

# AMBIENT ASSISTED LIVING ROLE PROFILES

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## **Abstract**

*Ambient Assisted Living (AAL) is a rapidly growing economic sector creating new jobs. The complexity of all the useful innovations in the field of AAL need professionals who know how to incorporate, install, service, and use those devices. New skills profiles have to be set-up for professionals from various backgrounds. This paper presents the 5 European Role Profiles for the AAL field generated after carefully analyzing the job market needs from the employer's perspective, within the framework of CompAAL Project.*

## **Keywords**

*Ambient Assisted Living, professions, qualification profiles*

## **Background**

The demographic change, increasing demand for geriatric care, as well as the increasing individualization of society are facts that influenced the development of the concept of Ambient Assisted Living (AAL) in Europe. AAL initiatives mainly have the objective to extend the time people can live in their preferred environment by increasing their autonomy, self-confidence and mobility with the help of new technologies. However, AAL is not only an issue of technological research and development but also a rapidly growing economic sector creating new jobs; the complexity of all the useful innovations in the field of AAL demands professionals who know how to incorporate, install, service, and use those devices; currently, there are no specific further vocational trainings available in Europe related to the use and development of AAL systems and tools.

## **Objectives**

Promote the availability of qualifications for the AAL sector at European level

Identify the main competence needs in the field of AAL.

Definition of European AAL Role Profiles describing the knowledge, skills and competences demanded by the AAL Sector in Europe

Provide guidelines for training institutions, advising VET institutions on competence needs for AAL Roles.

## **Methods**

The research carried out within the framework of the CompAAL Project, had as primary aim to identify the main needs and requirements in jobs in the field of AAL in different European countries (Spain, Germany, Hungary, France, Switzerland, Greece, Bulgaria, Austria and the United Kingdom ) and to define the knowledge, skills and competences (learning outcomes), which are insufficiently trained in the framework of related qualification programmes. The term “learning outcomes” refers to the set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal. (1)

In order to accomplish this quite complex task the aim of developing a transferable methodology that can be of a wider use by various interested stakeholders was guiding our approach. The methodology was comprised by several easily identified and implemented steps and took the form of two major pillars. On the one hand researching AAL job roles, and on the other researching relevant qualifications. The significance of such a twofold methodology stems from its ability to deal with the existing as well as the future knowledge, skills and competence needs in the field of AAL jobs and weight the one against the other needs. In so doing we were able to suggest specific qualification modules on the basis of what is actually

missing. The methodology follows the well-known IPO approach, whereby each step receives Input from previous step(s), and produces Output for the following step(s), after Processing some data. The Output of a step is produced as a transformation of the Input, which results from activities that process the Input together with context data. (2)

Based on the research results, and based on the European Qualification Framework (EQF) and e-Competence Framework (e-CF), we were able to determine and draft 5 European Role Profiles for the AAL functions.

## Results

### Job Role Profiles in the field of AAL

The five profiles that were developed are not mere descriptions of technical jobs. Two important sectors are represented in AAL, namely healthcare and information technology. The fact that the general population in Europe is both declining and aging has led to the realization that either more individuals will have to enter managed-care institutions or alternative approaches must be found. The desire on the part of many people to stay at home longer, to be more independent and less reliant on outside help is also becoming stronger. It is becoming ever more possible for people to remain in their accustomed environments, but some sort of assistance will be necessary. This is where modern, primarily digital, technologies come into play. The ideal AAL employee or practitioner would be a healthcare-motivated IT specialist or alternately a healthcare professional that is technologically savvy.

Given the nature of the CompAAL project consortium and its stronger background in information technologies, the profiles reflect this technological bias.

The AAL Profiles are described in two ways. First, a general summary description of the profile. This role description addresses the primary areas of responsibilities and tasks to be performed, the types of deliverables and contributions the individual will produce, how his/her performance will be measured, along with a brief description of the mission of the job and the environment in which it will be carried out.

The profiles are based on the e-Competence Framework, (e-CF) and a panel of subject-matter, professional, and training experts have identified those e-CF competences that they believe are relevant for each individual role profile. They have also provided a level of importance to each of these to help guide the assessments of ECVET points for each learning unit or

module. The e-CF further specifies more detailed capabilities and these were used to identify the specific learning units for consideration. Each of these competence areas must be addressed and trained, in conjunction with the core competences (soft, manager and behavioural skills), based on research and expert opinions.

Each profile is considered as a complete qualification; that is, each qualification is considered to be 100% of the outcomes to be achieved. (3)

The CompAAL project identified and defined the following AAL Role Profiles:

**AAL System Architect:** Determines the structure and management of a programme or computing system (software, hardware, interfaces)

**Mission:** To design, implement and integrate complex ICT solutions from a technical point of view, taking into account/according to the needs of the customers. Call for a set of modules and components that will populate the architecture. Ensure that technical solutions, procedures and models for development are up-to-date and comply with standards. Observe technical developments and integrate them into new solutions. Act as a team leader for developers and technical experts.

**AAL Solutions and System Developer:** also known as AAL Component Developer, AAL Applications Developer. Develops, implements and tests AAL components and systems according to customer needs.

**Mission:** To create AAL components and systems incl. devices (software, hardware, interfaces). Ensures building and implementing of ICT applications. Contributes to planning, low level design. Compiles diagnostic programmes, and designs and writes code for operating systems and software to ensure optimum efficiency and functionality. Produces components that implement specific functionality, within the context of a software architecture.

**AAL Maintenance Specialist:** Installs, configures and maintains AAL products, components and systems; provides technical assistance (online support or on the spot).

**Mission:** "Keep things going" from the technical point of view. To support, install, configure and repair the system incl. the components

**AAL Community Manager:** also known as AAL Assistant, Social Net worker, Social Care Facilitator, Social Inclusion Facilitator

Mission: Provide an interactive environment in which persons benefiting of assistance are connected with care providers and with their broader environment. Partner of the customer: trains, attends and supports customer, co-ordinates care services and social interactions which are facilitated by AAL technologies ensuring the wellbeing and social inclusion of the customer.

**AAL Consultant:** Owns product and market knowledge; analyses customers needs and necessities, defines and specifies solution requirements, evaluates installed AAL solutions

Mission: To identify the best-suited AAL product/solution according to the consumer's needs, requirements and financial resources.

The AAL Role profiles are available in the AAL Focus Area of the e-Jobs Observatory [http://www.e-jobs-observatory.eu/focus\\_areas/ambient-assisted-living](http://www.e-jobs-observatory.eu/focus_areas/ambient-assisted-living)

## Conclusion

Recent advances in Information and Communication Technologies (ICT) have given great potential to address the needs of elderly persons and to assist them in their effort to retain their independency and mobility and to stay healthier and remain active and socialized longer. In response to these opportunities and challenges, a vast number of technology-based R&D activities have focused on the ageing population.

Although the R&D community has produced a large number of innovative products, these can only be disposed and implemented successfully if the relative market players have well-qualified personnel. The AAL field needs professionals from various fields that are aware of AAL technologies and AAL products' functionalities and capabilities, and, in some cases, are able to promote, setup, maintain and use AAL products.

In view of the growing skills shortages in a number of technical disciplines and considering the articulated needs and requirements of the industry itself, the role

of vocational education and training organization (VET) is becoming ever more important.

Finding suitable personnel is part of the equation, but it is equally, if not more, important that those who wish to pursue jobs in these newer technical areas are adequately and appropriately trained. This responsibility, of course, falls to VET providers; that is, all organizations (or perhaps departments of larger corporate entities) that prepare individuals for entering specific job fields. The training offered must reflect actual industry needs and requirements, but it must go further as well.

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