NATIONAL CROSS-SECTORAL PROGRAMS FOR SCIENCE, TECHNOLOGY AND TECHNOLOGICAL INNOVATION

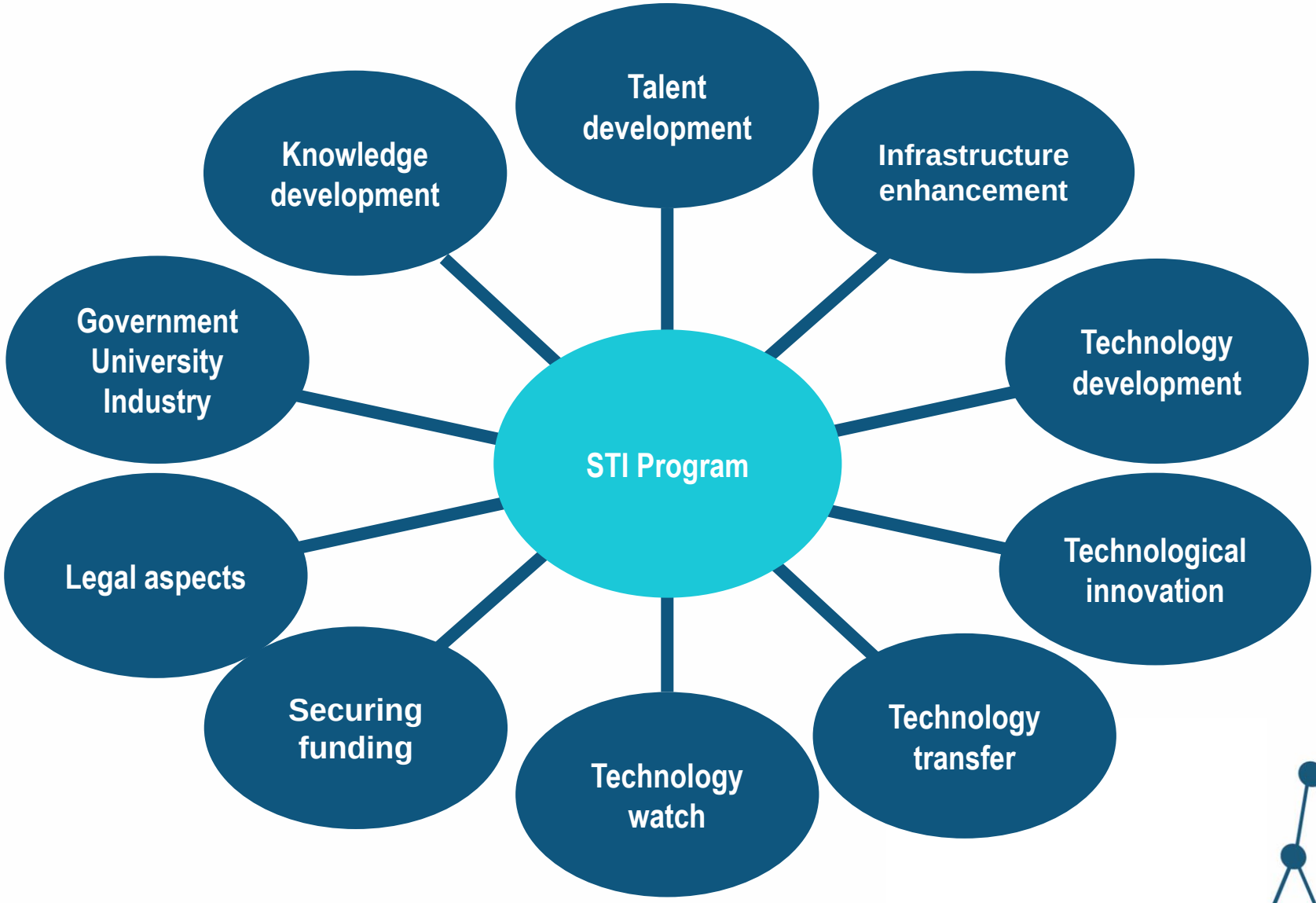
Programas de Ciencia, Tecnología e Innovación
Nacionales Transversales

CONCYTEC
CONSEJO NACIONAL DE CIENCIA, TECNOLOGÍA E INNOVACIÓN TECNOLÓGICA

National STI Programs

To manage, supervise and promote science, technology and technological innovation (STI) activities in a specific field, integrating stakeholders, identifying priorities and coordinating the provision of financial resources.

STI Program Concept

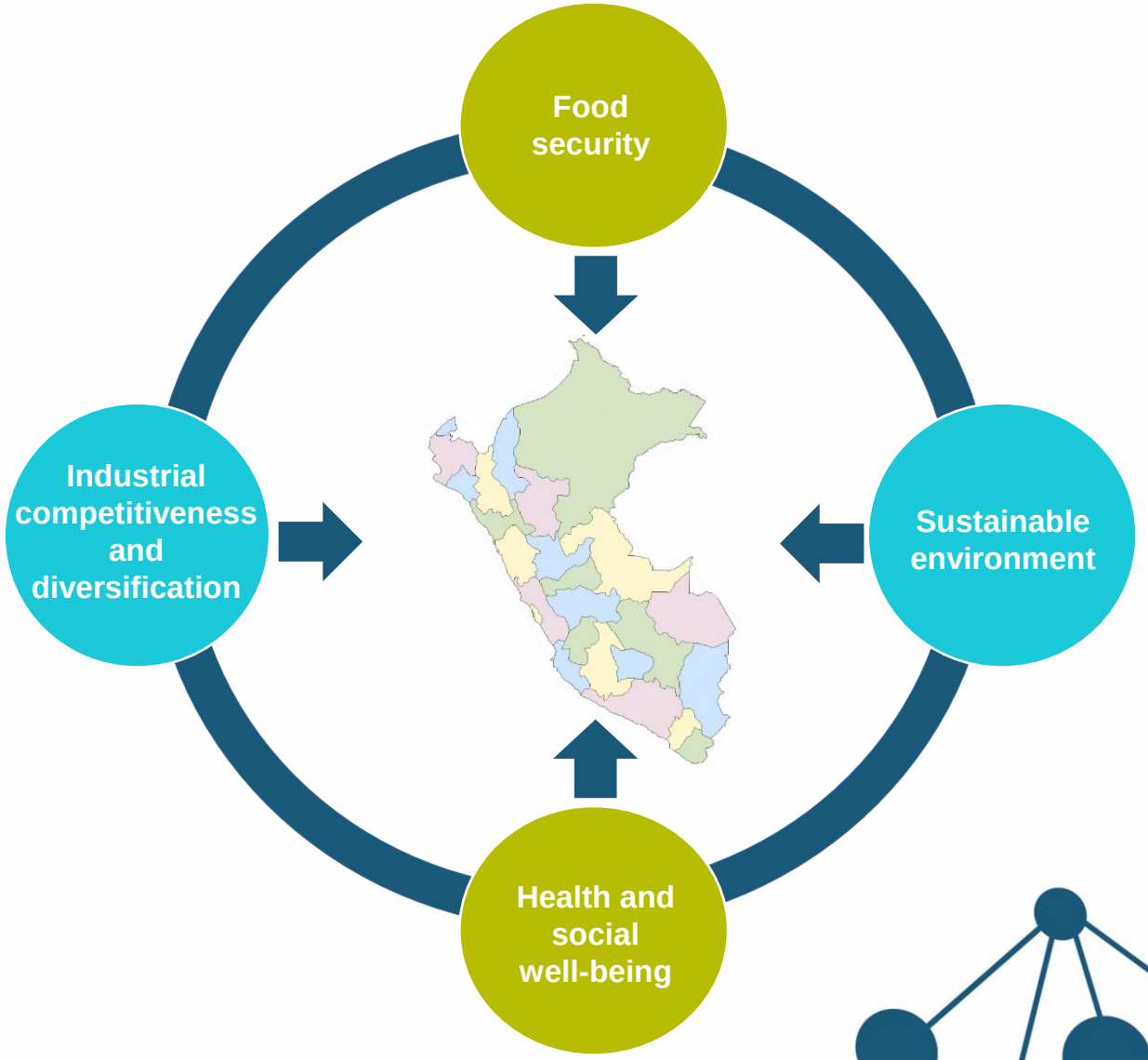


National Challenges

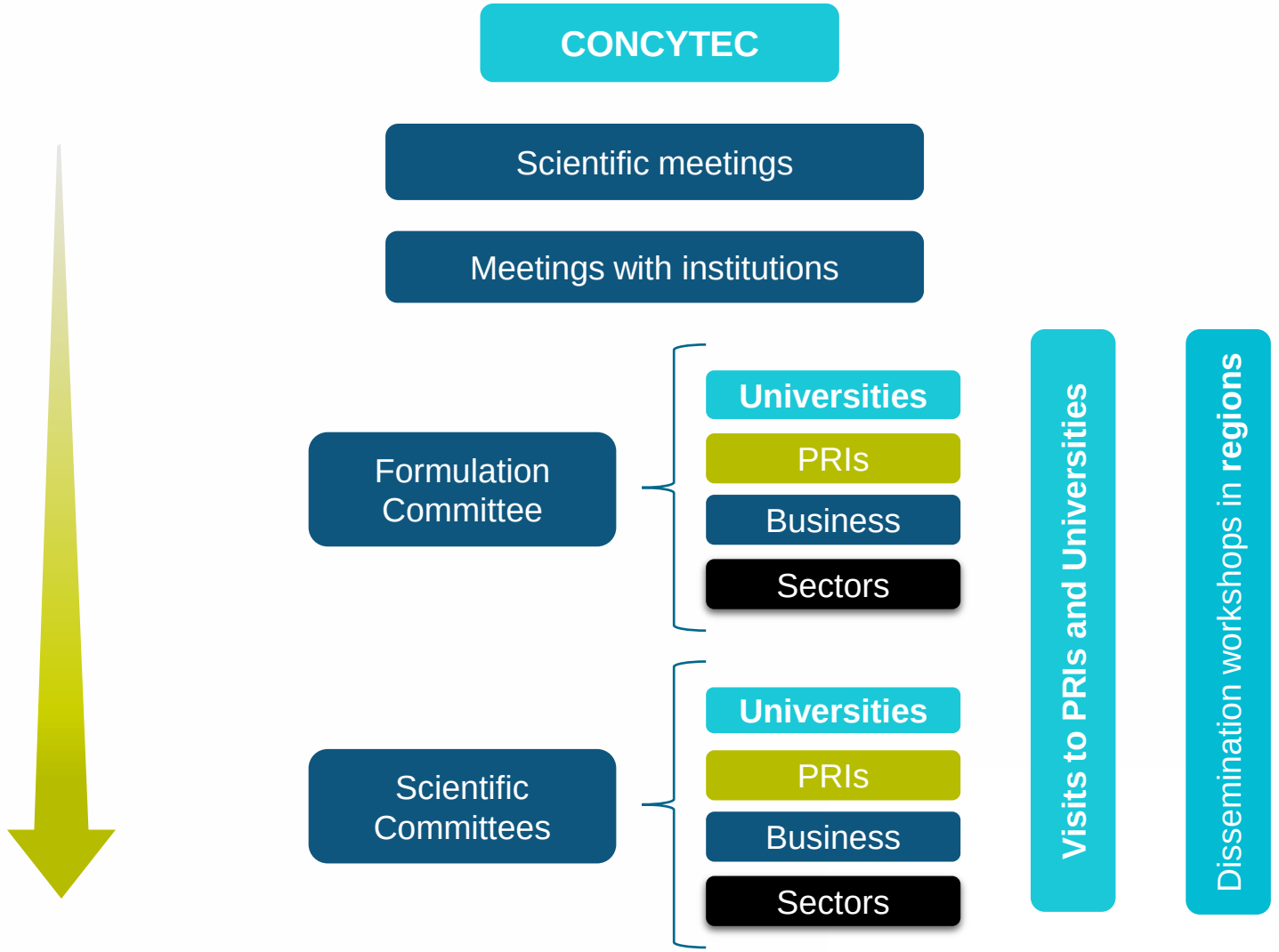
National Transverse Programs, synergy, cluster and strategic axes

National STI Programs	Challenges								Strategic Axes - CEPLAN						Clusters – CNC														
	Industrial competitiveness and productive diversification	Clean, secure and efficient energy	Health and social well-being	Education and knowledge societies	Natural resource management and adaptation to climate change	Food security	Effective and transparent public management	Sustainable cities	Human rights and social inclusion	Opportunities and access to services	State and governance	Diverse economy, competitiveness and employment	Territorial development and productive Infrastructure	Environment, biodiversity and disaster risk management	Mining Auxiliary Center in Lima and Arequipa	Fashion in Lima	Cultural Tourism in Cusco	Fine hairs Arequipa-Cusco-Puno	Logistics in Callao	Construction in Lima	Fishing: Flour and fish oil from the coast	Fishing: Frozen fish and preserves from the coast	Gastronomy and Food Service in Lima	Coffee from the North	Health in Lima	Software in Lima	Auxiliary agri-food in Lima	Fruit and vegetable on the coast	Meat in Lima	Mangos from San Lorenzo and Chulucanas valleys (Piura)
Environment	■	■	■	■	■	■		■							■			■		■		■			■		■			
Biotechnology	■		■		■	■									■			■			■	■		■	■	■	■	■	■	■
Basic Sciences	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Materials	■	■	■		■			■							■			■			■	■	■	■	■		■	■	■	■
ICT	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Prioritization of National Challenges

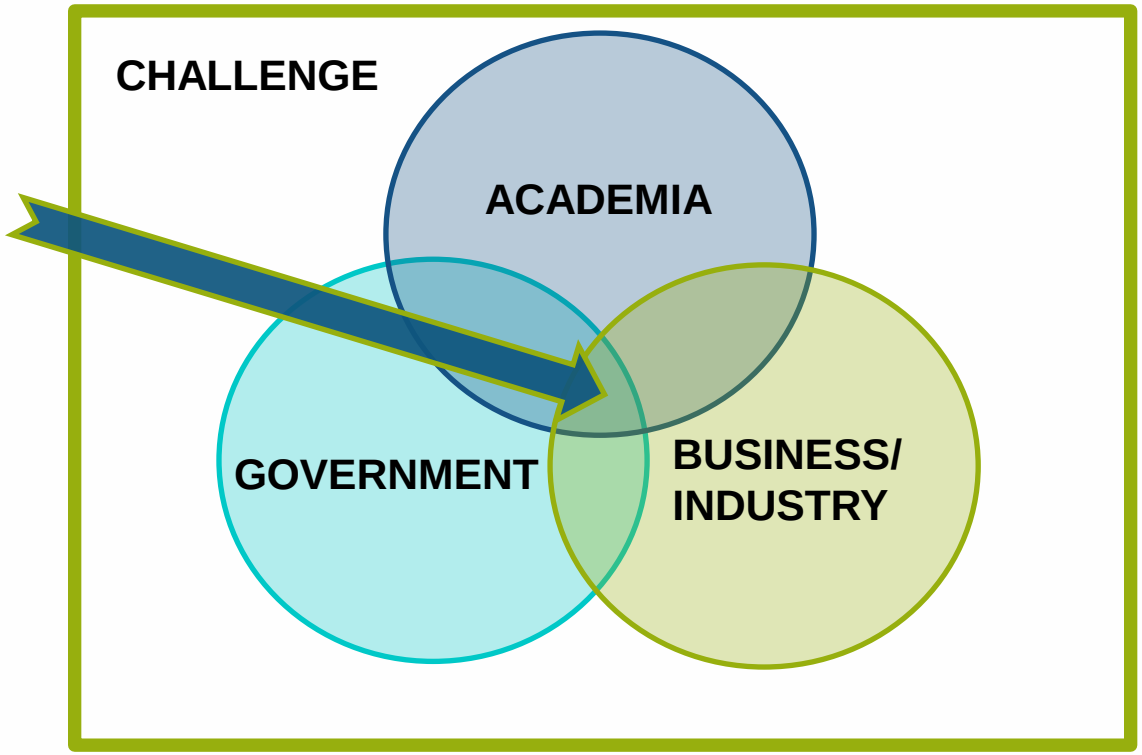


Formulation Process

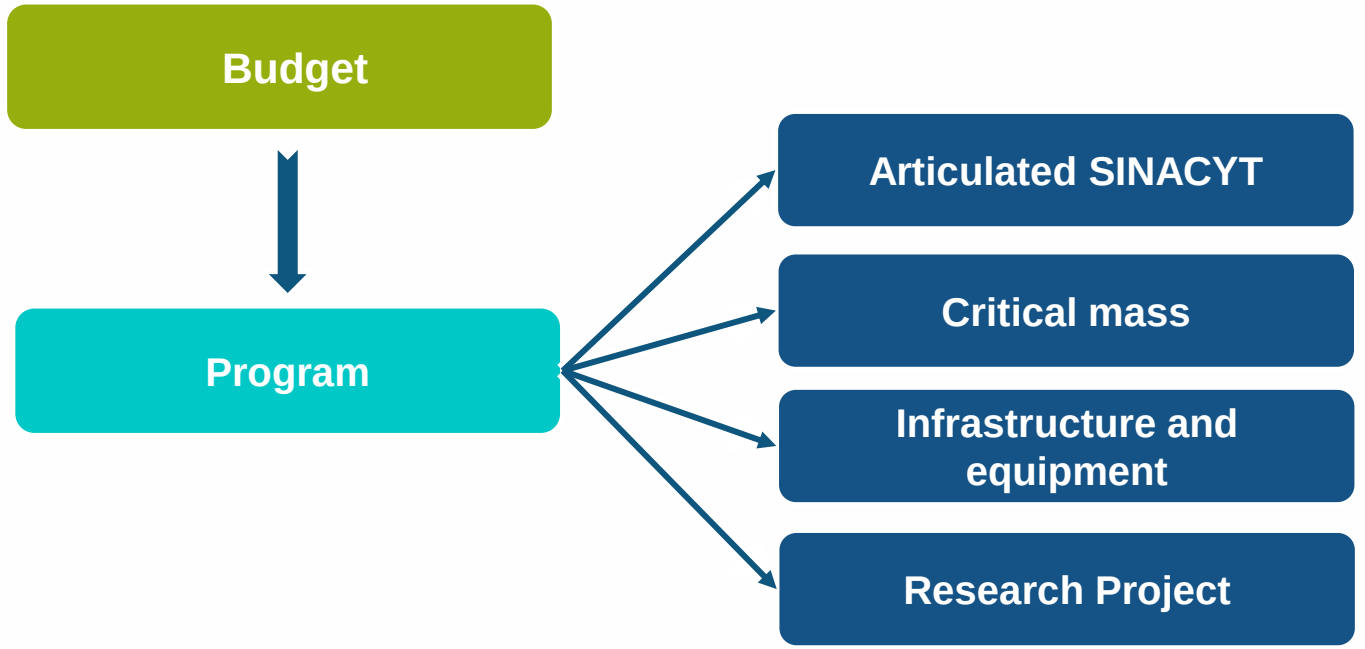


Prioritization of thematic areas and lines of research

Area of research/
lines of research



Implementation phase of the STI Programs



Indicators

Academic

- Number of professionals with a doctoral, master's or bachelor degree, or a professional title graduated as part of the programs' funding.
- New and well-established research groups.
- Undergraduate, master's or doctoral theses.
- New professors with a doctoral degree.
- Scientific articles, books and book chapters in journals or indexed publishers.
- Participation in national and international high-impact congresses.
- Equipment in research labs.

Technological

- Academia-industry research projects.
- Technology transfer to the industry.
- Research services required for the industry sector.
- High-level technical personnel to manipulate advanced technological equipment.
- Industrial property.
- Trade secrets.
- Patents.

PNCTI 2006-2021

National Cross-Sectoral Programs prioritized by CONCYTEC

PRONBIOTEC

E-TIC

ATLAS

CINTyA

ProMat

ValBio

Nacional Cross-Sectoral Program for Biotechnology PRONBIOTEC

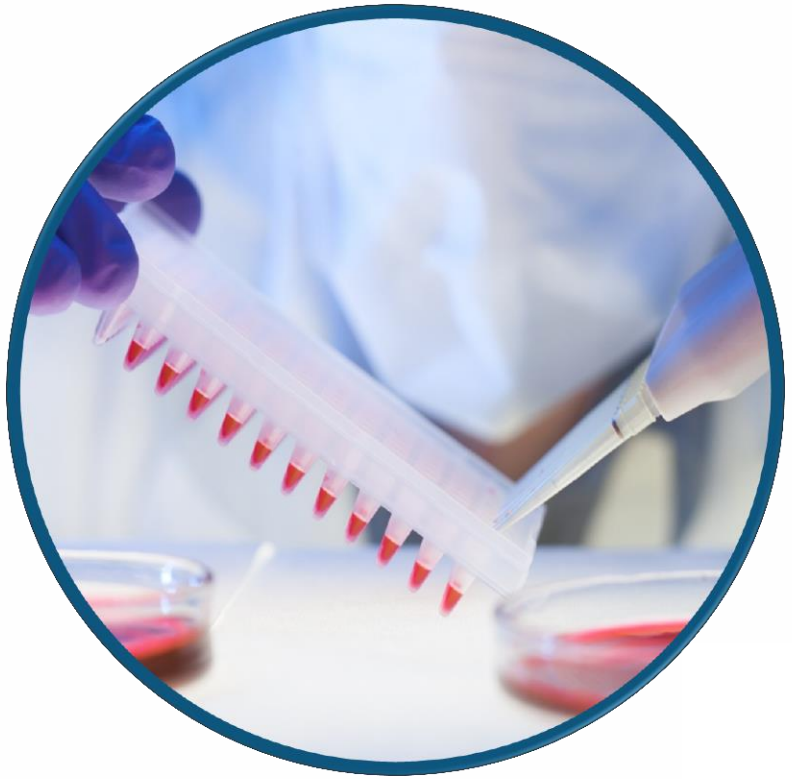
Dr. Jorge Tenorio. Responsable
jtenorio@concytec.gob.pe

Mg. Raquel Sotomayor. Especialista
rsotomayor@concytec.gob.pe

Thematic areas and lines of research

Animal and plant breeding

- Marker-assisted selection
- Artificial insemination
- Embryo implantation
- Embryogenesis
- In vitro fertilization
- Genetic modification



Microorganisms

- Bio-fertilizers.
- Probiotics (animals and humans)
- Pest and disease control
- Bioremediation
- Biofuels.
- Food supplements

Molecules

- Nutraceuticals
- Cosmeceuticals
- Drugs and active ingredients
- Biomaterials.

Animal and human health

- Vaccines (animals and humans)
- Diagnostic tests
- Tissue reconstruction

National Cross-Sectoral Program for Valorization of Biodiversity ValBio

MSc. Miguel Ayquipa. Responsable
mayquipa@concytec.gob.pe

Thematic areas and lines of research

Biodiversity

- Taxonomy
- Genetics
- Biochemistry

Ecosystems

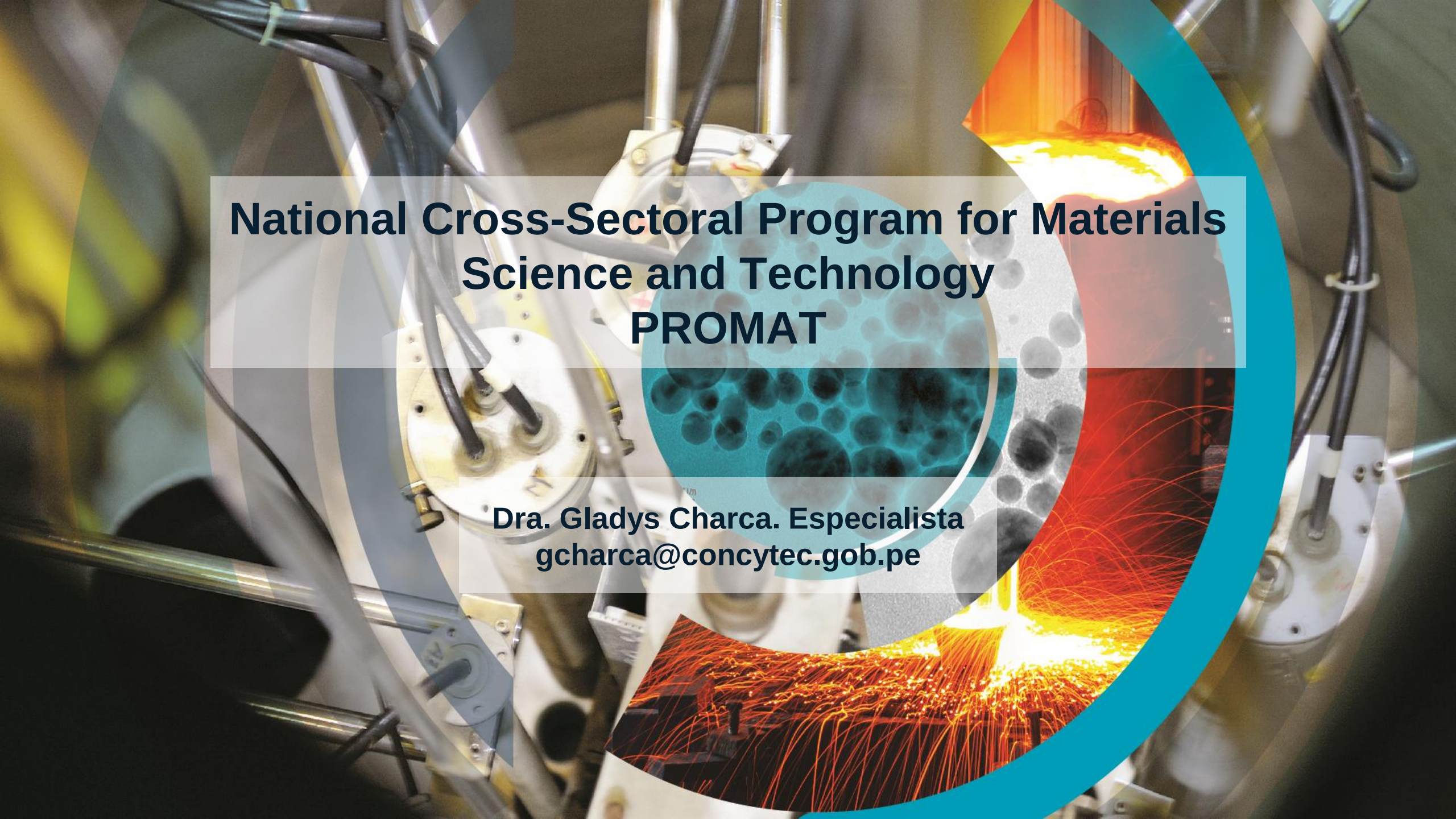
- Population ecology
- Evolution and adaptation

Sustainable management and use

- Cultural practices
- Sanitation
- Genetic improvement
- Reproduction

Products and services

- Industrial processing
- Gastronomy
- Ecoturism



National Cross-Sectoral Program for Materials Science and Technology
PROMAT

Dra. Gladys Charca. Especialista
gcharca@concytec.gob.pe

Thematic areas and lines of research

Nanomaterials and semiconductors

- Advanced nanomaterials for different applications
- Semiconductors for electronic applications

Composite materials, ceramic and non-metallic minerals

- Heterogeneous composite materials
- Homogeneous composite materials
- Ceramic materials and regional non-metallic minerals

Metals

- Structural integrity
- Reprocessing of environmental passives
- New metallic materials

Natual and synthetic polymers

- Natural, synthetic and functional polymers
- Recycling and valorization of residues

National Program for Basic Research in Basic Sciences
ATLAS

Dr. Víctor García. Responsable
vgarcia@concytec.gob.pe

Thematic areas and lines of research

Biology

- Molecular and cellular biology
- Botany
- Ecology and conservation
- Genetics and biochemistry
- Microbiology and immunology
- Parasitology
- Zoology

Physics

- Astrophysics
- Computational physics
- Condensed matters physics
- Medical physics
- Nuclear and elementary particle physics
- Theoretical physics
- Geophysics

Mathematics

- Computational science
- Statistics
- Operations research
- Applied mathematics
- Pure mathematics

Química

- Physical chemistry
- Natural products
- Environmental chemistry
- Materials chemistry
- Inorganic chemistry
- Nuclear chemistry
- Organic chemistry

Nacional Cross-Sectoral Program for Information and Communication Technologies E-TIC

Dr. Carlos Mugruza. Especialista
cmugruza@concytec.gob.pe

Thematic areas and lines of research

Computing

- Human-computer interaction
- Software engineering
- Computer graphics and imaging
- Ubiquitous computing

Cognitive systems

- Digital signal processing
- Intelligent systems
- Sensing and natural processing
- Neurosciences
- Robotics and automation

Data science

- Human behavior
- Psycholinguistics for ICT
- Parallel and distributed computing

ICT platform

- ICT networks
- Energy networks
- Circuits and electronic systems
- Cybersecurity

National Program for Enviroment Science and Technology
CINTyA

Dra. Tania Peña. Especialista
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Thematic areas and lines of research

Climate variability and climate change

- Future climate scenarios and their potential impacts
- Cryosphere dynamics
- Climate variability, recent climate change and paleoclimates
- Adaptation.
- Mitigation

Ecosistems and natural resources

- Ecosystems and ecosystem services
- Sustainable management of biological resources
- Water, energy, geological and soil resources
- Antarctic research

Environmental quality

- Remediation and recovery of degraded environments
- Bioaccumulation and biomagnification
- Environmental quality and human health
- Environmental pollution levels
- Waste management

Risk management

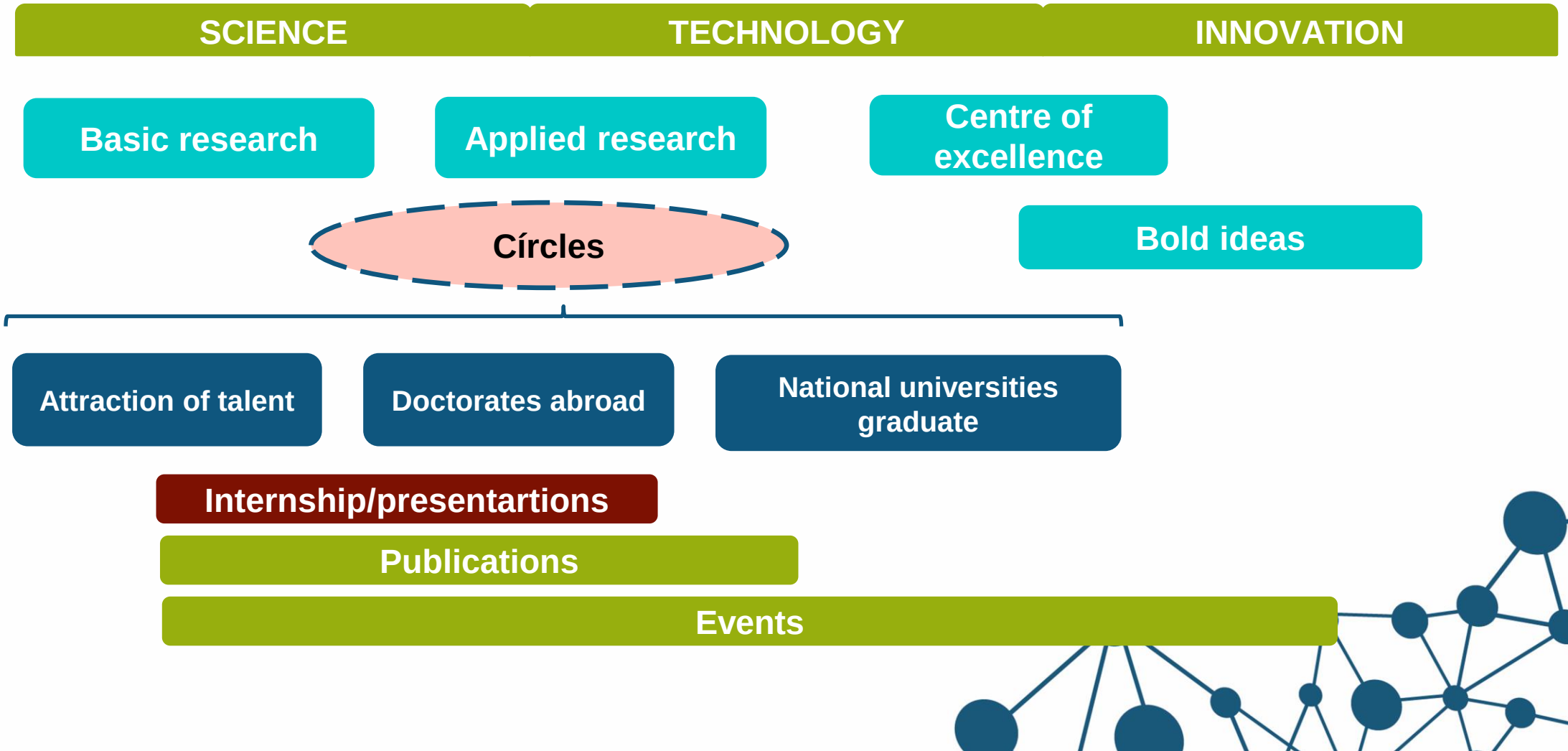
- Earthquakes, volcanic activity and related phenomena
- Extreme climate and hydrological events
- Erosion, sediment transport and mass movement
- Early warning systems
- Geospatial events.

Budget

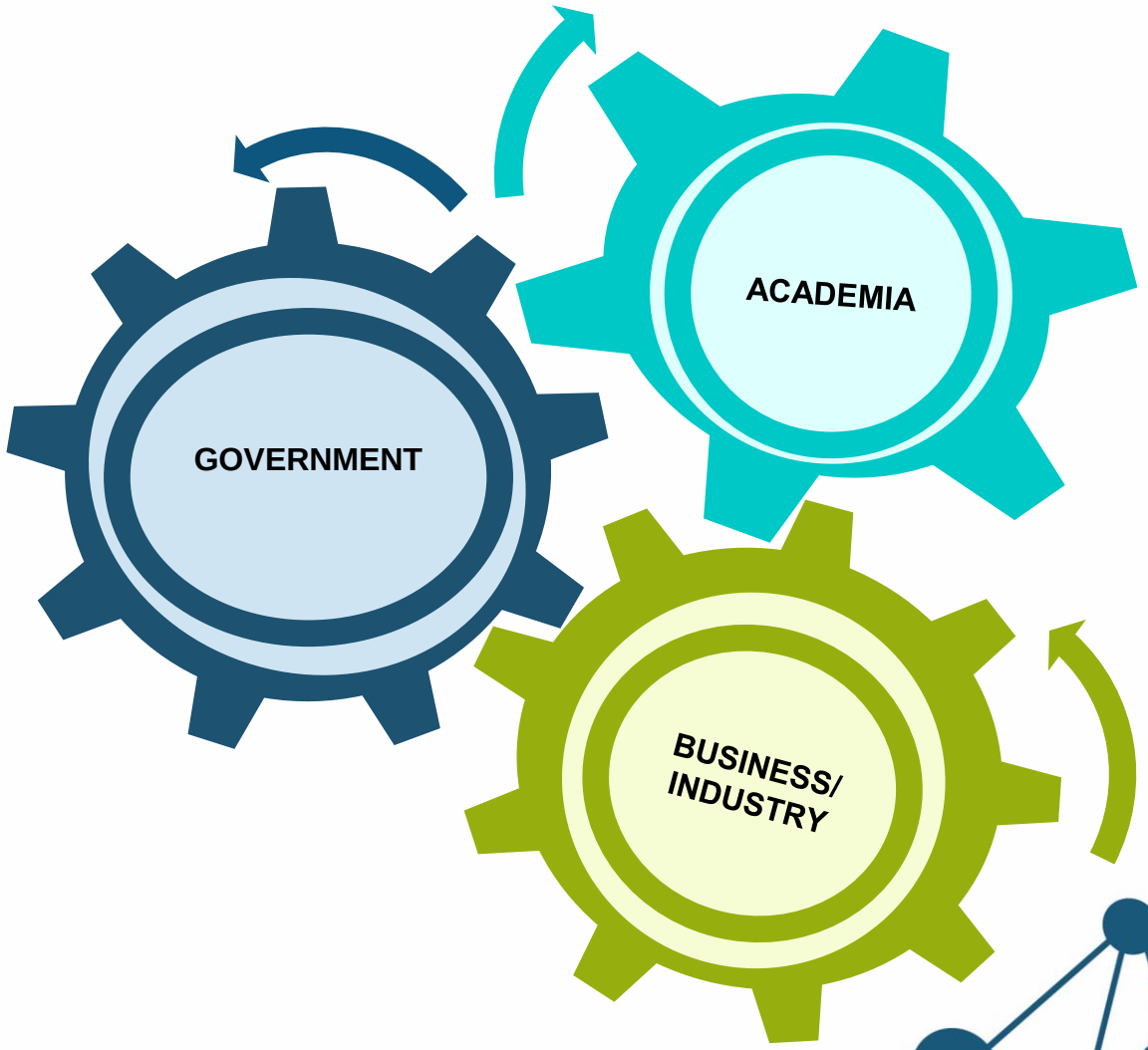
Budget 2016 – 2021 (S/.)	
ValBio	349 772 000
PROMAT	341 209 000
CINTyA	775 755 933
ATLAS	402 812 400
PRONBIOTEC	569 945 000
E-TIC	547 245 000
Total	**2 986 739 333**

Financial Schemes

CIENCIACTIVA
Becas y Co-financiamiento de Concytec



Articulation of National Cross-Sectoral Programs



Law Nº 30309: Law that promote research Projects, Technological development and technological Innovation (I+D+i)

Tax Benefits for innovative companies

The taxpayers that carry out expenses on scientific research projects, technological development and technological innovation, linked or not to the business of the company, may access to deductions:

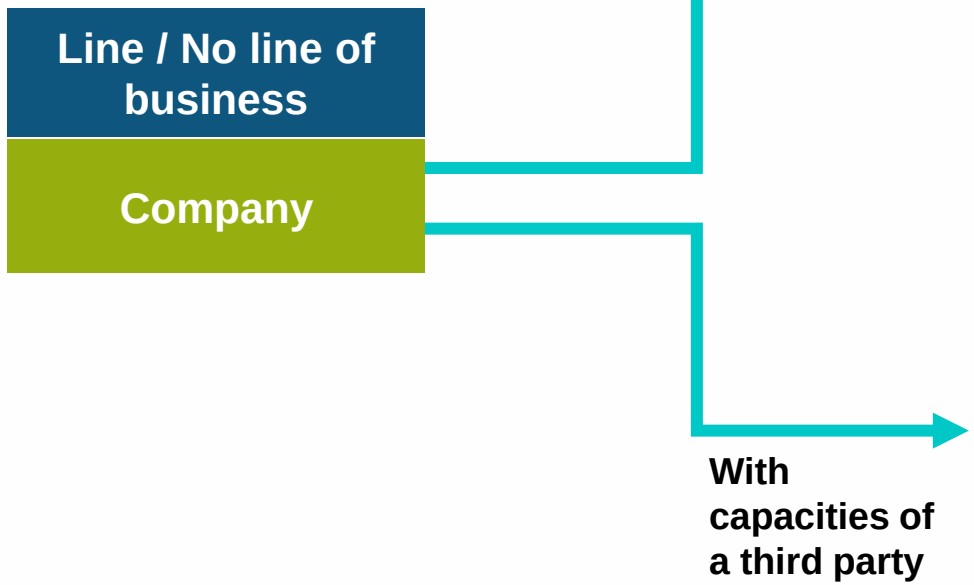
- **175%** Direct mode or with centers domiciled in the country
- **150%** Indirect mode, with centers NO domiciled in the country

Total anual deductions:

2016	2017	2018	2019
57 500 000	114 800 000	155 200 000	207 200 000

Total: S/. 534.7 millions

Modalities of application



DIRECT MODE: AUTHORIZATION AND PROJECT QUALIFICATION OF I+D+i

Authorization
- Specialist .
- Equipment, infrastructure, information system necessary

Qualification
- To demostrate that the Project has the research component, development or innovation.

INDIRECT MODE: CENTERS OF I+D+i

Period 1. Authorized by the Center

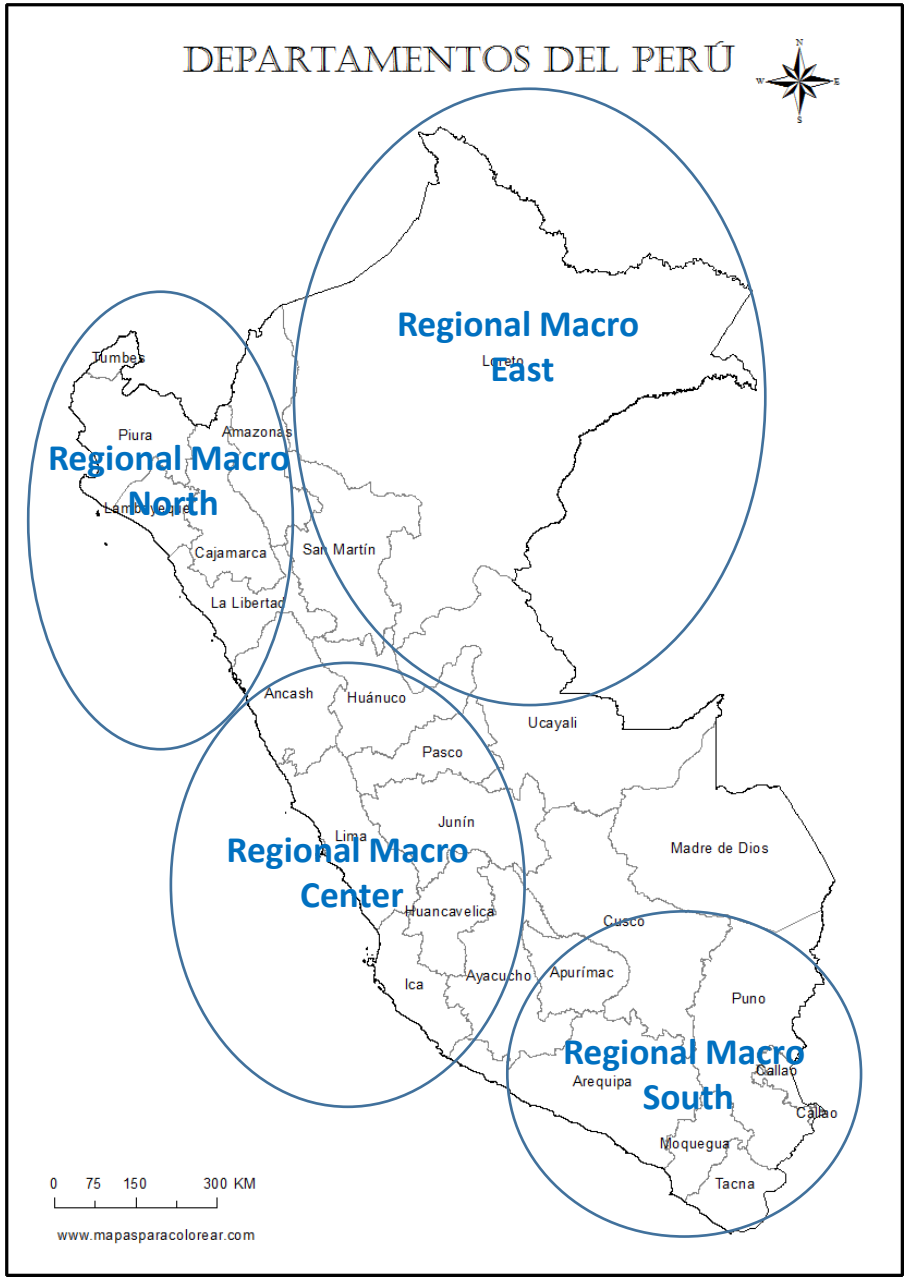
Authorization
- Specialists.
- Equipment, infrastructure, information system necessary
- Minimum experience of 6 months or specialists with experience

Period 2. Qualification of the project

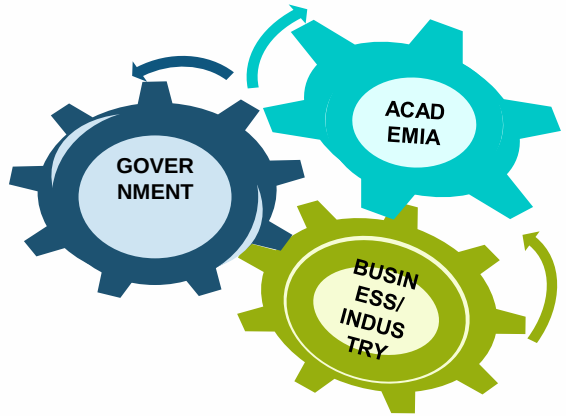
Qualification
- To demostrate that the Project has the research component, development or innovation.

* The Law 30309 and their regulation establish minimun requirements without prejudice to additional information that CONCYTEC could request

Meetings Regional Macro



43 Public Universities of 51



CONCYTEC

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IMPULSANDO
EL FUTURO

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