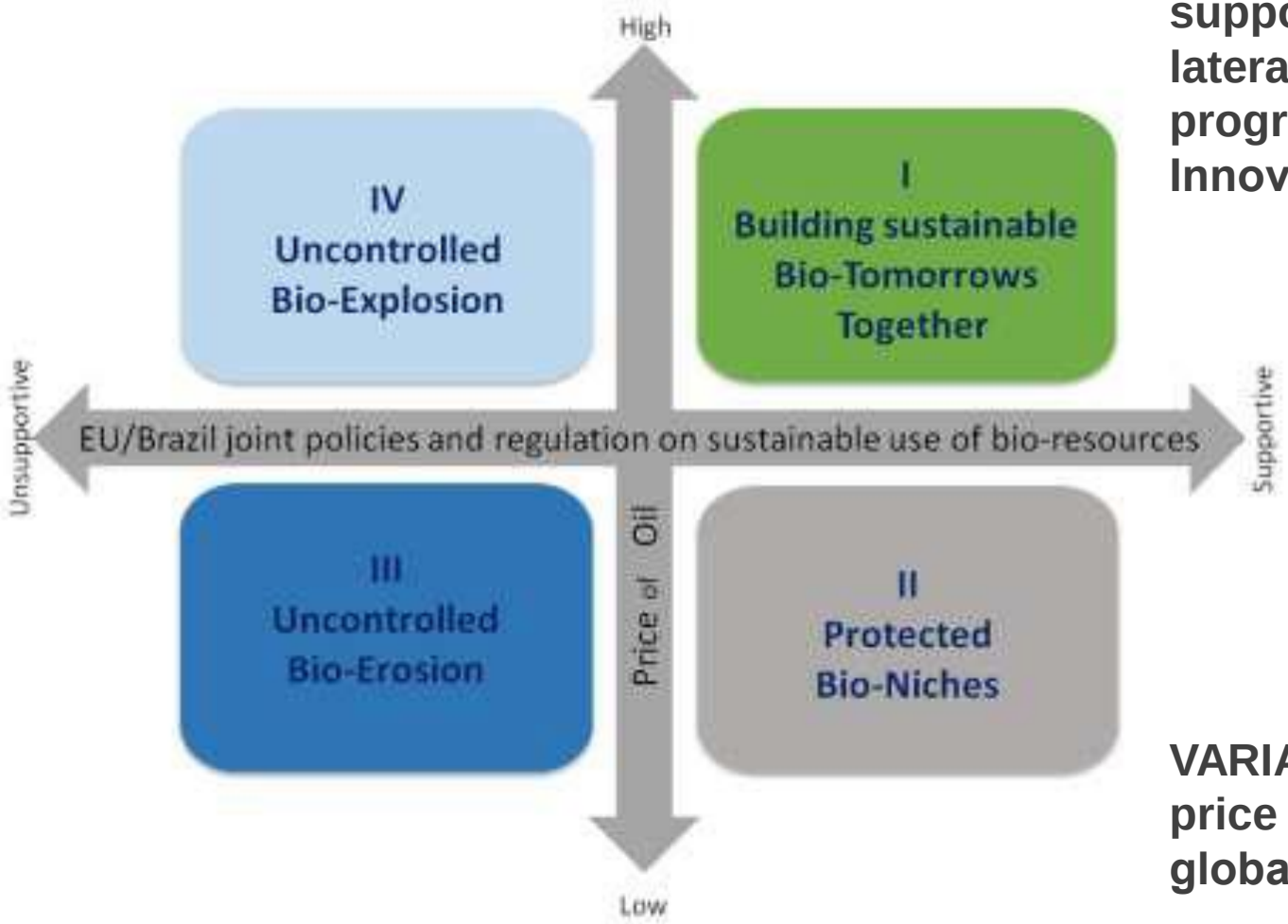
IX. **Green Energy:** Combining wind energy and biomass use, green house gas reduction technology

# Action Plan Creation Process Overview

## Five Strategic Areas for Cooperation & Draft Action Plans

- **Areas for mutually beneficial R&I collaboration:**
  - Green energy
  - Sustainable use of Bioresources (bulk and specific)
  - Food security & adaptation of agriculture to climate change
  - Smart cities & smart systems
  - Advanced manufacturing and nanomaterials
- **Each Action Plan developed by appropriate institution**
- **Process:**
  - **Development of theme specific 2x2 scenario matrix**
  - **Short descriptions of four alternative scenarios**
  - **Identification of priorities and critical areas**
  - **Roadmapping Activity for detailed Action Plans**

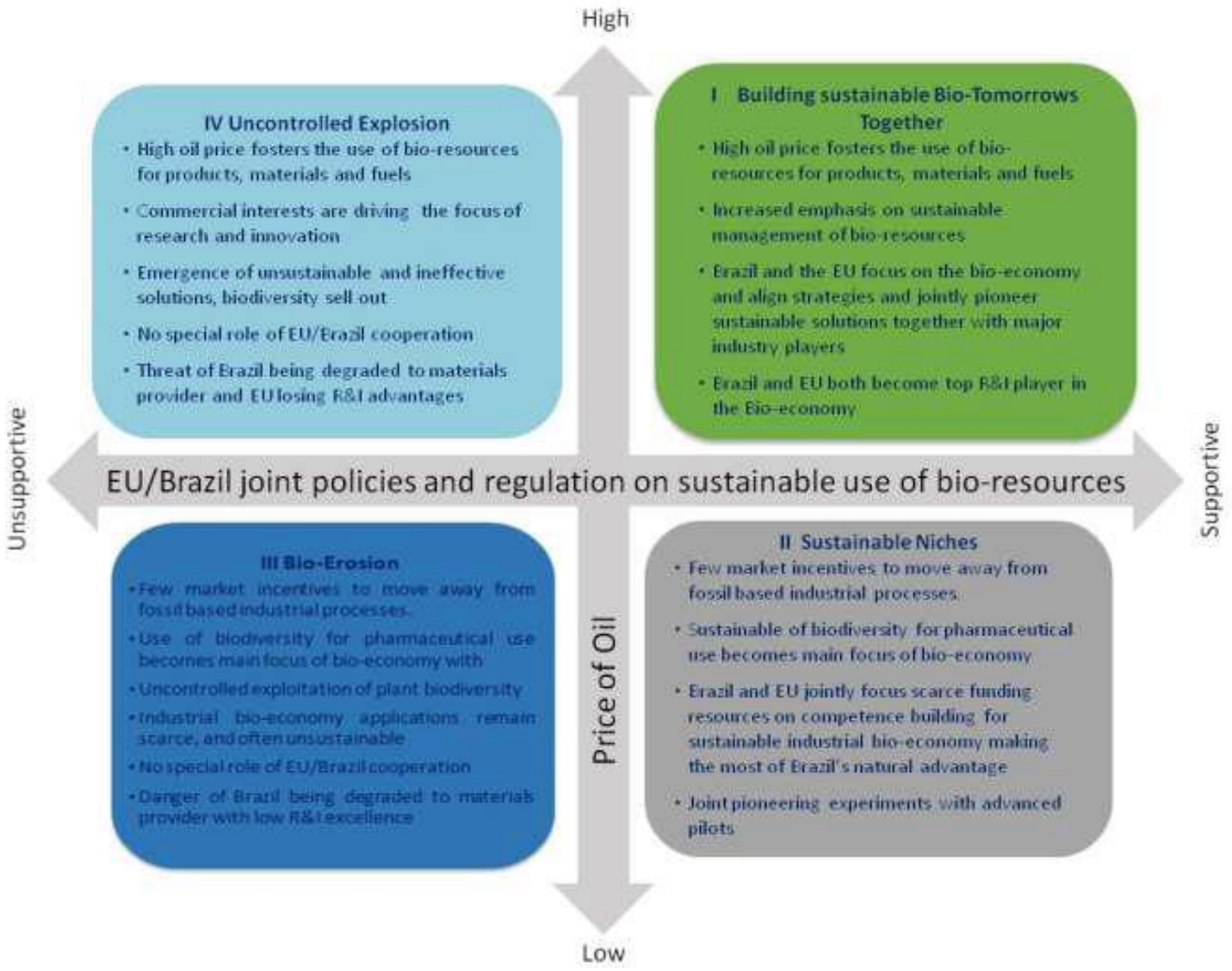
# Action Plan – Sustainable Use of Bioresources




**VARIABLE 1 - "The overall supportive nature of bi-lateral policies and funding programs for Research and Innovation."**

**VARIABLE 2 - "The price of oil on the global market."**

# Action Plan – Sustainable Use of Bioresources



# PRIORITY AREAS

- Sustainable industrial biotechnology especially future generations of sustainable biorefineries.

- Rational and effective use of industrial and agricultural waste/effluent.

- Conservation and sustainable use of biodiversity for new therapies.

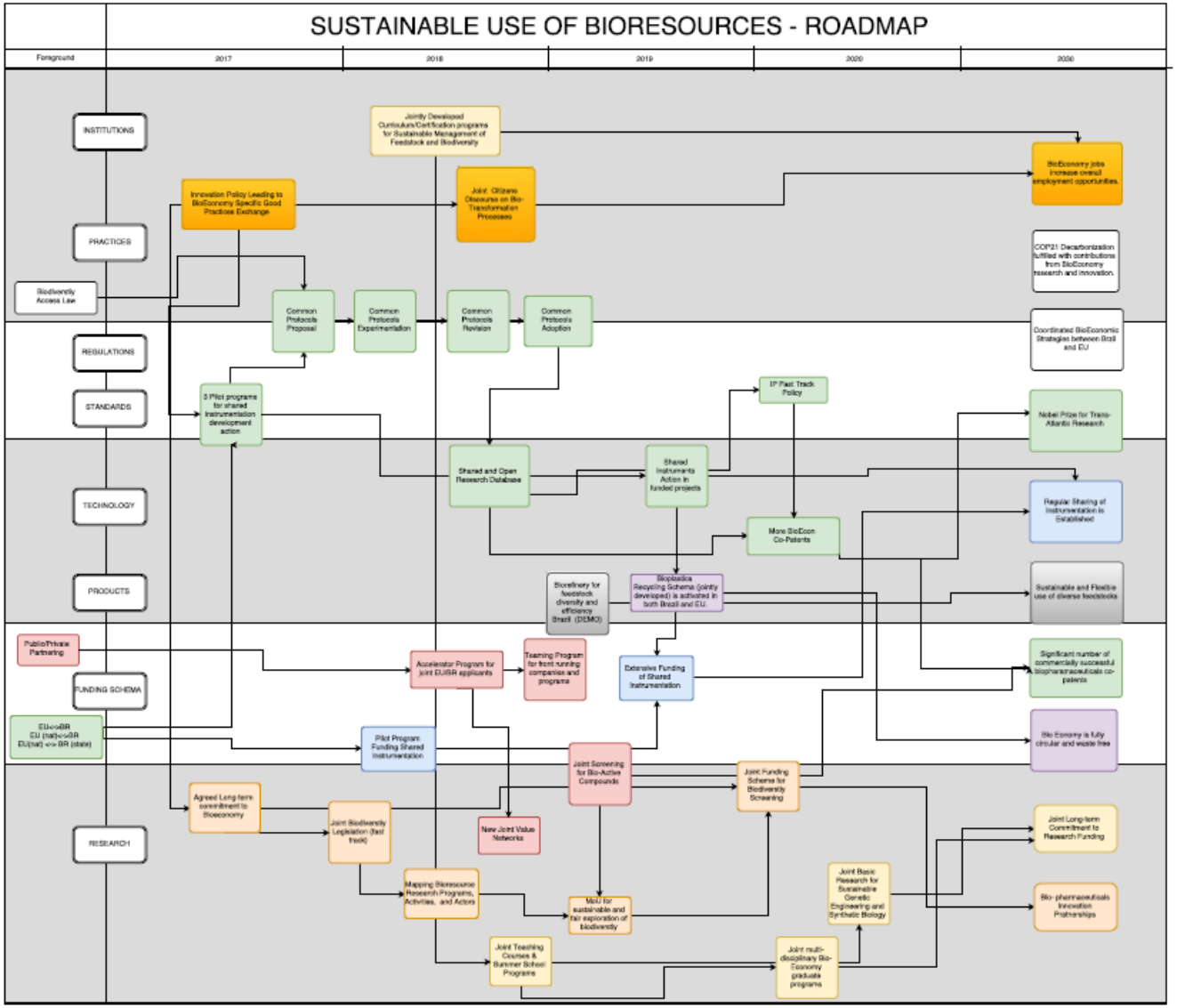
- Rational and effective discovery and screening of bioactive compounds from the Brazilian biodiversity.

- Plant biotechnology.

# PRIORITY AREAS: EU-BR 2030

- A coordinated Bioeconomy Strategy between Brazil and the EU is in place
- Both countries jointly commit to a joint long-term research and innovation strategy of sustainable use of Bioresources
- A Biopharmaceuticals Innovation Partnership between Brazil and EU is established
- Bioeconomy jobs increase overall employment opportunities both in EU and Brazil
- The COP21 Decarbonization goals are fulfilled with contribution from EU-BR bioeconomy research and innovation
- The Bioeconomy is fully circular and waste free through joint efforts of EU and Brazil

# Roadmap – Example




**Institutions & Practices**

**Regulations & Standards**

**Technology & Products**

**Research Policies & Agenda**

**Funding Schema**

# ROBUST TRAJECTORIES

- EU-BR supportive regulatory framework for sustainable use of Bioresources
- EU-BR common knowledge base and research protocols on sustainable use of Bioresources
- Bilateral EU-BR commitment to long-range funding
- Involving civil society in the development of bioeconomy
- EU-BR sharing of bioeconomy research facilities
- EU-BR shared educational curriculum in sustainable use of Bioresources
- Create durable personal relationships between Brazilian and European researchers and innovators in sustainable use of Bioresources
- Foster EU-BR pioneering coalitions
- Experimenting breakthrough solutions in protected niches
- Optimising biowaste collection and utilization processes through bi-lateral development of policies, partnerships, and technologies

# Thank you!

## Contact Us

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