



Theme 2: STI Agreements: success factors and options for improvement

Input from Portugal: Experiences with STI Agreements

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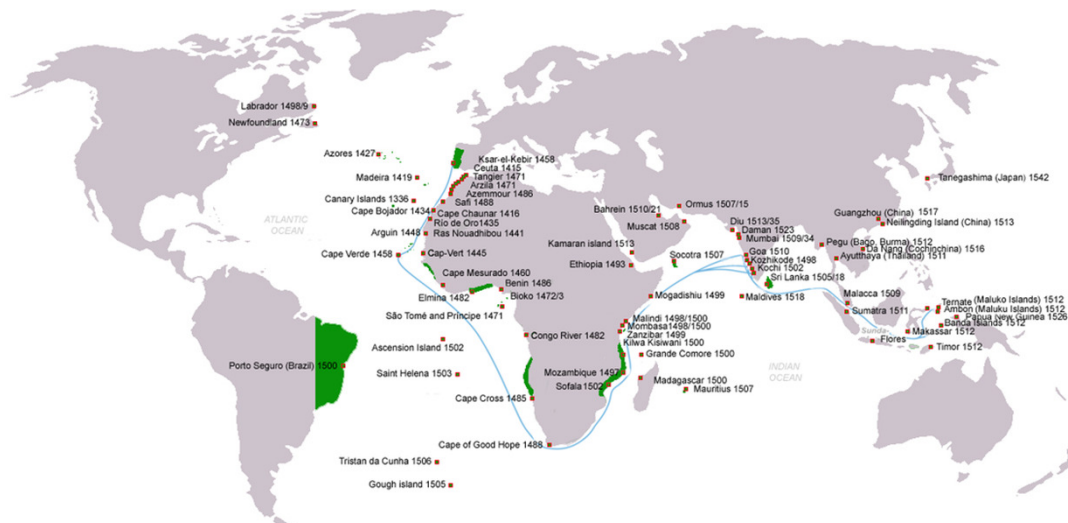
Outline

- **Background**
 - Historical perspective
 - Historical S&T perspective
- **S&T Agreements experience**
 - International Cooperation natural drivers
 - Evolution and types
- **Specific case of a Multilateral Interinstitutional Framework Agreement: The Iberoamerican Program for Science & Technology for the Development - CYTED (35 years old)**
 - Objectives and goals
 - Instruments & Topics
 - Results, success and impact
 - Future

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Background (historical perspective)

- Portugal is a country with low population and scarce natural resources which conducted to a
- Strong dependency on foreign relations (e.g. food import, emigration and external defense, etc) for centuries
- Since the XV century with the Portuguese maritime discoveries, Portugal created the first global network (maritime and commercial).
- How such a small country without resources? With an implementation and monitorization Plan (and **ambition**)



Portuguese discoveries and explorations: first arrival places and dates; main Portuguese spice trade routes in the Indian Ocean (blue); territories claimed during King John III rule (c. 1536) (green)

In: https://en.wikipedia.org/wiki/Portuguese_discoveries

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Background (historical perspective on S&T)

The successive expeditions and experience of the pilots led to a fairly rapid evolution of Portuguese nautical science, creating an elite of astronomers, navigators, mathematicians and cartographers with studies on how to determine the latitude by the stars.



From the medieval planispheric astrolabe



To the nautical astrolabe

Innovation can mean simplification

Technology



Cross-staff



Quadrant

In: Henrique Leitão (2017). Innovation is the past – ideas for the future <http://www.aislisbon2017.com/images/Presentations/Henrique-Leitao.pdf>

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Background (historical perspective)

For those reasons Portugal was the first country creating the 1st strategy truly global



The [Cantino planisphere](https://en.wikipedia.org/wiki/Cantino_planisphere), made by an anonymous cartographer in 1502, shows the world as it was understood by Europeans after their great explorations at the end of the fifteenth century. In: https://en.wikipedia.org/wiki/Portuguese_discoveries

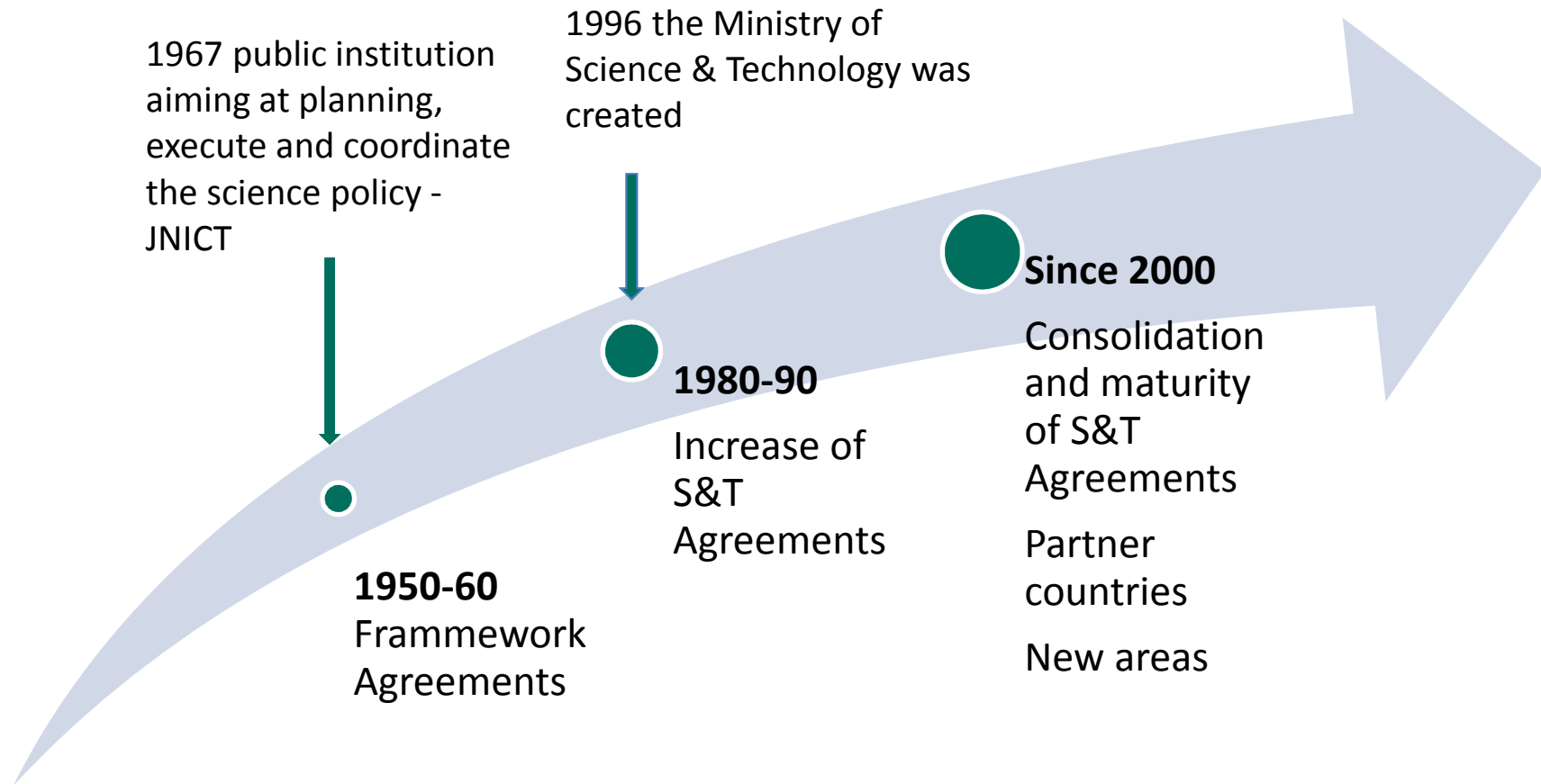
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International
Cooperation natural
drivers:

- Historial network
- Neighbourhood
- Language and culture

S&T Agreements experience

Evolution on S&T Agreements and Policy context



Present and future number of S&T Agreements depends on Policy driven

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S&T Agreements experience

S&T bilateral/multilateral level (weight) of Agreements

- Intergovernmental (general signed in bilateral/multilateral Summits)
- Interministerial (general signed between ministerial conferences)
- Interinstitutional

Types of Agreements

- **Framework Agreement (umbrella)** usually includes economic, industrial and S&T (more recently)
- **Cultural Agreement** (incl. culture, education, higher education, science & technology, language, youth, sports and social communication)
- **S&T Agreement (often includes Higher Education)**

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Specific case of a Multilateral Agreement:

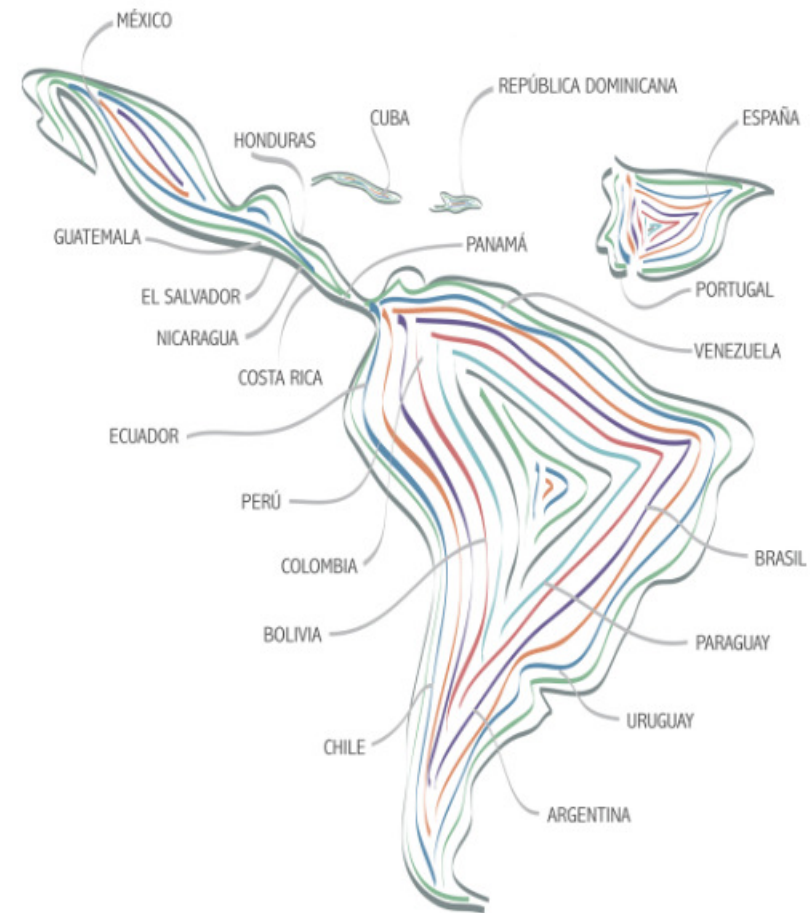
The Iberoamerican Program for Science & Technology for the Development -



CYTED was created in **1984** (35 years old) through an Interinstitutional Framework Agreement signed by **21 countries of Spanish and Portuguese language**.

Since 1995, the CYTED Program has been **formally included** among the Cooperation Programs of the Iberoamerican Summit of Heads of State and Government and reaffirmed.

CYTED's main objective is to contribute to the harmonious development of the IberoAmerican region through cooperation mechanisms that seek scientific and technological results, transferable to production systems and social policies.



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Specific case of a Multilateral Agreement - CYTED

The CYTED Program also answers the calling to act as a bridge for interregional cooperation in Science and Technology between the European Union and Latin America.

The specific goals of the CYTED Program are:

- Encouraging the **integration** of the Iberoamerican scientific and technological community, promoting an agenda of **shared priorities for the region.**
- Strengthening the technological development capacity of Iberoamerican countries through the promotion of **joint scientific research, the transfer of knowledge and techniques**, and the exchange of scientists and technologists among R&D&I groups in the member countries.
- Promoting the participation of **business sector** from member countries interested in innovation processes, in accordance with the research and technological developments of the Iberoamerican Scientific and Technological Community.
- Promoting the participation of researchers from the Region in **other multilateral research programmes through agreements** for this purpose.

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Specific case of a Multilateral Agreement -



Program thematic areas:

-  1. AgroFood
-  2. Health
-  3. Industrial Development
-  4. Sustainable Development
-  5. ICT
-  6. Science & Society
-  7. Energy

8. Business Incubator (since 2015)

Instruments:

- **R&D**
 - Thematic Networks (since 1984)
 - R&I Projects on Strategic Issues (two topics per year) (since 2019)
- **Innovation**
 - Conferences (since 1984)
 - Iberoeka (since 1991)
 - Entrepreneurship grants (since 2019)

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Specific case of a Multilateral Agreement -



R&D Instruments

	Objectives	Beneficiaries	Eligibility	Funding
Thematic Networks	exchange of knowledge between R&D groups from CYTED member countries and the strengthening of cooperation as a work method	applicants can represent or belong to public or private RTDI institutions, national or regional, as well as to non-governmental organisations or any other body involved in research activities	Min: 6 groups from at least 6 different member countries Network duration: max. 48 months (topics 1-7) max. 24 months for topic 8	CYTED max. 30.000€/year/project
Projects on Strategic Issues	Have access to financing that ensures their participation in the project	Applicants can represent or belong to public or private, RTDI institutions, national or regional, as well as to non-governmental organisations or any other body involved in research activities	Minimum: 3 groups from 3 different member countries Projects duration <=36 months	national funding agencies (virtual common pot), <i>a la carte</i>

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Specific case of a Multilateral Agreement -



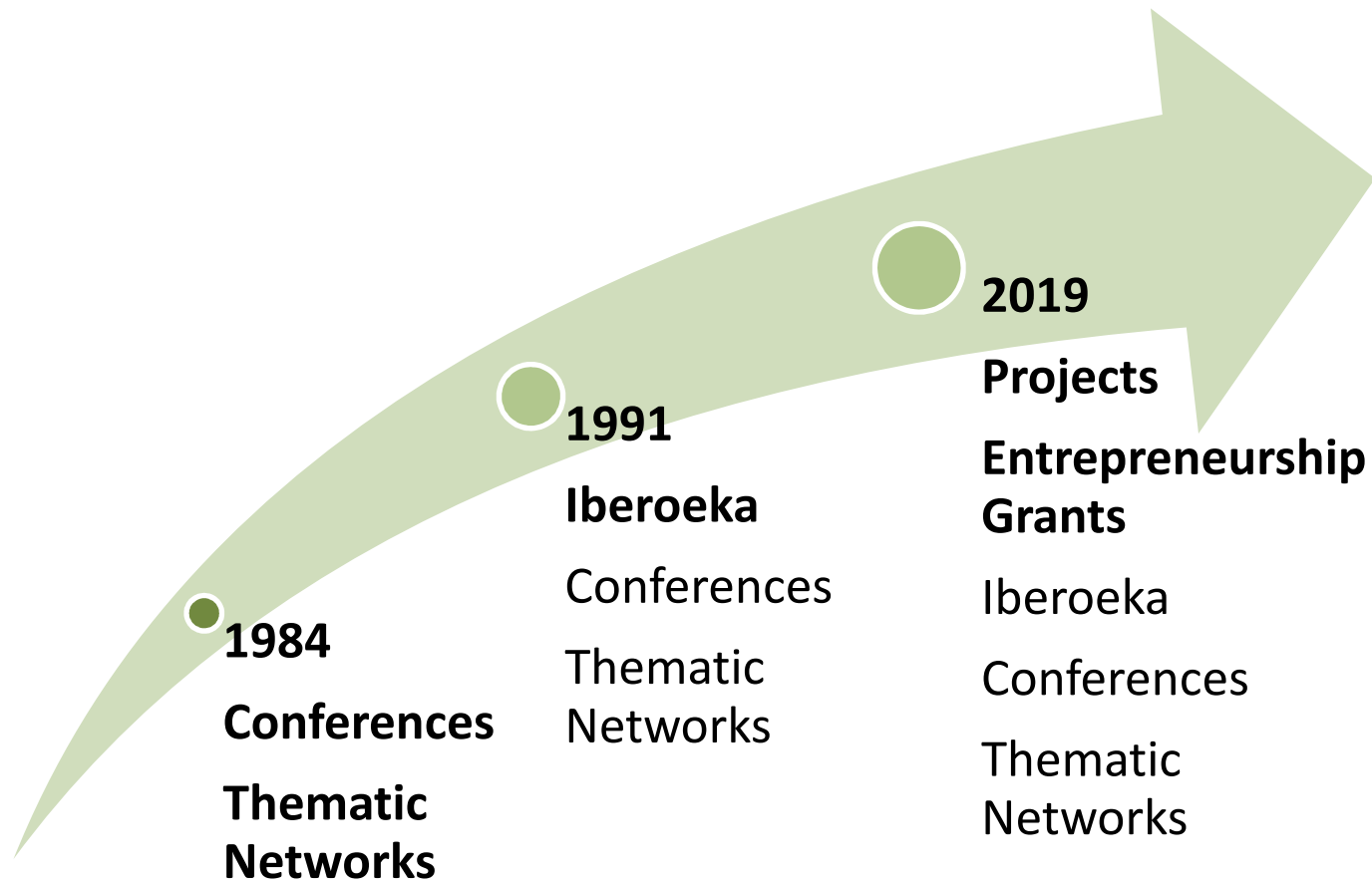
Innovation instruments

	Objectives	Beneficiaries	Eligibility	Funding
Conferences	To promote dialogue between private & public sector in emergent topics	SME's, universities, research centers	Travels & accomodation from 3 experts Duration: 1,5 day	CYTED Max 10.000€
Iberoeka (innovation projects)	To contribute to the regional industry productivity and competitiveness with new products, services or processes	SME's	National funding agencies	National funding agencies <i>A la carte</i>
Entrepreneurship grants	To promote internationalization and access to new markets from private sector	Star-Ups, SME's, incubators to develop activities in technological parks	Duration: 1 month Work programme	CYTED 1 month to both beneficiaries

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Specific case of a Multilateral Agreement - CYTED (35 years old)

Evolution of the Instruments



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Specific case of a Multilateral Agreement -



RESULTS, SUCCESS, IMPACTS

Since 2005 CYTED has started to evaluate the results, the success and impact by a set of indicators

- Number of researchers involved ; Number of industrial partners involved; Number of females (coordination/participation); Number of books published; Number of scientific articles published; Number of participants in training actions and workshops; Gender; Number of nominated experts (evaluation) <http://www.cyted.org/en/content/indicadores>

CYTED 2005-2018 outputs:

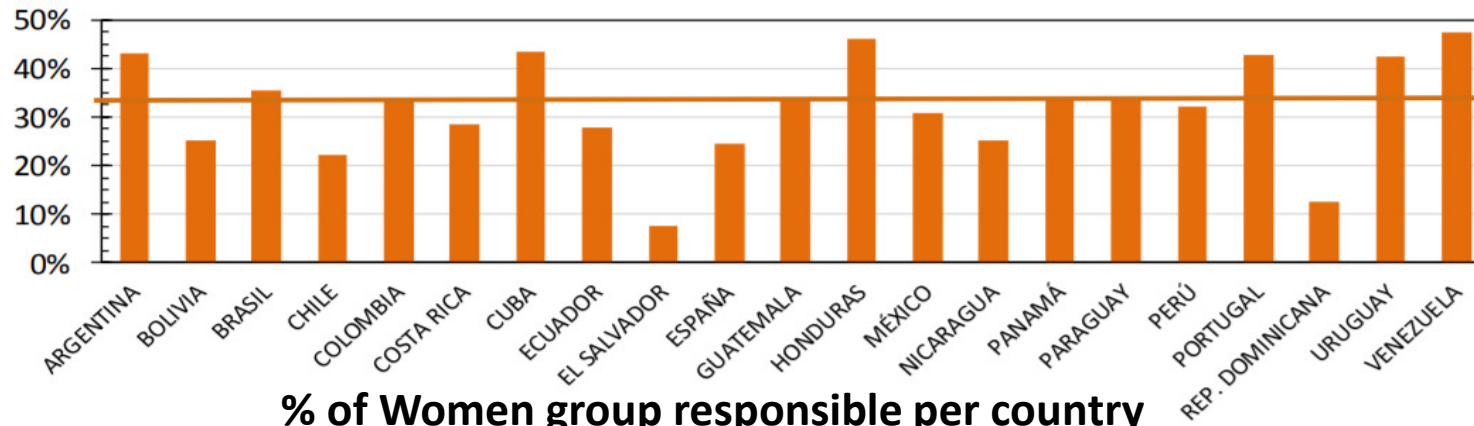
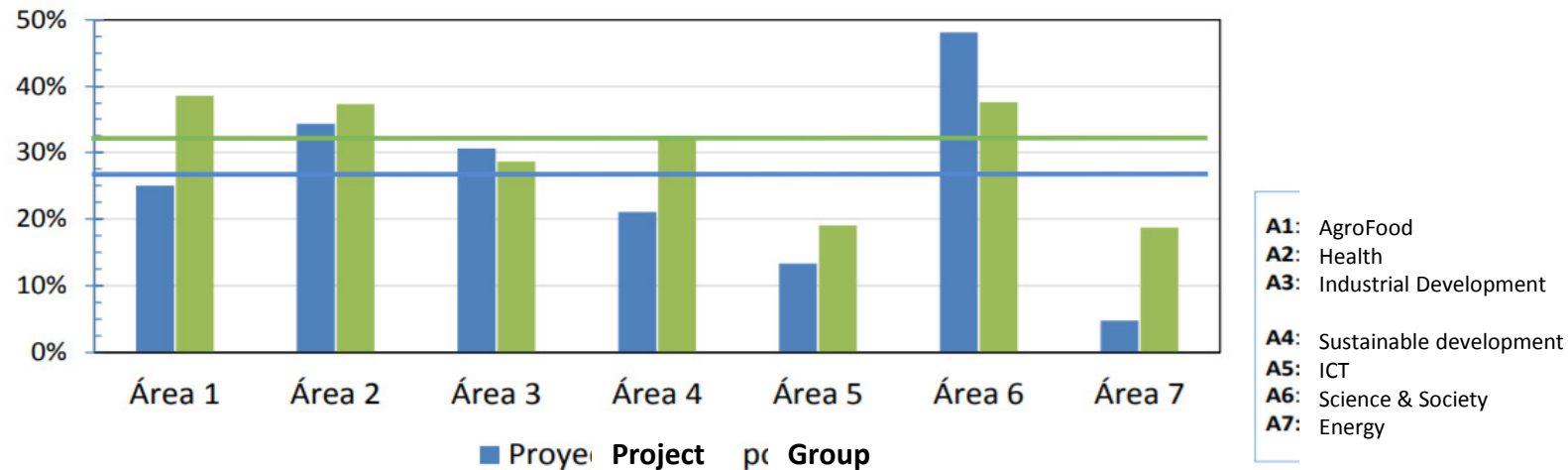
- 25.529 researchers and 983 industrial partners from the 21 countries
- 416 books published, around 6000 scientific articles
- More than 90.000 participants in courses and workshops

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Specific case of a Multilateral Agreement - RESULTS, SUCCESS, IMPACTS (2005-2014)



- % of Women as Coordinators and group responsible per RTDI area



% of Women group responsible per country

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Specific case of a Multilateral Agreement - RESULTS, SUCCESS, IMPACTS (2005-2014)



National **Strengths** and **Weaknesses** in each country 2005-14

	Área 1	Área 2	Área 3	Área 4	Área 5	Área 6	Área 7	
ARGENTINA	101	65	101	101	81	63	56	12%
BOLIVIA	20	7	18	17	2	9	11	2%
BRASIL	107	93	97	71	67	43	47	11%
CHILE	63	27	48	59	32	29	40	6%
COLOMBIA	36	53	72	52	50	34	30	7%
COSTA RICA	20	25	8	30	7	8	7	2%
CUBA	39	34	27	87	34	45	42	7%
ECUADOR	19	17	20	23	13	12	10	2%
EL SALVADOR	2	5	10	5	1	2	5	1%
ESPAÑA	209	153	181	191	221	69	112	24%
GUATEMALA	4	5	4	23	4	6	5	1%
HONDURAS	14	4	4	6	0	2	3	1%
MÉXICO	82	41	55	55	28	58	27	7%
NICARAGUA	3	3	1	16	1	2	3	1%
PANAMÁ	2	6	3	11	5	1	3	1%
PARAGUAY	1	7	2	7	5	3	7	1%
PERÚ	20	17	26	31	20	13	15	3%
PORTUGAL	37	29	55	23	21	15	35	5%
REP. DOMINICANA	2	1	4	7	1	1	11	1%
URUGUAY	63	43	30	25	18	23	3	4%
VENEZUELA	13	27	22	20	11	16	13	3%
	18%	14%	17%	18%	13%	10%	10%	4728

- A1. AgroFood
- A2. Health
- A3. Industrial
- Development
- A4. Sustainable
- development
- A5. ICT
- A6. Science & Society
- A7. Energy

Weaknesses

- Lack of research community
- Changes in government and funding

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Specific case of a Multilateral Agreement - CYTED (28 years old)

RESULTS, SUCCESS, IMPACTS

Own assessment are the critical success factors of this successful STI agreement:

- Mutual interest and high level commitment
- Clear governace (financial committe) with professional national delegates: definition on thematics; instruments; thematic areas, etc.
- Flexibility

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Specific case of a Multilateral Agreement - CYTED (35 years old) and ERA

The CYTED was the ERA-NETLAC partner responsible for managing the transnational call.

Future?

Possible Inclusion of new Portuguese/Spanish speaking countries

Other countries could participate in any instrument ... but with their own funds and in Portuguese/Spanish.

*Is the rationale for this STI Agreement still valid for the coming 3-5 years? **Yes***

*Should other STI Agreements in your country be adapted and modelled to this Examples or is this a unique case? **This is a unique case which could serve as an example for future cases.***



Many thanks for your attention

Maria Maia, Portugal