

hiStory Evaluation Plan

Deliverable D5.1

Project identification

Project Number	AAL-Call-2018-5-138-CP
Duration	36 Months
Coordinator	Claudia Schallert
Coordinator Institution	NOUS
Website	www.hi-story.eu/

Document Identification

Deliverable ID	D5.1
Release number/date	v1 November 2019
Checked and released by	AIT
Work Status	Released
Review Status	Reviewed

Key Information from "Description of Work"

Deliverable Description	D5.1 Evaluation Plan
Dissemination Level	Public
Deliverable Type	Report
Original due date	November 2019

Authorship & Reviewer Information

Editor	AIT
Partners contributing	VIC, NFE, HSL
Reviewed by	NFE

Release History

Release Nr	Date	Author(s)	Release Description/Changes made
V1	27.11.2019	AIT	First Field Trials planning

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Short Description

This deliverable describes the aim and methodology of both the qualitative and quantitative field trials, which will be realized in Switzerland, The Netherlands, and Austria, conducted by the partners VIC, NFE, and AIT in collaboration with the local technical partners HSL, IJS, and NOU.

Based on the outcome of a user study in the laboratory, carried out in Austria and an expert review conducted in Switzerland, user experience and usability issues are addressed and the hiStory web portal and mobile app is iteratively improved. In order to evaluate the hiStory system with potential end users in a real-life context, two field trials will be carried out, involving older adults telling and listening to personal stories (primary users), associations and initiatives aimed to foster social inclusion of older adults (secondary users) operating in service facilitation as well as potential service providers (tertiary users).

The first field trial will have a qualitative focus and aims at understanding user experience, acceptance and satisfaction when interacting with the hiStory system and facilitation service. Moreover, we obtain feedback on the analogue tools developed in “Task 2.1 Co-Creation / Service Design” and to what extent the services fostered social exchange between participants as well as the extension of the social networks. Finally, feedback on the business models will be obtained and the requirements for the remaining components that will be prepared for the second field trial (editing, monitoring, sharing) will be collected.

In the second field trial the fully implemented system prototype including web portal and mobile app will be evaluated in the third project year in all three pilot sites. A minimum of 120 participants (40 primary users per pilot site) will be involved in a 6-months field trial, to allow for comparison of the results across pilot sites and usage contexts as well as an analysis of moderating variables of the user experience. Thus, a mixed-method approach with a focus on quantitative methods is applied. The detailed evaluation plan will be defined after finalization of the first field trial in order to build on gathered findings in terms of research questions and methodologies to be applied.

1 About This Document

1.1 Role of the deliverable

In this deliverable, a comprehensive testing and assessment plan for the hiStory project will be presented. The plan includes detailed testing scenarios, methods, metrics, selection of users, and a time and resource plan with identified roles and actions for all evaluation activities. It determines main criteria for assessing the developed technology, which are linked to the projects' overall objectives and KPIs, and therefore allow a thorough evaluation of the success of the project as well as identify areas that need increased attention in the further development work.

Both trials will be conducted within cultural, touristic, and educational activities of the associated partners. User interactions are logged and ad hoc experience capturing is applied to obtain insights into the situational experience when interacting with the system. Since the system will be applied under different circumstances in different usage contexts, this allows for evaluating flexibility and scalability of the hiStory service models.

1.2 Structure of the deliverable

Chapter 2 describes the aims and structure of the qualitative and quantitative trials.

Chapter 3 describes the concept and methodology of the first field trial.

Chapter 4 de-scribes the outline for the planned concept and methodology of the quantitative trial in year 3, which will be updated and specified with January 2021. In the Appendices the information and interrogations materials are provided in English.

2 Aims and Structure of Field Trials

1.1 Contexts and Sites

Primarily, the project seeks to support older adults (OA) in

- preventing or reducing the occurrence of feelings related to loneliness and social isolation
- fostering their self-esteem by getting attention through storytelling activities

Furthermore, the history project addresses different contexts of living.

In **Austria**, the main goals of the project are to foster social engagement in older adults (OA) via participation in storytelling events as well as to enable facilitators (FA) dealing with oral history and knowledge retention to create and collect stories from OA. Event types that will be explored for storytelling might be telling circles (i.e. Gesprächskreise¹, guided tours, or private family/ kinship circle).

In **the Netherlands**, the project will mainly focus on social cohesion and preventing or reducing loneliness for OA in a disadvantage neighbourhood in Zutphen. The participants and facilitator will be found through a social or care organisations. Through participating in the project cannot only enhance the social cohesion in the group of participants itself, but can also have a positive influence on the social cohesion in the entire neighbourhood. Together with this aim, this project can also create a better understanding and image of the neighbourhood in the city of Zutphen.

In **Switzerland**, digital storytelling techniques will be applied to foster feeling of security and belonging among OA in their neighborhood (Ball-Rokeach et al., 2001). Stories that are bound to a place or object in the neighborhood will be collected to serve as neighborhood information. Also, stories providing authentic and diverse information might be consumed by tourists strolling in Lucerne to discover city history. Storytelling can occur in either private events, neighborhood story meetings or guided tours in the neighborhood with e.g. a storytelling guide or independently with a tour app.

1.2 End User and Stakeholder Groups

Different end user groups will be involved as participants in the field trials. Target groups of the project are:

- Older people as primary end users (OA) who want to share their story and contribute to their cultural heritage.
- People who consume their stories as secondary users, either family and friends (RE), or a broader level tourists, pupils and citizens (CO).
- Lead users or tertiary users are people that author stories (FA) and integrate these in the offer of their organizations such as museums, cities and municipalities, tourist operators, education and educational publishers (CL).
- Organisations interested in operating the hiStory platform to offer respective services for collecting, editing, sharing personal stories. These can be considered to be the payers (PD).

According the developed service concept reported in *D2.1 Service Design Specifications*, we aim at addressing different roles in the three countries. A first

¹ <https://www.wienmuseum.at/de/vermittlung/fuer-senioren/gespraechskreise-im-wien-museum>

outline of potential candidates for each role per country are given in **Fehler! Verweisquelle konnte nicht gefunden werden.** to Table 3.

Older adults (OA)	<ul style="list-style-type: none"> aged 65+, willed and able to tell a/o consume stories, various levels of digital literacy, in risk of social isolation (SI) / perceiving SI due to events, mobile vs. limited mobility, family can be reached/involved.
Relations (RE)	<ul style="list-style-type: none"> Social / family network interested in connecting OA with others and strengthening their social relations
Clients (CL)	<ul style="list-style-type: none"> museums, municipalities and cities
Consumers (CO)	<ul style="list-style-type: none"> Listeners at Erzählcafé, museum visitors, family members, children/ grand-children, school classes
Facilitators (FA)	<ul style="list-style-type: none"> Museum curator / associates to moderate, record, edit and share stories; Organizer of the "Gesprächskreis" hosted by Vienna Museum; Relatives (children/grand-children of OA) to record, edit and share stories

Older adults (OA)	<ul style="list-style-type: none"> aged 65+, living in the neighbourhood since a long time, willed to share their history in the neighbourhood or interested in learning about, relation to a specific historical place/object in Lucerne; volunteers, willing to tell historical stories as 'fictional speakers'
Relations (RE)	<ul style="list-style-type: none"> OA, volunteers of Vicino Network of Büro für Geschichte
Clients (CL)	<ul style="list-style-type: none"> Vicino City of Lucerne Büro für Geschichte Luzern
Consumers (CO)	<ul style="list-style-type: none"> Persons living in neighbourhood / district Quality tourists who want to discover this neighbourhood Quality tourists of any age, interested in history of Lucerne

	<ul style="list-style-type: none"> • Curious inhabitants of Lucerne
Facilitators (FA)	<ul style="list-style-type: none"> • Doris Kaufmann (VIC) with broad experience in recording and editing stories from neighbourhood • Standortleiter/in neighbourhood, knows well all potential storytellers already and is in close contact with all neighbours • Member of Spitex, in contact with fragile OA with symptoms of SI • Büro für Geschichte • Volunteers or professionals for editing, recording, arranging stories and content

Table 3: End User groups and hiStory Roles in Zutphen (NL)	
Older adults (OA)	<ul style="list-style-type: none"> • aged 65+ • willed and able to tell story • willing to learn new things (ICT) • inhabitant of the neighbourhood Ter Water, Zutphen • curious and interested to exchange experiences • willing to share their stories about their neighbourhood • willing to portray a better image and understanding of the neighbourhood
Relations (RE)	<ul style="list-style-type: none"> • Social or care organisations who work in the neighbourhood Ter Water • ZUT
Clients (CL)	<ul style="list-style-type: none"> • Social or care organisations • City of Zutphen • Tourist centre • History oriented organisations
Consumers (CO)	<ul style="list-style-type: none"> • Persons living in neighbourhood Ter Water • Persons living in Zutphen • Persons interested in the development and understanding of disadvantage neighbourhoods
Facilitators (FA)	<ul style="list-style-type: none"> • If possible; volunteers from a care of social organisation working in the neighbourhood • NFE

1.3 Impact Assessment

The HiStory project will have a number of positive effects on the end-users' quality of life in terms of reminiscence, well-being and improvement as well as persistence of

social connections (KPIs, see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

For assessing the impact of the respective factors, we rely on empirical evidence regarding potential benefits for older adults as well as on the systematically developed EvAALuation Indikatorenhandbuch, a manual for the measurement of effects and efficiency increases in AAL (Himmelsbach et al., 2017). This manual provides a set of self-assessment questionnaires to examine the impact of a given AAL technology, by means of assessing:

- **Quality of Life.** For evaluating the vitality and quality of life of the users, the indicators life satisfaction, self-esteem/self-perception, level of meaningful activation, and subjective health status related to memory loss will be examined.
- **Social connections.** Social interaction, social participation as well as the consideration of ethical guidelines in the development phase serve as indicators of a successful social connection.
- **Technology design.** A high user experience (UX) and usability serves as a prerequisite for user acceptance. Other indicators are accessibility, usefulness, subjective intention to use and user satisfaction.
- Special emphasis will be given **to data privacy**, as all stories collected and shared are highly personal data that need to be protected carefully from unwanted access or use.

These factors are elaborated and refined during the project, as reflected by the following user-related measures that will be collected and analysed toward the final impact assessment in the final field trial (see **Fehler! Verweisquelle konnte nicht gefunden werden.**).

Table 4: Assessment measures and metrics for impact assessment

	Specification	Metrics
Quality of life		
Subjective satisfaction with life	Measured with the Single-Item-Scale Satisfaction with Life (L-1, Beierlein et al., 2014)	Increase for \geq 65% of users
Self-esteem/self-perception	Measured with the Rosenberg Self-Esteem Scale (RSES) (e.g. Classen, 2007)	Increase for \geq 65% of users

Level of meaningful activation	Self-reported level of meaningful activation	Increase for \geq 65% of users
Social connections		
Social interaction	Total number of users engaged in the final field trials	\geq 145
Social participation	Number of actual meetings between user initiated by the HiStory tool	\geq 8
Consideration of ethical guidelines in the development phase	Monitored by project lead partner	yes
Technology design		
User experience & Usability	Measured with the user experience questionnaire (e.g. UEQ ² ; UMUX Finstad, 2010)	\geq "above average"
Accessibility	Compatibility with existing accessibility tools	yes
Usefulness	Perceived usefulness in field trials	\geq 90%
Behavioral intention / Subjective intention to use	Percentage of users that would continue using and recommend the solution	\geq 65%
User satisfaction	Acceptance rate of the tool (according Technology Acceptance Assessments)	\geq 75%

The project further aims at **preventing isolation and improving social inclusion** of older adults by building social networks through the interaction with HiStory services. To attain this, the HiStory system will provide means for older adults for getting in touch with others, with interested younger generations or fellow storytellers (NL), by activating and mobilising the older users and developing/strengthening social connections through shared experiences and memories. In the HiStory face-to-face meetings between users intergenerational friendship and social networks will be kept. This fosters social inclusion and again leads to positive effects on older peoples' well-being. On the broader scheme, all personal stories and experiences are transformed

² <http://www.ueq-online.org/>

into a piece of collective knowledge, accessible for a much larger group of people. HiStory can serve as a trigger to start communication and a variety of dialogues. With regard to technology design the history system aims to **foster agency and preserve ownership of self-created content and oral history** from the side of the older adults. In psychological terms agency can be understood as “the initiation of relatively autonomous acts governed by our intentional states—our wishes, desires, beliefs, and expectancies” (Hull & Katz, 2006). In a digital context, agency implies freedom choice, action, and making a difference to an individual’s life through the interaction with digital artifacts. According to Passey (2018) digital agency refers to the “ability for individuals to control and manage their use of digital technologies and online presence. This includes managing identity, initiating interactions, using technologies for self-identified purposes and modifying or developing digital tools”. More specifically, storytellers as HiStory users need to understand and be able to keep track of the integrated design elements of multimodal texts to communicate meaning beyond the simple sum of their parts (Erstad, 2008).

To meet this requirement, special attention in evaluations will be drawn on whether agency and ownership are properly addressed in the system design to be evaluated through the collection of the respective user feedback on perceived agency and user experience. In the field trials participants will answer to and reflect on questions about their subjectively perceived agency during the story creation process (e.g. Tapal et al., 2017).

Finally, the project will address important **stakeholders** including e.g. the social enterprises and initiatives, municipalities and touristic agencies, museums, schools as well as other education institutions. Success criteria on a stakeholder level are general perception, market potential, willingness to pay, as well as overall acceptance of the tool. The intended impact for the project which will be assessed in the second field trial in the third year through:

- Number of letter of intent from potential customers (8),
- Feedback on usefulness for primary and secondary end users (80% with rating useful),
- Willingness of end users to use HiStory further (75%),
- Emerged contacts between authors and consumers (5 per country).

Market potential KPIs are added during the work in WP6 in accordance with market analysis conducted in *Task 6.4 Market Analysis / Business Planning*

3 First Field Trial

After the first major development phase in year 1, a first functional prototype system will be tested in all three pilot sites. Targeted number of older adult participants is 24 (about 8 primary users per pilot site). The older adults (primary users) are encouraged to use their own mobile devices to avoid confounding influences of unfamiliarity with the used device. Users are asked to use the system freely and join repetitive history session events for two months. After this, a first analysis of user behavior and feedback is done to inform further development. To collect rich information on usage behavior, user experience, and improvement possibilities, primarily qualitative methods will be applied in the first field trial to allow in-depth analysis and understanding of the user experience.

3.1 Objectives and Research Questions

The general objective of the first field trial is to evaluate the first integrated prototype of the history web portal and app in terms of user experience (acceptance, reliability, performance) and its impact on user satisfaction, social experience and agency. Furthermore, the developed procedures and materials for hosting storytelling sessions to create storytelling projects will be applied and evaluated together with dedicated project facilitators.

More specifically through analysis of the gathered feedback in the field trial we aim

- To understand the **user experience, acceptance and satisfaction feedback** regarding the web portal and the mobile app from OA and FA.
- To obtain feedback by OA and FA on the interaction with **the analogue tools**
- To explore changes in **social experience and relationships**
- To preliminarily analyse **frequency and patterns of use** of the hiStory portal and app
- To obtain feedback on the hiStory draft **business models**
- To test/pilot a set of **quantitative instruments** which will be used in the quantitative trial to assess the social experience as well as agency and privacy issues in relation with history usage by older adult story tellers and consumers.
- To learn how to build social networks within the targeted applicatin contexts that remain and evolve throughout the duration of the trial.

With the following main research questions we will investigate the user experience, problems, barriers, needs, etc. immigrants have using selected hiStory over eight week duration:

1 — Acceptance, satisfaction

- a. How useful are the provided services and tools?
- b. How satisfied are OA and FA with the story creation process with the system over time?
- c. What problems and preferences occur with the HiStory digital and analogue tools?

2 — User Experience

- a. Do OA perceive an improvement of their social life and relationships through the use of hiStory?
- b. What are the main privacy concerns?
- c. How the sense of agency regarding sharing and modification of personal stories is perceived?
- d. What are the expectations of OA how their stories are used in and after trial?

3 — Social Networks and Community building

- a. What are useful procedures to establish and facilitate long term storytelling communities?

4 — Business model

- a. What are the secondary interests of FA toward using hiStory?
- b. What are concrete cases for story exploitation (library content)?

3.2 Study Design

3.2.1 Prototype

Selected components of the first functional HiStory system will be available for user-based evaluation in the first field trials:

- Web portal: The web portal is a web site with different functionalities, used by the FA for preparation and execution of the group sessions. The FA can perform the following actions in the first version:
 - Having the overview on existing projects on the platform
- Creating a new project for a specific site (eg. 'Love in Lucerne')
 - Having a detailed view on my active project
 - Add, edit and remove OA (users) in my project
 - Showing a screen with project authentication QR-code in a session
 - Showing a screen with all actual project stories
 - Edit or remove recorded stories from the canvas
- Mobile app: The mobile app is a progressive web app (PWA), that can be cached on android and iOS smart phones. The target user is the OA. The main functionalities of the PWA are:
 - Authentication to an existing HiStory project via QR-codes
 - Selecting an existing user and connect it to the PWA
 - Selecting the interface language (DE, NL, EN)
 - Record, listen and retake audio streams, containing individual HiStories
 - Add, view and edit the following attributes of a HiStory: title, author, picture, textual context description and the audiostream as described above
 - HiStories can be selected, from the backend, downloaded, modified and saved back to the central repository
- Analogue toolbox: Besides the software components there are as integral part of the whole user experience an analogue toolbox with printed materials available.

Together it allows a unique user experience. The toolbox consists of the materials developed within T2.1 Service Design (reported in *D2.1 Service Design Specifications*) including e.g. Focus Cards, Emotion cards, Actors cards, Feedback cards.

3.2.2 Participants

In **Austria**, participants will be recruited by AIT and SDA with the support of Vienna Museum by the following means: Invitation letters will be sent to the existing community of older adults from the Gesprächskreis. An invitation leaflet will be published in the Newsletter of the Vienna Museum.

An employee of the Wien Museum will be approached to take over facilitator tasks during the field trials.

In the **Netherlands**, participants of the project will be inhabitants of a specific neighbourhood in Zutphen, Ter Water. These participants will be recruited through a network of social and care organisations (NES, Zutphen) who work with and in this neighbourhood. The participants will be personally contacted through these organisations in an informal way. Because ZUT already has personal contact with this organisation, recruitment will be more informal and there will probably be no use of flyers or posters.

Also the facilitator is recruited in the network of social and care organisations. The project is being discussed in meetings, rather than advertisement or use of flyers. The recruitment of a facilitator will also be in an informal way, same as with the participants. This way the project is already placed in a familiar and intimate setting., which can be beneficiary for both participants and facilitator.

In **Switzerland**, participants will be recruited from the intern network of Vicino. Vicino conduct a lot of activities for elderly – between 60 and 99 years old – to bring people from the neighborhood together (e.g. “Knitting together”; “Coffee and Cake”, “Soup Kitchen”, etc.). Visitors of Vicino will see at the location a poster and invitation leaflet with a short description of the planned sessions. Also, the Facilitator will ask them proactive if they want to participate. After they are willing to participate, they will receive an invitation letter.

Facilitators are employees from Vicino, which are responsible for the location of Vicino in the neighborhood. That means, Facilitators are well known from the visitors. That's important because they provide confidence, which is necessary for the elderly to register at the sessions of hiStory.

3.2.3 Procedure

The first field trial will take place at the end of the first project year, starting with April 2020. The field phase will last over the duration of 8 weeks and will include different activities and types of events and interrogation techniques to gather valuable feedback from participants for the further improvement of the history system (see Table 5). The exact dates for the sessions and interviews will be set depending on internal schedules of the involved end user organisations and associate partners (i.e. Wien Museum), as well as availabilities of OA participants.

Table 5: Example field trial phases and activities overview

Phases	Activities	Week
Preparation	Publish Project information / leaflets; Contact and train FA; Invite OA; Send materials to OA, friendly reminder / call to OA	End of February / beginning March
Field phase	<u>Session 1:</u> Introduction workshop; sign informed consent; project presentation; good story tips; storytelling session 1	Week 1
	<u>First phone interview with OA:</u> General feedback, problems and concerns, session 2 reminder (Guidelines provided by AIT, conducted by AIT, VIC/HSL, NFE)	Week 2-3
	<u>Session 2:</u> general feedback and story wrap up, learn how to use mobile app, story refining;	Week 3-4
	<u>Second phone interview with OA:</u> General feedback, problems and concerns, session 2 reminder (Guidelines provided by AIT, conducted by AIT, VIC/HSL, NFE)	Week 4-5
	<u>Session 3:</u> Final story refinement; Business model discussion; final feedback; celebration	Week 5- 8
Final interviews	<u>Interview with FA:</u> Business model discussion; final feedback (Guidelines provided by AIT, conducted by AIT, VIC/HSL, NFE)	week 9-10
Analyses of results	Qualitative analysis of interview data and workshop protocols, descriptive analysis of demographics, user experience questionnaires	July-August

Reporting	D5.3 First Field Trial Evaluation Report	October 2020
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1. Preparation

In each country one facilitator will be designated to coordinate and host a history project with older adult participants. Supported by end user and research organizations concrete tasks of the FA might include:

- FA briefing with AIT/SDA (learn how to use the app / tool, intro to analogue tools)
- Learn how to handle the mobile app and web portal
- Coordinate techn. trouble shooting by NOU / AIT / SDA
- Prepare / support preparation of recruitment materials (Poster, leaflet, newsletter, etc.)
- Invite participants /Communication - online anmeldungssystem - provided AIT.
- Host 3 storytelling sessions
- Work on stories together with OA in the sessions
- Refine stories on web portal
- Give final feedback in an interview with research organisations

Facilitators will be recruited by local end user or research organisations:

- in Austria a representative / curator of the Vienna Museum
- in Switzerland a representative of the end user organization (VIC)
- in the Netherlands, a facilitator will be recruited in a social of care organisation in Zutphen. If this is not possible, NFE will act as facilitator.

Facilitators will be introduced to the HiStory system and procedures about four to six weeks before the main field phase. Briefings will be held by consortium partners i.e. AIT in AT, NFE in NL, and VIC/HSL in CH. A briefing session with each facilitator will include information on:

- Project presentation and vision
- Field trial purpose
- Sign up HiStory system (Web portal)
- Create and organize a project, theme, team (Web portal)
- How to use mobile app for connecting to a project, for audio recording a story
- How to comment and edit a story

2. Storytelling session 1: Introduction

An introduction workshop will be held in each target city (Lucerne, Vienna, Zutphen) at the end user organisations' or research partners' facilities. Recruited participants will be asked to appear at a specific time to get briefed on the study. Workshops will be held in the mother tongue of the participants.

The detailed procedure of the first session will correspond to the guidelines described on the service design *D2.1 Service Design Specifications*.

3. Storytelling Session 2: learn to use hiStory systems

In the second session participants will be introduced to the functional prototypes of the history system. They will be instructed and learn

- How to use the mobile app and the canvas during the face-2-face sessions within a team,
- How to use the mobile app independently at home for recording and editing

The detailed procedure for the storytelling part of the second session will correspond to the guidelines described on the service design *D2.1 Service Design Specifications*

4. Storytelling session 3: Team results and final feedback

In the second session participants will be introduced to the functional prototypes of the history system. They will be instructed and learn

- How to use the mobile app and the canvas during the face-2-face sessions within a team,
- How to use the mobile app independently at home for recording and editing

The detailed procedure for the storytelling part of the second session will correspond to the guidelines described on the service design *D2.1 Service Design Specifications*

3.2.4 Methods

Questionnaires: Short questionnaires will be provided during face-2-face sessions in order to collect additional insights on user aspects of

- User experience of OA and FA (UMUX, Finstad, 2010),
- OAs privacy concerns,
- OAs perceived agency (modified from Tapal 2017).

Phone Interviews: Between the face-2-face sessions phone interviews will be held by AIT in AT, NFE in NL and VIC/HSL in CH to collect qualitative in-depth feedback on the service design and app usage. Questions will address

- **Satisfaction** with the service design and user expectations toward the project results
- **Positive and negative aspects** regarding the face-2-face events as well as the interaction with the app.
- **Agency and ownership** (e.g. Do you wish to have the capacity to modify the story? How do you feel with the fact that others can modify your story?)
- **Social experience** and aspects in relation with the interaction with others within the face-2-face sessions as well as online.
- **Suggestions for improvement** of the system and service approach
- **Homework reminder**
- **Confirmation of dates** for the next face-2-face session

An interview will last approx. 20min and will be held via phone or face-2-face depending on the availability of the participants. The detailed guidelines for the interviews will be provided by AIT in English and in German and be translated into Dutch by NFE.

Final interviews with facilitators: After the end of the field phase a semi-structured qualitative interview with each facilitator will be conducted to collect essential feedback from the usage of HiStory platforms and tools. End user organisations will be supported by research partners. In case multiple facilitators had been involved in the trial from the side of the end user organisations, a workshop with all facilitators will be conducted. Questions will address overall impressions, positive and negative aspects, major issues and weaknesses of the approaches and tools as perceived by facilitators, quality of support, as well as considerations on the business model, i.e. further exploitation potentials of the gathered story content.

3.3 Data Analysis and Data Management

The qualitative data gathered during the face-to-face sessions and interviews will be analysed by means of a thematic analysis in order to identify main issues and improvement suggestions reported by users as well as aspects of their general satisfaction when using the hiStory app and portal.

Questionnaires will be statistically analysed by using SPSS software. However, the main purpose of quantitative data collection in the framework of the qualitative trial is the piloting of the instruments. Therefore, data will only be used to inform the quantitative trial and will not be exploited per se.

All issues that come up during the study will be collected and documented in an issue tracking system (jira) to inform technical partners and to allow for adapting the prototype for the second field trial.

According to the EU data protection and privacy regulations, all people involved in the project as part of the user-centred design process have the right to protection of their privacy and personal data. The right to privacy entitles everyone to respect for his or her private and family life, home and communications. The right to data protection entitles everyone to the protection of personal data concerning him or her.

The user's personal data in hiStory is processed fairly for specified purposes and based on the consent of the person concerned or some other legitimate basis laid down by law. hiStory also guarantees that every participant has the right to access data, which has been collected concerning him or her, and the right to have it rectified. The right to privacy includes the right to control personal data. That is, the user must be aware of the data, the time period for which they are stored, and people who have access to the information. Further, the user has the right to object to the data processing.

Within this field trial, only employees and briefed representatives of the respective organization that conduct the study will have access to the raw data. These are employees of VIC and HSL in Switzerland and employees of AIT, NOU and SDA in Austria, employees of NFE, IJS and ZUT in the Netherlands. It is stated explicitly that data will be transferred from one partner to another within the consortium only after it was made pseudonymous. That means AIT (and the rest of the hiStory consortium) will only get access to pseudonymized data from the study conducted in Switzerland and the Netherlands and vice versa.

There are three categories of user related data in hiStory:

- 1 — Questionnaire data for the variables of interest (quality of life, self-esteem, social relationships, user experience, etc)

- 2 — Interview data: notes written by observers, audiotapes of the interview in case the participant agreed to be audio recorded during the interviews.
- 3 — Sociodemographic data of the participant: age, gender, job role, city of residence
- 4 — Personal stories and additional story elements (text, foto, object-related information) created within the event sessions as well as via the app.

3.4 Reimbursement

Participants of the first field trial will be given a reimbursement in the amount of 40 Euro in Austria for their time efforts in participating in the study. The costs for reimbursements are taken over by AIT in case of Austrian participants.

In CH, facilitators are employees from Vicino, which are responsible for the location of Vicino in the neighborhood. That means, Facilitators are well known from the visitors. That's important because they provide confidence, which is necessary for the elderly to register at the sessions of hiStory. Therefore it is not necessary to incentive the participants, because they are pleased about to participate.

In the NL, there will be no reimbursements for facilitators or participants, other than the refunding of travel expenses or catering service during the sessions. Participating in the project should be voluntary and because the participants are willing and enthusiastic about the project. However, no unnecessary costs should be made, this is why we will reimburse travel expenses or similar expenses made specifically for the field trials.

3.5 Materials

- Session procedures (provided by SDA)
- Session materials (Booklet, conversation and feedback cards)
- Informed Consent form (twice per participant)
- hiStory App installation file and manuals
- OA Interview guidelines (provided by AIT)
- FA Interview guidelines (provided by AIT)
- Spare smartphones for participants without own device (provided by AIT)
- Questionnaires (provided by AIT)
- Voice recorder (for interviews; Smartphone, etc.)
- Reimbursement and Reimbursement forms (provided by AIT)

Translations into Dutch for the materials will be effectuated by NFE, specifically session materials, Informed Consent, Installation manual, Interview guidelines, questionnaires, reimbursement forms. Materials translations in German will be done by AIT.

4 Second Field Trial: Concept and Methodology

In the third project year, a second system prototype is evaluated in all three pilot sites. A minimum of 120 participants (40 primary users per pilot site) will be involved in a 6-months field trial. This allows for comparison of results across pilot sites and usage.

The detailed evaluation plan for this final field trial will be prepared by January 2021.

5 References

- Ball-Rokeach, S. J., Kim, Y. C., & Matei, S. (2001). Storytelling neighborhood: Paths to belonging in diverse urban environments. *Communication Research*, 28(4), 392-428.
- Beierlein, C., Kovaleva, A., László, Z., Kemper, C., & Rammstedt, B. (2014). Eine Single-Item-Skala zur Erfassung der Allgemeinen Lebenszufriedenheit: Die Kurzskala Lebenszufriedenheit-1 (L-1). *GESIS*.
- Classen, S., Velozo, C. A., & Mann, W. C. (2007). The Rosenberg Self-Esteem Scale as a measure of self-esteem for the noninstitutionalized elderly. *Clinical Gerontologist*, 31(1), 77-93.
- Erstad, O., & Silseth, K. (2008). Agency in digital storytelling: Challenging the educational context. In K. Lundby (Ed.), *Digital storytelling, mediatized stories: Self-presentations in new media* (Vol. 52, pp. 213–232). New York, NY: Peter Lang.
- Finstad, K. (2010). The usability metric for user experience. *Interacting with Computers*, 22(5), 323-327.
- Himmelsbach, J., Bobeth, J., Garschall, M., Aigner-Walder, B., Oberzaucher, J., Luger, A., Diensthuber, A., Lichtenberger, M., Schüßler, L., Schwarz, S. (2017). *EvAALuation. Indikatorenhandbuch für die Messung von Wirkungen und Effizienzsteigerungen* [EvAALuation. Indicator manual for the measurement of effects and efficiency increases]. Vienna, Villach & Linz. Retrieved from <http://evaaluation.tech-experience.at>
- Hull, G. A., & Katz, M. L. (2006). Crafting an agentive self: Case studies of digital storytelling. *Research in the Teaching of English*, 43-81.
- Passey, D., Shonfeld, M., Appleby, L., Judge, M., Saito, T., & Smits, A. (2018). Digital agency: Empowering equity in and through education. *Technology, Knowledge and Learning*, 23(3), 425-439.
- Tapal, A., Oren, E., Dar, R., & Eitam, B. (2017). The sense of agency scale: A measure of consciously perceived control over one's mind, body, and the immediate environment. *Frontiers in psychology*, 8, 1552.

6 Appendix A

6.1 Informed Consent (English)

Data Privacy Information and Declaration of Consent

1. Introduction

You have been invited to participate in this workshop as part of a AAL research project „*HiStory – Sharing your stories of your heritage*“³. Within the *HiStory* project, a technical solution will be developed that supports recording and collecting personal stories not only for private purposes but also for usage in certain contexts, such as e.g. for knowledge transfer in school projects or in museum exhibitions.

2. Conditions of participation and procedure

Participants must be invited by associates or partners of the *HiStory* project to take part in this activity. Participation in this workshop is voluntary.

In this workshop, the goal will be to gather insights, opinions and feedback regarding specific types of storytelling events as well as regarding possible means of invitation to such events. The workshop will last approx. 2,5 hrs and will take place at **<location of the workshop>**.

3. Purpose of processing your personal data

This workshop is part of a larger European project *HiStory* that is carried out in Austria, Switzerland, and The Netherlands. The information gathered in this workshop will be published in reports on the research project or in scientific papers in the form of statistical evaluations or scenarios without including any personal details. It will not be possible to track your identity from reports or papers at a later date. Your personal data will only be processed as part of this research project if you give your express consent. In **<country>**, **<responsible project partner name(s)>** may also process your data for other scientific research purposes relating to AAL projects if these are not aimed at producing person-related results.

The following data will be collected: name; age; gender; self-generated stories; discussion feedback. The workshop will be documented by photo and note taking for the purpose of analysis.

After completion of the project your data will be retained for as long as necessary to provide evidence of compliance with good scientific practice in accordance with the

³ <http://www.aal-europe.eu/projects/history/>

relevant guidelines. Research data must currently⁴ be retained for a period of ten years. If this period changes in the future your data will be stored for a correspondingly shorter or longer period of time.

4. Recipients of your personal data

Only dedicated representatives of the *HiStory* project consortium have access to your personal data. Your data will not be disclosed or transferred to other recipients without your consent.

5. Your rights and contacts

You are entitled to request information about your processed data; to ask for incorrect data to be corrected or deleted. You are also entitled **to withdraw your consent at any time** and **to object to the processing of your data**. If you withdraw, your data will not be used in the subsequent phases of the research project. Please note that documents already published or project results obtained using your data before you withdrew your consent cannot be altered. Please also note that your data may have to be further processed to prove compliance with the guidelines of good scientific practice.

If you require further information, have further questions, or wish to exercise your rights or abort the study, please contact **<name, address, E-Mail, phone number>**.

6. Declaration of Consent according to data protection law

I have read and understood the Declaration of Consent. By signing this declaration, I agree that **<responsible project partner name(s)>** may process my personal data for the purpose(s) as specified in section 3.

- I hereby agree that **<responsible project partner name(s)>** may use photos, audio recordings, video material or parts thereof, for marketing, advertising and public relations for the research project and may publish these materials to achieve the above purposes.

- I hereby agree to take part in this workshop conducted within the research project *HiStory*. I was informed about the project and its goals as well as the procedure and all of my questions have been answered to my satisfaction. I know whom to contact in case of any questions or other requests regarding the *HiStory* project. My participation in this scientific study is voluntary and I know I can end my participation at any time.

I, the undersigned, hereby declare that at the time of signing this Declaration of Consent,

- I am of full age and legal capacity.
- I am not of full age and/or legal capacity. I therefore require the consent of my legal representative to be able to participate in the study.

⁴ as of 10/2017.

I have received a copy of the Data Privacy Information and Declaration of Consent.

FIRST NAME AND LAST NAME IN BLOCK LETTERS

Date, place and signature

6.2 Demographic Data (English)

Please answer the following questions about yourself. Once again, we would like to point out that all data collected within the scope of these studies are treated anonymously and confidentially.

Age	Month of birth / year of birth: _____ / _____
Gender	female <input type="radio"/> male <input type="radio"/> no answer <input type="radio"/>
Highest completed Education	
<input type="radio"/>	Elementary school
<input type="radio"/>	Professional School / Apprenticeship
<input type="radio"/>	General qualification for university entrance
<input type="radio"/>	University
<input type="radio"/>	Others: _____
Family Status (multiple choice)	
<input type="checkbox"/>	single
<input type="checkbox"/>	married
<input type="checkbox"/>	living in a partnership
<input type="checkbox"/>	widowed
<input type="checkbox"/>	divorced
Occupation	
<input type="radio"/>	full-time employed
<input type="radio"/>	part-time employed
<input type="radio"/>	on maternity leave / leave of absence
<input type="radio"/>	in-service training
<input type="radio"/>	unemployed (including students, who are not working, people, who are retired or early retired)
Living circumstances	Alone at home, with one ...

6.3 Satisfaction with Life Scale (Beierlein et al., 2014)

The next question is about your general satisfaction with life: All things considered, how satisfied are you with your life these days?

not at all satisfied										completely satisfied
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

Nun geht es um Ihre allgemeine Lebenszufriedenheit. Wie zufrieden sind Sie gegenwärtig, alles in allem, mit Ihrem Leben?

überhaupt nicht zufrieden										völlig zufrieden
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4	5	6	7	8	9	10

6.4 WHOqol-BREF (english)

WHOQOL-BREF

Please read each question, assess your feelings, and circle the number on the scale that gives the best answer for you for each question.

1. How would you rate your quality of life?

<i>(Please circle the number)</i>				
Very poor	Poor	Neither poor nor good	Good	Very Good
1	2	3	4	5

2. How satisfied are you with your health?

<i>(Please circle the number)</i>				
Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		<i>(Please circle the number)</i>				
		Not at all	A little	A moderate amount	Very much	An extreme amount
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4.	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		<i>(Please circle the number)</i>				
		Not at all	Slightly	A Moderate amount	Very much	Extremely
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

		<i>(Please circle the number)</i>				
		Not at all	A little	Moderately	Mostly	Completely
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you	1	2	3	4	5

<i>(Please circle the number)</i>				
Not at all	A little	Moderately	Mostly	Completely
14. need in your day-to-day life? To what extent do you have the opportunity for leisure activities?	1	2	3	4

<i>(Please circle the number)</i>				
Very poor	Poor	Neither poor nor well	Well	Very well
15. How well are you able to get around?	1	2	3	5

The following questions ask you to say how **good** or **satisfied** you have felt about various aspects of your life over the last two weeks.

<i>(Please circle the number)</i>				
Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16. How satisfied are you with your sleep?	1	2	3	4
17. How satisfied are you with your ability to perform your daily living activities?	1	2	3	4
18. How satisfied are you with your capacity for work?	1	2	3	4
19. How satisfied are you with your abilities?	1	2	3	4
20. How satisfied are you with your personal relationships?	1	2	3	4
21. How satisfied are you with your sex life?	1	2	3	4
22. How satisfied are you with the support you get from your friends?	1	2	3	4

		<i>(Please circle the number)</i>				
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your mode of transportation?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		<i>(Please circle the number)</i>				
		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings, such as blue mood, despair, anxiety, depression?	1	2	3	4	5

27. Did someone help you to fill out this form?
(Please circle Yes or No)

Yes	No
-----	----

6.5 Rosenberg Self-Esteem Scale (RSES)

English:

1. On the whole, I am satisfied with myself.
2. At times, I think that I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel that I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I am a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Dutch (Franck, E., De Raedt, R., Barbez, C., & Rosseel, Y. (2008). Psychometric properties of the Dutch Rosenberg self-esteem scale. *Psychologica Belgica*, 48(1), 25-35.):

1. Over het algemeen ben ik tevreden met mezelf
2. Bij momenten denk ik dat ik helemaal niet deug
3. Ik heb het gevoel dat ik een aantal goede kwaliteiten heb
4. Ik ben in staat dingen even goed te doen als de meeste andere mensen
5. Ik heb het gevoel dat ik niet veel heb om trots op te zijn
6. Het is ongetwijfeld zo dat ik me bij momenten nutteloos voel
7. Ik heb het gevoel dat ik een waardevol iemand ben, minstens evenwaardig aan anderen
8. Ik wou dat ik meer respect voor mezelf kon opbrengen
9. Al bij al ben ik geneigd mezelf een mislukkeling te voelen
10. Ik neem een positieve houding aan ten opzichte van mezelf

German, revised by von Collani, G., & Herzberg, P. Y. (2003). Zur internen Struktur des globalen Selbstwertgefühls nach Rosenberg. *Zeitschrift für Differentielle und Diagnostische Psychologie*, 24(1), 9-22:

1. Alles in allem bin ich mit mir selbst zufrieden.
2. Hin und wieder denke ich, dass ich gar nichts taue.
3. Ich besitze eine Reihe guter Eigenschaften.
4. Ich kann vieles genauso gut wie die meisten anderen Menschen auch.*
5. Ich fürchte, es gibt nicht viel, worauf ich stolz sein kann.
6. Ich fühle mich von Zeit zu Zeit richtig nutzlos.
7. Ich halte mich für einen wertvollen Menschen, jedenfalls bin ich nicht weniger wertvoll als andere auch.
8. Ich wünschte, ich könnte vor mir selbst mehr Achtung haben.
9. Alles in allem neige ich dazu, mich für einen Versager zu halten.
10. Ich habe eine positive Einstellung zu mir selbst gefunden.*im Original: «I am able to do things as well as most other people.»

Die Übersetzung bei Ferring und Filipp lautet: «Ich besitze die gleichen Fähigkeiten wie die meisten anderen Menschen auch»

7 Appendix B

7.1 Usability Metric for user experience (English)

THE USABILITY METRIC FOR USER EXPERIENCE

Instruction:

“How strongly do you agree with the following statements about hiStory? Please rate each statement on the scale from 1="Strongly Disagree" to 7="Strongly Agree".”

	1 (Strongly Disagree)	2	3	4	5	6	7 (Strongly Agree)
1) The capabilities of hiStory meet my requirements.							
2) Using hiStory is a frustrating experience.							
3) hiStory is easy to use.							
4) I have to spend too much time correcting things with hiStory.							

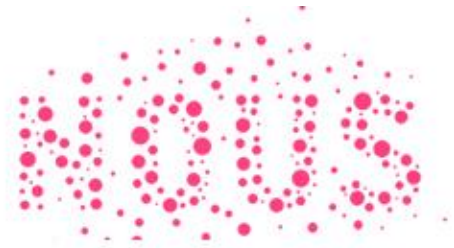
(We will discuss the ratings afterwards with the participants. E.g. “You rated the first question with a x. Could you please describe why?”)

7.2 Final Questionnaire

e.g. questions will cover:

1. I am in full control of what I do (SoPA, Sense of Positive Agency, Tapal 2017)
8. Things I do are subject only to my free will (SoPA, Sense of Positive Agency, Tapal 2017)
3. My actions just happen without my intention (SoNA, Sense of Negative Agency, Tapal 2017).
10. Nothing I do is actually voluntary (SoNA, Sense of Negative Agency, Tapal 2017).

Partners



Supporting Organisations

