The FCT Information Systems: services provided to support scientific research. The perspective of the Portuguese funding agency for science and innovation.

14 November, 2013
University of Porto, Porto

Paula Meireles – Document Management Group
Fundação para a Ciência e a Tecnologia, Lisbon – Portugal
The Portuguese funding agency for science research and innovation
The Fundação para a Ciência e a Tecnologia (FCT) started its activity in August 1997.

It succeeded to National Board of Scientific and Technological Research (JNICT), created in 1967.

Its mission is:
- The funding and evaluation of the research activity,
- The international scientific and technological cooperation,
- The coordination of public policies on science and technology,
- The development of national means of scientific computing.

The history of FCT has an important role in the history of science and technology and the organization of science in Portugal.
a) Science Management:

- Submission of applications for research scholarships, projects, institutions and scientific leaders;
- Management financing of projects and institutions;
- Communication with stakeholders;
- Curricula registration and management;
- Mobility of researchers;
- Opportunities for research;
- Access online information.
b) Scientific production:

The Scientific Open Access Repository of Portugal, known as RCAAP, has for mission promote, support and facilitate the adoption of open access to scientific knowledge in Portugal.
c) Access to the documentary heritage of FCT

- The treatment and organization project of the FCT archive started in 2008.

- We evaluated approximately 3.5 Km documentation accumulated since the late 1960’s of the twentieth century.
II. Information Systems FCT – Services for the Comunity

The Archive of Science and Technology

Public service use of the Fundação para a Ciência e a Tecnologia, being responsible for treatment, organization, communication and preservation of the science and technology archives held by the FCT. Encompasses:

- Essentially, archives of management institutions and scientific research organization at a national level,

But also...

- Archives of scientists and researchers with relevant activity in national and international scientific scene.
FCT
Fundação para a Ciência e Tecnologia
Arquivo de Ciência e Tecnologia
## II. Information Systems FCT – Services for the Community

<table>
<thead>
<tr>
<th>Historical Archive of Science and Technology</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Archive of Nuclear Energy Board</td>
<td>1954-1979</td>
</tr>
<tr>
<td>2. Archive of the INVOTAN Commission</td>
<td>1959-....</td>
</tr>
<tr>
<td>3. Archive of the National Board of Scientific and Technological Research (JNICT)</td>
<td>1967-1997</td>
</tr>
<tr>
<td>4. Archive of the National Institute of Scientific Research (INIC)</td>
<td>1976-1992</td>
</tr>
<tr>
<td>7. Archive of the Fundação para a Ciência e a Tecnologia (FCT)</td>
<td>1997-....</td>
</tr>
<tr>
<td>11. Archive of David Ferreira</td>
<td>[1911-2002]</td>
</tr>
</tbody>
</table>
### II. Information Systems FCT – Services for the Comunity

<table>
<thead>
<tr>
<th>Content</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INVOTAN Commission</strong></td>
<td>Research grants, decision documents (eg minutes of meetings of the Commission) and relations with NATO.</td>
</tr>
<tr>
<td><strong>JNICT / FCT</strong></td>
<td>Research grants, projects, institutions and scientific infrastructure and international cooperation.</td>
</tr>
<tr>
<td><strong>INIC</strong></td>
<td>Funding of research institutions, processes and procedures scholarship holders scientific interchange (agreements, conventions, scientific and cultural bilateral and multilateral).</td>
</tr>
<tr>
<td><strong>GRICES / ICCTI</strong></td>
<td>Multilateral cooperation (CERN, ESA, ESO, COST, CYTED, FHS, OECD, UNESCO) and bilateral cooperation (inter-institutional agreements).</td>
</tr>
<tr>
<td><strong>Office PRAXIS XXI</strong></td>
<td>Project financing and infrastructure.</td>
</tr>
<tr>
<td><strong>Personal archives</strong></td>
<td>Documentation gathered from the activity of scientists / scholars: Mariano Gago and David Ferreira.</td>
</tr>
<tr>
<td><strong>UMIC</strong></td>
<td>Coordination of public policies for the information and knowledge society.</td>
</tr>
<tr>
<td><strong>JEN</strong></td>
<td>Cooperation with international organizations, visits to international congener entities and participation in international events regarding nuclear energy.</td>
</tr>
</tbody>
</table>
Information available on the web:


- The inventory was created on a system that complies with international requirements for archival description and allows the association of digital objects and making them available online through the registration of association description.

- The digitization and online availability of documents is a goal that lies ahead in the near future as part of the activities of the Archive of Science and Technology, for reasons of accessibility and availability of information but also for reasons of preservation.
Reuniões

Nível de descrição: Unidade de Instalação
Código de referência: PT/FCT/EMG/CSCT/003 / 0006
Tipo de título: Atribuído
Título: Reuniões
Datas de produção: 1988-03-07 a 1989-01-18
Dimensão e suporte: 0,09 x 0,36 - papel A4.

Conteúdo e estrutura
Âmbito e conteúdo:
Documentação relativa à realização de reuniões no âmbito de preparação do PEDICT:
- Reunião de 25 de Março 1988, realizada na CCR-Norte: documentos para discussão nas reuniões, correspondência de logística com os intervenientes, apontamentos manuais.
- Reuniões realizadas na JNICT: 11 de Maio, 2 de Agosto, 24 de Outubro, 2 e 30 de Novembro e 12 de Dezembro de 1988 e 16 de Janeiro 1989 - correspondência de preparação de logística da reunião - convocatórias, agenda, lista de presenças. Inclui some documentação manuscrita.

Acesso e utilização
Cota actual: C.48.01.4
Cota original: 004581
Idioma e escrita: por (português)
Tipo u.l.: Pasta

Controlo da descrição
Revisto: Não
Arquivo Histórico da FCT

Resultados de pesquisa

Pesquisou usando parâmetros avançados e foram encontrados 3 resultados. Página 1 de 1.

**FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA, I.P.**

O fundo da Fundação para a Ciência e a Tecnologia, I.P. (FCT) testemunha a sua actividade, desde 1907, enquanto organismo responsável pela promoção, financiamento e acompanhamento da investigação científica.

Dates: 1990 - 2006
Referência completa: PT/FCT/FCT

**JUNTA NACIONAL DE INVESTIGAÇÃO CIENTÍFICA E TECNOLÓGICA**

O fundo da Junta Nacional de Investigação Científica e Tecnológica testemunha a evolução do organismo, desde a sua criação até à sua extinção, enquanto organismo responsável pela promoção, financiamento e acompanhamento de investigação científica.

Dates: 1984 - 1997
Referência completa: PT/FCT/JNICT

**JUNTA DE ENERGIA NUCLEAR**

O fundo da Junta de Energia Nuclear reflete a sua actividade, desde a sua criação até à extinção, como organismo pioneiro no estudo e aplicação da energia nuclear em Portugal.

Dates: 1953-01-24 - 1980
Referência completa: PT/NEF/NEF

NÍVEIS DE DESCRIÇÃO

- Coleção
- Fundo
- Secção
- Série
- Unidade de instalação
- Documento composto
- Documento

DATAS

- 1953-1963
- 1953-1973
- 1973-1983
- 1983-1993
- 1993-2003
- 2003-2006

REPRESENTAÇÃO DIGITAL

- Com representação
- Sem representação

APLICAR FILTROS
The structure of DigitArq is based on four international standards:

1. ISAD(G) – International Standard Archival Description
2. EAD – Encoded Archival Description
3. ISAAR (CPF) – International Standard Archival Authorities Records
4. EAC - Encoded Archival Context

- The first two are intended to support the process of archival description. The others are designed to support the production of authority records.

- In both cases encoded XML files were produced according to standard text structures in EAD and EAC and therefore allowing international exchange and dissemination.
II. Information Systems FCT – Services for the Community

ISAD(G) – General International Standard Archival Description

- Guidelines for Archival Description multilevel
- Regardless the form or the support of the documents

Goals:

- Production of consistent descriptions
- Facilitate recovery and exchange of information
- Data exchange
- Integration of descriptions from different entities
- 26 descriptive elements divided into different zones of description

http://www.icacds.org.uk/eng/ISAD(G).pdf
II. Information Systems FCT – Services for the Community

OAI-PMH - Open Archives Initiative Protocol for Metadata Harvesting

Protocol that allows Internet available metadata of various resources. It is used by aggregators of metadata, seeking to respond to interoperability.
II. Information Systems FCT – Services for the Community

The Archive, in terms of communication, is a primary source of information, which:

- Encourages the study and knowledge of science in Portugal as well as the entities that developed this activity;
- Provides access to organized information;
- Lets you know the past to understand the present and plan for the future.
Library of Science and Technology

The FCT holds a collection of national and international bibliography of scientific policy and management and administration of science, which must be preserved, identify and make available essential to support the study and understanding of the Archive.

Ongoing:

1. Bibliographic cataloguing, according to international rules of bibliographic description (ISBD, UNIMARC);

2. Availability and access of this collection to the scientific community and the general public.
II. Information systems FCT – Services to support core business

Management of business processes:

- Management of proposals submission
- Proposals evaluation
- Monitoring the financial support
- Scientific follow-up
II. Information systems FCT – Services to support core business

Electronic System Archive Management (SEGA)

Operating in FCT since April 15, 2011. Information system developed in order to store, preserve and retrieve the records created and received in the Foundation.

Among the many advantages, it stands out in this context, the organization and preservation of electronic archive of digital native and scanned documents.

The Current Archive: paper to digital
<table>
<thead>
<tr>
<th>Assunto</th>
<th>Remetente</th>
<th>Processo</th>
<th>Criado</th>
<th>Título</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reunião de arranque do Grupo de Trabalho</td>
<td>Agenzia Portuguesa do Ambiente</td>
<td>13-03-2013 14:15</td>
<td></td>
<td>Conselho Científicos</td>
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<td>Reporting com vista a produção de 5ª Comunicação Nacional</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difusão de Bolso de Pós-Doctoramento Ennio Rosebluth</td>
<td>Secretária de Estado da Ciência</td>
<td>13-03-2013 14:13</td>
<td></td>
<td>Gabinete de Comunicação e Imagem</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutança de instalações/denominação</td>
<td>ARDITI</td>
<td>13-03-2013 14:12</td>
<td></td>
<td>Informática</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requerimento de acreditação Mecenato Científico</td>
<td>Fundação Calouste Gulbenkian</td>
<td>13-03-2013 14:08</td>
<td></td>
<td>Assessoria Jurídica</td>
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<tr>
<td></td>
<td>- Instituto Gulbenkian - Instituto</td>
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</tr>
<tr>
<td></td>
<td>- Gulbenkian - Ciência - Maratona da Saúde</td>
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</tr>
<tr>
<td>Actualização dos Delegados Nacionais ao Space Policy</td>
<td>Secretária de Estado da Ciência</td>
<td>13-03-2013 14:07</td>
<td></td>
<td>E.P. Gabinete do Espaço</td>
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<tr>
<td>Expert Group da Comissão Europeia</td>
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</tr>
<tr>
<td>ID</td>
<td>Processo</td>
<td>Data do documento</td>
<td>Nome</td>
<td>Assunto</td>
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<tr>
<td>------</td>
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<td>3288</td>
<td>Processo: CD/AD/2011 - Reavaliação documental (1)</td>
<td>27-02-2012</td>
<td></td>
<td>REQUERIMENTO DE EMISSão DE CERTIFICADO CIêNCIA 20-10</td>
</tr>
<tr>
<td>1535</td>
<td>Processo: CD/AD/2012 - Doação a Moçambique Arquivo Pessoal General Tristão de Bettencourt (2)</td>
<td>08-08-2011</td>
<td></td>
<td>RECONHECIMENTO DA NATUREZA CIêNCIA DE ACTIVIDADE, PARA EFEITOS DE MECENAS CIêNCIA, DA BIODIGESTOR - ...</td>
</tr>
</tbody>
</table>
II. Information systems FCT – Services to support core business

Management of business processes - hybrid situation regarding the support of the documentation:

- electronic documents: electronic submission, digital native, email …
- paper documents: mail, ...

SEGA as a repository of documents produced under the management of business processes
II. Information systems FCT – Services to support core business

Program "Administration Electronics and Semantic Interoperability" (PAEIS)

Government policy for administrative modernization

<table>
<thead>
<tr>
<th>General Objective</th>
<th>Specific Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic interoperability in Public Administration and all the public entities that are related and that perform state functions.</td>
<td>The creation of a functional Macrostructure (MEF), semantic structure for classifying records</td>
</tr>
</tbody>
</table>
Interoperability implies, among others, the following areas of intervention:

- Technology - equipment and software to communicate with each other and understand each other in an integrated manner in order to meet global needs.

- Information transmitted or exchanged between the actors involved: their structure, i.e. the syntax and meaning of such information, i.e. the semantics.

For interoperability it is necessary to verify that, at least, these two factors are present in an articulated manner.
II. Information systems FCT – Services to support core business

Supporting tool for Semantic Interoperability

Functional Macrostructure - MEF

- Transversality
- Focus on functions
- Supra-institutional approach

- Optimization means
- Efficiency and effectiveness
- Transparency

- Transversal processes
- Common processes
- Shareable resources

- Simplification and modernization of processes
- Strategies and common practices
- Integration of information systems

II. Information systems FCT – Services to support core business

Business Activity Structure Classification System (BASCS)

Functional classification system used by Library and Archives Canada (LAC)

Three levels:

- Functions
- Sub-functions
- Activities

## II. Information systems FCT – Services to support core business

<table>
<thead>
<tr>
<th>Code</th>
<th>FCT Classification Plan</th>
<th>MEF code</th>
<th>MEF structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>Legal and normative planning</td>
<td>100</td>
<td>Legal and normative planning</td>
</tr>
<tr>
<td>010</td>
<td>Strategic planning and management</td>
<td>150</td>
<td>Strategic planning and management</td>
</tr>
<tr>
<td>020</td>
<td>Research and statistics</td>
<td>150</td>
<td>Strategic planning and management</td>
</tr>
<tr>
<td>030</td>
<td>Supervision, monitoring and accountability</td>
<td>450, 500</td>
<td>Acknowledgements and permissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>950</td>
<td>Supervision, monitoring and accountability</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Administration of civic participation</td>
</tr>
<tr>
<td>040</td>
<td>Institutional relations</td>
<td>200</td>
<td>Implementation of foreign policy</td>
</tr>
<tr>
<td>050</td>
<td>Dissemination and communication</td>
<td>900</td>
<td>Promotion and Institutional Communication</td>
</tr>
<tr>
<td>060</td>
<td>Information systems and documentation and supporting technologies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>Human resource management and industrial relations</td>
<td>250</td>
<td>Administration of working relations</td>
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<tr>
<td>080</td>
<td>Management of goods and services</td>
<td>300</td>
<td>Administration rights, goods and services</td>
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<td>090</td>
<td>Budget management</td>
<td>350</td>
<td>Financial administration</td>
</tr>
<tr>
<td>100</td>
<td>Supports, services and financial incentives</td>
<td>850</td>
<td>Execution of programs and incentive measures</td>
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<tr>
<td>110</td>
<td>Administration of justice</td>
<td>600</td>
<td>Administration of justice</td>
</tr>
<tr>
<td>120</td>
<td>Education and training</td>
<td>750</td>
<td>Service providing education and training</td>
</tr>
</tbody>
</table>
## II. Information systems FCT – Services to support core business

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>100</td>
<td><strong>Supports, services and financial incentives</strong></td>
<td>850</td>
<td><strong>Execution of programs and incentive measures</strong></td>
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<tr>
<td>100.01</td>
<td>Programs to support development</td>
<td>850.10</td>
<td>Execution of programs and support actions</td>
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<td></td>
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<td>850.10 .002</td>
<td>Calls</td>
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<td>850.10 .002</td>
<td>Projects</td>
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<td>Research scholarship integration</td>
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<td>850.10 .002</td>
<td>Mobility of human resources</td>
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<td>850.10 .002</td>
<td>Evaluation of Research Institutions</td>
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<td>850.10 .002</td>
<td>Financing Research Institutions</td>
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<td>850.10 .002</td>
<td>Scientific infrastructure</td>
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<td>850.10 .002</td>
<td>Supporting scientific community</td>
</tr>
<tr>
<td>100.05</td>
<td><strong>Awards, subsidies and occasional support</strong></td>
<td>850.10</td>
<td><strong>Execution of programs and support actions</strong></td>
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<td>850.10.300</td>
<td>Awarding prizes</td>
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<td>850.20.300</td>
<td>Awards</td>
</tr>
<tr>
<td></td>
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<td>850.10.003</td>
<td>Special support</td>
</tr>
</tbody>
</table>
III. Scientific heritage: an integrated perspective on access to information

Open access to scientific production:

- recommendations of the European Commission of 17 July 2012, with a view to providing open and free data and research results and publications resulting from scientific research projects, which are produced with public funding;

- the publication of Decree-Law n.º 115/2013 of 7 August, requiring the deposit in the repository RCAAP, of the work carried out to obtain master's and doctorate degrees;

- and, the presentation of a proposal by FCT for an Open Access Policy.
III. Scientific heritage: an integrated perspective on access to information
Integrated system

Digitarq

ACT

Inweb

Science museum

RCAAP

FCT
**III. Scientific heritage: an integrated perspective on access to information**

Knowledge management, with regard to the national scientific production.

- Creating a standardized working basis;
- Providing indicators for decision support;
- Efficient retrieval of information;
- Access to different outputs of information.
Ongoing projects:

- Identification of national scientific archives
- Promote access to scientific archives in the ACT
- Producing a thesaurus for Science and Technology Archive
- Creating an oral history repository
- Develop a Network of Science and Technology Archives
Paula Meireles
Fundação para a Ciência e a Tecnologia, IP.
The Portuguese funding agency for science research and innovation
Lisbon, Portugal.
paula.meireles@fct.pt