



INCREASING INTERNATIONAL STI COOPERATION BETWEEN **BRAZIL** AND THE **EUROPEAN UNION**

Training #2

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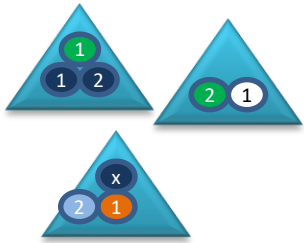
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Action Plan:

Sustainable Use of Bioresources

Potential Hot Topics



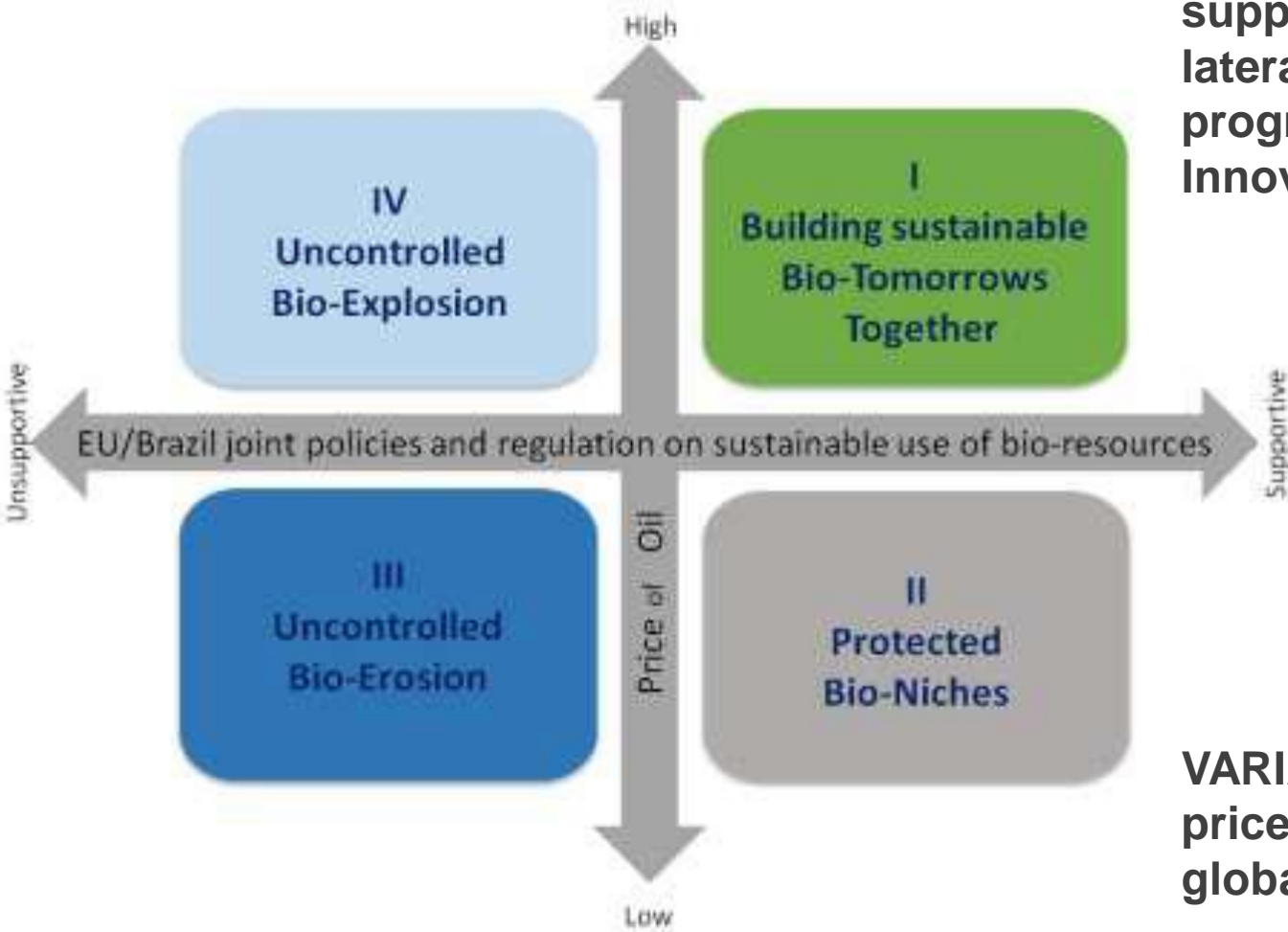
- I. **Sustainable Bioeconomy:** Strong focus on integration of food and feed stock as well as rational and effective use of industrial and agricultural waste/effluent
- II. **Food Security:** Based on the aim of zero food waste (waste streams from agri-production to house hold consumption) and well 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

Five Strategic Areas for Cooperation & Draft Action Plans

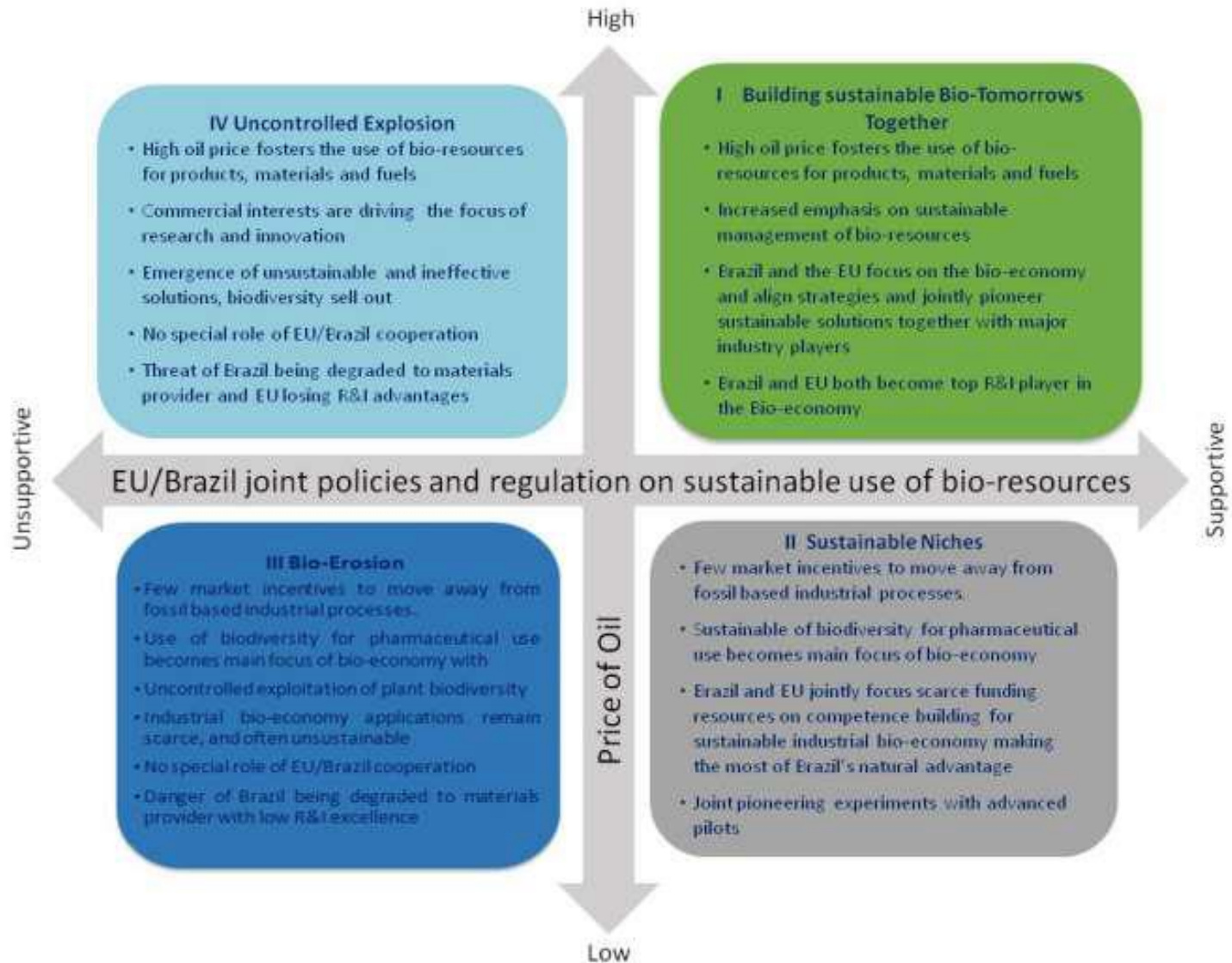
- **Areas for mutually beneficial R&I collaboration:**
 - Green energy
 - Sustainable use of Bioresources (bulk and specific)
 - Food security & adaptation of agriculture to climate change
 - Smart cities & smart systems
 - Advanced manufacturing and nanomaterials

- **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

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.”

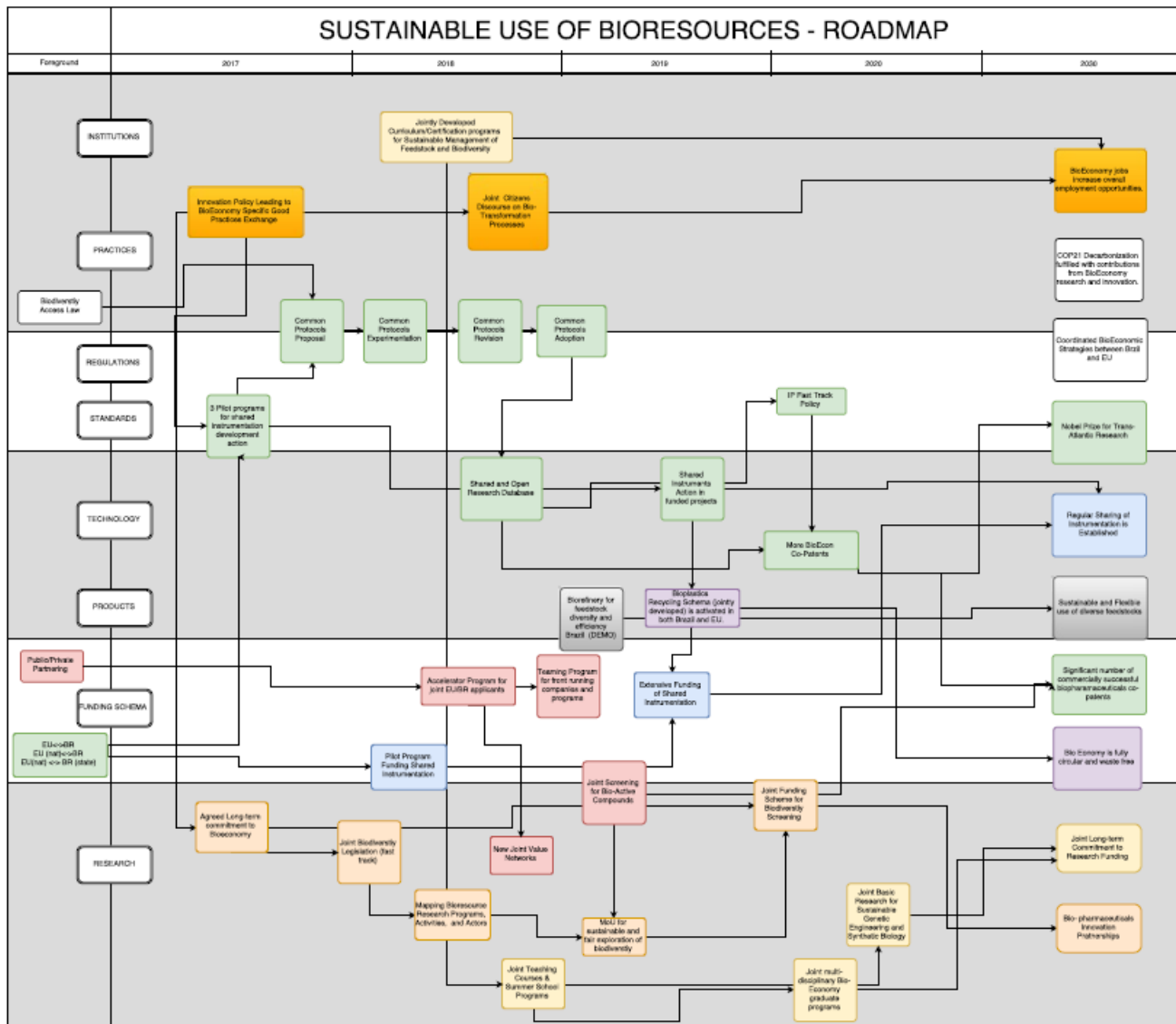


PRIORITY AREAS

- 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



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**

Contact Us

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