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Emulation Expert meeting
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Digital Information at Risk

- ❑ European National Libraries and Archives
 - ❖ Have the legal responsibility and the legislative framework to safeguard digital information and provide sustained access to digital cultural and scientific knowledge
 - ❖ Have limited ability to ensure that today's digital information will be accessible for future generations

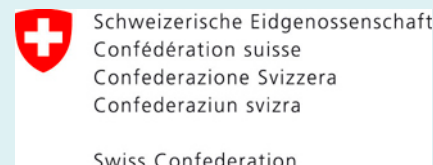
- ❑ Our society risks a gaping hole in the cultural and scientific record unless we act now

- ❑ Meeting the challenge of preserving access goes beyond the capabilities of any single institution

Planets partners I



- ❑ The British Library
- ❑ National Library, Netherlands
- ❑ Austrian National Library
- ❑ State and University Library, Denmark
- ❑ Royal Library, Denmark



- ❑ National Archives, UK
- ❑ Swiss Federal Archives
- ❑ National Archives, Netherlands



Planets partners II



- ❑ Tessella Plc
- ❑ IBM Netherlands
- ❑ Microsoft Research, Cambridge
- ❑ ARC Seibersdorf research



- ❑ Hatii at University of Glasgow
- ❑ University of Freiburg
- ❑ Technical University of Vienna
- ❑ University at Cologne



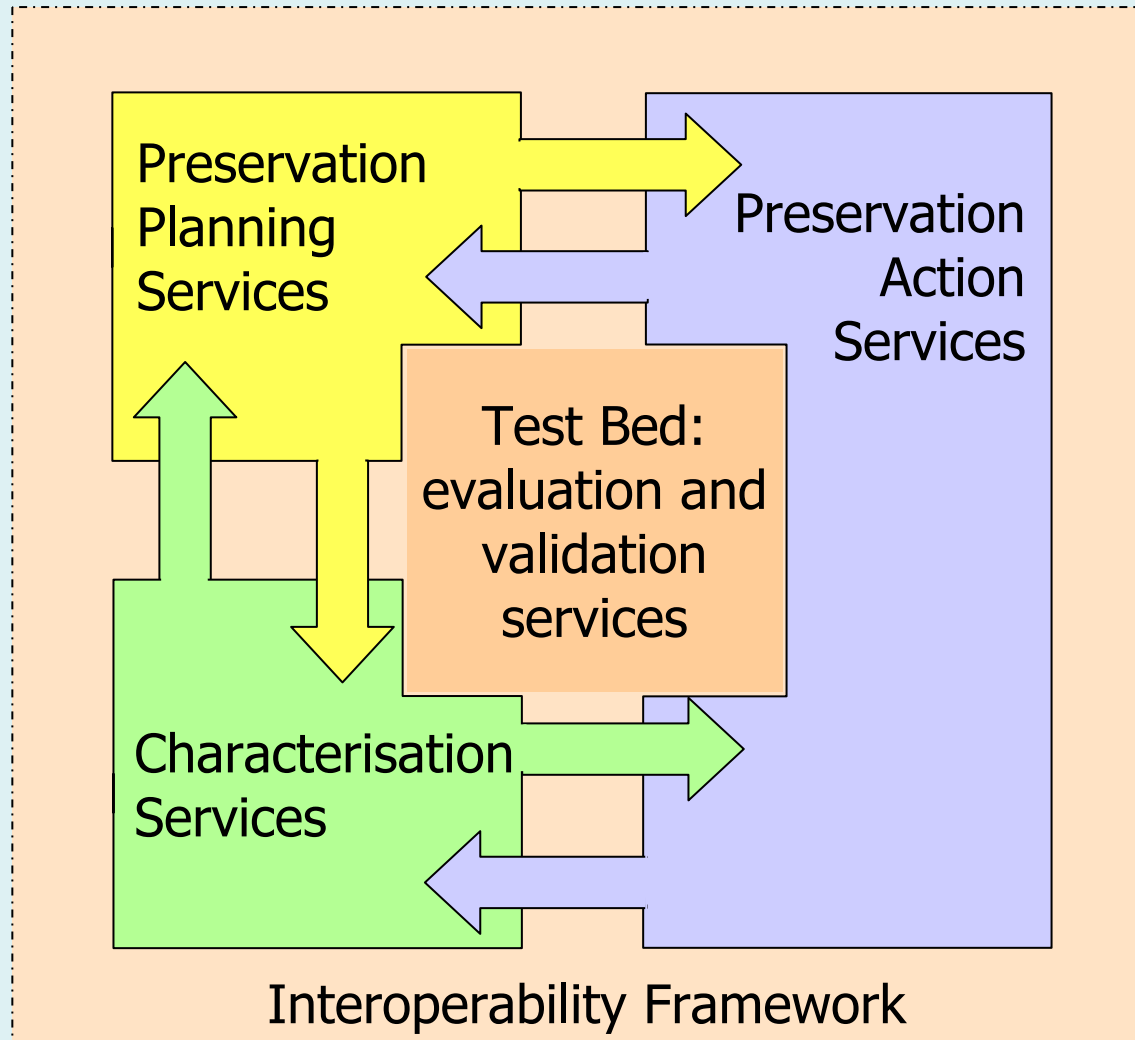
Key Outcomes

- ❑ Increase Europe's ability to ensure long-term access to its cultural and scientific heritage
 - ❖ improve decision-making about long term preservation
 - ❖ ensure long-term access to valued digital content
 - ❖ control the costs of preservation actions through increased automation, scalable infrastructure
 - ❖ ensure wide adoption across the user community and establish market place for preservation services and tools

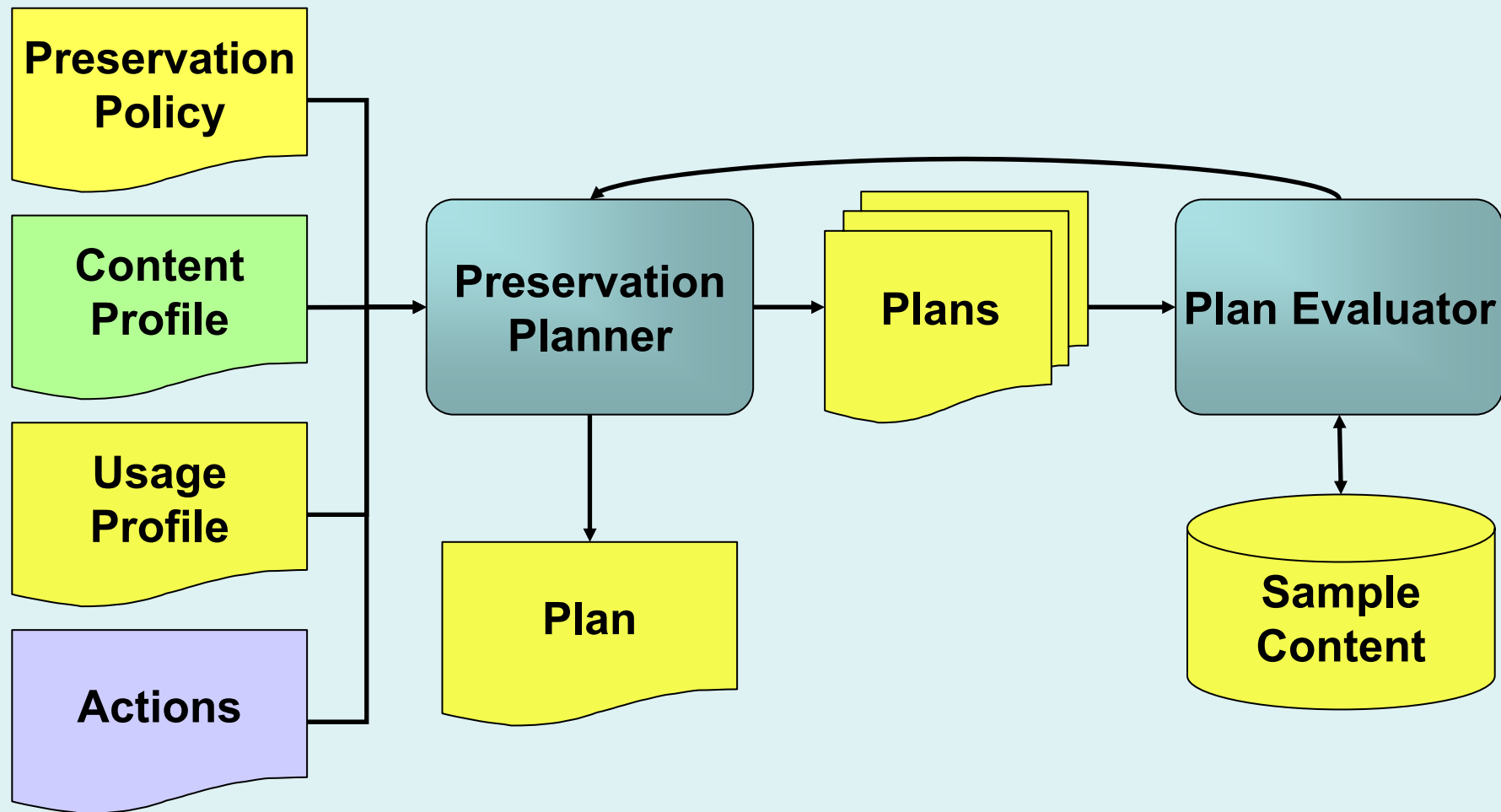
Decompose the Problem

- PLANETS will develop:
 - ❖ **Planning** services that empower organisations to define, evaluate, and execute preservation plans
 - ❖ Methodologies, tools and services for **Characterisation** of digital objects
 - ❖ Innovative solutions for **Preservation Actions**
 - ❖ An **Interoperability** Framework to seamlessly integrate tools and services in a distributed service network
 - ❖ A **Testbed** to provide a consistent and coherent evidence-base for the objective evaluation of different protocols, tools, services and complete preservation plans.

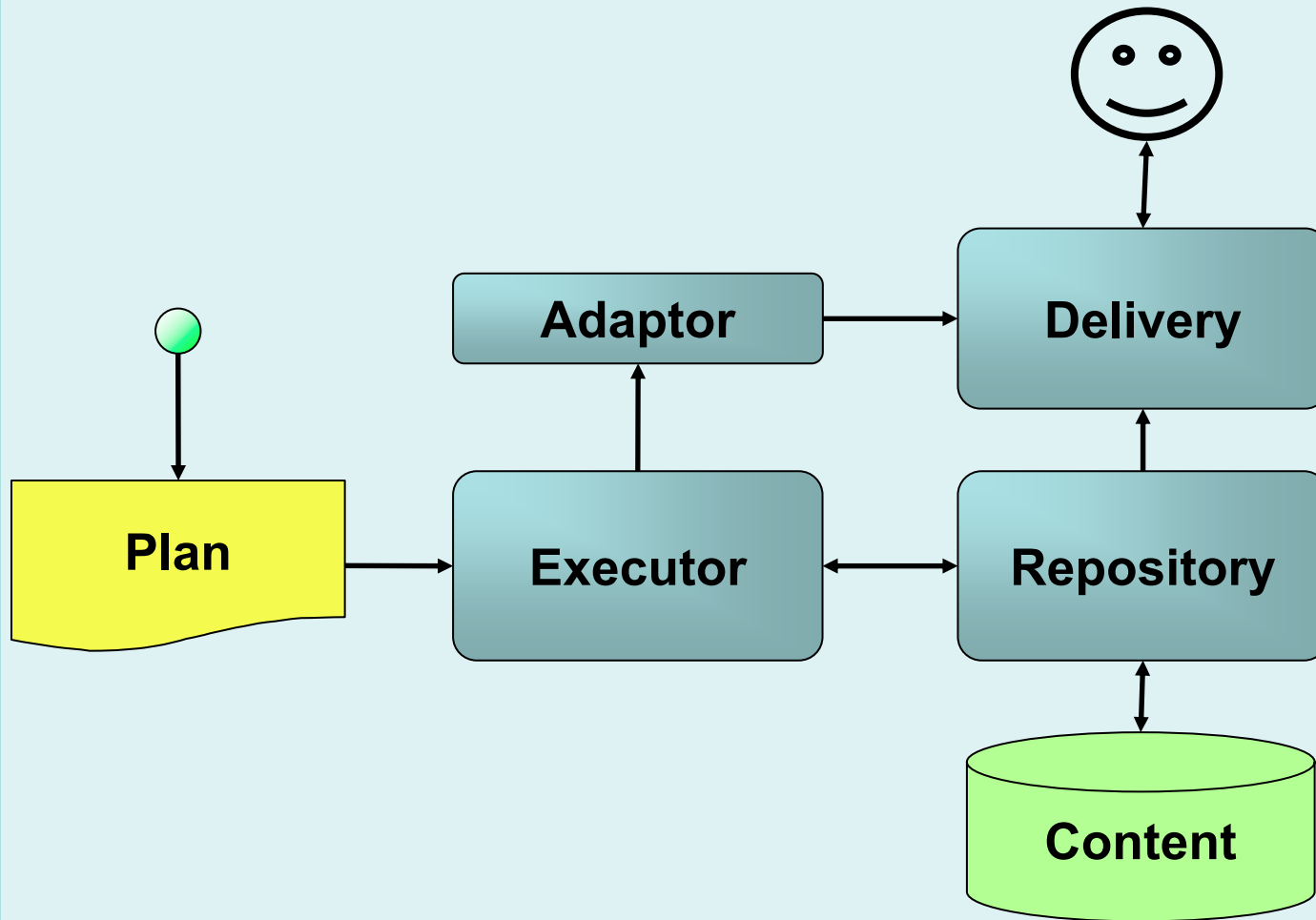
Project architecture reflects problem structure



Preservation planning



Preservation plan execution



Content Characterisation

- ❑ Planets focuses on characterising content in order to support preservation planning and preservation actions
 - ❖ Move away from high up-front costs to establish metadata

- ❑ Work will build on TNAs PRONOM service for file-format identification
 - ❖ Define a characterisation language
 - ❖ Define an extraction language
 - ❖ Define a pluggable interpreter

- ❑ Leverage understanding to recommend improvements in file format design

- ❑ Establish methods for evaluating loss due to preservation actions

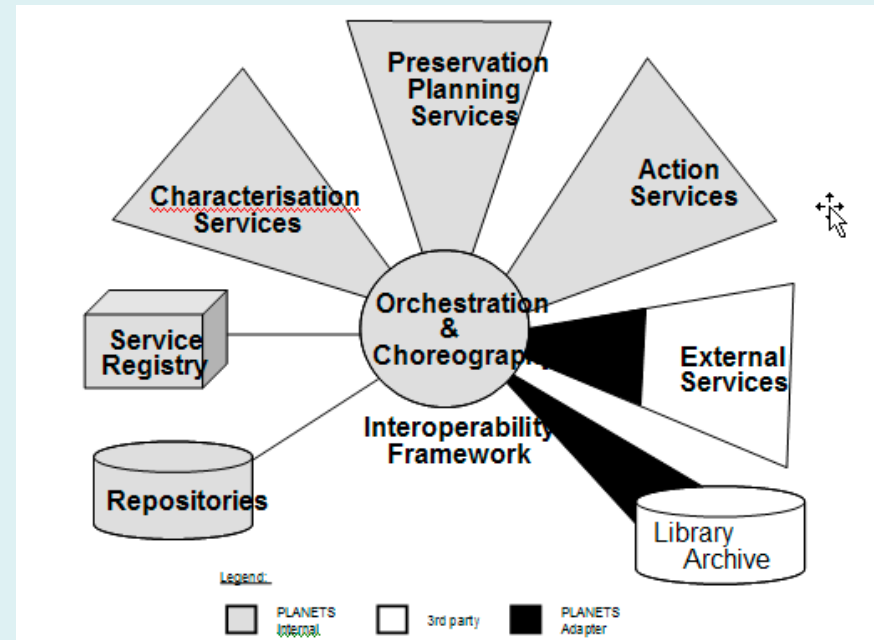
Preservation Actions

- ❑ Transform content
 - ❖ Provide pluggable infrastructure to wrap third-party transformation tools
 - ❖ Fill gaps with purpose-build transformation tools
 - ❖ Address need to preserve relational databases
 - Build on Swiss Archive work
 - ❖ Address need to preserve Microsoft Office content
 - Build on MS Office12 migration tools

- ❑ Transform environments
 - ❖ Modular emulation of the full hardware/software environment
 - Provides full look-and feel
 - Superb for highly dynamic content
 - ❖ Layered durable approach to emulation
 - Builds on IBM Universal Virtual Computer (UVC)
 - Provides robust migration-on-demand using today's knowledge
 - Establish abstract device drivers

Interoperability Framework and Testbed

- ❑ Planets provides an interoperability framework including
 - ❖ Interoperable distributed services
 - ❖ Service registries and shared data-stores
 - ❖ Encapsulate tools as services
 - ❖ Orchestration capability to combine services



- ❑ Planets testbed
 - ❖ Objective **evaluation** of preservation actions, characterisation services, preservation plans
 - ❖ Provides a controlled research infrastructure
 - ❖ Enable partners to conduct experiments, load content objects, execute tests, evaluate the results, and compare the outcome to similar tests
 - ❖ Provides a shared infrastructure for the preservation community
 - ❖ Enables external organisations to validate their preservation plans
 - ❖ Establishes content collections and preservation scenarios for **benchmarking**
 - ❖ Establishes certification criteria and procedures to evaluate third party tools and services

To conclude...

- ❑ Build practical solutions
- ❑ Integrate existing expertise, designs and tools
- ❑ Set up an infrastructure to share existing tools and to build new tools together
- ❑ Involve other players in the digital preservation field
 - ❖ Set up usergroups, develop open source tools, provide implementation guidance
 - ❖ Strong links with other European projects (Delos, Digital Preservation Europe ea)
 - ❖ World-wide: leading institutes in digital preservation are included in an advisory board