Description of Work (DoW)





List of participants:

Participant no.	Participant organisation name	Part. short name	Country
1	Hanzehogeschool Groningen	HG	NL
2	Avics B.V.	AVICS	NL
3	Novo	NOVO	NL

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1. Organisation

Directive group

Responsible for the final result and project control in general terms.

• Project Manager

Final responsibility for daily management of the project; project planning; follow-up of actions; financial aspects; subsidy book-keeping etc.; twice yearly report to Province.

Core group

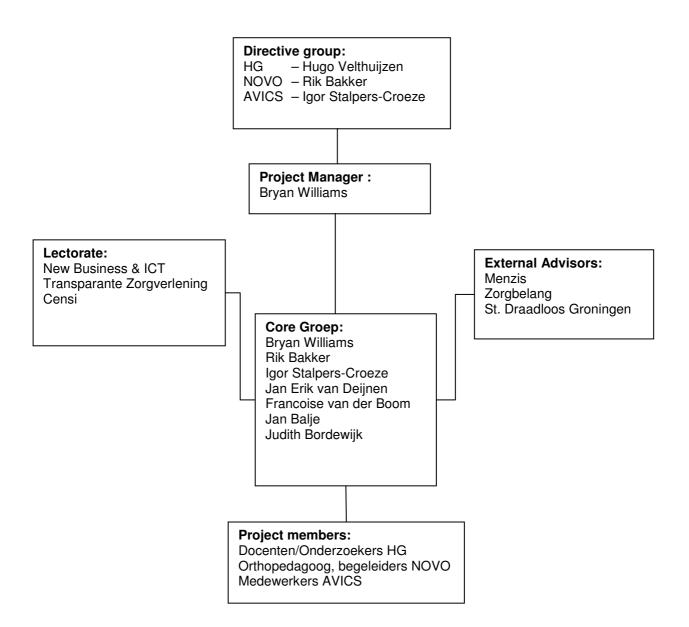
Responsible for making and delegating decisions/activities made in the group to the project members.

Project members

Team members responsible for conducting different activities.

• Lectorate and External advisors

For advice to all project members.



2. Work plan

The project will consist of the following work packages:

- WP1. Baseline Measurement Measurement of current situation, preliminary research, casus
- WP2. System Design Requirements specification, user need research and system design.
- WP3. System Integration Implementation of functionality. Support during integration and trials.
- *WP4. Implementation and Trials* Organization, installation/de-installation, execution, support and evaluation of various tests and trials.
- WP5. Dissemination and Exploitation Dissemination of the study results among scientific and professional fora and business plans for the exploitation of the integrated system.
- WP6. Ethical Issues Research into the relevant ethical issues during design and trial phases.

3. Roles and contributions of partners

In this section the composition of the consortium is described by demonstrating the critical mass and diversity of competencies and the infrastructure provided for the successful completion of the defined tasks.

	Communication protocols	Usability engineering	ICT professionals, embedded system design and implementation	Evaluation techniques	Ethical evaluation and assurance	Domain Expertise	Industrialisation and Marketing of Health Care solutions			
HG										
AVICS			•				•			
NOVO										

The Consortium is formed to create a group of companies that complement each other in expertise, technology, implementation and international market coverage.

4. Work package descriptions

Work package number	1	Start date or starting event T0										
Work package title	Base	line Me	asureme	ent								
Work package	Nove	– Rik E	Bakker									
manager												
Participant												
short name	HG	NOVO	AVICS									
Person- months per participant	5	9	2									

Target/Objectives:

- A Measurement of start situation
- B Preliminary research
- C Casus

Activities:

- A Research: target group/ house automation/ sensor technology
- B Observation: target group in start situation
- C Visit domotica convention center in Eindhoven.
- D mutual meetings: inventory group, observation group, NOVO, AVICS, HG.

Gantt chart:

See enclosure 1: Planning

Input from other WPs:

- A Not applicable
- B
- C

Not included:

- A
- B
- C

Deliverables

- A Start measurement 2 situations.
- B Inventory sensor technology: commercially, available and proven technology.
- C Casus
- D Clients requirement.
- E Consultancy report.

[&]quot;Responsible" means – the partner who coordinates the work, collects input from involved partners and performs final editing.

Work package number	2					art d ent	ate or	startin	g	T0		
Work package title	Syste	em Desig	n									
Work package manager	Avics	s – Igor S	talpers-	Croeze)							
Participant short name	HG	NOVO	AVICS									
Person- months per participant												

Target/Objectives:

- Understand and consider requirements from different stakeholders: the mentally challenged persons, and the informal and professional care-provider(s), which apply to the new functions of the whole system.
- Understand the technical requirements imposed by the different existing components, so that they can be further developed to achieve the common objective.
- Formalize the requirements so that the resulting solution can be evaluated/tested against them.
- Develop a common architecture that allows to integrate new functions and that is open for future developments.
- High-level design of the new functions.
- Specification of the necessary test/validation procedures at the integrated system level.

Activities:

This work package involves the following activities / tasks:

- **T 2.1 Requirements Specification** In the beginning functional requirements for the new system and the new functions will be defined. *Involved:* Avics, HIT
- **T 2.2 Initial System Design** Initial high-level design of the new parts of the system and new functions will be performed using Unified Modelling Language (UML) techniques. The resulting Initial System Design will be reviewed and approved. *Involved:* AVICS, HIT, NOVO.
- T 2.3 Evaluation of the Initial Design The requirements specifications and initial design will be
 evaluated within the project and validated by means of group sessions with representative end-users
 organizations. *Involved:* AVICS, HIT, NOVO
- **T 2.4 Final System Design** Based on the results of the evaluation activities the requirements and the design will be updated, finalized and approved. *Involved:* AVICS, HIT, NOVO.
- T 2.5 System Test Design Simultaneously test description documents for integrated system level tests will be developed, assuring requirements traceability. *Involved:* AVICS, HIT, NOVO.

Special attention will be given to system integration issues. AVICS will participate in the overall system design, since the various tracks will be integrated and eventually connected to an integration framework. From there information is stored and routed to other subsystems.

Gantt chart:

Input from other WPs:

- Initial baseline measurement documents (from WP1).
- Trial plans (from WP4).
- An initial overview of the applicable ethical aspects and moral problems related to the use of assistive technology / ICT implementation in the care for elderly people (from WP6).

Not included:

Deliverables

- D2.1 Requirements specification documents for system (T0+12 months). Responsible: AVICS.
- D2.2 Design specification document for the system (T0+12 months). Responsible: AVICS.
- D2.3 Test description documents for the new system functions at the integrated system level (with requirements traceability; T0+12 months). Responsible: AVICS.

"Responsible" means - the partner who coordinates the work, collects input from involved partners and

performs final editing.

Work package number	3					art d ent	ate or	starti	ng	T0+6		
Work package title	Syst	em Impl	ementat	ion	l e				l.			
Work package manager	Hanz	nze – Instituut voor ICT										
Participant short name	HIT	NOVO	AVICS									
Person- months per participant												

Target/Objectives:

- The system is developed according to requirements and design, within budget.
- The system is documented for developers and users
- The system is tested against the functional and non-functional requirements.
- Support is delivered during integration and trials.
- Maintenance and administration of the system is facilitated

Activities:

- T3.1 Study the existing technology that will be used (integrated) in the solution.
- T3.2 Develop the system according to the system design
- T3.3 Write the System Documentation (including transfer of development environment)
- T3.4 Write User Documentation
- T3.5 Create deliverable for system administrators (binaries, installation procedure)
- T3.6 System testing
- T3.7 Deliver support during integration and trials

Gantt chart:

Input from other WPs:

- Requirements, System Design and Test Procedures (from WP2)
- Trial plans (from WP4)

Not included:

• The projectproposal refers to the system as a "prototype". Due to projectconstraints, the system will not be complete enough for sale to third party clients.

Deliverables

- D3.1 Sourcecode of the system Hanze
- D3.2 System documentation Hanze
- D3.3 User documentation Hanze

"Responsible" means – the partner who coordinates the work, collects input from involved partners and performs final editing.

Work package number	4				tart da /ent	ate or	starting	д ТО.	⊦ 4 mont	hs	
Work package title	Tests	s, Trials a	nd Eva	luation							
Work package manager	NOV	O – Rik B	akker								
Participant short name											
Person- months per participant											

Target/Objectives:

- Definition of the Trial Plans
- **Test of integrated systems**. Following the separated testing of the subsystems, <u>a first joint test</u> of the integrated subsystems will follow in the laboratory. Duration: two weeks. After that, possible issues will be solved by the involved partners, and <u>second joint test</u> of the integrated subsystems will follow in the laboratory. Duration of these second tests: xxx months. It will be concluded by a user-evaluation. Involved: xxx
- **Field trials**. 3 pre-production systems will be built. These pre-production systems will be tried out in three field trials in Groningen, lasting one year. During the trials the alarms will be generated and handled in a uniform way based on functionalities in existing alarming servers. During the design fase of the project, requirements will be defined which have to be satisfied by the equipment at home, the communications means and the alarming servers to guaranty reliable functioning of the whole alarming chain.
- **Evaluation study** Each field trial will be evaluated in a scientific evaluation study. This study will focus on the user friendliness and usefulness of the system, as well as on the impact of the system on the autonomy, quality of life and the burden, feelings of competence and quality of life of their informal carers. To investigate the user friendliness and usefulness of the system semi-structured interviews will be conducted both with the elderly that participate in the experimental group and their (in)formal carers.

Activities:

This work package involves the following activities/tasks:

- T 4.1 Delivery of a concept demonstrator. Involved:
- T 4.2 Evaluation of the concept demonstrators, by potential users.
- T 4.3 Trial Plans
- T 4.4 Evaluation of system by potential users. Involved:
- T 4.5 Test of integrated system Involved:
- T 4.6 Field trials.
 - T 4.6.1: preparing field trial
 - T 4.6.2: delivery of 3 preproduction systems
 - T 4.6.3: field trial
- T 4.7 Evaluation study Involved:

Gantt chart:

Input from other WPs:

- concept demonstrators and framework from WP3
- Building first and second versions of the integrated system.
- Building 3 preproduction systems.

Not included:

Ethical issues: included in WP 6.

Deliverables

D 4.1 Trial plans for field trial prior to the start for the trials.D 4.2 Trial evaluation reports

Work package number	5					art d ent	ate or	starti	ng	T0			
Work package title	Diss	eminatio	mination and Exploitation										
Work package manager	HG -	- Hugo Velthuijsen											
Participant short name	HG	NOVO	AVICS										
Person- months per participant													

Target/Objectives:

- To transfer the knowledge gathered in this project to the field of in-home care.
- To demonstrate the functionalities in practice.
- To examine the feasibility of implementation of the project results on other locations. It will be part
 of this project to examine whether the technology and the functionality can be implemented
 successfully in other projects. Information gathered in this study will be used for developing a
 business case.
- To develop business cases.

Activities: Please note that these activities needs involvement of all partners.

- T5.1 Exploitation planning.
- T5.2 Conduct feasibility studies
- T5.3 Website
- T5.4 Knowledge transfer to the field of long-term care
- T5.5 Organizing workshops for stakeholders and project partners
- **T5.6** Business cases will be compiled for the system.
- T5.7 User documentation.

"Responsible" means – the partner who coordinates the work, collects input from involved partners and performs final editing.

Gantt chart:

Input from other WPs:

Not applicable

Not included:

Not applicable

Deliverables:

- D5.1 Exploitation planning
- D5.2 Feasibility studies
- D5.3 Website
- D5.4 Knowledge transfer to the field of long-term care
- D5.5 Demonstration houses
- D5.6 Workshops for stakeholders
- D5.7 Businesscases
- D5.8 User documentation

Work package number	6				art d ent	ate or	starti	ng	T0		
Work package title	Ethic	al Issue	es	,				'			
Work package manager	????	????									
Participant short name	HG	NOVO	AVICS								
Person- months per participant											

Target/Objectives:

- A
- B
- C

Activities:

- A
- B
- C

Gantt chart:

Input from other WPs:

- A
- B
- C

Not included:

- A
- B
- C

Deliverables

- A
- B

С

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5. Work package list

Package No	Work package title	Type of Activity	Lead Partner	Start Month	End month
1					
2					
3					
4					
5					
6					
	TOTAL				

6. Deliverables List

Del. no.	Deliverable name	WP no.	Nature	Dissemination level (Public or restricted)	Delivery date (project month)
D1.1					
D1.2					
D1.3					
D2.1					
D2.2					
D2.3					
D2.4					
D2.5					
D2.6					

Etc

7: List of milestones

Number	Milestone name	Work package(s) involved	Expected date (project month)	Means of verification
1	Kick-off	All		Inspection
2	PvA nul meting	1		Review
2	Preliminary System Design Accepted			Review
3	Trial Plan Ready			Review
4	Final System Design Accepted			Review
5	Test Plan Ready			Review
6	Integrated System Accepted			Test
7	Trial Systems Installed			Inspection
8	End of Trials			Inspection
9	End of the Project	All		Inspection

Enclosure 1: Planning Censi and Z&T

