The Roman Frontier along the River Rhine

The Role of Museums in revitalizing Cultural Landscapes

Renger de Bruin, Astrid Hertog & Roeland Paardekooper (eds), 2018

ICOM

international council of museums Netherlands

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Credits

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Project management
Both the organisation of the ICOM session in 2016 and the later publication was done by Renger de Bruin and Astrid Hertog on behalf of ICOM Netherlands, Roeland Paardekooper on behalf of EXARC, and Marliene Stolker, heritage advisor acted as assistant.

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Acknowledgments

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Fig. 1: LVR-Archaeological Park Xanten.
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Introduction

Renger de Bruin, Astrid Hertog, Roeland Paardekooper

The theme of the 24th General Conference of the International Council of Museums ICOM (July 2016) in Milan was 'Museums and Cultural Landscapes'. For ICOM Netherlands, this topic was appealing as the Netherlands has a rich tradition in cultural landscapes. One could argue that the country as a whole is a cultural landscape, created by man from the Middle Ages onwards, or even further back in history, to Roman times. The board deliberated on how ICOM Netherlands could contribute to the conference. It was decided to organise a session related to the general theme, while focused on the Dutch situation. The chosen topic was defined as the 'The Roman frontier along the River Rhine, the role of museums in revitalizing cultural landscapes'. The Roman frontier, the 'Limes', as the subject for the 'Dutch' session was more topical because the Lower German Limes (in the Netherlands and Germany) is listed for nomination as a UNESCO Word Heritage Site. The Dutch government and the German states of North Rhine-Westphalia and Rhineland-Palatinate started the procedure of application in order to join this part of the Roman border with Hadrian's Wall and the Antonine Wall in the UK and also the Upper German-Raetian Limes in Germany. These three sections of the Limes have already been recognised as Word Heritage Sites as 'Frontiers of the Roman Empire' (Adkins and Mills, 2011; Mills an Atkins, 2013; Mills et al., 2013; Mills, 2015; Flügl and Kutner, 2016; Sommer et al., 2013).

For the intended session in Milan, the role of museums in the nomination process of the Limes as a World Heritage Site should be underlined. Here a connection with the International Conference on 'Museums and World Cultural Heritage', that took place the year before, was logical. This conference, held in Catania (Italy), from 16th to 18th October 2015, resulted in a declaration on the role of museums in World Heritage Sites. The Declaration calls for UNESCO Sites to: "*increase the museological and institutional functions of museums*"; "*motivate museums and Institutions to have an active role in the protection, interpretation and presentation of the surroundings*", and managers to "*ensure that the governance of the sites integrate in their management museums and other institutions and places of culture existing in them; promote their involvement in the protection, conservation, interpretation of the heritage inscribed on World Heritage List*". Following its

adoption at the ICOM General Conference in 2016, national committees were encouraged to reflect and redefine the role of museums within WHL sites and to enhance their function within the sites they belong to.

This Declaration offered to elaborate on the role of museums in the Netherlands and Germany to present research on the Limes and to make this historical landscape visible. The board of ICOM Netherlands strove for a wider support. As the remnants of the Lower German Limes are partly on German soil, ICOM Germany was a logical partner. A delegation travelled to Munich to discuss cooperation between the two national committees, with a positive result. Other organisations drawn into the 'Roman boat' were the ICOM Committee for Education and Cultural Action (CECA), the ICOM Committee for Marketing and Public Relations (MPR), the ICOM-related International Organisation of Archaeological Open-Air Museums and Experimental Archaeology (EXARC), the Dutch section of the International Council on Monuments and Sites (ICOMOS), and the Foundation Roman Limes Netherlands (RLN). Representatives of all these organisations participated in the preparations, meeting several times in Utrecht (NL) and in Xanten (D). The session in Milan was presented as joint session, but overall responsibility remained in the hands of ICOM Netherlands.

The preparation group sought speakers with various angles, both geographically and thematically. The speakers made the session truly interdisciplinary, approaching the phenomenon of the Limes from the archaeological, historical,

Fig. 2: LVR-Archaeological Park Xanten.
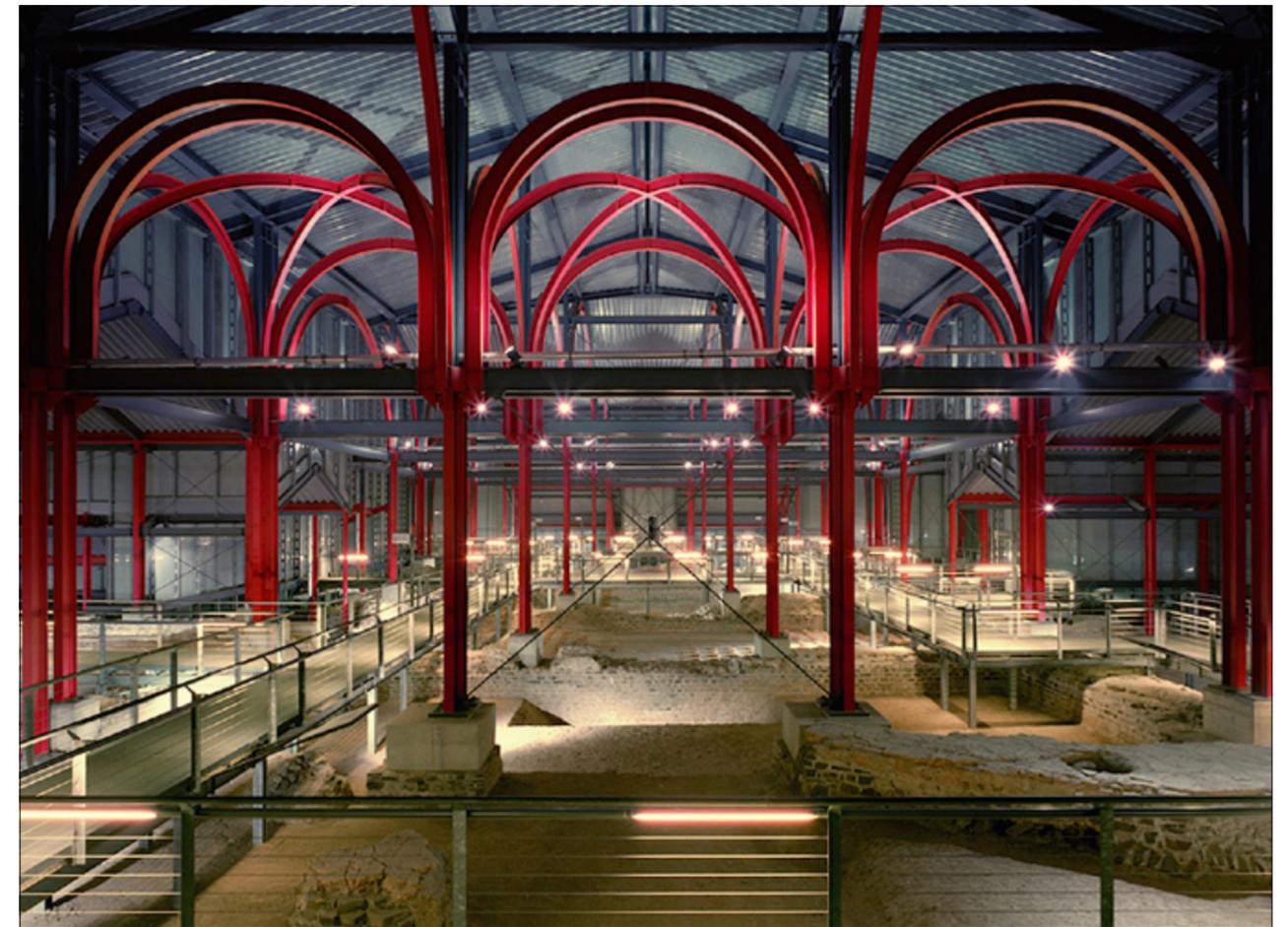
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Fig. 3: LVR-Archaeological Park Xanten.

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museological, tourist and political viewpoints. The first speaker, the British archaeologist David Breeze, who had been responsible for the nomination of the Antonine Wall as a UNESCO World Heritage Site in 2008, gave an overview of the European Roman Frontier, putting the Lower German Limes into this broader context. Breeze underlined the specific character of the Lower German Limes with a river defence line in present-day Germany, and a delta structure in what is now the Netherlands. He stated that museums can function as the gateways between the presentation of the Roman world in artefacts and the surrounding landscape. Erik Graafstal, head of the extensive excavations in the new urban landscape *Leidsche Rijn*, west of Utrecht and director of the Roman site museum in this area, gave an overview of these excavations and the presentation of their results. He pointed out the importance of the finds, both in the broad perspective of the Lower German Limes and in relation to the local community. Martin Müller, director of the Archaeological Park Xanten in Germany, outlined the function of a site museum for the South-Eastern part of the Lower German Limes. He emphasised the role of the park in knowledge-transfer from scientific archaeology to a wider audience. Especially because after the enlargement of the park and the opening of the Roman museum in 2008, the number of visitors had risen sharply and with it its importance for tourism.

Fig. 5: Castellum Hoge Woerd. Visualisation of the castellum, ingeniously built above the remains of the Roman Castellum in De Meern/Utrecht. © AAFKE HOLWERDA.

The touristic element was the topic of a presentation by Frederike van Ouwerkerk, senior lecturer on culture, tourism and communication at NHTV Breda University of Applied Sciences in the Netherlands. She discussed how the Lower German Limes is actually a memory-scape, which can be transformed into a challenging tourist destination by using storylines as a connecting thread between landscape and museums, in order to make the past visible and tangible. Visibility was also the main issue in the contribution of Christof Flügel, chief consultant for the archaeological museums at the Bavarian Museums Service in Germany: "Making the invisible visible". He explained the interpretation framework of the Upper German-Raetian Limes and showed museum projects along the Upper German-Raetian Limes in Southern Germany. With the example of the *Limeseum* in Ruffenhofen he elaborated the challenge of visibility. He explored the possibilities of storytelling and personal engagement in museum concepts along the Limes. He sketched the perspective of the whole Roman Limes in Europe and even beyond, making it the largest Heritage Zone, spanning 20 countries on three continents. The policy aspects were outlined in a joint presentation by Tamar Leene and Thomas Otten. They described the administrative and scientific cooperation in the World Heritage nomination process. Talking about the role of museums in this process, they emphasised the need for cooperation, both at home and abroad.

From the start, it was the intention of the preparation group to give the session sustainability by publishing its contributions. Such a proceedings book is now mostly published on-line, like the ICMAH-proceedings of Milan 2016, *Museums.*

◄ Fig. 4: Roman ship De Meern 1 in Museum Castellum Hoge Woerd, excavated in 2003. © ASTRID HERTOG.

Bronze figurine of a greyhound found in Arentsburg (Voorburg).
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Territories and Societies (http://network.icom.museum/icmah/publications/our-publications/). Online media is almost universally accessible, making an e-publication the more economical solution for ICOM members worldwide. For the proceedings of the joint session of 'The Roman frontier along the River Rhine, the role of museums in revitalizing cultural landscapes', the preparation group also opted for an e-publication, with an additional limited print edition. Cooperation with the ICOM office in Paris is sought, to help publish and promote the book aamongst members. The three of us were assigned with the editing task. We asked the speakers to write the essence of their presentations down in a short article, focussing on the role of museums in revitalizing the cultural landscape of the Roman Limes. Here we present these contributions in the sequence of the session on July 6th, 2016.

Fig 1: Map of the frontiers of the Roman Empire.

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The Roman Frontier in Lower Germany

The role of museums in revitalizing historic landscapes

David J. Breeze, archaeologist, United Kingdom

Rome and its frontiers

The city of Rome is, naturally, a World Heritage Site, as are other Roman cities and great engineering feats such as the Pont du Gard. In 1987 Hadrian's Wall in the UK joined this illustrious body. A dozen years later, there was a move to make the German frontier a World Heritage Site and this was achieved in 2005, followed three years later by the Antonine Wall in Scotland: this is called the Frontiers of the Roman Empire World Heritage Site (FRE WHS). These are the vanguard of a proposal to make all the frontiers of the Roman Empire a World Heritage Site, on an incremental basis (Breeze and Jilek, 2008). Obviously, the Roman Empire would not exist without Rome, but it was Rome's soldiers and the military installations which *they* built, that protected and defined the empire and it seems appropriate that the remains of these frontiers should also be a World Heritage Site (Fig. 1).

Rome's frontiers were diverse. Where possible her armies reached the sea. Elsewhere natural features such as rivers, deserts and mountains were used to help define the empire's boundaries, and where these did not exist, land frontiers were created (Breeze, 2011). Each section of the frontier was unique, in its response to the landscape and to the available materials of construction. There were certainly some features in common. One is the distance separating pairs of forts, another the relationship of the forts to the rivers or seas. Usually, a fort was placed beside a tributary so that ships could be drawn up out of the force of the main river or the tidal pull. There were basic sizes of forts, large bases for legions, smaller forts for other units.

It is when we drill down to the next level that we start to see distinctive differences. These include the positioning of forts to cover routes or maintain surveillance over centres of population. On the other hand, areas devoid of settlement, perhaps thickly wooded or where the frontier ran through gorges, were not protected.

The Roman Frontier in Lower Germany

The frontier of the province of Lower Germany is remarkable in offering us two types of frontiers to investigate (Breeze, 2011, pp.93-95; Fig. 2). Through much of its length, the part in modern Germany, the Rhine offers us what might be termed a normal river
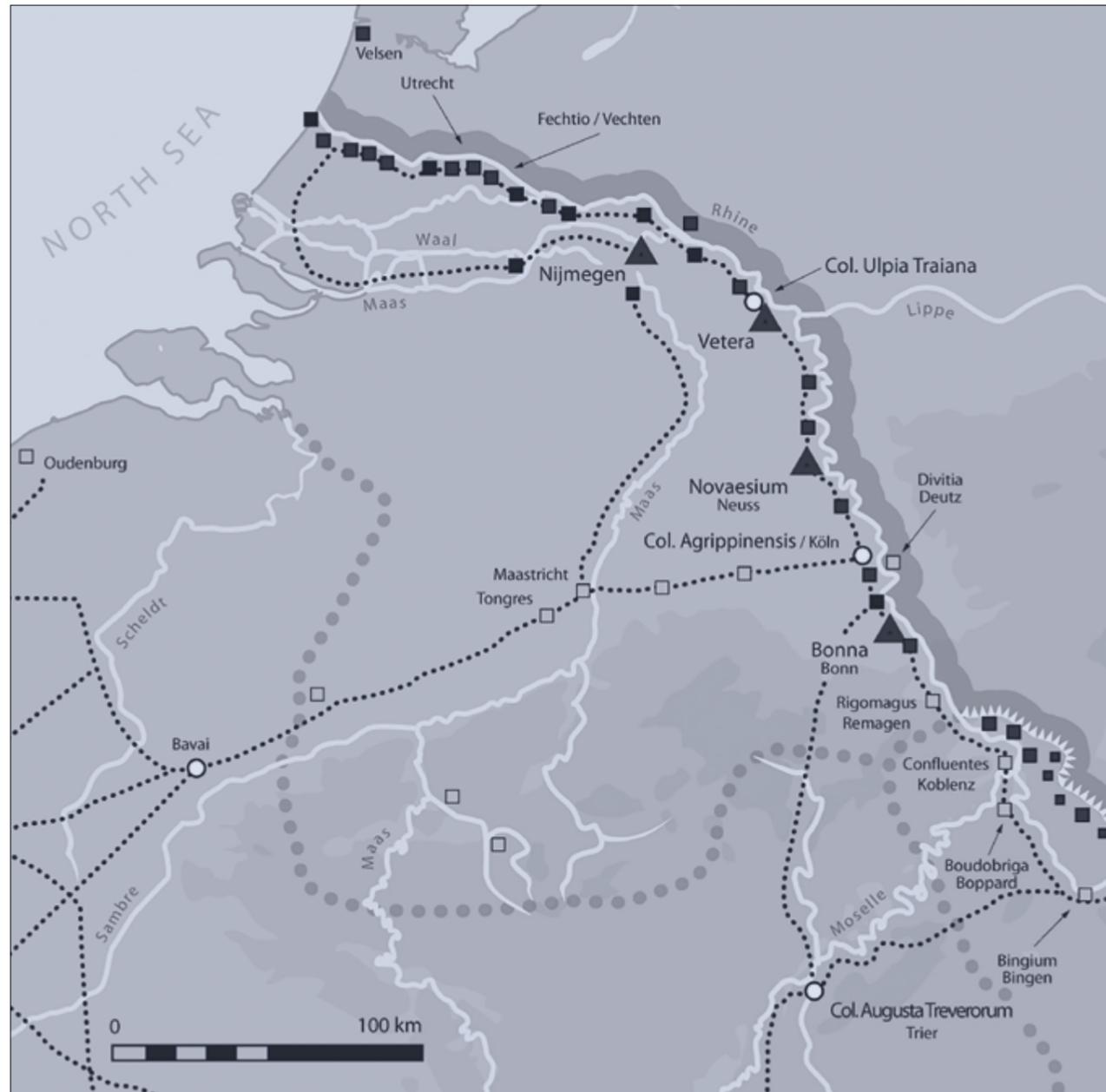
frontier, though there are details that are special. There are two legions both placed opposite rivers, that were potential invasion routes, leading into - and out of - what the Romans called *barbaricum*. The legions were supported by a mixture of smaller units along the river line, the cavalry regiments concentrated around the legionary bases.

The Rhine delta in modern Netherlands offers a very different picture. Here the forts are closer, they are smaller, and clearly focussed on the river. Many are of an unusual plan, not having the normal tripartite division. Whether this was due to the topography, or to the smaller number of soldiers based there is debatable. The units located along this branch of the delta included cavalry regiments, infantry regiments
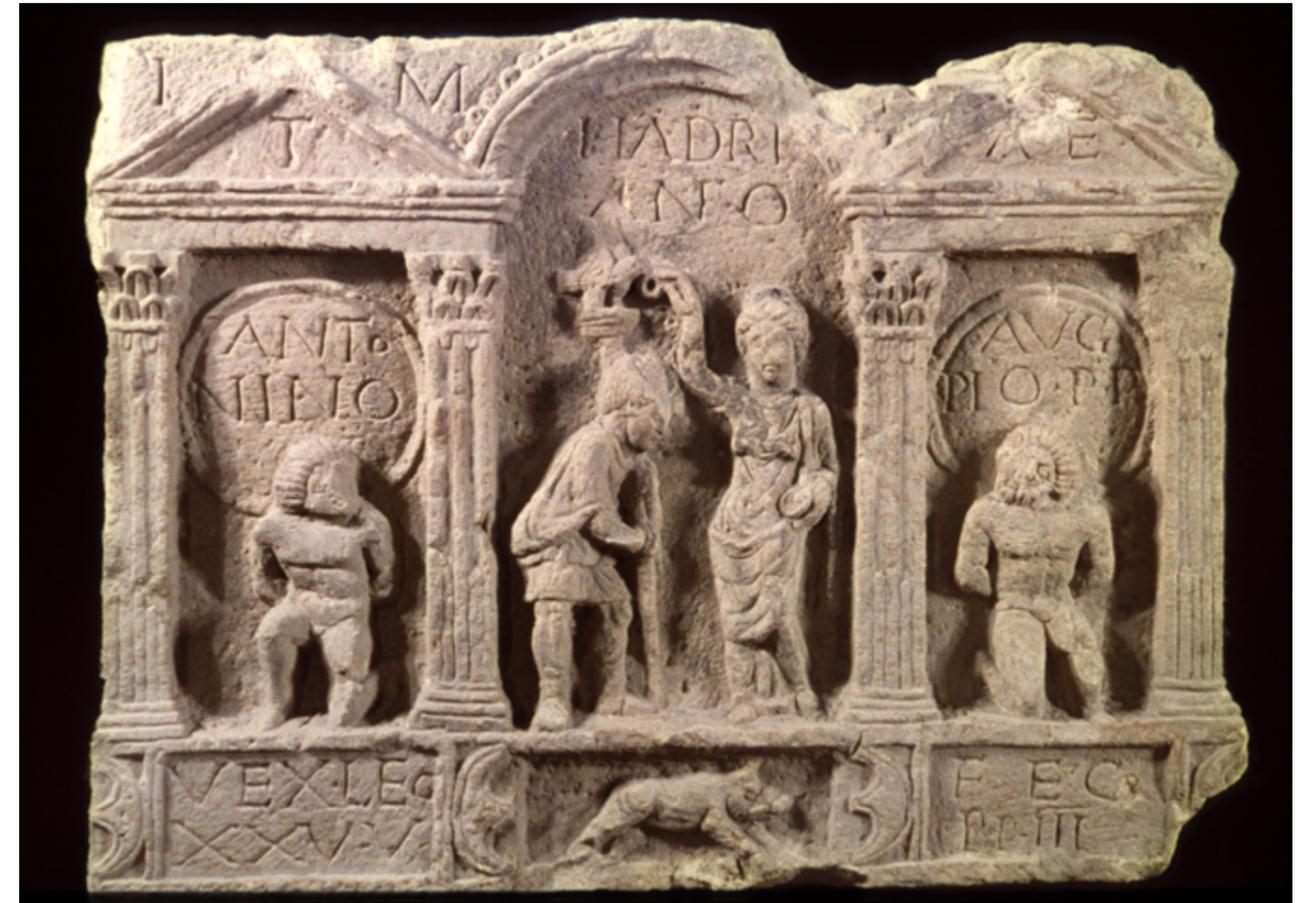
and mixed units of infantry and cavalry. There was only one legion, based at the head of the delta, at Nijmegen in a striking position overlooking the Waal, but it was abandoned before the end of the first century AD.

This is the first time that I have mentioned chronology but it is important. We can observe as a result of over a century of scientific excavation, the development of these frontiers and, it must be emphasised, through these developments observe the changing patterns of imperial defence.

The two types of frontiers within the province of Lower Germany offer a tremendous opportunity to compare and contrast the Roman approach to the terrain. We also have to take chronology into account. Both aspects are of essential importance in helping us understand the purpose, operation and development of Roman frontiers in Lower Germany. There is one final point: both sections suffer from a lack of visibility. In the main, we are dealing with military remains which do not survive above ground today.

Now this article had its origin at a conference for museum professionals, for which I have some relevant experience. As Chief Archaeologist of Scotland I was responsible for the site museums in the care of the state, and I am now chairman of a local museum trust. But I also look at museums from the point of view of the frontiers, the physical remains out there in the field. I am interested in the connections.

Sites and museums

The World Heritage Convention, established over 40 years ago only allows monuments - immovable structures - to be ascribed as World Heritage Sites. So the very objects - inscriptions - which tell us when these frontiers were built, by whom and sometimes why, cannot be part of the World Heritage Site because they have been placed in museums for their own protection (Fig. 3). The arms and armour, pottery and vessels, tools and implements removed from the frontier installations through excavation similarly cannot be part of the World Heritage Site. Yet these are precisely the objects which put flesh back onto the bare bones of the archaeological remains. It is good, therefore, to be able to note that UNESCO recently acknowledged the importance of museums and their collections and is now encouraging countries to take steps to list their museums and collections and take actions to protect them (UNESCO 2015). But there appears to be no intention to allow museums to become World Heritage Sites.

Fig. 4: The Roman bath-house at Bearsden showing the single room of the primary bath-house in the foreground and its successor looking from the furnace to the left to the changing room to the top right; the latrine lies top left. © HISTORIC ENVIRONMENT SCOTLAND.

So, let us look at the relationship between sites and museums from the other end of the telescope. We cannot return the artefacts to the sites, but we can bring the sites into the museum through the considerable range of techniques which are available to us. We can create, in the museum, the visual representation of sites and we can relate the artefacts to them. Moreover, we can do something which would be much more difficult to do in the field, introduce chronology to the interpretation. Even at the relatively simple Roman bath-house at Bearsden on the Antonine Wall there are four phases present and in laying it out for the public it was necessary to choose which phase to show (Breeze, 2016, pp.59, 103, 108-122; Fig. 4). The display of a multi-phased site in the field has its difficulties, but it can usually be accomplished much more successfully and accessibly in a museum.

We can also bring the historic landscape into a museum in another way. We cannot strip away modern Bonn or modern Utrecht to display the Roman remains underneath, but we can do that in a museum, and again we can use modern techniques to reveal that landscape changing over time.

Fig. 5: Some of the multi-language guide-books to Roman frontiers produced as a result of the Culture 2000 Frontiers of the Roman Empire project. © CULTURE 2000 FRONTIERS OF THE ROMAN EMPIRE PROJECT.

Development of the Frontiers of the Roman Empire World Heritage Site

I should like to return to my opening remarks about the creation of the Frontiers of the Roman Empire World Heritage Site. This project started with a few people - archaeologists and cultural resource managers - sitting round a table and articulating an aim - the development of a transnational World Heritage Site developing over time (Breeze and Jilek, 2008, pp.25-28). The following year we held a round-table discussion at the European Archaeological Association's annual conference and decided on a programme for research on Roman frontiers and that we needed money to implement that programme which meant Europe. Three years later we started on a 3-year European funded project worth over 2 million euros. Our group grew and we expanded across Europe and into areas such as tourism. We have produced guide-books and DVDs (Fig. 5). We are working now on apps, a wonderful way of linking museums with archaeological sites (see the paper by Christof Flügel in this volume; Dobat, 2015 discusses some of the complications).

What have we learned? Most of our core group knew each other before we started the European project, but we knew each other through conferences where there was

About the author

David Breeze was Chief Archaeologist for Scotland from 1989 to 2005 after which he led the team that successfully nominated the Antonine Wall as a World Heritage Site in 2008. He has excavated on the Antonine Wall and Hadrian's Wall and written books on both as well as on Roman frontiers generally. He served as Chairman of the International Congress of Roman Frontier Studies until September 2015.

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Fig. 6: The members of the Culture 2000 Frontiers of the Roman Empire meeting in Scotland in 2006.

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academic controversy. That could not be our course as we had to work together, pool our experiences, cooperate, adopt joined-up thinking, an holistic approach (Fig. 6). We had to learn how each country managed their archaeological sites and museums, how visitors from different countries approached visiting sites and museums, the strengths and weaknesses of all. Only in that way can an informed service be provided for our visitors. And we do differ in our approaches. My German colleagues like catalogues and typologies; the British produce, as it was put to me, our overviews and do not mind if we get our facts wrong (Rummel, 2014). The Germans and Swiss can sell three levels of guide-books, the British sometimes two levels, more often one, while I am not sure if the Dutch have heard of guide-books at all. If you open a German archaeological book, the first chapter will be *Geschichte*; you never see that in a British book. How far have we explored what visitors from different countries look for when visiting a museum? How do we cater for these differences?

What I am sure of is that the development of the Frontiers of the Roman Empire World Heritage Site will encourage more visitors to the archaeological remains *and* the museums associated with them, and this trend will be encouraged by the growing danger in today's world: people want to visit safe, but interesting, informative and exciting sites and museums. We most certainly face our own challenges to achieve this.

Fig. 1: Ruffenhofen (Bavaria, Germany). Plant Visualisation of Outline of Roman Fort Ruffenhofen with spiral architecture of the LIMESEUM in the background.

© LIMESEUM RUFFENHOFEN, N. FROEMEL.

Making the Invisible Visible

The Roman Limes in Bavaria, Germany

Christof Flügel (Landesstelle für die nichtstaatlichen Museen in Bayern), Germany

The Upper German-Raetian Limes (ORL) in Germany, due to its supposed non-visibility, is one of the most difficult World Heritage Sites (WHS) to communicate to the public. It lacks iconic sites like Housesteads Roman Fort and Museum on Hadrian's Wall, which are necessary for the creation of attractive on-site museum displays. The Limes mostly presents itself as some greenish stones in the wood or as a linear hedge in the open landscape. In 2018, the WHS Frontiers of the Roman Empire consisted of three inscribed sections, Hadrian's Wall and the Antonine Wall (UK) as well as the Upper German-Raetian Limes (Germany). Further sections are currently being prepared for inscription along the River Rhine (Netherlands/Germany) and the Danube (Austria/Germany/ Hungary/Slovakia).

Bringing the Landscape into the Museum: LIMESEUM Ruffenhofen

With regard to the conference theme "The Role of Museums in Revitalizing Cultural Landscapes" one of the most northern outposts of the Roman Empire at Ruffenhofen, district of Ansbach (Bavaria, Germany) can serve as an example. This rural area will have a predicted loss of population of at least 15% in the next 20 years, which was the cause for a strong political will to create a new archaeological on-site-museum. The Roman Fort of Ruffenhofen and its civil settlement are part of the largest archaeological landscape in Bavaria. The outlines of the fort have been delineated by plants over the last 10 years (Fig. 1). Before the construction of the LIMESEUM visitors explored the "Genius Loci" by walking their dogs in the Archaeological Park. This changed significantly with the construction of the LIMESEUM as an architectural landmark in 2012, which has now replaced the landscape as the main attraction (Fig. 2). The major problem in this 4.2 million Euro project, co-financed by the German Federal Investment Program in national World Heritage Sites, was that there were no iconic finds at Ruffenhofen to be presented in a classical "museum of objects". Our solution was therefore to bring the landscape into the museum: The interpretation had to be based on the results of geophysical survey in an unspoiled landscape. The central element of the interpretation is a high-end virtual reconstruction of the Roman landscape, based on Geophysics and LIDAR-Scans (Fig. 3). The storyline of December, a soldier, whose name is known from an inscription on an ear protector of a helmet, develops a relationship between Rome as the heart of the Empire and Ruffenhofen

at the very Edge of the Empire (December's Path, n.d.). This was the first successful implementation on the German Limes of a personalised story telling approach, adopted from UK examples.

New Lead Themes for Roman Museums

During the last years, two major lead themes connected with cultural landscapes emerged in Roman museums: (1) Frontiers and Migration, due to the current refugee crisis and (2) the topographical situation of Roman military installations (Deutsche Limeskommission 2017). These have to be seen against a more general background: what purposes did Roman frontiers serve and what impact did they have on individual life of people living at the edge of Empire?

Landscape strongly influenced the course of the borders (Breeze, 2013) and is closely related to questions of visibility of military installations in the landscape along with communication lines, water supply and fertile soils. When mapping the *villae rusticae* in the hinterland of the Upper German-Raetian Limes to the soil quality, it immediately becomes clear, that the Limes incorporated the fertile ground into the Empire in order to supply grain to the Roman Army (Valenta, 2015; Matesic, n.d.). The Upper German-Raetian Limes therefore was primarily a Frontier for Rome, but not against hostile German tribes (Sommer, 2016). Thus cavalry garrisons on the Limes were primarily stationed according to the need of protecting the hinterland as a supply region for the army as well as protecting the capital of the Roman province of Raetia, Augsburg (*municipium Aelium Augustum*).

Due to the European refugee crisis a further lead theme 'Frontiers and Migration' emerged in Roman museums: The personal engagement of visitors with questions of identity, a topic which had been for the first time successfully implemented as an

interpretation theme in the Roman Frontier Gallery at Tullie House Museum, Carlisle (UK). Especially in regions with rich epigraphic finds naming Roman inhabitants of the relevant settlements, like in Maryport (UK) or Obernburg am Main (Germany) this topic can easily be addressed: In Obernburg Roman soldiers in part came from Roman and modern crisis regions of the Near and Middle East (for example Syria and Iraq). For museum visitors the insight that not every Roman from the provinces actually came from Rome and that the population in the Frontier regions was multicultural, multilingual and highly mobile (Steidl, 2014a; 2014b; 2015) is of extreme interest. This fact has to be considered in local interpretation concepts.

Communicating Landscape and Finds: Interpretation Frameworks

During the preparation of the cluster 'Danube Limes West' (Germany, Austria, Slovakia and Hungary) for inscription on to the World Heritage List as part of the transboundary World Heritage Site 'Frontiers of the Roman Empire World Heritage Site (FRE WHS; see UNESCO, 2017), the question of topography and its implications for storytelling in museums in Austria and Bavaria defined the primary concept 'Frontline and Stronghold of the Roman Empire' for the joint 'Danube Limes Interpretation Framework' (DLIF) in these two countries. The DLIF is part of the proposed Austrian-Bavarian management plan (Flügel and Kuttner, 2016). The whole length of the Bavarian-Austrian river frontier was subdivided into interpretative regions, each of which represents an understandable 'chapter' relating to the primary concept. Interpretative regions were defined through evaluation of geographical core areas combined with key archaeological assets, namely sites and collections. The most important key principle when defining the museums along a stretch of 500 km was 'one site, one lead theme'. The DLIF is a guidance document with

advisory status for interpretation and access to the monuments of the nominated property, and thematically connected museums. All content should be continually reviewed in accordance with the latest standards of archaeological research. The aim of the DLIF is to increase awareness of the Bavarian-Austrian Danube Limes Section for local, regional, national and global audiences, in accordance with the Outstanding Universal Value. The main goal is the enhancement of intellectual access to sites and museums as places for lifelong learning and education. The document proposes a structure for interpretations comprising local, regional and supra-regional levels and relevant themes that can be adapted according to local needs and political circumstances.

Archaeological Landscapes in Museum Displays

Archaeological Museums have only recently realised the importance of interpreting Roman cultural landscapes in their displays. The significant change of landscapes in relation to today's appearance is considered to be of great interest for visitors. Therefore, virtual reconstructions of settlements and military installations in the landscape, like the reconstructed course of the river Danube and rural settlements in the hinterland of the Raetian Limes at the Stadtmuseum Ingolstadt (Fig. 4), are standard in many museums. They require a sound archaeological research basis to guarantee a high quality end product, after intense discussions between museum staff, archaeologists and multimedia specialists. Virtual reconstructions help to understand the Roman topography in urban areas as well as the location of single forts: In Passau (Bavaria), at the border between two EU-States (Germany/Austria) and of two Roman

Provinces (*Raetia/Noricum*). The Late Antique fortress of *Boiotro* remained unaffected by the centenary flood of 2013, with its high water mark 13 meters above the normal level. At Passau, in addition to a high quality film on Roman Passau with photorealistic textures (Das RömerMuseum Kastell Boiotro, n.d.), visitors have the opportunity to connect this site to the Empire, simply by walking the Late Antique 'Peutinger Road Map' of the Roman Empire and by searching for places where they have been before. Archaeologically attested inhabitants of Roman Passau like Esimnus, a wine merchant of Trento in Northern-Italy or Flora, an administrator of a Roman *villa rustica*, help to explore remote worlds by telling their individual stories.

Archaeological Landscapes and Multimedia: Advanced Limes Apps

The 2015 UNESCO recommendation concerning the promotion of museums (UNESCO, 2015) stressed for the first time the gap between museum collections and the relevant sites. To bridge this gap, the Landesstelle für die nichtstaatlichen Museen in Bayern (Bavarian Museums Service) has been developing various smartphone Apps since 2012 (Mainlimes Mobile; Limes Mittelfranken Mobile; Fig. 5; Multimedia Welterbe Limes, n.d.), which were subsequently adopted by other parts of the UNESCO FRE WHS, namely on the Antonine Wall (Download the App, n.d.).

The Bavarian-Austrian-Scottish EU-Project 'Advanced Limes Apps' (ALApp; Download the App, n.d.), running from 2016 to 2019 with financial support of the Creative Europe Program of the European Union, will strengthen this approach of bringing the finds and museum collections into the landscape and onto the sites, by creating high quality content to enhance visitor experience. By using virtual reconstructions, drone flights and 3D-Scans it is hoped to promote interactive site interpretation and on-site visitor engagement. ALApp brought together Scottish, German and Austrian cultural heritage and multimedia specialists to create a mobile app platform with exciting new visitor content for the Frontiers of the Roman Empire World Heritage Site. The application of new technology promises to make the visitor experience more interactive, through the use of augmented reality and 3D virtual reconstructions. The completed app will improve understanding and access for users on-site, but also for those who may want to visit 'virtually' from elsewhere. It will also form a bridge between the sites and their artefacts, which are often housed many kilometres away. The Bavarian contribution will focus on the area around the Roman fort of Eining (known to the Romans as *Abusina*), which is extremely rich in Roman sites, monuments and finds. Marking the point where the Raetian Limes ends at the Danube, the landscape includes an auxiliary fort, a short lived fortress for approximately 850 legionary soldiers of the *legio III Italica* at Eining-Unterfeld, river and road crossings, civil settlements, farmsteads and sanctuaries set in the rolling hills north of the modern town of Neustadt an der Donau.

Fig. 6: Regensburg (Bavaria): Virtual Reconstruction of Regensburg Legionary Fortress seen from the North. © ARCHIMEDIX OBER-RAMSTADT/LANDESSTELLE FÜR DIE NICHTSTAATLICHEN MUSEEN IN BAYERN.

Archaeological Landscapes and Museums: Future Challenges

The relation between topography, archaeological remains and finds as an interpretation topic in archaeological museums has only recently been discovered. Nearly all Roman forts follow a standard topographical situation on landscape terraces. Roman military architecture was not mainly defensive in purpose (like medieval castles), but served as a demonstration of power at the edge of Empire: The legionary fortress of Regensburg (Bavaria, Germany) on a terrace above the Danube river with its massive stone block walls reaching a height of 21 meters at the main gate (*porta praetoria*) must surely have been impressive when seen from the Barbarian side of the river (Fig. 6). To explore this 'psychological factor of military architecture in the landscape' is a challenge for future Roman exhibitions. The finds in museums (like the famous Regensburg building inscription of AD 179) only tell part of the story, if not set into relation to their original use, landscape and architectural or archaeological context.

UNESCO (in its 2016 "retrospective Statement of Outstanding Universal Value"/ rSOUV (UNESCO, 2016)) acknowledged the importance of the Frontiers of the Roman Empire WHS as a conspicuous part of the landscape and in urban areas still today. Landscape design and spatial organisation as well as the function of the Limes as an exchange region of cultural values were consequently identified as core assets and areas of interest. Archaeological museums therefore have a duty to convey this broader picture of antiquity to the general public, although this may not always be very simple from the interpretation point of view.

A slightly revised German version of this contribution will appear in Museum Bulletin Muzeum 26, 2018, *Schöne neue Alte Welt. Archäologie in Museen auf dem Weg in die Zukunft*. 26. Tagung bayerischer, böhmischer, oberösterreichischer und sächsischer Musuemsfachleute, 24.-26.9.2018, Regionalmuseum Mikulov (Czech Republic).

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Fig. 1: A bold new visual style is apparent in recent reconstructions and references. (a) Rijswijk (Guelders): monumental letters TOT HIER ('this far') in weathering steel, referring to the Limes as well as the Roman introduction of the alphabet. (b) Leiden-Roomburg: the defences of the Roman fort Matilo reconstructed in weathering steel and earth; (c) Bunnik-Vechten: the outline of the Roman fort Fectio marked by a concrete plinth. (d) Woerden: super-size reproduction of the Roman place-name Laur(i)um as given by the Tabula Peutingeriana.
© NEDERLANDSE LIMESSAMENWERKING.

Dutch design

Recent Reconstructions and References
along the Roman Frontier in the Netherlands

Erik Graafstal (Municipality of Utrecht), Netherlands

Not so long ago if asked about the Limes, most people in the Netherlands might have wondered whether you were talking about some rare amphibious creature. This lack of public awareness is hardly surprising. The Roman remains are hidden under later sediments or medieval occupation layers, with most stonework quarried away in later times. In the West of the country several forts provided the kernels for urban growth and were duly built over, whereas in the East much was simply washed away. Finally, as a river frontier, the Lower German Limes never had linear structure connecting the installations other than the Limes road.

Until the turn of the millennium, the Dutch Limes was really a disparate collection of hidden sites, a few of them marked with abstract references in the pavement, readable only to specialists. In terms of museum infrastructure, there were always fine collections of Roman material culture at Leiden, Utrecht and Nijmegen, but not a central presentation devoted to the Limes. Crucially also, the Dutch have no institutions comparable to English Heritage or the *Denkmalpflege* departments of the German *Länder*, let alone a tradition of limited research in order to better understand or present sites.

New wave of Dutch Limes visitor sites
In spite of all this, the last decade has seen a rich variety of site interpretations. Most are expressed in a bold new visual style. The trend was first visible at Valkenburg in the late 1990s. Now, a generation of angry young Romanists have come to the fore, keen to valorise their excavation results in a brave new world of developer-funded archaeology. Whatever good this has brought us, one of the effects has been that the public has moved to the forefront - and with it has come an appetite for stories and images.

Let us have a brief look at this new wave. What most gestures have in common is a certain immediacy, like the narrative strip marking the fort rampart at Woerden. Most references are explicit, usually true-to-place and true-to-scale. Sometimes, this results in conflicting interests, like at Arnhem, where the river management authority made the designers abandon Roman walls that stood across the river current because these would obstruct the flood path - there is actually a word in Dutch for such give-and-take: 'to polder' (Fig. 2, Arnhem-Meinerswijk).

Fig. 2: At Arnhem-Meinerswijk, the walls of the headquarters and south gate have been reconstructed using gabions, with those across the river's flood-path left out.

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In Holland, space is scarce and money is short, so the Dutch like to think in terms of dual functions. At Utrecht, the Limes road was reinstated as a pedestrian track in the new town of Leidsche Rijn.

We also like to take a free ride on the back seat. At Woerden a zero-staff drive-in museum has been created in a car-park which had produced a Roman ship find, a fragment of which is presented in a large diorama case. The magic trick, of course, is how to turn cultural heritage into social capital. An interesting attempt is Matilo Park at Leiden. Primarily designed for the local community, it does raise issues of management and continued activity (Fig. 1b).

A remarkable cluster of site museums have recently opened in the Utrecht area, each of them involving investments in the 10-20 million EUR range - it is a miracle how they have survived a decade of severe budget cuts and increasing political volatility. We like to think that this success is partly due to building on existing infrastructure and striving for a mutually complementary tourist offer.

At Vechten, east of Utrecht, a powerful visualisation of the Roman fort evokes a strong sense of size and place. Interestingly, this is situated right next to a 19th century Dutch

Water Line fort, another World Heritage Site in the making. A fine small presentation about the Roman fort Fectio nestles up to the main Water Line Museum (Fig. 1c).

On the Dom Square in the heart of the city of Utrecht, the visualisation of the fort perimeter subtly mixes with the historical environment. The line of glowing mist has become part of the mind-set of Utrechters and tourists alike. In 2014, the hugely successful DOMunder visitor centre opened up, introducing the smart flashlight, which triggers audio information points. The central theme of this self-guided discovery experience is the development of a Roman fort into the ecclesiastical centre of the Netherlands in the high Middle Ages (Fig. 3).

Castellum Hoge Woerd

Moving to the west, we come to Castellum Hoge Woerd, a modern replica of the local Roman fort and a cultural hot spot in the centre of the new town development of Leidsche Rijn. Designed in the mid-90s and creating some 30 000 new homes, the Leidsche Rijn project set new standards in its ambition to preserve the framework of the historical environment within the new townscape, giving it firm roots in the past (Fig. 4).

The sheer scale also meant that this is probably the largest archaeological project ever in the Netherlands. The research program, entailing some 120 major excavations, was consistently guided by a landscape-archaeological approach spanning three millennia of human occupation, one layer of which is the Roman frontier of the 1st to 3rd centuries. Therefore, we had the framework of the historic environment and the biography of the landscape - but what we lacked was a central place to tell the whole story.

The place-to-be was obvious to us from the beginning: the Hoge Woerd fort site, right in the centre of the new town. However, we turned archaeological predilection upside down: we decided to leave the fort site with all its appurtenances almost untouched, instead designing a non-invasive research programme to sort out the main topography of this Roman garrison town.

So, whereas excavation traditionally has favoured the garrison settlements, we decided to focus our research program on the little known areas in between.

We took the Limes road as our guide, and stumbled upon one surprise after another. We found evidence for the organisation of Roman building campaigns; water-management infrastructure, like a bridge, providing a huge culvert for floodwaters; logistic facilities, like a mooring place for the shipment of building materials; and watchtowers - the earliest examples in Northwest Europe.

In addition, there were ships, of course. One we excavated with Time Team - producing one of the best-rated episodes of the popular British TV series. The flagship of them all, has a cabin and a kitchen. The vessel sank around AD 190 because of some calamity producing the most complete river ship assemblage known from the Roman world so far. The set of woodworking implements, in particular, is unparalleled.

The two open weekends attracted some 30 000 visitors. Within a week after the lifting of the ship, the local council wrote a letter to the lord mayor and aldermen of Utrecht urging them to start thinking about how they were going to create the right conditions for the return of (quote) '*our* ship' to the Leidsche Rijn area (Fig. 4, page 12).

From this moment, we had an icon, we had the Hoge Woerd site, but we were still far from having a museum. Luckily, we were modest enough to realise that, in order to get the funding needed, as well as to arrive at a healthy business model, we had to broaden our base and place this new cultural facility firmly within the urban community. So we managed to lure two other planned, and well-funded, parties into our camp: a city farm with an education programme focussing on nature and sustainability; and a theatre, which would also provide us with congress facilities.

This is what came out of the pressure-cooker: a light-weight, modern replica of the Roman fort, true to scale, the pavilion accommodating the theatre, a restaurant and our Roman ship, with all the rest easily fitting within 400 m of fort ramparts, which were widened to 6 m, to spread the weight of the building.

Although four different parties cohabit in the Castellum, we carefully strive to make the visitors feel that this really is one world of discovery, offering a mix of culture, heritage, nature, sustainability, all presented as a seamless unity in both look and feel.

Fig. 3: The DOMunder experience below the Dom square at Utrecht, with its self-guided tours using an intelligent flash-light.
© MIKE BINK.

Fig. 4: Castellum Hoge Woerd at Utrecht-Leidsche Rijn: the reconstruction of the fort rampart was based on the timber-revetted 'box type' current in the 1st century. It was slightly widened to accommodate exhibition and education rooms, stables, offices, etc. In the foreground is the outdoor stage for the summer program. The pavilion in the background houses the ship exhibition, a theatre and a restaurant.
© PAUL VAN DER HEIJDEN.

The Museum itself is really all over the place. In essence, the Museum offers three main components, not necessarily equating with the three types of audience and corresponding geographical ranges we will be addressing.

On a more local and regional level, there is the exhibition '3000 Years of Working and Living'. This presents the dual story of man and landscape in the wider area. There are obvious cross-links here with our partners from the city farm. The presentation style involves bodily experience, lots of interactivity, gaming and multimedia, some of the output of which you can share on social media, like the virtual dressing room where you can pick and mix costumes of all ages. Another exhibit offers a spectacular, 360-degree animation of 3000 years of landscape transformation seen from the same virtual standpoint (Fig. 6).

The ramparts and gate towers of the fort are used as a platform for the presentation of a typical Roman garrison town on the Lower Rhine Limes. This, again, is very much a physical experience of size. Various topographic elements are visualised in the surrounding park. Over this layer, we project the virtual reality of our 3D time frames. Finally, in all the gate towers there are cases with material finds relating to, and often excavated from the very features you see before you.

Fig. 5: Atmospheric impression
of the yearly Romans' Day
at Castellum Hoge Woerd.
© AAFKE HOLWERDA.

The third major component is the unique ship assemblage, offering a picture of life aboard a river ship in the heyday of Roman provincial culture. This part has just opened, several additions will follow, like 3D-animations, the original cabin walls, and several pieces of furniture. Here too, information is presented in a light and playful way.

Castellum Hoge Woerd offers a range of cultural and leisure facilities firmly based in the local community, but with the inbuilt potential to become one of the major interpretative hubs for the Lower Rhine Limes. We have loads of education material for the school curriculum where the Limes is one of the so called 'central frames'.

The Dutch Limes

Back to the national level. Perhaps the most serious challenge is coherence and connections. Administratively, the Netherlands is a very busy place. Dutch mentality is the historical product of a peculiar type of bottom-up democracy: 'nobody is telling me how to drain my polder!' In Holland, it is difficult to get all the relevant bodies committed to a joint program - as this anthology shows.

There is a clear risk of redundancy and fragmentation. The Dutch Limes Cooperation has developed an overarching interpretation framework inspired by Hadrian's Wall. The main themes and audiences for the new site museums in the Utrecht area were

in fact defined with something similar in mind. We even developed an identical exhibit for all three sites, which highlights the touristic offer of each and is meant to stimulate cross-visits.

The key themes of the Lower Rhine Limes are complicated stories, like the landscape dynamics of the Rhine delta, the Limes as a transport corridor, or the scientific value of organic materials. (Fig. 7) These messages require strong museum support. However, how do we convey such stories and images on site?

Part of the answer, I suppose, is in the proliferating smartphone and iPad technology combining GPS-positioning and 3D-imagery. A fine recent example is the Time travel app developed for the province of South Holland.

Nevertheless, we also need the real thing. I think the challenge for the future is to develop exciting combinations of indoor information and outdoor experience, like a package deal combining a visit of the ship museum with a boat trip on its replica on the former frontier river.

One thing we need to free ourselves of is this persistent idea that we will never beat the Brits or the Germans, well, not in football perhaps. However, in terms of landscape

Fig. 6: The exhibition at
Castellum Hoge Woerd
stands out for the variety of
presentation styles typically
combining selective displays
of finds with entertaining
interactives some of which
create output that can be
shared on social media.
© MIKE BINK.

Fig. 7: The riverscape
of the Neder-Rijn.

© SIEBE SWART.

About the author

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Roman frontier in the Rhine delta, notably in the major new town development west of Utrecht. He was
co-author of the Comparative Analysis and Statement of Universal Values for the Lower Rhine Limes World
Heritage nomination dossier.

setting, we are not doing too badly. Have we sufficiently realised that, for the Romans,
the river Rhine was the functional equivalent of Hadrian's Wall…?

This is one of the reasons why I firmly believe in hiking and biking tours as a portal
into our hidden Roman frontier. However, let us take care not to think mono-
thematically. The best way to arrive at a broad tourist offer, with export potential is, if
we manage to present and brand our Limes package as part of a cultural cross-section
of the Netherlands.

Please let us remain humble: the Limes will never be a major industry. We will
remain dependent on tourist hubs, smart combinations and business models. This
is why I very much believe in the recently opened visitor centre Nigrum Pullum at
Zwammerdam, which is part of the village hall of a local care centre. With a shop
selling homemade products and a tearoom run by the residents, this is the latest gem
of the Dutch Limes museumscape.

Fig. 1: Location of the Colonia Ulpia Traiana, Xanten, in the Roman province of Lower Germania.
© H. STELTER, LVR-APX.

Colonia Ulpia Traiana

The Xanten Archaeological Park and its role in the World Heritage Site Lower German Limes

Martin Müller, LVR Archaeological Park Xanten (APX), Germany

The Xanten Archaeological Park

The remains of the 73 hectare Roman city of Colonia Ulpia Traiana (CUT) are located in North Rhine-Westphalia, near today's Xanten, about 100 km from Cologne and 50 km from the Dutch city of Nijmegen (Fig. 1).

Roman remains extend for several kilometres along what was then the course of the Rhine. Firstly, there is the two-legion camp "Vetera I" and its associated settlement, which are on the Fürstenberg hill. The burial grounds alongside the link roads consist mainly of military graves. Towards the Colonia Ulpia Traiana, near Xanten Cathedral, there was a *vicus* with artisan workshops, followed by the CUT itself (Fig. 2).

After the end of the CUT people settled around Xanten Cathedral, only a few hundred meters away. The vast majority of the Roman town was not built over, but systematically plundered for stone up to the early modern era. Nevertheless, today it offers an almost unique opportunity to research and display a Roman city in the Roman North-West Provinces (an overview gives to the research state Müller, Schalles, Zieling, 2008).

In the 1960s, the plan was to build over the area of the CUT and create an industrial estate. The first companies had already been established when the state of North Rhine Westphalia and the Rhineland Regional Council together decided to protect this historical site and to move the companies elsewhere. This decision led to a consideration of how to open up the Xanten Roman remains to the general public. In 1974, the Regionalmuseum was opened in Xanten town centre, and this was followed in 1977 by the opening of the Archaeological Park (APX), which for a long time was to be restricted to the eastern part of the CUT.

The LVR Archaeological Park extends over almost all of the CUT and the ancient harbour. The LVR-RömerMuseum was built within the confines of the CUT in 2008 (Fig. 3). The building complex does not only house the museum, but also serves as a protective building over the archaeological remains of the so-called Town Baths. At the same time, the building conveys the dimensions of the ancient structure.
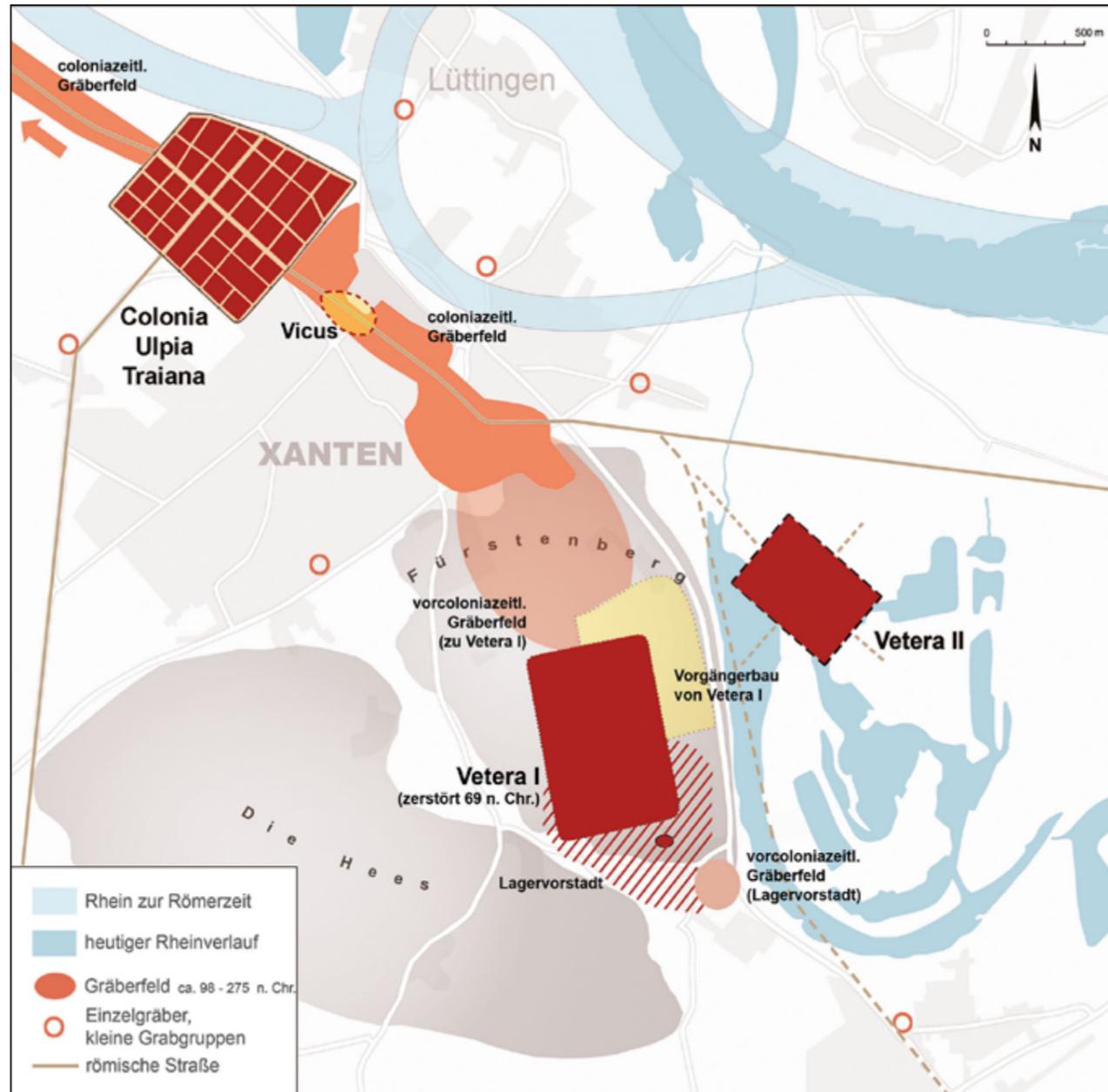
Fig. 2: The most important assemblage of Roman finds in the area of today's Xanten.
© H. STELTER, LVR-APX.

Today, the LVR-Archäologische Park Xanten/ LVR-RömerMuseum is an independent agency of the Regional Association of the Rhineland (LVR), which has to fulfill three core tasks:

1   The protection of the historical remains
       Meanwhile, almost the entire area of the ancient city CUT and the Roman port has been acquired. A main road, which until recently cut through the Colonia Ulpia Traiana, was relocated in 2009 and replaced by a bypass around the historical site (Fig. 4). The Archaeological Park, which initially was only to the east of the main road, was thus more than doubled in size. By bringing

the archaeological monuments within the area of the open air museum, it has become possible to protect them permanently from intervention by third parties (Müller, 2006; Müller, 2008).

2   The exploration of the CUT and its environs

3   The presentation of the Roman remains to the general public.

An important goal is to enable people to visualise the archaeological remains, which for the most part lie beneath the present ground level. A basic requirement was and is, therefore, to find a form of representation which gives an idea of the ancient city structure to visitors while maintaining a comprehension of the size and extent of the ancient settlement. An important element in this visualisation is marking the road layout of the town. The ancient streets and the adjacent insulae are indicated by tree-lined avenues, representing the porticos which are found throughout the CUT.

Another important element for the visualisation of the extent of the town are the Roman town walls. The walls and towers have only been fully reconstructed in part of the south east corner of the town. Elsewhere, the towers have been reconstructed, with high beech hedges running between them to indicate the course of the wall. Similarly, only the Northern gate, the so-called Burginatium Gate, has been reconstructed. These "landmarks" enclose the CUT and give visitors a clear picture of the extent of the Roman town. Basically, all measures which serve to give visitors a visual impression of the town are carried out in situ (Fig. 5). One aim is to represent the most important and typical buildings in the Roman town, with their different functions.

In the APX the aforementioned buildings are displayed in various ways. One important method is to reconstruct architecture, either wholly or partially (Müller 2011, 55 ff.).

Visitors to the LVR-APX, and to the museum within it (Schalles, 2008, pp.8-17; Schalles, 2011, pp.139 ff.), gain an overview of the history of Roman Xanten, from its beginnings through to the Frankish period (Fig. 6).

Every military subject area necessary for inclusion in the World Heritage Site is already on display in the museum, and is also visible from inside the museum (Fig. 7).

The entire Roman history of Xanten and the lower Rhine area is represented in the Roman Museum, while from the outset, the guiding concept for the visualisation of the Roman city was to represent it as it was in the 2nd to 3rd century. Neither Pre-Colonial structures nor the archaeological remains of Late Antiquity have been recreated.

The World Heritage Site Lower German Limes

For entry into the World Cultural Heritage list, only the military legacies of the Roman period are relevant to the Lower German Limes. In Xanten, a whole series of Roman finds can be placed in this context, extending over several kilometres along the course of the Rhine as it was in Roman times.

In the applicant's opinion, the military camp Vetera I should be put on the list of World Heritage Sites (Fig. 8), Lower German Limes. Important military installations, such as the Vetera I Legionary Camp, whose exact position is controversial (Schmitz,

Fig. 4: Areas of the archaeological site which have already been purchased are shown in blue. The new main road goes round the Park.
© H. STELTER, LVR-APX.
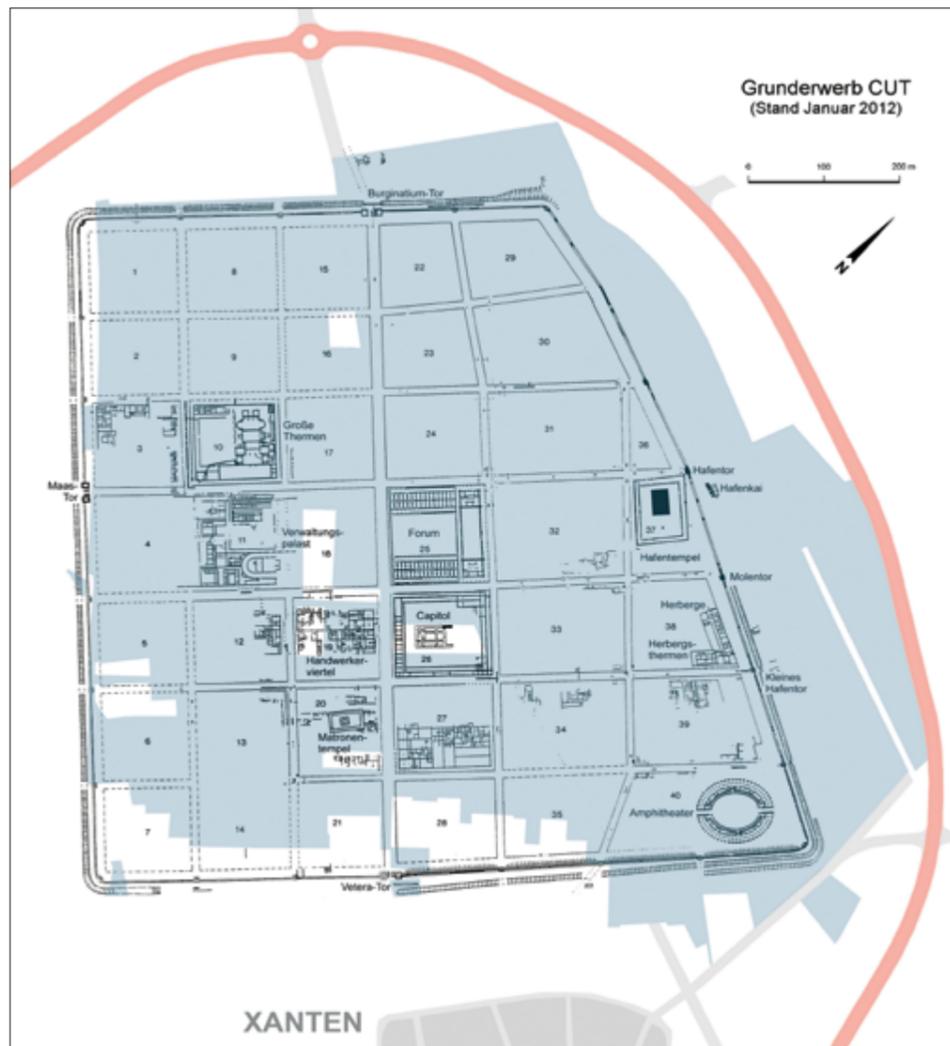
2011, pp.119 ff.), the legionary tile works or the military camp in Xanten-Beek, not discovered until 2015, (Brüggler, 2016, pp.130-132) are located in a so-called "Buffer Zone" around the Vetera I Legion Camp. All these installations are no longer visible, but they are largely not built over and are freely accessible to the public.

Fig. 5: The eastern end of the APX with the partly reconstructed amphitheatre in the foreground.
© M. KRETZSCHER FOR LVR-APX.

Although of course the rise and development of the CUT is closely linked with the Roman army, only the purely military findings from the CUT area can be included in the list as things are.

This is the excellently preserved Limes Road from the pre-colonial time, the newly discovered military fort in the south western corner of the CUT and the massive fortification "Tricensima" (Fig. 9).

Presentation of the World Cultural Heritage in Xanten

In the LVR-APX the finds assigned to the World Cultural Heritage can and should be shown in the original. This leads to a breach of the previous guiding principle in the APX itself, whereby only findings of the 2nd and 3rd centuries are presented. However, this provides an opportunity to discuss the development of this location and its particular military component. For consistency's sake, in the Park, the aim would be to teach the Roman history of Xanten from the beginnings to Late Antiquity, as is already practiced in the LVR Roman Museum.

The findings of the individual archaeological sites are presented in the LVR-RömerMuseum, together with the history of the area or of the individual sites. The existing exhibition should be accentuated here.

The findings in the CUT area which are assigned to the World Cultural Heritage are to be presented in the original under protective structures. The pre-Colonial Limes Road directly in front of the entrance to the LVR-RömerMuseum has been archaeologically investigated in the past few years. It is in a perfect state of preservation and suitable for presentation. The roadway itself will be visible for a length of about 10 metres. The further course of the road will be identified by markings (poles or the like) within the LVR-Archaeological Park.

The Tricensimae has already been archaeologically examined in some places, and the excavations were then refilled. The find of an approximately 4-metre-thick fortification wall with towers is to be opened up again, as well as the very wide ditch in front of it. The south-western area of the fortification in insulae 4 and 11 would be suitable for presentation.

The militarily secured area, which was only discovered a few years ago, in the southern part of the former Colonia is also to be integrated into the existing exhibition and opened up to visitors. The wall with its two gates is in a very good state of preservation, so that the entire fortification in the original is to be presented here. A combination of protective structures and sections of walls protected by so-called "sacrificial layers" would be conceivable here.

Fig. 6: The LVR-RömerMuseum in the Xanten Archaeological Park.

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With its archaeological heritage, Xanten is one of the most outstanding places in the area of the Lower German Limes. The LVR-Archaeological Park Xanten is one of the most visited museums in Germany, with 600 000 visits a year.

The archaeological findings from the military areas which can be assigned to the World Heritage site can be found in the Roman Museum and, as already mentioned, are made accessible and presented in the APX area. It will be the task of the tourism development of this world heritage to connect the archaeological sites with the LVR-RömerMuseum.

Fig. 7: Roman military exhibition area in the LVR-RömerMuseum in the Xanten Archaeological Park.

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The didactic goal of the museum must be to convey the peculiarities of the Lower German Limes as a World Heritage site for the Xanten area to a broad public, and to make the characteristics of the ancient landscape comprehensible.

This lends itself to the development of an archaeological tour (see, for example, Obladen-Kauder, 2005) to visualise the individual archaeological sites still under the ground, or to make their extent and location comprehensible for the visitors. The tour would inevitably stretch over several kilometres, so it would only appeal to a fraction of the visitors to follow the tour on foot. The provision of bicycles, e-bikes and a tour by electric bus could significantly expand the target group. The latter offer would also contribute to a significant improvement in accessibility. The starting point of this Xanten World Heritage tour would have to be the LVR-Archaeological Park, since the necessary infrastructure (parking, toilets, gastronomy, shop, info) is available there. The provision of an "orientation app" already available in the APX, could be extended to the Xanten World Heritage route. A visit to the Roman sites which are assigned to the World Heritage and its "buffer zone", is also to be made possible on specialist tours. For this, the highly trained guides of the APX with their call centre and the corresponding booking logistics are at our disposal.

In addition to the exhibition areas in the Roman Museum, a new exhibition pavilion is
to be erected within the Xanten Archaeological Park, which will provide visitors with
information about the World Heritage Lower German Limes as a whole, providing
basic information on World Heritage status and the associated commitments and
opportunities. In addition, this exhibition area is to form the starting point of the
Xantener World Heritage tour and provide the visitors with the basic archaeological-
historical data as well as information on the ancient and modern natural environment
and tell them about the tour itself.

A new administrative, repository and science centre is already built which is located
in the periphery of the APX (Fig. 10). In a second phase, a new exhibition area - a
so-called Discovery Forum - will be connected to it. Here, visitors in teams, under the
guidance of team leaders, will act as archaeologists, using archaeological methods to
develop new insights. The work of various agencies, for example the archiving of finds
in the repositories, can be integrated into this program, demonstrating the reasoning
behind the laborious archiving and storage of archaeological finds.
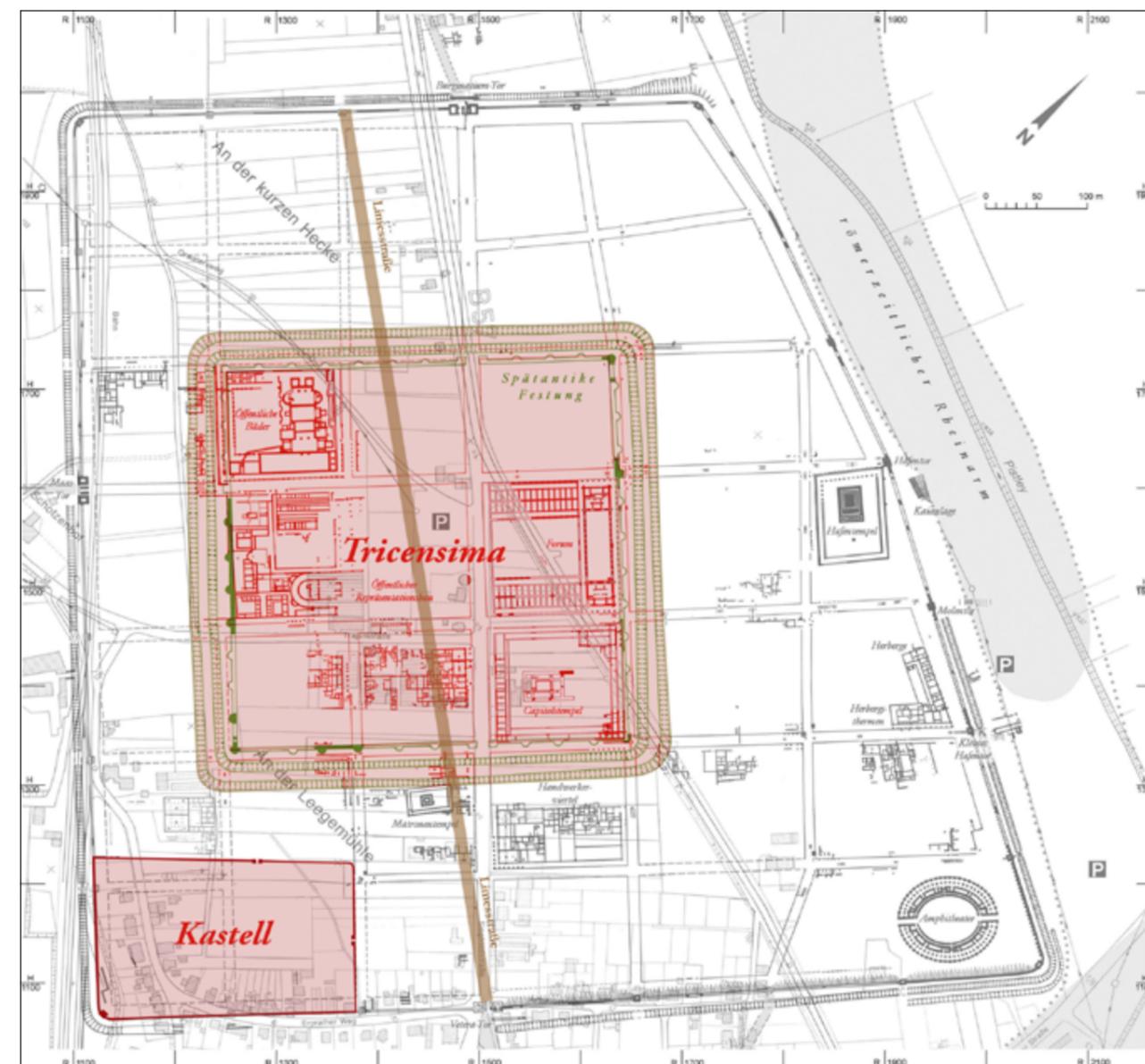
The preservation of archaeological finds as well as the maintenance and investigation
of an archaeological site can thus be brought to the attention of the visitors to the
World Heritage site.

Thus the APX is well suited to bringing the World Heritage Site Lower German Limes
in general, as well as the related Roman remains in and around Xanten, to a broader
public.

The human and financial potentials of the Archaeological Park can be used to
present permanently the tasks and objectives of this World Heritage site in one
location, where over 20 million visitors have involved themselves with the culture
and history of the Romans.

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Fig. 10: The building complex of the new APX Research Centre.
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About the author

Martin Müller studied provincial Roman archaeology, classical archaeology and ancient history at the Universities of Hamburg, Perugia and Munich and completed his doctorate on the subject "The Roman grave finds of Phoebiana Faimingen". He first worked as a scientific trainee at the Westphalian Museum of Archaeology - Office for Bodendenkmalpflege in the Department of Provincial Roman Archaeology. Between 1995 and 2000 he was a lecturer in provincial Roman archaeology and excavation and a research assistant at the Archaeological Seminar of the Westfälische Wilhelms-Universität Münster. He became a research assistant at the Westfälische Museum für Archäologie and became director of the Stadtmuseum and the Historischer Höhler in Gera. In 2001 he became the director of culture, school administration and sports of the city of Gera. Since 2003 he has been the head of the LVR-Archeological Park Xanten / LVR-RömerMuseum.

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Fig. 1: Signpost of the Limes in Germany.
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Memoryscapes

The Roman Limes, along the River Rhine, a tourist attraction?

Frederike van Ouwerkerk, Netherlands

Cultural landscapes

The Council of Europe defines cultural landscapes as "*an area, as perceived by people whose character is the result of the action and interaction of natural or human factors*" (Council of Europe, 2000). Thus, the Council promotes the protection, management and planning of the landscapes and organises international co-operation on landscape issues.

Cultural landscapes combine physical, social and intangible elements. They consist of the built-, grown- and constructed elements, of houses, bridges, ditches et cetera. A landscape consists of an enormous complex fabric of experiences, memories, traces of former civilisations, stories, knowledge. Signposts to put new discoveries in place and to base choices for the future on lessons learned from the past (van Toorn, 2016). The landscape is therefore an important spatial condition for our notions of cultural identity and expresses the identity of a community. As Desvallées puts it: "*Cultural landscapes, then, embody the many landscapes that define us- all in all*" (Desvallées, 1990, 49).

When it comes to the cultural dimension, Kolen and Lemaire (1999) see the landscape as a starting point for the collective memory and as a domain for our 'sites of memories'. With the emotional and psychological dimension of the landscape, they aim at the meaning of the landscape for the feelings and the memories of the individual (Cusveller et al., 2006). An often used term is a *lieu de mémoire* (site or place of memory), that "*is any significant entity, whether material or non-material in nature, which by dint of human will or the work of time has become a symbolic element of the memorial heritage of any community*" (Nora, 1996, p. xvii). It may refer to any place, object or concept invested with an historical significance in the popular collective memory, such as a monument, a museum, an event, a symbol like a flag or the French figure Marianne, even a colour vested with historical memory. A *lieu de mémoire* signifies the cultural landmarks, places, practices and expressions stemming from a shared past, whether material (monuments) or intangible (language and traditions) (Commission franco-québécoise sur les Lieux de Mémoire Communs, 1996). Specific events happened, and shaped the landscape during the ages and created

distinguishing characteristics. This is where places of memory and heritage originate: memoryscapes. Therefore, a cultural landscape can be seen as a memoryscape, telling stories of the past.

Interpretation and memoryscapes

Heritage Interpretation

How could we make those historic stories and memories a unique experience for visitors? An effective approach is heritage interpretation. There are many slightly different definitions and visions on Interpretation, but the essence is that it is not just about telling stories, but also about enabling visitors to understand the heritage better, by creating a personal connection with it. The goal of interpretation is therefore to improve and enrich the visitor experience by helping site visitors understand the significance of the place they are visiting, and connecting those meanings to visitors' own personal lives (U.S. Department of the Interior, National Park Service, n.d.).

Originally, heritage interpretation existed to educate, primarily with a view to imparting an understanding of the need to conserve and preserve (compare Tilden, 1957); it now covers a much wider range of goals (Bennett, 2009, p.84). Interpretation in museums can best be explained as "*getting the museum story across*" to the public. This can take place in text and images (text panels near showcases, guidebooks, websites, apps or movies), but can also be done by guides which is called 'live interpretation'. The most recent definition simply states that interpretation is "*any live interaction between museum / site staff and visitors*" (IMTAL Europe, n.d.). This definition includes many living history-type activities, ranging from non-costumed demonstrations of historical craft to storytelling and costumed first- and third-person interpretation, but is also used to cover activities such as guided tours, education workshops, theatre performances and demonstrations. Interpretation encompasses the idea of bringing the past to life, explained in ways that engage and interest the public (Mills, 2016; Mills, in press). Interpretation explains the value of heritage sites to the visitors, specialists as well as the local, regional and national community and politics. Without interpretation, heritage sites play no role whatsoever.

The interpretation frameworks for different parts of the Limes (see Flügel, as well as Leene & Otten in this volume) are successful approaches to turning the multitude of stories of the Limes into a single approach, leaving enough room for diversity and local interpretation against the backdrop of the larger framework.

Storytelling

In destination marketing, used in the tourism industry, it is all about the story that helps persuade the visitors, offering them a way to understand the message (Buhrs and Van Wingerden, 2008). Not only should the story fit with the message, it should also align with your target group's frame of reference. Therefore, a story is not fixed, but adapted to each new audience. A visit has to be a personal experience fitting with lifestyle and 'personal branding' (aan de Stegge, 2014). Visitors will add meaning to the stories they experience, hopefully leading to the much wanted impact that the

message, as defined by the tourism professionals, being remembered and understood by the visitors. The very essence of the tourist experience is the sense of place in the destination and the sense of identity for the visitor that goes with it. The power of stories is enormous: they make order in the world, explain mysterious facts and give reason to apparently random facts by means of the imagination (Blom, 2012). Telling stories is a way of creating an experience for the audience where they identify themselves with the site. Visitors receive a meaningful, challenging and a unique authentic experience, which gives them knowledge, inspiration, fun and in the end a sense of well-being and engagement (van Ouwerkerk, 2009).

Depending on the public and the overall message chosen, different stories can be told using a single object or site. A good guide will select certain objects because they fit better to the story to be told; others will be left out, or another objective will be used.

An example is the Roman dice made of bone (Fig. 2). Several of the possible story lines this item could be used for are:

- Roman objects
- Meaning of games in Roman times
- Objects made of bone
- Types of dices
- Types of games in general over the years
- Lifestyle of Roman soldiers
- Leisure in Roman times
- Lifestyle of the Dutch in Roman times
- Ways of manufacturing dices - creative process

Each of these story lines requires adequate research.

A storyline requires cooperation between different stakeholders (van Ouwerkerk, 2005): the storyteller needs to find their position in the interpretation framework, which links the storyline to the local heritage as well as to other stakeholders including museums, hotels and restaurants. Storylines can be the basis of trails, guided tours, treasure hunts, websites, apps et cetera.

A good example of story lines connecting local communities, museums and landscapes are the European Cultural Routes by the Council of Europe (Council of Europe, n.d.). To date, there are 31 Cultural Routes of the Council of Europe, with very different

Fig. 2: Dice made of bone, Roman Era, found at Valkenburg ZH, De Woerd, excavation ROB 1985-1988.
PROVINCIE ZUID-HOLLAND - CC BY 4.0, HTTPS://COMMONS.WIKIMEDIA. ORG/W/INDEX.PHP?CURID=64941934

themes that illustrate European memory, history and heritage and contribute to an interpretation of the diversity of present-day Europe. The storyline in each of these routes is the thread linking hidden treasures. Examples are 'the Hansa', 'Megalithic Culture' or 'Destination Napoleon'. The story of the Roman Limes has the potential to create such a storyline connecting places throughout Europe.

Heritage tourism and destination marketing

Heritage tourism can be described as visitors traveling to see, experience and learn about natural or cultural landscapes, sites, features, objects, people, events and stories. The challenge for heritage destinations is to present the unique storylines of heritage sites to visitors.

Visitors arrive with their own cultural values and ask before choosing where to go: 'What's in it for me'. After all, the visitor is looking for a meaningful interaction with the past. Therefore, it is important for a heritage site to be aware of these values and to try to create an experience with a value fit. The quality of the experience depends on the extent to which the concept and product match the user's value pattern. (Boers et al., 2012) A value fit contributes to a positive experience.
This means a change from a supply-oriented approach to a real demand-oriented approach and to look at the heritage site from the customer's perspective.
To achieve such a value fit, it is necessary to understand the key values of certain groups in society. This is done by means of values surveys. Rokeach is regarded as the father of large-scale values surveys. In his survey (Rokeach, 1973) he distinguished between instrumental and terminal values. Instrumental values involve general guidelines with regard to behaviour, and terminal values involve general guidelines about the (desired) end state of existence.
Value segmentations turn out to be more like tools to explain behaviour. A model which is often used for this in the tourism industry is Motivaction's mentality model. The basic principle of the mentality model is to place people into categories according to their 'attitudes towards life'. (Boers et al., 2012). They even created an international model called Glocalities.

In view of the fact that a visit has to be a personal experience that fits into a lifestyle and 'personal branding' with the help of these mentality models, it is possible to design the meaningful and unique experience a visitor is looking for (aan de Stegge, 2014). This unique experience should contain the following elements:
Unique/ Unfamiliar/Unexpected, it should be entertaining and memorable.
Novelty, it should raise curiosity; provide a new experience, a new insight.
Inspiring, it should be provocative and stimulating.
Quality, it should be customer and service oriented.
Understanding, it should lead to a profound understanding of the world around.
Emotions/Education, it should evoke emotions and be a moving, meaningful experience (Schouten 2002).

Research has shown that an experience with a lot of education in it creates a real memorable experience. In addition to a memorable experience, the visitor wants to learn something about themselves in relation to the destination. They want a personal

Fig. 3: Glocalities model. MOTIVACTION, WWW.MOTIVACTION.NL/EN/ GLOCALITIES/GLOCALITIES- RESEARCH).
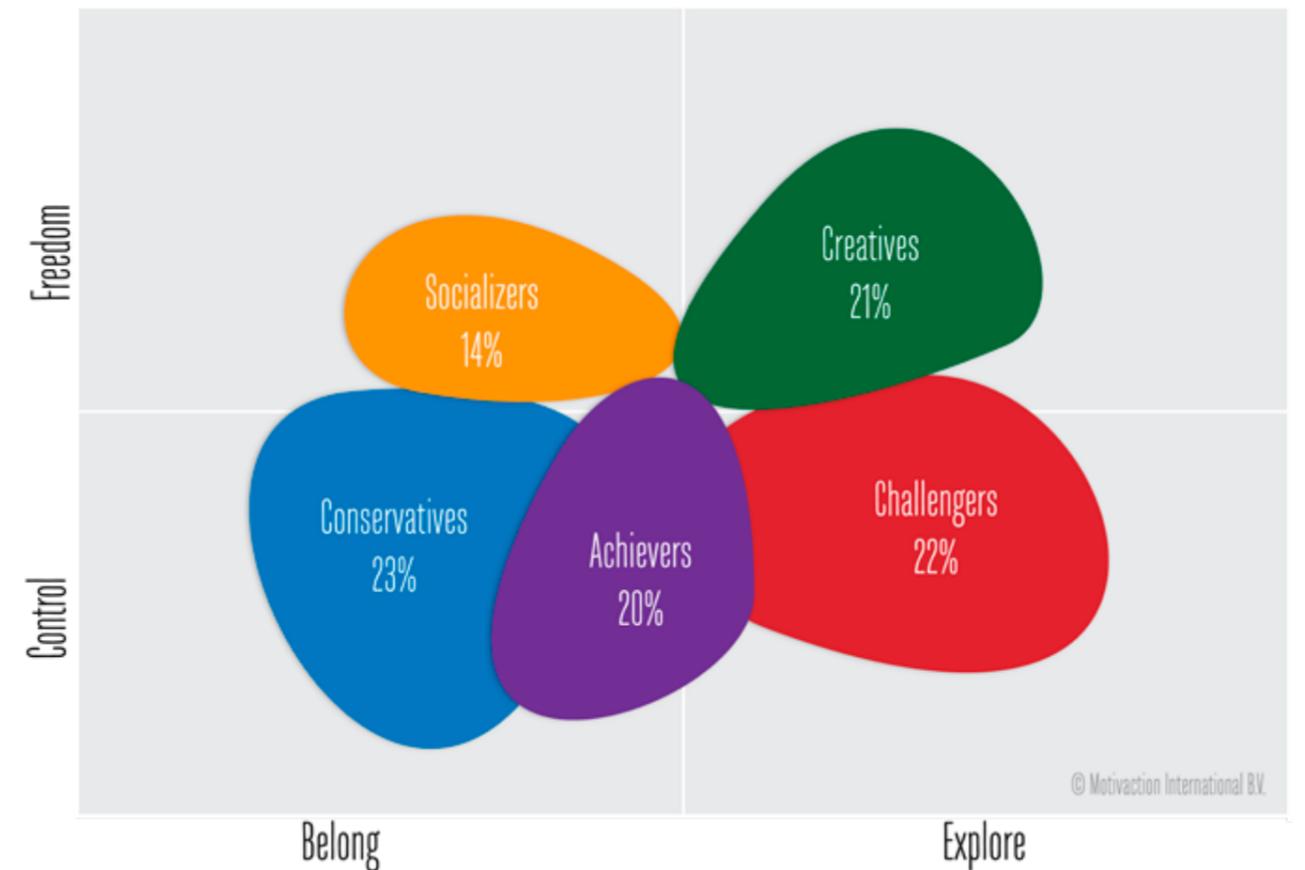
development experience. This is called transformation in the experience economy and gives a second meaning to the letter **E,** namely **E**ducation (van Ouwerkerk 2007, 27-30).

Images are becoming more and more important for tourism. Traditionally, the growth of tourism goes hand in hand with the progress in photography. Images of a certain landscape on a picture postcard or in a travel guide makes them suddenly worth seeing - ordinary places, 'sites' become 'so worth seeing sights'. Once on the spot, tourists take pictures of the same landscape as on the postcard. Tourism is always a matter of 'looking if it is correct'. We no longer succeed in looking objectively at a place (Urry, 2002). Instead, we have a tourist gaze. Photos are crucial, especially to share the experience where, as mentioned earlier, the tourist has enormous interest in the authentic and unique but with a nostalgic, romantic touch. They want to make pictures without, for instance electricity wires. Culture of the image has become more important than the reading culture we were used to.
The question is, in case of the Limes on the Lower Rhine, how to make people enthusiastic to come, if there is nothing significantly visible of the Limes in the landscape? There is no 'one image' available, that can be seen and shared on websites, Facebook, Instagram or even in a tourist guide. Museums, though, do have the tangible, visible objects of the Limes in collections and on display. Nevertheless, many museums that hold 'Limes objects' are not right 'on' the Limes, and are primarily focused on the exhibitions within the museum walls.

Fig. 4: Roman soldiers at the Dutch border.
© ROMEINENNU.

The Roman Limes on the Lower Rhine: a tourist hotspot?

The World Heritage Site 'Frontiers of the Roman Empire' on the World Heritage List is not listed as 'cultural landscape', but as a selection of sites. The Lower German Limes is expected to be added to the list of existing Frontiers throughout Europe. The Limes on the Lower Rhine itself will be a selection of separate sites.

For the sake of the interpretation and appreciation of the mostly invisible Roman Frontier, it is important to perceive the Limes as a cultural landscape and not as separate sites, because the sites together formed in Roman times a connecting defence line and the storylines are widely available. Modern-day tourists are searching for meaningful stories that can be successfully addressed by applying interpretative techniques. As stressed before Roman archaeological sites are unfortunately mostly invisible in situ for the creation of images and photos, which can be shared on social media. Museums artefacts collection *can* make the story visible and tangible and should therefore play a major role in bringing stakeholders together in order to design the unique experience the visitor is looking for. The combination of the artefacts *inside* the museum and the heritage and landscape *outside* will stress the historic sensation and the sense of place and time.

Research shows that many people are interested in so-called 'hotspots', sites where something special happened. "*They want to experience and watch these important events*" (Thwaites, 2012).

DOMunder in Utrecht (NL) is a typical Limes hotspot. The historic sensation can be felt there. The attraction is underground, adventurous and on-site. With a torch in their hand, visitors can try to find Roman artefacts and the remnants of the Roman Castellum. DOMunder uses Instagram, Facebook and Google to post inviting pictures which inspire people to visit. This is also the case of the *Castellum Hoge Woerd* (NL) (see Graafstal in this volume), an eye-catching architecture built on the underground Castellum fundaments.

Archeon, in Alphen a/d Rijn (NL) has gone through an interesting development, coming from the other spectrum. Founded in 1994 as an archaeological open-air museum, i.e. with only reconstructed buildings based on Dutch archaeology, the archaeological artefacts could originally be found in museums like the National Museum of Antiquities (RMO) in Leiden. In 2011 however, the *Archeologiehuis Zuid-Holland* opened right next to *Archeon*, hosting temporary exhibitions of archaeological artefacts from the province Zuid-Holland: original archaeological material was exhibited right next to the reconstructions. In the near future, *Archeon* will also house the National Roman Ship Museum, including five archaeological wrecks found in the 1970's in nearby Zwammerdam. This is an inspiring example of connecting authentic museum collections next to the reconstructions that house storylines of 'daily life Roman culture'. A next step could be that *Archeon* uses the Limes landscape as an extension of the Park, actively providing information on the (long distance) walking and bicycle trails along the Limes, to be launched in 2018.

Conclusion

By connecting memoryscapes and museums as part of the same story, a storyline becomes a coherent trail. Such storylines make people stay longer, spending more and becoming more involved, so they learn more and remember their visit longer. They will also share their experience and thus invite others to experience the same, creating new but shared memories.

The Limes is an important memoryscape, on its way to become a challenging tourist destination by using storylines as a connecting thread between landscape and museums. The Limes has huge potential in cultural tourism, with a storyline taking shape thanks to the work of so many. This contributes exactly to the European Commission strategy of making people aware of their shared past.

It is in the established museums, small and larger, that a great challenge lies in connecting the storylines of the Limes to the objects and artefacts. There is also an important opportunity in connecting the local communities, museums and the memoryscapes. The museums act as spiders in the web.

About the author

Frederike van Ouwerkerk studied (art) history in Groningen (NL) and public history in Amsterdam (NL). She worked as an educator and as a consultant in education and public affairs for several museums in the Netherlands. When she continued her career as a senior lecturer on culture, tourism and communication at NHTV Breda University of Applied Sciences, she experienced a big gap between culture and tourism. She decided to find ways to fill this gap and did a lot of research on usable pasts and the role of museums and edutainment as a managerial tool for destination management.

The last couple of years her research focus is on the possibilities of memoryscapes, museums and heritage to establish an identity for a destination and to make this identity visible and tangible for a large audience. Edutainment proved to be a very important tool to accomplish this, while storylines turned out to be the connecting thread.

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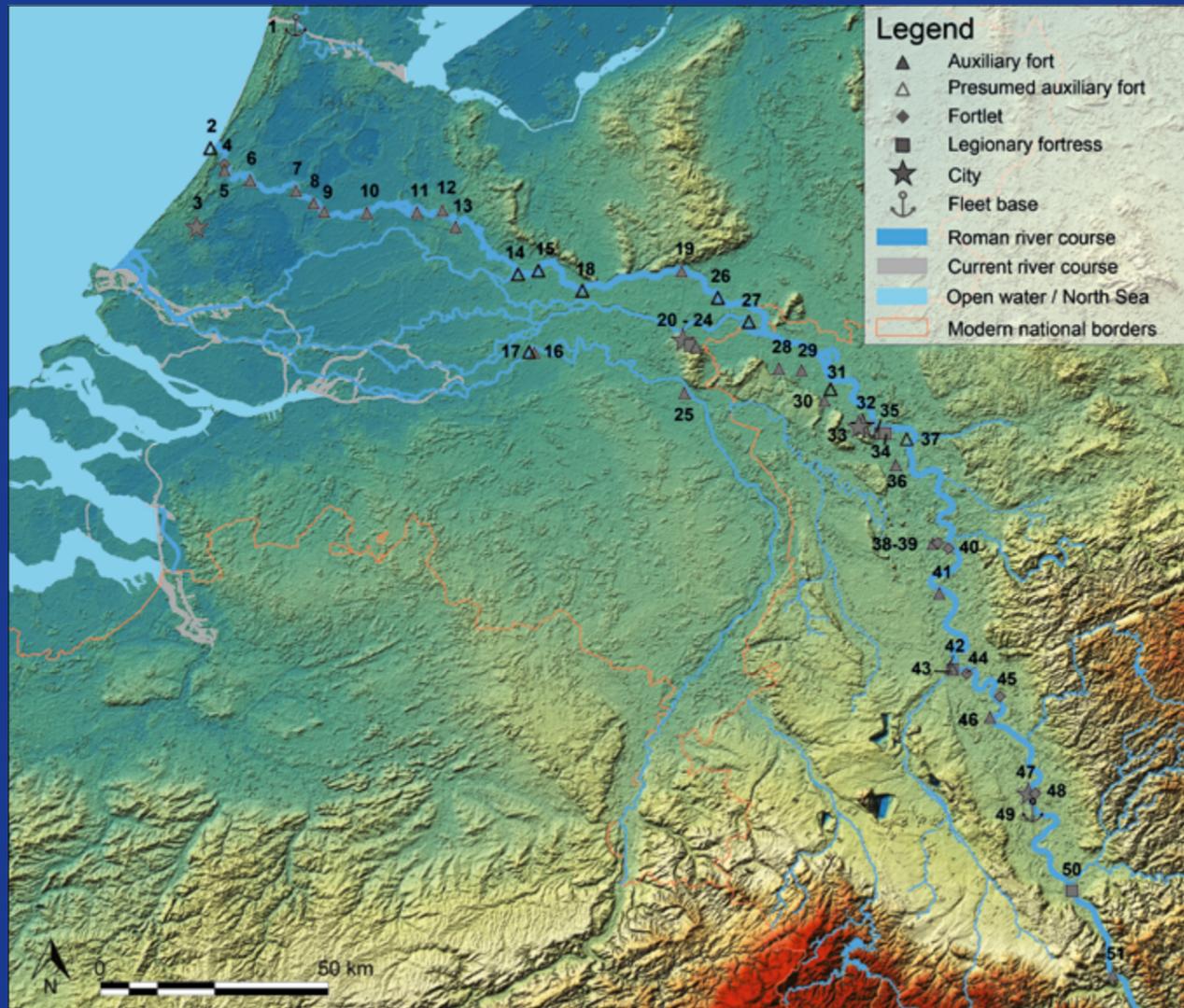
Fig. 1: Overview of the Lower German Limes. 1. Velsen Flevum, 2. Katwijk-Brittenburg Lugdunum, 3. Voorburg Forum Hadriani, 4. Valkenburg-Marktveld, 5. Valkenburg-Dorp Praetorium Agrippinae, 6. Leiden-Roomburg Matilo, 7. Alphen aan den Rijn Albaniania, 8. Zwammerdam Nigrum Pullum, 9. Bodegraven, 10. Woerden-Kerkplein Laurium, 11. Utrecht-De Meern Fletio, 12. Utrecht-Domplein Trajectum, 13. Bunnik-Vechten, 14. Rijswijk, 15. Maurik Mannaricium, 16. Kessel-Lith, 17. Rossum Kloosterwaard, 18. Kesteren, 19. Arnhem-Meinerswijk, 20. NijmegenValkhof, 21. Nijmegen-Hunerberg, 22. Nijmegen-Kops Plateau, 23. Nijmegen-West Noviomagus, 24. Nijmegen Oppidum Batavorum, 25. Cuijk Ceuclum, 26. Duiven-Loowaard, 27. Herwen-Bijlandse Waard, 28. Qualburg Quadriburgium, 29. Till-Steinches Hof, 30. Kalkar-Altkalkar Burginatium, 31. Wissel, 32. Xanten CUT, 33. Xanten Tricensimae, 34. Xanten-Bislicher Insel Vetera II, 35. Xanten-Fürstenberg Vetera I, 36. Alpen-Drüpt, 37. Büderich-Steinacker, 38. Moers-Asberg Asciburgium, 39. Moers-Asberg Asciburgium, 40. Duisburg-Werthausen, 41. Krefeld-Gellep Gelduba, 42. Neuss Novaesium, 43. Neuss Novaesium, 44. Neuss-Reckberg, 45. Monheim-Haus Bürgel, 46. Dormagen Durnomagus, 47. Cologne -Altstadt CCAA, 48. Cologne-Deutz Divitia, 49. Cologne-Alteburg, 50. Bonn Bonna, 51. Remagen Rigomagus.

World Heritage Nomination

Frontiers of the Roman Empire

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Outstanding Universal Value of the Lower German Limes

The World Heritage Convention was established to recognize 'sites of Outstanding Universal Value' which are part of the heritage of humankind as a whole, which deserve protection and transmission to future generations, and which are important for the whole of humanity. For that reason, it is important to answer the question "why is the Lower German Limes of Outstanding Universal Value?"

The Lower German Limes is a distinctive part of the frontiers of the Roman Empire, which protected the extensive Empire over the three continents of Africa, Asia and Europe.

It formed part of the frontiers of the Western Roman Empire throughout its entire existence. It reflects the development of the Roman military and associated civilian infrastructure from its beginnings in the last decades BC until the mid-5th century AD. The needs of the Empire moulded the regional landscapes and societies, as evidenced by water management works, industrial exploitation of natural resources, road construction and the imposition of a complex military and urban infrastructure. On the other hand, the cultural and natural characteristics of the region shaped the outward appearance of the Empire, as testified by adapted designs of military settlements, buildings, ships and roads. Ultimately, the frontier served as a starting point for the Early Medieval civil and religious infrastructure, which is the basis for present day society.

The remains of the Lower German Limes testify to the adaptive strategies of the Roman Empire in a marginal and very dynamic river landscape, to deal with the threats posed by the fragmented Germanic communities across the Rhine. It is an exceptional testimony to the innovative responses of a great empire to secure its territories against external groups which it found impossible to control by diplomacy. The Lower German Limes exhibits unique testimonies to water management strategies and constructions employed by the military command of the Roman Empire. Examples are a canal, heavy quays and landing platforms, adapted fort designs and road sections protected by timber revetments. Buried riverine rubbish

deposits constitute veritable treasure-chests of organic materials and artefacts bearing unique information on frontier life and on vanished traditions such as notably that of riverboat building.

Preparing the World Heritage Nomination

The German states of North Rhine-Westphalia and Rhineland-Palatinate as well as the Dutch provinces of Gelderland, Utrecht and Zuid-Holland cover the entire area of the Lower German Limes along the river Rhine. Since 2011, Germany and the Netherlands have therefore jointly been preparing the UNESCO World Heritage Nomination.

There are multiple reasons for a transnational nomination. First, during the Roman era, this area formed a single administrative entity: the province of Germania Inferior. Second, by nominating the German and the Dutch parts together, the entire gap between the existing parts of the Frontier of the Roman Empire - Hadrian's Wall and the Upper German-Raetian Limes - would be closed.

However, the most important reason is that the individual parts of the frontier share to a large degree the same characteristics and contribute to the Outstanding Universal Value as a whole. Despite of all diversity of the different parts of the Lower German Limes, which is also a result of more than 150 years of geological and archaeological research along the line. Because of the high groundwater level, the preserved remains include very high quality organic remains.

The Lower German Limes shows a completely different character to, for example, Hadrian's Wall or the Antonine Wall. The lack of standing remains above ground is compensated by the high quality of archaeological remains below ground, which have been brought to light during archaeological excavations or other works. Visible stone-built elements were torn down and later re-used in the early medieval cities. Research work shows the contribution of these facts and remains to the living heritage of the Lower Rhine region. Archaeological reserves all along the river form a valuable treasure for future research.

Frontier of the Roman Empire as a whole

Hadrian's Wall (UK) was accepted as a UNESCO World Heritage Site in 1987. When the nomination of the Upper German-Raetian Limes (Germany) was under preparation in the early 2000s, the idea was advanced to create a single UNESCO World Heritage Site encompassing all the frontiers of the Roman Empire in Europe, the Near East and North Africa. The World Heritage Committee expressed its support of this idea in 2005, renaming the joint World Heritage Sites to 'Frontiers of the Roman Empire'. The Antonine Wall (UK) was accepted by the World Heritage Committee as an extension of this World Heritage Site in 2008.

Parallel to this process, preparations have started for the nomination of other sections of the Roman frontiers in Europe. Different countries within Europe submitted their parts of the frontier to the Tentative Lists (e.g. Slovakia in 2002, Croatia in 2005). Tunisia was the first - and yet only - State Party outside Europe to submit a Tentative List entry for its Roman frontier section in 2012.

The submission of individual Tentative List entries by the State Parties reflected the envisaged gradual extension of the Frontiers of the Roman Empire on a national basis. A World Heritage Expert meeting on serial nominations (2010 - Ittingen (Switzerland)), resulted in several recommendations for the creation, extension

and management of serial and transnational UNESCO World Heritage Sites. These recommendations, adopted by the World Heritage Committee, concerned amongst others the definition of the properties, the explanation of their Outstanding Universal Value and the necessity of developing a comparative analysis prior to their nomination, a justification of the number and size of component parts, and a clarification of the chosen approach.

In line with these recommendations, ICOMOS requested a thematic study of the Roman frontiers in 2015, containing a description of the remains, and whether these could be divided into sections reflecting geographical aspects and having the capacity to demonstrate Outstanding Universal Value. Such a study would serve as a base for a nomination strategy.

In 2016, the thematic study of the Frontiers of the Roman Empire was drafted, elucidating the character and distribution of the remains of the Frontier. Based on published evidence, this study was supplemented with data provided by the European State Parties. The aggregated information demonstrated that although frontier installations shared many characteristics throughout the Roman Empire, regional landscapes and threats provoked different responses, discernible in the distribution, positioning and design of the military posts.

Using this Thematic Study, a Nomination Strategy was conceived and agreed upon by all of the involved state parties. The Thematic Study and Nomination Strategy were presented to the 41th session of the UNESCO World Heritage Committee in Kraków Poland, in 2017.

Fig. 2: Remains of the Medieval castle Valkhof in Nijmegen, which is constructed with Roman building material.
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Cooperation with other organisations - The Netherlands

Besides an agreement with the Germanic states and transnational cooperation between the European State parties, the cooperation with local governments and stakeholders is essential to a successful World Heritage Nomination.

First of all, these local stakeholders have access to knowledge and assets needed for sustainable protection. However more important is that including these stakeholders will lead to a shared management responsibilities on the nominated property and a shared responsibility for its future. In the end, this will increase the chance for protection of the heritage for future generations.

In the Netherlands, the regional governments cooperated with 25 municipalities in preparing the UNESCO World Heritage Nomination. The governments signed a cooperation document in 2014, committing themselves to the common goal of placing the Dutch part of the Limes on the UNESCO World Heritage List and, furthermore, agreeing to the processes involved in the preparation of the nomination (appointing responsibilities for different parts of the process). Since then, these governments cooperated in the preparation of the nomination file, management system, but also in different initiatives on increasing public awareness. The Foundation Roman Limes Netherlands worked between 2014 and 2018 successfully on cooperation and projects, aiming to communicate about the Roman Limes. This collaboration is proceeded by the regional heritage organisations and (site)museums. They jointly coordinate various

initiatives to involve the public and to create better understanding about the archaeological and cultural value of the remains of the Roman Frontier.

Cooperation with other organisations - Germany

The German part combines two states (Länder), 5 districts and 16 municipalities, which are organised into a regional consortium which is integrated into the whole process by means of several meetings. The primary connecting points are local museums and cultural authorities. Two museums show the efficiency of good cooperation on the local level, bringing out a bunch of successful activities, also integrating NGO's. These are the Archaeological Park in Xanten and Haus Bürgel nearby Monheim.

The German site of Xanten (with the well-known LVR Archaeological Park and Römermuseum above the Colonia Ulpia Traiana, the archaeological Landscape Park from the medieval city to the area of the legionary fortress of castra vetera) is an excellent example of joining together existing initiatives of monument offices, museums, NGO's and municipalities. In the future, these initiatives will constitute new activities and public awareness of a fascinating monument and its surrounding cultural landscape.

The Late Antique fortlet of Haus Bürgel, situated in the beautiful historical cultural landscape of the flood plain of the river Rhine nearby Monheim, combines excellently preserved visible remains of walls and structures converted, in more modern times, in to an agricultural farm and has been presented for several years by a private campaign funded by the North-Rhine Westphalia Foundation. The small-scale museum houses a fascinating exhibition about this historical site and concentrates several campaigns around the subject of the Roman army and Roman life along the Lower German Limes.

The importance of museums in presenting the World Heritage Site

Public awareness and public understanding is indispensable for sustainable protection. If people do not feel engaged and do not value their Roman heritage and its contribution to modern life, they will have no interest in protecting it.

A major issue in the public presentation of complex heritage sites, such as the Lower German Limes, is that many of the component monuments are not visible to the public eye. Furthermore, a second challenge is that many of the sites are essentially similar (Roman forts and other military installations). Each monument or location tends to produce similar artefacts and tell a similar story. Whilst academics may find important differences between each location, to the visitor they are pretty much the same. Therefore, each site potentially competes with its neighbours and tells a similar story from the visitors' perspective.

In order to increase the public knowledge and understanding, an interpretation framework has been developed for the Lower German Limes. This framework provides a mechanism through which each site can tell a different story, thereby enhancing the visitor's experience and enabling each location to complement its neighbour rather than competing with it.

The concept of an interpretation framework as a means of structuring interpretation for complex heritage sites comprising many similar or related visitor attractions (archaeological sites, museums, visitor centres et cetera) was first explored through the Hadrian's Wall Interpretation Framework (Adkins and Mills, 2011; Mills and Adkins, 2013). The underlying rationale for the interpretation framework comprised:

Recognising that Roman sites and museums across the Roman frontiers are essentially similar and potentially repetitive from the perspective of the visitor.

Recognising both the need and the opportunity to develop differentiated visitor offers, with each site or museum focusing on different themes or aspects of the Roman Frontier narrative and providing different visitor experiences.

Advocating the use of good interpretation practice recommended by professional interpreters across Europe (www.interpret-europe.net; www.ahi.org.uk).

At the 22nd Roman Frontiers Congress in Ruse (Bulgaria) in 2012, the following overarching concept has been proposed which outlines the potential scope of the Roman Frontier narrative for public presentation (Mills, 2015, p.943):

"The Roman Empire was one of the largest, most powerful and influential Empires the World has ever seen. Its impact and legacy continues to affect and shape our modern world although the high point of the Empire was over 2000 years ago. The frontiers ebbed and flowed in response to economic and political issues and decisions at the heart of the Empire and threats and pressures at its edges. Imperial ambition, Roman identity, external threats, trade, resources, communications and supply were important factors influencing the location, extent and nature of the frontiers and how they changed and evolved over time.

The frontiers of the Roman Empire defined the Roman world physically, symbolically and psychologically. The Emperors spent much of their time on the frontiers and depended on the army, mainly based on the frontiers, for support. Many Emperors came from the frontier areas, especially in the later Empire. The nature and physical structure of the frontiers and their military systems varied across the limits of the Empire, including walls and timber palisades, rivers, deserts and mountains.

The purpose of the frontiers varies too, over space and time and was often as much about controlling and managing communications, trade and movement of people as it was about defence. The frontiers were where the Roman world came face to face with others. As in the modern world, these frontier zones were marked by innovation, cultural exchange, conflict and ethnic mingling and diversity.

Today the story of the Roman frontiers symbolises many issues confronted by people and nations in the modern world, of conflict, security, mistrust, autocracy, economic prosperity and opportunity, religion, ethnicity and cultural exchange. They provide a window through which to look at the past, the present and the future. They provide a vehicle through which to explore and to promote UNESCO's core values in creating the concept of World Heritage - to promote understanding, toleration, co-operation and respect amongst the nations of the World."

Fig. 7: Signing of the cooperation act. J. Vogel, LVR-LMB.

Implementation of the interpretation framework

With the interpretation framework for the Lower German Limes under development, the second step is the implementation of this framework, in order to create the understanding needed for a successful nomination. This goes further than only the unadorned presentation of information; interpretation encompasses the idea of bringing to life what is being explained in ways that will engage and interest the public. Interpretation in this sense is nonetheless still anchored in the evidence itself and in scientific explanation - it simply goes further in focusing on those aspects and techniques of presenting the information that are most likely to engage visitors.

Museums have a clear position in presenting the Lower German Limes to visitors, both local people and tourists. They have the knowledge of the narrative and understanding of the audiences, their expectations, interests and motivations. In addition, the diversity of the museums and their concepts is an advantage and a quality which will be successful in acquiring the visitors' acceptance.

Regarding the implementation of the interpretation framework, we should not forget the important role of other multipliers besides museums: the local authorities and the monument offices, heritage institutes, volunteer organisations and many other platforms like the German "Limes Road". In cooperation, all these organisations can contribute to a successful implementation of the Lower German Limes as a future World Heritage Site.

About the authors

Tamar Leene is coordinator of the Dutch Limes Association, a cooperation of the provinces Utrecht, Gelderland & Zuid-Holland en Cultural Heritage Agency of the Netherlands. The Dutch Limes Association was founded in 2010 and is responsible for the preparation of Frontiers of the Roman Empire - Lower German Limes World Heritage Nomination, including a supporting program and to bring people of all ages and backgrounds the opportunity to discover, explore, understand and be inspired the archaeological remains of the Roman Frontier in the Netherlands. Tamar Leene studied landscape planning at Wageningen University (MSc) and Political Science at Leiden University (BA).

Born 1966 in Bonn, Dr. Thomas Otten studied 1989-1994 prehistoric and classic archaeology as well as old history at the Rheinische Friedrich-Wilhelms-Universität in Bonn and at the Ludwig-Maximilian-Universität München. 1995-1998 he wrote his dissertation about the excavations under the St. Viktor church in Xanten, with as theme cathedral and immunity. 2000-2006 he was director of the Rheinischer Verein für Denkmalpflege und Landschaftsschutz e.V. Since 2006 he is Referatsleiter Bodendenkmalschutz und Bodendenkmalpflege at the Ministerium für Bauen und Verkehr des Landes NRW. He is currently director of MiQua. LVR-Jüdisches Museum im Archäologischen Quartier Köln, Germany.

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Fig. 1: Scale model of the fortress Ruffenhofen.

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Conclusion

The articles presented from the session at the ICOM General Conference in Milan, 2016 illustrate the importance of connecting the tangible and intangible, movable and immovable World Heritage. Within the case study of the Roman Limes along the river Rhine, the contributors all reflect on the pivotal role of museums in the cultural landscape and in the continuation of that also for World Heritage Sites. Making the Roman Limes visible for inhabitants and tourists alike, is a challenging task for museums. This endeavour is highly topical in view of the nomination of the Lower German Limes, the Roman frontier on the Rhine, as a UNESCO World Heritage Site by the Dutch government, supported by the German states of North Rhine Westphalia and Rhineland Palatinate.

The nomination of the Lower German Limes as UNESCO World Heritage Site demands intensive cooperation between Dutch and German authorities at various levels. The challenge is to turn the Limes from an almost unknown phenomenon in to a landmark cherished by many. There is a crucial role for museums in this process. We can make a clear distinction in the types of museums along the Limes: site museums (protecting Roman remains), (re)constructions in archaeological open-air museums and collection presentations (showing artefacts found elsewhere).

Museums are first of all custodians for excavated archaeological objects, as would be in many other cases of World Heritage Sites. They are able to connect these objects to the sites and stories of the Roman Empire. Along the whole of the Lower Rhine Limes, museums serve as important actors in education, interpretation and storytelling, especially as little is to be seen above ground. Museums are able to tell the multi-layered history of the surrounding landscapes. Some of these site museums are even integrated into the landscape. They serve as gateways to the surrounding cultural landscapes, combining indoor information and outdoor experience. This is important for the consciousness of the Limes as the former Roman border in the world of today. For inhabitants, the link with the past gives a grounding in an often newly shaped environment. In terms of tourism, this is also attractive. Tourism has a cultural dimension, but also an economic benefit for the region. These elements are highly relevant in the nomination process. Alongside the larger museums,

one must not underestimate the role that smaller museums play in their local communities: explaining the shared heritage, creating regional identities and so-called 'memoryscapes' which can turn 'The Roman past' into their own past.

Several thousand museums are either directly located in, or related to the 911 World Heritage areas. The absence of museums would deprive many of the World Heritage areas of a major part of their ultimate goal: conserving the world's living memory. ICOM is willing to become the first and foremost advisor on museum issues in World Heritage areas. (ICOM, n.d.).

The ultimate aim of both museums and sites is research, public awareness, better understanding and more appreciation of World Cultural Heritage culture. Museums should therefore have a role in World Heritage Site nominations and requirements, as we have striven to demonstrate by investigating the Lower Rhine Limes.

The Catania Declaration, 2015 on the role of museums in World Heritage Sites calls for UNESCO Sites to: *"increase the museological and institutional functions of museums;*

motivate museums and Institutions to have an active role in the protection, interpretation and presentation of the surroundings", and managers to "*ensure that the governance of the sites integrate in their management museums and other institutions and places of culture existing in them; promote their involvement in the protection, conservation, interpretation of the heritage inscribed on World Heritage List.*" Following its adoption at the ICOM General Conference in 2016, ICOM National Committees were encouraged to reflect and redefine the role of museums within World Heritage Sites, to enhance their function within the sites they belong to.

We advise, beyond the ICOM recommendations in the Catania Declaration that ICOM acts as one of the advisory bodies in the procedure and requirements of World Heritage Site nominations and museums also know what to do.

Renger de Bruin, Astrid Hertog & Roeland Paardekooper

Fig. 5: Presentation of Living Frontiers in Tullie House.
© TULLIE HOUSE MUSEUM AND ART GALLERY TRUST.

◄ Fig. 4: Detail of showcases with exceptionally well preserved workmen tools of the Roman ship De Meern 1, Castellum Hoge Woerd.
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The crucial role of museums in cultural landscapes: publication by ICOM Netherlands

The borders of the Roman Empire (also known as Limes) in Great Britain (Hadrian's Wall and the Antonine Wall) and parts of the Limes in southern Germany have been added to the UNESCO World Heritage List as "Frontiers of the Roman Empire" (WHS). The so-called Lower Germanic Limes will be nominated by the Dutch government in cooperation with the German federal states of North Rhine-Westphalia and Rhineland-Palatinate in 2020 as a supplement to these "Frontiers of the Roman Empire". In recent years, many initiatives have been developed to increase the perception of the Dutch Limes. After all, this is largely underground and therefore invisible. In this publication, the role of museums in these challenges is examined.

This English-language publication contains eight contributions and is based on the international session at the ICOM General Conference in Milan in 2016, organized by ICOM Netherlands. Through an international group of experts, topics such as museums and cultural landscapes, visitor experience, tourism, cooperation, and government responsibility are described and recommendations made. Museums play a crucial role in the revitalization of cultural landscapes, so important to the UNESCO World Heritage List.

The publication "The Roman Frontier along the River Rhine" is available online at www.icomnederland.nl and can be ordered as hard copy from ICOM Netherlands via the same website.