

# Science, Innovation, and Partnerships for Sustainability Solutions

A National Academies Symposium

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*Panel: International and National R&D Directions,  
What's needed for S&T for Sustainability*

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*UNITED NATIONS CONFERENCE ON SUSTAINABLE DEVELOPMENT (RIO + 20),*

*Rio de Janeiro, 20-22 June 2012*

**Rio+20 should accelerate and broaden the **world-wide transition** towards a  
**green economy** that promotes sustainable development and contributes to  
poverty eradication around the world.**

Contribution by the European Union and its Member States

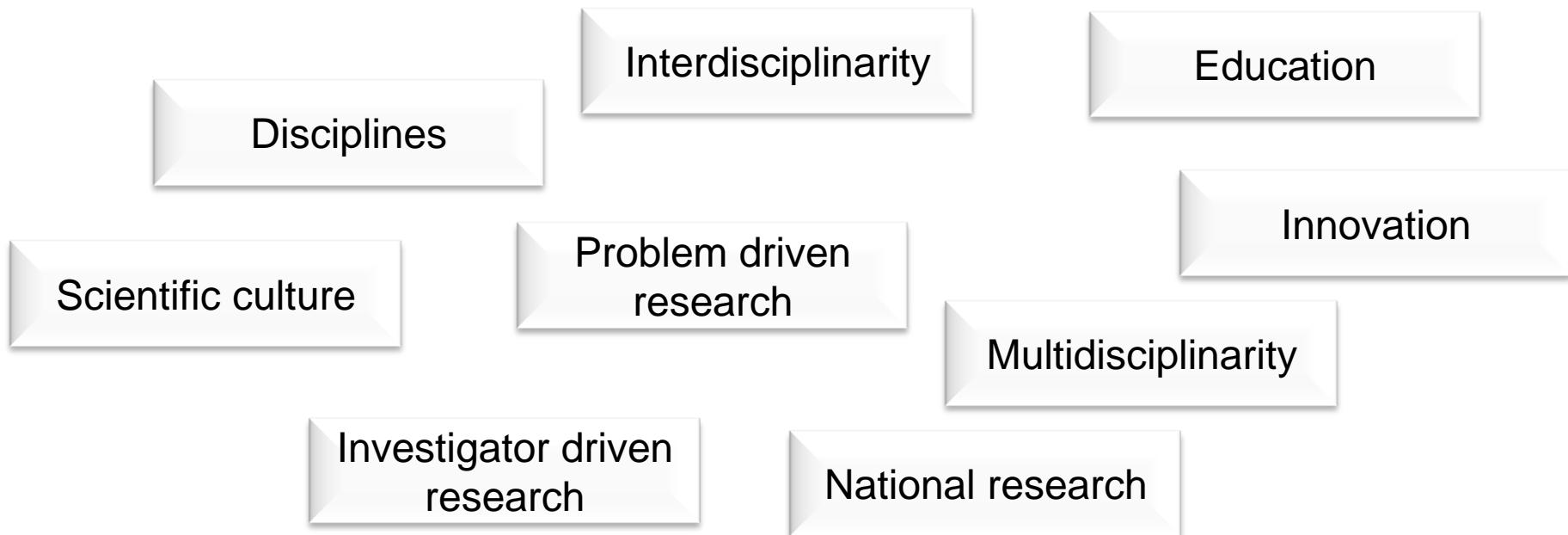
# Issues

“ Green economy is more than the sum of existing commitments: it has the potential to lead us to a new development paradigm and a new business model where growth, development and environment are seen as mutually reinforcing each other.

Increasing resource efficiency, promoting sustainable consumption and production patterns, tackling climate change, protecting biodiversity, combating desertification, reducing pollution as well as using and managing natural resources and ecosystems in a sustainable and socially responsible manner are both requirements and key vehicles in ensuring a just transition to a green economy.”

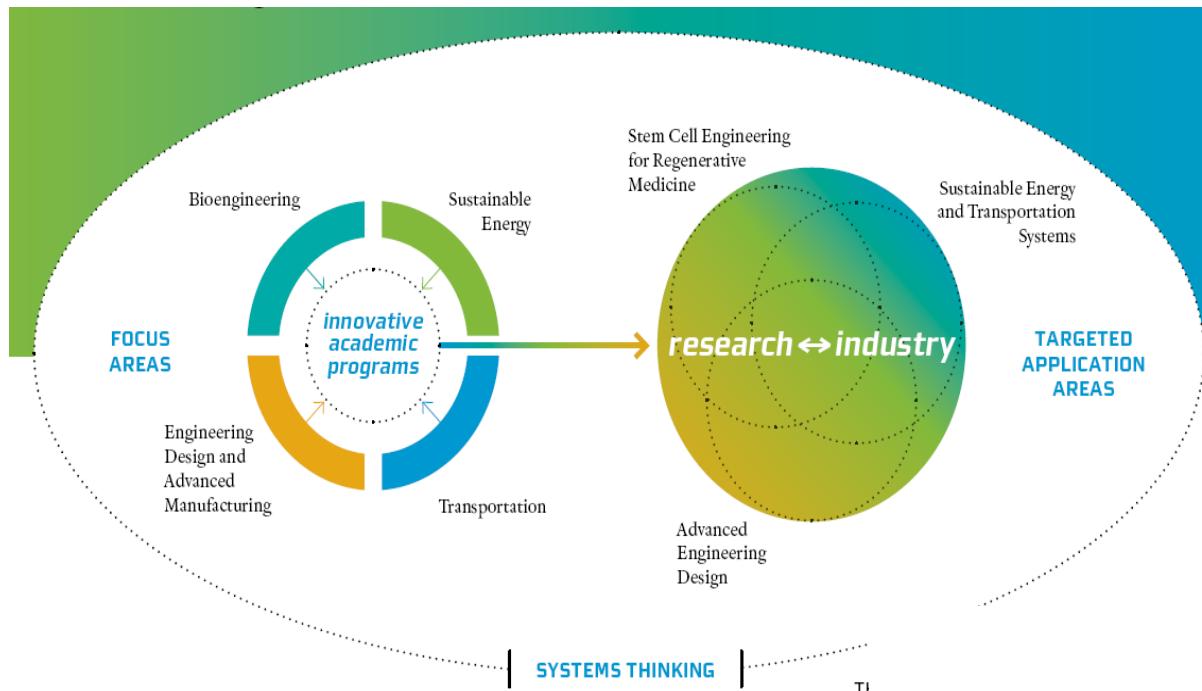
# S&T needs and Barriers

Research is needed to **understand the character**, the **mechanisms** and the **requirements** of the **institutional transition** in **society, culture, technology, economy, regulation, and policy** necessary to allow for sustainable development – **Requires Demonstrations**.



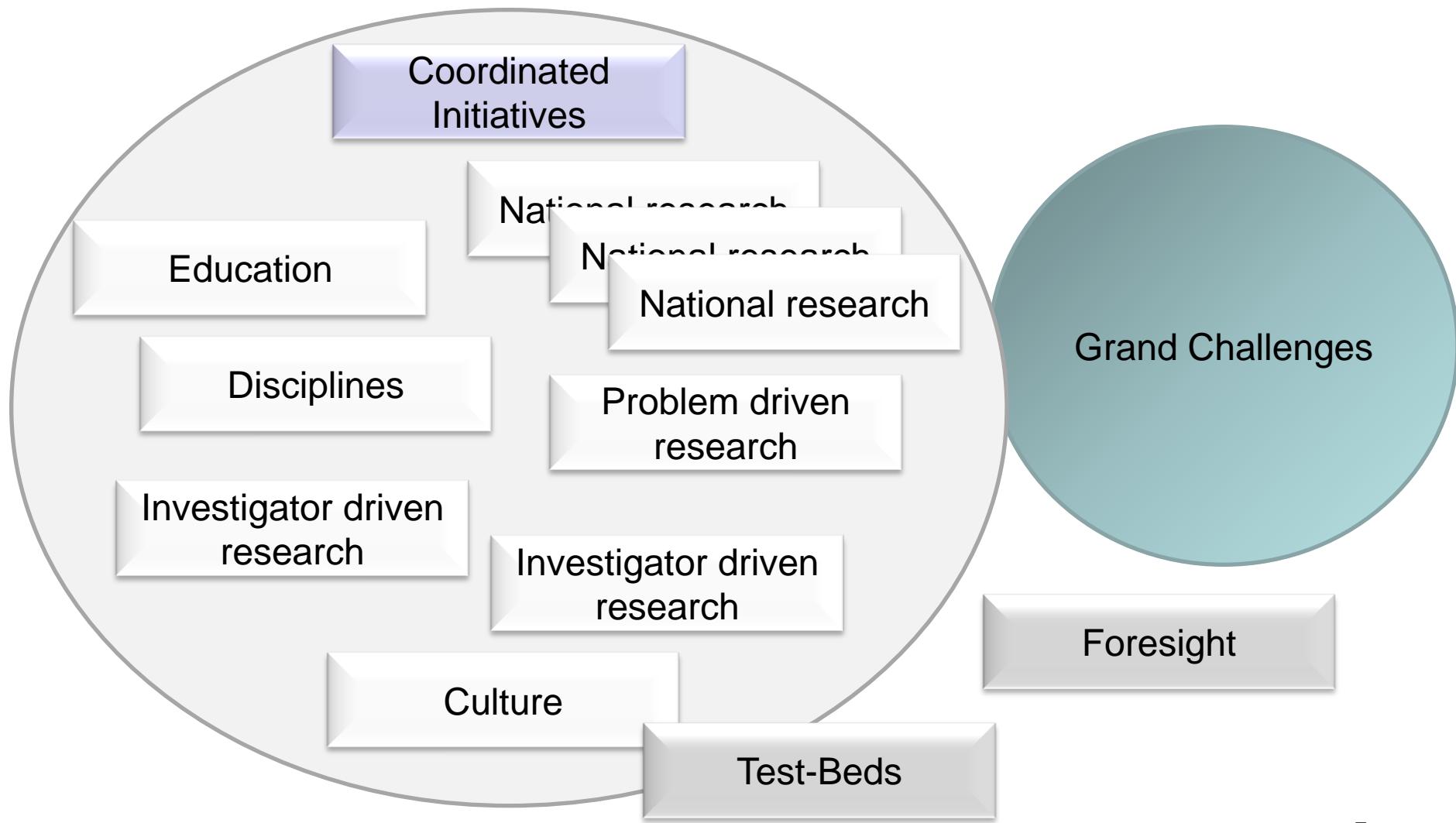
# MIT Portugal

Engineering systems focus: gives emphasis to **complex systems** that not only have critical **technological components**, but also have significant **economical** and **socio-technical** level **interactions**, going beyond traditionally defined engineering disciplines.



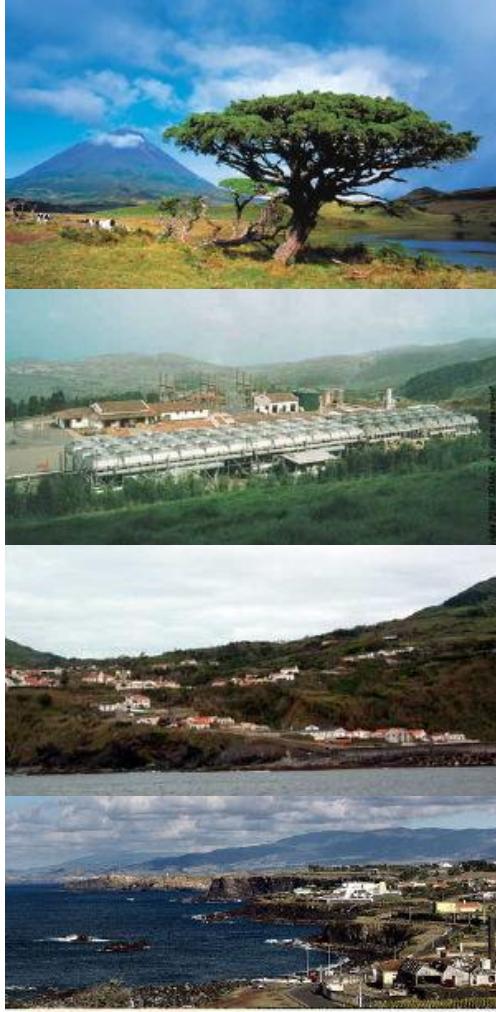
**10** Portuguese Universities,  
**All 5** Schools within MIT,  
**4** Doctoral programs  
**1** MBA,  
**3** Master's of Business Engineering and Master's of Science programs.  
**Over 500** student from 44 countries

# New Directions



# Green Islands Project

**MIT** Portugal



- Three Phase Research Strategy
  - Novel Research Topics Focused on the Integration of New Supply and Demand Technologies, including Storage, Transportation, Efficiency
- Sustainable Energy Systems Full Scale Testbeds

