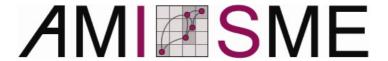


## Project no. 005875



# Analysis of marketing information for small- and medium-sized enterprises

Instrument: Craft

## Deliverable 1-4c Final activity report

WP Leader: Fraunhofer IAO
Editor: Dr. Wolf Engelbach

Editor E-Mail: Wolf.Engelbach@iao.fhg.de

**Status:** Draft (for use within the WP)

x Final (for use within the Project)

Public (Homepage or interested parties)

**Start date of project:** 2004-11-01 **Duration:** 27 months

**Due Date:** 2007-01-31 **Submission Date:** 2007-03-30



## **Table of Contents**

Ex	ecutive summary	3
	Project objectives	3
	Work and results	3
	Project organisation	4
	Intentions for use and impact	5
1.	Project objectives and major achievements	7
	1.1. General project objectives	7
	1.2. Summary of the work performed	8
2.	Work package progress	9
	2.1. Work package 1: Project management	10
	2.2. Work package 2: Market, user and technology analysis	11
	2.3. Work package 3: Development of an exemplary market a	pproach 12
	2.4. Work package 4: Specification	13
	2.5. Work package 5: Development and pilot application	14
	2.6. Work package 6: Evaluation and testing	15
	2.7. Work package 7: Exploitation & technology transfer	16
	2.8. Work package 8: Review and assessment	17
3.	Consortium management	18
	3.1. Co-ordination activities	18
	3.2. Shifts of effort and responsibility	18
	3.3. Changes in time schedule	19
	3.4. Updated milestones and time schedule	20
	3.5. Updated deliverable plan	21
4.	SME and RTD contributions	24



## **Executive summary**

## **Project objectives**

AMI-SME project created a web-based search tool to help SMEs accessing the information they need to make a success of entering and operating in new markets. Moreover, AMI-SME supports the user with an ontology based structure to store the retrieved documents and the gained knowledge, which helps firms to analyse and interpret the information they receive, and to use it as an input for next information searches. Essentially, this search tool allows trained users from any SME or business association to gather intelligence about a market. Search parameters and ontology specifications can be entered easily which enables the user to tailor results to their Industry's or even company's needs.

#### Work and results

In the first year, most effort has been spent to the analysis (WP2), the market approach (WP3) and the specification (WP4). At the end of the first year the AMI-SME system has been specified, back-end and component implementation started, and the concept for the user interface was clear.

Most effort in the second period has been spent for the technical development (WP5), followed by testing (WP6) and Exploitation (WP7). A first prototype that realised the search and the document organisation was developed until April 2006. A second prototype with advanced ontology supported functionality, such as knowledge storage and assisted search, was ready for testing by the SMEs in October 2006.

During the whole project duration, project management (WP1), the internal review (WP8) and the exploitation plus dissemination(WP7) were important. In AMI-SME, project meetings have been scheduled about every three month to allow close interaction of all the involved partners. Other meetings of the project coordinator with one or two of the project partners have been related to work packages. An internal document server, a WIKI and a CVS-system allowed a good access to all relevant information by each partner.

The software prototype was accessible online to all project partners in different releases. The stability and functionality of the prototype increased steadily, it even supported multi-user access and the local connection to individual databases. The final version is very reliable and allowed complex testing by the SMEs.

AMI-SME software is a domain model assisted Internet search system with integrated document storage and knowledge organisation. AMI-SME software supports systematic search activities that go beyond single-step retrieval. It combines search engines that are available on the Internet with a flexible storage system for documents and knowledge items obtained from a search.

In AMI-SME, a search can be named and modified, stored and re-executed. Search history and abstracting provide fast access to the relevant search results. It is possible to filter, sort and store the results for further processing or docu-



mentation. Both documents and knowledge items can be described and commented by the user in various aspects. Moreover, there is the opportunity to distinguish several independent search projects with separated queries, documents and knowledge items. All results of AMI-SME search are still available without Internet access.

A domain specific information model ("Ontology") serves as organisational assistance in AMI-SME. It is displayed in form of a knowledge tree (like a folder structure) and is used to label and retrieve downloaded documents as well as identified knowledge items. During the query definition this domain model also suggests search topics and keywords to the user. An assisted search moreover supports search engine features such as source, date or document type selection.

The testing scenario for of AMI-SME have been small and medium-sized enterprises (SME) that want to expand their business to other countries, as well as their consulting partners or business associations: they need to collect and interpret information about their specific industry niche in a particular geographical area. This is mainly based on weakly structured information, of which the user has to extract the relevant content himself.

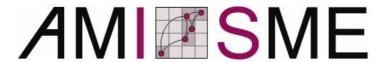
Therefore, a general marketing and internationalisation domain model is integrated in the AMI-SME system. This model will be automatically extended by the user while working with a distinct project. Additionally it is possible to specify other domain models outside of the system according to the needs of any industry, company or project.

## **Project organisation**

The following partners contributed to AMI-SME:

- 1. Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V. (DE)
- 2. biozoon GmbH (DE)
- 3. Centro Internacional de Métodos Numéricos en Ingeniería (ES)
- 4. CiaoTech SRL. (IT)
- 5. FHS Kufstein-Tirol Bildungs-GmbH (AT)
- 6. Fondazione Graphitech (IT)
- 7. Instytut Inzynierii Informatycznej SP. Z O.O. (Institute for Computer and Information Engineering, LTD) (PL)
- 8. InTraCoM GmbH (DE)
- 9. KMA Knowledge Management Associates GmbH (AT)
- 10. Politechnika Warszawska (Warsaw University of Technology) (PL)
- 11. Prof. Dr. Gerhard Heyer (DE)
- 12. Quantech ATZ S.A. (ES)
- 13. Semtation GmbH (DE)

The project uses the following logo to be consistent in its publications and designs.



In addition, the following materials for external communication were established and are used by all partners:

- An English Poster allows marketing of the project on public events and in the companies and institutions of the participants.
- A printed project flyer in English and all the languages of the participants (German, Polish, Italian and Spanish) supports the information of interested companies.
- An external Internet homepage, with a short explanation in the five languages, was established at www.ami-sme.org and gives detailed information about partners, events and results in English.

The contact person for the project is:

Dr. Wolf Engelbach Fraunhofer Institut für Arbeitswirtschaft und Organisation Nobelstr. 12 70569 Stuttgart Germany

tel: +49 711 970 2128 fax: +49 711 970 2401

e-mail: wolf.engelbach@iao.fhg.de

### **Intentions for use and impact**

The AMI-SME project results present a new element to the current state of the art, since such an ontology based search and storage system makes Internet search more intelligent and aligns it closely to the users' demand. The system does store the content in the users' environment and keeps them available without Internet connection.

On the dissemination standpoint, since the beginning of the project, proposers realised several actions to spread the project objectives and results. They managed to be involved within international seminars and workshops, they published articles and gave presentations on project scientific and technical achievements, they realised and distributed flyers in five languages with the project description, and a project public web site has been set up as an open window for any interested organisation to know more about the project.

The project results have been presented to many interested enterprises and associations. For that purpose it has been a great advantage that the general application idea can be transferred to other topics such as product development or innovation management just by defining another domain model.

Concerning the exploitation plan, the activities realised by the partners demonstrated that the AMI-SME product could be very useful in supporting SMEs



gathering and storage of marketing information. The potential users of AMI-SME could therefore be the following players:

- SME internal personnel
- External consultants (business consultants, marketing agencies)
- Marketing Intermediaries (Business associations, Chamber of Commerce, Public Development Agencies)

The SME partners took the decision to focus on a stable prototype instead of cutting-edge unstable features, since that was crucial to the exploitation strategy. The diversity of exploitation ideas by the partners leads to a noncompetitive situation that enables all partners to use the software and the gained knowledge for their own purposes, such as internal usage, consultancy with the software, and integration to Intranets, further development aiming at patent analysis or cooperation with sales partners.



## 1. Project objectives and major achievements

This final activity report summarises the relevant developments in the EU CRAFT project AMI-SME (Analysis of marketing information for small- and medium-sized enterprises).

## 1.1.General project objectives

#### Information challenges of internationalisation

Increasing competition and globalisation trends are challenging companies to expand the target markets for their products and services into foreign countries. The process of internationalisation necessitates many decisions. Adequate information about the target markets is required to support decision making and ensure the successful implementation of the internationalisation strategy. Among the relevant factors are market potentials, competitors, the legal situation, the sales organisation, and marketing events.

#### **Solutions for SMEs**

AMI-SME delivers a solution that meets the information requirements of international marketing and sales endeavours. AMI-SME aims to gather, analyse and store essential information for small and medium-sized enterprises (SMEs) that intend to enter or have recently ventured into an international market. SMEs that do not have the capacity to conduct detailed market analyses of their own are provided with the software itself and also consultancy services are offered for related activities, such as ontology definition and result interpretation.

#### **SME** oriented software results

The main outcome of the project is a software prototype that is based on the organisational user requirements:

- The internationalisation is based on many questions that have to be answered by SME. An assisted search supports SMEs to cover the relevant topics regarding industry, country and companies such as customers, suppliers and competitors.
- Modern functionality such as summarizing and metadata extraction is improving the analysis and guidance, but hidden for the user as far as possible.
- The retrieved documents as well as the gained knowledge can be stored in an intuitive ontology structure, and this can be used for further analysis and the improvement of the next search.



## 1.2.Summary of the work performed

In the first year, most effort has been spent to the analysis (WP2), the market approach (WP3) and the specification (WP4). Most effort in the second period has been spent for the technical development (WP5), followed by testing (WP6) and Exploitation (WP7).

At the end of the first year the AMI-SME system has been specified, back-end and component implementation started, and the concept for the user interface was clear. A first prototype that realised the search and the document organisation was developed until April 2006. A second prototype with advanced ontology supported functionality, such as knowledge storage and assisted search, was ready for testing by the SMEs in October 2006.

The results of the project are described in the deliverables. Progress is visible between the deliverables within single work packages. The WP results and deliverables have been presented and discussed during project meetings.



## 2. Work package progress

The deviations (time schedule, partners involved) from the project work programme and the corrective actions taken are described in section 3 since they normally involve more than one work package. There also the complete and updated list of deliverables and the milestone plan are given. All work package milestones are strictly related to general project milestones.



## 2.1. Work package 1: Project management

WP 1 is lead by Fraunhofer IAO, and supported by CIMNE, especially regarding the project document server. It was started in the first month and continued during the whole project.

The objective of WP 1 'Project Management' is to make sure the AMI-SME project will be carried out in time and in budget. Moreover, this work package will comprise the creation of periodic reports, the aggregation of the cost statements and communication with the European Commission. WP 1 is also responsible for the efficient technical, scientific and administrative co-operation. Detailed results are given in section 3.

#### **Tasks**

- Task 1-1 Co-ordinate the technical activities of the project at consortium level;
- Task 1-2 Overall legal, contractual, financial and administrative management of the consortium;
- Task 1-3 Prepare, update and manage the consortium agreement between the participants;
- Task 1-4 Co-ordinate knowledge management activities at consortium level;
- Task 1-5 Oversee the promotion of gender equality in the project;
- Task 1-6 Oversee science and society issues, related to the research activities conducted within project;
- Task 1-7 Obtain audit certificates by each of the participants;
- Task 1-8: Prepare cost statements and project progress reports for the European Commission;
- Task 1-9: Conduct project controlling and make sure that the work is carried out in time and in budget;
- Task 1-10: Set up FTP site and document sharing system to facilitate collaboration;
- Task 1-11: Schedule, plan and conduct plenary and consortium meetings;
- Task 1-12: Prepare and submit periodic reports;
- Task 1-13: Prepare and set up quality insurance for the project work;
- Task 1-14: Prepare and conduct review meetings;
- Task 1-15: Create and update regularly a SWOT analysis for the project.

#### **Deliverables**

- D 1-1: First (interim) management report
- D 1-2 a+b: First periodical reports
- D 1-3: Second (interim) management report
- D 1-4 a+b: Second periodical reports
- D 1-4 c+d: Final reports

#### **Milestones**

- M1: Project is started.
- M5: First half of the project is carried out.
- M8: Project is ended in time and in budget.



## 2.2. Work package 2: Market, user and technology analysis

The objective of WP 2 'Market, User and Technology Analysis' was to identify the technological state-of-the-art in the field of analysis of market information, to identify the user needs both for SMEs in general and for the user partners in particular, and to evaluate and to assess the market potential. Additionally, the market was analysed regarding the software support for the development of the envisaged components for the AMI-SME tool set.

The WP 2 was lead by Fraunhofer IAO and supported by all partners: the SMEs for the requirements, and the RTDs for the technical state-of-the-art. WP 2 started at the beginning of the project and was finished after six month.

In WP 2 major efforts have been taken to stabilize a broad image of the AMI-SME solution. This includes technical state of the art analysis (documented in D 2-1), analysis of the market situation (documented in D 2-2) and the user requirements (documented in D 2-2, updated and extended in D 2-3). This technology, market and user analysis gave a deep insight into the situation, expectations and success factors for AMI-SME. The project team used these results to design and implement an accepted method and software system.

#### Tasks

- Task 2-1: Analysis and evaluation of available business process, context frameworks (...) and information sources;
- Task 2-2: Analysis and evaluation of standards in the field of information retrieval (...);
- Task 2-3: Analysis and evaluation of existing reference architectures;
- Task 2-4: Analysis and evaluation of existing tools for semantic search, for context modelling, and for documentation:
- Task 2-5: Identify the specific requirements of the participating users (...);
- Task 2-6: Identify the specific requirements of SMEs for analysis of market information;
- Task 2-7: Identify the specific requirements of SMEs regarding data logistics and logistics support;
- Task 2-8: Identify the market needs and the market potential for the AMI-SME software tools (...);
- Task 2-9: Analysis and evaluation of software engineering methodologies (...);
- Task 2-10: Analysis and evaluation of tools for the software developments.

#### **Deliverables**

- D 2-1: Analysis and evaluation of the technological state-of-the-art
- D 2-2: Analysis of user requirements and market needs (confidential and public version)
- D 2-3: Update of user requirements

#### **Milestones**

- M2: State-of-the-art analysis completed
- M2: User requirements identified and market analysis completed
- M3: Update of market, user and technology analysis completed



## 2.3. Work package 3: Development of an exemplary market approach

WP 3 laid the conceptional basis for all models and frameworks in the AMI-SME project. This business design specified from a user point of view the business needs on the framework, the components themselves and the AMI-SME software tools. WP 3 gave input to the update in WP2 and took place in close connection to the first stages of WP 4. WP3 was lead by Intracom and supported mainly by the other SMEs, but also by Fraunhofer and FH Kufstein. It started in month 4 and ended in month 6.

Work package 3 defined the business design of the AMI-SME architecture. Based on the requirements in deliverable 2-3, crucial aspects are elaborated in detail. Especially the information categories and information demands are structured and many examples given, as well the information sources. Also the process integration of the marketing methods and the information demands have been specified. Preparing additional fundaments for the specification, the strategies for semantic search are discussed. Moreover, the need for adaptation is presented, with the conclusion that ontologies and information sources will be most important to allow adaptation to. The user scenarios illustrate the intention of the SME users and influence the focus of the testing phases. The user scenarios and the definition of company ontologies have proven the correctness of the ongoing work and goal of the AMI-SME project. The results from WP 3 are continued and refined in WP 4 (requirement specification).

#### Tasks

Task 3-1: Design of a framework for analysis of market information;

Task 3-2: Design of a business process framework for marketing information logistics;

Task 3-3: Business design of a process integration reference architecture;

Task 3-4: Identification of test scenarios

#### **Deliverables**

D 3-1: Draft version: Business Design for the AMI-SME architecture

D 3-2: Final version: Business Design for the AMI-SME architecture

#### **Milestones**

M3: Business design and frameworks design completed



## 2.4. Work package 4: Specification

WP 4 specified all models, frameworks and software products that have been developed in the AMI-SME project. This technical design describes all AMI-SME elements from a technical and implementation point of view. The combination of WP3 and WP 4 ensured that the development outcome is in line with the requirements identified in the work package 2.

WP 4 started in month 6 and ended in month 10. It was lead by KMA and strongly supported by all partners. A lot of effort and discussion was necessary to clarify all the interrelated issues. The results of WP 4 are detailed specifications with formal and graphical methods:

- Requirement tables
- Use Cases
- Site Map
- GUI design drafts
- UML state charts
- Ontologies-Diagrams
- Module Structures
- UML Component Diagrams
- Classes and Interfaces

#### Tasks

Task 4-1: Design of a technical framework, metamodel specification, tool-implementation and configuration for the specification;

Task 4-2: Specification of the technical design of the component based software-architecture, Class Diagrams, Data Models, Structure Charts, Ontologies, Side Maps, ... etc;

Task 4-3: Identification and adoption of appropriate ontologies for relevant languages and sectors

Task 4-3: Specification of guidelines for instantiation of the references models and architecture;

Task 4-4: Update of specifications regarding feedback from WP2 and WP3 and WP5.

#### **Deliverables**

D 4-1: Draft version: Technical design for the AMI-SME architecture D 4-2: Final version: Technical design of the AMI-SME architecture

#### **Milestones**

M4: Specification completed



## 2.5. Work package 5: Development and pilot application

The development in WP 5 aims at the realisation of the conceptual items specified in WP 3 according to the technical design (WP4). The whole development work is distributed among the technical participants of the work package so that a detailed work plan with clear interfaces is in place. The development process followed an iterative approach, so that at several interim prototypes have been produced and improved. The work is in close connection with the requirements identified in WP 2 and the specifications of WP 3 and 4.

WP 5 results in prototypes for a practical scenario, showing the general functionality of the AMI-SME tools. The first prototype is focussing on "ad-hoc" search and document storage, the second one on "assisted search" and "knowledge extraction". With the expert feedback from WP6, the second prototype has been improved.

WP 5 is lead by Warsaw University and involves mainly the RTD partners, but also KMA, Intracom and Semtation. WP 5 started even earlierer in month 6 with the establishment of the development environment and technical tests. It continued until the end of the project, e.g. regarding bug fixes, internationalisation and documentation.

#### Tasks

- Task 5-1: Create work plan that distributes the development to the development partners (...).
- Task 5-2: Develop 1<sup>st</sup> version of the AMI-SME architecture components (1<sup>st</sup> prototype).
- Task 5-3: Carry out unit testing for all components developed.
- Task 5-4: Identify and prepare user site (...)
- Task 5-5: Prepare integration test plans and integration test data.
- Task 5-6: Carry out integration test for 1st prototype.
- Task 5-7: Carry out 'light' integration test for 2nd prototype. (...)
- Task 5-8: Incorporate findings of WP 6 into the development of the 2<sup>nd</sup> version of the AMI-SME prototypes.
- Task 5-9: Documentation of development.

#### **Deliverables**

- D 5-1: Development work plan
- D 5-2: 1<sup>st</sup> prototype including documentation
- D 5-3: 2<sup>nd</sup> prototype including documentation
- D 5-4: Documentation of Development and Pilot site

#### Milestones and expected results

- M4: Work plan ready
- M6: 1<sup>st</sup> prototype ready
- M6: Pilot site prepared for implementation
- M7: 2<sup>nd</sup> prototype ready
- M8: Pilot site results documented; Development tested and documented



## 2.6. Work package 6: Evaluation and testing

The work package aims at evaluating the applicability of the AMI-SME approach and the AMI-SME software tool considering the requirements identified in WP 2 to 4. While the first prototype was mainly analysed by experts at FH Kufstein, the second prototyp was deeply tested by the SMEs.

WP 6 is led by the FH Kufstein and mainly involves the SMEs, but for necessary support, such as documentation and software updates, also the RTDs.

#### **Tasks**

- Task 6-1: Define an evaluation methodology for the AMI-SME project. (...)
- Task 6-2: Define a methodology to measure the acceptance of the AMI-SME architecture (...)
- Task 6-3: Prepare the user sites for end user testing (...)
- Task 6-4: Define a methodology to measure the improvements in terms of operational efficiency that could be achieved using the AMI-SME architecture.
- Task 6-5: Validate the project results against latest developments

#### **Deliverables**

- D 6-1: Report on evaluation and measurement methodology
- D 6-2: Evaluation report

#### **Milestones**

M6: Evaluation methodologies defined

M7: Tests of first prototype completed

M8: Tests of second prototype completed



## 2.7. Work package 7: Exploitation & technology transfer

The work package "Exploitation and Technology Transfer" aims at providing commercial and scientific sustainability of the project results. First, the commercial partners will develop a business plan for the exploitation of the AMI-SME solution. Second, the scientific results will be disseminated in the research and academic community. An additional task will be the transfer of newly developed technologies. Additionally, within this work package the issues of the project's corporate identity, templates, website etc. were resolved.

The work package ran during the whole project life. It was lead by CiaoTech, which has especially taken the responsibility for the exploitation plan.

#### **Tasks**

- Task 7-1: Create Dissemination Standards (...)
- Task 7-2: Prepare and implement a public web site and a public project presentation (...)
- Task 7-3: Report on attended dissemination events (...)
- Task 7-4: Prepare Dissemination and Technology Transfer Plan (...)
- Task 7-5: Define target groups and appropriate activities for transfer of technology and knowledge as well as for further exploitation by the participation SMEs.
- Task 7-6: Prepare a preliminary version of the exploitation plan (...)
- Task 7-7: Update plan for using and disseminating knowledge (...)
- Task 7-8: Disseminate the results of the AMI-SME project within the scientific and the user community (...)
- Task 7-9: Prepare exploitation plans of the AMI-SME architecture and business models of the participating SMEs. (...)
- Task 7-10: Prepare public report on exploitation and technology transfer activities (...)

#### **Deliverables**

- D7-1: Dissemination Standards
- D7-2: Public web site and project presentation
- D7-A: Preliminary plan for using and disseminating knowledge
- D7-B: Final plan for using and disseminating knowledge

#### Milestones

- M2: Exploitation and Technology Transfer Plan ready
- M5: Preliminary plan for using and disseminating knowledge ready
- M8: Final plan for using and disseminating knowledge ready



## 2.8. Work package 8: Review and assessment

The work package "Review and Assessment" of AMI-SME describes how the output of the on-going assessment will feed into the project management, as assessment is only useful when it informs management in a timely fashion.

The work package will parallel the project life. It is lead by Prof. Heyer and supported by Fraunhofer IAO. In general, Mr. Heyer accompanies and consults the project by reading the documents and attending the meetings, and providing technical and organisational suggestions to the project and its leader.

#### **Tasks**

Task 8-1: Development of review method

Task 8-2: Execution of reviews

#### **Deliverables**

D 8-1: 1st review and assessment report

D 8-2: 2<sup>nd</sup> review and assessment report

#### **Milestones**

M5: 1<sup>st</sup> review and assessment report ready

M8: 2<sup>nd</sup> review and assessment report ready



## 3. Consortium management

#### 3.1.Co-ordination activities

The project AMI-SME has been doing fine and working according to the adapted plans. Minor changes were necessary regarding the project organisation in order to clarify and realise the project idea more appropriate. All such changes were discussed with and accepted by the project officer prior to their realisation.

Quarterly meetings and internal reporting as well as regular E-Mail and telephone conversations allowed a good overview of the tasks and activities in the different work packages. An internal project server offered a good access to and distribution of all relevant project documents by each partner. In addition, the RTD development partners use the WIKI-server of Warsaw University to get access to documentation and information that is only related to the software implementation. Distributed software development was supported by a CVS server. Additionally an issue management system was used to keep an overview of open tasks, their priorities and the responsible partner.

Project meetings have been done about every three month to allow a close interaction of all partners. This reflects that the RTDs are interested to get the input from the SMEs, and the SMEs want to understand at least the conceptional discussions of the RTDs. The meetings in general are organised to allow the presentation and discussion of the interim results, to decide on the further orientation of the project, and to clarify the next activities. While in the first period, often draft deliverables have discussed, in the second period the software prototypes have been an important focus.

#### 3.2. Shifts of effort and responsibility

AMI-SME aims to realise method and software solutions for SMEs. The developers of the software need to understand the user requirements really good and should offer their technical experience in an early stage to avoid the reinvention of wheels or unrealistic expectations. Therefore it has been necessary that the technical partners participate in the first work packages by joining project meetings, reading documents and giving input via telephone or E-Mail. All these activities need some effort that was not calculated for some partners, especially not for GraphiTech and CIMNE. Here the efforts are shifted from later WPs according to the demand described.

The Italian partner CiaoTech came into the project during the final negotiations. The effort in the Description of Work (DoW) was optimised for the former partner (SmartIT) and not always appropriate to CiaoTech. CiaoTech is very experienced in marketing processes and in information analysis, more than in software development. This combination is of high value for AMI-SME and complementary to other partners' skills. To bring these competencies into the project most useful, the effort of CiaoTech is shifted from WP 5 mainly to WP 3 and WP 7. This also allows to look more detailed at the business case of the consultants that use AMI-SME in addition to the business case of the SMEs



using AMI-SME themselves. In consequence, CiaoTech took the responsibility for WP7 and the deliverables D 7-A and D 7-B.

To balance this shift in the overall consortium, the German SME partner Semtation reallocates its effort towards WP 5, and reduces at WP 3, WP 4 and WP 7. This also makes sense regarding the competencies, because the core business of Semtation is software development, and especially related to their main field of ontology developments this is very useful for AMI-SME in general.

The leadership of WP 5 "Technical Implementation" was shifted from CIMNE to Warsaw University. After the presentation and discussion of the skills and experiences of all partners during the kick-off meeting, this change seemed to be appropriate. Warsaw University has large experiences with similar software development and research projects. They have a clear vision of possible technical solutions for the user requirements, and are able to manage the technical cooperation of several remote developers. In this setting, CIMNE can concentrate on the development of specific modules.

The SME partners realise that the exploitation of the AMI-SME software will also need some further investment. Therefore they decided that the result of AMI-SME should be as close to a final product as possible, and in case of resource conflict better some fancy features should be reduces. This decision in combination with that shift of WP leadership will increase the effort for the Polish partners, on one hand for the University as technological lead partner, and on the other hand for ICIE due to their role that includes extensive component testing. Any such increase of personnel effort will not extend the budget lines in the DoW, which is possible due to reduced personnel costs compared to the calculation in the DoW.

Fraunhofer did not use the opportunity to give a subcontract for translation, which has been decided by the SMEs. CIMNE reduced its effort since some of their tasks in WP5 were conducted by Warsaw University. Due to these reductions, most other partners slightly extended their efforts. Intracom and Graphitech, spent more effort for AMI-SME than their budget allowed. It has been clear to these partners that they might not get the EU-contribution for their additional effort that extends the overall budget for the project.

## 3.3. Changes in time schedule

In the original DoW WP 3 and WP 4 were planned to be conducted parallel. After the project started, the project team decided that it is more appropriate to have interim results of WP 3 before WP 4 would end. This change is due to the fact that WP 3 will be more a verbal description of the general ideas and WP 4 will get more detailed in technical specification than it was expected during the proposal. This also intends that the two deliverables in WP 4 are each two month delayed. This re-arrangement of WP 4 did not cause any backlog of the overall project, because the intended form of specification also covers parts of activities that otherwise would have to happen in WP 5 (e.g. implemented mock-up, detailed screen prototype and state charts).

WP 5 has started earlier with some preparation tasks (technology selection, development environment installation ...). By this quick start, also an early

discussion of technical ideas and solution pathways was possible. The resources for these activities are mainly assigned by the Polish partners that also took the lead in WP 5 (see page 18). In WP 5, the activities of CIMNE are delayed for two month. This is due to technical problems caused by the connexion to the development server on one hand, and to necessary personal changes related to technological decisions for AMI-SME (no ASP solution, JAVA implementation) on the other hand.

The project has been extended for three month. In August 2006 it has been discovered that the project needed the extension to conduct the testing and evaluation in the intended quality and with all the relevant features implemented, such as Assisted Search and Internationalisation of the User Interface. This extension has been accepted by the EU. Therefore all the activities that were scheduled until the end of the project, also have been extended by three month. In addition, the milestones M7 (Prototype 2) and M8 (Evaluation) have also been delayed for three month each.

## 3.4. Updated milestones and time schedule

In addition to the milestone list from the original DoW, there are three milestones: the specification, the review after one year, and the prototype is split up in two different versions. This became necessary to more interim goals in the middle of the project duration. The updated DoW for the project extension reflects these changes.

All milestones of the project are now combined with the regular project meetings; the dates of the milestones are slightly adjusted to the meeting dates. The last two milestones are three month later, since the project has been extended for that reason. The Trento meeting was scheduled for the M7 date without extension, and the review was necessary, since prototype 1 could not be presented appropriately at M6.

The following table gives an overview of the milestones and the corresponding meetings. It highlights one relevant key topic and lists the deliverables that are discussed during the meeting.

Mile- stone	Project Month	Main Topic	Deliverables	Meet- ing	Place
M1	1	Organisation		11/04	Stuttgart (D)
M2	4	Analysis	2-1, 2-2, 7-1, 7-2	02/04	Rome (I)
M3	7	Requirements	2-3, 3-1, 1-1, 4-1	05/05	Barcelona (E)
<i>M4</i>	10	Specification	3-2, 4-2, 5-1	09/05	Warsaw (POL)
M5	13	User Interface	1-2 a+b, 7-A, 8-1	11/05	Potsdam (D)
<i>M</i> 6	18	Prototype 1	5-2, 6-1	03/06	Kufstein (A)
		Review	1-3	05/06	Stuttgart (D)
		Prototype 1a		07/06	Trento (I)
M7	24	Prototype 2	5-3	10/06	Vienna (A)
M8	27	Evaluation		12/06	Rome (I)

Figure 1: Overview of milestones and meetings in AMI-SME



## 3.5. Updated deliverable plan

The deliverables in WP 1 and WP 7 should follow the reporting guidelines for CRAFT projects more strictly; therefore some rearrangements were necessary. With respect to the extension of the project, the dates to deliver the final documents have changed from October 2006 to January 2007. Also for reasons of simplifying and homogenising the reporting, some re-arrangements happened.

Compared to the original DoW the following changes in the deliverable structure became necessary and have been discussed with and agreed by the project officer; they are already reflected in the updated DoW:

- **D 1-2** (Annual management report) and **D 1-4** (Final management report) are separated now according to the reporting guidelines of FP6: there will be "Periodic activity reports" (**D 1-2a** and **D 1-4a**) and "Periodic management reports" (**D 1-2b** and **D 1-4b**) as well as "Final activity report" (**D 1-4c**) and "Final management report" (**D 1-4d**).
- In the public deliverable **D 2-2** (market and user analysis) the SMEs did not want to publish all results in detail, because it already tackles exploitation planning by detailed client analysis. To avoid the conflict between results transfer and protection of economic interests, we agreed to the suggestion of the European Commission that we still have the public deliverable, but in addition a restricted one that additionally includes all the sensitive information.
- The deliverable **D 2-3** has been renamed to "Update of user requirements", which describes that not all previous chapters of D 2-1 and D 2-2 are repeated, but only the chapters with new content. That allows an easier reading than having the same chapters again without changes.
- In WP 3 the same deliverables structure and naming logic is used now as it already was in WP4: A draft version will be completed first, followed by the final version. Thus, the name of **D 3-1** has changed to: "Draft version: Business Design for the AMI-SME architecture" (instead of "Design of business process framework for marketing information logistics").
- **D** 5-3 (Report on pilot user site preparation and AMI-SME pilot site) is completely integrated in **D** 5-2 (1<sup>st</sup> prototype including documentation) and **D** 6-1 (Report on evaluation and measurement methodology) and is therefore not necessary separately.
- **D** 5-4 (Report on pilot user site preparation and AMI-SME pilot site) will also be completely integrated in **D** 5-5 (2<sup>nd</sup> prototype including documentation) and **D** 6-2 (Report on landscape testing) and is therefore not necessary separately.
- D 5-5 (2<sup>nd</sup> prototype including documentation) will be renumbered to D 5-3, since D 5-3 and D-4 are integrated in other deliverables. Also D 5-6 (Documentation of development and pilot site) will be renumbered to D 5-4.
- **D** 6-2 (Report on landscape testing) and **D** 6-3 (Overall evaluation report (including Code of Practice)) are just one month separated and will therefore be integrated to one deliverable that will be called **D** 6-2 (Evaluation report).
- **D** 7-3 (Report on attended events) and **D** 7-4 (Dissemination and technology transfer plan) shall be combined with **D** 7-6 (Preliminary version of the exploitation plan). The new name of the deliverable **D** 7-A is



- "Preliminary plan for using and disseminating knowledge", and is scheduled in month 12. Responsible will be CiaoTech instead of Fraunhofer IAO, because they coordinate the development of this plan.
- **D** 7-9 (2nd report on exploitation and technology transfer activities), **D** 7-7 (Updated plan for using and dissemination knowledge) and **D** 7-8 (Exploitation plan) will be combined to the new **D** 7-B "Plan for using and disseminating knowledge", scheduled in month 24. Responsible will be CiaoTech instead of Fraunhofer IAO, because they coordinate the development of this plan.

The following table includes the new list of deliverables and thus summarises the changes that are explained.

Del. No <sup>1</sup>	Deliverable name	Lead partici- pant	Na- ture 2	Dis- semin. level <sup>3</sup>	Delivery	Real delivery
D 2-1	Analysis and evaluation of the technological state-of-the-art	FHG	R	PU	M03	30.01.05
D 7-1	Dissemination standards	FHG	R	PU	M03	16.01.05
D 7-2	Public web site and project presentation	FHG	О	PU	M04	Feb 05
D 2-2	Analysis of user requirements and market needs	FHG	R	СО	M04	01.03.05
D 2-2a	Analysis of user requirements and market needs	FHG	R	PU	M04	30.04.05
D 2-3	Update of user requirements	FHG	R	PU	M06	30.04.05
D 3-1	Draft version: Business design for the AMI-SME architecture	InTra- CoM	R	PU	M06	30.04.05
D 4-1	Draft version: Technical design for the AMI-SME architecture	KMA	R	СО	M06	30.04.05
D 1-1	First management report	FHG	R	СО	M06	30.04.05
D 3-2	Final version: Business design for the AMI-SME architecture	InTra- CoM	R	RE	M07	06.06.05
D 4-2	Final version: Technical design for the AMI-SME architecture	KMA	R	СО	M09	30.09.05

 $<sup>^{\</sup>rm 1}$  Deliverable numbers in order of delivery dates: D1 - Dn

<sup>&</sup>lt;sup>2</sup> Indication of the nature of the deliverable:

 $<sup>\</sup>mathbf{R} = Report$ 

 $<sup>\</sup>mathbf{P} = Prototype$ 

 $<sup>\</sup>mathbf{O} = \text{Other}$ 

<sup>&</sup>lt;sup>3</sup> Indication of the dissemination level:

**PU** = Public

**RE** = Restricted to a group specified by the consortium (including the Commission Services).

**CO** = Confidential, only for members of the consortium (including the Commission Services).

 $<sup>^4</sup>$  Delivery date. Month  $^{0}$  marks the project start, all delivery dates are relative to this start date.

Del. No <sup>1</sup>	Deliverable name	Lead partici- pant	Na- ture 2	Dissemin. level <sup>3</sup>	Delivery	Real delivery
D 5-1	Development work plan	WUT	R	CO	M09	30.09.05
D 1-2a	Periodic activity report	FHG	R	СО	M12	12.12.05
D 1-2	Periodic management report	FHG	R	СО	M12	12.12.05
D 7-A	Preliminary plan for using and disseminating knowledge	Ciao Tech	R	СО	M12	12.12.05
D 8-1	1 <sup>st</sup> review and assessment report	Heyer	R	СО	M12	12.12.05
D 5-2	1 <sup>st</sup> prototype including documentation	WUT	P/R	СО	M15	10.04.06
D 6-1	Report on evaluation and measurement methodology	FHS K	R	PU	M15	10.04.06
D 1-3	Second management report	FHG	R	СО	M18	13.06.06
D 5-3	2 <sup>nd</sup> prototype including documentation	WUT	P/R	CO/RE	M19	07.07.06
D 5-4	Documentation of development and pilot site	WUT	R	СО	M27	14.03.07
D 6-2	Evaluation report	FHS K	R	CO	M27	14.03.07
D 7-B	Plan for using and disseminating knowledge	Ciao Tech	R	СО	M27	14.03.07
D 8-2	2 <sup>nd</sup> review and assessment report	Heyer	R	CO	M27	14.03.07
D 1-4a	Periodic activity report	FHG	R	CO/RE	M27	30.03.07
D 1-4b	Periodic management report	FHG	R	CO/RE	M27	30.03.07
D 1-4c	Final activity report	FHG	R	CO/RE	M27	30.03.07
D 1-4d	Final management report	FHG	R	CO/RE	M27	30.03.07

Figure 2: Updated deliverable list AMI-SME



## 4. SME and RTD contributions

In AMI-SME there are different kinds of SMEs directly involved:

- 1. Biozoon and Quantech are end-users that have technical business and need market information for their internationalisation projects.
- 2. CiaoTech, KMA and InTraCoM are consulting companies that intend to support other SME by using the AMI-SME solution.
- 3. Semtation and ICIE are software companies that intend to sell the technical solution of AMI-SME in relation to other software products.

In this constellation, there is a very fruitful and inspiring discussion about the expectations towards the functionalities of the developed software solution and its exploitation. The SMEs also learn more about their exploitation chances during the project (see in detail D 7-B). They all brought their view and experiences into the design and specification of AMI-SME.

The RTD performers discovered a clear distribution of responsibilities, which is roughly the back-end (database, development environment etc.) by Warsaw University, the front-end (GUI) by Fraunhofer, the ontology and summarising by GraphiTech and the search engine connectors by CIMNE. Thereby all relevant competencies are covered and clear interfaces defined.

There is a close interrelation between RTDs and SME: many SMEs are really interested to understand the technical solutions behind AMI-SME and learn more about technology which they may also need in other contexts. The RTD partners listen carefully to the SMEs expectations and usage scenarios and are able to reflect that in their technical discussions. The balance of work between SMEs and RTDs is appropriate to the project objectives and to the work plan.