

DELIVERABLE 2.5

CENTRINNO LIVING ARCHIVE – BETA VERSION

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1.0	31/01/2023	Jonathan Even-Zohar Hester Dibbits	AHK	Final version by the consortium to be submitted to the EC.

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EXECUTIVE SUMMARY

This deliverable describes the second iteration (Beta) of the CENTRINNO Living Archive, a resource intended to enable pilots in the nine cities to implement local heritage engagements with their communities in an inclusive and sustainable way, and pull together the curated content on a European platform, fostering reflection and supporting the research.

The deliverable provides background information to the approach, details the three constituent elements of the Living Archive (offline participation, online database with network visualisation, and collaborative research and reflection) and proposes development actions toward D2.7 (Living Archive - Final Version).

As a beta version, it is intended for usage, trials and development over the period of the 3rd sprint in 2023.

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GLOSSARY

ACRONYM / TERM	DESCRIPTION
CENTRINNO	New CENTRAlities in INdustrial areas as engines for inNOvation and urban transformation
EN	Emotion Networking is an exercise that provides insights into complicated interplays between emotions, interests and different sorts of knowledge, and between items of heritage and people. The aim is for participants to notice changes in these relationships and to become (more) aware of the complex dynamics surrounding heritage. In this way, they develop "heritage wit", a set of competencies that enable people to relate critically to processes of heritage making and enter dialogue, with due attention to heritage dynamics and other people's position. These skills can help us, as society, deal with the past in the present, which is often emotionally charged. In CENTRINNO, the approach is used as a method to develop heritage as a key concept in the creation of Fab City Hubs.
FCH	Fab City Hubs are open spaces for city making. They work as a physical interface to connect actors within a Fab City Prototype (usually a neighbourhood) and foster collaboration and exchange of skills and knowledge between local communities in a given territory. (FCH Toolkit , GitBook)
HWG	The Heritage Working Group (HWG) was a group set up with the people from each pilot who were most responsible within their pilot for working on heritage matters, and the collecting, processing, and uploading of KPI 'stories' for the Living Archive.
Sanity.io	Sanity.io is a cloud-based content platform that helps developers and content creators to create, manage and edit content in a secure and efficient way. It is built on a modern architecture that uses a combination of JavaScript libraries and APIs, as well as a custom GraphQL schema to enable developers to quickly create, manage and query their content. It is used to host the Living Archive Beta version's website.
Taxonomy	In the Living Archive Alpha (D2.3) a working thesaurus and tagging framework was prototyped. In this next iteration of the Living Archive, these are combined in the online part and utilised as a consistent taxonomy, tailored to the project and based on the learning of the second Sprint period applied in the online space of the deliverable.

1. Introduction

1.1. Purpose and scope

The Living Archive is one of the central resources developed in the CENTRINNO project. This section outlines the purpose and scope of the Living Archive as a whole and this deliverable.

The purpose of the Living Archive has been presented in M18 of the project as “Living Archive – Alpha Version” [1], as “one of the central infrastructures of CENTRINNO, aiming to enable pilots to ‘make heritage’ on and around their sites in ways that it inspires and supports the pilots to build inclusive, circular, sustainable hubs.” This has remained the basis for the development of this Beta version.

The approach to the development of this infrastructure, likewise, has remained largely the same. The key feature being its iterative development, with each version (alpha, beta and final) being accompanied by a short report in the form of a deliverable (M17, M29, M40).

The set-up outlined by the Living Archive - Alpha version, and its conceptual underpinnings, have been tested and reflected upon during the second sprint, which - in the process toward the development of the Living Archive - Beta Version – has led to a conceptual and structural redesign. Overall, the set-up remains composed of these three elements.

The key objective of this deliverable is to document and present the Beta Version of the Living Archive infrastructure.

It first discusses the conceptual and structural changes since the Alpha version.

Consequently, it presents the new iterations of the three constituent parts: Part A refers to local engagements into heritage by the pilots, Part B refers to a co-designed online multimedia repository of curated, relational content, and Part C refers to online analytical dossiers or blogs collating and examining the gathered content. Secondly it maps the road ahead, on strategic as well as practical levels, toward the development, and launch, of the Final Version, scheduled for M40. Finally, the deliverable presents (links to) updated guidance materials to enable pilots to use this Beta version and on its basis, co-develop the Final version.

It is important to note that this document frequently refers to the Alpha Version (D2.3) for more information. This is purposefully done to ensure the document does not become too repetitive and/or lengthy. Where needed to ensure comprehension, the document will quote parts of the Alpha Version.

Also important to note is that this deliverable also includes a [Proof-of-Concept website, which can be accessed online](#), and a set of annexes which provide further background belonging to the deliverable.

1.2. Contribution to other Deliverables

This section outlines the way this deliverable of the Living Archive Beta relates to other deliverables.

- **D2.1 Urban Ecosystem Mapping Guidebook** (M08) [2]: The Living Archive Alpha Version builds on the methodologies and frameworks for mapping urban ecosystems described in the Urban Ecosystem Mapping Guidebook (D2.1), including the work done to develop, train and support pilots in their application of the heritage dynamics

methodology/approach of **Emotion Networking (T2.1)**. Further, the Living Archive Alpha Version directly feeds into and informs the development of future iterations of the **Living Archive (Final Version, M40)**.

- **D4.1 Detailed Pilot Planning and Monitoring Framework (M08) [3], D4.2 Collective Results Sprint 1 and D4.3 Collective Results Sprint 2 (forthcoming)**: deliverable further takes into account the activities organised and/or planned by pilots in relation to all key concepts and infrastructures. At a general level, the developed Living Archive is needed to enable partners active in WP4 to ‘feed’ the Living Archive with bottom-up heritage stories. In this regard the deliverable also builds upon the developments in WP1, and harnesses the conceptual complexity as designed in the **CENTRINNO Framework (D1.2 and GitBook) [4]**.
- **D2.4 Cartography Beta Version (M29, forthcoming)**: The Living Archive and the Cartography are developed in parallel to each other. Since the functionalities of the Cartography shall allow linking to the Living Archive and vice versa, this deliverable has been closely aligned with D2.2 in terms of its structure and content. Initially, at the Alpha stage, this occurred via the usage by both platforms of the data visualisation platform Kumu, and the exchange of knowledge in its application was expected to create further synergy. At the current stage, the two deliverables have uncovered more conceptual connections, which are explored in D4.3, mentioned above. Resources identified in the Cartography (presented in D2.4) can constitute promising leads for heritage stories, a process which will be further explore in the next sprint.
- **D3.3 Fab City Hub Toolkit (M30, forthcoming)**: The Living Archive Alpha Version presented a methodological approach, centred on the methods of Emotion Networking, Participatory exhibition-making, and ethnographic fieldwork. These were partially included in the Alpha Version of the Fab City Toolkit [5] (M18), but mainly documented in the Living Archive Alpha Version. In the current deliverable, the guidance resources on these methods will be directly developed and offered in D3.3 (deliverable and [GitBook](#)).
- **D5.2 Impact Assessment (M29, forthcoming)**: One of the dimensions of the impact assessment conducted relates to the ways in which pilots have engaged with the key concept of heritage, during the co-developing, applying and using the Living Archive infrastructure. Working with the Outcome Mapping method (D5.1) has sparked further reflection during the development of the Living Archive Alpha with regard to the overall envisaged change, and indications of change pathways (in the transformation of former industrial sites into inclusive, sustainable hub).

1.3. Structure of the Deliverable

What follows is a description of the different sections that are found within this document.

Section 1 briefly introduces the document, and its connection with the CENTRINNO project from a technical and logistical perspective.

Section 2 discusses the conceptual and structural changes of this Beta Version vis-à-vis the Alpha Version (D2.3). In alignment with the setup of the preceding iteration, the section

discusses changes, including the ethical considerations of local heritage engagements, the renewed focus on the role of the concept of heritage and place in the CENTRINNO project as it emerged in mid-2022 following the review by the European Commission, and the emergent concerns around the initially envisaged usage of Kumu – the platform in which the prototype of the Online Living Archive was created.

Section 3 presents the Beta Version in three main parts: (1) describing [in the particular] the enriched portfolio of local heritage engagements as ‘scenarios’ to foster multivoicedness in the local collection of stories for Part A; (2) providing a detailed documentation of the new online space for the Living Archive Part B and (3) demonstrating how Part C is formed in public-facing blogposts.

Section 4 presents the planning ahead toward the final iteration of the Living Archive, including the immediate path ahead for the third project sprint with special focus on divergence across the pilots and the role of the Heritage Working Group. The horizon for usage and development of the Living Archive infrastructure after the end of the EU funding is also discussed in this section.

Section 5 provides links, references and annexes related to the Living Archive Beta Version, including:

- Annex 1: How to Upload Stories: This is a basic guiding document to enable the project team members to work with the new web environment. It will become a living document, as the pilot teams will work with it and it will require improvements in the guiding clarity (e.g. troubleshooting, etc.)
- Annex 2: Proof of Concept Wireframes: This is the foundational set of wireframes used to create the Living Archive Beta.
- Annex 3: Taxonomy overview: This is the overview of tailor-made tags and categories created in this iteration of the Living Archive.
- Annex 4: Overview of co-collection efforts to date: This provides an overview of the local efforts and stories collected by the pilots to date.

2. Changes from Alpha Version

The Living Archive Alpha Version is presented in the previous deliverable D2.3. This section outlines the way this deliverable of the Living Archive Beta has developed since the Alpha version, before later explaining (in section 3) the detailed make-up of the Beta itself.

The Living Archive is the resource which is developed to address the concept of ‘heritage’ in the CENTRINNO project. It does so by employing the methodology of Emotion Networking. This process is visualised in D2.3 as such:

The visual in Figure 1 shows:

- The method of Emotion Networking, including the organising of sessions, the conducting of fieldwork and interviews, is used in local offline co-collection efforts (A).
- Content is gathered using a tagging framework
- Then this content is brought together online (B), in a network visualisation, using Kumu.
- This allows for reflection on the relations between and among contents (C).
- The resource is transferable in terms of its methodology, a thesaurus (elaborated from the tagging framework) and the network visualisation code. The tagging framework was developed to classify, cluster and compare similarities between heritage stories collected by pilots for research purpose

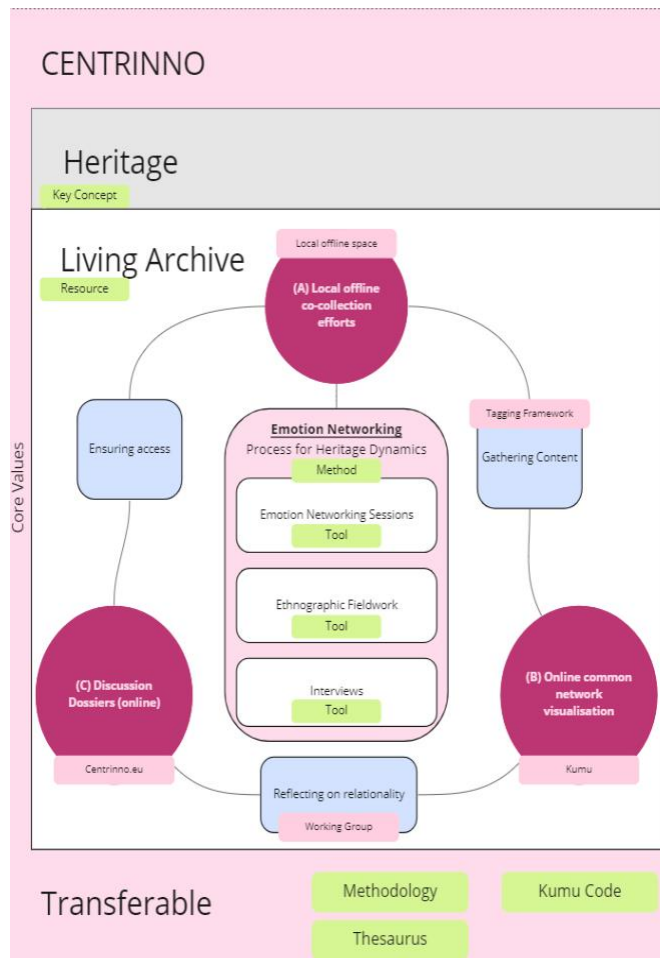


Figure 1 – Visualisation of the Living Archive Alpha version

The set-up of the resource has been presented in the Alpha version as a prototype design with three composite parts:

- **[Part A]** As a local participatory co-collection effort of stories related to different aspects of heritage, which essentially implored pilots to create local offline exhibitions using participatory engagement methods with their local communities. The suggested approach was modelled on the work of the organisation Imagine IC.
- **[Part B]** As a transnational online repository consisting of these site-related stories, which can be explored in an interactive network visualisation. To this end, a prototype was created using the data visualisation tool Kumu.
- **[Part C]** As a series of online publications which reflect upon and analyse interrelationships among the co-collected content, processes, and forms.

Since the release of the Living Archive Alpha Version in January 2022, the Project has made significant progress. Pilots have organised activities related to the concept of heritage, including Emotion Networking sessions, interviews, etc. [6]. Project partners have convened twice in co-creative consortium meetings where several workshops and reflection sessions of heritage and the Living Archive have revealed insights into the strengths and weaknesses of the Alpha version. The AHK, Task Leader for the Co-Designing of the Living Archive (T2.4) and the Feeding of the Living Archive (T4.5), has had many interactions with pilots, in groups as well as individually, to learn about the process and effects. An overview of changes is listed in Table 1 below, while the remainder of this section dives deeper into these changes on a conceptual as well as structural level.

Table 1 - Overview changes from Alpha to Beta Version

Element	Alpha Version	Beta Version: Conceptual and Structural Changes	Rationale
Local engagement strategy (Part A - (see 2.1 and 2.1.1): this augments the item 'Importance of the actual former industrial site (Conceptual)' below this item in the table.	Participatory exhibition-making implored the pilots to engage locally in participatory fashion to identify topics with local communities, and enable them to share their stories together.	Conceptual: Broadened to include more scenarios for local engagement with the [industrial] history of the site, and the tangible and intangible traces of the industrial past. Each of the five (currently, with scope for more) scenarios provide conceptual templates for how to think about engaging with local heritage. Structural: Each strategy also provides a structural template for how to engage actively and specifically with local heritage for each pilot.	Sprint 2 made clear that the local actions of pilots were more varied and diverse.
Importance of the actual former	In the Alpha version, the focus was more on the	Conceptual: More focus on the potential of the	The consortium's ongoing monitoring

Element	Alpha Version	Beta Version: Conceptual and Structural Changes	Rationale
industrial site (Conceptual) (see 2.1.1)	communities and related stories, considering the pilots' site as a starting point, but less engaging with the related past.	actual former industrial site itself, and its associated traces of the past Structural: N/A	and evaluation ensured this focus remained central. Alpha did not explicitly move away from dealing with the physical/built environment, but the focus was somewhat blurred.
Web design (Part B)	Kumu prototype showing a network visualisation of relation between stories and tags.	Conceptual: N/A Structural: Custom built website, easier to navigate, showing stories and how they relate	New website ensures stability and sustainability to handle larger volumes of data.
Tagging framework (Part B)	Wide list, over 300 tags, with limited focus on the specifics of CENTRINNO and no hierarchy among them.	Conceptual: Development of hierarchical structure, in order to develop the specificity of stories (see 2.2.3). Structural: Developed as a tailored taxonomy, using a narrative 'sentence' structure (see 2.2.3).	Learnings during the second sprint about the specific features of dealing with post-industrial traces of the past needed to be included in a more focused narrative-driving strategy.
Stronger focus on ethics and values	Focus on ten Fab City Principles.	Conceptual: Addition of criticality and curatorship as core values (see 2.1.2). Structural: N/A	Ongoing monitoring and evaluation by the AHK led to the understanding that these aspects required more attention.
Stronger relations to CENTRINNO Framework	CENTRINNO Framework underpins Living Archive	Conceptual: now greater capacity for interpretation in how stories are uploaded (see 2.1.3). Structural: Difference in upload form to allow space for interpretation (see 2.1.3).	As project matures more linkages among the CENTRINNO are identified, but there was limited capacity to show this in the earlier design.
Enhancing local and global usage(s)	Outputs of local heritage engagement designed by pilots, and <i>online</i> outputs of pilots' heritage engagement are open and public-facing	Inclusion of external experts input in Living Archive conceptual underpinning (see 2.1.4). Structural: N/A	Sprint 2 indicated that pilots effectively work as curators at the local level and as co-curators at the European level.

2.1. Conceptual level

This section outlines the conceptual basis for the Living Archive, along with any developments or deviations from the Alpha version.

The overall concept for the Living Archive has remained largely unchanged in this Beta Iteration, as compared to the Alpha Version. The following description still holds true with regard to its overall nature and purpose.

*The CENTRINNO Living Archive is an **open access platform** containing content (e.g., stories) stemming from pilot cities’ (post-) industrial sites, collected locally with participatory heritage methods. Its purpose is to help communities imagine what can be broadly described as a new ‘critical heritage of making’, and enable the creation of inclusive and circular hubs (Fab City Hubs) [1, p.12]*

What then *is* a Living Archive? Once more, the brief exposition of this notion in the previous iteration (D2.3) works well, stipulating that it refers: *to the idea of an open, collaborative and creative offline or online archive to which everyone can contribute, and which everyone can access; a flexible system in which content is constantly recontextualised [7]. Just like any other archive, the “Living Archive” is not to be seen as a neutral site where knowledge is just stored, but as a site of knowledge creation and knowledge management. Collecting activities play an important role here, but always as ‘part of a more extensive process consisting of a range of activities, like annotating, questioning, managing, documenting, constructing and transforming, but also forgetting, abandoning, leaving unnamed and erasing’ [8].*

Several other elements, however, have led to new approaches, arising for the research and innovation work with pilots during Sprint 2. Some examples are provided here:

Table 2 - Examples of insightful pilot interactions

Pilot	Interaction during Sprint 2	Key insight contributing to Beta development
Paris	Organised a local Living Archive (Part A) as a standalone online inventory of food production techniques from the past, including a timeline [9]	We learned that past (heritage) practices collected and carefully curated by the pilot can serve the FCH creation by inspiring actors. To help other pilots follow this trajectory, the LA beta showed how it works when a pilot collects stories itself through clear desk research and curation. Thus, the LA Beta is designed to accommodate and include this local work, and broaden the approach to local engagement from Alpha to Beta (see Table 1).
Amsterdam	Organised an exhibition that showcases local makers	Exhibition about makers, meant to engage with making in the contemporary sense, did not engage much with traces of the past. This showed us the need to provide more support/guidance on how pilot teams could approach this.
Tallinn	Organised Emotion Networking sessions about ‘grandma skills’ and ‘the commons’	Living Archive stories were directly developed through these sessions, leading to better understandings of how heritage can be a catalyst for changes, and how the Living Archive being more easily navigable (which was

Pilot	Interaction during Sprint 2	Key insight contributing to Beta development
		problematic on the Kumu prototype) can help implement those changes.
Barcelona & Tallinn	Encountered sensitive heritage issues within their pilot activities	Barcelona’s EN session with the director of MUHBA illuminated some tensions between the pilot and the pre-existing heritage organisations. Tallinn also encountered a situation where one of the Russian-lineage members of their community garden inadvertently removed a culturally important flower of Estonia from the garden, thinking it was a weed, highlighting the tensions between the Russian population in Estonia. These sensitive heritage issues indicate the need for the Beta version to have space to accommodate and discuss conflicting emotional heritage matters.
Blönduós, Zagreb	Encountered differing situations related to the ownership of the buildings within their pilot sites	The insights relating to the ownership of the building(s) in the pilot sites of Blönduós and Zagreb (the Kvennaskollinn and the Sjlème meat factory respectively) were both drawn from and reactions to the European Commission’s mid-term report, which stated that there needed to be more emphasis on the built fabric of the sites themselves. The split ownership of Kvennaskollinn between the Icelandic Textile Center organisation and the municipality in Blönduós and the non-access through lack of pilot governance of the meat factory meant we had to re-evaluate in which ways pilots could engage with the physical spaces of heritage within the projects. The five scenarios for engaging with heritage locally was one of the responses to this (see section 2.1.1).

From the interactions presented in Table 2, the Beta version was developed with several important changes:

2.1.1. Additional strategies for heritage as a catalyst

This section develops further the conceptual basis of the latest iteration of the Living Archive, starting with how the idea of **heritage as a catalyst** has been further implemented.

The CENTRINNO Living Archive is an infrastructure which stimulates and supports local engagements with the past and its legacies by people who are working to create new circular and sustainable hubs at and around places which have in the past served an industrial function. Put differently, it provides and investigates an approach on dealing with the past as a catalyst for change. About this, in the previous iteration, the following was said: *Traces from - and stories about - the past are used as a catalyst for change, so as to not just replicate the past, but stimulate critical reflection on how to deal with the history and heritage of post-industrial sites in the context of major challenges facing societies today and in the future* [1, p.12].

This intended purpose of working with the concept of heritage at the local (pilot) level, has in the previous period been brought forward more. The principal reason for this renewed focus were the comments given by the European Commission, following a midterm review of the project. The reviewers reminded the consortium of the expectation to contribute to the revitalisation of former industrial sites.

Working from those comments, the pilots' Heritage Working Group, meeting in September, elaborated on a new set of **five scenarios for local engagement** with actual buildings, i.e., on former industrial spaces. This reflection was further developed at the Consortium Meeting in October 2022. In this Living Archive Beta, these scenarios are developed as part of the Living Archive Part A "Local offline heritage engagements". What are these scenarios and their conceptual underpinnings? This is presented below.

Former industrial areas are interesting locations for FCH-teams who aim to contribute to the transition towards a more sustainable, inclusive society by setting up or supporting local makerspaces. Such spaces are aimed to encompass light industry, collaborate towards new circular production methods and work from local, inclusive ownership. FCH aim to facilitate learning how to make and repair things, re-using 'waste' and/or local resources.

Why in particular should this take place in or around former industrial sites? At the basis, there is the functionality of the sites being spacious, affordable and often located in zones where light industrial activity is permitted. Given this (pre-)existing appeal to the necessary stakeholders at-site, former industrial spaces often already offer spaces for makers, artists, cultural and/or creative professionals, as well as citizens.

But what to do with the old buildings, chimneys, machinery, cranes, ships, railway tracks and other 'left-overs' from the 'heavy industry' period? Can they be of any use in the process of transitioning towards more inclusive and sustainable models of urban production? The particular set of characteristics of former industrial spaces - namely associations with class, environmental degradation, specific architectural forms and production - make them particularly fertile places through which to **critically explore the relationship between past, present, and future ethics of sustainable living**. CENTRINNO makes the claim that they can function as a catalyst.

In the earlier iteration of the Living Archive, such *tangible* traces from the industrial past were less addressed. During the interactions of the second sprint, in the current iteration, five scenarios are distinguished and (in section 3) integrated into the design.

Tangible traces from the industrial past can function as a catalyst for the transition towards a more sustainable inclusive future by:

(1) Acknowledging contestedness and multivoicedness

Tangible traces of the past, such as buildings, machinery or inherited soil pollution, may be instrumental in challenging people to acknowledge the deep impact of the Industrial Revolution on people and planet: how did it previously and today have an impact on a local, regional, and global scale? The pilot team members can take an active role here by positioning themselves as 'newcomers' (even if they are not) who want to reach out and listen to what the traces [tangible and intangible] have to tell them: "Hello, we are new here, is there anything I should know about this place? What happened here? Can you help me to acknowledge the impact of the industrial past (locally, regionally and globally?)". This could also be combined with an approach of the usage of the Cartography and urban mapping methods, where material traces

and pathways can serve as another route into the history of what happened at the site over time.

This engagement-work, supported by tools made available through the Fab City Toolkit, provides the pilot teams with a scenario for heritage management. It also includes acknowledgement of the work that has already been done by others. The outcome is in the collection of stories, and the presentation and organization of these stories offline and online (in the Living Archive): “Look! We – as a FCH-team listened carefully to you, we see you and acknowledge your existence, we invested in historical engagement, we did not run away from difficult stories, we acknowledge the deep (ongoing) impact of the industrial past on planet and people. This is what we were told. Read all the stories and explore how they relate.”

An example of this scenario would be when the pilots engage with former workers and users of the former industrial site are given the chance to share and implement their personal perspective onto the way that the current/future FCH organization operates. Solutions including workshops with former workers and local historians are presented. The stories that are brought during these sessions form and feed the Living Archive, which creates a greater awareness of the history of the place, and the different heritage perspectives worth paying attention to within it.

(2) Facilitating community site renovations

Inviting local community members to help renovate a building at the FCH area, and potentially also other abandoned buildings in the neighbourhood enables a direct interaction of people with physical sites. There are many examples of this kind of heritage work (see e.g. [10]). Restoration specialists can teach people how to make use of traditional knowledge, and similarly local citizens can share their expertise and knowledge, in terms of building skills, as well as also about the history of the buildings, and all this can help to build a sense of community: “Hello, we are new here, do you like to help us renovating this building? To make it into a nice place for the community? Maybe we can show each other some nice tricks how to re-use local materials, there is a makerspace we all can use.”). Moreover, the FCH can ensure circularity in the usage of tool, techniques and materials, and consider sustainability of the renovation process.

One example of this scenario could be - hypothetically - the architectural reconstruction of the fire-scorched former police station, which used to be part of the Kopli peninsula former industrial zone (see also <https://hiddentallinn.com/kopli-walk/> (last visited 6-1-2023)).



Figure 2 - former police station in Kopli area, photo H.Dibbits, 10-8-2022

(3) Curated decay

Working as a team with different stakeholders towards ‘curated decay’ of the tangible traces of the industrial past. This is a form of heritage management by which ‘non-intervention’ or ‘continued ruination’ are employed [11] [12]. This results in heritage sites that are transformed into nature reserves by appreciating both decay and ecology. The potential of implementing a ‘giving back to nature’ aspect within a FCH serves as a particular path to cherish the temporariness of buildings, sites and other physical remnants of human interventions.

One example of this which could be explored is in Amsterdam Noord where a section of the former shipyard-turned-remediated-circular working space De Ceugel where the houseboats are currently located completely becomes a natural reserve when De Ceugel's current lease ends. The space, which is already partially transferred to nature, would then be completely ‘given back’. The transference from industrial effluent to ecological regeneration (via phytoremediation) is carefully managed and curated, and the area is considered concurrently in terms of its future and its past.

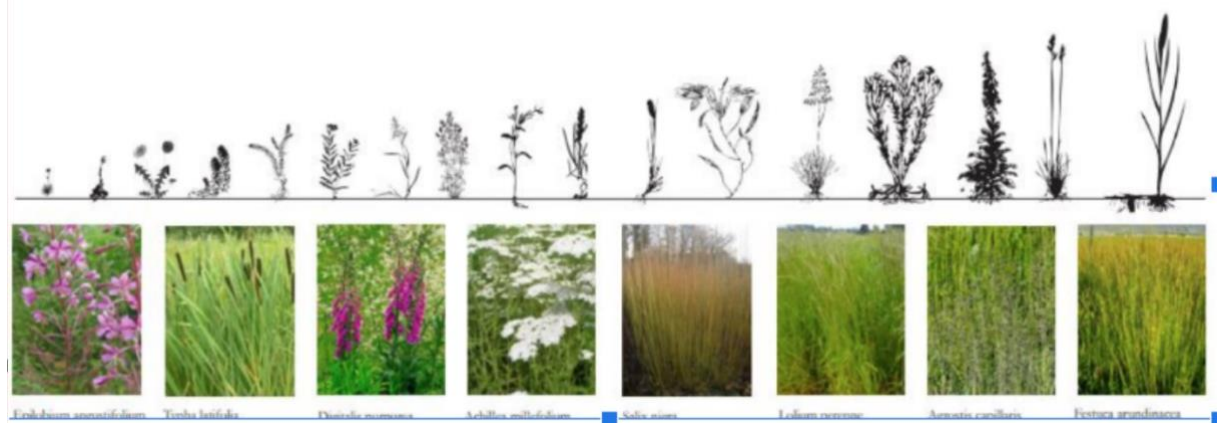


Figure 3 - The range of plants in De Ceugel doing phytoremediating work, from [13].

(4) Facilitate artistic intervention

Former industrial spaces (buildings, waterfronts, yards, etc.) already appeal to street artists, and when there are galleries and/or other presence of artistry, there is also an opportunity for FCH-teams to facilitate or commission an artistic intervention. Increasingly, the public space – the city – is seen as a décor for artistic work. Unlike exhibitions with information about the past, artistic interventions stimulate the community’s receptive senses in terms of awareness, creativity, reflections and can more than anything also encompass/allow for experiences of feelings of discomfort, lack of well-being, etc.

One example of such an intervention can be found at the Kunststrom Plant in Luckenwalde, Germany. This a former industrial power plant that has been made into a renewable energy art space in which the industrial-scale issues of energy sources become also part of the artistic curation. It is also important to note critically that artistic interventions may also be lacking in the ambitions of the FCH, for example when they intervene in the space without at all considering alternative, forgotten and/or silenced voices or perspectives.



Figure 4 - Sun & Sea installation at Kunstrom Plant Luckewald [14]

(5) Work on [historical] nature-based solutions for industrial degeneration

One example comes from the CENTRINNO pilot of Paris, where *Vergers Urbains* and the Paris team implement historical urban gardening techniques into the architectural built heritage of the city's industrial areas so as to provide a strong ecological basis for biodiversity. Biodiversity increases in the area meaning a stronger overall ecosystem, which combines with the social measures implemented by the Paris pilot, meaning more equal access to greener spaces for everyone.

Vergers Urbains create new gardening possibilities within the pre-existing built heritage of Paris, such as the work, in collaboration with the Paris pilot team, within the former industrial railway in the 19th Arrondissement of the city known as 'Le Petit Ceinture'.



Figure 5 - Le Jardin des Traverses, one of the projects of Vergers Urbains in 'Le Petit Ceinture' [15]

2.1.2. Additional values for heritage as a catalyst

This section continues the development of the conceptual basis of the latest iteration of the Living Archive, explaining the addition of two values.

In the previous iteration, various aspects related to ethics and values were discussed. For the current Beta Version, it is worth stressing here the core tenants of those discussions:

All pilots contributing and using the Living Archive (including all local heritage engagements) need to consider critically issues of intellectual ownership, privacy, authenticity, and trust.

Pilots need to develop and follow codes of ethics, such as the core values and ethics codes for professional archivists [16] and the ethical discussion around word choices presented by the Dutch National Museum of World Cultures, can serve as a frame of reference [17].

With regard to values, being a core organising mechanism of the Living Archive, the previous iteration offered a detailed discussion of the 10 Fab City Principles [18] which does not need to be repeated here.

There are however two important new values to unpack further: (1) Criticality and (2) Curatorial agency.

2.1.2.1 Criticality

There is no lack of historical research, local history database(s), community driven Wikipedia pages, local historical societies, industrial heritage reading groups, academic publications, heritage community magazines, etc. Why then stimulate the FCH-teams to engage in the field of heritage with (yet) another Living Archive? Three perspectives on this value were discussed in the HWG. All three perspectives can be understood within the context of the broader aim of CENTRINNO to working with the idea of re-generation, i.e. “[...] striving not only to prevent harm, but to redress that which has already been done and regenerate what has been lost.” [19]. Note that this approach differs a lot from the idea of revitalization of former industrial sites primarily by focusing on the re-use, restauration and/or development of the industrial buildings with the aim of enhancing its attractiveness for tourists [20][21].

- 1 Showcasing the (former) industrial place as heritage
- 2 Showcasing craftsmanship as heritage
- 3 Showcasing raw materials as heritage

1) Showcasing the (former) industrial place as heritage

Focusing on ‘forgotten’ stories related to the old buildings or other tangible remains from the industrial past, there seems often to be a longing to reconstruct the complete history of the site: how did the industrial complex look like? What have these buildings been part of? It is also what seems to be suggested in the article ‘Milan. Creative Industries and the Use of Heritage’ by Giovanna Fossa [22]. Reflecting on how remnants of the industrial period are treated in Milan she concludes: “There is the risk of preserving only passive skeletons, instead of historic landscapes integrated in contemporary activities. That would be a pity, especially in cities like Milan and Sesto, where working hard is in the peoples’ DNA. [...] What happened to architectural monuments in the architectural concerns at the beginning of the 20th century [...] must now be applied to post-industrial monuments: Industrial archaeologies and their texture and living landscape of memories must be involved in order to inspire and root such renewal projects.”

This text can be read as a call to respect the remains– and to re-create the rest, while it could also be argued that these sites are to be regarded as ‘contested heritage’: why would we like to foster them in the first place? What exactly are we celebrating? And why? What if we – if you – would suggest to get rid of the factory, to demolish it? Why this longing for ‘reconstruction’? Is it maybe because we – they – are afraid to lose income? But who or what exactly profits?

2) Showcasing craftsmanship as heritage

A focus on the craftsmen and craftsmanship in the former industrial areas, brings other challenges. The Amsterdam pilot team, for example, has chosen this option, and made a small exhibition, showcasing ten makers of the former industrial area in Amsterdam Noord: Buiksloterham, as well as from many other European pilot sites. The preparation, opening and hosting of this exhibition stimulated the pilot’s local community engagement. It sparked positive energy and pride of people in the makership – which fits well with the core ambition of this pilot to make making more visible and appreciated. Reflecting on how this local engagement related to critical heritage work, some questions remain: in how far is this exhibition also a commercial activity? And what would happen if we would make it into one? The makers need to make a living. FCH-pilots could reflect from this experience: how do exhibitions like this change the relation between the different craftsmen and small enterprises? Who is selected and based on which criteria? What is and what should be the role of CENTRINNO in this respect? What if we would make these questions part of the exhibition?

The dilemma of showcasing is omni-present in the world of heritage and craftsmanship. The UNESCO list for intangible heritage offers many interesting examples: on the Dutch list we can find the craft of diamond cutting, supported by two commercial companies: Coster Diamonds and Gassan Diamonds, and henna art, the traditional craft for which Fatima Oulad Thami wrote the application Henna art as craft. She received the certificate from the UNESCO committee and, it says on her website: because of this she is the one and only Henna Artist who is allowed to carry the logo of the Dutch Inventory for Intangible Heritage. Being considered ‘heritage’ empowers and acknowledges craftspeople [23].

3) Showcasing raw materials as heritage

What are the challenges (and opportunities) of a focus on materials working on the development of productive, sustainable and inclusive hubs? What happens if we think of materials in terms of “heritage”? How is or how has been for example wood or wool valued by different people? What happens if we do not showcase places, or people, but **natural resources** as heritage? A focus on materials is a very promising approach, as it drifts away from the human-centric view on the value of the past, to look more at what nature is offering us, but also what it means if we use to make profit. Wood, wool and other materials are good to think with. What is the history of a single tree? How does a thread of wool traverse decades of history?

This critical perspective is more difficult to transpose into ‘stories’ for the Living Archive, perhaps, but it does offer more proximate opportunities for FCH-teams to connect their ambitions in the area of circular economy and heritage.

When choosing what to label, foster or foreground as heritage, for example in the curation of the Living Archive, it is important to take into consideration the impact of the selection process and its related activities, not so much in terms of money, but in terms of – literally - profit: who or what profits from ‘heritage making’? We can work on it, in line with the idea of “true price”. “A True Price is the market price plus the social and environmental costs of a product. A

growing number of farmers, producers, shops, wholesalers, cafes, restaurants and supermarkets work on true pricing.” [24]

2.1.2.2 Curatorial agency

A second value to unpack which relates to the ethics and values of creating a Living Archive, which builds on the points raised above, is the question of **agency and curation**. In the CENTRINNO project, pilot teams could be considered as UFOs who – in peace – seek to connect, take root, nest, among a pre-existing social, cultural, economic, political and environmental context of an area. Working on the different key concepts, these teams face various challenges. For example, as part of the urban mapping activities done in CENTRINNO in the context of the Cartography, in order to make a difference in the circular economy area, they research and identify stakeholders, map the ecosystem and find leads for circular opportunities. With the concept of heritage, the teams touch upon more sensitive and difficult to quantify or process aspects of life – the past, what matters, for who, and why?

Other aspects that need to be critically reflected upon is the role of the European consortium behind all the pilots, the programme and impacts envisaged by the European Union, and the coaching -, advisory, and developmental role of the AHK, who provides the only heritage/history expertise in the consortium.

In the Living Archive Alpha Version, it was ascertained that pilots would ensure local participatory work to find out which topics matter for people in their areas, organise EN sessions around these topics and collect material (i.e., stories), and *with* the community create an exhibition. This model did not work in most pilot’s situations. In some cases, this was to do with logistics and planning, as for example several exhibition activities are planned by the pilots to take place during the third, and final, sprint period. But in other cases, the process of ‘landing the UFO’ on the delicate subject matter of heritage simply needed more time. While pilots are able to organise participatory events, it turned out that overall, it would still be their leadership among the community which would remain the driver on all the heritage work. Put shortly: they remain, as FCH-teams, the curators of their Local Living Archive, and as a group, alongside the AHK, as the co-curators of the online Living Archive.

This aspect has affirmed, toward this Beta Version the importance of **defining clearly roles and responsibilities** to fulfil the curatorial tasks, and implores the Living Archive to also create a curatorial policy. This is envisaged below in section 2.1.4.

2.1.3. Stronger relations to the CENTRINNO framework

This section shows the stronger link to the CENTRINNO framework within the development of the Living Archive.

In the previous iteration of the Living Archive, the position of the resource amidst the CENTRINNO Framework (see Figure 6 below) was established [4]. This has not changed significantly.

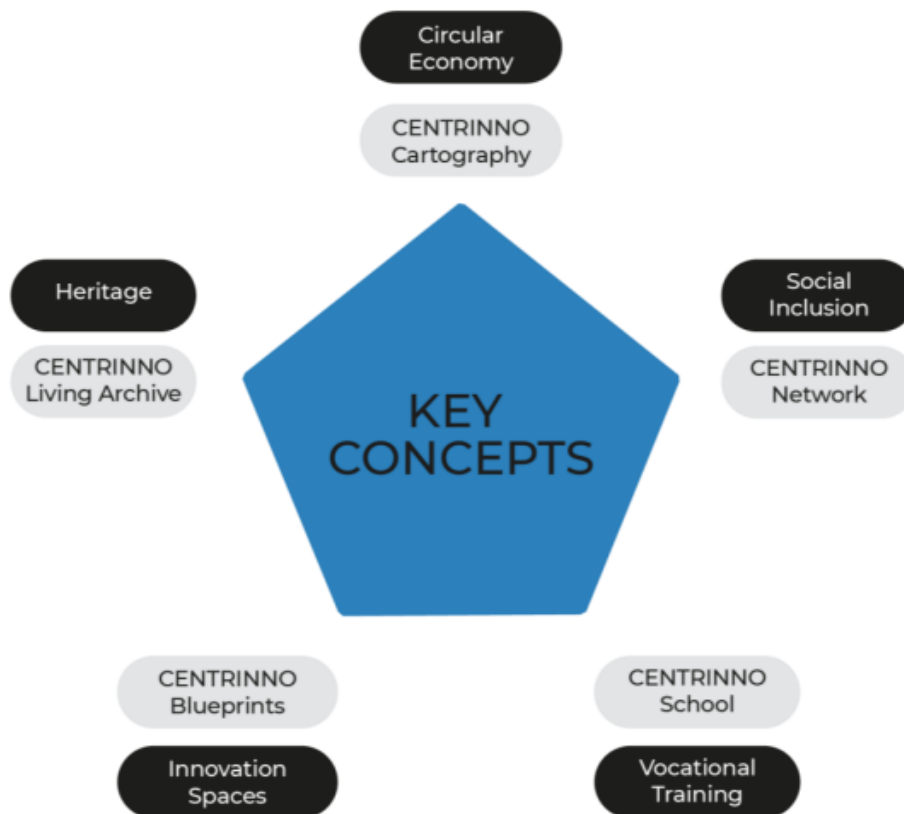


Figure 6 - The CENTRINNO key concepts framework, as first delineated in [4].

Some small developments in the thinking about the relation between the key concepts are worth describing here:

- The Living Archive explores and presents stories from the nine pilot sites, which (see 2.1.2 above) carry with them strongly the ‘voice of the FCH-teams’. In the Beta version, there is more attention given to ensure the interpretation of the pilot teams is documented and included. This carries a positive element of also making visible why a certain story is curated by a pilot for reasons that may directly relate to another key concept. For example, it could be that a story recognised as a ‘heritage opportunity’ is directly related to social inclusion, vocational education and/or circular economy.
- The Living Archive’s renewed focus on the importance of intervening in the actual post-industrial space (e.g., building, site) – as opposed to ‘merely’ relating the heritage work to the related people (e.g., carpenters) and/or materials (e.g., wood) – also means that the work on the concept of heritage relates more closely with the different approaches that pilots take in the set-up of the Fab City Hub (e.g., physical, distributed, etc.)

2.1.4. Enhancing the local and global usage(s)

This section shows how the Living Archive Beta version engages more with different usage, on the local and global scale.

Building up from the Living Archive Alpha Version, this version affirms the conceptual approach of the Living Archive as an open system. The following essentials still hold true:

- The outputs of various local heritage engagements (e.g., podcasts, walking tours, exhibition, public events) are designed by pilots as open, public-facing activities.
- The online outputs of the Living Archive, referring to the website (part a) where inputs from all pilots are collected as well as the reflective blogposts (part c), equally, are open and public-facing, but will find their ways more toward policy makers, researchers, fab city hub makers and more.

During the development period, the AHK team consulted various experts in the field of digital heritage, community archives and oral histories. At the conceptual level, these were especially concerned with the ethical dimension of ensuring that 'heritagisation' is not conducted in an exploitative way in which stories are collected and used without care for reciprocity.

How pilots engage communities living and/or working on, near or around the site where Fab City Hubs are being developed with their local heritage interventions can differ depending on the type of action, the intended outcome(s) and – more generally – the way(s) in which a pilot has shaped its local community work. The **scenarios** for such local heritage engagements (discussed above in 2.1.1) are however designed having in mind the importance/potential which the past holds to wage meaningful conversations with a diverse audience in the present, in order to contribute to a more circular, more inclusive, more connected, local society – hereby serving the key objectives of becoming a thriving Fab City Hub.

This subsection (2.1) explained the conceptual development of the Living Archive. In the next section we explain what these mean for structural changes made in the Beta design of the resource.

2.2. Structural level

This section outlines the structural changes of the Living Archive Beta version. As surmised above, the core structural elements of the Living Archive are continued:

It remains of high importance that the pilots work at the local level to identify ‘heritage opportunities’, referring – for example – to long neglected or forgotten traces from the past, elements of buildings, crafts and materials which can bring people together and champion the utility of emergent Fab City Hubs. By conducting Ethnographic fieldwork, researching the traces of the past in their pilots’ area, and organising Emotion Networking session in which a diverse group of people engage with a topic of contestation, they are able to understand various ways in which the past plays through and impacts in the present. Such ‘heritage wisdom’, or ‘historical awareness’ at the local level is necessary in order to decide what kind of other local heritage engagements would be possible and needed (see section 2.1.1 above). Throughout all these activities, pilot-teams learn about stories which they might wish to amplify/retell in order to inspire a wider audience to engage with the work of the hub. They use this knowledge to curate local activities (e.g., exhibition, booklet, area walk, local website, etc.)

Such stories continue to be collected/curated centrally by the CENTRINNO project in an online Living Archive, which was prototyped in the [Alpha version on Kumu](#). The specific of that version are detailed in the accompanying deliverable D2.3.

A proof-of-concept of the Beta version of this dimension of the platform can be viewed [here](#), and is elaborated with visuals in section 3 below. Here, using a tailor-made set of tags, they are put in a relational network which enables visitors to explore and learn how such stories relate to the [core principles](#) of the Fab City movement.

These insights – how different stories relate to one another, how different methods of engaging local communities, etc. – continue to be shared through blogposts in order to spark new questions and conversation on the role of heritage engagements in the quest for more circular and inclusive societies.

How these three structural elements are furthered in the Living Archive Beta Version is shortly discussed below in subsections and elaborated in more detail in section 3.

2.2.1. More guidance for local engagement

This section outlines the development in the Living Archive Beta version’s capacity for local engagement.

In the Living Archive Alpha Version, pilots were presented with **guidelines on participatory exhibition making**. These were made up of designated actionable steps, designed from the practice of the Amsterdam-based organisation Imagine IC. At the start of the second sprint period, the AHK observed that the aim to create an exhibition was perceived by pilots as a large subproject, and therefor was pushed ahead to the third sprint period by most pilots. Because of this, it was decided to use the invaluable face-to-face time at the CENTRINNO Consortium Meeting in Barcelona (17th-19th May 2022) to conduct a workshop with all on how local engagement does not need to be large and/or all-encompassing.

The guidance on participatory exhibition making is developed further and included in the FCH Toolkit (D3.3), where more is explained about how it was intended, and how pilots are using it.

2.2.2. Technical advancements from the Kumu Alpha Prototype

This section explains the technical developments from the Living Archive Alpha version.

The Living Archive Alpha version included an online environment designed in Kumu, an open-source data visualisation tool. This prototype was important as it visualised the relationality among stories and tags.

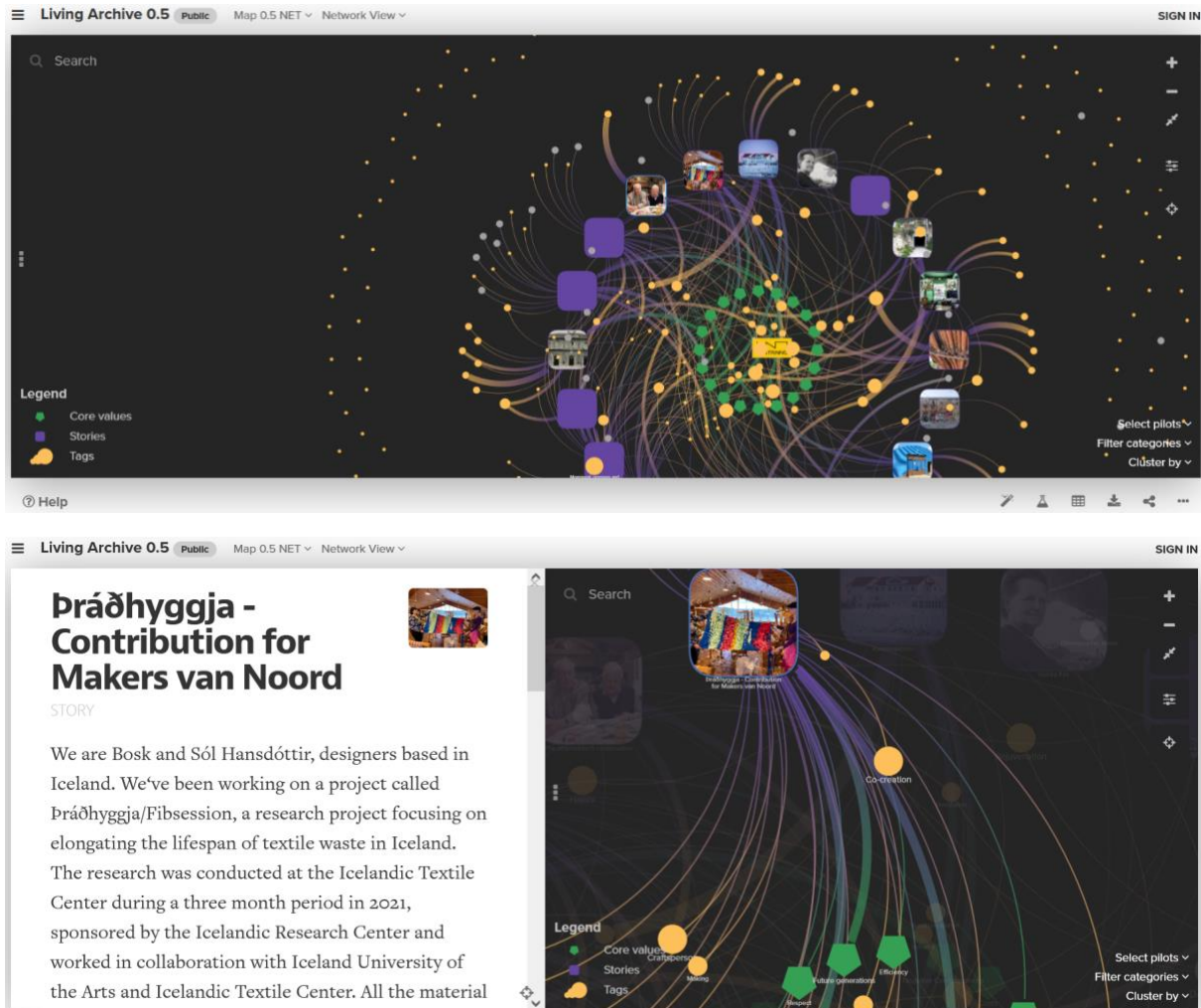


Figure 7 - Living Archive Alpha Prototype on Kumu

However, during the second sprint, as the number of stories and tags grew, it became evident that it was not a sustainable solution to ensure post-project usage and development. In this subsection we describe the main changes between the initial Kumu prototype and the new website developed in Sanity.io. In section 3 the new website is presented in more details, while this subsection described and justifies key changes.

During Sprint 2, the prototype designed on Kumu was used by the AHK team to store stories which the pilots had uploaded through the project-internal pilot dashboard, hosted on Microsoft Teams. Various limitations were identified in this process:

- The process to store and then move data from the “Dashboard” to Kumu was cumbersome and risked losing data quality, as it required several manual export/import actions.

- The Kumu network visualisation became difficult and slow to navigate due to the increase in data points and data size. These issues could have been countered by purchasing an Enterprise version and running Kumu on the AHK servers, but would bring complicated technical policy and pricing discussions, which at this stage, without securing longer-term commitment, would be a risk.
- The growing dataset made it necessary to split the data into different visualizations (e.g. focusing on just a cluster of data), which was impossible with Kumu.
- Kumu allowed little to no interface customization, making the process unappealing to users and pilots, but also making it impossible to utilize the CENTRINNO branding and design elements for the final product.

As a response to these challenges, the AHK team initiated a round of consultations with web developers and practitioners in the field of digital humanities, community archiving, and network visualisations, to work toward a new build of the Living Archive Part B.

The table below provides an overview of the results of those consultations, pointing toward the decisions taken in the design of the new website. Section 3 presents how these recommendations were integrated in the Beta version. Section 4 of this deliverable unpack further planning of this website toward the final version.

Table 3 - Overview recommendations for technical development

Recommended change	Elaboration	Impact on the Living Archive design
Cease development of the Kumu-based prototype.	<p>In order to anticipate 400+ stories on one visualisation, Kumu (which comes as a client build, with limited control over the server, and potential legacy issues in the longer-run) is not the way forward.</p> <p>The web developer also pointed to the data architecture which has some limitations on Kumu in terms of creating parent-child relations (e.g. between tags and groups of tags, and to distinguish the core values and stories as other data points).</p>	<p>Kumu's role as mock-up /prototype was sufficient and enabled the project to work on the initial co-design.</p> <p>The envisaged advantage of connecting between the usage of Kumu in the Living Archive and Cartography infrastructures remains possible through external linkages at the story / tag / core value level. Specific modes of integration will be explored and set in the third sprint period.</p> <p>The data fields for the entry into the database of stories iterates forwards from the Dashboard form.</p>
Ensure Beta functions as Proof-of-Concept (for longer term development)	<p>D2.5 is entitled "Living Archive Beta". Concretely, it is a Proof of Concept (POC), which means it is (1) fed by project content sourced by pilots and the AHK team, (2) accessible online, (3) enables implementation in sprint 3.</p> <p>The reason to frame the website as a POC (and keep "Beta" as an</p>	<p>The Kumu prototype enabled flexible, quick testing of the interplay between concepts, needs and functions. At the current development stage, the functions identified should rather be made in a different platform to foster stability, longevity and sustainability of the design, development and usage.</p>

Recommended change	Elaboration	Impact on the Living Archive design
	<p>overall progress marker for the deliverable) is that in this iteration the focus is on the data architecture, front and back-end structures (pages, forms, users, visualisation / relationality etc.), and ensuring the public-facing design is co-created during the third sprint with the pilots.</p>	
<p>Ensure solid database construction</p>	<p>POC uses backend, hosting and frontend services which provide more safety to build data management, user-rights for pilots, multimedia repository, forms design, in stable, supported and secure systems (backend), while having full control over the hosting.</p> <p>The AHK is collaborating with web developer Alessandro Amato to both build, and help maintain this system until the end of the project, as well as provide documentation to allow AHK and CENTRINNO to do this themselves.</p>	<p>AHK, Reinwardt Academy Cultural Heritage Research Group has the intention to commit to continue hosting and maintaining the platform until 2027 (re. GA), as the LA system can be used for other (dynamic/interactive) heritage projects.</p> <p>A central advantage of the data design should be the possibility to load new pilots/places/projects to the same web structure.</p>
<p>Develop easier content curation</p>	<p>In Sprint 2, pilots have uploaded their stories through the project-internal Dashboard. This repository remains active during the POC development phase.</p> <p>Then, in the stable POC 15-20 stories will be used as exemplar content, these are sourced by pilots (Sprint 2, see above) and AHK, and are meant to show (prove) the concept of the Living Archive website.</p> <p>It is expected that pilots will all achieve their KPI markers, ranging between 15-20 stories per pilot in Sprint 3</p> <p>The POC will provide a new, easier-to-use form (with very similar fields arrangement as on the dashboard) to enable pilots to do this</p>	<p>The Beta version will include a new user rights and roles management in the back-end, with one author/form submission account, or per pilot.</p> <p>The Beta version will provide a clear timeline on how and when pilots will be introduced with the new back-end, and ensure easy and smooth workflow (see Section 4 below).</p> <p>The AHK team creates with each pilot a timeline for when which stories will be collected and ready to be uploaded, and figure out which (Part A) local heritage engagement activities will take place in sprint 3.</p>

Recommended change	Elaboration	Impact on the Living Archive design
Ensure clear co-design pathway	Sprint 3 is the last period of work for the pilots during the project, so they need to be very well aware of the Living Archive’s development needs. It is important to design an efficient co-design process, making clear how pilots are involved and at which stage on issues like (a) form design, ease of use, (b) visualisation design / applicability, (c) referencing to own website, linkages)	<p>Explain how various elements of the new build will be tested and iterated upon during 2023, and the path toward final. This is noted Section 4, including development timelines, needs and interactions.</p> <p>The project “Heritage Working Group”, in which each pilot is represented, take co-ownership of the design process.</p>
Design for public access	<p>The POC forms the (live and functioning) core of the online LA, but it will not have yet in D2.5 a fleshed-out design. Because most pilots plan to conduct more local engagements (Part A) during Sprint 3, it is important that this design elements (welcoming users, showing the urgent and humane potential of heritage, and inviting users to navigate through stories, tags, values) are developed during the sprint.</p> <p>The risk is that pilots might be showing their communities something which does not look yet ready, but the key point is that the core functionality will be used, and useful.</p>	<p>Whereas the Alpha Version did not specify how the data/network visualisation is geared to be easy-to-use for the public-at-large, the Beta version’s POC is set up to co-create a designed website which is appealing and inviting.</p> <p>In the Alpha version, the Kumu prototype brought the visitor directly to a network visualisation, which – due to the increase in data points and linkages – became difficult to navigate. Providing a network visualisation however is of key importance to make visible the relationality among stories and tags. Thus, in the POC, the network visualisation is nested in each instance of reading out the data at the story- and/or tag-level.</p>

2.2.3. New taxonomy

This section explores the new taxonomical method of structuring collected ‘stories’.

In the Living Archive Alpha Version, the tags provided to codify the stories coming from the pilots, were manifold and many (over 300). An important change for the Beta Version is the creation of a taxonomy among these, and the further fine-tuning of the selection. Instead of adding many tags ‘at random’, the online Living Archive Beta Version administers the stories online with a set of 13 sequenced categories of tags, composing a summary sentence (one-liner), and adding tags in 3 interpretative categories. This is presented in more visual form in section 3 below and with details in Annex 3. This change was developed in order to (a) ensure **easier structuring of stories** during the collection process (b) ensure **better transferability** of the structure to other sites in the world, (c) connect better with the **Fab City principles**, (d) support pilots more to identify why they – as **engaged curators** – *want to retell/share a story*.

The taxonomy makes it possible to compare the stories and through this helps to achieve the goal of the Living Archive to see the bigger picture.

In CENTRINNO, we focus on the relationality of things, and work with network/system theory: making the system and its dynamics visible and insightful [25] [26] [27]. This mission informs the design of **The Living Archive**.

It is not 'just' a depository, but it aims to help people to see the bigger picture, and the more dynamic system at play: regeneration is only possible if people fully understand the site, i.e., if they come to see the bigger picture. This includes how these sites have been formed over the years, how the past works in the present and how these sites are part of the world.

Which similarities and which differences between the sites come to the fore? Our (=CENTRINNO's) hypothesis is that **it helps us to investigate this question by summarizing stories in one sentence based on the following shared narrative:**

All over Europe (and elsewhere) there are sites that went through a more or less similar development: industrial sites, where people made their living (and created memories), had an impact on the environment and the soil, before the industry and (some of) the people left, the sites were abandoned, newcomers came, policy makers and project developers came, rents started to rise, other groups of newcomers came, residents started to be concerned, wondering what would happen next, whether they can stay, whether they will have to move.

The Living Archive design (cultivating the method of Emotion Networking) enables people to study the complex network in which the stories collected by CENTRINNO pilot teams are embedded. It is designed to show how individual stories are related to each other, and how they are part of a bigger 'system' of relationality. This design helps to make sense of individual stories, to better understand the system and its dynamics, and finally to intervene in a meaningful manner, that is: meaningfully and ethically contributing to the process of re-generation of former industrial sites.

New strategy in one sentence: All stories that are collected can be summarized in one sentence, containing a number of fixed elements. The structure of the sentence is also (more or less) fixed, based on the fact that all pilot sites in CENTRINNO are sites where the industrial past impacted the present. The use of a one sentence structure is not intended to be limiting (and opportunity is given to elaborate further throughout the story collection process), but rather enables the possibility of a standardised structuring of the varied elements that comprise diverse and varied stories. These one-liner sentences, are composed of 13 features:

1. On a specific moment in **time** (period)
2. In a specific **context** (after/during a significant moment or event, e.g. earthquake, strike, communist era)
3. At/in a specific **place** (factory, dwelling, school, garden, street, etc.)
4. Which is characterised by certain **physical/material things/features** (flag, graffiti, fountain, trash piles, trees)
5. **People** [craftsmen, workers, residents, migrants, tourists...etc.]
6. **Live** (sleep, eat, work, strike, sing, earn, furnish, decorate, celebrate, fight, pray... etc.)
and
7. **Make** (produce etc., weaving, farming, bee keeping, etc.)
8. **Things** (food, furniture, honey, cloth...etc.)
9. Out of/using **something** (materials, wool, steel, wood, etc.)
10. Thus **impacting**/changing (extract, demolish, exhaust, etc.)
11. On a certain **scale** (local, regional, global)

12. To the **environment** (water/soil, ecology, air quality, space, other living creatures/things, ...etc.)
and
13. Impacting **people**: how they feel, what they dream about (senses, emotions, memories)

Applying this structure as a means to construct one-line summaries, a story sentence could look like this: *1. Twenty years ago 2. one month before the factory closed its doors, 3. in the meat factory 4. men 5. were singing folk songs 6. while producing 7. the last order of canned meat 8. from cattle 9. that had been transported 10. from local farms 11. that bred hundreds of bulls, 12. bringing excitement to people all over the world who loved to eat the canned meat at special occasions.*

It should be noted that the 13-element sentence structure is a guideline and a method of standardising the uploading of content, rather than something to be considered as a box-ticking exercise. Not all stories will have each of the 13 narrative elements, nor each of the 3 interpretative elements (following this paragraph).

Adding interpretation: Following the one-liner with 13 features, 3 interpretative concepts are added, using (1) tags offering certain ethnographic concepts/lenses, (2) tags with the centrinno core values/principles and (3) tags related to the idea of industriality. This last layer is important, as the core mission of CENTRINNO is to turn the former industrial sites into lively industrious, re-generative, inclusive hubs where locals know how to make, repair, produce things on a local level:

14. Ethnographic concepts: how to make sense of what is happening here? Examples of ethnographic concepts/lenses are: Gentrification, Aesthetisation, Exotications, Commodification, Appropriation etc. In one way or another these concepts refer to changes that occur as a result of societal interactions.
15. Fab City Principles: The CENTRINNO envisions that on former industrial sites sustainable, socially inclusive hubs come into existence. To this aim, CENTRINNO works with the ten principles of the Fab City Movement, which predate the CENTRINNO project, as well as the emergent 10 Fab City Hub Principles which are developed in the project and are tailored to the designs of Fab City Hubs.
16. Industriality: At the core of the mission of CENTRINNO is the 'light re-industrialisation', or at times called 'citizen's industrial revolution' of Europe. These visions situate a certain vision on making, crafting, etc. Among the partners and networks of the project, they refer to experimentation of making things, to a DIY mind-set, and to the desire to work on small-scale level via circular and sustainable methods.

2.2.4. Integrate reflections on Centrinno.eu

This section outlines how the Living Archive Beta version allows for collected content to be integrated on centrinno.eu.

Work on the heritage dimension in CENTRINNO is highly qualitative in nature. Pilot teams have various conversations with their local partners, as well as among each other on the European level about this aspect. At the European level, the task is to research and make sense of how (post-) industrial heritage can be used as a catalyst for more circular and inclusive change. For pilot teams to be able to do this, training has been provided (on Emotion Networking, on Fieldwork, etc) on a decentralised basis. However, in order to co-design the Living Archive, more qualitative collaboration was needed. For that purpose, the Heritage Working Group was created. Sessions in this group develop and deliver the type of reflections

needed for the AHK team to lead on the writing of analytical blogposts reflected on the value and connections within and between stories.

As more stories are gathered in the online Living Archive, and more interconnections and relations made visible among tags, as well as among Fab City Principles and the emergent Fab City Hub Principles, more relevant and insightful reflections can be noted and published on Centrinno.eu using the hashtag #heritageopportunities. At the same time, it is vital that we make visible the need for critical approaches. Labelling and treating and showcasing 'old buildings' as heritage is [often] part of the problem of gentrification. This needs to be acknowledged, and reflections in this part of the Living Archive are meant to present this criticality.

2.3. An updated resource concept

Having discussed the conceptual and structural changes since the Alpha version, the overall concept visualisation of the three Living Archive constituents – as presented in section 2.1 above – is hereby adjusted to:

- Include **five scenarios for local engagement** in relation to the key concept ‘Heritage’ (Part A);
- Refer to the subdomain **la.centrinno.eu** instead of a stand-alone Kumu build (Part B);
- Deliver a taxonomy as a transferable result instead of thesaurus.

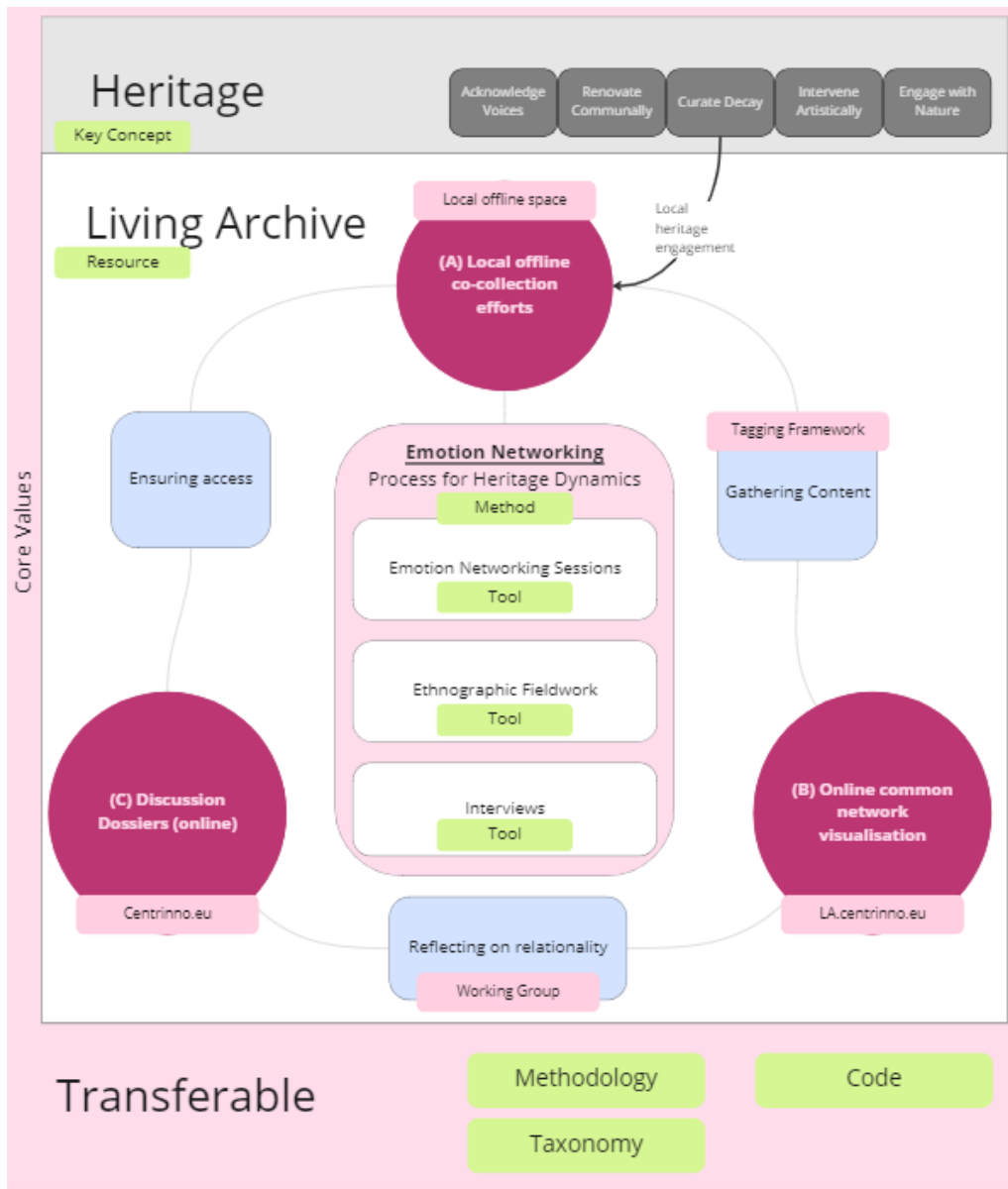


Figure 8 8 - Iterated conceptual flowchart of the Living Archive, including the new scenarios

3. The Beta Version

The previous section described the conceptual and structural changes to the Living Archive resource from its earlier Alpha iteration (as described in D2.3) to the current Beta iteration. In this section, we describe the resulting Beta version.

3.1. General set-up

The general set-up of the Living Archive Beta version is explained here. As detailed elsewhere, the CENTRINNO Living Archive is composed of three parts:

- **Part A** (described below in section 3.2) is about local curatorial heritage activities, whereby pilot teams deepen their knowledge and understanding of how traces of the past play a role in the present. Pilots observe the former industrial site, organise Emotion Networking sessions, conduct interviews and by doing so collect stories. Through local exhibitions and/or other presentational activities, they ensure these efforts foster inclusive participation. Such local engagements happen in many ways, which are conceptually framed as five scenarios (see section 2.1.1 above)
- **Part B** (described below in section 3.3) is a European/international multimedia website where the pilot teams together with the AHK curate an online Living Archive. It's current Proof-of-Concept version can be accessed [here](#). Stories selected by the pilot teams of particular relevance and/or significance to stimulate change are made available online. Each story is uploaded applying three layers of information:
 - o **Information layer** where actual information about the collected story and related media is provided.
 - o **Narrative layer** where a taxonomy of tags is applied across 13 categories following a structure which delivers a one-sentence summary.
 - o **Interpretation layer** where three 'lenses' are applied to enquire the pilot which uploaded this story on matters of relevance to the specific nature of the selected story.
- **Part C** (described below in section 3.3) is a series of reflective blogposts which provide reflections on the activities of Part A and the collections of Part B. These are accessible through the CENTRINNO main website using the hashtag #heritageopportunities

3.2. Offline local heritage engagements

The way in which the Beta version allows for offline local heritage engagements is outlined below.

Pilots are invited to organise local activities in which they seek to engage with traces of the past on and/or around their (former) industrial sites. These activities can be seen as '**local heritage engagements**'. It is however important to avoid labelling something as 'heritage' before engaging with it, with people who care (or don't) care about it, and so on. As explained above (section 1.2), the Living Archive is conceived on the notion that heritage is something which is made in interaction.

The local activities of the pilots enable the teams to 'land' in the area. By conducting ethnographic fieldwork, organising Emotion Networking sessions and talking with a variety

people who hold a variety of relations to a variety of traces of the past, pilot teams learn about how the past is effecting the present and they identify the potential of harnessing these effects toward a future they envisage for the site.

The local Living Archive is formed from the sum of the pilots’ local activities and interactions. These interactions occur in (at least) five scenarios (see section 2.1 above for detailed conceptual discussion of these scenarios). The scenarios are developed in order to inspire pilots to design their local engagements. At the core of all scenario’s remain the defined tools and approaches.

In order to organise such activities, the CENTRINNO pilots, as well as future teams who seek to establish Fab City Hubs, are supported with guidance in the form of “How To’s”, which are made available in the Fab City Hub Toolkit (D3.3, forthcoming). These include:

- How To Emotion Network
- How To Ethnographic Fieldwork
- How To Co-Collect (participatory exhibition making)

These guiding documents will be made available in D3.3 and in the context of WP3, the project will facilitate pilots in further usage and knowledge and experience exchange through various interactions. This toolkit, moreover, also includes references to other guidance on oral history work and interviewing approaches.

3.3. Online Living Archive website

Following from 3.2, the following section explains how the Living Archive Beta version will be implemented online.

The online multimedia repository part of the Living Archive in this iteration functions as a Proof-of-Concept (POC). It is important to be reminded that the POC has only light/basic designs, and is mainly built to ensure a stable and durable data structure. Following the conceptual and structural changes (described in Section 2 above), the following URL allows to view and interact with the [POC](#).

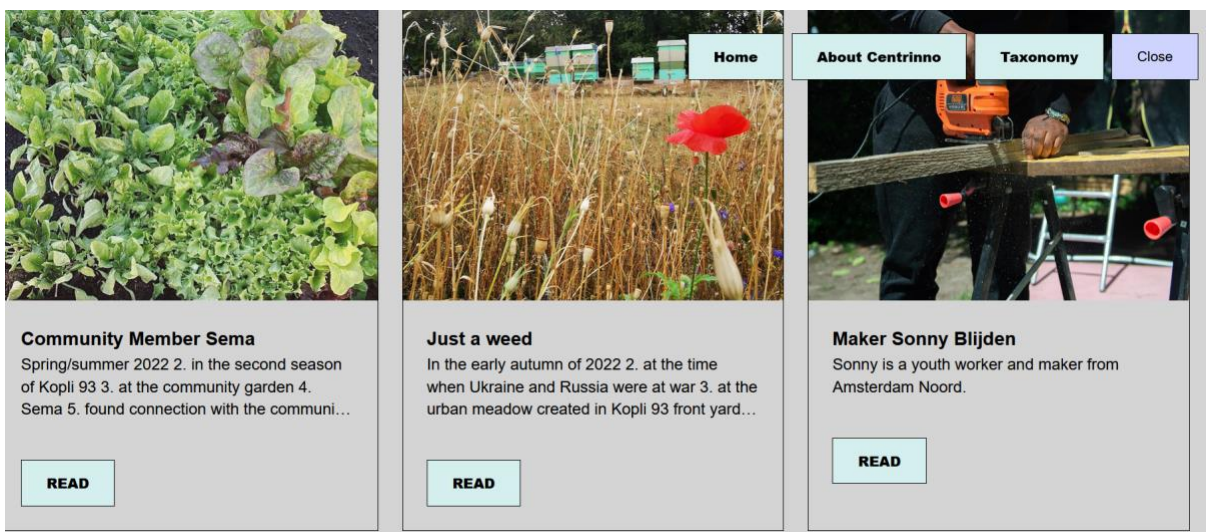


Figure 9 - Screenshot of the Proof-of-Concept landing page

In this subsection the data design, content structure, pages view and navigation as well as technical specs are presented.

The process of developing this POC has been led by Alessandro Amato, and included conversations with expert-practitioners in the field of digital humanities, desk research and various co-design sessions with members of the AHK team.

The idea is to find an ideal way of presenting both the content (stories) and the underlying network of the Centrinno project. Since data visualizations often tend to overcomplicate things and overwhelm the user rather than providing a positive experience, the challenge is to find a comprehensive way of telling all the stories that are part of CENTRINNO while still giving a sense of purpose when navigating the platform.

Two main references were the basis of inspiration for the POC:

- <https://javastraat.cloud/> An incredible example of what can be done with content as a data form. However, this results in a confusing/overwhelming experience in this case which would clash with the story-telling purpose of The Living Archive.
- <https://animalsasobjects.org/> - A more suitable example, where stories, articles and excerpts are all linked to each other in a one-to-one network relationship.

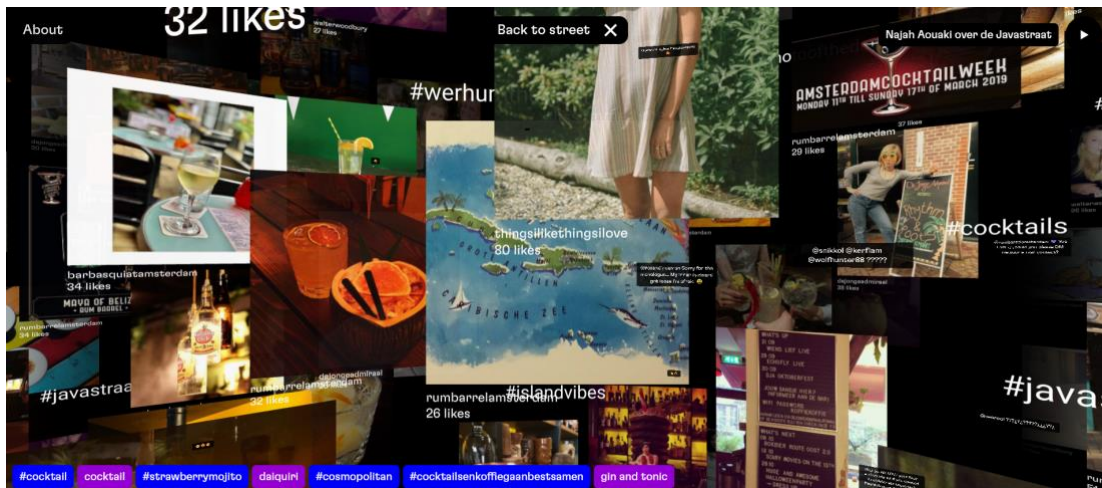


Figure 10 - Screenshot of the Javastraat website



Figure 11 - Screenshot of Animals as Objects website

3.3.1. Data design

This section outlines how data for the Living Archive Beta version will be designed and organised.

The first challenge was to organize the data collected by pilots in a way that would allow a clear architecture. This led to an editorial effort from the team to combine tags, remove redundancies, and generally create a more usable database.

The data then showed **three** clear, intertwined structures:

- Stories
- Tags
- Categories

Stories, the main data structure, features **tags** which in turn are assigned to an overarching **category**. In other words, a category can contain multiple tags, but a tag is always assigned to one single category (i.e. Place -> Brewery, Factory...).

The data models were then built in the following way:

- **Story model:** Containing all the **content** related fields including **metadata** (author, location, pilot, date), and assigned tags (in an array). Each tag then automatically features the category it's assigned to. The content fields of each story will also be **modular**: a user can structure a page with more images, galleries, videos and text and rearrange their order at will.
- **Tag model:** Containing for each tag a **title**, a **definition** and an **assigned category**, or multiple assigned categories.
- **Category model:** Containing a **title** and a **definition** of the category.

The relation between tags and categories can be explored in Annex 4 below.

3.3.2. Content

This section outlines how content for the Living Archive Beta version will be collected, which relates directly to the CENTRINNO KPI "stories". This builds on the broad approach that a story can be defined as being any item of media (text, audio, video, photography, drawing, etc.) which is presented and 'has something to say'.

The content of the Living Archive website are stories. As previously outlined in D2.3 [1], the definition of 'stories' is broad and allows room for interpretation and the different contexts of the pilots. Stories can be text, images, audio, and beyond (or a combination).

The AHK team learned that a more focused approach, with both less tags and a more structured tagging system, was necessary (see section 2.2.3 above). The point of departure was the 'thesaurus' definition used in D2.3 [1]. During Sprint 2 the HWG tested the Tagging Framework, containing the tags with which the collected stories are associated.

Following this insight, the Tagging Framework was improved by removing superfluous or too-similar tags (while retaining the capacity to add and save new tags that the pilots assign themselves). Further, the development of a hierarchical 'one-sentence' structure provides a much-needed standardisation of the manner in which stories are collected and reported, while still being flexible enough to ensure that the depth and variety of different contexts, and the stories they bring, are possible. This was considered necessary because of the feedback from pilots from the HWG, which made clear that the somewhat 'random' feeling of the multitude of

tags was overwhelming and difficult to work with, as well as the fact that it helped the AHK and the pilot teams to have a more streamlined approach to curating stories. The one-sentence structure was tested with the HWG in December 2022, and the attendees’ feedback was implemented.

The content is thus including of three layers of data: **informative**, **narrative**, and **interpretative**. When pilots upload content, everything that is uploaded also corresponds to these three layers. These are indicated in **Figure 8** visual below, and also accessible on the [Proof-of-Concept online](#), by choosing “Taxonomy” from the Menu.

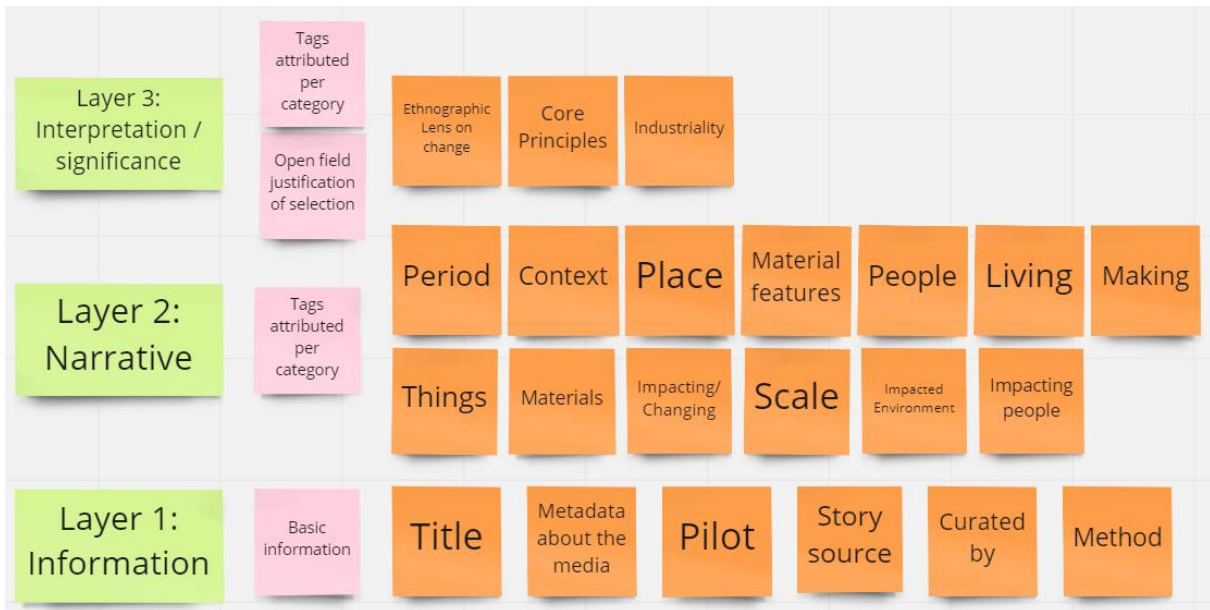


Figure 12 12 - Outline of three layers of story content as developed in the HWG Miro Board

The first layer concerns the more logistical **information** related to the story. This includes the title, the pilot(s) concerned, the story’s source, who it was collected by, what kind of story media the content is comprised of, and so on.

The second later concerns the **narrative** of the collected story. This is where the bulk of the tags are relevant, and where the pilots fill out the content collection forms on the website according to the one-sentence structure. Again, this layer is characterized by tags relating to the 13 of the 16 categories of tags. For the full tag list, see Annex 2.

The third and final layer concerns **interpretation/significance**. In this layer, more tags are applied to the content which indicate how the story is relevant to the CENTRINNO mission, namely how it relates to the FCH principles, how it can be understood in terms of ethnographic terms or concepts, and how it relates to notions of industriality or productivity.

3.3.3. Pages

This section outlines how the Living Archive Beta version will be navigated.

The following link contains the preliminary design and wireframes for the application with notes to explain the experience and interaction between components:

<https://www.figma.com/file/osXk6mmwA3kAq1BoTHtOyw/Centrinno-Wireframes?node-id=0%3A1>

The wireframes (Annex 2 below) will be expanded in the final phase of the project, which will then provide the basis for the final visual designs and prototypes for the application.

Table 4 - Overview of pages on LA Beta POC

Page	Function
Homepage	Main landing page on the site, from which users can be directed from the main CENTRINNO website. This will feature an intro component (work in progress) and a selection of stories (editable in the backend)
About	An explainer page that briefly presents the CENTRINNO Living Archive, providing accessible descriptions of its purpose, the people involved, and situating the resource clearly in the larger CENTRINNO project;
Taxonomy	Page where the user interacts directly with the network of tags and categories, and the respective related stories. Interactions include dragging/positioning of all elements (stories, tags and categories) and clicking on any element to open a new page. It will feature a randomized (suggested) list of tags and categories to click on which will then lead to the filter page. It will also feature a search function that will populate results based on the user input
Filter page	Each tag or category will produce a “slug” or “filter” page when clicked on from either the taxonomy page or the graph nodes inside the story page. This page will show a title and definition on the left side, and on the right side a network visualization of the selected tag/category and its connected elements: other tags, the category it’s assigned to (if a tag), and the connected stories.
Story page	<p>Main page of the Application: it will feature a sidebar with all the metadata for each story: author, date, pilot, location, people involved, and a <i>smaller</i> network visualization to see which tags the story features, and which categories these tags belong to. The graph nodes will be clickable and redirect the user to the filter page.</p> <p>The main content part of the story page will be presented on the right, with a title and hero image as fixed elements at the top. All the rest of the content is optional and can be arranged and organized in different ways:</p> <ul style="list-style-type: none"> - Image galleries - Video - Audio files - External links - Text - Quotes

3.3.4. Usage

This section concerns how the Living Archive Beta version will be used. To that end we discuss various use cases.

The **Content Editor** – which is most likely to be a member of each pilot team, or of the AHK, will simply log into the Sanity Studio CMS with the given credentials. He/she will have to edit the relevant content models: tags, categories and stories. Tags and categories’ titles and definitions will always be editable (making sure that the reference to the stories and to each other is still valid with the changed name). To upload and correctly edit a story model with all its fields refer to **Annex 1** of this document.

The experience of the frontend for **website visitors** is straightforward: the user will land on the homepage via the centrinno.eu main page, search engines or promotion by pilot and be presented with an introductory, eye-catching component or animation (still TBD) that visually represent the Living Archive. This will already present stories with a link to their respective pages, and below will be the grid with a selection of latest stories published. A navigation element will allow the user to access the rest of the application: taxonomy page, where a user can search the network of tags and categories with its connected (children) filter pages, and the about page to know more information about the project as a whole. Ultimately, all pages and components will lead the user to the story pages, which still remains the core element of the project and the application alike.

The online experience is designed to be intuitive for the wide variety of potential users, including:

- Local community member who takes part in a **local Fab City Hub** might be invited by pilots and/or future FCH's to explore stories which relate to a topic to their interest through the search function and/or through the tags/taxonomy.
- Policy maker, researcher or other relevant stakeholders (e.g. makers, craftsmen) arriving to the Living Archive through reference from the **CENTRINNO Fab City Hub Toolkit** might be most interested in the About section and keen to browse the content through the lens of the Fab City Principle pages.

3.3.5. Specs and system

This section explains the technical specifications of the Living Archive Beta system.

Table 5 - Technical specifications

Name	Type	Function/specs
React/Typescript	Frontend technology	Custom web application written in React and Typescript, modern JavaScript frameworks which allow for great customization, leanness and maintainability.
API Based CMS, Sanity Studio	Content/Data Management System	Fully customizable CMS that is built around the data and not the other way around (WordPress, Squarespace...). Data models and fields can be re-engineered, expanded, mixed.
Netlify	Hosting Platform	Seamlessly integrates with all the other tools to create an orderly and easily maintained development environment.
D3	Frontend Library	JavaScript package that allows powerful data visualizations and custom interactions (what Kumu is built on)

3.4. Connecting the dots on Centrinno.eu

This section explains how the data from the Living Archive Beta version will be collated, analysed and presented on centrinno.eu.

The purpose of the Living Archive remains unchanged, but carries with it some new focuses and more precise iterations of earlier ideas. The CENTRINNO website, centrinno.eu, can function as an online location through which visitors can explore these iterations and ideas.

The primary new development is the Living Archive website, which has been detailed extensively above, and will be hosted on a standalone hosting platform, but redirecting to a dedicated subdomain: la.centrinno.eu website. There will also be a page on the CENTRINNO main website linking through to this subdomain. The Living Archive website's format, which displays the connections between different sites, stories, and contexts, simultaneously presents a way to engage with both the opportunities and the challenges presented by CENTRINNO's heritage work. The work that we, the AHK, have been undertaking in collaboration with the different pilots, will be showcased to show the progress and outcomes of the project, and indicate how there are possibilities to build on what has been achieved in the project.

The close collaborations with pilots that have been ongoing during the project's runtime will manifest in the form of analytical **blog posts** - Part C of the Living Archive - which connect the most interesting stories within or between pilots. These blogs will be written mainly by AHK, but in close collaboration with the pilots. The planning for these is included in section 4 below.

To illustrate, a planned blog post is found in the Tallinn pilot, whose Living Archive story entry about beekeeper Roland Põllu connects not only his family lineage - via his beekeeping grandfather who operated just beyond the Tallinn industrial shipyard complex - but also the flora and fauna of the surrounding environment of Tallinn's pilot site Kopli 93. Through the craftsmanship of Põllu's beekeeping, the Living Archive blog posts can explore the way in which the historical journey of bees threads together both the industrial history of Tallinn and the natural history of its ecological entities. As such, it can be seen as a way to connect human and non-human processes of development, presenting important speculative implications for notions of sustainability, circularity, and inclusivity.

Such an example is just one of many possibilities for how the analytical blog posts can increase the knowledge-sharing capacities for the CENTRINNO project, thereby connecting the heritage work embedded within the Living Archive with the priorities of WP6, through which this knowledge is valorised and disseminated.

In the final iteration of the Living Archive, blogposts posted on www.centrinno.eu will also be accessible from within the Living Archive, by providing links from related stories and/or tags to relevant blogs.

4. Co-design planning

4.1. Status beta development

This section demonstrates the ongoing development of the Living Archive Beta version.

In D2.3 Living Archive Alpha, a table was included in section 5, anticipating the development aims toward D2.5 Beta. This table is used below to note the status of each of these aims, and suggest an actualised development aim toward D2.7 (Final Version).

Table 6 - Overview areas of development Alpha, Beta, Final

Area	Beta Development aim(s) (from D2.3)	Status in D2.5	Suggested aim for D2.7
Core values	To deepen a common understanding of the central values which carry the project's central drive and ambitions for inclusion and circularity; To (re)develop a unified list of core values, which can be used to re-tag the contents (Part B) and provide richer insights (Part C), while connecting better to the needs and ambition of pilot sites.	AHK team has studied Fab City value frameworks and included this in the new/updated scenarios for local heritage engagement following the helpful midterm review by the European Commission. Subsequently, the Beta POC uses a data architecture which builds from / around these core values by operationalising them as a category of tags and querying the pilots at an interpretative/qualitative level in the data entry form.	To assess and confirm if the included Fab City Hub Principles function well as a category for the website.
Intervention ethics	To increase awareness and reflect together upon the ethical role that 'heritage making' plays in the Fab City Hub creation process; To be able to rethink the ABC design from an ethical perspective (e.g. is CENTRINNO still a UFO? Does it land softly? Is it welcome? etc.)	At the HWG meetings, this was discussed. There came a focus on the role of the Fab City Hub teams as the engaged curators. Thus, the LA local engagement (Part A) is where these teams 'land' and implement one of the 5 local engagement strategies. Then, they collect, curate, and select stories which - along with their perspective on WHY a story matters for them - they upload to the LA online space (Part B)	Write 5 blogposts about this process for Part C.

Area	Beta Development aim(s) (from D2.3)	Status in D2.5	Suggested aim for D2.7
Tagging Framework (iteration toward taxonomy)	<p>To improve the initial Tagging Framework, in terms of categories and keywords, and enhance its relevance and applicability; To identify the need and/or potential for developing a unique, and possibly multilingual CENTRINNO Thesaurus.</p>	<p>In a HWG meeting we worked on the tagging framework. We have not been able to conduct much deeper research, because there have not been many stories uploaded The EC review demanded new/more focus on the aspects of built heritage, physical on-site traces</p>	<p>To review/enrich the new taxonomy, researching how it is being used by the co-curators in the HWG and assessing together what the final iteration of the taxonomy should become.</p>
Part A: Local Living Archive	<p>To iterate the guidance on Part A based on concrete pilot experiences and thus enrich the level in which the Living Archive is informed by evidence collected in CENTRINNO; To build a portfolio of practices applied in CENTRINNO;</p>	<p>Pilots have applied the suggested approach in different ways. This has been brought together in a baseline mapping of activities (collated in a poster for CM), and subsequently in this Beta version developed and embedded at the conceptual level.</p>	<p>Finetune, and possibly make visible on the final iteration of the website, how the five scenario's enable / result in different stories (content).</p>
Part B: Kumu - > Iterated beyond Kumu.	<p>To be able to iterate or redesign the Kumu site based on pilot experiences, built with actual co-collected contents and integrating renewed core values and tags. To be able to decide what kind of professional design is needed for the Beta version (if at all). To be able to finetune the definition of the KPI 'Stories'. Transition story-inputting method from Dashboard Form to Kumu in stable and safe way. To decide on new developments for Sprint 3, including tagging emotions and user-generated content.</p>	<p>Pilots have been presented with the Kumu prototype. It was received with interest. The prototype was not stable enough to be used in implementation in Sprint 2. A more professional Beta is now available with easy/direct usage of this online space for pilots to upload stories in Sprint 3.</p>	<p>To streamline the publishing of all pre-collected content (available in the 'dashboard', as well as on pilot's own data structures) To publish this not-yet-designed Beta as a "Proof of Concept" before Sprint 3, and work with pilots to co-create clear instructions, criteria and workflow. To continue to iterate the public-facing, appealing, design, with advice/co-design conversations with the HWG.</p>

Area	Beta Development aim(s) (from D2.3)	Status in D2.5	Suggested aim for D2.7
Part C: Dossiers	<p>To assess the quality of the discussion dossiers which have emerged/been enabled by new inquiries. To be able to decide if the chosen course is sensible, or if the Living Archive requires other methods to foster public access and engagement (if at all);</p>	<p>Two drafts were developed but not prepared for publication</p>	<p>Write 10 blogposts discussing /reflecting upon the exemplar content.</p>
Data management	<p>To be able to (re)develop the online Living Archive's Data Management configurations, including adding new fields in the Dashboard Form, and securing compliant access, user rights and privacy protocols on Kumu To identify key decisions which need to be taken with regard to data governance toward the final version.</p>	<p>(Slow) alignment with the AHK school-wide policy on research data management (RDM) has been ongoing Dashboard is being discontinued. Pilots are still able to use the story form.</p>	<p>Make clear at which moment pilots should stop using the Dashboard story form, and properly launch/instruct how to use the POC form (planned for Feb 2023)</p> <p>Develop a sound data management and software development plan, departing from the experimental platform used now;</p> <p>Create a development agenda within the context of WP1 and WP6 on the strategy for the Living Archive's public-facing function and clearance and consent forms (and/or anonymization strategies) for pilots.</p>
Support	<p>To offer an updated set of guiding documents along with the Beta version (including Emotion Networking How To, Tagging Framework, Interview strategies, Dashboard Forms, Kumu instructional videos)</p>	<p>Individual calls with pilots for qualitative feedback on the content and method have been held HWG installed and met twice to deep dive into the practices of local (critical) engagement with heritage (<i>see reports</i>) Started talks with WP3 leader on developing new guidance materials on ethnographic approaches, and update the EN How To with a self-assessment/reporting tool (Typeform)</p>	<p>Implement the EN How To + Typeform Tool</p> <p>Ensure sufficient reflection opportunities/talks with pilots on the content HWG in november about the post-CM strategies for local engagement</p>

4.2. Sustainability

This section outlines the capacity for the Living Archive Beta version to be sustainable and further iterated in the future, beyond the project lifetime. The Living Archive is a resource which is aimed to not only enable the pilots working in CENTRINNO to create viable Fab City Hubs, but also to continue to be used beyond the project lifetime. In this subsection we discuss the strategies to achieve this:

4.2.1. Commitment for maintenance

The Reinwardt Academy, part of the Amsterdam University for the Arts (AHK) is expected to formalise, during the final period of the project, a maintenance commitment in which it confirms its facilitation of resources to ensure the online part of the Living Archive remains secure and available. This includes costs for hosting, frequent maintenance (security updates, design touch-ups and debugging) and minimal availability of staff capacity to actively maintain the contact inbox of the Living Archive. This commitment is expected to be confirmed for the period 2024-2027, with clear indications for the conditions in the area of usage and functions needed to extend this commitment for 2027-2030.

4.2.2. Facilitated usage for emerging FCHs

The second strategy to ensure the Living Archive is sustained beyond the project lifetime, is the facilitated usage of the website for new/emerging FCH teams. Aligned with the exploitation strategy of CENTRINNO, the Living Archive is a resource which is made available to all new, emerging Fab City Hubs. The Fab City Foundation will be asked to invite its many current and future members to uptake participation in the resource. This will generate new usage which will be embedded in the commitment strategy mentioned above, including onboarding of potential new FCH teams.

4.2.3. Opening new long-term partnerships

Built upon the facilitated usage, the third strategy will be to engage in conversations with possible specific needs of new adopters of the Living Archive approach, and the Reinwardt Academy Research Groups availability and interest to explore new long-term partnership(s), projects and activities. Already during the project lifetime potential partners have been identified. Once the Living Archive Final Version is presented (see section 4.3 below), aligned with the WP6 dissemination activities, such partnerships are expected to be explored.

4.2.4. Usage in research, training and education

The Living Archive encompasses an innovative development critical cultural heritage methods and tools, which makes it very useful for the Reinwardt Academy educational programmes (at BA and MA level), as well to its work in the wider Cultural Heritage sector (e.g., training workshops, guidance publications, etc.) and in its research valorisation efforts (e.g., publications, lectures, etc.). In close collaboration with various related departments running these efforts, the research group will seek synergies which may lead to usage of the Living Archive resources by relevant education-, training- and/or research projects.

4.3. Technical Development Plan

This section lays out how the Living Archive Beta version Part B (website) will develop technically during the final iteration, in the third pilot sprint, delivering in M40 the Final Version.

Table 7 - Technical Development

Technical development item	Description
Force Graph -> D3	The network visualization technology will be expanded to provide a more custom and visually appealing solution, with more semantic links and interactions.
Visual Design	The whole web application will undergo a branding and visual identity process to make it unique and tied to the existing branding guidelines.
Search Functionality	A search functionality will be developed, providing search possibility within the tag/category network, and returning related stories on submission.
About page	Design and development of the about page: information about resource and how it is nested in the project and network, the people involved and the conceptual underpinnings. This page will also provide ease-of-access linkages to key guidance resources developed within CENTRINNO, including the Fab City Hub Toolkit (GitBook), where specific guidance on the applied methods to develop the content of the Living Archive are linked.
Introduction Component	The homepage will feature an interactive component that catches the eye of the user while also giving an idea of what The Living Archive is.
Content collection and uploading	Parallel to the technical development, all content collected by pilots will be prepared for uploading to this new space.
Animations, transitions, styling	Styling and embellishments of the site overall
Assign domain and deployment	Preparation tasks for launch process.

4.4. Recommendations for Co-Design

This section takes a broader perspective on how the Living Archive has been co-designed with pilots during Sprints 1 and 2, and addresses important recommendations on how to ensure **high-quality work** in the third and final sprint in this task: How is a Living Archive co-designed?

A Living Archive – in the CENTRINNO mold – can be co-designed in a number of ways. Key to the co-design is **frequent communication** with pilots, which, over the course of the first and second sprints, has shown the AHK what pilots are doing to engage with heritage in their respective sites and communities. Beyond just being a way to track progress in terms of the KPI ‘stories’, regular contact with pilots allowed us to observe **how the different types of content** - or heritage items, or stories – reflect the need for changes to be made in the Living Archive’s design itself (for examples of this, see the table in section 2.1.1). This communication took place in the form of **informal contact**, more formal arranged meetings (such as one-on-one meetings with individual pilots) and the establishment of trust that pilots could be relied on

to carry out their heritage-based activities and record the outcomes so as to provide input for how the design of the Living Archive could develop. While this was not always completely successful (see elaboration below), the communicative aspect proved a necessary part of knowing what was needed in the design of the Living Archive.

Aspects of the Living Archive, such as the ‘sentence’ structure taxonomy (see 2.2.3), were also co-designed with representatives from each pilot in the HWG. Having designed the taxonomy internally, we presented it to the HWG in one of our regular meetings and had those present test the usage of it. We now carry that tested element through to the way in which stories are collected for the Living Archive, indicating how the HWG proved an important part of the co-design process.

Observations by AHK team during sprint 1 & 2 and recommended actions for sprint 3

- **Critical reflection on heritage work in CENTRINNO is essential**

CENTRINNO acknowledges that there is a need for historical engagement with the buildings or sites from which the pilot teams are working. This engagement asks for **a critical interest in processes of heritagization**, including the ones that the pilot teams themselves are part of.

Why? Being aware not only of what happened in the past, but also WITH the past, and how the past and the heritagization of the past have an impact on the present, should make it possible to accelerate the desired transition process, while taking seriously the ethical concerns that comes with such interventions.

Restoring an abandoned meat factory, archiving long forgotten textile workers’ songs, revitalizing traditional ways of urban farming: these are all examples of ‘making heritage’ or - to put it differently - **‘curating the past in the present’**. It is a conscious, future-oriented way of working with the multiple meanings and possible significances of traces from the past, including those traces that (seemed to) have been lost, hidden, forgotten, ignored or suppressed.

Recommended action: AHK will organize mini-symposium (online) for HWG members with interactions with students of the Applied Museum and Heritage Studies MA students and staff, where a selection of core insights on heritage will be discussed. The resulting documentation, including literature will be provided to the HWG.

- **The need for critical engagement with the past is not self-evident for pilot teams**

Facilitating the pilots in their work on the LA and the emotion networking sessions, questions like the ones formulated in the paragraphs above, came up only incidentally in the 1st and 2nd sprint. One may say that for most pilot members ‘the past’ was not their main area of interest, and it appeared that for many of the makers, the creative entrepreneurs etc. - the same can be said: the old factory offers them first of all a space to work. The history (the biography) of the building is not something they are very keen on.

Recommended action: AHK will invite pilot teams to appoint dedicated time during the 3rd sprint to do fieldwork with a special focus on history and heritage.

- **Heritage work can do harm**

Curating the past - as in heritagization, fostering, safeguarding, showcasing, collecting, archiving, revitalising - can have a positive effect, but it can also, albeit

unintentionally, do harm. People may have with divergent interests, feelings and memories in relation to the actual buildings and sites that are used for the development of Fab City Hubs. Mutual misunderstanding, or even sentiments of disgust, antagonism and polarization can be the result of such diverging experiences.

In CENTRINNO, we generate knowledge about alternative and silenced histories. We want to reveal how these histories and objects unsettle ways of looking at the world and its histories and how to deal with this discomfort. We do this by ‘re-connecting’ traces from the past to their different biographies. In order to understand the impact of the INDUSTRIAL past in the present, we also need to explore how it came that we turned specific traces of that past into ‘heritage’, while other aspects were neglected.

Recommended action: AHK will monitor (e.g., job shadowing, interview, etc.) and share the pilots’ fieldwork experiences with a focus on what they consider as important items of heritage and what others think and feel when it comes to tangible and intangible traces of the past. Ongoing Feb-June 2023

- **Divergent understandings of the notion of heritage exist within the CENTRINNO consortium**

CENTRINNO asks how ‘heritage’ can be a catalyst in the transition of former industrial sites into hubs for inclusive sustainable entrepreneurship. At various occasions during the 1st and 2nd sprint, the notion of ‘heritage’ was discussed. Often ‘heritage’ is/was used as a synonym for ‘monument’ or ‘monumental building’, as in: ‘How can we use the old monumental industrial buildings from the late 19th century for/ the desired transition?’. In line with developments in the field of critical heritage studies, it has become more and more common to approach ‘heritage’ as a context-bound label or value [28].

Recommended action: AHK will facilitate a short survey on how the concept of heritage is understood among the CENTRINNO consortium members during a bi-weekly Pilot Coordination Call session with the pilots and discuss the results in a written report. Planned for 22 February 2023

- **Critical engagement with the past can be challenging for pilot teams**

Tasked with the support of pilot teams in their explorations of ‘heritage as a catalyst towards inclusive and sustainable futures’, the AHK-team has considered heritage as a context bound label or value right from the start. It creates space to acknowledge possible divergent interests and feelings related to former industrial buildings. For pilots it is challenging as it opens the door to question everything - one could even start wondering if approaching former industrial buildings as ‘heritage’ may function as a catalyst for gentrification and social injustice instead of social inclusion and ecological re-generation. And how to deal with the issues of contestation related to the site? There is a growing awareness that the industrial past and its aftermath cannot be understood without addressing the colonial past and its workings in the present. What does this mean for CENTRINNO?

Recommended action: AHK will invite members of the HWG to co-author a blog for the Part C of the Living Archive, discussing issues related to heritage and/as gentrification.

- **Collecting stories, doing ethnographic fieldwork and emotion networking is a tool to create critical engagement with the past**

This became more and more evident over the past two years. It can be considered as an important research outcome. The iterative, bottom-up approach was essential in this respect, but also the methods and tools introduced to the pilots: the ethnographic field work, interviewing and emotion networking. What these methods have in common is that they tend to have a transformative effect: after Sprint 1 and 2 the claim is made that it *does something* to not only those who are observed, interviewed or invited to participate in an emotion networking session, but also to the researcher – in this case the pilot team members.

Recommended action: AHK team will align with the partners CENTRINNO to make sense of the transformative effects of ethnographic field work and of heritage tools in CENTRINNO with a selection of pilot team members.

5. Conclusion and next steps

The sections above provide a set of development needs (technical, conceptual, structural) toward the Living Archive Final Version. The actions needed to achieve these development needs are plotted in framework with four phases:

Table 8 - Timeline framework

Levels	Phase 1 Feb '23	Phase 2 Mar-Apr '23	Phase 3 May-June '23	Phase 4 July-August
Pilots	Local engagement activities Content curation Workshop at online by-weekly Pilot Coordination Call	Local engagement activities Content curation	Local engagement activities Content curation	
HWG	Presentation Living Archive Beta Version Detailed Sprint 3 Planning	Peer assessment content curation Mini-symposium x co-design session	Final co-design sprint based on a 'soft launch' version.	Evaluation session on the resource
AHK	Weekly technical design sprints Open monitoring on application of methods by pilots	Weekly technical design sprints Open monitoring on application of methods by pilots	Sustainability commitment confirmation Open monitoring on application of methods by pilots	Ensure final version stability, debugging, final guidance materials.
Project	Alignment with planning at project level	Integration of infrastructure levels (e.g. subdomain la.centrinno.eu, blogs) Focus Group on heritage key concept with externals	Launch Living Archive 'soft launch' pre-Final at Consortium Meeting	Public Launch Living Archive Final version

The specific planning for the implementation of these needs during the final sprint of the project will be detailed in close alignment with the HWG in early February 2023, using the collaborative Living Archive Visual Space on Miro.

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ANNEX 1: How to upload content to Sanity Studio

The process of uploading content to Sanity Studio (Content Management System) is relatively simple and straightforward:

1. Log onto <https://centrinno.sanity.studio/desk>. If you are an owner or an editor, you will receive an invitation to create an account.
2. There are, as previously explained, 3 content models:
 - a. **Story**: see point 3 below.
 - b. **Tag**: these will be mostly populated in advance, but owners/editors will always be able to edit their title, definition and relation to categories.
 - c. **Category**: these will be mostly populated in advance, but owners/editors will always be able to edit their title and definition.
3. **Story model**: the story model is divided into content fields, all requiring specific content:
 - a. Title (**REQUIRED FIELD**): short string of text with the story title (some limitations on max characters and special characters will be defined during training).
 - b. Hero Image (**REQUIRED FIELD**): the image that represents the story, best if provided in either square ratio (1:1) or 16:9 ratio.
 - c. Publication date (**REQUIRED FIELD**): date of publication of each story.
 - d. Author (**REQUIRED FIELD**): name of the author or writer of the story.
 - e. Summary Text (**REQUIRED FIELD**): max 3 lines of text. A synopsis of the story content.
 - f. Main Text: modular and optional text field to build the story content.
 - g. Pilot: dropdown list of all pilots to choose from.
 - h. People involved: free array of text strings. The user can input the main subjects of the story.
 - i. Image Gallery: An array of images from the story content, any ratio will be accepted, but it will be cropped according to the component appearance (TBD)
 - j. Video: upload a video MP4 directly to Sanity
 - k. Audio: upload an audio MP3 file directly to Sanity
4. Click on the “create new” icon at the top of the Story model
5. Edit and/or create new fields within the story content model
6. Hit publish on the bottom right corner of the story editor

Disclaimer: this is only an approximation of how building story pages will look like once the application is complete. The visual design phase will address more detailed content needs and define file sizes, ratios, file types, text limitations and formatting, etc.

ANNEX 2: Proof-of-Concept Wireframes

The Wireframes that illustrate the experience and overall function of the application can be accessed with Figma (requires making an account, cost-free and easy to set up):

<https://www.figma.com/file/osXk6mmwA3kAq1BoTHtOyw/Centrinno-Wireframes?node-id=0%3A1>

Alternatively, JPG versions of the same wireframes have been exported and can be found below:

Story specific page
Through cards, links or search queries, the user will finally land on a story specific page, which will present all the content, related to the Story -> (story fields in Sanity Studio)

Story page layout
The story page layout consists of two main areas: the main content and the sidebar. The main content will simply render all the content fields that are populated in Sanity Studio for each story.

Sidebar component

The sidebar component will feature all the metadata fields for each story, as illustrated. For instance, author, locations, pilot, date and people mentioned in the story will appear in the sidebar. Finally, the sidebar will also present a 'version' of the Centrinnno network with the current story as the center of the universe, surrounded by a selection of the referenced categories, tags and other stories.

Author: author name

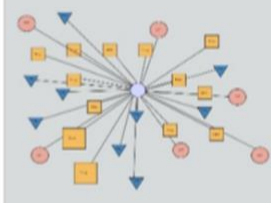
Locations: relevant locations

Pilot: the pilot


Date:

People involved: person one, person two...

See in The Centrinnno Network



Hero image

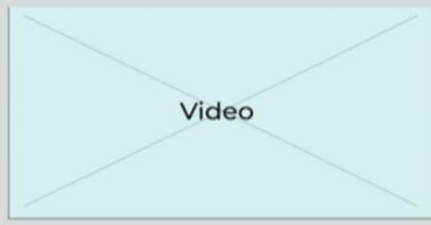


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PLAY AUDIO FILES

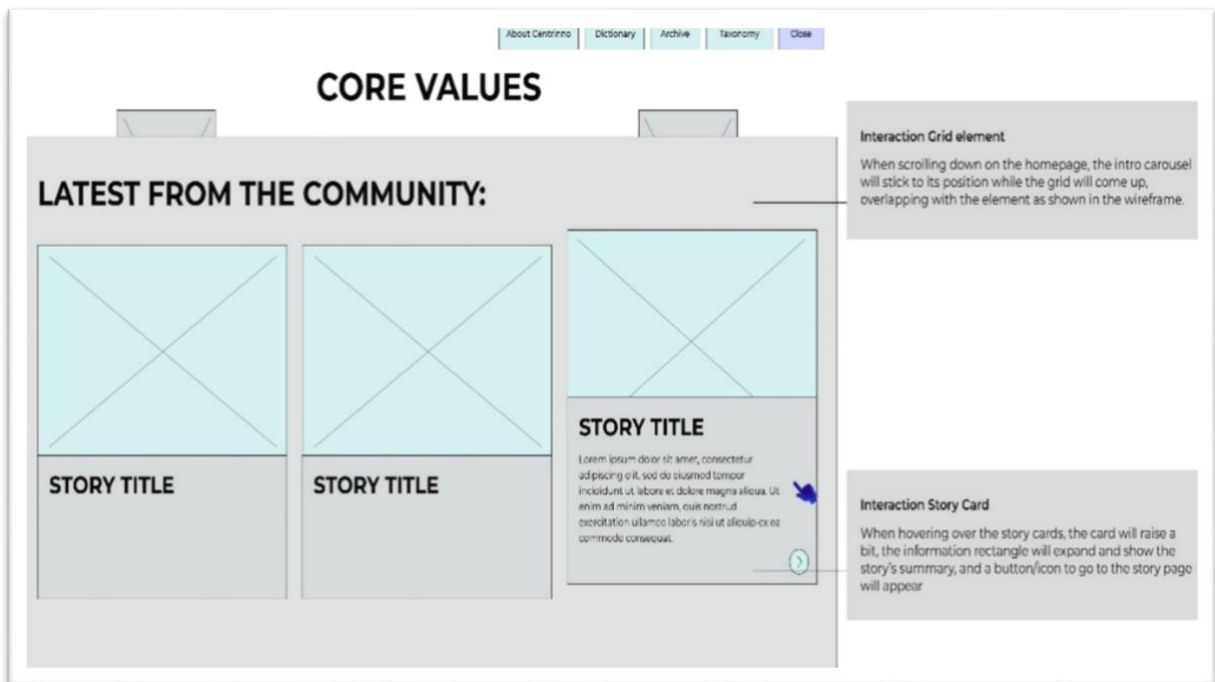
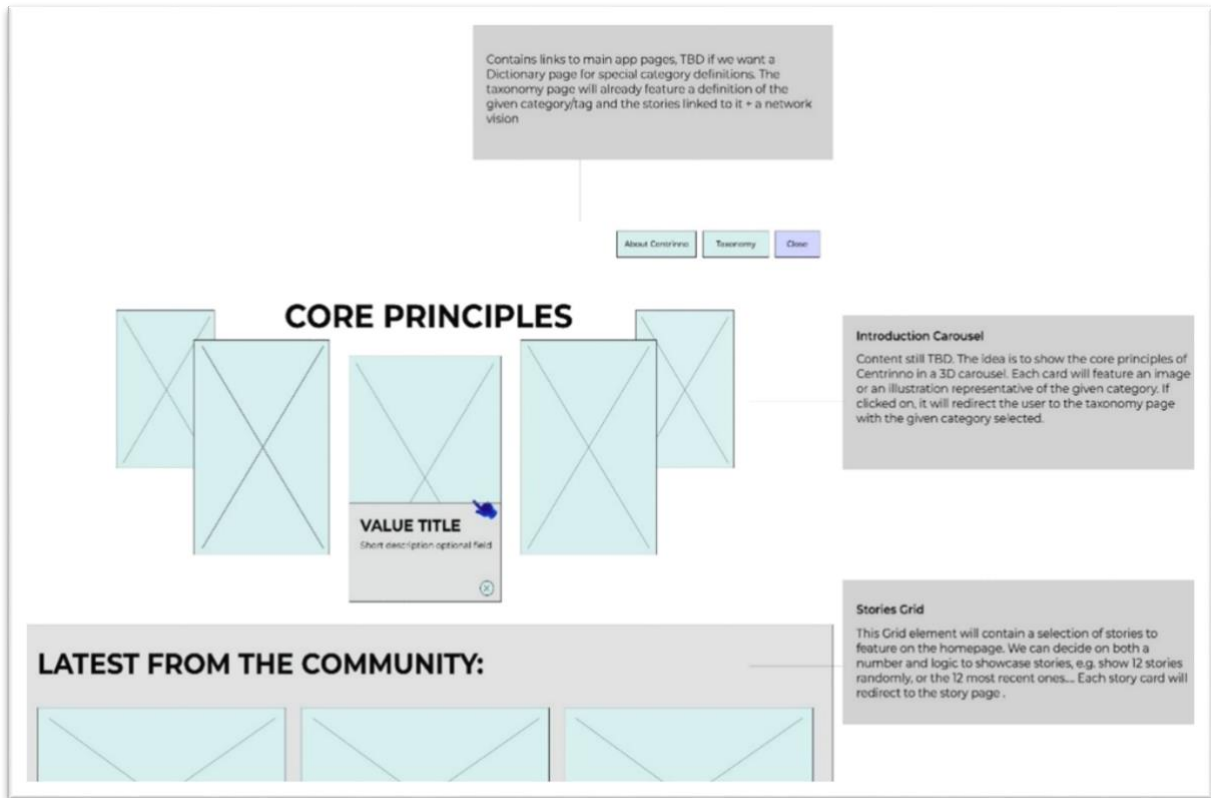


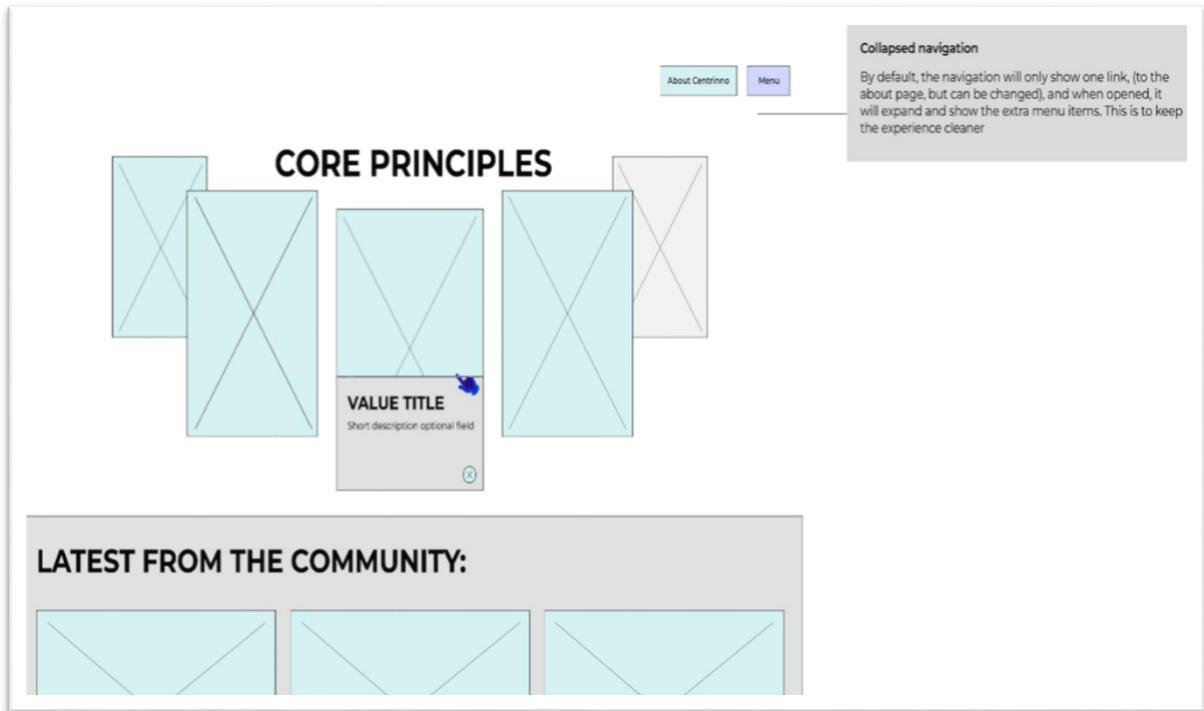
GALLERY

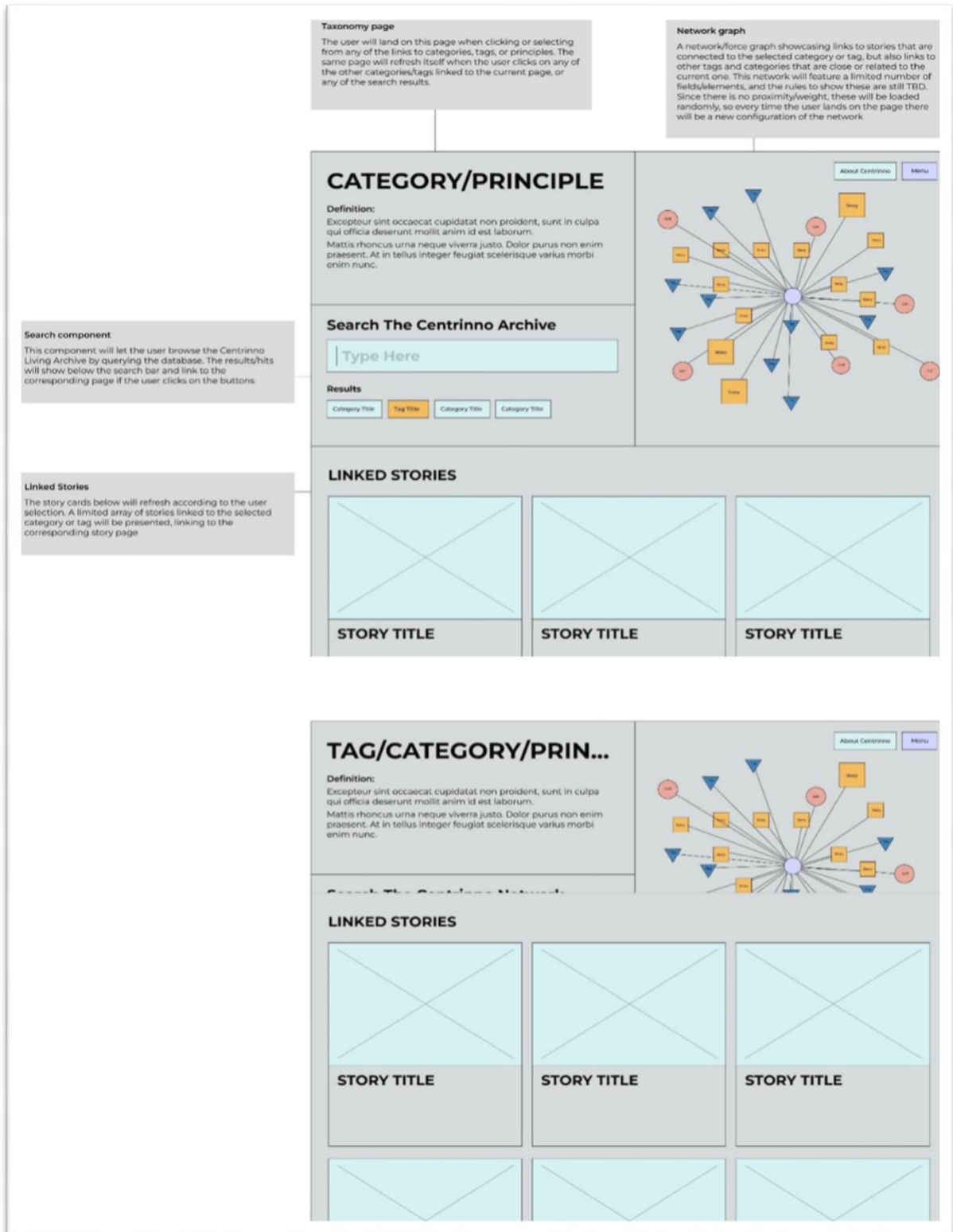


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Taxonomy page with no selection

From the menu, the user can still land on the 'taxonomy' or 'archive' page to initiate the search or the navigation through the categories, tags and stories. Once the user clicks on one of the links or inputs a certain keyword, the page will then turn to its active state (wireframe on the left)

Placeholder image or animation

When the taxonomy page is in its 'inactive' state, there will be a placeholder image or animation. This will then leave the place for the network graph once there is a category or tag selection.

Search The Centrinno Archive

About Centrinno
Menu

Type Here

Results

Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title
Category Title	Category Title	Tag Title

SELECTION STORIES

<div style="border: 1px solid #ccc; height: 100px; background-color: #e0f2f1; margin-bottom: 5px; display: flex; align-items: center; justify-content: center;"> X </div> <div style="background-color: #757575; color: white; padding: 5px; font-weight: bold; text-align: center;"> STORY TITLE </div>	<div style="border: 1px solid #ccc; height: 100px; background-color: #e0f2f1; margin-bottom: 5px; display: flex; align-items: center; justify-content: center;"> X </div> <div style="background-color: #757575; color: white; padding: 5px; font-weight: bold; text-align: center;"> STORY TITLE </div>	<div style="border: 1px solid #ccc; height: 100px; background-color: #e0f2f1; margin-bottom: 5px; display: flex; align-items: center; justify-content: center;"> X </div> <div style="background-color: #757575; color: white; padding: 5px; font-weight: bold; text-align: center;"> STORY TITLE </div>
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ANNEX 3: Taxonomy

As explained in sections 2.3 and 3.2 above, this iteration of the Living Archive Tagging Framework is presented as a Taxonomy. It is nested in a one-liner sentence structure of 13 narrative elements, and includes 3 additional interpretative elements. To all of these elements a tailor-made set of tags is attributed. These are presented in this Annex in the table below. In each category, the system allows for additional tags to be added during the curatorial/uploading process.

Category 1: Period (sentence narration: On a specific moment in time)	
Tags	<i>Open/variable to chronological indicators (e.g. Date(s) – Date, Summer of [year], etc.)</i>

Category 2: Moment/Event (sentence narration: In a specific context)	
Tags	Disaster
	Disease
	Fire
	Flood
	Hunger
	Relocation
	War
Industrial era	

Category 3: Moment/Event (sentence narration: At/in a specific place)	
Tags	Brewery
	Bridge
	Carpark
	Canal
	Chimney
	Church
	Dock
	Factory
	Farm
	Garage
	Gym
	Coffee place
	Hotel
	Information panel
	Library
	Makerspace
	Monument
	Mosque
	Open space
	Park
	Railway
	Road
	School
Shed	
Shop	
Sport facilities	

	Train station
	Tree
	Warehouse
	Mill
	Agricultural lands
	Harbor
	Hiding places
	Home
	Imaginary places
	Landforms
	Landscape
	Legendary place
	Private space
	Protected areas
	Public space
	Wilderness
	Workplaces

Category 4: Features (sentence narration: with physical/material things/features)

Tags	Flag
	Graffiti
	Mural
	Trees
	Fountain
	Statue
	Grave
	Billboard

Category 5: People (sentence narration: people/person)

Tags	Academic
	Activist
	Artist
	Child
	Craftsperson
	Earlier inhabitant
	Entrepreneur
	Elderly person
	Heritage professional
	Historian
	Maker
	Policy maker
	Repairer
	Squatter
	Student
	Volunteer
	Worker
	Young Urban Professional

Category 6: Live (sentence narration: verb relating to people/person)

Tags	labor (work)
	Administer
	Eat
	Flee
	Get a job
	Learn
	Migrate
	Party
	Perform
	Play
	Protest
	Recreate
	Retire
	Sleep

Category 7: Make (sentence narration: <i>verb relating to people/person</i>)	
Tags	Farming
	Gardening
	Labor (work)
	Labor relations
	Labor time
	Learning
	Making
	organization
	Producing
	Repairing
	Vocation
	Work environment
	Work ethic
	Workers

Category 8: Products (sentence narration: <i>subject relating to people/person</i>)	
Tags	Bag
	Cars
	Cupboard
	Embroidery
	Flag
	Flowers
	Fruit
	Furniture
	Hat
	Honey
	Meat
	Plants
	Plastic nick nacks
	Rope
	Rug
	Sewing machine
	Sheet metal
Shoes	

	Socks
	Sweater
	Textile
	Trains
	Vegetables
	Vinyl
	Waste

Category 9: Materials (sentence narration: Out of something <i>related to the products</i>)	
Tags	Bakelite
	Ceramic
	Coal
	Concrete
	Glass
	Leather
	Meat
	Metal
	Paper
	Plaster
	Plastic
	Rubber
	Textile
	Water
	Wood

Category 10: Impacting (sentence narration: thus impacting/changing)	
Tags	Building
	Burning
	Decaying
	Demolishing
	Destroying
	Exhausting
	Extracting
	Flooding
	Growing
	Moving
	Polluting
	Safeguarding
	Sickening
	Starving

Category 11: Scale (sentence narration: on a certain scale)	
Tags	Area
	Continental
	Country
	Global
	Home
	Local
	Neighbourhood

	Regional
	Street
	Universal

Category 12: Environment (sentence narration: to the environment)	
Tags	Air
	Animals
	Basin
	Mountain
	Nature
	Other living creatures
	Plants
	River
	Soil
	Space
	Valley
	Water

Category 13: Impacting people (sentence narration: <i>how they feel, think, dream, sense, etc</i>)	
Tags	Alert
	Anger
	Depressed
	Discomfort
	Disgust
	Excited
	Fatigue
	Fear
	Happiness
	Job satisfaction
	Job stress
	Nervous
	Relaxed
	Sadness
	Senses: Hear
	Senses: See
	Senses: Smell
	Senses: Taste
	Senses: Touch
	Stress
	Surprise
	Tense
	Upset

Category 14: Ethnographic concepts (interpretation)	
Tags	Aestheticisation
	Appropriation
	Authenticity
	Citizenship

	Collective memory
	Commercialisation
	Competition
	Counter culture
	Crime
	Deindustrialisation
	Exclusion
	Festivalisation
	Folklorism
	Gentrification
	Housing
	Industrialisation
	Leisure
	Migration
	Mobility
	Nationalism
	Nature
	Participation
	Pollution
	Property
	Regeneration
	Regionalisation
	Representation
	Revolution
	Ritual
	Sustainability
	Tourism
	Tradition
	Transmission

Category 15: Values (interpretation)	
Tags	Ecological
	Economic growth and employment
	Experimental
	Glocalism
	Holistic
	Inclusive
	Locally productive
	Open-source philosophy
	Participatory
	People centred
	Criticality
	Curatorship

Category 16: Industriality (interpretation)	
Tags	Advertising
	Branding
	Division of labor
	Market capitalism
	Mode of production

	Source extraction
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ANNEX 4: Stories

Over the course of the Sprint 2 stories were collected by pilots using Emotion Networking and interviews. These were gathered using the project’s earlier monitoring and documentation tool “Dashboard”. This tool was discontinued in the fall of 2022, and pilots were asked to wait with uploading their content until after this Beta Version was operational. Here follows a basic overview of stories gathered in the earlier tool. These stories will go through an update process and become tagged with the new structure during the Sprint 3. Please note this is not a reflection of the overall amount of stories gathered by pilots. It is expected that all pilots together will provide by the project’s end an estimated total of 200 entries.

Title	Fabio Zalla - Short story for Makers of Noord
Pilot	Barcelona
Content	<p>My name is Fabio Zalla, I'm a local artisan producing pure handmade pieces using prime leather materials from Spain. I like to support the local production scene with my energy and skills.</p> <p>After working in a local cooperative of makers and manufacturers, I've decided to build my place and have a facility to work with materials I need and create a space that reflects my romantic style.</p> <p>After consulting the neighbourhood, I was able to contact an antique bird shop that was closed for 20 years and bring it back to life with a new purpose. It took me two months to restore the space, and now I'm happy I could preserve the shop's identity and give it back to the community.</p> <p>I prefer to use traditional methods for my products, and I like to create custom hand tools, mainly using recycled materials, to achieve the results and the details I have in my mind.</p> <p>I recently started exploring new sectors, approaching and reinventing a traditional material like leather while keeping more attention to the product life and the sources of the materials used. This was also why I started establishing a circular system of reusing leftovers and sharing them on a local scale with other artisans.</p>
Method	Interview (verbal)
Relevance	<p>The short story collected from Fabio Zalla as a contribution to the "Makers of Noord" exhibition is a small fragment of the more significant tale he did not share at that specific time. However, between the lines, it is easy to recognise the role he plays and feels to cover in this intergenerational transition phase between fully manual craftsmanship and a technological sector just a step away. He also tells, without saying, how creative and resilient an artisan has to be able to follow the passion (neverminding the hard work).</p> <p>He then shares an important moment of his daily life, how he found very personal solutions to the waste problem and demonstrates how a small scale circularity is part of a local supportive scheme to generate community.</p> <p>One last thought goes to the building he contributed to renovating and open to the public after being abandoned for many years. He put into the space much effort in terms of materials, time and energy, however, the infrastructural transformation of the surrounding neighbourhood does not give him any guarantee of how long he will be allowed to stay there, as all the buildings surrounding him are being sold at unforeseen speed.</p>

Title	Transition through the eyes of a taxi driver
Pilot	Barcelona
Content	<p>A taxi driver who has been living in Poblenou all his life has seen numerous changes in the area, both positive and negative. He said 'Before we used to connect a lot more with others in the neighbourhood. we were more social. now, there are a lot of people from outside, there is less social connection.' Now, it appears that the comparatively smaller amount of social interaction may be because there was no access to the beach: 'Before, there was no beach, there was no access because of the industries,</p>

	now we have a beach!' People, it is implied, were more likely to connect with each other in their space(s), rather than have the area simply be a through road to the beach. This lack of connection is however also a sign that the area is becoming cleaner. 'Before Poblenou was a neighbourhood full of smoke and industry. Now it is mostly clean industry'
Method	Interview (verbal)
Relevance	This story indicates the tensions between social identity/connection and environmental problems, which are in interaction in the face of redevelopment of an industrial space like those located in Poblenou. The question is what are the things that allowed for social connection before, and how are they lost in these redevelopments? What could these redevelopments have done in order to make them socially accessible?

Title	Saga af fálka - story of the falcon
Pilot	Blönduós
Content	<p>The magnificent and beautiful bird the falcon has many different meanings but due to its skill to hunt and fly it signifies independence and freedom. This statue of an Icelandic Falcon is made by an Icelandic artist Guðmundur frá Miðdal, the father of Erro, another artist, presents in a way how I feel about the pilot side in Blönduós with its almost unlimited possibilities. The Falcon in the picture is first of all, in one of the most beautiful spaces in the building and only shown for a few weeks to few people during the summer. It is a gift from former students that visited on an anniversary the school and brought this art piece with them to show as a sign of appreciation and respect around the middle of last century. The same goes for almost all of the art. The room is a kind of an exhibition space / storage room ruled by an organization (friends of Kvennaskólinn). The organization was until recently led by the last principal of the school that closed in the late seventies. When women's schools were no longer seen in a positive light. With the rise of the women's movement and women seeking equal opportunities and, in the news, it was often first woman this and first that and no mention of women's former virtues of working with textiles or cooking dinner. The ownership of the house and how it should be used has been and still is in some ways complicated and the same thing goes for the items in the house. Different ideas and interests and complicated ownership mixed with local politics adds to the confusion.</p> <p>So back to the falcon that in my mind very much symbolizes the situation. It symbolizes the situation because it is glued to the desk in a room loaded with pieces both from the school and from former students in a room set up without a reference to an actual room that ever existed.</p> <p>Who owns it, where is the best place for it, who should decide its location in which context it should be shown etc.</p> <p>Do I think these items should be kept? Yes, some of them absolutely like the falcon. Not as convinced that the biscuit you see beside him should be kept.</p> <p>This is why we were very enthusiastic when we first learned about emotion networking and still are. We are hoping that it will be helpful to find the best way to find a solution and even have a consensus on how to move forward, bring more life into the building and free the falcon.</p>
Method	Personal donation
Relevance	It's a story that symbolizes and gives great insight into perceptions of "honoring heritage" and complications regarding the use of space within Kvennaskólinn, home of the Textile Center.

Title	Þráðhyggja - Contribution for Makers van Noord
Pilot	Blönduós
Content	We are Bosk and Sól Hansdóttir, designers based in Iceland. We've been working on a project called Þráðhyggja/Fibsession, a research project focusing on elongating the lifespan of textile waste in Iceland. The research was conducted at the Icelandic Textile Center during a three month period in 2021, sponsored by the Icelandic

	<p>Research Center and worked in collaboration with Iceland University of the Arts and Icelandic Textile Center. All the material used for the project was sourced from the Icelandic Red Cross. We recently showcased our first capsule collection of garments created using recycling methods developed by the duo during a residency in the Icelandic Textile Center. The capsule collection is created using all locally resourced waste textile with emphasis on recycling tea towels. Shapes are inspired by Icelandic knitting patterns and focus on exalting the charming colours and prints already in the tea towels.</p> <p>With our work we hope to evolve the recycling culture in Iceland as well as introduce creative ways of doing so, to create value from unwanted textile as well as longer life and prevent textile in landfill from our best of ability.</p> <p>Those who inspire us the most are all the skilled craft women that came before us, those who have taught us, showed us and paved the way for us. Iceland is enormously rich in terms of skilled craft women in weaving, knitting, felting, embroidering and we could go on and so forth. We have a rich craft culture and it has been carried out through generation's of women.</p>
Method	Personal donation
Relevance	Story that gives insight into the creative process of designer duo focused on utilizing textile waste, inspired by textile traditions.

Title	Skills we got from our grandparents (or parents)
Pilot	Tallinn
Content	<p>When I was little, my grandma used to grow basically all the vegetables, berries and fruit she and our extended family needed. Potatoes, tomatoes, bell peppers, cucumbers. I also remember strawberries, raspberries, apples and plums. My grandma had a huge greenhouse and rainwater barrels from which she took water for the plants. But watering the plants was proudly my task since I was 5. Well, actually, grandma did most of it secretly but she allowed me to believe that I was the official head of the watering unit at the greenhouse. I still remember the smell of tomatoes and really big bell peppers, which we had to support with sticks.</p> <p>The garden and the greenhouse my grandma owned yielded quite a bit of crop every year. It is only now when I have started gardening myself, I realize, how much skill and tips it takes. And I think I will not manage to get all these tips from her, she is quite old now and has trouble with her health. But I still feel I should get as much as possible, because I would need to have the knowledge she has in order to grow more veggies/berries for our family, too. For example, I have serious trouble with getting tomatoes - I get many flowers, but rarely a tomato.. I'm sure my grandmother would have a tip or two.</p> <p>During the emotion networking session, people participating were from various backgrounds and origins. There were 7 people present (6 adults + 1 child) omitting the presenter of the story. 1 person was from Spain, others from Estonia but if we went a couple generations back, other countries were mentioned, too. Some said that they are very connected to the skills their grandparents have and it is so much a part of their heritage, they are also using the same skills at their workplace. One member of the community had never seen their grandparents and therefore were sad that they have no "skills heritage". It was raised as a topic in the group, that sometimes when they are doing something (planting, cooking, fixing), they get a memory flash with a picture of their grandmother/grandfather doing the same thing.</p> <p>Especially with the people who are working in the area that their grandparents or parents taught them, have linked it to "making sense" that I have picked the same field of work. That it is logical and continuous pattern. We also discussed WHY our grandparents needed to use so many skills - it was a matter of resilience and their lives were much more labor-intensive. Pride was also mentioned - being proud of</p>

	<p>your roots, your parents, the place you grew up and the skills you have. Skills link you to your roots.</p> <p>The topic of sensory heritage was also brought up - the memory of the heat of the greenhouse, smell of plants and rainwater, and how self-grown tomatoes or other veggies taste differently than the ones you buy from shop. It was also interesting to notice what kind of crops do we remember - people with origins from warmer countries remembered corn and sunflowers, too and especially just eating straight from the field.</p> <p>In Estonia, going to the forest for mushrooms is also an important part of family heritage. Some remembered going to the forest also with grandparents. And of course - helping our as a kid at your grandparents garden. For some, it was really hard work but they did it because everyone in the family tried to help each other out. This is also linked to resilience.</p>
Method	Workshop / Focus group
Relevance	I believe that we all have skills that we have seen in practice in our homes as children. How many of these have we acquired and how many are lost skills?

Title	The establishment of the Women's College
Pilot	Blönduós
Content	<p>When asked about their knowledge on the history of the Women's College in Blönduós, two of our interviewees, Paul and Eva, spoke about the remarkable story of the establishment of the four women's colleges in Iceland in the 19th century which influenced the women's education greatly. Before that, schools in Iceland were intended for men and the role of women was to take care of the home. In 1874, the Women's College in Reykjavík was founded and in 1877 the Women's College of Laugaland in Eyjafjörður and the Women's College of Skagafjörður. Finally, in 1879 the Women's College of Húnavatningur was founded, which later became the Women's College in Blönduós. As Eva pointed out, all these schools were only for women, which is amazing because at that time there were very few primary schools and there was only one college for men, the Reykjavík College. Suddenly there were four schools for women, and the schools were very ambitious. It was difficult to get teachers who had the knowledge to teach various subjects such as mathematics, Icelandic, English, Danish, science, drawing, sports, handcrafts and sewing. In 1923, the Women's College became a homemaking school until it was closed in 1978. Paul stated that he would like to make the story of women's education in Iceland visible in the Women's College of Blönduós</p>
Method	Interview (verbal)
Relevance	The building of the Women's College in Blönduósbær is one of the oldest building in the town, and as the college was one of the few colleges for women in the 19th century, its history is significant for Blönduósbær

Title	Maker Willem van Kelle
Pilot	Amsterdam
Content	<p>Willem van Kelle is a metalworker working from a studio at the Aambeeldstraat. His creations can be understood at the intersection of design and construction. During his studies of mechanical engineering Willem realised the course was too restrictive for him: it didn't stimulate students to make things of their own. He quit his studies and started working in a concrete factory. It was there that he became inspired to pursue the craft of metalworking. In his current work he combines both creative and technical elements and makes works like a table made from wood and metal, or a balustrade out of metal and glass. In addition, he is always looking to combine old and new techniques and other elements in his working process. His constructions are therefore defined by a mix of modern methods, like laser cutting, as well as more historic techniques, such as heating steel and subsequently shaping it by hand. Willem notes that his way of working - merging old, new, creative and constructive techniques - can</p>

	<p>be complex; he states that the way he works is “not the easiest way, but it’s my way and the only way I want to work.”</p> <p>Willem has been working in the Hamerkwartier for many years and does so with knowledge and admiration for the history of the area. “I have a lot of respect for what once took place here and for the people that used to live here - I think that’s very important, especially when you are a newcomer”. He adds that he feels a connection between metalworkers in the past and himself. The element of precision and striving to include clean, technical detail in his work can for example also be found in the steel beams of old factory halls.</p> <p>Together with six other makers, Willem works from a studio on a three year long contract. Despite several contract extensions in the past couple of years, the studio may soon cease to be available due to the city’s development plans for the area. Willem recognizes that Amsterdam-Noord is changing rapidly, that “the city is always in transition. Nothing lasts forever. You have to enjoy the moment while you can.”. Still, he remains focused on enjoying the present-day creative and supportive landscape that the area provides: the makers and community in Noord know each other well and people have each other’s back if needed. He mentions the example of Skatecafé to illustrate that when one project ends, a new one may emerge. With that in mind, he finds both support and inspiration from other makers and his mentors in the area. They have taught him that he can make whatever he wants, in his own way, as long as it is done with passion for the craft.</p>
Method	Interview (verbal)
Relevance	Willem van Kelle is a maker working in Amsterdam Noord that is experiencing the challenges posed by gentrification and development. Similar to other makers in the area, his workspace is precarious and it is likely that he will have to leave Noord in the coming years.

Title	Electrician Bob Vlucht
Pilot	Amsterdam
Content	<p>Bob Vlucht is an electrician and works in Amsterdam-Noord, at a different location every day. As his father was an electrician, he knew from an early age that he wanted to do the same. He finished his studies as soon as possible and every once in a while he goes back to school to get his certificates renewed, as the profession requires a significant amount of ongoing training.</p> <p>A while after entering the profession, he became bored of being a general electrician. As a result, he trained to work with 10 000 volt cables, a higher voltage than used in homes. Now that he works with these larger cables, he is challenged in his craft once again. In Bob’s profession it’s very important to be precise and to not make mistakes, because people can be left without power for hours if the job isn’t done correctly. When an assignment requires two electricians, he calls on his trusted colleague, Naoufal Afkir, to partner with him. Bob loves his trade and luckily it’s a stable job, because there will always be a demand for power. He feels gratified in this work, noting that “people are happy when I bring back the power”.</p> <p>As an electrician Bob is an important part of the energy transition that is taking place in Amsterdam. Next to this, he sees other changes in the city. In Noord many new houses are being built, while old ones are being renovated. In both cases Bob and his colleagues are needed to manage the electricity cables. As long as Noord expands, it will remain an interesting area to work as an electrician a “there will always be a demand for power, but it will be more sustainable in the future”.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)

Relevance	Bob Vlucht has witnessed the changing environment of Noord in his years as an electrician in the area. He has experience both in residential and commercial electricity and thus has experienced how these changes shape and transform a neighborhood in a multitude of ways. As Bob continues to gain knowledge and experience in his trade, he serves as an example of someone who understands and is part of the energy transition in Noord. Workers like Bob will be instrumental in implementing changes toward sustainability in the region and will continue to serve an important role within the community. Bob also serves as an example of someone that went to learn a vocational trade and has built a successful career from his study.
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Title	Maker Sacha de Brey
Pilot	Amsterdam
Content	<p>Sacha de Brey is 13 years old and goes to the Agoraschool in Amsterdam-Noord. As part of his studies - the school challenges students to choose their own goals - he trains in woodworking at Houk Maakt Het, located at the NDSM-plein. He has been an apprentice of Houk van Lier for nearly two years and spends two days a week learning from Houk and other makers that stop by the workspace. During this time, he has learned how to use digital design, as well as hands-on woodworking skills. As a result of the knowledge he has acquired, Sacha has already crafted works like wooden key chains and multiple insect hotels. He built his first insect hotel at the request of his grandparents and in the meantime he has made several more for family and friends. His favourite aspect of woodworking is using the knowledge he has to craft actual items.</p> <p>Sacha was inspired to go into woodworking by his mother, who has been a woodworker for over twenty years and who went to school with Houk. She often stops by the workshop to guide him in his work. Sacha himself feels very much at home at Houk Maakt Het: some people do not seem motivated to work with kids, but Houk and the others in the workshop enjoy helping kids to create things.</p> <p>Because of his time at Houk Maakt Het, Sacha has learned a great deal more about Amsterdam-Noord. When not working on his projects, he likes walking around the area and chatting with other creatives. He particularly enjoys walking through the NDSM Loods - a former industrial shipyard. When he sees the work of other makers in the area, he “gets new ideas and feels like starting new projects”. The work of other makers and artists in this yard is a source of inspiration and helps him generate ideas for future projects.</p> <p>Photo: Joshua Abrebrese</p>
Method	Interview (verbal)
Relevance	Sacha de Brey is a student that has chosen a more vocational path forward in his studies. Through his studies, he has been able to gain practical and hands on experience as well as visualize what a career in makership might look like for his future. With the number of makers being pushed outside of Amsterdam on the rise, Sacha is an example of how collaboration between educational institutes and makers can help train and inspire a younger generation of makers within the city.

Title	Maker Daan Meeuwig
Pilot	Amsterdam
Content	Daan Meeuwig is a lamp maker, inventor, and builder who works in a shared workshop on Aambeeldstraat with five other makers. Through his company, Daan's Handige Jongens Winkel, he crafts items like lamps made from oysters and chairs constructed from jerrycans. He was inspired to start making as a child by his friend's father who would take them to a scrapyards where he could learn skills like drilling and welding. He notes that it was important for him 'to have a space where I could rumble around and try stuff'. This ability to experiment is what he tries to replicate in his shop today; in addition to creating space for his own work, he aims to create a space

	<p>“where other people can build and try” elements of makership.</p> <p>Daan Meeuwig Daan Meeuwig in his work space Connecting people with the community Meeuwig was introduced to Noord, and NDSM in particular, as a child, reminiscing that ‘as kids we used to go here and toy around with boats when these were still industrial sites’. He reflects on the area’s industrial past and sees vestiges that still persist today, remarking on the presence of the past through streets in the area named after tools, like Hamerstraat and Aambeeldstraat.</p> <p>He also visits hardware stores that have in more recent times started supplying local makers instead of industrial makers, describing these shops as ‘a remnant of when the industrial was here’. He sees a continuation of the story of making in the area through the physical, both in terms of industrial architecture in Noord and through his craft, steel working, that has had a long presence in Noord.</p> <p>Meeuwig also reflects on his relationship to the area, particularly as he is the concierge of his workspace and often helps to connect people within the community. He has occupied his workspace for over ten years, though will likely need to move in the future as the land will be used for development. As other makers in the area have been facing the same pressure for years as Noord transforms, Meeuwig believes this has brought the maker community closer as they are “all in the same ship and need to move - that creates a bond”.</p> <p>Future maker spaces Instead of feeling regret over the changing landscape of Noord, Meeuwig has instead focused on gratitude for the time he has been able to spend working in the area. While he looks forward to change in his future and feels that change is natural, he does so with a sense of worry for what an exodus of makership from Noord could entail, particularly as the area inspired him as a child to start making. He notes that “as a kid, I could go to a place where there were people working with steel. It was really important for me and it inspired me to do my work today. So imagining a city without places where stuff is made - I think it would be missed”.</p> <p>While Meeuwig may need to leave his workshop in Noord in the future, he intends to stay connected to the area. He has been in conversations with project developers in Noord about the possibility of creating maker spaces in buildings planned for construction. These workshops would provide space for both newer and more established residents to experiment, create, and build both crafts and community. It also simply provides an outlet for joy in the area since, as Meeuwig puts it, “there’s so much fun in making”.</p>
Method	Interview (verbal)
Relevance	Daan Meeuwig expresses a differing opinion on the role of gentrification within Amsterdam Noord - namely that change is natural and something that he is willing (if not excited) to adapt to. He also reflects on how change has always been present in the area, that the narrative of change has a long history in the region. He also expresses how the past is reflected through his craft and through the architecture of the area.

Title	Maker Anja Akkermans
Pilot	Amsterdam
Content	<p>Anja Akkermans is a goldsmith and jewellery maker, and shares a shop - Juwelier Akkermans - with her sister Annemieke. Juwelier Akkermans was opened by their father Jaap in 1968 and in 1999, the Akkermans sisters purchased the shop on Purmerweg from him. Located within the shop is a small atelier where Anja produces her own jewellery, which makes Juwelier Akkermans a unique place.</p> <p>Born in the same building as her shop, the sisters also come from a family of makers:</p>

	<p>their father was a watchmaker, their mother a seamstress. Despite the fact that “girls didn’t really go to school to learn to do things with their hands”, Anja decided to become a jeweller herself. AS she notes, “why would a girl not become a craftsman?”. Thanks to her vocational training, in combination with her sister’s education in administration, they have - to their father’s pride - successfully operated the shop ever since purchasing it.</p> <p>As she was born and raised in the building of Juwelier Akkermans, Anja feels a strong connection with the area around the shop. She has seen Amsterdam-Noord change over the course of her lifetime, particularly in terms of the housing market. “In the early days, the people who lived here were workers. The whole neighbourhood consisted of rental houses and it was working class people who lived here.” Over time, she saw that many homes were no longer for rent, but were instead purchased by people from outside, with a higher socioeconomic status. Similarly, many small shops in the area have disappeared, in part due to the construction of a nearby shopping mall.</p> <p>Despite changes in the area, Anja’s customers are still mostly neighbourhood inhabitants. They are grateful for having a local jewellery shop. She notes that her customers are conscious about making more sustainable choices and are aware of the impact of consumption on the environment. For this reason the gold she uses primarily comes from existing pieces, like old wedding bands. Her customers also want to make sustainable choices and make purchases from a physical store.</p> <p>Akkermans and her sister plan to retire in the coming years. When the time comes, they hope to sell the shop to another maker. Anja also likes the idea of the shop housing several makers, working together and inspiring each other within the same space. She thinks this model would fit well in the neighbourhood. “Where would customers go if we weren’t here anymore?”</p>
Method	Interview (verbal)
Relevance	<p>Anja Akkermans grew up in Noord and has thus seen how her neighborhood near the Purmerplein has changed over several decades. She in particular reflects on how development and gentrification have impacted the neighborhood and how residents now must have substantial means to afford housing. She has also experienced an increase in demand from her customers for sustainable practices within the past decade and has adapted her jewelry making to incorporate more reused material. She serves as an example of how a maker in Noord has been able to adapt and adjust to the changing landscape and continue to operate a successful business.</p>

Title	Maker Sonny Blijden
Pilot	Amsterdam
Content	<p>Sonny Blijden is a jack of all trades who works in Noord. He previously worked for an employment agency as a business consultant, but during the COVID-19 pandemic he decided to take a new path. Now he is a youth worker and maker.</p> <p>Despite growing up thinking he had two left hands, he discovered that he is able to learn and make if he wants to the past two years. His maker career started when he built a bar from an example he found online. When his neighbour moved away and she offered him some leftover wood, he was inspired to start a new project. He hasn’t stopped making since.</p> <p>Sonny tries to pass on this message to the young people he works with: you can achieve what you want to, but it starts by taking a small first step. He sees many youngsters in Amsterdam growing up in marginalised areas and going down the wrong path. They grow up with a very limited idea of their potential, like himself when he was younger. Their environment seems to determine their options, while their potential is so much bigger than that. He encourages them, telling them “It’s about</p>

	<p>willpower and not giving up when it gets hard. Think of solutions: how do I make it better?”.</p> <p>Sonny’s life story is living proof of achieving what you aim for by perseverance. An important message according to him. He grew up in several difficult neighbourhoods and was close to ending up in criminality. Instead he was selected to play professional football. Because of an accident, he lost the ability to walk and his football career ended. After a long process of recovery, he can luckily walk again. However, because of his own eventful life - growing up in a poor family, becoming rich as a football player and starting all over again because of a grave accident - he is very good at communicating with young people. He knows what they live through and hopes to change their image of civil servants by leading through example.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)
Relevance	Sonny’s story is important as it shows the way in which making can be used to encourage young people who may not often experience equitable conditions in their lives. Through his own story and his craft, Sonny can work with students and empower them to make decisions that will benefit their own lives and communities.

Title	Tailor Veli Sahin
Pilot	Amsterdam
Content	<p>Veli Sahin has a tailor shop in the Van der Pekbuurt. He has been making, repairing, and resizing clothes for almost 35 years and does so with great satisfaction. His clients mostly come from Amsterdam-Noord, but occasionally also from the West or South of the city. With his repairs and adjustments, he makes sure that people can once again wear the clothes that are often treasured items with emotional value to them. Through his work, he “wants to see people happy and confident in their clothes again”.</p> <p>Veli learned the tailor’s trade at a young age himself. When he was 11, he left his home in Istanbul to look for work. He found a job in sewing and repairing clothes and he has continued working this craft ever since. Meanwhile, Veli has been living in the Netherlands for quite some time. His first shop was on the Kinkerstraat and since 2013 he has been running his shop in the Van der Pekbuurt. His neighbourhood is developing. The houses are historic and quite old, meaning that many streets are currently being renovated. As a result, the tailor shop has to temporarily move somewhere else. As the shop and his home are under the same roof, this has quite an impact on Veli. Although he likes that he will get his house back fully renovated, he hopes that the old character of his home remains.</p> <p>The tailor’s trade is an old profession, but things are changing in the craft. New fashion requires new fabrics, different materials and therefore new machines. In the past Veli taught in schools and he has had several trainees who have come to learn the trade since. Altogether, he is not planning to stop being a tailor anytime soon and looks forward to getting his renovated shop back.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)
Relevance	Veli’s story illustrates how a historic trade has continued into the present, adapting to meet the needs of the present day. Through his work, he is committed to training the next generation that will continue the trade in the future.

Title	Mechanic Erdal Sen
Pilot	Amsterdam
Content	Erdal Sen is a car mechanic and works for Garage Appie & Sen, a family-owned business situated on the Vuurwerkerweg. Erdal’s father founded the garage years

	<p>ago together with his friend Appie and Erdal has been fascinated by cars, especially engines, ever since. From early childhood on, he spent much of his time in the garage and eventually he decided to train to be a car mechanic. He graduated in 2011 and now that he is certified, works with his father in the garage.</p> <p>What Erdal loves most about his trade is doing complex repairs; first finding out where the problem lies and subsequently fixing it. Newer cars often mean more complexity, in terms of their engines and electrics. The challenge is in the quest. Appie & Sen are known for their quality and service. They take the time to find out what is wrong with a car. They also go out of their way to return cars back to the homes of (regular) customers - most of them live in Noord - if needed. Erdal is proud that his garage is “known for taking the time to ensure quality and offer personal service to every customer.”</p> <p>Like many other businesses and entrepreneurs in the neighbourhood, the garage has to make way for city development in 2024: houses need to be built in this area. The municipality has offered Appie & Sen a new location in Sloterdijk, but that would be a disaster for the garage. Customers would have to drive through the Coentunnel to reach them and driving home cars after repairing them would be impossible. In short, they would have to establish a whole new customer base. That’s why Erdal and his family continue to hope for a new place in Noord.</p> <p>Erdal has seen changes in his neighbourhood for years, but since the opening of the Noord-Zuid metroline, Noord is transforming rapidly. He understands the need for housing; the city is growing and people need to live somewhere. In his ideal world, houses would be built while space remains for local business. When he thinks of the future of Amsterdam-Noord with only houses, he feels “you would miss the entrepreneurs – they are part of Noord and give it character”.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)
Relevance	Erdal’s story shows the tension that can be caused by gentrification; in his opinion, there are seemingly competing needs of increased housing with that of supporting existing businesses. Erdal believes that these businesses have shaped the history and character of the neighborhood; if not valued by the municipality, the displacement of these businesses would remove a significant factor that has shaped the area (business owners and entrepreneurs) and could shift the narrative of the area away from a place of local making and community.

Title	Volunteer Simon Bakker
Pilot	Amsterdam
Content	<p>Simon Bakker is retired and works as a volunteer at the Klusfabriek in Noord. Here, he repairs and refurbishes bikes for people in the neighbourhood. De Klusfabriek is a community centre for youngsters and kids in the Florabuurt and the rest of Amsterdam-Noord. It includes a social workplace that provides repair services for bikes, scooters and cargo bikes. At the Klusfabriek kids come to hang out and eat together, but they also learn practical skills. Simon has worked for the Klusfabriek for over five years, and has been a maker for the majority of his life. He started working in the bike shop of his father, right after the Second World War, when he was just ten years old. Now he fixes bikes at the Klusfabriek and teaches kids the skills to do the same. His favorite aspect of his work is “helping people in the neighborhood for free”.</p> <p>The bikes are repaired for the neighbourhood community for free, especially for those who do not have the money to spend on a bike or repairs. Many of the bikes are donated to the Klusfabriek by people who themselves do not need them anymore. Those bikes are then refurbished and given away.</p>

	<p>As he is already retired, he plans to continue this work as long as his health still allows it. Luckily it seems as though the Klusfabriek will remain in the Florabuurt for the time being: there are no plans for housing development yet. The past years, Simon has seen many initiatives and workplaces come and go. He feels as though old shops are supposed to make room for brand new buildings in the neighbourhood. This puts a pressure on makership in Noord and the rest of the city and he wonders if the municipality sees the value of the area.. In addition, schools should play a bigger role in encouraging kids and youngsters to become makers, according to Simon.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)
Relevance	Simon's story demonstrates the impact of community engagement in the lives of youth. As a lifelong resident of Noord who learned a craft, he now dedicates his free time to teaching youth in the neighborhood. His experience of learning bike repair from his father is mirrored in his work to teach bike repair to the next generation.

Title	Boatbuilder Lizzie Clarjjs
Pilot	Amsterdam
Content	<p>Lizzie Clarjjs is a boatbuilder and works for Woodies aT BerLin. She studied design and woodworking at the Hout-en Meubileringscollege Amsterdam and has specialised in the interior building of boats. "I start from zero until I have built a home for somebody." Next to her work at Woodies aT BerLin, she enjoys making artistic wall furniture for family and friends. She lives on a boat she built herself, near the NDSM Werf.</p> <p>As her father is a maker as well - he creates constructions for artists - and inspired Lizzie to work with her hands from an early age. Seeing him at his craft piqued her curiosity and continues to influence her creativity to this day. Also motivating her work is Huib Koel, her boss at Woodies aT BerLin, where she once started as an intern. Huib made her feel comfortable in the workspace as a woman working in an occupation primarily dominated by men. She notes that her boss never treated her differently as she was a women and that "he just believed in me"/</p> <p>Lizzie is conscious of her position as a woman working in carpentry and wants to use her work and voice to stimulate other women to do the same. She particularly hopes more women will learn the craft, so that the industry will become more diverse. She encourages women to join the profession as "any woman can do this if she really wants to".</p> <p>Shipbuilders still use techniques and tools that have been around for many years. While newer technology may be used to increase precision in the building process, it remains mostly manual work. It gives Lizzie great satisfaction to use tools that have made it through the test of time. "If you are working with your hands, you are still going to need a hammer and a chisel." What she loves about craftsmanship is that you can really focus on the task at hand, ignoring everything else for a while. As such, carpentry to her sometimes feels like meditation: it's just you, your tools and nothing more.</p> <p>Photo: Joshua Abebrese</p>
Method	Interview (verbal)
Relevance	Lizzie's work as a boatbuilder shows the importance of increasing diversity in makership, particularly in trades that have been historically male-dominated. Her story also reflects a thread between past and present, how many elements of her trade seemingly have not changed and continue to be applied in modern circumstances.

Title	Cobbler Marleen Dijkhof
Pilot	Amsterdam
Content	<p>Marleen Dijkhof is a cobbler and owner of the Schoenmakerette, a shop that repairs shoes and other leather items. As a young woman in a dying craft dominated by men, she has a clear mission: to revalue the cobbler trade and stimulate people to start caring for their possessions. She believes people “need to start appreciating the things we have and think carefully before we buy something new.”</p> <p>Dijkhof fell into the profession of cobbling by coincidence. She had a side-job in a store that also repaired shoes. On a particularly slow day she asked the owner, a cobbler, to teach her shoe repair. Through his teaching, she realised that she had a natural skill for cobbling and decided to make it her profession. The Schoenmakerette opened its doors in 2016. It’s a shop with a nostalgic vibe, that emanates Marleen’s mission: to encourage people to reduce their consumption and make more sustainable choices by repairing their possessions. It used to be normal to have your shoes mended, but as fast fashion has grown in popularity, the quality of shoes has greatly decreased. The result? Mounts of discarded shoes and fewer cobblers each year.</p> <p>Recently, Marleen has decided to close the Schoenmakerette. Despite having more than enough customers, she is struggling to run the shop on her own. “It’s very hard to have a small business and run a shop with opening hours - and I’m a mom too.” It’s frustrating that more young people would like to work with their hands, but are not stimulated to do so because of the way we see craftsmanship in society, that there is too little attention given to training craftspeople. In part, because of this reason, Marleen isn’t able to take on an apprentice in the Schoenmakerette: she simply does not have the time and financial means to make such an investment. While she may be stepping away from the shop, Marleen is still committed to sharing her vision. She hopes that the craft will once again grow in popularity and that cobblers will start appreciating their work as an important part of a sustainable future.</p>
Method	Interview (verbal)
Relevance	<p>Marleen’s story is an important one as her mission focuses on raising awareness and accountability within her community about how people value (and therefore treat) items. She explicitly connects her repair business with sustainability and uses it as a platform to educate her customers. Her story is also relevant as it shows the challenges that makers can face when trying to make a living. While Marleen was able to create strong demand for her work, the economic circumstances and, in her opinion, lack of support for training future makers, led her to close shop.</p>

Title	Maker Sidsel Dauv
Pilot	Copenhagen
Content	<p>My name is Sidsel Dauv. I’m 27 years old and a maker, turned designer, turned maker again. I have a background in Accessory and Play Design and love working with ideas that surprise, inspire and make people smile.</p> <p>I work at MakerSpace NV in Copenhagen, developing workshops and project suggestions for young adults and their related instructors. We work with a wide range of crafts, analogue as well as digital, trying to incorporate heavier machinery like CNC machines, 3D printers and different kinds of cutters. Our work is important, as it encourages our users to pursue creative solutions and think together about alternative paths in their educational journeys.</p> <p>I get inspired by our volunteers, our users and my colleagues every single day. They give their all to add their own individual touch to the maker movement, working hard to make their own or others’ ideas come to life.</p>
Method	Interview (textual: e.g. email)
Relevance	

Title	Designers Bosk and Sól Hansdóttir
Pilot	Blönduós
Content	<p>We are Bosk and Sól Hansdóttir, designers based in Iceland. We've been working on a project called Bráðhyggja/Fibsession, a research project focusing on elongating the lifespan of textile waste in Iceland using recycling developed by the duo. The research was conducted at the Icelandic Textile Center during a three month period in 2021, sponsored by the Icelandic Research Center and worked in collaboration with Iceland University of the Arts and Icelandic Textile Center.</p> <p>All the material used for the project was sourced from the Icelandic Red Cross. We recently showcased our first capsule collection of garments created using recycling methods developed by the duo during a residency in the Icelandic Textile Center. The capsule collection is created using all locally resourced waste textile with emphasis on recycling tea towels. Shapes are inspired by Icelandic knitting patterns and focus on exalting the charming colours and prints already in the tea towels.</p> <p>With our work we hope to evolve the recycling culture in Iceland as well as introduce creative ways of doing so, to create value from unwanted textile as well as longer life and prevent textile in landfill from our best of ability.</p> <p>Those who inspire us the most are all the skilled craft women that came before us, those who have taught us, showed us and paved the way for us. Iceland is enormously rich in terms of skilled craft women in weaving, knitting, felting, embroidering and we could go on and so forth. We have a rich craft culture and it has been carried out through generations of women.</p>
Method	Interview (textual: e.g. email)
Relevance	

Title	Beekeeper and coffee roaster Roland Põllu
Pilot	Tallinn
Content	<p>Tere!</p> <p>I'm Roland Põllu, a coffee maker and beekeeper from Tallinn, Estonia. After wandering around and returning back to Estonia in 2009, I joined a team of coffee enthusiasts who were the specialty coffee pioneers in Estonia. As I was rediscovering and learning more about coffee (I worked as a barista back in my school days), I also met my future wife and the love of my life, Mari. Mari means berry in Estonian, so beans and berries started a new journey together for a better future. We established KOKOMO Coffee Roasters in 2015 and our first child Lumi Mari (snowberry in Estonian) was born the very same year; Tali (winter in Estonian) joined the team in 2018. The last three years we have been living, growing and working in the northern part of Tallinn in Kopli peninsula.</p> <p>This area, a hidden gem where our home is located, is called Professors' Village; beautiful wooden houses have been preserved here. There is still a bit of wilderness here and more nature even though the ship industry and a cargo port are quite close. The former rubber factory on the peninsula is now a home and centre for culture and the new future of Kopli. Põhjala Factory is where our coffee roastery lies too. It's a few minutes bike ride from home.</p> <p>When my grandfather turned 93 years old in 2019, I understood that someone had to take over his apiary he kept in our country house in Central Estonia, surrounded with forest, bogs and swamps. We've always had honey on our table and I understood that I would be the only one to take this responsibility. I took all his books and started to read and recall everything grandpa had taught me when I was spending the time in the countryside. When the pandemic hit the world, I saw the chance since there was less work at the cafe and we preferred to spend more time in the countryside. I managed to save some of grandpa's hives from collapse and rebuilt our apiary with</p>

	<p>fresh queens and inventory. Then a bear came to visit in 202 – the first time in 40 years!</p> <p>It took another year to relearn and build the new apiary. Since the bear still probably hangs around, I decided to move our apiary closer to home, to Kopli and start learning urban beekeeping. With Tallinn Beekeepers Society and the Kopli 93 community centre under Centrinno project, we are collaborating to teach the new generation of people of Kopli how to preserve and keep our connection with nature and build a better future.</p>
Method	Interview (textual: e.g. email)
Relevance	The importance of the story is preserving and upgrading old food production skills, methods, and traditions, and fitting them into modern urban industrial setting. It falls into the category of #grandpaskills. This is a story that inspires to use urban industrial space in a more diverse and interactive ways. Beekeeping and honey production combines leisure with productivity.

Title	Community commons and the emotion network of Kopli makers
Pilot	Tallinn
Content	<p>The topic of the session was inspired by a story shared by the head of Põhjala Factory NGO. Her main point was that the very strong community feeling that existed in the early years of the creative city existence, is now vanishing and people do not treat it as the commons anymore. It has become too big for that or it has become too much of a corporative business for the people. People used to work on the developments, opportunities and fix problems themselves. Not they often expect the leaders of Põhjala to do everything for them. It has become a commodity or service. It is not so much a community any more.</p> <p>The other thing that we have noticed when dealing with community building ourselves, are the mixed feelings associated with shared property and territory. But you cannot make a community makerspace and garden without sharing resources. We somehow need to support the process of overcoming the collective trauma and learn the true meaning of the commons. Because the USSR had nothing to do with the commons. Although, they used the term communism.</p> <p>The story at hand describes the results of an emotion networking session with five local makers/designers/craftspeople from Põhjala Factory.</p> <p>Elisabeth, a person calling herself the head rake keeper (pearehahoidja) of Põhjala factory shared the story about the commons of the community garden. She said that at one hand sometimes people do not respect the property. They leave the things messy and sometimes it seems that people do not care. But on the other hand it makes her happy, because despite the messiness, things are not stolen. It still works and there is trust. But it is clear that in order to share resources, someone must have more responsibility than someone else.</p> <p>Juhan, a digital marketing specialist responded that "commons" makes him feel proud but scared at the same time. He said that he is proud because having a community, being able to share resources and enjoy all the commons we have thanks to the government. But he is scared because of the same issues that Elisabeth mentioned. The problem of people not taking responsibility. But Juhan said that in reality he does not have his own experience regarding managing the commons or being part of a community that shares resources.</p> <p>Helen, an artist, says that when to think about the commons specifically, she now sees that there are many things in Põhjala, that are commons, and that could be improved. But she thinks that everyone's experience is influenced by the one or two communities that they have been part of.</p> <p>Pille, also an artist, replies that the emotions really depend of the community that first pops into your mind when being asked this question. What has been your personal experience in a community? How pleasant or unpleasant it was?</p>

	<p>Brita, felt calm and relaxed. She felt that this topic is not close to her heart and does not spark bigger emotions in her. She thinks that it would be very nice if people were able to take care of the commons.</p> <p>Elisabeth thinks that the attitude people have towards common resources really depends upon the way that the resources were acquired. If it is some random project money that not many people had to work hard on to get it then why should anyone care if they did not want the resource bad enough to work for it and in the end they got it for free. Maybe the situation is different if they got the resource differently.</p> <p>Pille added that now when she thinks again, she has felt used and not disrespected if she has been kind towards others to use her things and people do not treat those things with the love and care that they would find if those were their own things.</p> <p>Ander, a digital marketer, marked her initials in the middle of the board and did not have much to express. He just said that it is not very topical for him right now.</p> <p>Because many emotions were shared, the facilitator now allowed the participants to change their position on the emotion networking board.</p> <p>Karin, the facilitator now read a text for the community explaining what the commons really is:</p> <p>Kogukondlik ühisvara (ingl commons/ common-pool resources) kujutab endast sotsiaalset, poliitilist ja majanduslikku süsteemi, mis tugineb iseorganiseeruvusele ning hõlmab kollektiivset omandit ehk ressursse, mida teatud kogukonna liikmed või inimkond laiemalt omavahel jagab, aga ka juhtimis põhimõtteid ja reegleid, mille kogukond kujundab ressursi ühiseks loomiseks või haldamiseks. Selliste ressursside hulka võib lugeda loodusvarad, üldkasutatava maa ja ka näiteks vaba tarkvara, informatsiooni ja teadmised.</p> <p>Ühisvarade hulka kuulub ühiskondlik omand ja eraomand, mille kasutamist lubavad seadused või traditsioonid (nt avalikuks kasutamiseks olev rand on ühisvara).</p> <p>Kultuurivallas on ühisvaraks vabalt kättesaadav kirjandus, muusika, kunstid, disain, filmid, televisioon, raadio, informatsioon ja tarkvara. Ühisvarade hulka kuulub ka avalik hüvis (sh nt riigikaitse) või ka näiteks mitteametlik tugivõrgustik kogukonna ja kogukonnasuhete näol.</p> <p>Peter Barnes kirjeldab ühisvarasid jagatud kingitusena. Jagatud kingitus pole individuaalne kingitus, oleme selle saanud kogukonna liikmena. Sellised kingitused on näiteks õhk, vesi, ökosüsteemid, keeled, puhkepäevad, raha, seadused, matemaatika, pargid, Internet, kogukonna suhted. Kogukondliku ühisvara printsiip püüdleb kõigi kogukonnaliikmete otsustesse kaasamise poole, püüdes hoiduda tavapäraselt levinud ebavõrdsusest ja hierarhiatest, mis loovad eeliseid teatud klassi, soo, rassi või positsioonide (nagu juhid, eksperdid jt) esindajatele.</p> <p>Sisuliselt on kogukondliku ühisvara puhul seega oluline teadvustada lisaks ressurssidele ka seda, et kogukonna sotsiaalsete ja looduslike ressurssidega seotud ühistegevused oleksid juhitud kogukonnaliikmete poolt võrdsuse ja aktiivse osaluse põhimõtetele tuginevalt.</p> <p>(Note Karini! Ma kopeerisin umbes mingisuguse ingliskeelse sarnase jutu siia kokku. Ma ei jaksanud otse tõlkida ja vb seda polegi vaja.)</p> <p>ENG</p> <p>The commons is the cultural and natural resources accessible to all members of a society. Traditional examples of commons include forests, fisheries, or groundwater resources, but increasingly we see the term commons used for a broader set of domains, such as knowledge commons, digital commons, urban commons, health commons, cultural commons, etc. These resources are held in common even when owned privately or publicly. Commons can also be understood as natural resources that groups of people (communities, user groups) manage for individual and collective benefit. Characteristically, this involves a variety of informal norms and values (social practice) employed for a governance mechanism. Commons can also be defined as a social practice of governing a resource not by state or market but by a community of users that self-governs the resource through institutions that it creates.</p> <p>The common is not to be construed, therefore, as a particular kind of thing, asset or</p>
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<p>even social process, but as an unstable and malleable social relation between a particular self-defined social group and those aspects of its actually existing or yet-to-be-created social and/or physical environment deemed crucial to its life and livelihood. There is, in effect, a social practice of commoning. This practice produces or establishes a social relation with a common whose uses are either exclusive to a social group or partially or fully open to all and sundry. At the heart of the practice of commoning lies the principle that the relation between the social group and that aspect of the environment being treated as a common shall be both collective and non-commodified-off-limits to the logic of market exchange and market valuations.</p> <p>---- networking continues ----</p> <p>Elisabeth started sharing a story about communities in general. She said that commons is something that a community owns. When she was little, she has vivid memories from her visits to her grandmothers place. When she was there she had the feeling like she had more aunts and uncles than she really did have biologically. Her grandmother knew everyone in the apartment building. There was always an aunt Malle, or aunt Ülle around. Today we don't have that. We barely know our neighbours. And the community at Põhjala Factory or in Kopli 93 is sort of artificial.</p> <p>Juhan thinks that there is still hope for some real-estate developments where similar people with similar world views come together. But then he remarks that what he learned from this conversation is that a parking lot is also the commons. Something that belongs to the community. And he has a big problem with the parking lot. He thinks that some commons, like the parking lot, have to be governed very strictly and carefully. Through lots of laughs, he explained how this situation is even painful. Once, he arrived to work the earliest and someone called a police to him saying that he has parked someone in. But in reality it was someone else arriving later.</p> <p>Elisabeth thinks that we are all a bit too anxious or not relaxed enough because it is not ok even that that kind of situations make someone so mad so that they are calling the police. Juhan thinks that this is not the solution because it is hard to teach someone to relax.</p> <p>Brita comments that her feelings are getting more and more intense when listening to the stories of others. Intense in a sense of calmness. She feels it is nice to share and talk about such topic.</p> <p>Many participants now started talking about how many there are cars at Põhjala this week. Some events are organised in a way that people or participants are travelled to Põhjala by bus, and some others are completely unorganised car chaos. It really makes a difference in the day to day experience.</p> <p>Karin then explained further that the thing with the commons is that many things around us, are the commons. They might not be governed as the commons but it is still something that we consume regardless of our choices. Like the streets in the city, public transportation, noise level in the city.</p> <p>Elisabeth notes that she has previously worked in the local municipality and she can see that often for policy makers and public officials it is not easy to govern the commons properly because most of them have a clear responsibility area. But there are some in-between areas / clouds that are nobody's business. Many things are also very difficult to manage. For example the road material industry in Kopli, that is very polluting. It is very hard to make them leave. There is no solution other than just waiting for the real-estate prices to make them go somewhere else. But our air is more polluted and there is nothing to do.</p> <p>Pille said that this topic has ties with the soviet times. When we are talking about our common rights and the rights of the people and start blocking or influencing private</p>

	<p>property rights, then people get all triggered. Anything connected to socialism is a no-go.</p> <p>Karin added that she thinks when people and the communities were more capable in governing their own commons, then overcoming social, economic, and environmental challenges would be simpler because often the communities themselves have the best information about the local context, their need and preferences. It makes sense, for example, that the people in Kopli can speak up and co-create the community center that they want to have rather than giving this task only to the policy-makers who serve the idea that makes them look good for more general voter audience in Northern Tallinn. What can happen in transformational times is that the government cannot reach everyone's needs and views. People have to be armed with self-organising skills. Otherwise, people will not very happy about the change.</p> <p>Juhan noted that community is key in keeping up the morale in all of this. And community means some kind of power. Ander still feels distant to this topic.</p> <p>Pille remarks that her creation is inspired by the fear of the climate crisis, social crises, and all the other scary things that the future might hold. She dreams about a better city and environment for everyone. For example, we will not start driving with our bikes when you can get killed on the street when on your bike.</p> <p>Karin, the facilitator did not participate on the board of emotions because she is the researcher of the commons herself and did not want the session to become a lecture. She did note that the atmosphere of the session was tense because there were a lot of emotions coming up with this topic. To the facilitator, it sometimes seemed like people did not want to talk about it or think about it too much. And when they started talking, the emotions travelled to all corners of the board. Sometimes it was the same person feeling many extremes. In the end of the session we all remained in the circle to continue the discussion. People were curious to learn more. It seemed like the topic was still important to them. So then the lecture, that Karin was trying to avoid by not participating on the board, still happened. It was lovely to learn that when introducing the topic more softly and giving good research-backed information about the commons, then people will lose the nightmare associations with the Soviet Union.</p>
Method	Workshop / Focus group
Relevance	But it was important to document those emotions because then we know better of how to approach our own community at Kopli 93. Our goal is to give people the tools to self-organise. It is clear that "doing things together" at some level can make people feel distant and avoidant. We have to be careful in clearing away misbeliefs about the commons and teach a better way how to make decisions and lead discussions to achieve a common ground.