



Co-funded
by European Union
eContentplus

AQUARING

Accessible and Qualified Use of Available Digital Resources about Aquatic World In National Gatherings

Partnership

	Organisation	Country	Role in the project
1	Acquario di Genova Costa Edutainment SpA	IT	<u>Coordinating Partner</u> Content provider, scientific expert
2	Nausicaa - French National Sea Centre	F	Content provider, scientific expert
3	Royal Belgian Institute of Natural Science	B	Content provider, scientific expert
4	Rotterdam Zoo	NL	Content provider, scientific expert
5	Lithuanian Sea Museum	LT	Content provider, scientific expert
6	ECSITE, European Network of Science Centres and Museums	B	Dissemination, consensus formation
7	Softeco Sismat SpA	IT	IT industry, SME, solution provider, implementation of infrastructure and services
8	Foundation Robotiker	E	Metadata, semantic modelling (ontologies), language and knowledge technologies
9	University of Genoa, Department of Anthropological Sciences (DISA)	IT	Evaluation methodology



Aggregation of digital contents on aquatic science and culture

Sources

Science centres - Natural history museums - Aquariums



Climatic zones
Water and regional development

Hydrological cycle
Irrigation and drainage



Aqua topics

Ecosystems land forms and land use
Animal kingdom
Biology of aquatic organism
Vegetable kingdom
Animals behaviour
Biodiversity
Climate change
Land degradation

Water and society
Education
Research
Information
History
Water use
Water quality and contamination
Water Pollution

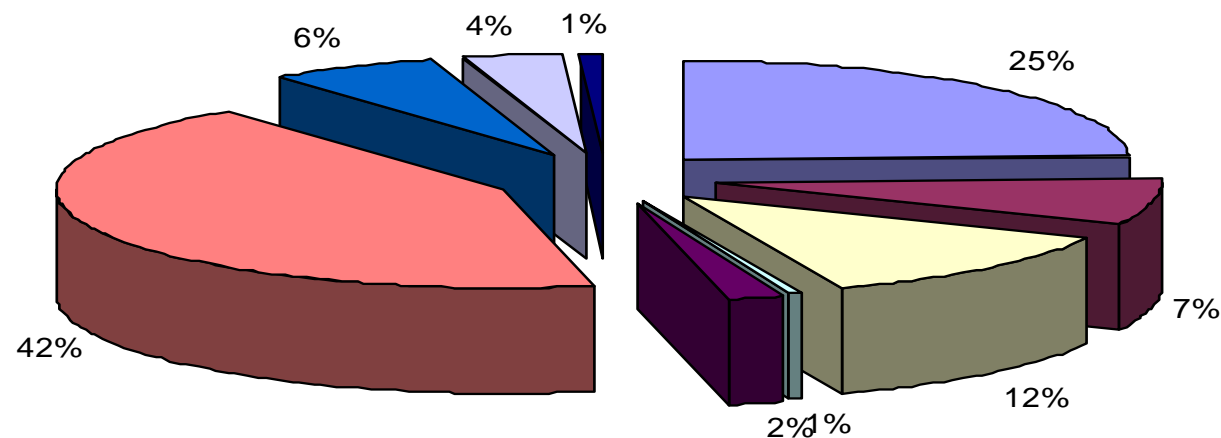




Aggregation of digital contents on aquatic science and culture-2

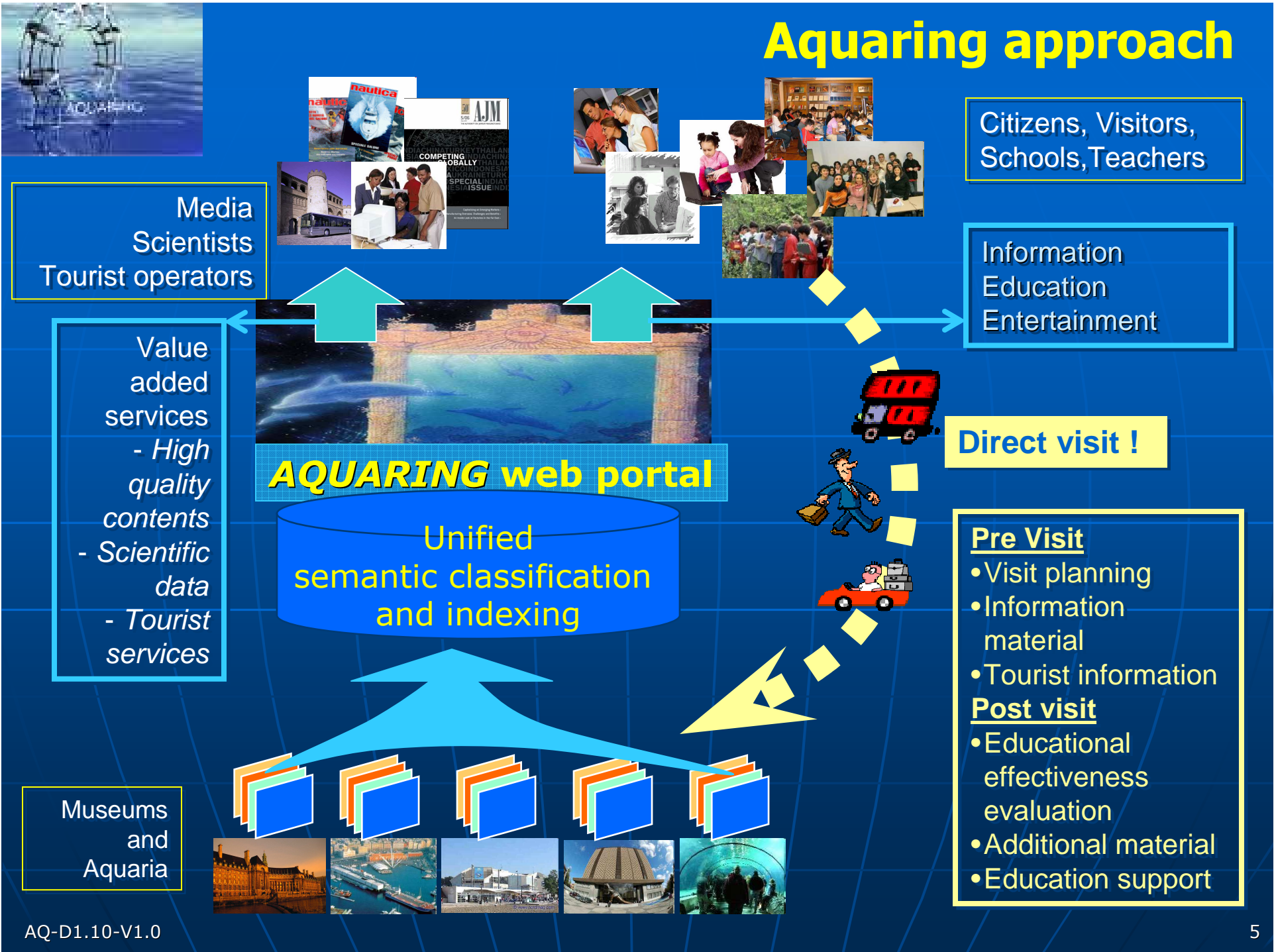
Digital contents by type

Digital contents



- Documents
- Theses, thesis projects and dissertations
- Computer programs
- Audio files
- Multimedia publications
- PDF files
- Data sets
- Images
- Video files

Aquaring approach





Project objectives

- **To add value to individual collections** of the participating science centres and encourage the development of a global view of the European heritage in the domain
- To allow European visitors to explore a **virtual global knowledge space** and to plan and combine specific investigations and learning routes across the digital resources of different centres
- **To support improved education and informal learning experiences**, for both individual learners and groups;
- **To increase communications** to and awareness of the public at large on aquatic environment conservation and sustainable management of aquatic resources;
- **To strengthen the cultural and scientific offer** of participating centres and the capability of offering combined experiences to their visitors
- To deliver **value added services** to tourist operators, media producers and other business uses



Target users: *education and entertainment*

- **Citizens and visitors**

General needs of *in depth information* related to the topic and of *orientation* with respect to the existing information

- **Schools, Institute and Universities**

Needs and requirements for accessing *on-line scientific contents* related to the different profile and education levels of the students

- **Sector teachers and experts**

Main need for this specific segment include the *design and definition of learning courses, preparation of students' visit, the long life learning process* for the different scholarly levels



Target users: *Professionals*

- **Researchers and scientific experts**

Although not specifically oriented for a scientific use, Aquaring allows the distribution of digital collection as a prerequisite for *e-Science development*

- **Media**

Access and (re)use of **high quality digital contents** for publications and multimedia content production

- **Tourist operators**

There is an interest in improving the *quality of the tourism offer* and to addressing specific target group

- **Museums, Science centres and Aquaria managers**

For the definition, validation, and verification of possible *joint European cultural projects* and to provide *joint offers* to the visitors



Services provided

- **Content search and navigation** supported by domain ontology and according to visitor's profile
- **Visit and educational paths** planning with the involvement of several centres with different specialisations
- Interaction with the content infrastructure to provide **feedback on the user experience**
- Provision of **support services** for tour organisation and content (re)use



Major challenges

- ❑ Lack of knowledge about available digital collections and lack of access support (metadata)
- ❑ Lack of unified metadata model suitable for the domain
- ❑ Lack of interoperable representation of the domain semantics
- ❑ Lack of unified access infrastructure
- ❑ Multilingual issues
- ❑ Copyright
- ❑ Critical mass
- ❑ Sustainability / advertising



Ways to address the objectives

1-content semantics and infrastructure

- Investigate and define suitable **common data and meta-data schemes**
- domain's semantic descriptions (**ontologies**) to enable content integration and development of the global digital data space on aquatic heritage.
- Design and set up an open **semantic web based infrastructure**, with an associate set of **e-services**
- **Web portal to access a distributed content database**
- **Multilingual content base management tools supporting**

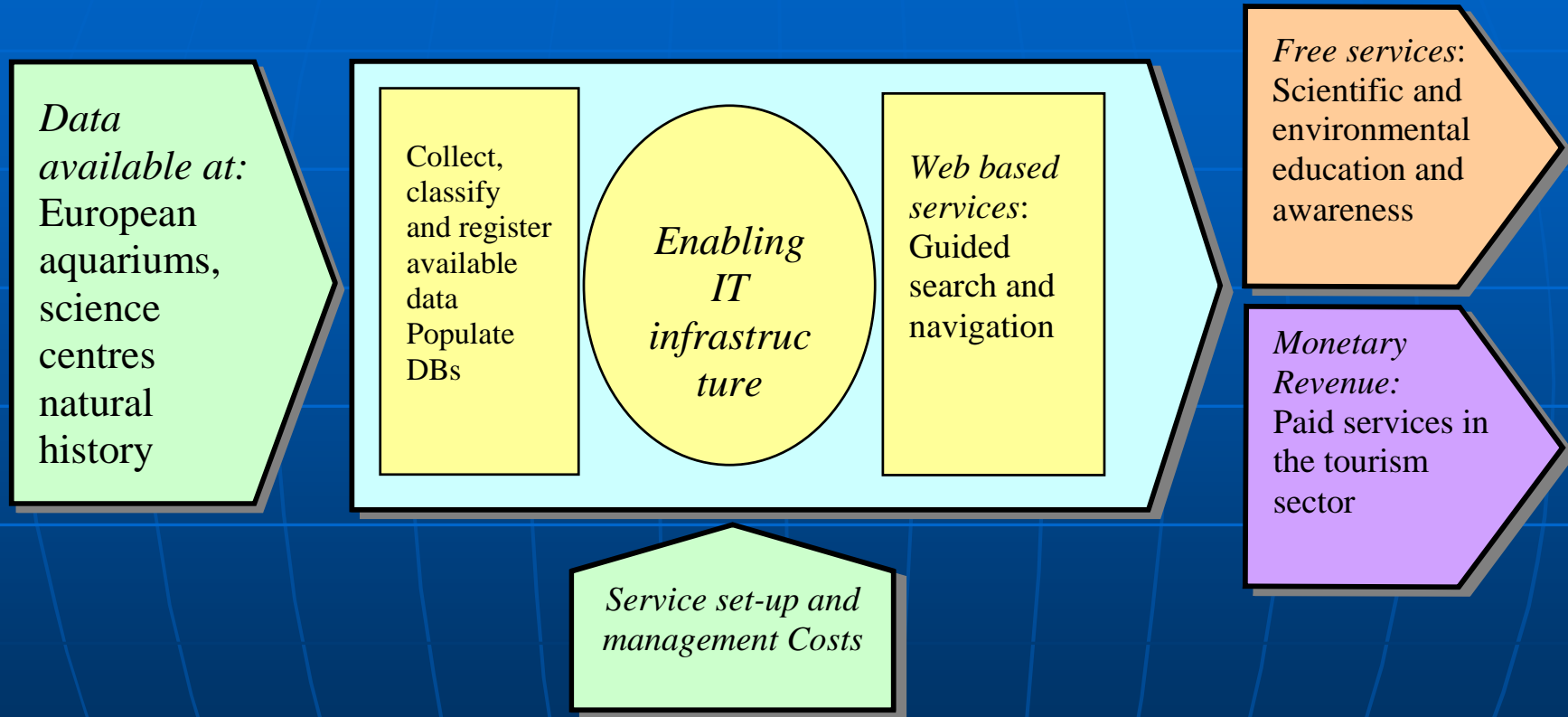


Ways to address the objectives 2-organizational issues

- ❑ Investigate and define suitable common **copyright policies**
- ❑ To provide multilingual support through:
 - **multilingual metadata model and ontology**
 - **multiple language user interface**
 - **multilingual content navigation and search**
- ❑ The project consortium includes **main organisation at EU level** with significant mass
- ❑ ECSITE supports extension
- ❑ Definition and provision of **value added services to business users:** tourist operators, media producers,...



Business model



Workpackages



WP1
Project & Financial Management

WP2
Digital Collections & User Needs

WP3
Meta-Data & Semantic Resources



WP4
Enabling Infrastructure & Services

WP5
Global Content Space
Set-up and Validation

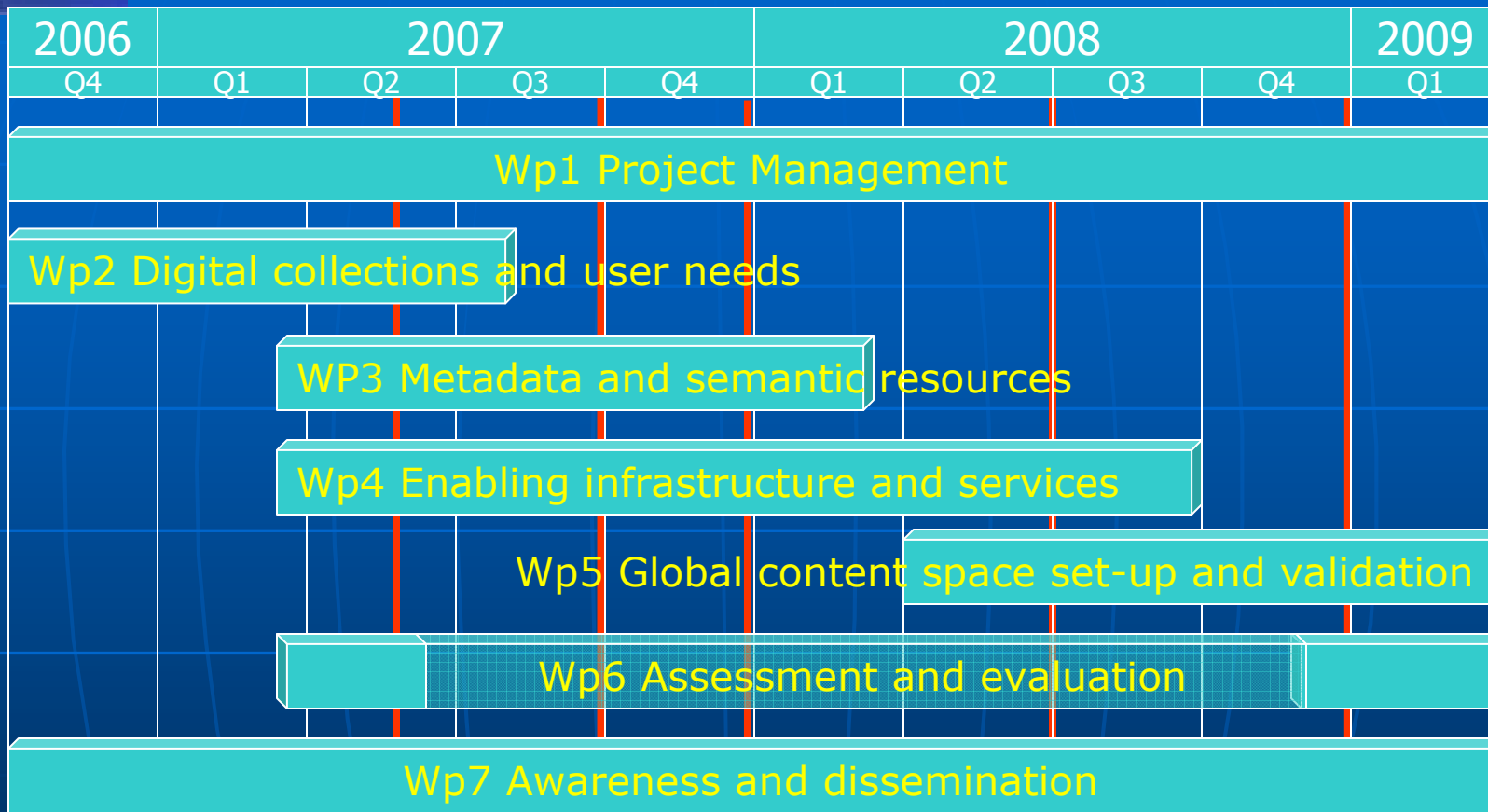
WP6
Assessment & Evaluation

WP7
Awareness & Dissemination



General work plan

Duration: 30 months



M1, Data & user needs

M2, Infrastructure spec.
metadata model,
ontologies

M3, Mid-term

M4, first
prototype

M5, final
prototype

M6, final
assessment

First iteration

Second iteration



Deliverables and milestones (first activity report)

Milestones

- **M1:** Digital data collection and user needs and evaluation metrics
- **M2:** Infrastructure specification, metadata and domain ontologies, evaluation plan

Num	Deliverable title	Due
D 1.0	Quality Assurance Plan	3
D 7.2	Project web site	3
D 1.10	First Version of PowerPoint Project Presentation	3
D 2.1	AQUARING User Segments, Profiles and Needs	4
D 7.1a	Dissemination and Awareness Plan (Initial Version)	6
D 1.1	Periodic Progress Report (Mid-term, period 1)	8
D 6.1	Validation, Evaluation & Usability Plan	9
D 2.2	AQUARING Cross-border Digital Content Space: Structure and Design	10
D 2.3	AQUARING Collection: IPR, Access and Use Policies	10
D 4.1	The AQUARING Content Sharing Infrastructure: Architecture Specification and Design	10
D 3.2	Formalised AQUARING Domain Ontologies	15
D 3.1	Meta-data Framework	15



Deliverables and milestones (second activity report)1

Milestones

- **M3:** Mid-Term Milestone
- **M4:** Initial demonstration prototype

Num	Deliverable title	Due
D1.2	Periodic Progress Report (End-Term, period 1)	16
D1.3	Progress Report First Activity Period	16
D1.8	First Financial Statement	16
D4.2	Prototype Implementation of AquaRing Content Sharing Components	18
D7.1b	Dissemination and Awareness Plan (<i>Intermediate Vers.</i>)	21
D1.4	Periodic Progress Report (Mid-term, period 2)	23
D4.3	Prototype Implementation of Integrated AquaRing Content Sharing Infrastructure	24
D5.1	AquaRing Validation Use Case Implementation	26
D7.3	The AquaRing Final Workshop	28
D7.1c	Dissemination and Awareness Plan (<i>Final Version</i>)	28



Deliverables and milestones (second activity report)2

Milestones

- **M5:** Final Demonstration Prototype
- **M6:** Final Assessment

Num	Deliverable title	Due
D7.4	Exploitation and business plan	28
D6.2	AquaRing Validation Use Case and Results Evaluation	30
D6.3	AquaRing Assessment, Sustainability Analysis and Recommendations	30
D1.11	Final Version of PowerPoint Project Presentation	30
D1.7	Final Project Report	30
D1.9	Final financial statement	31
D1.5	Periodic Progress Report (End-term, period 2)	31
D1.6	Progress Report Second Activity Period	31



Dissemination to visitors

- Participating organisations are **visited by many tourists** every year
 - Aquaria (Genoa Aquarium alone reach every year more than 1.300.000 visitors)
 - Museums
 - Zoo
- **Visitors** are a main dissemination **target** and **channel**
 - Information to visitors
 - Visitors disseminate information to friends, in the school, at work...
- **Dissemination to visitors**
 - Flyers, demos,...
 - Feedback through the Aquaring portal
 - Newsletter, invitation to events, ...
- **ECSITE**
 - **300** members in **30** different countries
 - Over **30 millions** visitors per year



Dissemination and publication-1

- Consortium includes several partners highly oriented toward dissemination and advertisement of their activities and initiatives
 - Aquariums, museums, zoo
 - Large network of contact with media and specialises press

- Involvement of large and qualified networks in the field:
 - ECSITE (European network for science centres and museums)
 - WON (World Ocean Network)



Dissemination and publication-2

- **Definition of the dissemination policy, strategy and plan:**
 - Analysis of the target dissemination groups to address;
 - identification of dissemination channels
 - Identification of activities and timing
 - Issue and update of the project dissemination plan (D7.1)
- **Envisaged dissemination initiatives include:**
 - logo and branding, web site
 - project presentation for different target user,
 - leaflets, flyers, brochures, posters
 - press releases and conferences
 - Joint with other projects/networks
- **Set up and running of Workshops and Focus Groups sessions.**
- **Organisation of a Final AquaRing Public Workshop**



Dissemination and publication-3

- ❑ “World Ocean Day”, the bi-annual international meeting organized by the World Ocean Network
- ❑ ECSITE Annual Conference
- ❑ Science Centres World Congress
- ❑ WEEC, the Annual World Congress on Environmental Education
- ❑ The Annual IZE Meeting (International Zoo Educators)
- ❑ Dedicated meeting with EC DG Fisheries, Environment and Research, Brussels, aimed at presentation of project results to support policy development

	Location	date
Press conference 1	Genoa	19 October 2006
Press conference 2	TBD	Month 12
Press conference 3	TBD	Month 24