

## CONFERENCE ABSTRACT

# Ambient Assisted Living - design recommendations for a case management and a respective business model

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**Introduction :** Ambient Assisted Living (AAL) applies to IT-based products and systems serving as assistance to elderly persons. The objective is to increase quality of life and to assist in dealing with daily life and routine. The added value of AAL lies in avoiding or delaying the transition into stationary facilities. Over the recent years development of AAL products has been researched. However, spread and implementation only shows slow success. Increasingly the implementation of age related case management which ensures the counseling with respect to AAL is requested.

In course of the Regio13-funded research project INVERSIA and a post graduate doctorate study design recommendations for an AAL-Case Management were compiled. To be able to offer the service on the market recommendations of a corresponding business model were developed.

**Methods:** A qualitative study was conducted based upon Grounded Theory by Glaser and Strauss. This method is suitable for rather unexplored objects of research, as which the AAL - Case Management may be considered. Especially the aspects of the circular approach, theoretical sampling, theoretical saturation, theoretical sensitivity and the open and axial coding are used. In terms of triangulation according to Flick different qualitative methods are combined to achieve a greater level of insight as compared with using a single method. Experience of practitioners of the field of interest AAL and Case Management, as well the special fields of assistive technologies, appliances and home environment counseling which exhibit contentual overlaps with AAL have been collected in course of ten partially structured interviews of experts, two focus groups and two participating observations in the range between fall 2010 and spring 2015. Aside of an explorative interview and an experts interview, additionally six problem oriented interviews were held. For conduct of the group methods the method of the focus group was chosen. In total 18 persons were involved in the individual interview and group methods. Of these seven were in managerial capacity. Analysis of the empirical research and the findings from literature research provide the basis for deriving the design recommendations for an AAL case management and the respective business model.

**Results:** The counsel and assistance of clients is usually not performed in the scope of a full case management. Usually the first steps of the case management-process are carried out under supervision, whereas the performance of the further parts of the process is left to the

clients and their relatives own responsibility. The term "Case Management Light" has been introduced. This specifies that the client performs the process steps as independently as possible, while maintaining only loose contact to the case manager. If necessary the requirements of more intensive support services can be determined and provided.

Relatives and social service providers are stated as fundamental partners in the consultation process. Mostly they trigger initial contact to an information center, provide information in course of the assessment, and participate in planning and realizing support.

In course of the consultation situation the closest possible orientation towards the needs of the clients are considered a fundamental success-factor. Some interview partners appreciate that they can perform independent consultation without pressure to sell. Solutions which offer best possible fulfillment of needs and are as cost-efficient as possible are sought. Enrollments and support services which correspond to the capabilities of the clients and comprehensively include the surroundings are stated as success factors for the later use of appliances or technical products.

The knowledge of the consultants can be identified as a crucial key resource. Differing measures for knowledge acquisition and transfer are stated. Due to the personnel-intensive services the personnel expenses represent a significant factor in the cost structure. Services of the interview partners are free of cost for the client, means of income are in the public sector.

**Discussion:** Derived from the results of empirical research and literature design recommendations for case management and business model have been established.

Comprehensive and integrated counseling and assistance of the clients by AAL-Case Managers appears sensible as the implementation of AAL – in tendency – requires a high number of participants and comprehensive knowledge of the fields of social and health care as well as technology are indispensable. Due the complexity in AAL the termination of assistance after completion of planning is not recommended.

From the data value propositions were derived which an AAL-Case Management should meet for their clients. The quintessence from the viewpoint of the clients can be expressed as follows:

- My needs are in the focus.
- Somebody considers himself comprehensively responsible for me and my needs.
- I am assisted throughout the whole process.
- Somebody records what I actually need.
- The consultation is not limited to a product group. I am also offered other appliances and service which support and facilitate me in living as self-dependently as possible.
- Somebody has full overview of possible offers and services.
- The consultants seek to find a simple and cost-efficient solution which suits me.
- I receive advice and consultation independent of economic interests of the consultants.

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- I receive proven products whose functions are known.
- I can test the products myself prior to purchase.
- In case of questions I can turn to a familiar person.

The design recommendations stated in this research study are oriented along these value propositions. Concrete recommendations and suggestions have been expressed – among others – for the topics maintaining relations to the relatives and service providers as key partners, employees as focal resource, interest in providing monetary contributions to private persons, corporations and public authorities.

**Conclusion:** The design suggestions do not represent comprehensive codes of practice but should provide stimuli for creating an AAL-Case Management. A practical approach requires substantial groundwork with respect to development and cultivation of partnerships, generation and exchange of expertise, lobby work for funding of the Case Management. Additional research may be applied to the issues of organizational form and funding.

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**Keywords:** ambient assisted living; case management; consultations; business model

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