



FCT

Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

Foundation for Science and Technology Portugal

Establishing Portugal as a global reference
for research and innovation



Message from the President

Portugal has a well-established research base, primed to carry out internationally competitive research. This community drives new areas of frontier science, underpins knowledge-based innovation and contributes to solving the challenges modern societies face.

The research community in Portugal is diverse, productive and internationally competitive. Over the last decade, researchers in Portugal have increased the number of published and citable articles by almost four-fold. Furthermore, almost half of the publications have authors affiliated to non-Portuguese institutions, underscoring the increasingly international nature of Portugal's research base. To increase Portugal's capacity to attract and retain the best scientists is one of FCT's main goals.

The range of research in Portugal is broad, with particular strengths in certain areas, with high publishing activity (marine sciences, environmental sciences, material sciences, life sciences and biotechnology) or high citation impact (space sciences, agricultural research, animal and plant sciences, neuroscience and clinical sciences). Several of these research areas underpin developments in technology-intensive industries, thus driving innovation in expanding economic sectors.

FCT's vision is to establish Portugal as a global reference for science, research and innovation, and to ensure that knowledge generated by research is used fully, **for economic growth and the well-being of all citizens.** To achieve this, we are working to sustain the exponential growth of the Portuguese R&I system, by successfully addressing the challenges of quality and international competitiveness.

Miguel Seabra

January 2015

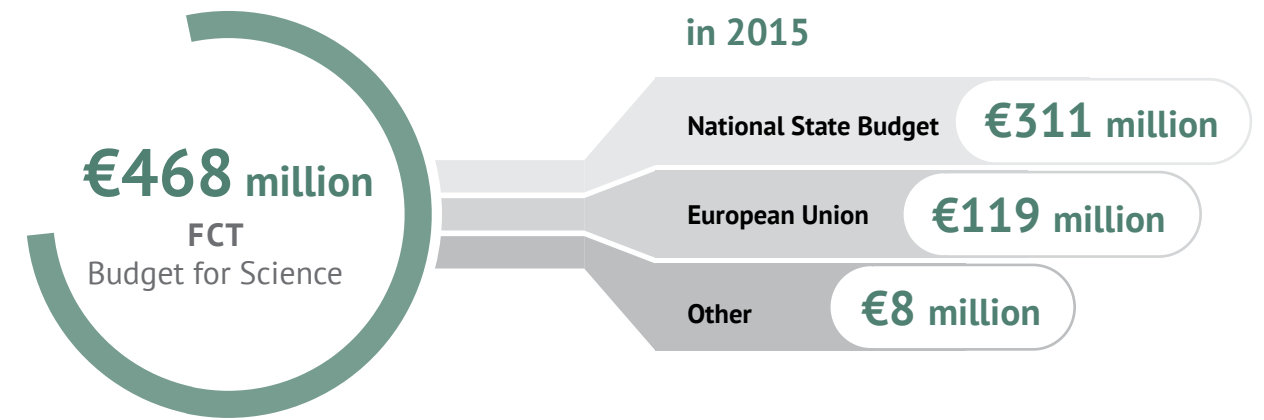
FCT IN PORTUGAL'S RESEARCH FUNDING LANDSCAPE

THE *FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA* (FCT) IS THE NATIONAL FUNDING AGENCY FOR SCIENCE AND RESEARCH IN PORTUGAL.

FCT supports research with over 400 million euro per year (on average), which accounts for approximately 30% of Portugal's annual public funding for science.

FCT is a publicly funded government agency, under responsibility of the Ministry of Education and Science.

The FCT budget is provided mainly by the national state budget (approximately two thirds) and European Union Structural Funds.









FCT AT A GLANCE

FCT supports the brightest minds, groundbreaking ideas, internationally competitive research centres and state-of-the-art research infrastructures, across all research areas.

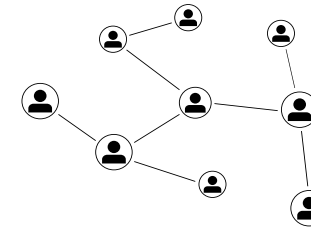
FCT acts internationally with both established and emerging science nations, ensuring researchers in Portugal have access to international research programmes, funding and networks.

FCT funding is awarded on a competitive basis.

Winning proposals are selected through rigorous, transparent, national or international peer-review, involving hundreds of independent scientists.

in 2014	 Studentships, Fellowships	 Research Positions	 FCT PhD Programmes	 R&D Project Grants	 R&D Centres funding	 International cooperation
NUMBER	10 700	1 300	98 <small>approved for funding</small>	4 000	318	
FUNDING (€)	€164 million			€109 million	€54 million	€44 million
with industry	150 PhD in Industry Studentships		43 businesses as participants in 7 PhD Programmes in Industry Setting	106 businesses as participants		

FCT connects research with industry for greater economic impact and growth.



JOINT USA-PORTUGAL PROGRAMMES (MIT, UT AUSTIN, CARNEGIE MELLON UNIVERSITY)

156 industry partners

19 start-ups

UTEN - UNIVERSITY TECHNOLOGY ENTERPRISE NETWORK

4 business incubators

6 Technological parks

92 Technology Transfer Offices

45 Partner companies

FCT connects research with society, by sharing FCT-funded research with citizens, and promoting open access to all publications arising from FCT-funded research.

Through its FCCN department, **FCT supports the internet communication needs** of the research and education communities in Portugal.

FCT contributes to inform public research and information society policies, in Portugal, in Europe and globally. FCT is an active voice in high-level international dialogues on science and Information Society policies.

BIZ.PT - GLOBAL START-UP PROGRAMME

19 start-ups

SUPPORTING THE BRIGHTEST MINDS

FCT SUPPORTS THE MOST TALENTED RESEARCHERS.

We cover the different career stages: from graduate education, through training at graduate and post-doctoral level, to independent positions at Portuguese R&D centres.

GRADUATE EDUCATION

For graduates wanting to start a scientific career.

PhD Studentships & PhD Studentships in Industry

Offered through an annual call for applications, these are personal awards for graduates wishing to undertake research towards a PhD in an R&D centre and/or in industry.

FCT PhD Programmes

Biennial competitive calls for research-based PhD programmes, proposed by universities, R&D centres and/or industry.

Three types of PhD Programmes are funded:

- National
- International
- In industry setting

TRAINING

Post-doctoral fellowships are offered through annual calls for applications and within FCT-funded project grants. All fellowships come with three-years' funding, and are renewable for a second three-year term.

Other fellowships for graduate training include:

- **Research Fellowships** – awarded within research project grants or R&D centres
- **Research Technician Fellowships**
- **Traineeships at Scientific Organisations** such as CERN, the European Space Agency (ESA) and the European Southern Observatory (ESO)

CAREER DEVELOPMENT

FCT's career development programmes aim to promote the uptake of highly qualified and internationally competitive scientists into research and academic centres in Portugal.

The FCT Investigator Programme provides 5-year funding for the most talented and promising researchers, across all scientific areas and nationalities. The programme supports both outstanding post-doctoral researchers who wish to make the transition to independent researcher, as well as already independent researchers, with a proven track record, who wish to establish leadership in their research fields.

FCT Investigator grants are of three types:

- **Starting Grant**
- **Development Grant**
- **Consolidation Grant**

SUPPORT FOR GROUNDBREAKING IDEAS

FCT AWARDS PROJECT GRANTS TO THE MOST COMPETITIVE TEAMS, TO CARRY OUT GROUNDBREAKING RESEARCH.

FCT launches annual calls for proposals in all research fields, as well as focused, subject-specific calls.

Four types of project grants are available in the annual calls for all research areas:



EXPLORATORY PROJECT GRANTS

For research proposals that explore an original idea and show potential to open up a new field of research or strengthen an existing area. These are one-year grants, of up to €50 000.

PROJECT GRANTS

Support the development of original and cutting-edge ideas, that show strong potential to significantly advance a research field. Two to three year grants of up to €200 000 are awarded.

EXCELLENCE GRANTS

Support proposals that build on a large, well-established body of research by the applicant(s). Proposals should be organised into a five-year plan, made up of distinct research lines. Grants are up to €500 000.

RESOURCES GRANTS

These grants support people, equipment or facilities to build capacity, and bolster competitiveness, namely within international programmes. Five-year research plans are funded, with up to €500 000.

R&D CENTRES

INCUBATORS FOR TALENTED RESEARCHERS AND CUTTING-EDGE RESEARCH.

Most scientific research in Portugal takes place in R&D centres funded by FCT. All centres are expected to carry out innovative and ambitious research, set up international collaborations and recruit high level researchers from across the globe.

R&D Centres should also contribute to the dissemination and transfer of knowledge, as well as to increasing competitiveness and wealth creation in their regions.

Centres are funded by large grants, for periods of 5-6 years. Funding for each centre is established after a quinquennial review. Fairness, rigour and transparency are key factors in the review process.

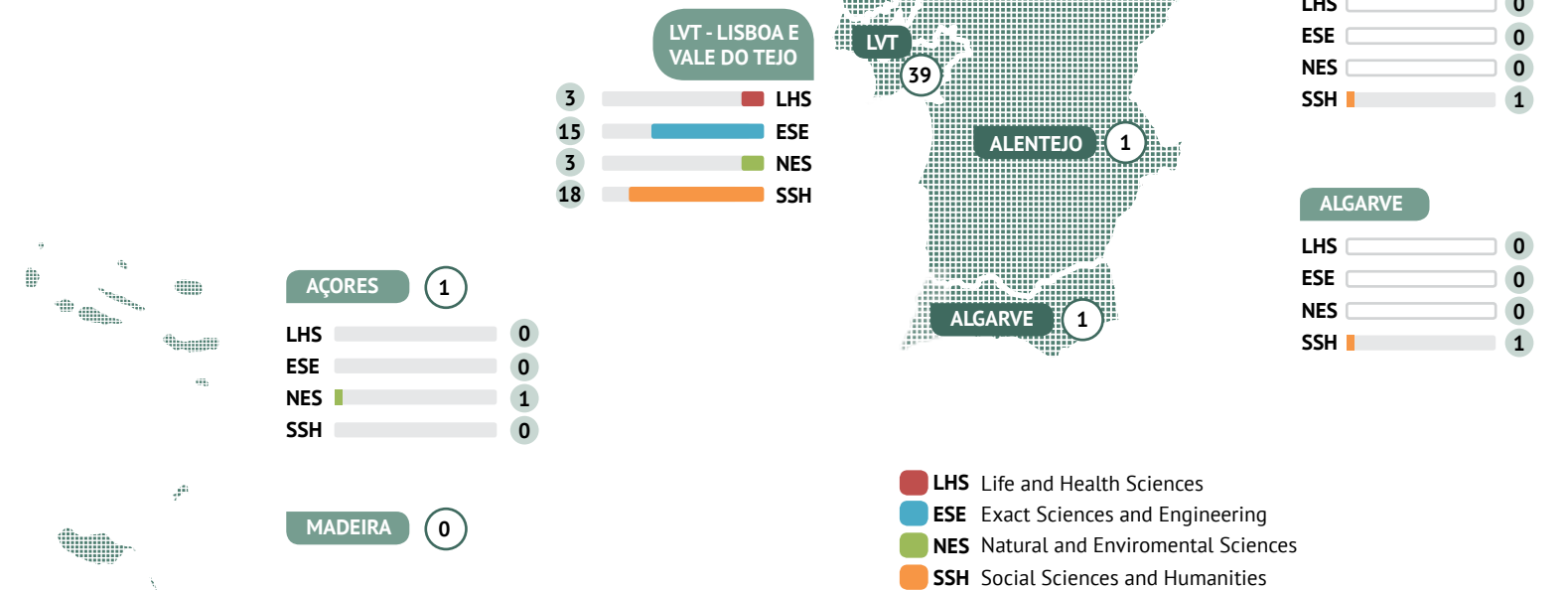
Currently FCT funds **292 R&D Units** and **26 Associate Laboratories**, across all research areas. Some are based at universities, other are private, non-profit organisations.

CENTRES OF EXCELLENCE

There are currently 84 R&D Centres that were rated as “Excellent” in the last review.

R&D Centres of Excellence play a key role in advancing science in Portugal, across all research areas.

FCT supports Centres of Excellence in establishing themselves internationally, by addressing issues of national and global relevance.



RESEARCH INFRASTRUCTURES

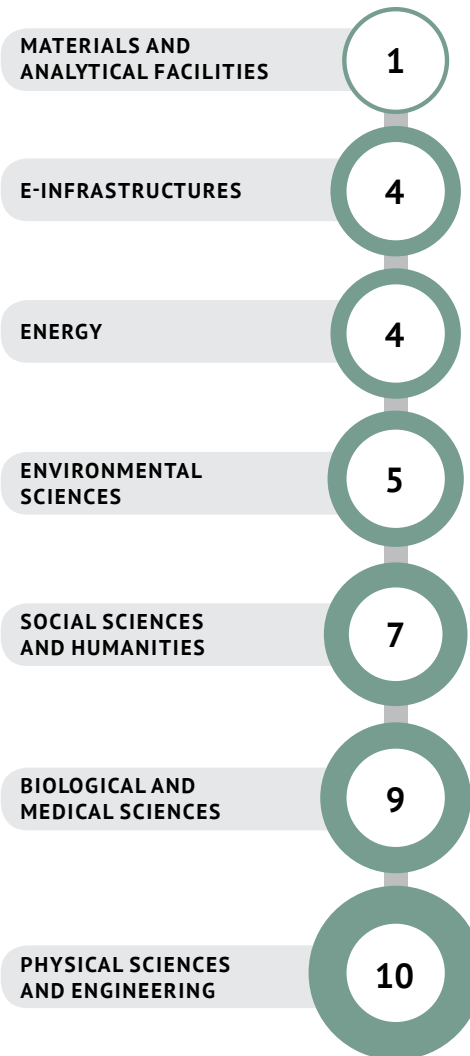
MODERN DAY SCIENCE REQUIRES STATE-OF-THE-ART RESEARCH FACILITIES.

FCT supports research infrastructures of strategic interest, that underpin cutting edge research and innovation, and bolster the capacity of the R&D community in Portugal to be an active member of European and international projects.

The first national roadmap includes 40 research infrastructures, 23 of which are nodes of research infrastructures included in ESFRI (European Strategy Forum for Research Infrastructures).

All research infrastructures included in the roadmap were selected through international peer review and will receive funding until 2020.

RESEARCH INFRASTRUCTURES IN THE NATIONAL ROADMAP



KNOWLEDGE TRANSFER

TECHNOLOGICAL DEVELOPMENTS IN MODERN SOCIETIES RELY ON KNOWLEDGE GENERATED BY SCIENTIFIC RESEARCH.

FCT works to encourage industry to invest in R&D, participate directly and actively in graduate training and in the uptake of talented scientists, with a view to building a qualified workforce, that may underlie sustained economic and social growth.

FCT PROVIDES DIRECT FUNDING FOR INDUSTRY PARTNERS THROUGH:

PROJECT GRANTS

Businesses may apply as participants, and bring in matching funds. FCT covers 50% of costs of industry partners.

INTERNATIONAL PARTNERSHIPS

Innovation and entrepreneurship are key goals for the partnerships with MIT, UT Austin, Carnegie Mellon University (in USA) and Fraunhofer Gesellschaft (in Europe).

FCT LIAISES BETWEEN ACADEMIA AND INDUSTRY TO ENCOURAGE KNOWLEDGE TRANSFER:

INTERNATIONAL LIAISON OFFICE WITH INTERNATIONAL ORGANISATIONS (CERN, ESA, ESO)

FCT mediates access of Portuguese companies to tenders for space and large-scale research facilities.

TECHNOLOGY TRANSFER

FCT is a partner in major technology transfer programmes: PTTI – Portuguese Technology Transfer Initiative, UTEN – University Technology Enterprise Network, Biz.PT – Austin-based business incubator, BGI – Business Accelerator Programme with MIT.

INTERNATIONAL COOPERATION

SCIENCE IS GLOBAL. FCT ACTS WITH OVER 70 COUNTRIES, ACROSS THE GLOBE, TO ENSURE INTERNATIONAL COMPETITIVENESS OF RESEARCH CARRIED OUT IN PORTUGAL.

EUROPEAN RESEARCH AREA

EU Framework Programme Horizon 2020

FCT supports researchers in Portugal in preparing applications to the Horizon 2020 Framework Programme, the largest EU research and innovation programme ever, with nearly €80 billion euro available over the next seven years.

ERA-NETs – Coordinating research activities between funding agencies

FCT is a member of 28 ongoing ERA-NETs, across the exact sciences and engineering, life and health sciences, natural and environmental sciences and the social sciences and humanities. FCT also participates in two “global” ERA-NETS, with India and with Africa.

Joint Programming Initiatives (JPI) – Common national strategic research agendas to address societal challenges

Portugal is a member of three JPIs, in which FCT represents the scientific community and Portugal’s strategic research interests: JPND – Joint Programming on Neurodegenerative Disease Research; JPI Water and JPI Oceans.

COST – European Cooperation in Science and Technology – FCT operates the COST programme in Portugal, encouraging the participation and leadership of resident researchers in scientific and technological networks

COOPERATION BEYOND EUROPE

FCT runs dedicated scientific programmes, with key partner countries, in specific areas, with both established (USA) and emerging science nations (Brazil, China, India, African Portuguese-speaking countries).

INTERNATIONAL RESEARCH ORGANISATIONS

Portugal is an active member of leading research organisations, allowing access of researchers in Portugal to international networks, facilities and large-scale research infrastructures, including:

CERN – European Organisation for Nuclear Research

ESA – European Space Agency

ESO – European Southern Observatory

EMBO – European Molecular Biology Organisation

ESRF – European Synchrotron Radiation Facility

GBIF – Global Biodiversity Information Facility

ALBANIA
ALGERIA
ANGOLA
ARGENTINA
AUSTRIA
BARBADOS
BELGIUM
BOTSWANA
BRAZIL
BULGARIA

BURKINA FASO
CAMEROON
CANADA
CAPE VERDE
CHILE
CHINA
COLOMBIA
COSTA RICA
CÔTE D'IVOIRE
CROATIA

CYPRUS
CZECH REPUBLIC
DENMARK
DOMINICAN REPUBLIC
EGYPT
ESTONIA
FINLAND
FRANCE
GEORGIA
GERMANY

GHANA
GRECE
HUNGARY
ICELAND
INDIA
IRELAND
ISRAEL
JORDAN
KENYA
LATVIA

LEBANON
LITHUANIA
LUXEMBOURG
MADAGASCAR
MALAWI
MALTA
MEXICO
MOLDOVA
MOROCCO
MOZAMBIQUE

NETHERLANDS
NEW ZEALAND
NICARAGUA
NIGERIA
NORWAY
PALESTINE
PANAMA
PERU
POLAND
ROMANIA

RUSSIA
RWANDA
SENEGAL
SERBIA
SLOVAKIA
SLOVENIA
SOUTH AFRICA
SPAIN
SWEDEN
SWITZERLAND

TAIWAN
TUNISIA
TURKEY
UGANDA
UKRAINE
UNITED KINGDOM
UNITED STATES OF AMERICA
URUGUAY

NATIONAL COMPUTING INFRASTRUCTURE

FCT CONNECTS ACADEMIC AND RESEARCH INSTITUTIONS IN PORTUGAL TO OTHER EDUCATION NETWORKS AROUND THE WORLD

Through its FCCN department, FCT plans, manages and operates the National Research and Education Network (NREN) - a high-performance platform for developing and testing advanced communication applications and services.

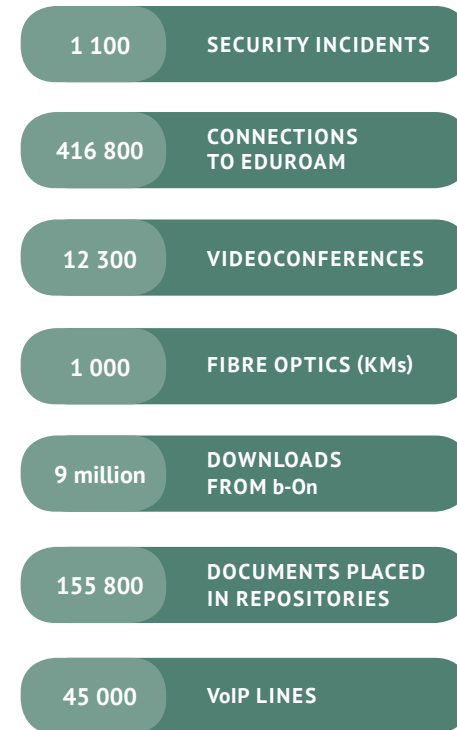
CONNECTIVITY

A wide range of network services are made available through the RCTS academic network supporting numerous applications and services providing collaboration, knowledge and safety.

SCIENTIFIC COMPUTING

The scientific datacentre provides effective and trustworthy storage solutions as well as computing power, helping to develop and support increasingly complex advanced research and/or technological activities.

in 2014



COLLABORATION

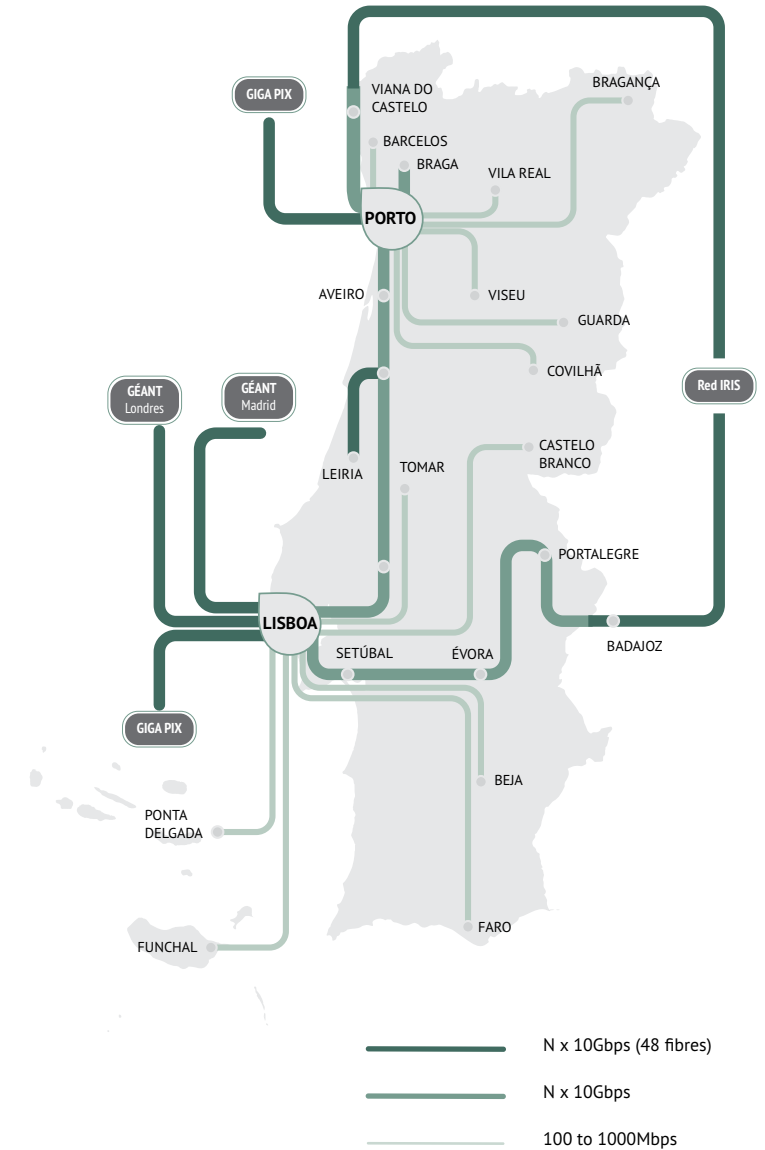
A range of services, brought together to provide interoperable services that support global collaborations and enable access to a multimedia universe: online classes, video streaming, web meetings, videoconferencing, VoIP network services, among others.

KNOWLEDGE

The b-on library provides unlimited and permanent access to thousands of international scientific publications from major international scientific content providers. FCCN also supports and maintains open access digital repositories and a web archiving service.

SECURITY

A certified authentication service (using a single user name and password) gives access to a large number of systems and web applications to guarantee the correct identification of users and services. A Computer Emergency and Response Team (CERT) deals with issues relating to IT security, whether they are due to system failures caused by virus attacks, acute security gaps in applications or enquiries regarding individual protection measures for computer systems.



INFORMATION SOCIETY

WE LIVE IN AN INFORMATION SOCIETY, WHERE THE CREATION, DISTRIBUTION, USE, UPTAKE AND MANIPULATION OF INFORMATION UNDERPINS ECONOMIC, POLITICAL, SOCIAL, SCIENTIFIC AND CULTURAL ACTIVITIES.

FCT coordinates public policies for the information society in Portugal by:

- Being the voice of Portugal and of Portuguese citizens in international organisations dealing with **internet governance**;
- Informing and supporting Portugal's researchers and businesses in gaining access to **information and communication technologies networks and funding schemes**;
- Creating **digital citizens**, engaged and empowered to take part in the information society.

Open
Access
Safer
Accessibility internet
e-inclusion Cybersecurity
Future internet

DIALOGUES ON PUBLIC POLICY

FCT IS COMMITTED TO INFORMING RESPONSIBLE, FORWARD-LOOKING PUBLIC POLICIES ON RESEARCH AND THE INFORMATION SOCIETY.

FCT represents Portugal in key **international science and technology fora**, including the OECD, the Strategic Forum for International Cooperation (SFIC), the EU-Africa High Level Policy Dialogue on STI (HLPD), EU-Latin American Countries, the Community of Portuguese Language Countries (CPLP).

Within the Digital Agenda for Europe – a Europe 2020 flagship – FCT has a key role, building bridges between EU and national initiatives. FCT is also a member of several policy and governance organisations dealing with issues of the **Information Society** such as the Internet Corporation for Assigned Names and Numbers (ICANN) and the Internet Governance Forum (IGF).

FCT played a key role in developing **Portugal's Innovation Strategy for Smart Specialisation**. Created with wide stakeholder involvement, the Smart Specialisation Strategy will underpin research policy and funding instruments for 2014-2020.



FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA

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