



Ecosystem infrastructure for smart and personalised inclusion  
and PROSPERITY for ALL stakeholders

## **D303.2 Assistance on Demand integrated in an existing technical Support service**

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## Abstract

This deliverable serves as documentation of the implementation activities of task 303.3: Enhancing existing technical Assistance on Demand services. This task was about the enhancement of the existing technical support services for the products of LIFEtool by adapting the Assistance on Demand infrastructure from SP2 to their requirements and needs. It contains a description of the existing technical support processes and presents the possibilities of adaptation of the infrastructure by LIFEtool.

## Keyword List

Technical support, Assistance on Demand, help platform, LIFEtool Help System

## Version History

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## Executive Summary

This deliverable presents the outcomes of task 303.3: Enhancing existing technical Assistance on Demand services. Within this task LIFEtool adapted the Assistance on Demand infrastructure which was developed in SP2 to their requirements and needs. As a result LIFEtool build a new help platform called “LIFEtool Help System” which functions as the first main entry point for customers when seeking for product support. It contains all the information about LIFEtool products along with manuals, videos, hardware requirements as well as contact information to developers via Skype, phone, mail and product reviews by customers. The “LIFEtool Help System” platform is a real life application and can be accessed under: <http://aod.lifetool.at/>

# 1 Introduction

LIFETool is located in Linz (Upper Austria) and is a non-profit organisation founded by Diakoniewerk and the Austrian Institut of Technology.

LIFETool wants to contribute to opening up the world of computers, which comes so natural to us, to children, teenagers, adults and ageing with physical and learning disabilities or multiple impairments and thus LIFETool wants to enhance these people's integration and equal opportunities. The means to achieve this target are research & development, consultation & training and renting & selling of electronic communication systems, individually adapted input devices for the computer, alternative input devices, mouse-simulating devices, special software programs and environment control systems.

Learning, playing, working, gathering information and communicating are within everybody's range if the computer is considered a "tool". LIFETool considers its engagement as an innovative, future-oriented and modern way to allow for integration and equal opportunities of people with disabilities in the sense of self-determination, independence and freedom of action.

LIFETool has developed over the last 10 years more than 20 educational and accessible software products aiming at learning culture skills (e.g. reading, writing and calculating) as well as the famous IntegraMouse which helps to operate the computer solely by mouth. The slightest movement of lips controls the mouthpiece and moves the mouse pointer across the computer screen. By simply sipping and puffing, mouse clicks can be triggered as with any standard mouse.

LIFETool provides professional and personal technical support for every software application that it provides, as well as for hardware components (assistive input- and communication devices) for free of charge. Every work day, the software engineers as well as pedagogues are available for the customers. Until now all this requests are solved via telephone/mail and/or if necessary combined with remote control solutions. Within task 303.3 LIFETool used the Assistance on Demand infrastructure which was built in WP205 in order to adapt it to their special requirements and needs. This new personalised help platform called "LIFETool Help System" enhances and makes more efficient the existing support services. Besides reducing costs and effort.

## 2 Contribution to the global Architecture

Within WP303, task 303.3 LIFEtool took the Assistance on Demand (AoD) infrastructure which was provided by SingularLogic (consortium partner no. 6) developed in WP205 and adapted it to their special requirements and needs. As a result LIFEtool build a new help platform called “LIFEtool Help System” which functions as the first main entry point for customers when seeking for product support. The LIFEtool Help System is a real life application and serves as a proof of concept for others who want to make use of the Assistance on Demand infrastructure to use it for their own purposes and of the Prosperity4All infrastructure itself.

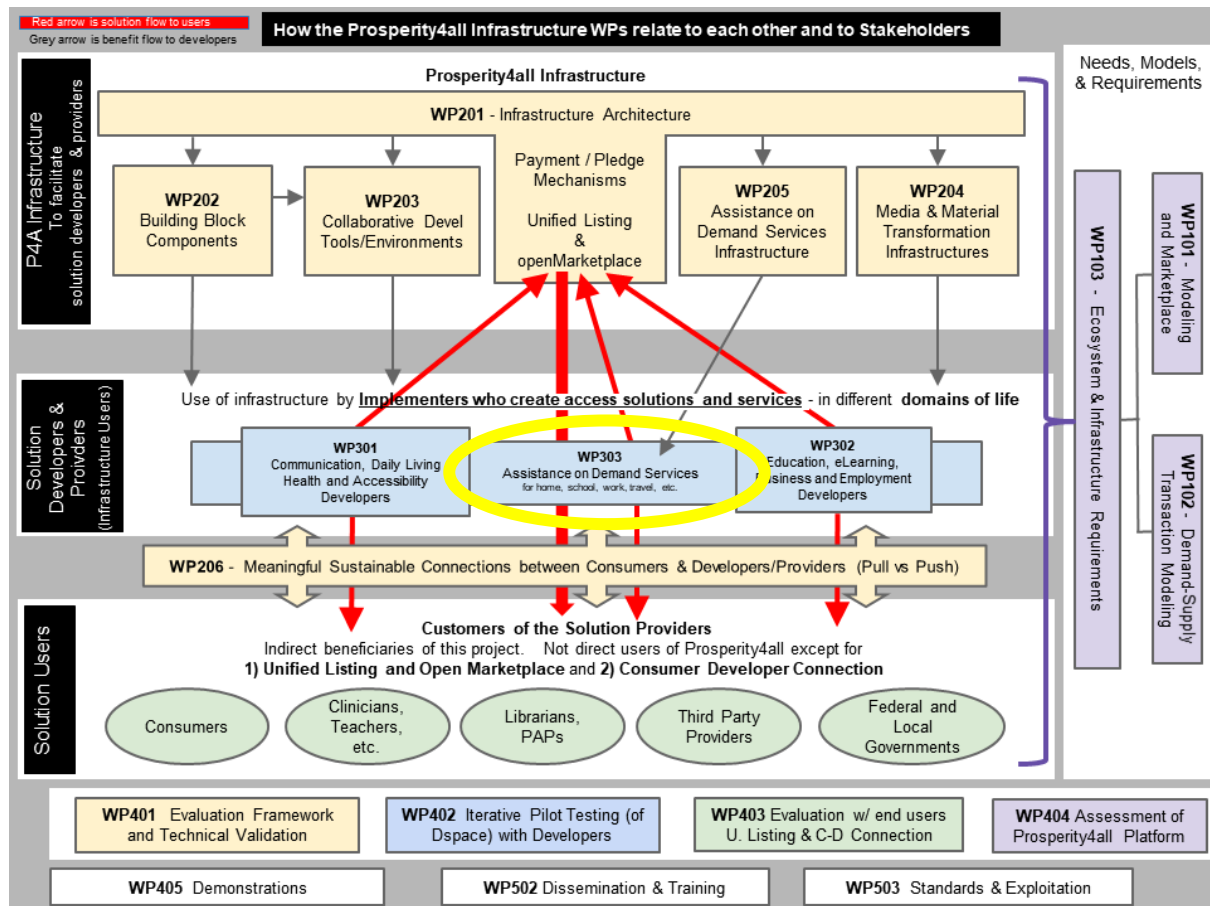


Figure 1 - Prosperity4All global architecture, WP 303 marked in yellow

## 3 Description of Solution

### 3.1 Prosperity4All AoD platform

The Assistance on Demand Services infrastructure is a generic open-source infrastructure that enables the rapid deployment of new machine/human/crowd-based assistance services on demand by allowing service suppliers to easily register their assistance service and individuals to seek assistance in an organized fashion from a set of predefined sources based on type of need, quality of service desired, and other personal preference at the moment.

The platform is feature rich and thanks to its modular construction also highly adaptable. As LIFEtool only needed a few features in order to create the LIFEtool help system the adaptation through the administration panel was straightforward and well documented in the customization guidelines.

### 3.2 LIFEtool existing technical Support service

LIFEtool provides their products and information through various channels:

- LIFEtool Website (DE & EN): <https://goo.gl/RfGZsv>
- LIFEtool Solutions Web Shop (DE only): <https://goo.gl/W9vsC6>
- Apple App Store (multilingual): <https://goo.gl/KiwZeV>
- Google Play (multilingual): <https://goo.gl/TUFruq>

All these channels include product and help information but none of them includes the full set of products (software & hardware) together with all information available (e.g. manuals, contact information, product videos ...).

The direct customer support is realised via telephone, mail, Skype and if necessary remote control solutions. This approach may also be improved as there are experts in the team for different developments and products. Customer support could be more efficient by directly linking the different support requests to the right staff members.



### 3.3 Benefits for LIFEtool by using the AoD platform

The deployment and adaptation of the AoD platform provides the following benefits for LIFEtool:

- One portal to access all help information of LIFEtool products (software & hardware)
- All information regarding one product is bundled together on one page (product description, illustrations, downloads, videos, FAQs, manuals, support contact information, system specifications)
- Options to include customer ratings and comments
- Options for multilingual support
- Searchable and filterable (filter for categories of apps, hardware...)
- User interface is highly accessible and can be individually customized (e.g. for visual impaired people):
  - Text size
  - Font
  - Line spacing
  - Colour and contrast (support of several schemes: black/white, inverted black/white, yellow black, inverted yellow black, grey)
  - Emphasise (underlined and bold links, enlarged buttons, menus, text-fields, ...)
  - Several layout themes

## 4 Interaction with Developer Space

LIFETool has developed over the last 10 years more than 20 software products aiming at learning culture skills (e.g. reading, writing and calculating) as well as the famous IntegraMouse<sup>1</sup> which helps to operate the computer solely by mouth. The main target groups are cognitive and motor limited persons.

In terms of the Prosperity4All project and task 303.3 LIFETool intended to enhance their existing technical support services by using the Assistance on Demand infrastructure and adapting it to their requirements and needs.

The interaction with the team of SingularLogic turned out to be very easy as all the basic information regarding the Assistance on Demand infrastructure as well as the contact details of the developers were presented in the DSpace. A couple of Skype sessions as well as active e-mail communication were used in order to brief the implementer team of LIFETool about the implementation of the platform and all its functionalities and options for adaptations. All in all, it was a very effective and fruitful cooperation.

With the help of the Assistance on Demand infrastructure LIFETool managed to create a new platform called “LIFETool Help System” which enhances and makes more efficient their existing support services by reducing costs and effort. It would have not been possible for the implementer team to create this solution from scratch as the effort would have been too much (approximately 2 person years).

<sup>1</sup> <http://www.integramouse.com/>

## 5 Implementation Work

### 5.1 LIFEtool Help System

The implementation of the LIFEtool Help System can be accessed at: <http://aod.lifetool.at/>

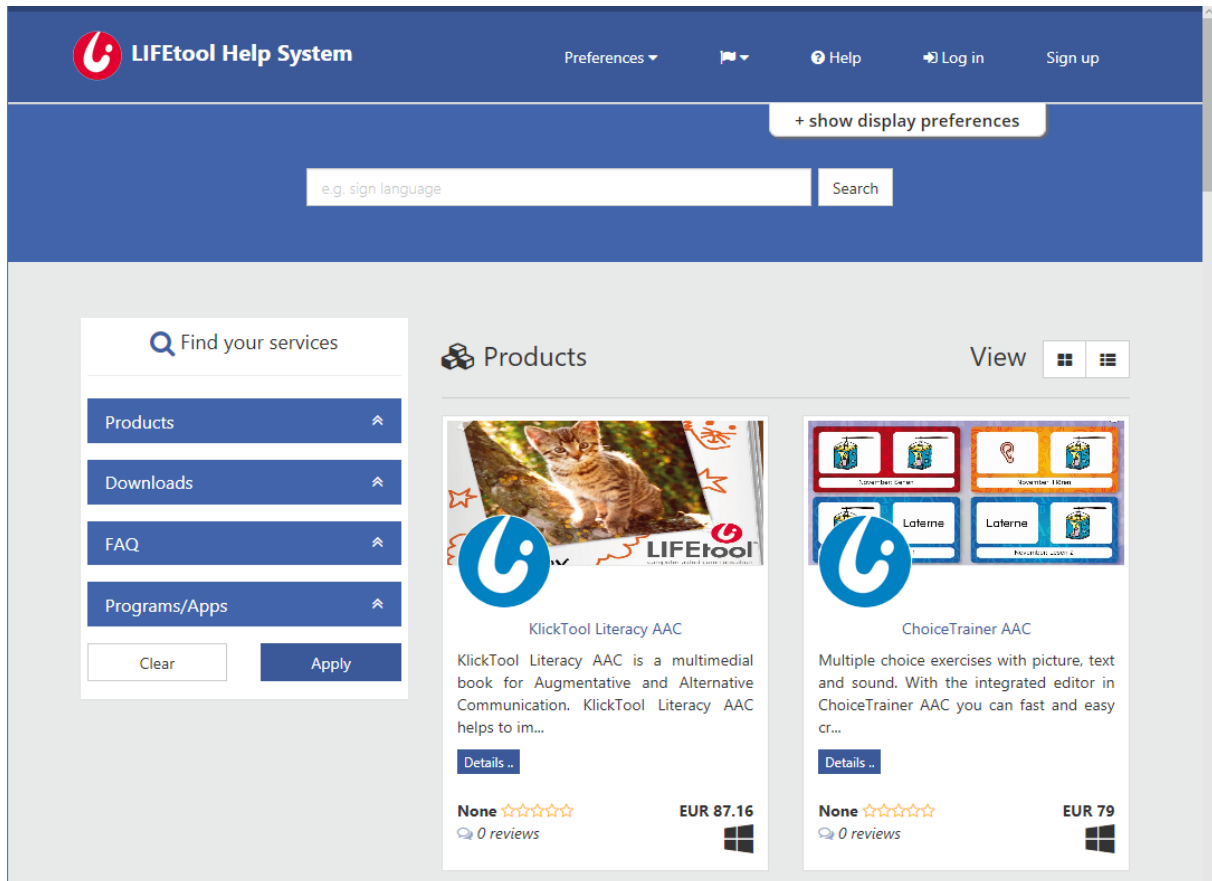


Figure 2 - Start page of the LIFEtool Help System

#### 5.1.1 GitHub Repository

The code and installation instructions were taken and used from GitHub:

<https://github.com/silop4all/aod>

The bug tracking and issue management was also realised with GitHub:

<https://github.com/silop4all/aod/issues>

## 5.2 Infrastructure

### 5.2.1 Server Architecture

The server OS is an Ubuntu 14.04.5 LTS Linux Server in a Microsoft Azure Data-Center in West Europe (Netherlands). The location of the server is an important criteria as we need to fulfil the European **General Data Protection Regulation** (GDPR). Otherwise it would be a problem if the server would be located outside the EU because not all Datacentres fulfil the GDPR Requirements.

The Web server is an Apache 2.4.7 with Python 2.7.6.

### 5.2.2 Database

The DB used is a MySQL DB Version 14.14 Distribution 5.5.53. MySQL is an open-source relational database management System (RDBMS).

### 5.2.3 Frameworks

The AoD platform uses the Django framework 1.8.11 and the JQuery framework. Django is a free open-source web framework written in the programming language Python. Django implements the model-template-view (MTV) design pattern.

The UI Options<sup>2</sup> framework including Infusion framework (Part of the fluid-project) as well as additional frameworks which are not explicitly mentioned here are used.

## 5.3 LIFEtool Adaptions of the AoD platform

### 5.3.1 AoD administration panel

The LIFEtool AoD administration panel can be accessed at: <http://aod.lifetool.at/en/admin/>.

An Administrator Account is required to access and it is divided into six big sections:

1. Administration
2. App
3. Authentication and Authorization
4. Robots
5. Sites
6. Plugins

<sup>2</sup> <http://fluidproject.org/>

The sections **App, Authentication and Authorization and Sites** were the sections which were used to customize some basic settings.

The section “**Site**” of the administration panel was used to set up the site settings:

- Domain name: aod.lifetool.at
- Display name: AoD.LIFetool.at

The section “**Authentication and Authorization**” was used to manage the backend users.

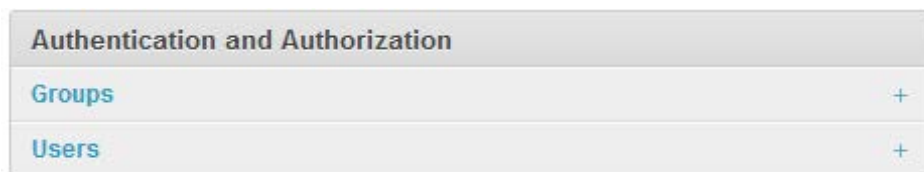


Figure 3 - Authentication and Authorization Menu

The section “**App**” was used to

- Activate/deactivate the used/not used **App Components** needed by LIFetool (network\_of\_assistance\_services, social\_network, subscription\_banner, add\_to\_cart, crowd\_source\_banner, ui\_options\_banner)
- Set app Favicons
- Set app language flags (the used languages and flags): German (de) and English (en)
- Set app logos
- Set app metadata: some HTML meta data for the HTML head element was added
- Set app themes (configuration of the AoD colour scheme). Before changes can made an corresponding CSS file is needed in app/static/app/content/themes/
- Set app contact details (Skype ID, phone number, mail, address)
- Set article documents: used to manage or add documents from users and admins
- Set article videos: used to manage or add videos from users & admins
- Set articles: articles that are available by the FAQ/help menu were added here. Some translations were also added in this part of the administration panel
- Set categories: Here the different categories of LIFetool software products were added, which are then shown in the category listing inside the product filter box

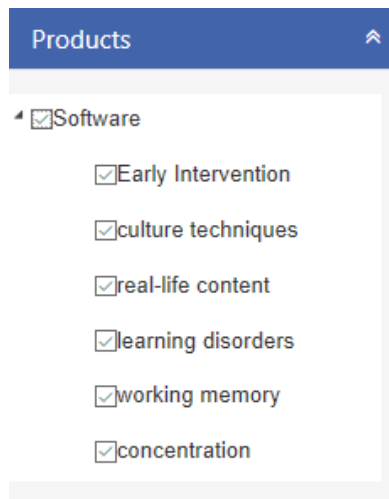


Figure 4 - Product filter dialog

- Set charging policies: The different charging policies were managed and created. As LIFEtool only pursues one-off payments until now only this option was chosen among free, pay per usage, pay per month of usage, pay per day of usage
- Set cookie policies: The different titles and content were added and translated that are shown to every user in order to comply with the EU GDPR
- Set IT skill levels for users: Here were the different IT skill levels defined:
  - Beginner
  - Basic Knowledge
  - Experienced
  - Expert
- Set service configuration: The different kind of products were configured
- Set service keywords: Every product was tagged with individual keywords
- Set service languages: The available languages for the products
- Set service technical support: The available types of technical support for the products:
  - Video (YouTube, Vimeo, other servers)
  - Document
  - Shared links
  - Mail/telephone contact
  - Direct Skype chat link to support staff
- Set social networks: The list of social networks that LIFEtool uses
- Set topics: The main topics of the FAQ/Help section
- Set user preferred themes: This is a list of users and their selected colour themes
- Set users: This is a list of frontend user accounts. Each can be edited and deleted within this interface.

### 5.3.2 Adaptations of files

#### Configuration files

The settings of the AoD platform were done in following files:

- settings.py
- development\_settings.py
- production\_settings.py

They are locate in /opt/prosperity/AssistanceOnDemand/AssistanceOnDemand

In order to be able to switch easily between development (better for debugging) and production the files development\_settings.py and production\_settings.py cover the same settings. Some basic settings were done in these files:

- Cryptographic signature
- Mail configuration
- Google analytics
- Databases

#### Theme files

LIFETool added theme files lifetool.css and lifetool.less to app/static/app/content/themes/ and compiled them with lessc.

#### Deactivation of the welcome banner

As the welcome banner consumed too much space it was removed from customizedIndex.html in templates/app/home/.

### 5.3.3 Content

#### Adaptations in the front end (Provider Role): Creation of Products

Products were added while logged in as a user with Provider Role. *My Account* → *My Offerings*

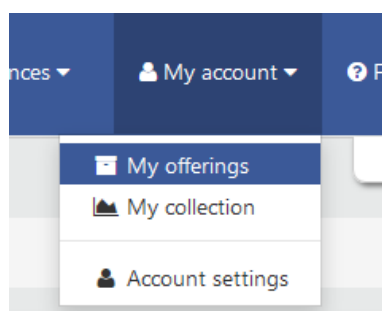


Figure 5 - My Offerings Menu

# 6 Steps in order to add a new LIFEtool product

## 1. Add "Basic information"

The following image shows the basic information needed for one software product consisting of title, small description, type of operating system and pedagogic category, image and related keywords.

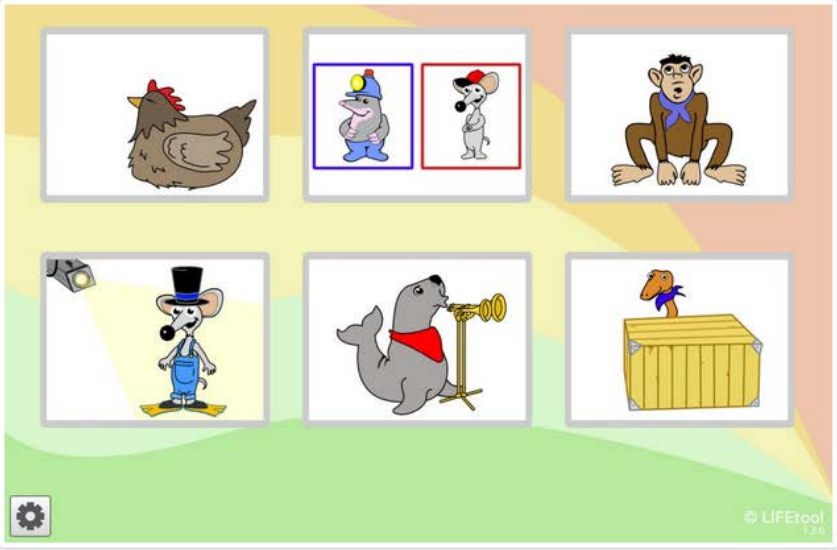
### Basic information

**Title \***

**Description \***

**Type \***

**Category \***

**Image \*** 

**Related Keywords \***

Figure 6 - "Basic information" dialog



## 2. Add “Charging Policy”

Home / My offerings / SwitchTrainer for Apple iOS / Edit

Basic information | **Charging Policy** | Usage | Constraints | Technical Support | Register

Charging Policy

**Charging model \*** One-off payment

**Price \*** 16.99

**Currency \*** Euro

\* Mandatory fields

Figure 7 - “Charging policy” dialog (charging model, price, and currency)

## 3. Add “Usage” (Technical requirements, installation and usage guidelines)

Basic information | Charging Policy | **Usage** | Constraints | Technical Support | Register

General guidelines

**Technical requirements** Apple iPad 2 or higher, iOS 8 or higher

**Installation guidelines** Explain step-by-step how a user could install the service, if needed

**Usage guidelines** Provide instructions related to the usage of the service (ie follow a link, book a meeting etc)

**Accessibility \***  Public  Private

\* Mandatory fields

Figure 8 - "General guidelines" dialog

#### 4. Add "Constraints"

Basic information | Charging Policy | Usage | **Constraints** | Technical Support | Register

← Lingual constraints →

**Is there lingual constraint? \***  Yes  No

**Select the languages in which service is supported \*** English, German

**Are there locational constraints? \***  Yes  No

**Other constraints** None

\* Mandatory fields

Figure 9 - "Constraints" Dialog

#### 5. Add "Technical support"

Basic information | Charging Policy | Usage | **Constraints** | **Technical Support** | Register

← Technical support →

**Skype ID** lifetool\_ad

\* Mandatory fields

Figure 10 - "Technical support" Dialog

## 6. Register the product

Basic information | Charging Policy | Usage | Constraints | Technical Support | Register

### Service Registration

Do you want to publish on users the service? \*  YES  NO

Terms of use \*  I agree to the [Terms of usage](#)

Submit

\* Mandatory fields

Figure 11 - "Register" Dialog

### Add other materials like links, videos, pdf...

The addition of other materials to a product was done as follows: *My Account* -> *My offerings* -> *Technical support* link of the relevant product

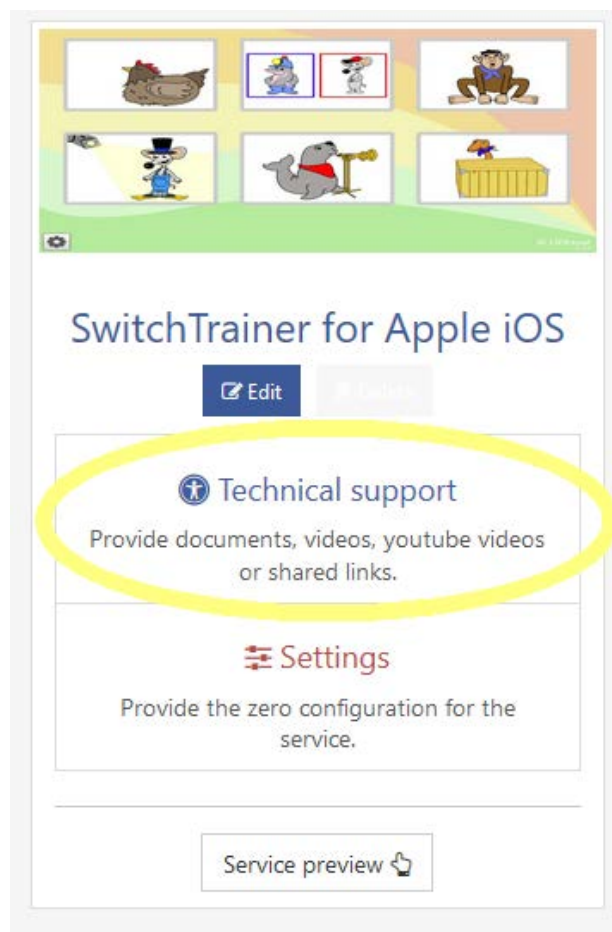


Figure 12 - Add other materials for technical support

## 6 Lessons learned and Discussion

After the deployment and the full adaptation of the AoD platform by the team from LIFEtool the following lessons learned are worth mentioning:

- It was easier to use the AoD platform in order to build the LIFEtool Help System than starting from scratch. As result this implementation saved cost and effort.
- The installation with the build in installation-script was easy although some minor issues occurred.
- There are differences between internet browsers used: Sometimes the appearance and functions are different e.g. the display preferences (UI Options) did not work in Firefox, Edge and Internet Explorer.
- Periodic updates and backups are necessary to ensure safety and functionality. In addition, a test system for development and debugging is recommended, where you can test changes before you run them on the live system.
- LIFEtool decided to go beyond adaptations provided through the administration panel this required changes to files => updates cannot be made easily, as changes will get lost.

## 7 Conclusions and future Work

For the LIFEtool team it was a great experience to deploy and adapt the AoD platform. The cooperation with the team of SingularLogic was fruitful and informative. It is appreciated that the platform is open source. The basic idea of the AoD platform fits well into the corporate philosophy of LIFEtool, as the potential of bringing together people with special needs and individual help services is obvious.

Next, LIFEtool will update to the final version of the AoD platform in the near future. After that the whole product range of their developed software and hardware products will be filled in to the platform. Furthermore the team will explore the possibilities of direct sales through the platform (e.g. direct downloads and PayPal). Another thing which could be of interest is the direct way of booking and paying consultants working hours by clients as well as scheduling, booking and paying workshops for multiple clients.

## 8 References

Assistance on Demand Wiki: <https://goo.gl/Mo1XB2>

Tsakou G., Leligou N., P. Athanasoulis, Assistance on Demand Infrastructure: Guidelines for administration panel, <https://goo.gl/BhGzZo>

## Annex I: Glossary

Abbreviation	Full form
<b>AAL</b>	Ambient Assisted Living
<b>ACS</b>	AsteRICS Configuration Suite
<b>AoD</b>	Assistance on Demand
<b>API</b>	Application Program Interface
<b>AsteRICS</b>	Assistive Technology Rapid Integration & Construction Set
<b>AT</b>	Assistive Technology
<b>C4A</b>	Cloud4All
<b>CSS</b>	Cascading Style-Sheets
<b>D</b>	Deliverable
<b>DoW</b>	Description of Work
<b>DSpace</b>	DeveloperSpace
<b>EU</b>	European Union
<b>FAQ</b>	Frequently Asked Questions
<b>GDPR</b>	<b>General Data Protection Regulation</b>
<b>GUI</b>	Graphical User Interface
<b>GPII</b>	Global Public Inclusive Infrastructure
<b>ICT</b>	Information and Communications Technology
<b>IDE</b>	Integrated Development Environment
<b>ISO</b>	International Organization for Standardization
<b>P4A</b>	Prosperity4all
<b>R&amp;D</b>	Research and Development
<b>SP</b>	Sub-Project
<b>UI</b>	User Interface
<b>UX</b>	User Experience
<b>WP</b>	Work Package