# ÉISCHTE WELTKRICH: REMEMBERING THE GREAT WAR IN LUXEMBOURG - DIGITAL EXHIBITION

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ABSTRACT: The digital exhibition Éischte Weltkrich: Remembering the Great War in Luxembourg is a project currently developed by the C2DH - Centre for Contemporary and Digital History of the University of Luxembourg with the objective of addressing a neglected and understudied period in the history of the Grand Duchy. Supported by the Ministry of State and bringing together the collections and expertise of all the major Luxembourgish museums, archives and cultural institutions, the project has progressively deepened and widened its scope, aspiring to become a long-term online resource. This paper outlines the exhibition concept and design, describing the process of development and implementation of the website, the challenges in dealing with a variety of sources from different repositories and the possible solutions for addressing a wider audience with accessible and engaging content using a wide range of multimedia features and new strategies in digital storytelling.

## 1. INTRODUCTION

Born as a collaboration between the University of Luxembourg and the Ministry of State within the frame of the WW1 Centenary commemorations, the digital exhibition Éischte Weltkrich: Remembering the Great War in Luxembourg was designed with the purpose of shedding light on a period still largely unexplored and neglected by local historiography.

Overwritten by the dramatic events of the Second World War, the complex and ambiguous history of Luxembourg during WW1 — a neutral country, invaded by the Germans, bombed by the Allies and torn by social and political tensions — has suffered from a general indifference and disregard from both historians and local population [1].

The initiatives for the Great War centennial have offered an unprecedented chance to reengage with this period both at an academic and at a political level. However, we deemed important not to confine the exhibition project to the boundaries of the commemorations but rather turn it into a long-lasting digital resource, with an open, flexible and integrable structure.

Avoiding a trite militaristic memorialisation of the war, the digital exhibition Éischte Weltkrich (translating "the First World War" in Luxembourgish) proposes itself as a means to remember a forgotten conflict, where remembering is the active and ongoing cognitive process through which nations and groups historically construct narratives about the past. The history of WW1 in Luxembourg is not univocal and unambiguous but protean and complex, made by memories produced and/or repressed, embedded in objects, places and commemorative practices. As these memories and stories resurface, they highlight in a critical and self-reflective way the dissonant narratives that have reinforced or official and established subverted the historiography.

To embrace this plurality of voices and to avoid a monolithic view and interpretation [2]

we tried to offer a multi-faceted interactive experience that acknowledges and engages in conversation with diverse audiences. Relinquishing authority also means abandoning strict linearity in favour of a non-linear, multi-layered approach [3], offering various tiers of experience that visitors can pick according to their own inclinations and online reading modalities.

In order to address these multiple typologies of fruition, we reflected on strategies for tailoring content to suit users belonging to different age groups and with different competences, learning abilities and digital literacy, striving to adopt a clean, simple and inclusive user interface, to ensure for all users equal access to the information and functionality of the site.

Designing an online exhibition presents a different set of challenges and possibilities compared to a traditional one. If, on one hand, the translation from analogue to digital inevitably comes with issues of authenticity, materiality, and decontextualisation, on the other hand, new technologies offer the possibility of transcending spatial and temporal boundaries, allowing for the creation of meaningful learning experiences.

The digital exhibition does not propose itself as a surrogate of a real one, nor does it want to replace the live "auratic" museum experience, but rather represent an informative and engaging online platform where audience participation is encouraged by means of web interfaces and systems that support creative explorations of the content.

A wide range of multimedia features are employed to present history in a visually appealing way, although these represent a means of conveying complex information in a palatable form rather than an end in itself. Finally, and above all, instead of standing as static repository of information, the exhibition strives to maintain a self-reflexive curatorial approach, presenting the content in a critical way in order to stimulate questions and debates.

## 2. THE DIGITAL EXHIBITION

In terms of production, the project to develop a virtual exhibition on the First World War in Luxembourg has officially begun on the 15th of February 2016 with a preliminary phase of research and study of the materials related to

Luxembourg in WW1, and the establishment of contacts and collaborations with the relevant public repositories and private collectors. The collection of sources helped to analytically frame, compare and contextualise the material, identify the core themes and better define the structure of the exhibition. The following phase saw the selection and cataloguing of the items, the establishment of the digitisation parameters, the settlement of the copyright agreements and the detailed structuring of each section. Working with the designers hired to develop the website brought a general reassessment of the exhibition design in view of both technical possibilities and constraints, and our concept was further revised, elaborated and enriched. Once the backbone of the digital exhibition was defined, we focused on the content and the storytelling which required several iterations, editing and selective pruning. Throughout the entire development process, we strived to include different actors with a series of seminars, workshops and focus groups.

In order to engage different audiences with varying degrees of knowledge and expertise (from the member of the general public with no previous familiarity with the topic, to the expert of local history who wants to use the website as a resource) we explored various strategies in digital storytelling, envisioning individual and collaborative educational activities targeted at specific groups, and employing a hierarchical navigation that allows the users to move from a first basic level of information to more complex content.

The homepage thus presents four independent but interconnected modes of navigation (or entry points): The Themes (a thematic, story-driven mode), the Collection (an exploration of the individual objects in the digital archive), an interactive georeferenced Map and an event-based chronological exploration represented by the Timeline (Fig. 1).



Figure 1: Homepage

The overall structure and design of the exhibition remains flexible and open, allowing for the continuous integration of further themes and documents, either provided by institutions or crowdsourced.

#### 2.1 THE THEMES

The themes are presented as digital stories [4][5][6] designed to create an immersive visual experience (Fig. 2). The Occupation tells the story of the German invasion of Luxembourg at the beginning of the war and of ensuing complex and ambiguous relationship with the occupiers. Grief and Loss tells of the death of the soldiers and of the civilians in a neutral country, of the bombings of the steel industries, the diseases and the military cemeteries. The Food Crisis discusses the political and social impact of the food crisis, resulting in civil unrest and in the creation of the first trade unions. The Aftermath looks at the events immediately following the armistice: The French and American occupations, the political changes and the process of memorialization of the victims. Finally, Migrations follows the impact of war in the movements of people in and out of Luxembourg.



Figure 2: Example of theme

Each story is a linear — albeit not forcedly chronological — narrative divided into chapters. Each chapter is composed of a succession of textual and visual modules that give rhythm to the storytelling; the user can either follow the story sequentially or, at any point, freely jump to a preferred chapter through a theme index (Fig. 3).

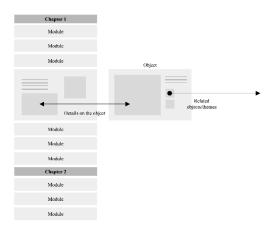


Figure 3: Structure of the themes

The digital stories are built through a specially designed visual editor that mediates between back end and front end, functioning as a storyboard creator where the individual visual modules are shaped and their arrangement in a narrative pace can be tested. The modules offer a varied yet limited range of possibilities for structuring the content: text + background; text + object (where the object can be an image, a video or an audio file); gallery of objects (with a choice between grid and slideshow); map + text and so on (Fig. 4).



Figure 4: Variations of modules

We decided to divide each theme/story into five chapters of ten modules each, and, to avoid tiring and losing the attention of the reader, we limited the written sections to a maximum of 70-100 words per block of text, keeping the style simple and jargon-free. Balancing readability without forgoing accuracy and depth of information has proven to be one of the most challenging tasks of content creation. A strategy to limit the word count was to link contextual information to a glossary, so that clicking on a specific term in the text would open up a small text bubble with additional biographical data or definitions of less-known terms which do not immediately contribute to the story.

In order to avoid reducing the images and objects used in the modules to mere visual backdrops to our story, we allowed the possibility of exploring them individually with links to separate windows containing detailed information as well as descriptive metadata.

The themes are navigated by vertical scrolling as well as by arrow clicking while a visual indicator and the changing chapter numbers provide feedback on how far the user is into a story. Modules with galleries of images are instead browsed horizontally, introducing a variation in the navigation pattern.

The reading time is of roughly 15-20 minutes per story, given the user exclusively reads through the theme from start to finish without opening any of the individual files. With this solution we hope to equally accommodate the needs of the users who like to be guided through linear curated content, as well as of those who enjoy free exploration and non-linear browsing.

### 2.2 THE COLLECTION

The Collection is where the user can explore the individual images, artefacts, and documents that constitute the exhibition archive.

Unlike other digital exhibitions that display selected material from a single museum or collection, the Éischte Weltkrich exhibition comprises a heterogeneous corpus of objects coming from different institutions and repositories, each with their individual classification standards, accessibility, and curatorial agendas. Establishing links and collaborations with public museums, libraries, archives, as well as Luxembourgish private collectors who agreed to put their collections at our disposal, we sourced and researched approximately 3000 documents, including artefacts, photographs, postcards, caricatures,

film footage, audio files, newspaper articles, official documents, books, diaries, and letters.

This material has been then accurately examined and selected, giving particular attention to those previously unpublished documents that demystify local popular stories or present elements of novelty, suggesting different readings of the established traditional narratives.

The process of translation of the material from analogue to digital was often already undertaken by the contributing institution; in a few occasions the digitisation of the objects had to be done anew by the staff of the Digital and Media Lab of the University of Luxembourg.

In order to display the richness of the digital collection and encourage a serendipitous discovery of stimulating items instead of allowing access to the collection exclusively via search function, we adopted a "generous interface" design [7], offering an infinite scroll with thumbnails of objects which can be freely browsed or filtered by type of resource and time-span (Fig. 5).

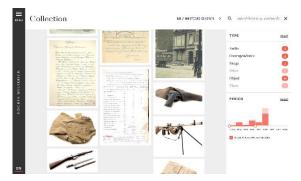


Figure 5: The collection

Selecting one of the items in the Collection opens up a window containing a larger zoomable image, date, location, a descriptive entry and additional metadata. A further link to a several specially curated documents allows to discover additional related objects (Fig. 6).



Figure 6: Example of individual object

Rare books are available to read in their entirety and have been made searchable through optical character recognition (OCR) technology. Should the copyrights allow it, it will be possible to download the respective file together with its metadata, a measure to counter the dispersion and decontextualisation that often accompanies digital sources.

While the interface design prompts a deep exploration of the Collection by analogy and random discovery, the user who is looking for specific information can of course perform a full-text search which also offers autocomplete suggestions starting from the fourth typed letter. As with all the content of the digital exhibition, the Collection will be continuously integrated with new material and will hopefully become a valuable research tool and point of reference.

#### 2.3 THE INTERACTIVE MAP

Maps are essential data visualization tools and all salient Luxembourgish locations linked to WW1 (bombed sites, shelters, war cemeteries, memorials etc.) as well as all the historical records in the collection that refer a specific place are displayed on an interactive map – zoomable to street level – which provides a geo-exploration mode (Fig. 7).

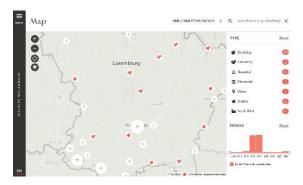


Figure 7: The interactive map

While the map is contemporary, selectable layers allow the visitor to compare earlier landscapes and understand the changing political borders of the Greater Region from 1914 to today. By enabling location-awareness (particularly when viewing the website on mobile devices) the user can employ the map as a discovery tool to filter and locate relevant places in the proximity. This feature can naturally have applications for mobile learning activities as well as enhanced touristic experiences.

#### 2.4 THE TIMELINE

Finally, the Timeline offers a more conventional event-based exploration as well as an additional access point to the digital exhibition.

Timelines are traditionally regarded as powerful and intuitive frameworks for presenting history, able to simplify narratives by highlighting linear and causal successions of events. Postmodern critique however warns against the coercive nature of chronological narratives seen as univocal and deceptively neutral interpretations [8].

We attempted to address the issue by linking our digital timeline to the Collection, allowing the user to explore more complex connections as well as seeing historical records in context.

A sidebar traces a linear unfolding of the events with a yearly calendar from 1914 to the early 1920s giving access to a chronology of significant dates covering both local and international context. Each event can be then expanded to reveal additional information as well as a thumbnail display of the related images and objects which can be further explored (Fig. 8).



Figure 8: The timeline

## 2.5 THE EDUCATIONAL SECTION

Aside from the four modes of navigation, two additional sections accessible from the side menu provide tailored content for specialist researchers and for schools.

A Resources section contains downloadable contributions by various scholars and museum professionals on specialist subjects. While the context is always Luxembourg during WW1, the papers cover diverse topics, from literature to art, photography, history of science, politics and economics.

In collaboration with our colleague Frederik Herman, an educationalist and a specialist in Social and Cultural Histories of Education, we organized a series of focus groups with local history teachers aimed at gaining a first insight on how WW1 is taught in Luxembourg, identifying the challenges teachers might encounter while dealing with this topic, and discussing some digital tools and solutions that can be developed to facilitate teaching and enrich learning experiences. The focus groups with the teachers were followed by an online survey advertised through the ALEH (Association Luxembourgeoise des Enseignants d'Histoire) network.

The data collected during the discussions constituted the basis for developing the pedagogical section which offers three downloadable manuals that teachers can use in the classroom to encourage the study of local history and engage pupils in research activities involving digital tools and resources.

Each downloadable manual — addressed to teens between 15 and 18 years of age — uses an object from the collection as a starting point to explore the broader context: The Forgotten Monument (the Clausen war memorial for the civilian victims of an aerial bombing); 250g of bread (a rationing card, referring to the food crisis and hardship during the war); and finally Invitation to the Ball (an invite to one of the dancing soirées organized by the American troops in Luxembourg following the Armistice).

The suggested activities employ an interdisciplinary approach to promote active learning and are divided into modular sections to accommodate different time availability and resources. The teachers are then given the possibility to submit and upload a documentation of their results onto the website.

#### 2.6 THE DEVELOPMENT

In order to retain a certain degree of autonomy in managing and adding new content, the backend structure for uploading and storing the files and metadata on the University server, was developed in-house by Daniele Guido, lead designer and full-stack developer at the C2DH.

The open-source platform Miller was first developed in the context of RESuME, an

Erasmus+ Programme funded project (http://resume.uni.lu) to provide researchers with a simple, customised content management system.

Built on top of Django and the Django REST framework, Miller deploys a RESTful API to search, access and edit multi-language contents through a basic data model: authored narratives (Story objects) which contain resources (other Story or Document objects). Both Story and Document objects have a metadata field which provides multilingual properties for titles, abstract, contents, references and copyrights and narratives. The Story contents are delivered as markdown plain text through the API, shipped with a versioning feature so that previously saved contents can be easily recovered. Links to other stories and documents are expressed as markdown links pointing to the target element identifier.

The external studio Calibro design (http://calib.ro) is responsible for the design and visual identity of the exhibition as well as for the development of the front end and visual editor. The latter relies on a client-side web application build with React.js that uses the data provided by the Miller API. The front end is developed with some of the most advanced technologies for cross-browser and crossdevice web development such as the React.js framework, Bootstrap for layout and as grid system, and MapboxGL.js for displaying geographical data.

The elaboration of the visual identity of the exhibition stems from an initial study of the typefaces used in Luxembourgish newspaper advertisements during WW1. Purposely distancing itself from a martial theme to reflect the non-belligerent status of the Grand Duchy during the war, the choice of fonts retains traces of the Belle Époque while remaining sober and readable. Large full-screen images pay tribute to the vast photographic production of the time whereas the colour palette alternates a greyscale with a pale cream background with desaturated red highlights.

## 3. CONCLUSION

The website is currently at the last stages of development and is expected to officially launch at the end of February 2018. The following months will be dedicated to integrating additional content and running

usability tests to verify the functionality of the website on all platforms.

Following the official launch, user interaction and feedback data will allow to further improve participation and plan future expansions.

The ongoing elaboration of the digital exhibition has offered a valuable opportunity to reflect on the transformations brought about by digital technologies, the changing dynamics of appropriation of history and the consequent need to rethink and revaluate strategies and practices.

#### 4. ACKNOWLEDGMENT

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Last but not least, I would like to thank Calibro and Daniele Guido for so efficiently interpreting and translating our needs with intelligent and intuitive solutions.

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