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RETOLD: Experiences in a Local Museum with Digital Documentation – The Stone Age Park Dithmarschen in Albersdorf (Germany) as a RETOLD Partner

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The Stone Age Park Dithmarschen in Albersdorf (Germany) is an archaeological open-air museum focussing on the Stone Age. It consists of an outdoor park area of about 40 hectares. This includes archaeological monuments, reconstructed Mesolithic and Neolithic buildings and a recently opened museum building with an exhibition of original artifacts. Like in any other museum, our challenge is to save and document information, especially information relating to practical work techniques and craft skills, in a sustainable way for future museum generations. Because of the evolving situation regarding these concerns the Stone Age Park joined Retold in 2020.

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RETOLD is a four year cooperation project, co-funded by the European Union's Creative Europe Programme. The project will be finalised in Autumn 2024. It focusses on open-air museums, their stories, and how to make sure we can keep sharing them in the future. Our approach is to divide the stories we tell into two categories: traditional crafts as example of activities: the intangible, and buildings which stand for artefacts, and hardware: the physical. The project has developed a structured approach to the documentation of these, which will be followed by going digital with this information. Finally, the stories can be shared again.

There are two more open-air museums in Retold: Museumsdorf Düppel (Stadtmuseum Berlin, Germany) and the ASTRA National Museum Complex from Sibiu, Romania. Each of us has our own challenges, partly because of differences in size, nature or location and organisational structure. We, the Stone Age Park Dithmarschen, are representative of maybe half of the open-air museums in Europe: situated in rural territory, not too large and with limited scope, but with a loyal group of volunteers and friends, and providing important value for the region. For a museum like Stone Age Park Dithmarschen, using digital techniques may pose some difficulties: equipment can be expensive, and staff are not familiar enough with digital techniques. But if RETOLD works here, it may work in many other places as well.

When RETOLD came to town

It is important to mention, that apart from the three museums already mentioned, there are other partners in Retold: EXARC is the coordinator, and then we have Universitat Autónoma de Barcelona (Catalonia, Spain), Nüwa Digital Media Content Production Studios Ltd (Ireland) and under their umbrella XYZ Technical Art Services GmbH (Germany). To be frank, a tech dev project with challenging engineering requirements like this cannot be successfully managed by museums alone.

We had two RETOLD workshops in Albersdorf, in September 2023 and in March 2024. Where other RETOLD partners work from the technical side of the platform towards the stories we want to capture, in these workshops we worked the other way around: we discussed in detail what information we found important, and then structured that.

It was important that RETOLD came to Northern Germany, sharing what was designed by the six RETOLD partners. We knew this was a test, both for RETOLD and for us. So, what are the experiences of a smaller museum? The heart of RETOLD is structuring what is already there. The three museums had already looked deep into their archives, listing what they knew about their reconstructed buildings and crafts. Based on that, detailed questionnaires were made so each museum would collect information in roughly the same way.

Our museum played an important part in defining what should be documented and what not, but still our staff were a bit shocked when they finally had to start using the questionnaires. The issue was that at that stage, the forms were still being prepared for being programmed into the RETOLD platform, hence they did not exactly fit on a single or even a dozen sheets of paper. One of the forms covered over 400 lines. We know that when the platform is ready, this will be much more user friendly.

Language

Another issue was that these extensive excel sheets were in English, and although some of our staff have a reasonable level of ability with that language, many of the forms require detailed input and vocabulary which we only know in our own language. It is important to add that we expect the people using the platform will not generally be museum directors, but mostly maintenance staff and tour guides. So it is important for us that not only the questions and pull-down menus must be available in more languages, but also the input we add, the answer we give, must be allowed in different languages. However, a very important step towards better understanding information from other museums is the fact that everything is well structured.

We also noticed the language issue during the workshops. The first time RETOLD met in Albersdorf, everything was in English and there was little dialogue between our staff and foreigners. This changed a lot when in the second meeting, we only used German. It was clear that our staff and volunteers now had a better understanding of why we were doing this and their feedback helped a lot in changing the approach and in prioritising certain aspects above other. Based on these experiences, RETOLD will consider again if and how the platform can be multilingual.

This is not normal

In our day-to-day business, we have no time to document, digitise and share the stories of our buildings, crafts, and so on. Every step in this process was new for us, starting with the communication and data storage up to the advanced creation of 3D-models of our buildings. We are aware this will make us more robust, and once digital, we can share our stories in various ways, but it is still an effort. We were happy that we were not alone in this and had similar experiences to the other two museums. Still, a lot of progress was made in self-education, step by step with the trial-and-error-method (of course using digital tutorials). We were lucky to have some young adult volunteers who were eager to explore the technology and to find solutions. They work closely together both with our employees and members of our friend's association, so we ensure continuity in the process.

Digital 3D house models

Why?

At first we thought that having digital 3D house models was something for nerds only. But that was until we realised what you can do with them. It works as a perfect stage for sharing information about a building, whether you are standing inside it or if you are anywhere else in the world.

For example, if our maintenance staff have the model on their tablet, they can walk through the house and make notes on it about repairs needed. It gets interesting when they can take that tablet to the museum director, discussing and planning priorities, and then the director can even take this to the museum board or authorities: people who would never put on their mud boots to inspect a house in the museum itself but are the ones making decisions about larger investments.

Further to this, what if we take that 3D model and use it to reach out to our visitors? We must meet the public where they are, and that is not necessarily right here in the museum. Simply said, we can add information to all corners of the 3D house model, and then share that wherever. We all know that, depending on who we want to address, we can tell dozens of different stories linked to one single house. But for that, the basic information must be collected and formatted.

Hardware

But first, how do we get a digital 3D model? We did not have the necessary equipment, like a camera, a good computer or even the software. Technology develops very fast, but even so, what we needed was out of the ordinary, and without financing via the RETOLD project this would have been impossible for us. More importantly, RETOLD offered us advice on what to buy, and what not.

Technically, most current digital cameras are sufficient for making photos for a 3D model. Simply said, you need to take a whole lot of photos, hundreds, in a systematic way, preferably using only one camera, under stable circumstances (so do not record a bit today, and the rest

next week). But what about the roof? We needed to make our camera fly, or better said: we needed somebody with a drone to take pictures from above, to construct the roof in the models. Otherwise, there are open holes in the roofs and ceilings of the model.

There is a lot of planning involved, about how detailed the model should be. And what about items standing around the building like quern stones, pots, and tools? This time, we did not photograph the interior of the building because either we should empty it completely, or we should have it fully furnished. As we were off season, it was not completely empty, nor at all in a condition fit to show our visitors by means of a 3D model. This is something to think about.

Software

Some of the software we needed for our 3D modelling is quite demanding; you cannot run it on a normal desktop computer. So here again, we relied on advice of RETOLD professionals. The software itself was easy to use and did not require complex training. The names and brands we mention here may be replaced by others in the future. The main software we used for the creation of the 3D models was Reality Capture. The commercial licence can be quite expensive, but there are other licenses for education purposes, cultural organisations, and charities. So once that problem was solved, we only needed to pay a small amount for each model we exported.

Wherever we could, we used open-source software, like Blender for rendering and remodelling the 3D models. Another good tool is Sketchfab, for work on 3D models and the export of bigger data files. Without that programme it would have been very difficult to work with the 3D models outside our main graphic computer.

Once we had the 3D model, we started collecting information around it for the purposes we described earlier. Following the second workshop, all the information was processed but we cannot see the result and how it can be used before the technical part of the RETOLD platform is ready. If there is one thing we know, however, it is that these data can and will be used in many ways and formats, now that we have them.

A 3D model, and then what?

We did not just fly circles with a drone in the park. But we could not try out the RETOLD platform either. So, although we are a bit in the dark about how it will look and feel in the end, we discussed in detail what we thought would be most practical. What exactly can you do when you finally have that 3D model in your pocket? And what would that entail? For example, if we want to tell stories using that model as a stage, we need to make sure we have all the sources in order. This means going through our archives, checking details. We also realised, that the online public will not follow a guided tour from A to Z as our real life visitors do. For that reason, we designed several very short stories, which can be staged, filmed, and

pinned onto the 3D model. The visitor should be able to choose what they like to view, and in what order.

Although quite different from what we are used to, the information we share this way is like any other story we share. We decided to literally go through all the steps of this process, and make small video clips around several of our Stone Age houses. We are convinced that these digital gadgets will not lead to less visitors to the park, on the contrary, nothing beats the real thing, the real experience. Going digital may enhance or support the visit. The nightmare would be that staff get replaced with a video screen in our Mesolithic hut, but that will not happen in our lifetime.

It was not just fun and philosophical contemplation, however, RETOLD needs results too, and part of that is preparing the so called 'whitebook', or user's manual for the platform. This will be a website, both for people using the platform, but also for museums interested in getting a good understanding of it before they join. We used parts of our workshops in Albersdorf to pretend to be documenting a building, for example taking shots of maintenance issues, or filming people who were filming people doing crafts. It felt weird, partly because it was staged, but we hope that these images will help others understand what to do and how. Much of our RETOLD work over the past years was a process of informing ourselves and then trying things out. With the whitebook based on our experiences, we hope it will be much easier for other museums.

Conclusion

Saving our most important stories and details of our museum is certainly not an easy journey and we are not there yet. But it is worth it. We hope that sharing some of our experiences helps others. Most importantly: do not do this alone: there are too many aspects involved, and we have not met anybody who masters all, both from the museum and the technical side. Without the practical and technical help and inspiration of the other RETOLD partners it would have been very difficult to be part of such a digitalisation project.

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