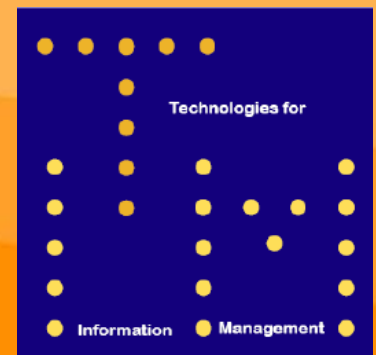


**ICT 2009-10 Work Programme
SO 4.3**

Intelligent Information Management

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Intelligent Information Management



1. European Policies Content
2. Ongoing research activities
3. Outlook and perspectives: FP7 ICT Call 5
4. Key challenges to be addressed
5. Practical Tips



Key community instruments

AN OVERALL STRATEGIC FRAMEWORK FOR COMMUNITY ACTION



- To devise and implement adequate European policies
- To support RTD on next generation of ICTs contributing to sustainable growth

ICT Policy context in Europe i2010 strategic framework



Objectives:

- *To reinforce the contribution of ICT to Europe's performance...*
 - *To create a favourable environment for competitiveness and growth...*
 - *To increase the welfare of European citizens through increased use of ICT...*
-
- *Scope for all electronic communications, services and media sectors, investment in research, inclusiveness and public services*
 - *Link to the Lisbon strategy, stating objectives and benchmarking performance*



ICT Policy context in Europe

i2010: three pillars



- A Single European Information Space

The completion of a **Single European Information Space** which promotes an **open and competitive internal market for information society and media**

- Innovation and investment in research

Strengthening **Innovation and Investment** in ICT research to **promote growth and more and better jobs**

- Inclusion, better public services and quality of life

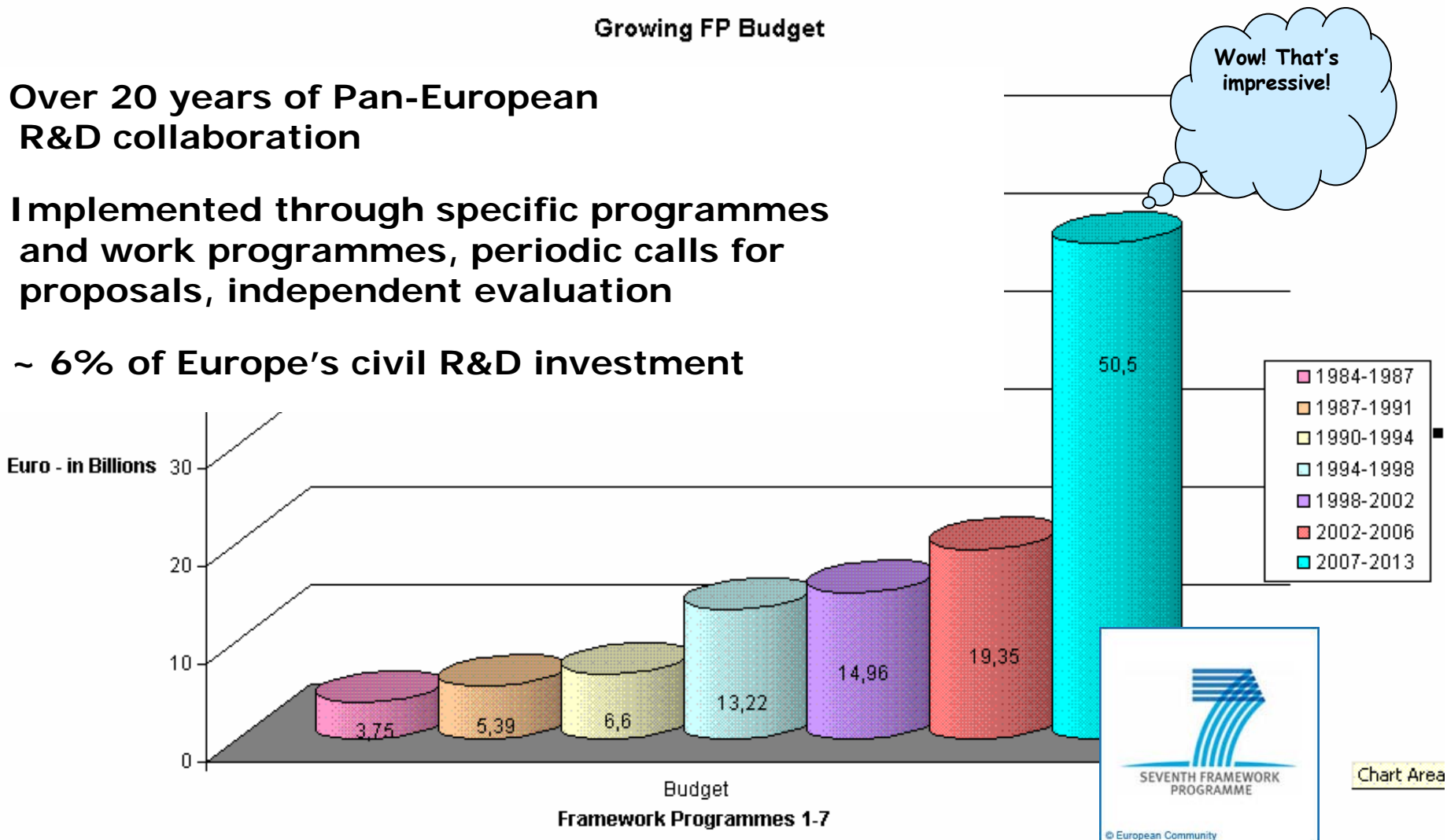
Achieving an **Inclusive European Information Society** that **promotes growth and jobs in a manner that is consistent with sustainable development** and that prioritises better public services and quality of life



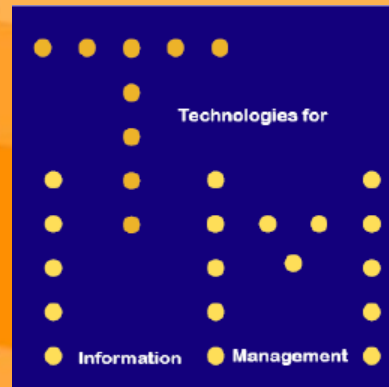
Community Framework Programmes

Main EU instrument to fund Community research

- Over 20 years of Pan-European R&D collaboration
- Implemented through specific programmes and work programmes, periodic calls for proposals, independent evaluation
- ~ 6% of Europe's civil R&D investment



Overview of related ongoing research activities



Focus on Knowledge management and Content creation in FP6

- **62** projects, ~**700** contractors, **270** M€
- **RTD&D:**
 - long term research (formal, theoretical)
 - component technology research & development
 - applied, system-level research
 - demonstration
- **emphasis on**
 - generic, enabling technologies
 - flexible, cross-sectoral application platforms

4 Calls in FP6

- **Cross-media Content** (call 2):
novel forms of digital content
creativity & interactivity, user experience & control, story-telling & non-linear narratives...
- **Content & Knowledge** (call 4):
intelligent, dynamic content
access & management (meta data generation / extraction, semantic annotation & indexing, contextual retrieval...), automated workflows, aggregation & personalisation...
- **Knowledge** (calls 1 & 4):
intersection of Web, MM and KR&R (*SemWeb+*)
networked information & communities, automation of knowledge lifecycle, web / multimedia
“documents”, from static to dynamic information, interaction & evolving processes
- **Audiovisual Search Engines** (call 6):
organising, searching and accessing large scale, distributed
audiovisual content
automated knowledge discovery and extraction, annotation and summarisation, indexing and retrieval of all types of digital content (text, image, video, audio, 3D objects etc.), including protected content

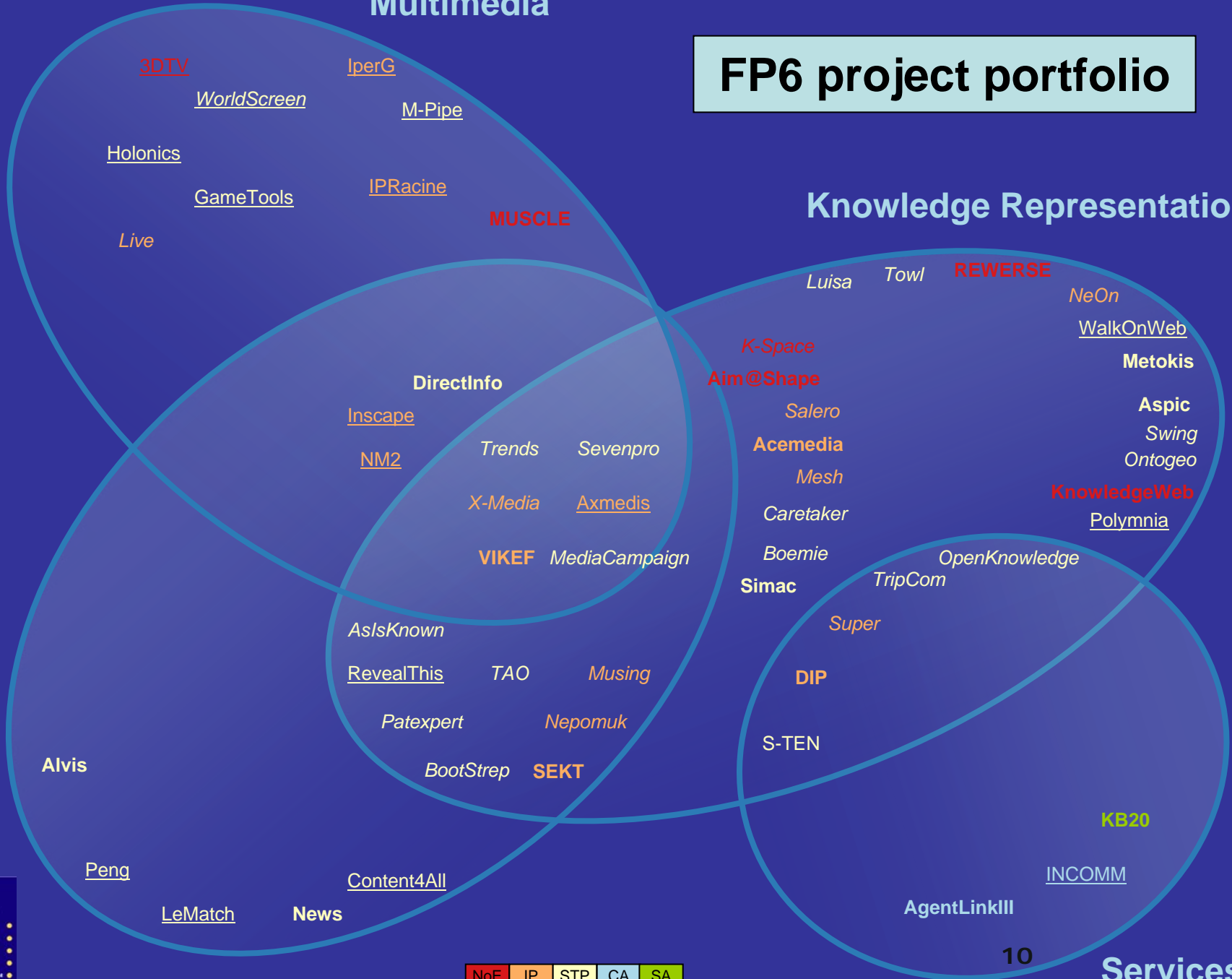


FP6 project portfolio

Multimedia

Knowledge Representation

Text



FP7 Work Programme ICT *Challenges*



Socio-economic goals				
	4. Digital libraries and content	5. ICT for health	6. ICT for mobility & sustainable growth	7. ICT for independent living and inclusion
1. Network and service infrastructures				
2. Cognitive systems, interaction, robotics				
3. Components, systems, engineering				

Industry/Tech needs

Future and Emerging Technologies (FET)



European Commission
Information Society and Media



Challenge 4 in FP7 ICT WP 07-08

Digital Libraries and Content



“Make content and knowledge abundant, accessible, interactive and usable over time by humans and machines alike.”

- content must be made available and its **long term usability, accessibility** and **preservation** must be ensured
- effective technologies need to be developed for **intelligent content creation and management** and for supporting the **capture of knowledge** and its **sharing and reuse**



Two activity tracks



- **Digital Libraries**

- cultural, scientific, scholarly content
- typically public-interest services
- networking, accessibility, sustainability ...
 - acquisition (digitisation, rights)
- curation, preservation

- **Intelligent Content**

- media & organisational content
- mostly private players
- commercial (creative industries) or competitive (enterprises) value
 - from creation through to consumption



FP7 Call 1



- **Inputs:**
 - 148 proposals
 - 1210 participants from 50 countries
 - 473 Meuro requested, 51 Meuro available
- **Outputs (1:10):**
 - 15 proposals retained for negotiation
 - 128 participants from 21 countries
 - 55% academia & research centres
 - 45% business & public sector



FP7 Call 3



- **inputs:**
 - 252 proposals (+41%)
 - 2017 participants from 49 countries
 - 817 Meuro requested, 50 Meuro available
- **Outputs (1:19; -5%):**
 - 13 proposals retained for negotiation
 - 106 participants from 21 countries
 - 51% academia & research centres
 - 49% business & public sector



Outcomes of CALL 1 & 3

Objective: Intelligent Content and semantics

- 28 projects, 234 contractors, 101 M€

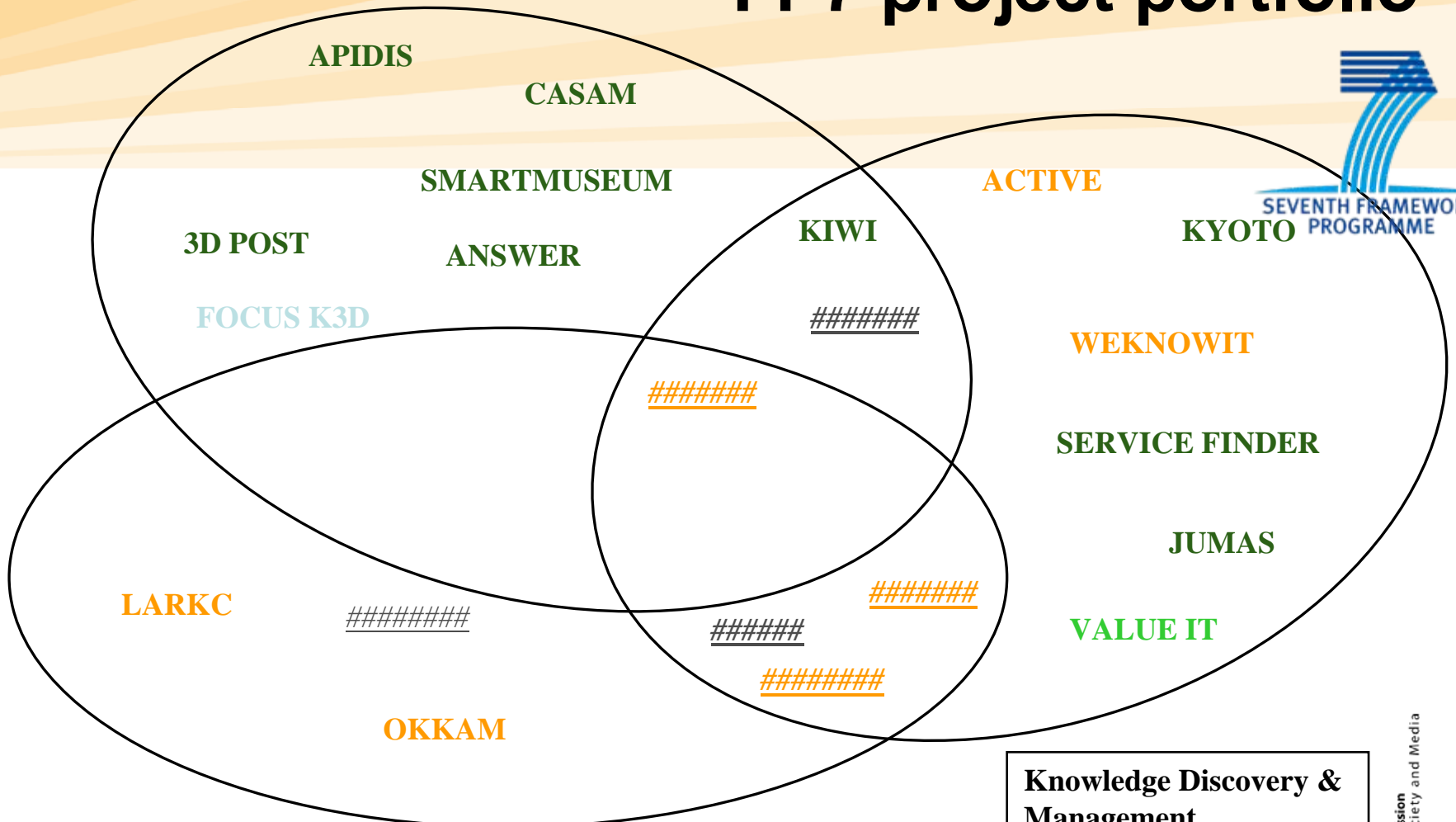
3 RTD&D main lines:

- Online content, interactive and social media,
- Knowledge discovery and management
- Reasoning and information exploitation.



Online Content, Interactive & Social Media

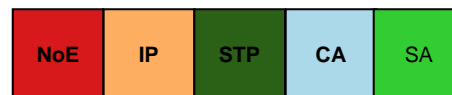
FP7 project portfolio



Reasoning & Information Exploitation

Knowledge Discovery & Management

CALL 1 CALL3



Intelligent Information Management

SO 4.3

**in FP7 ICT Work
Programme 2009-2010**



Data grows faster than intelligence



Data growth trends

- IDC March 2008 report: by 2010 less than 50% of digital info will be authored documents
- The rest will come from
 - automated experiments (e.g. DNA sequencing)
 - ambient sources (surveillance, sensors, RFID)
 - interaction logs (web searches/services, telecom, financial transactions)
 - ...
- Need to make sense of it (**knowledge based economy**)

SO 4.3

Intelligent Information Management

Key work programme themes:

- Capturing tractable Information
- Delivering pertinent information
- Collaboration and decision support
- Personal sphere
- Impact and S&T leadership

Key dimensions: any kind of large data sets + real time



Capturing Tractable Information Sources



robust and performant technologies to acquire, analyse and categorise extremely large, rapidly evolving and potentially conflicting and incomplete amounts of information. These technologies will extract, correlate and integrate data from diverse sources and formats (multimedia and 3D content; heterogeneous databases; data streams from sensors and scientific equipment; social interactions and networked appliances; information from business processes and software services) while tracing provenance, evaluating trust level and assessing reliability. The scalability, flexibility and performance of such methods and techniques will be demonstrated by rigorous empirical testing over large-scale testbeds.



Delivering Pertinent Information Analysis

usable and customisable systems to improve the efficiency of the information lifecycle, starting from proactive diagnoses of information gaps and triggering goal-dependent search, acquisition, structuring and aggregation of relevant local, remote and streaming resources. Managing this information and making it actionable requires large-scale reasoning resulting in effective ranking, profiling and interpretation as well as versioning for time-dependent compliance and justification. Such systems will support the navigation, manipulation and consumption of digital information by means of adaptive user-information interactions based on the state of the art in the psychology of human perception and attention. The effectiveness of such systems will be validated with appropriately-sized groups or communities of representative users.



Collaboration and Decision Support Tools

efficient and dependable problem solving and decision support systems for critical, information-bound domains in which our ability to share and exploit information is outstripped by the rate of its growth in size and complexity. Intended beneficiaries include organisations with complex business processes and access control policies; scientific communities collaborating on challenging projects and building very large datasets; teams of professional creators working on complex designs or multimedia materials; and web communities with sophisticated cooperation needs. The effectiveness of such solutions will be tested against the requirements of the respective groups or communities.



Personal Sphere

Context

intuitive systems that help individuals secure, manage, visualise and interpret their personal information, attention trail and social history so as to enable the provision of personalised and context-dependent information from multiple sources and services. A specific requirement and design principle is that such systems preserve privacy and implement auditable information disclosure policies that are under user control and whose application can be verified at all times. Their usability and rate of uptake will be monitored by means of verifiable quantitative indicators.



Impact and S&T Leadership Coordinating and Supporting Activities

networks and other initiatives designed to link technology suppliers, integrators and leading user organisations. These actions will help develop a common understanding, including vis-à-vis neighbouring disciplines, and ensure proactive cross-fertilisation between EU projects and other relevant industrial and national activities. They will address barriers hindering a wider deployment of research results, work towards establishing or advancing widely recognised standards, reference architectures and benchmarks, and increase awareness of the potential of the technologies at stake within broader audiences.



Overall approach .1



- **research for a purpose, problem & objective driven**
- **centred around users, data & flows**
 - a compelling use case is as important as the underlying research
- **meaningful demonstrator(s)**, field validation & assessment
- **active promotion & dissemination** of results beyond scientific circles



Overall approach .2



- address **clearly established problems**, widely recognised outside academic circles:
 - better quality of output
 - save time
 - cut cost
- **use of ICT** in the application context
 - prerequisites, incentives, repercussions



Time schedule Call 5



- **Publication: 31 July 2009**
- **Deadline: 3 November 2009**
- **Indicative Budget: 70M€**



FP7 – ICT Proposers' Day



***Budapest
22 January 2009***

Network

- Meet researchers with similar or complementary research interests
- Form project consortia
- Follow-up of the ICT Event in Lyon

Obtain information

- Challenges and objectives of the Work Programme
- Instruments, contracts, rules for participation
- Around 100 Commission officials present



FP7 – ICT Proposers' Day

22 January 2009 - Budapest

Structure of the one day event:

- organised as networking forum with no formal agenda
- 8 scenes dedicated to the challenges of ICT WP 2009-2010 to share information on proposal ideas
- series of 'networking booths'

Prepare in advance starting from NOW!

- meet your future partners virtually on the internet site through an on-line communication forum
- leave your comments and express your interest
- present your proposal idea - submit a presentation until the 19th of January at 12:00

Proposers' Day

Budapest

22 January 2009



Register on <http://ec.europa.eu/ictproposersday>
free of charge!

Contact: INFO-ICTPROPOSERSDAY@ec.europa.eu
Alessandro.Barbagli@ec.europa.eu



Further info



- **ICT under FP7**

<http://cordis.europa.eu/fp7/ict/>

- **Experts database:**

<https://cordis.europa.eu/emmfp7/>

- **Unit E2 – Technologies for Information Management.**

URL: <http://cordis.europa.eu/info-management/>

mailto: info-e2@ec.europa.eu



Thank You!

