



Objective 11.2

PCP Digital Preservation

NCP Briefing

ICT Call 11

Brussels, 5 September 2012



*Digital Preservation research is concerned with the **sustainability of digital resources**, i.e. their accessibility, integrity and usability over time.*

The Challenge

Digital artifacts are today a prominent part of archival collections ...

- *growing quantity of digital resources in general*
- *more and more inherently digital objects*

... but they are extremely vulnerable and at high risk of getting lost or becoming unusable

- *changes of hardware and software*
- *degradation of storage media*
- *errors and technical failors in archiving systems*

Aspects of a complex problem

Technical

- *obsolete media and formats: migration, emulation*
- *guaranteeing integrity and functionality over time: quality control & repair*

Organisational

- *Who does what and when? (preservation planning, workflows...)*
- *Curation staff needs new skills*

Aspects of a complex problem

Financial

- *costs of preservation*
- *financial impacts of loss*

Legal

- *legal obligation to preserve*
- *restrictions through copyright and DRM protection*

No definitive solution possible

- *preservation requires ongoing efforts*
- *must be proactive (preventing loss before it occurs)*

What is needed

Organisations with a societal mandate, legal obligations or business interests in long-term usability of digital holdings need

- *ready-to-use, customisable and affordable **technical solutions***
- *new **knowledge and skills** in curatorial staff*
- *a **legal framework** that allows preservation actions (copying, migrating...)*

EU activities – policy support

Digital Preservation is on the EU policy agenda since the "i2010 Digital Libraries" initiative (launched 2005).

Latest activity:

- **Recommendation on Digitisation and Digital Preservation** (October 2011)

Three recommendations for digital preservation:

- reinforce national strategies, update action plans implementing the strategies, and exchange information between Member States
- adapt the legal framework to allow for preservation actions such as copying
- improve legal deposit arrangements for digital content.

EU activities – ICT research

Investment under FP7 close to € 100 mio

Results from early projects:

- *Formal models to characterise digital objects*
- *Methods and tools to support preservation planning*
- *Advanced tools for web archiving*
- *Emulators for obsolete media*
- *OAIS-based technology platforms*
- *Studies in legal barriers*
- *Services for end-users*
 - ***Open Planets Foundation***: *a community providing practical solutions and expertise, and open source tools*
 - ***PrestoCentre***: *competence centre for preservation of digital audiovisual material*

Ongoing Research (ICT Call 6)



Scalable solutions for digital preservation

- *creating automated quality-assured workflows*
- *supporting organisation policy based preservation planning and watch*

Ongoing Research (ICT Call 6)

arc**mem**



ENSURE

Intelligent digital curation and preservation systems

- *leveraging the Wisdom of the Crowds (social Web) for content appraisal, selection and preservation*
- *preserving access to services and software that support business processes*
- *commercially relevant data; issues specific to industry and services (IPR, privacy, legal compliance, use of existing IT tools and infrastructures)*

Ongoing Research (ICT Call 6)



Preserving complex objects

- *weblogs - challenge: continuously evolving*
- *scientific workflows - i.e. not only results but also discovery process*



Ongoing Research (ICT Call 6)



Network of Excellence

APARSEN – Alliance Permanent Access to the Records of Science in Europe Network

- *strengthening and extending collaboration amongst major European stakeholders in digital data and digital preservation (focus on science records)*
- *creating a virtual digital preservation research centre*

Outlook (Results from ICT Call 9)

New projects to start end 2012/early 2013

- *Techniques and tools for **recovering loss** and for **repairing** damaged digital objects, and for **preventing loss and damage** of newly created resources*
- *Embedding **reasoning and intelligence** in the digital information life-cycle (includes research on **semantic decay**, management of **evolution over time**, methods to identify **obsolete information**)*
- *Coordination actions promoting the **uptake of digital preservation research outcomes**, outreach to **new stakeholders**; **road mapping***

Trends in Digital Preservation Research

Across all funded projects, we can observe

- *Broadening of the digital preservation research and user community*
- *Increasing range of application areas and types of digital resources*
- *Growing participation of industry players as solution providers (big companies and SMEs)*



Work Programme 2013

Objective ICT-2013.11.2

More efficient and affordable solutions for digital preservation developed and validated against public sector needs through joint Pre-Commercial Procurement (PCP)

Project type: CP-CSA for PCP

Budget: € 5 mio

Call: ICT Call 11, 18 Sept. 2012 – 16 April 2013

General Scope

*PCP actions focus on
jointly identified concrete challenges that*

- *are part of the mid-to long-term innovation plans of the participating public purchasers*
- *and require new **R&D***



Scope for PCP for Digital Preservation Research

Examples in the Work Programme

- *establishing and implementing best practices*
- *staff training*
- *integrating digital preservation requirements in existing information systems*
- *increasing those systems' resiliency against technological changes*
- *etc.*

Funding scheme

CP-CSA = Combination of Collaborative Project (CP) and Coordination or Support Action (CSA)

- Publicly procured **R&D work** that responds to well-defined needs shared by public organisations (= CP part of the project, similar to a STREP, maximum 75% of costs reimbursed)
- The **procurement process**, i.e. a public call for tenders (= CSA part of the project with max. 30% of the budget; costs reimbursed at 100%)

Consortia

- *Minimum of three **public digital collection holders** (libraries, archives, heritage organisations, museums, administrations...)*
 - *Small archives welcome*
- *Possibly **other partners** (e.g. research organisations)*
- ***Industrial technology and service providers** to be brought in via **public call for tender** (which is part of the project)*
 - *SMEs welcome*

Possible areas of R&D work

- *generation of preservation-relevant metadata*
- *migration processes and quality control*
- *preservation of particularly challenging digital resources, such as*
 - *large, complex, distributed objects*
 - *dynamic, active or interactive artifacts*
- *other*

*The use of **open platforms** and contribution to **standards** are encouraged.*

R&D phases

PCP projects are typically split in at least **three R&D phases**

- *solution exploration and design*
- *prototyping*
- *Testing against a set of functionality / performance criteria, jointly defined by the public procurers*

NB: Proposals should describe the evaluation process and method used.

Competition and Risk Sharing

- *Public purchasers may select several companies to start working in parallel and **choose the best solutions** through intermediate evaluations*
- ***IPRs generated by a company** during the PCP contract are assigned to that company with one free licence for the public procurers for their internal use*

What is not part of Objective 11.2

- *Digitisation of analogue objects*
- *R&D in the field of digitisation*
- *Development of storage technologies*

PCP is an instrument for **R&D procurement**, and does not include the purchase of end-products or subsequent service contracts.

Expected impact

- *Reduced preservation **costs** and improved preservation **capacity** and competences in public organisations dealing with digital preservation, **including small archives***
- *Strengthened position of European **service and technology providers** (including **SMEs**) in the field of digital preservation*