

*Discovering the Archaeologists of Europe:*

# GERMANY



Verband der Landesarchäologen  
in der Bundesrepublik Deutschland

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July 2008



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## 1. Preface and Acknowledgements

The following concluding report presents the results of an examination of the professional situation of archaeologists in Germany. It is part of a project that has the goal of identifying the opportunities and barriers that exist within the European labour market for archaeologists. The project, "Discovering the Archaeologists of Europe", is coordinated by the Institute of Field Archaeologists (IFA) in the United Kingdom and is financially supported by the EU, as part of the "Leonardo da Vinci" vocational education and training programme. The following report will be published in English and German together with the reports of the other project partners on the project's web site [www.discovering-archaeologists.eu](http://www.discovering-archaeologists.eu) and can be printed, or copied free of charge. In addition to twelve national reports on archaeological employment in each of the participating countries in the Discovering the Archaeologists of Europe project (of which this is one), these results also contribute to a transnational summary and overview of that project (K. Aitchison, Discovering the Archaeologists of Europe: Transnational Report. 2008 [online at: [www.discovering-archaeologists.eu](http://www.discovering-archaeologists.eu)])

The report on Germany as well as the questionnaire used to gather data are closely oriented to the parameters set for the entire project and to the IFA's pilot study for the UK (Aitchison/Edwards 2003). The German contribution was organized by the association of state archaeologists in Germany, the Verband der Landesarchäologen in der Bundesrepublik Deutschland (VLA). The VLA also provided the counter-financing. Dirk Krausse (Regierungspräsidium Stuttgart) was responsible for the authorship of the text. Sascha Schmidt and Carla Nübold (both of the Regierungspräsidium Stuttgart) prepared the German questionnaire. Carla Nübold is thanked for entering the data and creating the tables and graphics. The English translation of the original text was prepared by Mary Wong-Sommer.

The labour market for archaeology in Germany is somewhat more difficult to analyse than that of the other countries participating in the project (England, Netherlands, Slovenia, Greece, Belgium, Cyprus, Republic of Ireland, Austria, Slovakia, Czech Republic, and Hungary) for the following reasons:

1. The complex structure of archaeology in Germany, with varying federal, state, county and local levels, required the inclusion of a large amount of institutions, thus raising the number of "contact persons".
2. Corresponding to the large German population, and hence a larger number of archaeologists, the amount of data gathered and analysed is considerably larger.
3. The archaeological institutions in Germany are not associated under a common governing body and have extremely heterogeneous responsibilities and areas of interest.
4. It was therefore difficult to decide which disciplines and institutions should be included in the study.
5. There were no previous analyses on which to base this study.
6. As a result, a special list for the distribution of the questionnaire had to be compiled after laborious research.

This situation and the decision to include as many archaeological disciplines and organisations as possible, including the smaller companies and museums, led to the expectation that there would be a relatively small response to the questionnaire. Surprisingly, while the return from public institutions was lower than expected, it was higher from the private companies. In all, a response quota of c. 35% is a sufficient basis for the study, although large regional differences are to be noted.

All state archaeologists have been given the opportunity to provide additional data on their particular region in order to create a more exact presentation of the situation in their own state (deadline: end-August 2008). These regional reports will then be published together with a summary of the following text and a report comparing the market in Germany with that of the other participating European countries in "Archäologisches Nachrichtenblatt" (Berlin; 2009).

The authors would like to thank all those who took the time to respond to the questionnaire. They have contributed to the first database in which the social standing, situation and importance of archaeologists and archaeological institutions in Germany are compiled and compared, not only on a national, but also on an international basis. The number of differing institutions and professions that work in the field of archaeology, and are financially dependent on archaeology, is large. It is in our common interest to present this situation to the public and thereby attract attention to the important role that archaeology plays in society.

It has already become apparent that Germany no longer counts as one of the leading European nations in terms of the “supply” situation of archaeologists. In fact, Germany is far from it. In relation to population and economic strength, the supply of archaeologists in many regions of the country can aptly be described as meagre. Fears that a European benchmarking could have a contra-productive effect on German archaeological institutions are thus unfounded. This is especially the case for the state departments of archaeological heritage management. On a country-wide average, their staff numbers are considerably lower than the standard of comparable western and northern European countries – in spite of the excellent benchmarks and record profits realised in the German economy. In teaching and research, the personnel situation (and salary trend) in the archaeological fields has, on average, declined for years. German universities, too, have been suffering for years from the problem that the archaeological labour market only needs a small portion of their graduates. This has a direct effect on the motivation of faculty and students (Lorenzen 2007). In the Netherlands, UK, and the Republic of Ireland, this problem disappeared long ago. Graduates in France and the Scandinavian countries also have a much better chance of being employed in archaeology than their German peers. It should be noted, however, that over the past 20 years in the archaeological labour markets of the Netherlands and the UK, new jobs have been created almost exclusively in the private, rather than the public sector. The social welfare benefits and job security related to these jobs are, of course, of a lower quality than that of jobs in the German public sector.

There are certainly some state departments, museums and other institutions in Germany that have been able to stem the general tide of staff reductions, and thus take a defensive attitude to studies such as ours. Over the long term, however, further reductions in Germany can only be prevented through an offensive and united approach of all archaeological institutions in the country. There is no need for even those flourishing organisations with a solid personnel base to fear a budgetary comparison with the situation in countries of similar economic strength, such as France, the UK, the Republic of Ireland, the Benelux countries, the Scandinavian countries, or Switzerland. For the majority of German institutions, though, this comparison will be a painful view of the low level to which employment in archaeology has fallen in this country.

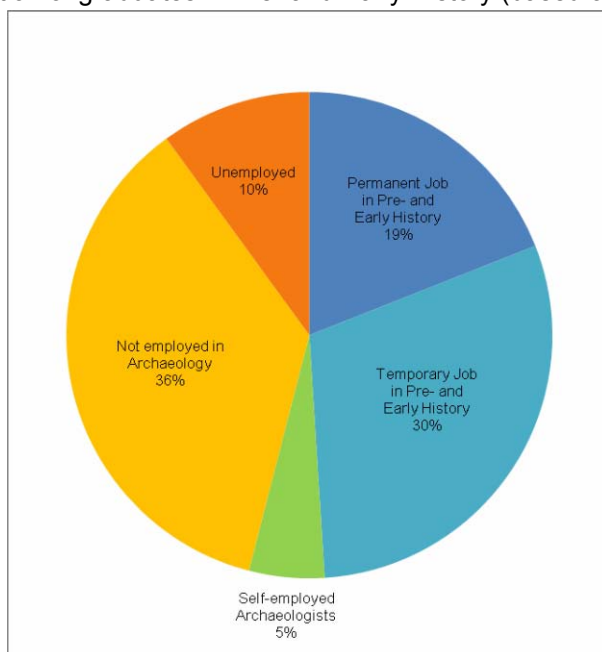
## 2. Introduction and Background

### 2.1. Preceding studies and background information: archaeological institutions and structures in Germany

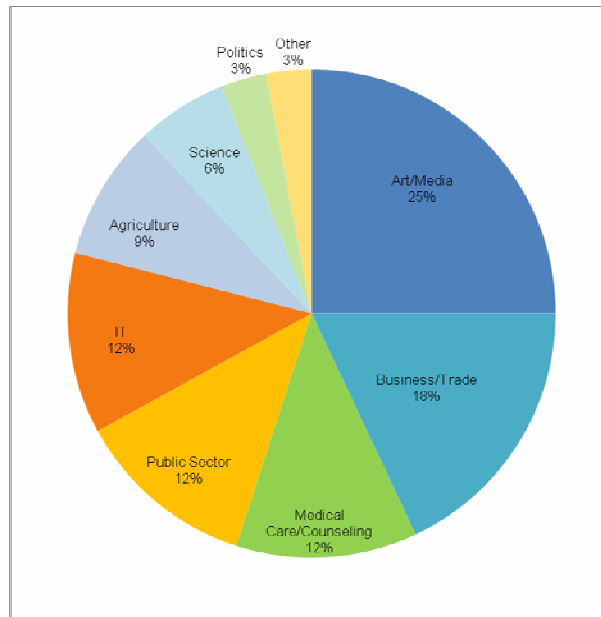
No relevant, large-scale investigations have been conducted in the past on the labour market for archaeologists in Germany. The following surveys, however, deserve mention: H. Aments (1994) on the situation of university graduates, the Deutsche Gesellschaft für Ur- und Frühgeschichte on the job qualifications required of university graduates in Pre- and Early History (Archäologische Informationen 20/1-2, 1997), M.K.H. Eggert's (2001) comprehensive review of the labour market and the recently published study on employment perspectives for graduates in Pre- and Early History (Lorenzen 2007). The situation for graduates in Classical Archaeology was summarised a few years ago by U. Sinn (2000). An analysis of job exchanges and employment advertisements is provided by R. Karl and R. Krierer (2004).

Lorenzen's study in particular characterises the opportunities and problems that archaeology graduates face when entering the labour market. Personal interviews with 91 graduates of the Kiel Institut für Ur- und Frühgeschichte (Institute for Pre- and Early History) who completed their studies between 1990 and 2005 revealed that only 19% were able to get a permanent job in an archaeological institution. In contrast, 36% left the field and 10% were unemployed. 30% were employed by an archaeological organisation on a temporary basis and 5% were self-employed (Fig.1). Those who left the field were not necessarily at a disadvantage. In fact, some became extremely successful in a variety of other professions (Fig.2). A significant amount of those graduates who found archaeological work were employed by non-German, European operations (Fig.3). This presents an initial impression of the current employment situation in Germany and shows that for many years the supply of qualified archaeological personnel has been considerably higher than the demand.

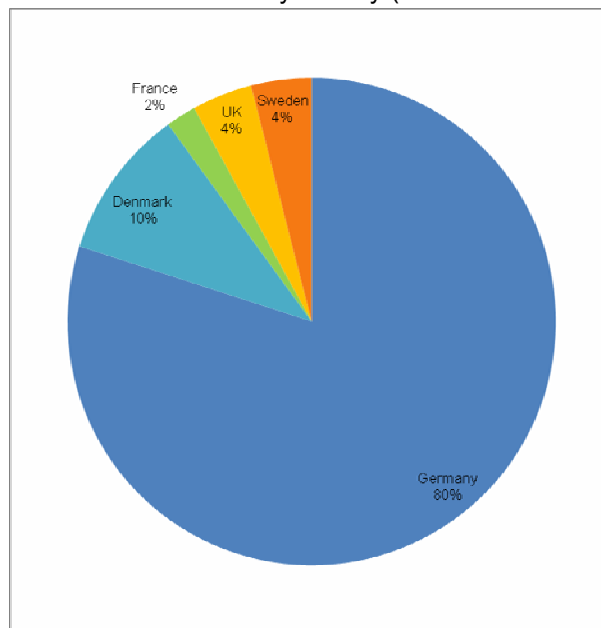
**Figure 1:** Employment situation of graduates in Pre- and Early History (based on Lorenzen 2007, Fig. 1)



**Figure 2:** Current non-archaeological employment of graduates in Pre- and Early History (based on Lorenzen 2007, Fig. 3)



**Figure 3:** Job location of graduates in Pre- and Early History (based on Lorenzen 2007, Fig. 2)



As is well-known, Germany is a state with a pronounced federal structure. Responsibility for cultural issues – and thus also for archaeological heritage management, museums, and archaeological research and teaching in the universities is not located in Germany at the federal level, but rather at the level of the individual states. Through various institutions the federal government does, however, exert influence on archaeological heritage management, museums and research. Examples here include the federal legal system, such as the ratification of the European Convention on the Protection of the Archaeological Heritage in 2002 (Malta Convention), and the promotion of research through the Deutsche Forschungsgemeinschaft (DFG).

Traditionally, the majority of public institutions that employ archaeologists are funded by the individual states. Among the most important of these are the respective bodies responsible for archaeological heritage management (Landesdenkmalpflege) – the following tables will refer here to state archaeologists (*Landesarchäologen*) – the state museums, including their branches, and the state universities and academies. Recently, there has been a trend in the case of the state museums to change the legal forms of the institutions to so-called “Stiftungen”, or foundations, (e.g.

Stiftung Schleswig-Holsteinische Landesmuseen Schloss Gottorf), or partially commercially oriented “Landesbetriebe” (e.g. Landesmuseum Württemberg Stuttgart; Archäologisches Landesmuseum Baden-Württemberg). Some states, especially those in the former Prussian areas, have combined archaeological heritage management with the archaeological state museums into one unit with a department for each field. In contrast, the federal government funds very few archaeological institutions. One of these, the Deutsche Archäologische Institut (DAI), is by far the most important of all archaeological organisations in the country. The DAI reports to the foreign ministry and, according to its home page, has a total of 261 employees, including 176 archaeologists. The federal government additionally finances many jobs through research grants that are primarily overseen by the DFG. These jobs have limited terms and employ archaeologists in universities, research institutes, the state archaeology departments, and larger museums.

Three important archaeological research institutes that are not connected to universities should also be mentioned. The Römisch-Germanische Zentralmuseum Mainz (RGZM) and the Bergbau-Museum Bochum are jointly financed by the federal and respective state governments as so-called “Blaue-Liste” institutions. The federal government (75%) and the states (25%) also jointly fund Germany’s largest cultural foundation, the Stiftung Preußischer Kulturbesitz in Berlin, which is officially headed by the Minister for Culture. The Stiftung is one of the largest cultural institutions in the world and a significant employer of archaeologists.

There are furthermore many, mostly very small archaeologically-active organisations that are funded on the community (kommunal), or county (Landkreis) levels. These are generally museums with archaeological collections and establishments related to practical archaeological heritage management. The latter will be referred to in the following tables as county archaeologists (*Kommunalarchäologen*). The regional authorities of the Rhineland-Palatinate and Westfalen-Lippe in North Rhine-Westphalia are an exception here. Although these “Landschaftsverbände” are funded by their communities, they are one of the largest employers of archaeologists in Germany.

Since the 1990’s, private archaeological firms have gained importance as employers. In some states, excavation companies carry out the vast majority of emergency or pre-emptive excavations. Private companies have also taken over a broad spectrum of archaeological services, from simple drafting to the restoration of finds and even the conception of entire exhibits, or 3D-animations.

Finally, the role of private associations (Vereine) should be noted. These employ archaeologists on a smaller dimension through museums, “Altertumsverbände” (associations focusing on antiquity-related topics), and university research grants.

This study has created the following categories to reflect the extremely complicated situation in Germany, with its great variation of structures from state to state and the traditional profiles and responsibilities of archaeologists: *State archaeologists* (employed by the state), *County archaeologists* (employed by the city, county, or community), *Museums* (public and private), *Universities*, and other *Research institutes* (Akademien der Wissenschaften, Blaue Liste-Institutionen, DAI, etc.). An additional category, *Private firms*, includes excavation companies and other private archaeological services. The fact that the responsibilities of many public archaeological organisations often overlap (e.g. combined archaeological state museums and state heritage management departments) leads inevitably to “grey areas” in the following tables.



## 2.2. Archaeological disciplines and the traditional approach of graduates

Although the profession “archaeologist” is not legally defined in Germany, within the archaeological community the term is generally understood to refer only to graduates of standard university degree programmes. An “archaeologist” in Germany is thus firstly someone with a relevant academic degree, and only secondly a person who is employed in an archaeological field.

The European declaration calling for the convergence of the European higher education systems (the Bologna process) has slowly begun to take effect in Germany. In the past, archaeological education in Germany, unlike other European systems, involved a clear differentiation between the archaeological fields and required early specialisation. In Germany, students did not (and still do not) study “archaeology”. Instead, they choose an archaeological field to concentrate on from the first semester onwards. A prerequisite to be able to study archaeology at a university is the Abitur, the highest secondary school diploma. In order to receive an M.A. or PhD degree in archaeology, many universities still require a minimum level of Latin (Latinum, or Großes Latinum), and some also require the same of Ancient Greek (Graecum).

In terms of graduates and the amount of jobs offered on the labour market, the disciplines of Pre- and Early History as well as Classical Archaeology are traditionally dominant. Some universities also offer specialised degree programmes in Medieval Archaeology and Provincial Roman Archaeology. The corresponding numbers for the fields of Southwest-Asian Archaeology, Biblical/Christian Archaeology and other philological disciplines that include archaeology and archaeological research (e.g. Egyptology) are relatively small.

Almost all universities include the above-mentioned degree programmes in their liberal arts faculties and offer M.A. or PhD degrees. Until the 1990’s it was possible – and in some universities the prevalent tradition – to enter a direct PhD programme without first receiving a preliminary degree. In the late 1970’s the number of archaeology students grew dramatically. Since then, German students have tended to have much longer periods of study than their European counterparts. As a result, doctoral graduates in Germany are also considerably older.

The early specialisation required of students as well as the attitude that only a doctorate reflects the proper professional qualifications explains the above-mentioned traditional interpretation of the term “Archaeologist”. It also explains the pronounced differentiation between graduates of the various archaeological disciplines and between the professions of archaeologist (generally a PhD), technician and worker.

Until the 1960’s, little had been done to professionalise the work of excavation. University research excavations were (and still are) led in general by a scientist (with a “Habilitation”, post-doctoral lecture qualification, or an assistant with a PhD), who organises a larger group of unpaid and a smaller group of paid, qualified students (wissenschaftliche Hilfskräfte). In other words, archaeologists generally worked amongst themselves on excavations. Depending on their financial situation, institutes sometimes hired specialists on a temporary basis, such as photographers, illustrators, surveyors, botanists, or zoologists, to assist the archaeologists. In the case of large, personnel-intensive excavation projects, the demand for additional manpower was covered by hiring locals. Farm labourers and construction workers were hired to carry out manual labour.

With the expansion of both the university institutes for Pre- and Early History and the state departments of archaeological heritage management, which are traditionally closely tied in terms of personnel, new archaeological professions developed. In particular, the profession of the excavator (Grabungstechniker) was established in the 1970’s. Within archaeological heritage management, technical specialists (photographers, restorers, illustrators) and manual workers have always been used to supplement the work of the archaeological staff (“Referenten, Konservatoren”), in addition to temporarily-hired students and administrative assistants. As excavation techniques improved and the number of rescue excavations rose, the need for technically-qualified and experienced personnel to direct the technical aspect of local excavations, surveys, etc. also grew. The gap was

filled primarily by excavation employees who had the necessary skills and knowledge. Some may have already proven themselves as excavation assistants. The establishment of a Board of Examiners and examination regulations for excavators ([www.Landesarchaeologen.de/ag/fort\\_pruef\\_grbtech\\_05.pdf](http://www.Landesarchaeologen.de/ag/fort_pruef_grbtech_05.pdf)) resulted in the 1990's in the creation of a nationally-recognised profession with specific training requirements. A prerequisite to acceptance in such a programme is the completion of a technical apprenticeship. Another profession, excavation engineer, has only recently been established. Prerequisites here are the "Fachabitur" (diploma from a technical school) and the completion of a degree programme at a "Fachhochschule" (university of applied sciences) ([www.f5.fhtw-berlin.de/krig](http://www.f5.fhtw-berlin.de/krig)). The expansion of the systems in the 1970's also led to an increase in the number of scientists, especially natural scientists (biologists, geologists, geophysicists, etc.) who found employment in archaeological institutions. They are, however, considered to be "specialists", rather than "archaeologists".

German "archaeologists" traditionally see themselves as scientists with a masters or doctoral degree in Pre- and Early History, Classical Archaeology, or one of the other archaeological disciplines. In general, a degree in archaeology was, and still is, a prerequisite for employment as scientific director of an archaeological excavation, to be accepted for publication in scientific journals, and to use the professional title of "archaeologist". A university degree is also required to be hired in the upper-level management of museums, universities, and the state archaeological heritage departments. "Specialists" with academic degrees, such as botanists or zooarchaeologists, are treated like archaeologists in this respect. In contrast, excavators and excavation engineers are not counted as scientists, as they do not have university degrees. For the most part they are placed in middle-management positions and are paid less than archaeologists or natural scientists. Excavation workers, who generally have no specialised training or education, belong to the lower level of civil service and earn the least of these groups.

### **2.3. Archaeology in Germany: traditionally a relatively impermeable system**

The archaeological labour market in Germany has thus traditionally had a relatively rigid, hierarchical structure. To put it simply, university-educated scientists are at the top level, below which come the technical specialists and then the workers at the bottom. This structure of three levels is similar to the much-debated German "three-tiered school system". It can hardly be refuted that the civil service structure in Germany, and thus the personnel structures in archaeological heritage management, universities and museums, are directly influenced by this social tradition.

For decades, the number of graduates in the archaeological disciplines has been far higher than the number of vacant jobs for scientists. As a result, there has been a trend among archaeologists in the public sector to accept jobs with lower pay than their qualifications would warrant. Archaeologists can be found working as excavation assistants, or technical excavation directors. This step down to the lower-to middle management level of civil service is for a significant portion of German archaeologists today the only possibility to find employment in a public-sector archaeological organisation. For years, the amount of jobs with higher qualifications has been successively reduced for budgetary reasons in the majority of German states. A step up to a better paying position is therefore almost never possible.

In addition to this vertical rigidity, archaeology in Germany also has horizontal barriers: For example, the early specialisation in a specific archaeological discipline prevents classical archaeologists from applying for and receiving jobs in the field of Pre- and Early History, and vice versa. The specialisation (and also "regionalisation"), particularly in prehistoric archaeology with its extremely wide-ranging and complex object of research, went so far that at some point individual academic institutes were single-handedly able to satisfy the demand for archaeologists in both museum and archaeological heritage management in their regions. The traditional attitude that a Conservator or

Curator is only good if s/he can immediately identify every local find that is placed before him/her helps to explain the close relationship within a region between university institutes, state archaeological heritage management, and museums.

Over the last decades, the daily routine in museums and in heritage management has changed, with specialisations and material-related knowledge taking a back seat to event management (museums) and management techniques (heritage management). It is to be feared that this development could negatively affect scientific quality. On the other hand, it also fosters the interdisciplinary, inter-regional, and international permeability of the archaeological labour market.

The newly conceived B.A. and M.A. programmes in German universities will probably support this tendency. There are many cases in which the traditional barriers between the archaeological disciplines have been torn down, thereby increasing horizontal mobility.

The establishment of private archaeological firms in the German market has brought large changes to the archaeological profession over the last two decades. Compared to public-sector employers, the commercial companies have more room to manoeuvre in their labour contracts and can more easily implement performance-related payment. Nevertheless, at least the excavation firms have to indirectly orient their work to the concepts, the costs and the quality-criteria of the public-sector archaeological heritage management. The future will show how the interaction between public-sector archaeology and commercial services affects the professional situation of archaeologists, other scientists employed in archaeology, excavation engineers, excavators, and workers. This study attempts to provide an initial view of the situation.

#### **2.4. Heritage management laws and their effect on the labour market**

On October 9, 2002, following the approval of the Bundesrat and Bundestag in accordance with Art. 59 Abs.2 Satz 1 of the constitution, the German Federal President ratified the European Convention on the Protection of the Archaeological Heritage (BGBl 2002 II, p.2709-2719). This document, generally known as the Malta Convention, or Convention of Valletta, went into effect on July 23, 2003, in accordance with Article 14, Paragraph 5 (BGBl 2003 II, S.309). Following the recommendation of the "Ständige Vertragskommission der Länder", all states had previously approved the revised text.

The convention is concerned with elements that fall under the competency of the states according to the German constitution (Art. 30, 70 ff.). As a result, the implementation of the convention and the responsibility to carry out all related commitments lie in the responsibility of the federal states. The convention is legally binding for all states, as they approved the document before it was ratified. The states are therefore bound to ensure that the necessary measures are taken to carry out the convention. In particular, the state parliaments are required to examine their laws and, where necessary, to change these laws so that the country fully complies with the Malta Convention (cp. Schweitzer, Staatsrecht III, 8. Aufl. 2004, p.165 ff; DSI 29, 04/ 2005, 65 ff.).

The valid heritage protection laws of the individual German states vary considerably with regard to their conformance with the revised European Convention on the Protection of the Archaeological Heritage.

In the "new states" of eastern Germany, there is no, or only a little need for alteration of the relevant heritage protection laws because these were created in the early 1990's, simultaneously to the Malta Convention, and reflected the principles of the convention. The heritage protection laws of Brandenburg (§15 Abs. 3 and 12 Abs 2), Mecklenburg-Western Pomerania (§6 Abs. 5), Saxony (§14), Saxony-Anhalt (§14 Abs. 9) and Thuringia (§11 Abs. and §13 Abs. 3) all include an explicit "Polluter Pays Principle" in the sense of Art. 6 of the Malta Convention - although the financial burden is limited by the principle of what is just and reasonable. For example, §12 Abs. 2 of the Brandenburg law BbgDSchG states: "In cases involving considerable movements of earth, the initiator

shall bear the costs for the protection and conservation of the monuments that are directly or indirectly affected, within reason.” §14 Abs. 3 of the Saxon SächDSchG closely reflects the convention: “The financiers of large, public or private, building or development projects, or projects to strip raw materials or mineral resources can be held responsible as initiators for the costs related to the archaeological excavations, the conservation of the finds, and the documentation of the features and finds, within reason. The determination of the cost burden is to be made by the state department for archaeological heritage management.” In Thuringia, the law states that “The owner of a permit according to Paragraph 1, No. 3 is required to bear the costs, within reason, for the archaeological measures necessitated by the construction, for the archaeological operations to secure the finds and for the archaeological documentation. These costs are to be paid to the responsible state department for archaeological heritage management” (ThDSchG § 13 Abs. 1 Nr. 3).

In the new German states the “Polluter Pays Principle” is applied to all larger construction projects. The quick adoption of this principle was especially advantageous at the time of the “Aufbau Ost” (Building up Eastern Germany). The German Reunification brought a tremendous surge in infrastructure and building projects in the east. With the “Polluter Pays Principle”, the financial burden for the rescue excavations could be assigned to the financier of the project. In other words, major federal projects were billed to the federal government and private projects to the private investors. This was in contrast to the traditional German practise which called for state financing of rescue excavations.

Unlike the Netherlands (Bloemers 2005) and the UK, nearly all of the new German states decided not to privatise excavations in the early 1990’s. All rescue excavations, regardless of whether they are caused by public or private projects, are carried out in Saxony, Thuringia, Saxony-Anhalt and Mecklenburg-Western Pomerania by the responsible civil authority, generally the state archaeology departments. Brandenburg is an exception: following the example of the Netherlands, the sector of rescue excavations has been opened to commercial excavation companies.

Regarding financing according to Art. 6 of the Malta convention, there is practically no need for change in the laws of the new German states. It is of relevance to this study to note that the large amount of infrastructure projects that were carried out in these states after reunification led to an enormous increase in rescue excavations, which in turn caused a temporary rise in the demand for archaeologists, excavators, and excavation workers. The majority of state archaeology offices maintained their government monopoly, however, and met the increased need with short-term hiring in the public sector. At the time, there was an extremely high level of unemployment in eastern Germany, with both highly-qualified and simple workers looking for jobs. A large number of these people were hired – and partially financed – through the employment programme of the federal employment office. This had the additional advantage of reducing the financial costs carried by the investors. In the first half of the 1990’s, reforms in archaeological heritage management and the museum sector as well as the restructuring of the eastern German universities also temporarily improved the situation in the labour market of the “old” German states. Many young and highly-qualified graduates of western German institutes for Pre- and Early History took advantage of the situation to “go east”. In addition, job rotation took place in western Germany, with experienced archaeologists moving east to take on leading positions in heritage management, museums, and universities.

Since then, the building boom and the accompanying rescue excavations in eastern Germany have lulled and will likely remain at a lower level. As the increased demand for excavations in the 1990’s was almost exclusively met with temporary hiring in the eastern states, and as the number of permanent positions there is below the western German level, the employment situation for archaeologists in the new German states can be expected to deteriorate over the next years. A long-

term, significant establishment of commercial excavation firms in the archaeological sector only occurred in Brandenburg.

The situation in the “old” German states is quite different. Their heritage management laws are based for the most part on legal documents from the 1970’s and 1980’s and must be altered in order to conform to the European Convention on the Protection of the Archaeological Heritage. Article 6 ii of the convention is of particular relevance, as the personnel and financial resources in the public sector that are available for rescue excavations has shrunken since the early 1990’s. Until recently, the “Polluter Pays Principle” had not been a part of the legal system in these states. As a result, there is a structural deficit in the financing of rescue excavations, which constitutes a breach of Article 6. The case before the high court in Koblenz (OVG Koblenz) involving an excavation agreement between a government heritage management office and a private investor in the Rhineland-Palatinate illustrates just how important it is for the lawmakers of these states to act – and quickly.<sup>1</sup>

In order to avoid conflicts regarding the notoriously tight budgeting of the state archaeological heritage management offices, various “old” German states have recently changed their laws, or are in the process of doing so.

In the Rhineland-Palatinate a new state law altering the current heritage management and conservation law has been drafted. It includes a limited “Polluter Pays Principle” (alteration to §21 of the DSchG RP).<sup>2</sup> Parallel to this, the state contracted a commercial excavation company for the first time in 2007 to carry out large excavations accompanying a pipeline project.

Schleswig-Holstein, which already has a partial “Polluter Pays Principle”, is also in the process of altering its heritage management laws and to regulate the financing requirements for rescue excavations in conformance with Article 6 of the Malta Convention.

Saarland also embedded the “Polluter Pays Principle” in its legal system with a change in the law on February 2006 (SDSchG §12 Abs.4). Closely following the Saxon law, it states: “The financiers of large, public or private, building or development projects, or projects to strip raw materials or mineral resources can be held responsible as initiators for the costs related to the archaeological excavations, the conservation of the finds, and the documentation of the features and finds, within reason”.

Hamburg has a partial “Polluter Pays Principle” that applies only to historical monuments that are entered in their official list of monuments: “If a monument is removed from its location, or disposed of, the body responsible for the site must bear the costs for the previous scientific documentation, in the case of archaeological monuments and sites at least the research and evaluation through rescue excavations” (DSchG HH §11 Abs.4).

In Berlin, too, the initiators of archaeological rescue excavations are required to pay for the related costs. The legal base can be found in §11 Abs.4 DSchG Bln. (Documentation requirement with an explicit “Polluter Pays Principle”).

The “Polluter Pays Principle” is not embedded in the legal systems of the other federal states (Baden-Württemberg, Bavaria, Bremen, Hessen, Lower Saxony, and North Rhine-Westphalia). There are no specific regulations concerning the financing of rescue excavations in conformity to Article 6 of the Malta Convention. In order to fill this gap, most of these states have tried, with varying success, to enforce a financing requirement for private and public initiators. These measures, which stem from the poor financial situation of the public institutions, result in individual arrangements with the owner of each separate project and do not constitute an adequate regulation in accordance with the Malta Convention.

In Baden-Württemberg and North Rhine-Westphalia it is usually argued that the state laws (Landesverwaltungsgesetz §36 Abs.2 VwVfG, or UVPG §2) are sufficient to enforce a financing re-

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<sup>1</sup> Urteile des OVG Koblenz, February 5 and December 8, 2003.

<sup>2</sup> Landtagsentwurf zu einem neuen Denkmalschutzgesetz Rheinland-Pfalz, August 30, 2006.

quirement for rescue excavations. This, however, is not an adequate substitute for a clear regulation as called for by the Convention of Malta. In North Rhine-Westphalia there has recently been a court case in which a private investor sued the government's heritage management office because of the financial costs it was forced to pay.<sup>3</sup> The administrative court in Düsseldorf confirmed the opinion of the heritage management office in this case. There have not, however, been similar judgments by upper courts that can be carried over to the other states. At least the ruling confirms the opinion and practise of archaeological heritage management in the Rhineland, where investors of larger construction projects have long been required to pay for the related costs, and private companies have been contracted to carry out the rescue excavations.

In other states, especially Bremen and Hessen, the offices involved with heritage management try to impose a financial requirement on the initiator of rescue excavations through the general requirement that property owners have to maintain cultural monuments (§9 DSchG Bremen and §11 HDSchG). These measures occur on a case-by-case basis and are dependent on the current budgetary situation. In general, conflict has been avoided so that there has not yet been a court ruling on the validity of this practise.

Bavaria is a special case. The state has considerably reduced its budget for the funding of rescue excavations over the past years. Larger rescue excavations in Bavaria are now almost exclusively completed by commercial companies. In the absence of a public budget, these are almost entirely financed by the respective initiator, i.e. investor. As the "Polluter Pays Principle" is not embedded in the Bavarian legal system, however, and as there is no "within reason" clause, continual conflicts between the state offices and the investors are inevitable. There is a danger here that the courts will be increasingly drawn into the debate.<sup>4</sup> This is, furthermore, true for all the federal states whose heritage management laws do not contain a clear regulation of the financing burden.

The labour market in archaeological heritage management is very heterogeneous: In North Rhine-Westphalia, Hessen and Bavaria, the government monopoly on archaeological rescue excavations has been explicitly dissolved in favour of private excavation firms. The state heritage management offices maintain control over these firms and oversee excavation standards. The Rhineland-Palatinate is currently considering the establishment of a system with excavation companies. In many of the other states private companies also work to varying degrees for the government heritage management offices. In Baden-Württemberg, for example, archaeological diving firms are employed for under-water archaeological examinations due to legal, insurance, and logistical considerations. Baden-Württemberg nonetheless shares the opinion of the above-mentioned eastern German states that it is more advantageous from a scientific and fiscal point of view to implement rescue excavations through the state heritage management offices.

There is a recognisable trend in the western German states to reduce the long-term tasks of the archaeological heritage management offices, and, by means of successive cutbacks in personnel and financing, to contribute to the consolidation of the state budgets. With the exception of North Rhine-Westphalia, Bavaria and Brandenburg, there are currently no truly established, predictable, and lucrative markets for large archaeological excavation companies. The next years will show how the path taken by Hessen, and the Rhineland-Palatinate affects the quality of archaeological heritage management on the one hand, and the development of the labour market on the other hand. It is in any event to be expected that the field of archaeological heritage management in western Germany will undergo reform in the next years and that the wide-spread introduction or application of the "Polluter Pays Principle" will lead to an increase in the number of rescue excavations performed. Thus, a somewhat higher demand for personnel in the excavation sector can also be expected.

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<sup>3</sup> cp. Urteile des VG Düsseldorf, October 30, 2003 and March 30, 2006.

<sup>4</sup> cp. Urteil des Bayerischen Verwaltungsgerichtshofs, June 4, 2003 Az. 26 B 00.3684.

### 3. Methodology

In order to establish a common database, a similar methodology was agreed upon by all members of this EU project. The study closely follows the pilot project “Archaeology Labour Market Intelligence: Profiling the Profession 2002 / 03” completed for the United Kingdom (Aitchison / Edwards 2003).

#### 3.1. The questionnaire

As in the case of the above-mentioned British study, the questionnaire has two parts: The first concerns questions about the organisations that employ archaeologists. The second part concentrates on compiling a profile of the different posts (e.g. scientist, excavator, worker) within these organisations. It was designed to be copied as many times as necessary. The questionnaire was sent digitally in May 2007 with a covering letter from the Verband der Landesarchäologen to all organisations on an address list completed expressly for this purpose. The questionnaire and the covering letter are included in the Appendix (p. 62 ff.).

#### 3.2. The address list

Reflecting the categories defined and described above (cp. 2.1.), special address lists were compiled for state archaeology, county archaeology, museums, research institutes, and commercial firms. Some of the addressees could be found on various internet sites:

- membership list of the Verband der Landesarchäologen (categories 1 and 2: *state archaeologists* and *county archaeologists*)
- web sites of museums, primarily state museums, with archaeological collections (category 3: *museums*)
- web sites of university institutes (category 4: *universities*). The following are defined to be archaeological disciplines, or disciplines with at least a partial archaeological character: Pre- and Early History, Archaeology of the Roman Provinces, Archaeology of the Middle Ages, Classical Archaeology, Egyptology, Southwest-Asian Archaeology, Ancient Oriental Studies, Biblical Archaeology, Christian Archaeology, Byzantine Archaeology, Islamic Archaeology, Studies of the Americas, Heritage Management, and Excavation Technique.
- membership list of the Verband freier Kulturwissenschaftler and the University of Bamberg’s list of commercial firms (category 5: *private firms*)
- web sites of research institutes with archaeological orientations (category 6: *research institutions*)

The state archaeologists were also asked to add to the list, particularly in the categories of museums and private firms. In the end, the list comprised a total of 455 addressees from the different categories.

#### 3.3 Data collection

In mid-May 2007 the questionnaire was sent digitally with a covering letter from the Verband der Landesarchäologen to 233 names on the address list (state and county archaeologists and university institutes). Recipients were asked to return the questionnaire by e-mail or post by the end of June 2007. In the beginning of June, at the annual meeting of the Verband der Landesarchäologen in Esslingen, it was decided to supplement the addresses of the commercial firms and museums

with the help of the state archaeologists in each of the federal states. In all, the address list totalled 455 names by the end of August. Additional mailings were then sent to museums, commercial firms and research institutes. As the response at the end of September measured only 20%, the deadline was extended. The data collection phase was completed at the end of February 2008 with an increased response rate of 35.4%.

### 3.4. Data entry

Of the 161 responses, 144 questionnaires were usable. The remaining 17 were not applicable (no archaeologists employed in the organisation), or were left unanswered (no time, or no interest). The data were entered in a *Microsoft Access Database*. This now consists of data on 144 organisations (Part I of the questionnaire) and 363 post profiles (Part II). The anonymity of the data was ensured by the use of a code for the organisations. The original returned questionnaires (both those returned via post and e-mail) are going to be destroyed or deleted after completion of the statistical analysis.

**Table 1:** Number of responses to Part I of the questionnaire, per state and category, the total number of organisations mailed, and the response rate.

Response Organisations		State Archaeologists	County Archaeologists	Museums	Universities	Private Firms	Research Institutes	Total
BB - Brandenburg	Responses	1	2	1		10		14
	Organisations	1	5	2	0	20	0	28
	Response Rate	100%	40%	50%		50%		50%
BE - Berlin	Responses	1		0	3	3	0	7
	Organisations	1	0	5	8	20	2	36
	Response Rate	100%		0%	37.5%	15%	0%	19.4%
BW - Baden-Württemberg	Responses	1	1	2	6	11	1	22
	Organisations	1	2	11	14	13	1	42
	Response Rate	100%	50%	18.2%	42.9%	84.6%	100%	52.4%
BY - Bayern	Responses	1	6	5	6	17	0	35
	Organisations	1	13	21	22	46	2	105
	Response Rate	100%	46.2%	23.8%	27.3%	37%	0%	33.3%
HB - Bremen	Responses	1		0				1
	Organisations	1	0	1	0	0	0	2
	Response Rate	100%		0%				50%
HE - Hessen	Responses	1	4	4	4	4	0	17
	Organisations	1	7	15	10	9	1	43
	Response Rate	100%	57.1%	26.7%	40%	44.4%	0%	39.5%
HH - Hamburg	Responses	1	0		0	0		1
	Organisations	1	1	0	3	1	0	6
	Response Rate	100%	0%		0%	0%		16.7%
MV - Mecklenburg Western Pomerania	Responses	1	2	0	1	0		4
	Organisations	1	4	2	4	2	0	13
	Response Rate	100%	50%	0%	25%	0%		30.8%
NI - Lower Saxony	Responses	1	3	0	1	5	1	11
	Organisations	1	20	1	4	8	2	36
	Response Rate	100%	15%	0%	25%	62.5%	50%	30.6%
NW - North Rhine- Westphalia	Responses	2	4	2	4	12	1	25
	Organisations	3	9	11	13	23	1	60
	Response Rate	66.7%	44.4%	18.2%	30.8%	52.2%	100%	41.7%
RP - Rhineland- Palatinate	Responses	3		2	2	0	1	8
	Organisations	4	0	4	7	1	2	18
	Response Rate	75%		50%	28.6%	0%	50%	44.4%
SH - Schleswig- Holstein	Responses	2		1	1	1		5
	Organisations	2	0	10	3	2	0	17
	Response Rate	100%		10%	33.3%	50%		29.4%
SL - Saarland	Responses	1	0	0	1			2
	Organisations	1	1	2	2	0	0	6
	Response Rate	100%	0%	0%	50%			33.3%
SN - Saxony	Responses	1	0	0	1	1		3
	Organisations	1	1	2	5	3	0	12
	Response Rate	100%	0%	0%	20%	33.3%		25%
ST - Saxony-Anhalt	Responses	0	0	3	0			3
	Organisations	1	1	17	3	0	0	22
	Response Rate	0%	0%	17.6%	0%			13.6%
TH - Thuringia	Responses	1	0	0	1	1		3



	Organisations Response Rate	1 100%	1 0%	1 0%	4 25%	2 50%	0	9 33.3%
<b>Total</b>	Responses	19	22	20	31	65	4	161
	Organisations	22	65	105	102	150	11	455
	Response Rate	86.4%	33.8%	19%	30.4%	43.3%	36.4%	35.4%

A response rate of 35.4% may at first seem low. This is, however, comparable to the results of other questionnaires (Aitchison / Edwards 2003). It is interesting that the response of county archaeologists, university and research institutes was 30-35%, whereas the quota for museums was only 19 %. The low return from museums was to be expected, as many small, peripheral museums with historical content were sent questionnaires, in case they employ archaeologists. Happily, the response from the commercial firms totalled 43.3 %. This indicates that this category is very interested in the results of the study. The response from the state archaeologists was only 86.4 %, compared to the 100 % that was expected.

A positive result is that almost all of the larger states with big populations responded. The highest return rate came from Baden-Württemberg, at 52.4%. Except for museums, all of the categories are well-represented here. The state with the largest population, North Rhine-Westphalia delivered a good data basis. The responses from Hessen, Bavaria, Bremen, Schleswig-Holstein, Saarland, Thuringia, and the Rhineland-Palatinate were satisfactory.

It is striking that among the universities the response from the discipline of Pre- and Early History (50.0 %) was considerably higher than that of the other disciplines (31.4 %).

### 3.5. Calculating total workforce size

In order to calculate the total number of staff employed in the archaeological sector in Germany the internet sites of the relevant organisations, institutes, and companies were searched for their employment figures. In the process, information on the staff figures (mostly scientific personnel) of an additional 205 organisations was found. This supplementary information provides a sufficient calculation base, at least for the total number of archaeologists, and other scientists at 75.8%. The remaining 24.2% could be extrapolated from the average organisation size in the individual categories of each state. The number of the reported and the calculated archaeologists/scientists in the organisations of the different categories and states are illustrated in the Diagrams 24 and 25 (Ch. 5.1.).

### 3.6. Professions and post profiles in archaeological institutions

Part II of the questionnaire concerned the post profiles. A total of 363 responses were returned from this section. 7 of the 144 responding organisations (4.9 %) returned only Part I, while 73.2 % completed 1-3 questionnaires and 20.5 % completed 4-7. Two organisations (1.4 %) completed 8-11 profiles.

In the 363 profiles, 149 different terms were used to describe the posts. These were simplified and condensed into 15 profile groups, some with specialisations.

**Table 2:** The 15 profiles, specialisations and the original titles of all posts as well as the number of times they were used, listed alphabetically.

Profile	Specialisation	Post titles reported	No. of times named
Excavation worker		excavation worker, temporary help, skilled excavation worker, excavation helper, excavation work	12
Excavator		excavator, technician/ excavation director	18
Illustrator		drafter, internal service/ work on plans, illustrator, graphic art for archaeological publications, graphic work/3D animation, CAD, CAD skilled work	30
Photographer			8
Postgraduate trainee			1
Restorer		restorer, (archaeological) restorations, restoration	19
Scientist	without additional specialisation	scientist, archaeologist, archaeologist (scientist), archaeology (incl. excavation director), assistant/ with university degree, management assistant, conservator, prehistory expert, private lecturer/ archaeologist/ scientist, professor, city archaeologist, scientist (incl. head of division, regional division staff, research project staff, excavation director), scientist (with permanent job), scientist/ archaeological heritage management, scientific staff, scientific assistant, preparation of collections/ curators/ archaeological transfer of ownership	120
Scientist	aerial photography	archaeological aerial photography	1
Scientist	archaeobiology	scientist (archaeobiology), archaeobotanist, archaeozoologist	3
Scientist	editor	editing/ layout, scientific editing, media specialist	5
Scientist	excavation	field archaeologist, excavation director, scientific excavation director	10
Scientist	geography	historical geographer	1
Scientist	geology	geologist, archaeogeology	2
Scientist	geophysics	geophysicist, geophysical prospection	1
Scientist	library	librarian	1
Scientist	management	management/scientific direction, museum director, collection director, scientist (management), scientist museum direction, scientific direction of the institution	8
Scientist	museum	museum pedagogy, public relations [cat. 3], publisher [cat. 3], museum expert, museum director	6
Scientist	under-water archaeology	archaeological research diver	1
Staff member	without additional specialisation	staff member, administration, part-time secretary, other staff, administrative staff, secretary, secretarial work, other work, office work/ administration / archive, secretary bureau / administration, administration / organisation / pedagogy, staff, office manager /accounting, budget / organisation / security, non-scientific staff, staff and worker, administrative work, accounting, office staff, finds work, staff / office, office worker, depot manager, storage room manager	54
Staff member	EDP	EDP / data entry, typing in data, inventory (collections/ databases), media designer, programming / IT	5
Staff member	Library	library staff	1
Staff member	Museum	cashier / museum pedagogy, supervision personnel museum, cashier /museum shop / entrance, supervision, free-lance museum tour guide, museum reception, cashier / telephone/ shop	7
Student apprentice			2
Student help		temporary work for students, student staff member, student scientist temporary work	4
Technician	without additional specialisation	technician, technical personnel, other technician, technical services, technical staff, laboratory engineer /technical staff, technician with/without university degree, laboratory technician, other technical work, technical staff, LTA / BTA	46
Technician	surveying	topographic measurement / surveying technique / GIS	3
Volunteer		volunteer, volunteer staff	2
Worker		worker, unskilled help, worker in open-air area, helper, skilled worker	11
"Zivildienstleistender" (without title)		i.e. Community service in lieu of military service	3
			4
<b>Total</b>			<b>389</b>
Responses			363
Multiple post titles			26

Multiple titles for 26 profiles resulted in a total of 389 titles named. The table serves to document a wide range of professions and post profiles within the archaeological organisations of Germany. It is not surprising that the title of scientist was named 159 times. Although these are primarily archaeologists, there is also a variety of other disciplines represented, such as historical geography, museum management, pedagogy, and library management. The fact that there were only a few natural sciences named in the scientific profile is surprising, as it does not reflect the current situation. However, it does support the general impression that the archaeological institutions are cut-

ting back on the traditionally closely-related fields of archaeobotany, archaeozoology and Palaeolithic anthropology. These specialties are of great importance to archaeological research. As they are hardly offered any more by the biology, or other natural sciences, departments of the universities, their continuation is endangered. It is peculiar that the titles of excavation worker and student staff were rarely named, as this also does not reflect reality. It is to be assumed that these profiles exist among the institutions, but that they were not specially mentioned.

### **3.7. Electronic access to the report**

Together with the reports of the other project partners, this report will be published on the project's web site, [www.discovering-archaeologists.eu](http://www.discovering-archaeologists.eu), in the respective national language and in English. It can be accessed free of charge.

## 4. Organisations

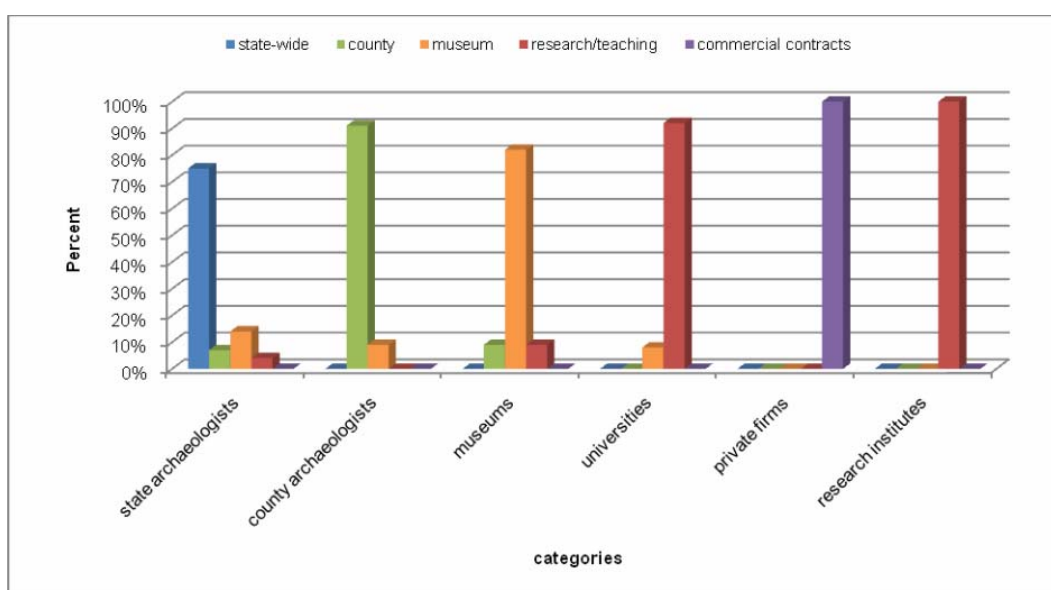
The questionnaire was sent to all organisations in state archaeology and county archaeology as well as to all university institutes, commercial firms and research institutes in Germany that are presumed to employ archaeologists. 144 organisations completed and returned the forms.

### 4.1. Types of organisations

#### Structure

In the first question of Part I of the questionnaire, the addressees are asked to mark which structure (state archaeology, county archaeology, university / research institute, museum, private firm, other) best describes their organisation. Most of the respondents marked several structures.

**Diagram 1:** Distribution of the various organisation types and the organisational structures named, in percent.

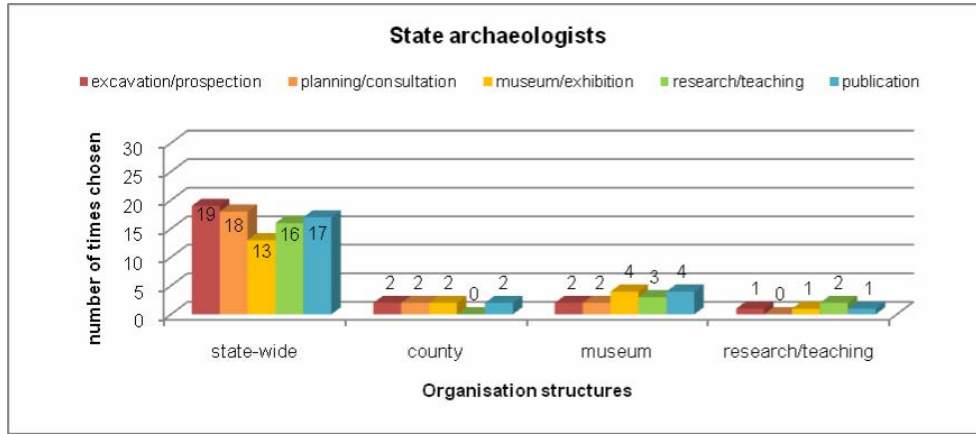


Whereas the commercial firms only appear in the organisation structure “private firms”, and the responding research institutes only in “research / teaching”, the other four types of organisation are active in several areas. State archaeologists can be found in four structures (state archaeology, county archaeology, museum and university / research institute), county archaeologists in two structures (county archaeology and museum), museums in three structures (county archaeology, museums and university/research institute), and the universities in two structures (museum and university / research institute).

#### Focus of activities

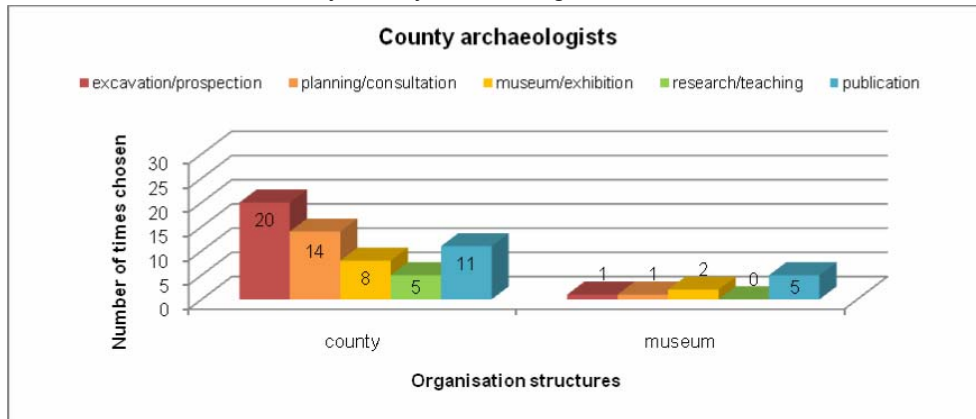
Respondents were asked to choose between five different activity groupings that best describe the role of their organisational structure: excavation / prospection, planning consultation, museum / exhibition, research / teaching, and publication.

**Diagram 2:** Focus of activities chosen by state archaeologists.



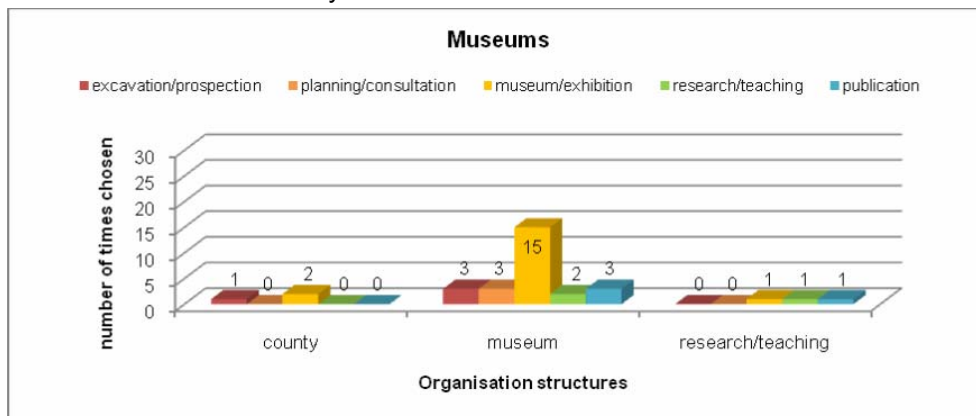
It can be seen here that the state archaeologists are not only active in several types of organisational structures, but are also very active in all of the activity-groupings within each structure.

**Diagram 3:** Focus of activities chosen by county archaeologists.



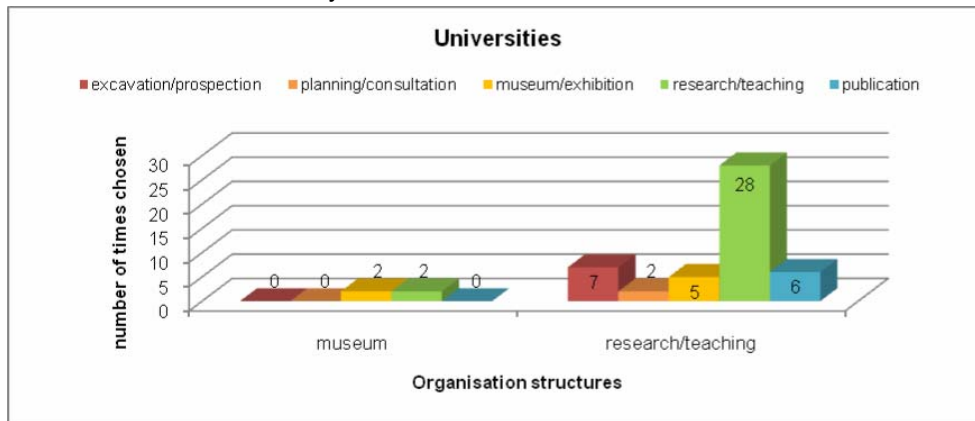
The county archaeologists, who see themselves primarily in the organisational structure “county archaeology”, are mostly active in the groupings “excavation / prospection”, “planning consultation”, and “publication”. Here, too, there is a large variety of activity.

**Diagram 4:** Focus of activities chosen by museums.



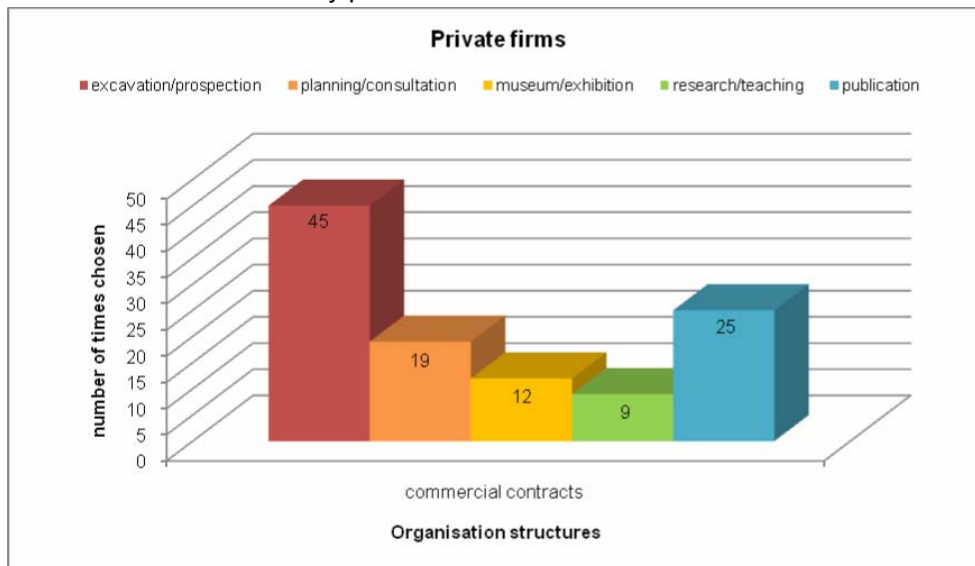
The majority of museums placed themselves within the “museum” organisational structure, with their activities focused on “museum / exhibition”.

**Diagram 5:** Focus of activities chosen by universities.



As expected, the universities primarily chose one grouping: “research / teaching” within the structure “university / research institute”. Because many archaeological institutes in Germany are traditionally also responsible for larger archaeological collections and, in part, for major museums, the structure “museum” with the activity focus of “museum / exhibition” was often chosen as well.

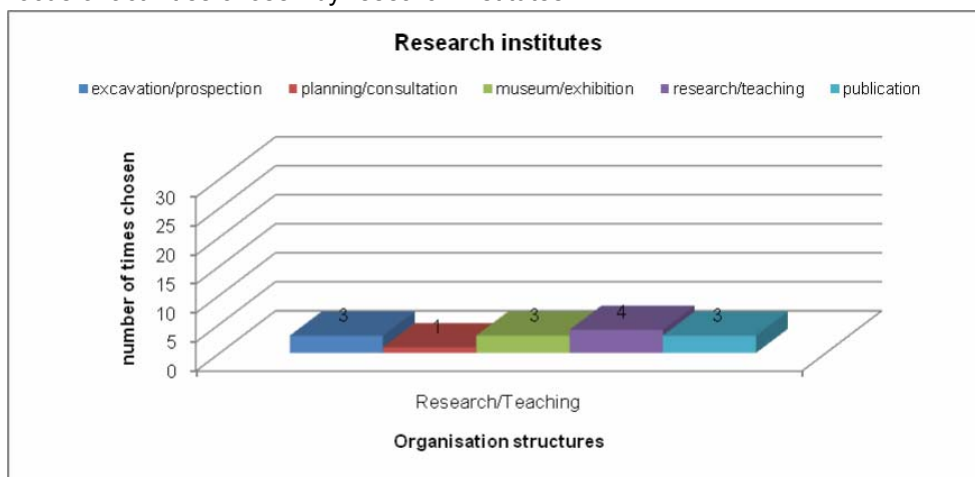
**Diagram 6:** Focus of activities chosen by private firms.



43 % named 45 times) of the private firms are primarily active in “excavation / prospection”. Additional activities are in “publication”, “planning consultation”, and “museum / exhibition”. This highlights the fact that most commercial archaeological companies in Germany do not just concentrate on excavations, but instead provide a variety of services and products that enable them to react flexibly to changing demand on the market. Once again, it is important to note that only a few states have established, and relatively stable, markets for archaeological excavation firms. The excavation business is very dependent on the economic environment, the authorisation procedure, and also seasonal fluctuation.

The relatively frequent choice of publication and research in this category reflects the aim of these companies not to be limited as providers of services, but rather to participate actively in “research / teaching” and “publication”.

**Diagram 7:** Focus of activities chosen by research institutes.



Unfortunately, it is not possible to recognise a distinct trend here, as only four research institutes responded to the questionnaire (DAI: Kommission für Archäologie Außereuropäischer Kulturen Bonn, Akademien der Wissenschaften Heidelberg and Mainz, Institut für historische Küstenforschung Wilhelmshaven).

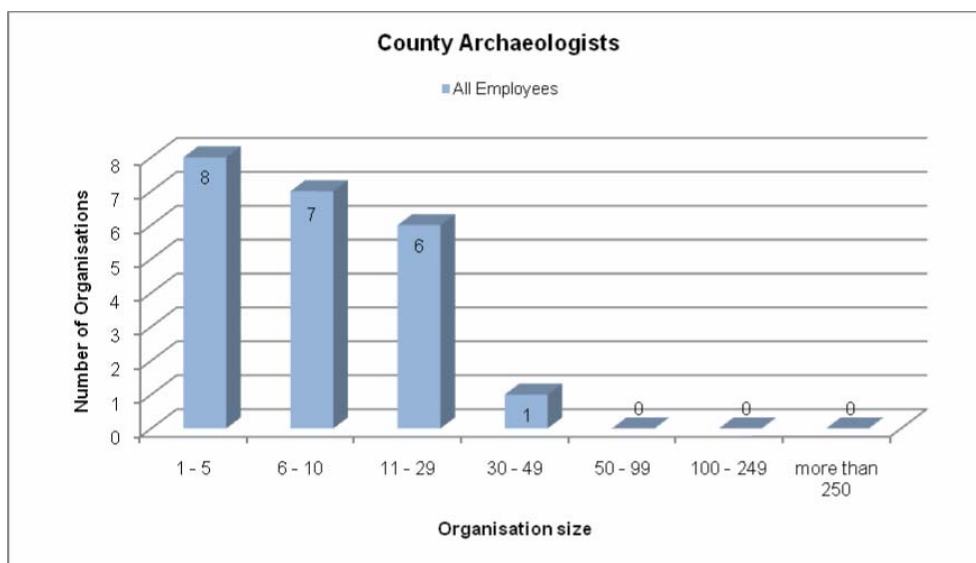
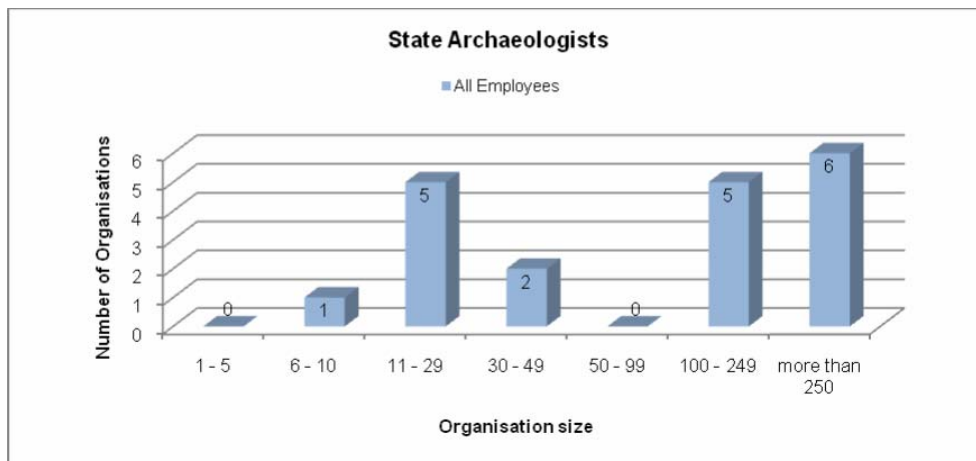
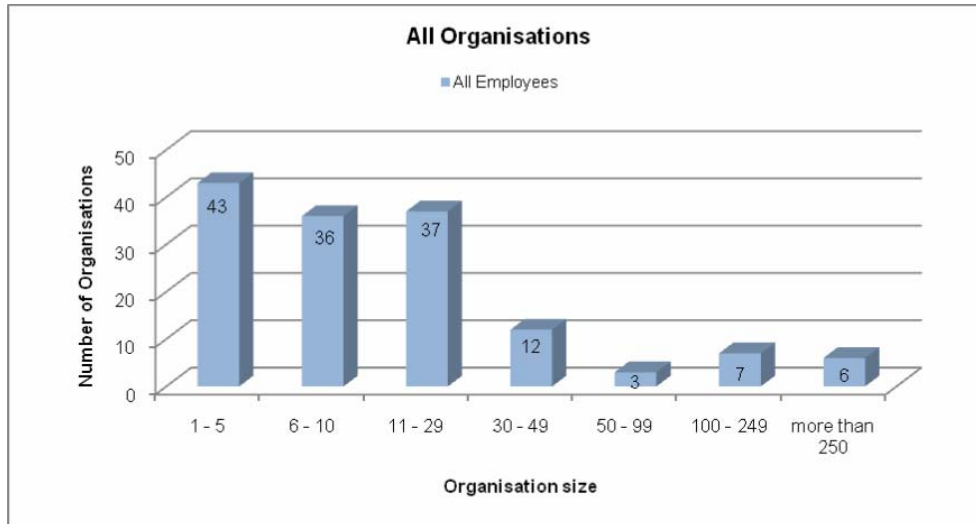
## 4.2. Number and distribution of the organisations

**Table 3:** Number and percent of the institutions addressed, by state and category.

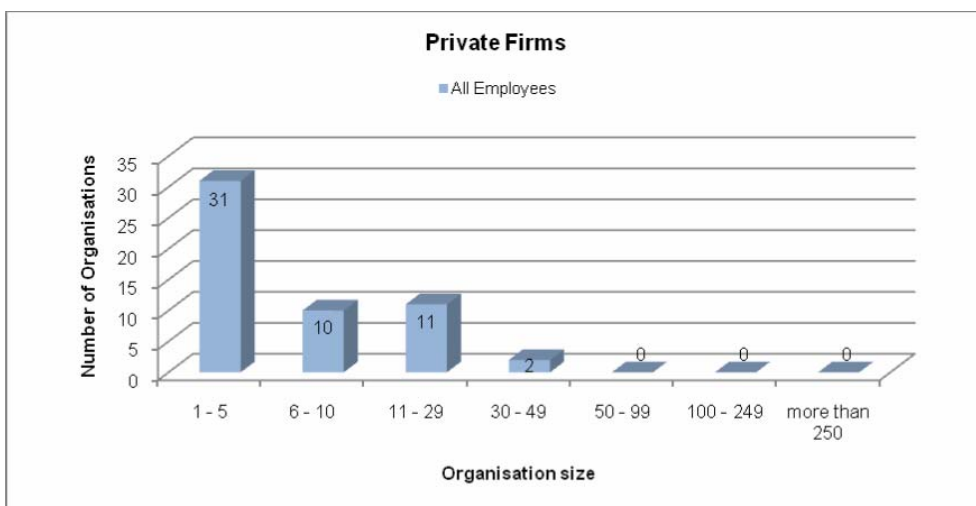
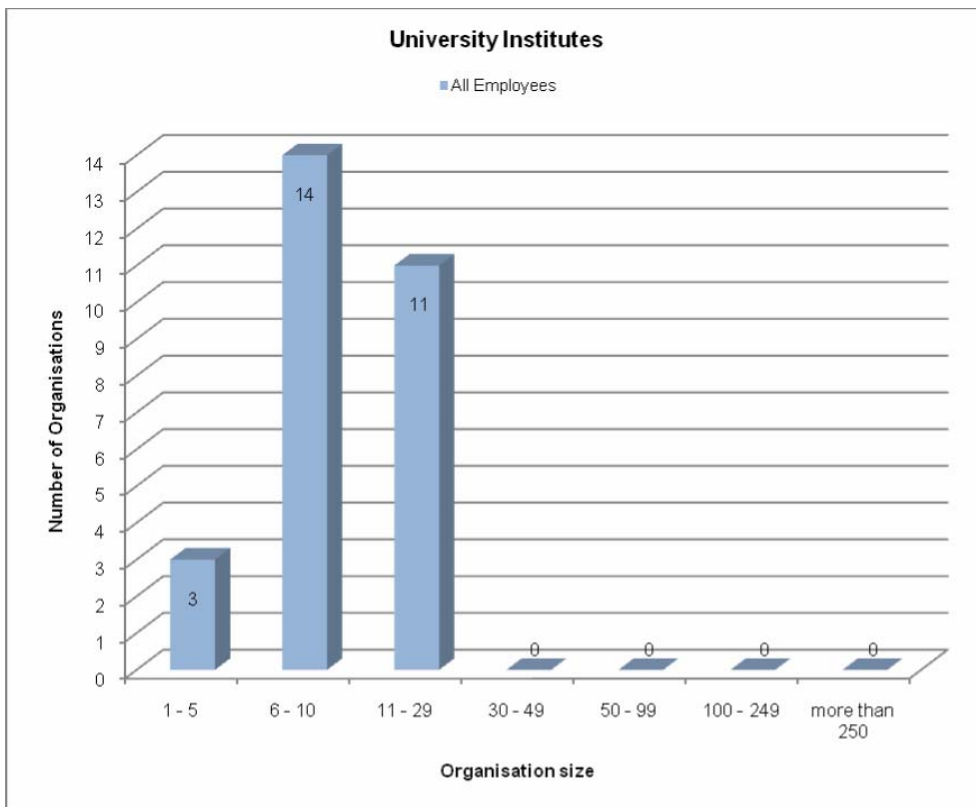
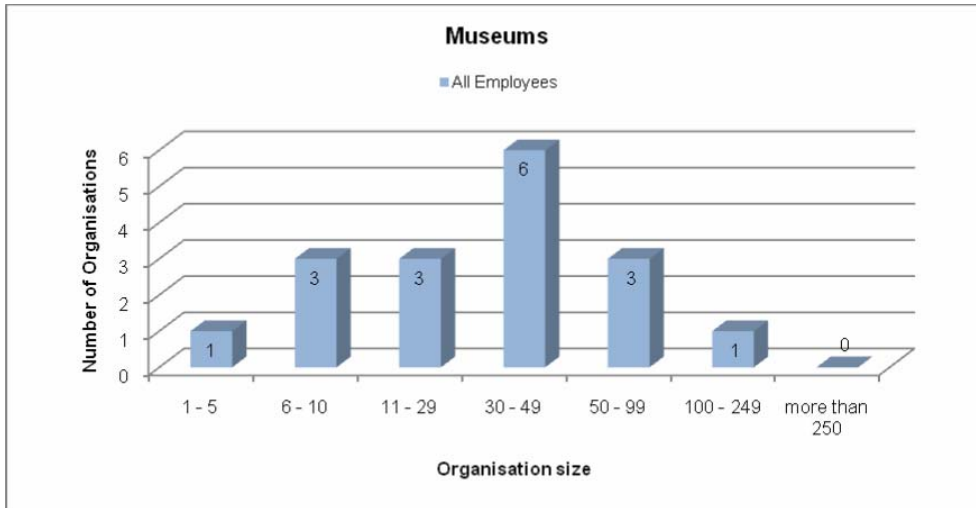
Share of the Institutions		State Archaeologists	County Archaeologists	Museums	Universities	Private Firms	Research Institutes	Total
BB - Brandenburg	Institutes Percent	1 0.8%	5 1.0%	2 0.2%	0 0.0%	20 3.3%	0 0.0%	<b>28</b> <b>5.3%</b>
BE - Berlin	Institutes Percent	1 0.1%	0 0.0%	5 0.8%	8 3.0%	20 3.1%	2 0.7%	<b>36</b> <b>7.7%</b>
BW - Baden-Württemberg	Institutes Percent	1 2.0%	2 0.1%	11 1.9%	14 6.3%	13 0.9%	1 0.3%	<b>42</b> <b>11.5%</b>
BY - Bavaria	Institutes Percent	1 1.3%	13 0.8%	21 1.1%	22 5.5%	46 5.4%	2 0.7%	<b>105</b> <b>14.8%</b>
HB - Bremen	Institutes Percent	1 0.2%	0 0.0%	1 0.2%	0 0.0%	0 0.0%	0 0.0%	<b>2</b> <b>0.4%</b>
HE - Hessen	Institutes Percent	1 0.8%	7 1.8%	15 2.2%	10 3.6%	9 0.3%	1 0.4%	<b>43</b> <b>9.1%</b>
HH - Hamburg	Institutes Percent	1 0.1%	1 0.1%	0 0.0%	3 1.9%	1 0.1%	0 0.0%	<b>6</b> <b>2.2%</b>
MV - Mecklenburg Western Pomerania	Institutes Percent	1 0.5%	4 0.2%	2 0.3%	4 0.4%	2 0.3%	0 0.0%	<b>13</b> <b>1.7%</b>
NI - Lower Saxony	Institutes Percent	1 1.7%	20 1.2%	1 0.3%	4 1.3%	8 0.6%	2 0.7%	<b>36</b> <b>5.8%</b>
NW - North Rhine- Westphalia	Institutes Percent	3 3.2%	9 2.6%	11 4.1%	13 7.7%	23 3.3%	1 0.6%	<b>60</b> <b>21.5%</b>
RP - Rhineland- Palatinate	Institutes Percent	4 1.0%	0 0.0%	4 2.2%	7 3.6%	1 0.2%	2 0.6%	<b>18</b> <b>7.6%</b>
SH - Schleswig- Holstein	Institutes Percent	2 1.0%	0 0.0%	10 1.0%	3 0.7%	2 0.1%	0 0.0%	<b>17</b> <b>2.8%</b>
SL - Saarland	Institutes Percent	1 0.1%	1 0.1%	2 0.1%	2 0.3%	0 0.0%	0 0.0%	<b>6</b> <b>0.6%</b>
SN - Saxony	Institutes Percent	1 2.0%	1 0.1%	2 0.2%	5 1.5%	3 0.4%	0 0.0%	<b>12</b> <b>4.2%</b>
ST - Saxony- Anhalt	Institutes Percent	1 1.7%	1 0.1%	17 0.3%	3 1.4%	0 0.0%	0 0.0%	<b>22</b> <b>3.5%</b>
TH - Thuringia	Institutes Percent	1 0.3%	1 0.1%	1 0.0%	4 0.7%	2 0.2%	0 0.0%	<b>9</b> <b>1.3%</b>
<b>Total</b>	Institutes Percent	<b>22</b> <b>16.8%</b>	<b>65</b> <b>8.2%</b>	<b>105</b> <b>14.9%</b>	<b>102</b> <b>37.9%</b>	<b>150</b> <b>18.2%</b>	<b>11</b> <b>4.0%</b>	<b>455</b> <b>100.0%</b>

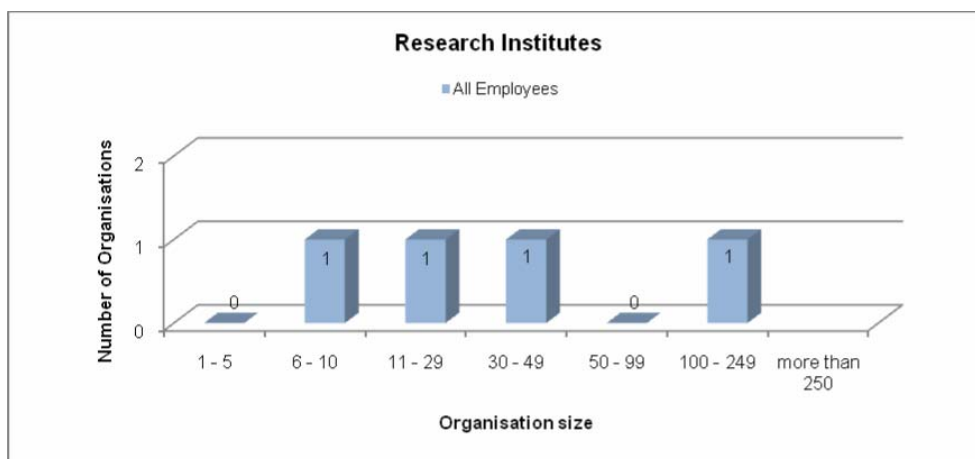
### 4.3. Organisation size

**Diagrams 8-14:** Number of organisations with 1-5, 6-10, 11-29, 30-49, 50-99, 100-249, and over 250 employees in an overview and within the individual categories (database of Diag. 8: 144 responses).









On the whole, archaeological institutions in Germany are small to very small in size. The total number of employees (core personnel, temporary personnel, etc.) among 29.9 % of the responding institutions is 1-5 persons. One-fourth (25 %) of the organisations employs 6-10 people, and another fourth (25.7 %) has 11-29 employees. Only 19.4 % of the institutions have 30 employees, or more. In the case of the large institutions with 100 employees, it should be noted that these include the large state departments for heritage management (with their staff for architectural and art monuments) and the combined archaeological state museums / archaeological state departments of the Prussian model. The case is similar for the responding research institute with over 100 employees (Akademie der Wissenschaften, Heidelberg). Only a small percentage of the scientists employed here are actually active in an archaeological field.

The data provided by the respondents (Diagrams 8-14) can be considered a representative sampling. The distribution of organisational size only changes insignificantly if data from internet research on the non-responding institutions is included. It is only in the case of large institutions with more than 100 employees that the image changes somewhat if the RGZM and DAI are included. Unlike some of the responding state departments for heritage management, these two institutions are almost exclusively concerned with archaeology.

An analysis of organisation size within the individual categories provides further insight. Among commercial companies, 75.9% employ only 1-10 people. As mentioned above, they can react flexibly to meet changing demand for personnel.

**Table 4:** University Institutes of Pre- and Early History

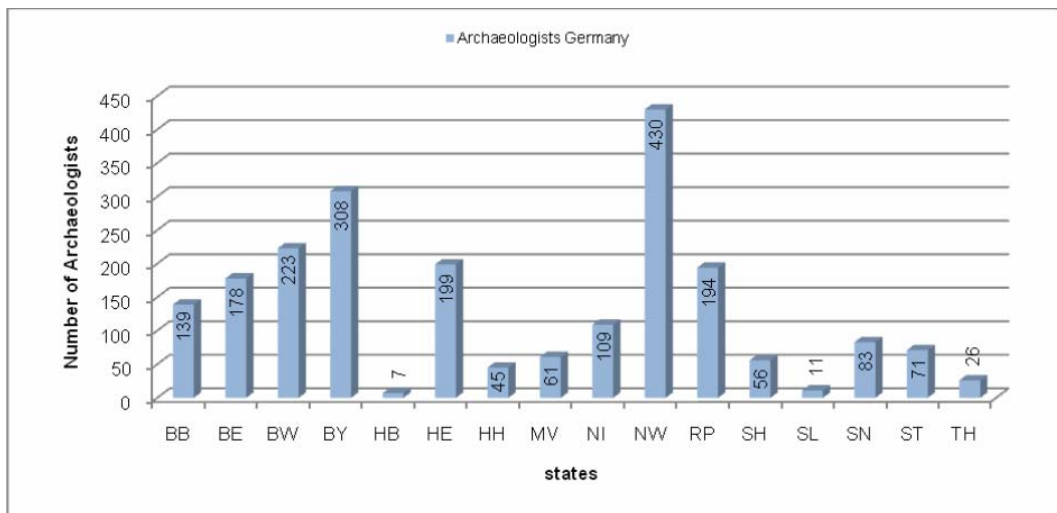
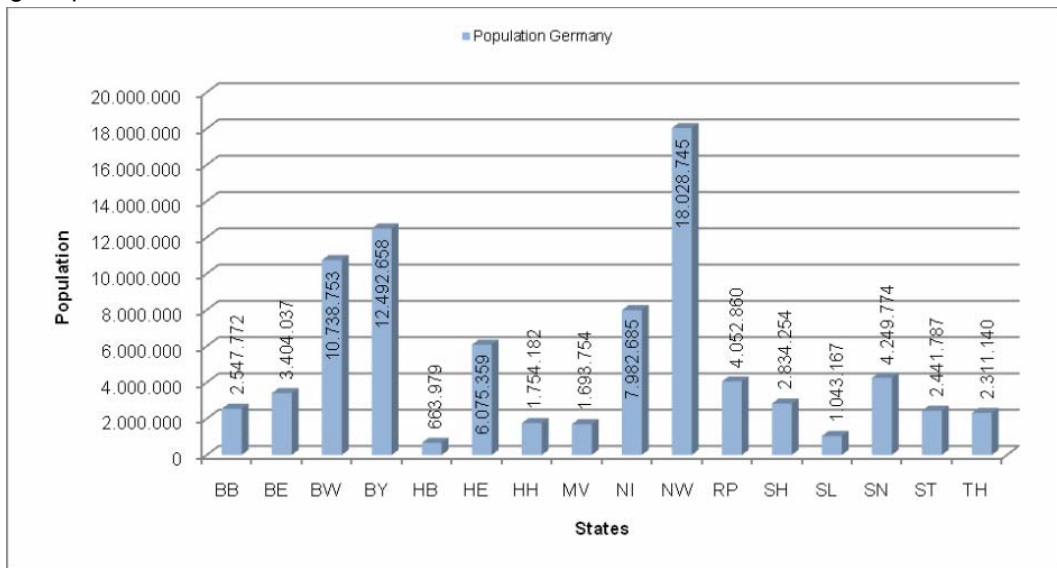
14 Institutes	University Institutes Prehistory
Profile responses	45
Paid Employees	155
Jobs with established positions	107
Jobs not included in original budget	15
Jobs funded by third parties	33
Temporary Jobs	69
Permanent Jobs	86

#### 4.4. Geographic distribution and reach

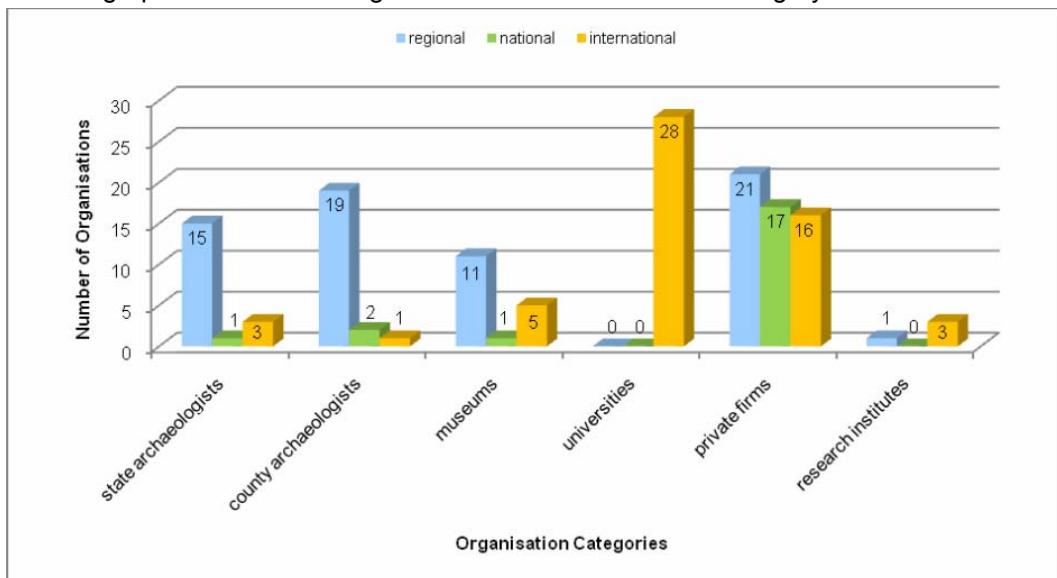
Question 2 of Part I asked the organisations to identify their locations and the geographic reach of their institution. The quantitative distribution of these institutions within the states is representative of the respective population distribution.

For a quantitative distribution of the archaeologists in the states see Chapter 5.8., Table 25.

**Diagrams 15 and 16:** Distribution of the total population and localisation of the calculated total number of archaeologists per state



**Diagram 17:** Geographic reach of the organisations in each structural category



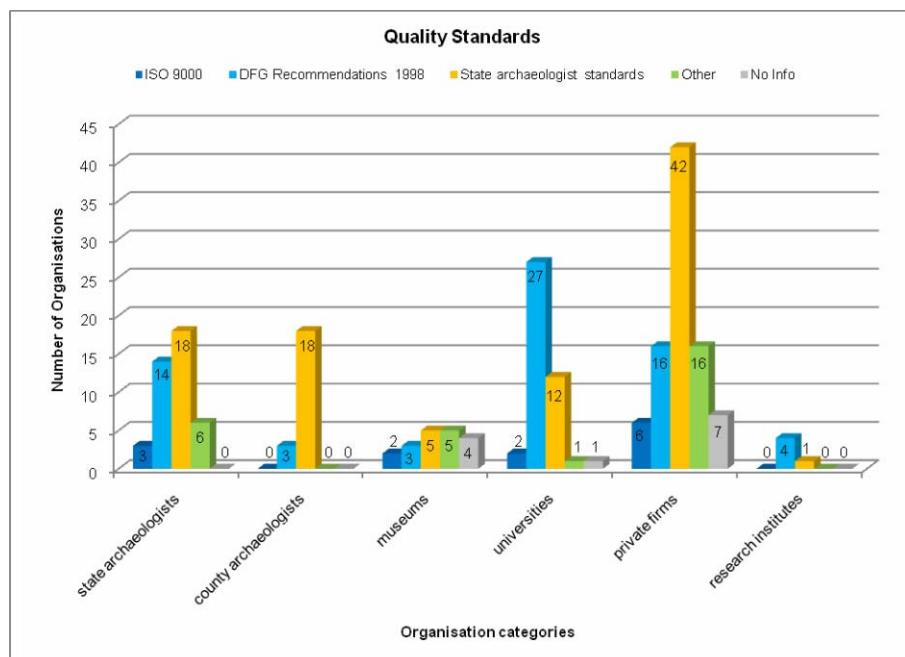
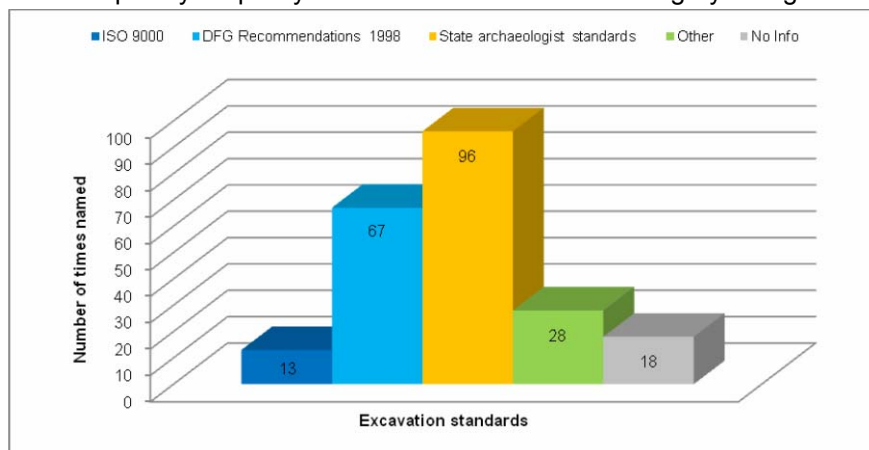
It can clearly be seen that state and county archaeology as well as museums primarily see their activities as regional, whereas the universities and research institutes are almost without exception internationally oriented. There is heterogeneity among the private firms. Once again, this documents the flexibility and the broad range of services provided in this category.

#### 4.5. Quality standards and the qualifications of excavation directors

A goal of the British pilot project was to identify the quality standards used by the archaeological institutions (Diagrams 18 and 19). As expected, those primarily concerned with research, especially university institutes and other research units, regularly mentioned the recommendations of the DFG. A positive result is the fact that the state archaeologists also use these recommendations for their quality standards. The frequent referrals to the excavation standards of the VLA ([www.landesarchaeologen.de/publ/grabungsstandards\\_april\\_06.pdf](http://www.landesarchaeologen.de/publ/grabungsstandards_april_06.pdf)) by both the state and county archaeologists and by (excavating) museums and universities are also very positive.

It is interesting to note the variety of standards, including individual and governmental elements, which appear in Table 5. Among the commercial companies, the orientation of excavation firms to the guidelines of the VLA, and furthermore to the rules and regulations of the relevant state, is quite clear.

**Diagrams 18 and 19:** Frequency of quality standards named in each category of organisation.



**Table 5:** Quality standards reported in each organisation category.

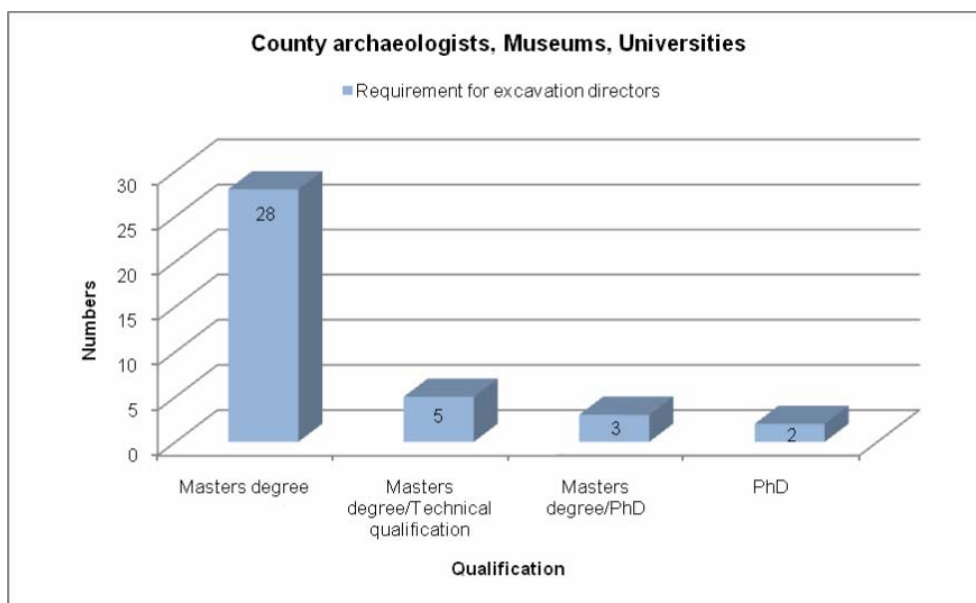
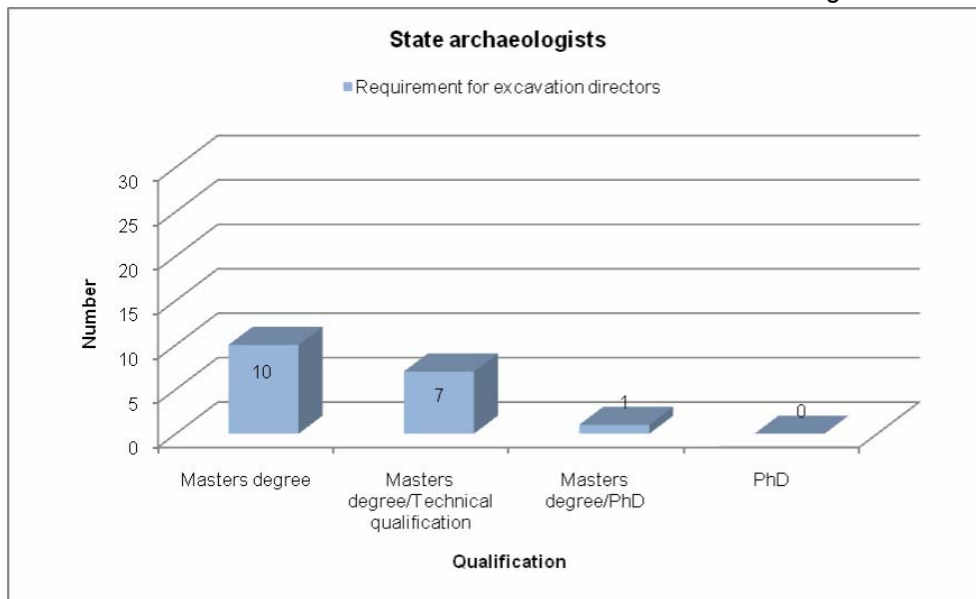
1. State archaeologists	own excavation documentation
	specialized standards
	own excavation guidelines, own standards
	documentation guidelines of the Brandenburg State Conservation Office; international museum standards
3. Museums	WGL guidelines (evaluation)
	Q-Quality stamp of the TMB (Brandenburg tourism Organisation)
	sustainability criteria: standards of the German museum association; own statutes
	ICOMOS museum standards
4. Universities	VDR catalogue of competencies
5. Private firms	own quality standards
	depending on state
	standard of the federal Bundesverband freiberuflicher Kulturwissenschaftler BfK e.V.
	standards of the Rhineland office for archaeological heritage management
	own quality control, staff qualifications, control system
	excavation standards, wetlands and under-water archaeology (Hemmenhofen)
	documentation guidelines of the Bavarian State Conservation Office
own professional ethics	

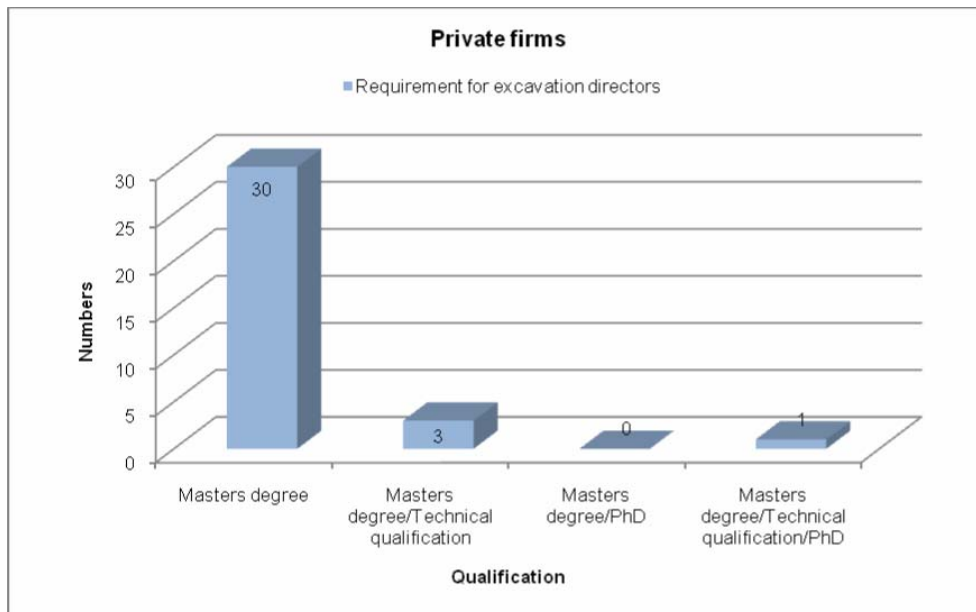
**Table 6:** Quality requirements for the position of excavation director, by category.

Category		Qualifications for excavation director
State archaeologists	<i>basic requirement</i>	university degree in an archaeological discipline, or completed training as professional excavator
	<i>additional requirements applied by some</i>	excavation experience
		knowledge about finds and features
		Frankfurt model
		leadership and team-work capabilities
		certified qualification of recovery and documentation techniques
County archaeologists	<i>basic requirement</i>	university degree in an archaeological discipline, or completed training as professional excavator
	<i>additional requirements applied by some</i>	excavation experience
		experience in leading excavations
		PhD
Museums	<i>basic requirement</i>	university degree in an archaeological discipline, or completed training as professional excavator
	<i>additional requirements applied by some</i>	excavation experience
		experience in leading excavations
		PhD
Universities	<i>basic requirement</i>	university degree in an archaeological discipline, or completed training as professional excavator
	<i>additional requirements applied by some</i>	excavation experience
		experience in leading excavations
		PhD
		participation in 2 study-excavations (3 wks each), traineeship in a large excavation (8 wks), participation in surveying: course I and II
		individual aptitude
"S/he has to be able to handle it!"		
Private firms	<i>differing requirements</i>	university degree in an archaeological discipline, or completed training as professional excavator
		project manager, or deputy
		PhD
		at least an M.A. degree in Pre- and Early History, no other subject (Egyptology, etc)
		at least an M.A./diploma in Archaeology; at least 1 yr. work experience; good knowledge of soil/ground ; ability to lead and organisational talent.
		many years of experience, ability to deal with people
		many years of experience in a mid-management function in an archaeological operation and/or advanced studies in Pre- and Early History, or related disciplines
		professional competence, mind for business, social competencies
		university degree, proof of experience in the archaeology of the region
		at least an M.A. and 5 yrs of relevant professional experience
		university degree, several yrs of excavation experience, experience directing smaller digs, or as assistant director
		university degree in archaeology, or completed training as professional excavator
		university degree, field experience knowledge of firm-related documentation process (= previous work as technical /specialised employee)
		archaeologist with 4-5 yrs excavation experience, or polytechnic degree with 4-5 yrs excavation experience
		archaeologist with wide-range of experience/ many years of excavation experience/ personnel management/ efficiency management
surveying technician		
Research institutes	<i>differing requirements</i>	many years of excavation experience, regional specialisation, ability to work independently
		university degree in relevant discipline
		completed training as professional excavator

One of the main goals of the Leonardo Project is to compile a European comparison of the minimum requirements for employment as excavation director. The question was formulated broadly and read, “What qualifications are required of a person in your organisation to direct an excavation?”

**Diagrams 20-22:** Qualifications to become excavation director in the different categories.





In the case of state archaeologists, a university degree in an archaeological discipline is almost always a prerequisite to becoming a scientific excavation director, and completed training as excavator is the prerequisite to taking over the technical / local direction of an excavation. In addition, excavation experience was named as a requirement by each respondent. This is in keeping with the excavation standards of the VLA. A similar response was returned by the museums, universities and county archaeologists, although they often mentioned specific levels of qualification, in particular a PhD, for scientific excavation directors. Commercial companies have very specific, individual requirements of their excavation directors. “Several years of experience” in a position of responsibility on an excavation was a common prerequisite. A B.A. is often considered to be insufficient; a master’s degree or “Diplom” is often the minimum accepted. It is of relevance to the Leonardo Project’s intention of identifying barriers to mobility that the state archaeologists, research institutes, and excavation firms often require thorough knowledge of the specific finds and features of the region as well as experience working in the region’s archaeology, or a “regional specialisation”. Many private firms thus specifically require a degree in Pre- and Early History. In some cases, a degree in certain other archaeological disciplines is considered to be inadequate.

In all the categories, personal components, such as individual strengths, social competencies and leadership experience, are also listed as requirements for an excavation director.

## 5. Archaeologists

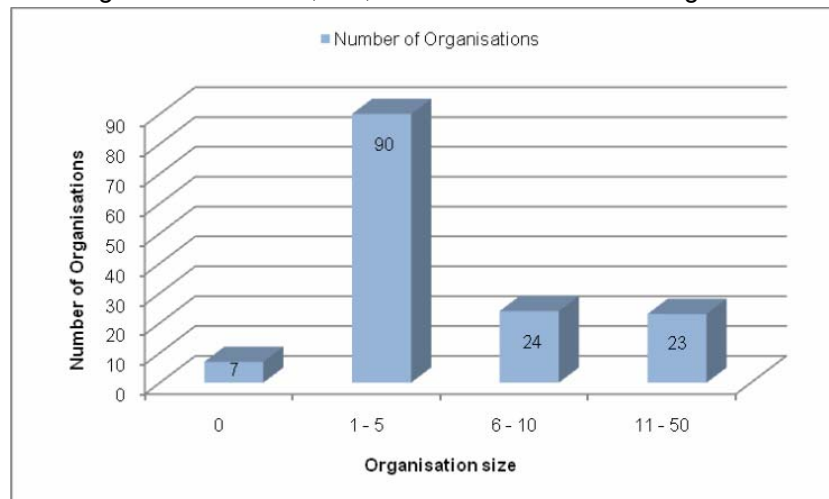
### 5.1. Number and distribution of employees

One of the main goals of the Leonardo Project is to determine the total number of archaeologists working in each of the participating European countries. For reasons explained earlier (cp. Chapter 2.2.), in the German report only those persons with a university degree in an archaeological discipline are defined as “archaeologists”. The questionnaire was designed in such a way that the profile of the archaeologist only included scientists who are assigned with archaeological responsibilities, or have jobs as archaeologists (questionnaire part I, questions 3 and 4).

7 institutions stated that they do not employ “archaeologists” according to this definition. The majority (90 = 62.5%) employ 1-5 archaeologists as scientists. None of the organisations employs more than 50 archaeologists.

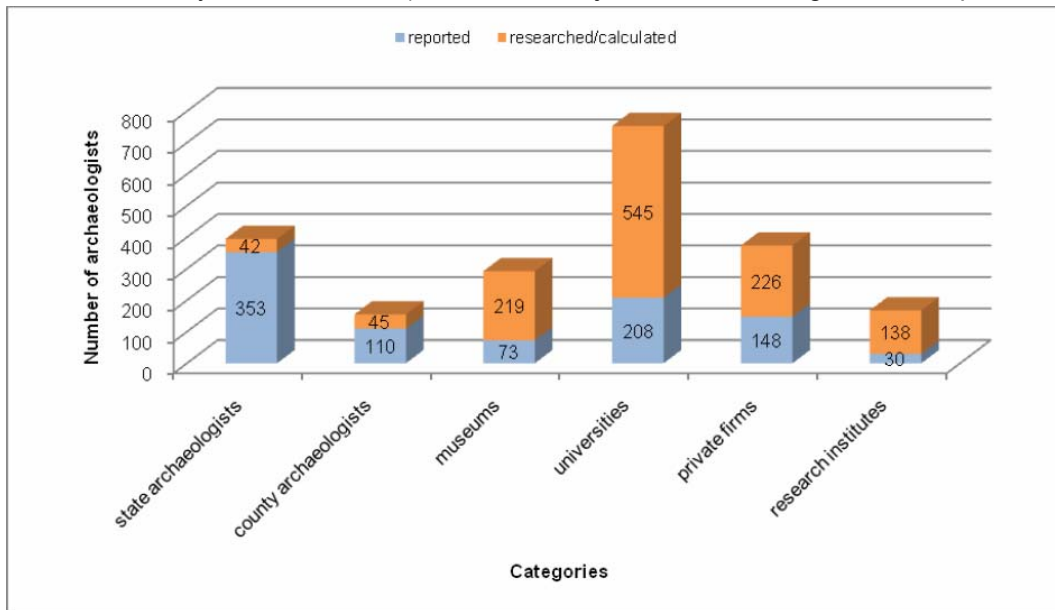
If the numbers for those institutions that did not respond (but whose figures could be researched) are included, the result changes slightly, especially in the lower and top segments. The RGZM, for example, currently employs 52, and the DAI 176 archaeologists. Nevertheless, in Germany, a clear majority of organisations employs only between one and five archaeologists. In fact, most only employ one to three scientists. It is clear here that the German labour market now offers considerably more jobs to archaeological “all-rounders” with little scientific specialisation.

**Diagram 23:** Number of organisations with 0, 1-5, 6-10 and 11-49 archaeologists.





**Diagram 24:** Distribution of archaeologists, documented and researched, or calculated (archaeologists employed outside of Germany are not included). A total of 922 jobs for archaeologists were reported.



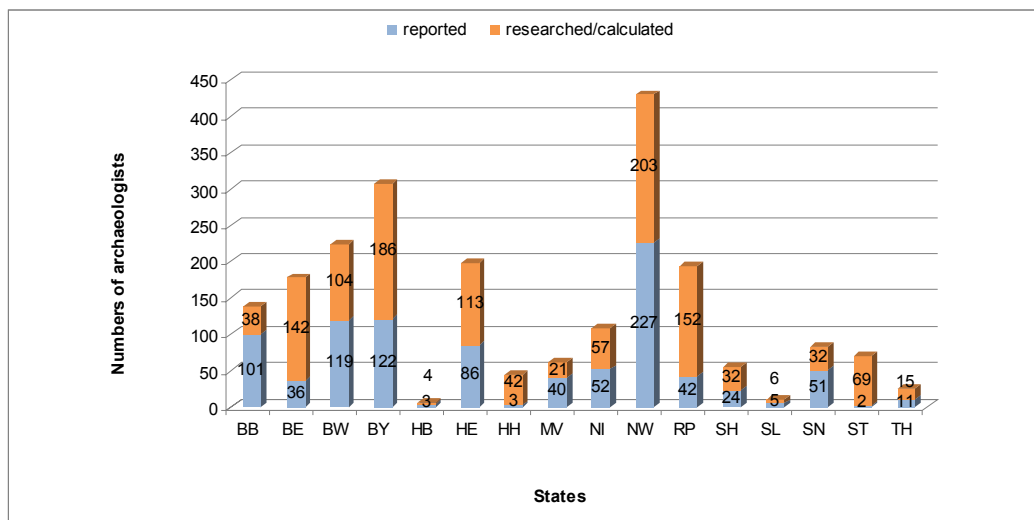
As the amount of scientific staff of those institutions that did not respond to the questionnaire can be found on their web sites, the total number of archaeologists employed as such in Germany can be calculated relatively accurately. Our research has determined that in the winter of 2007 / 2008 at least 2,200 university-educated archaeologists worked in the archaeological labour market. This includes those DAI scientists who work in the institute's foreign offices. The total figure calculated is definitely lower than the actual level because certain secondary sectors, such as cultural tourism, could not be included in this study. Additionally, a relatively large amount of archaeologists with short-term jobs in Saxony-Anhalt's state archaeology could not be included. The number of archaeologists that have not been identified should not be higher than a few hundred persons, however. As a result, the total figure of archaeologists working in Germany can be estimated at 2,400-2,600.

At first glance, this is an impressive amount. In light of the total population and the economic strength of the country, however, it is very low. With a population of 82.5 million, Germany only has one university-educated archaeologist working in his/her field per 33,000 residents. In comparison: In the UK (population c. 60 million) in 2002 / 2003 no less than 5,700 archaeologists were employed in archaeology. This is a ratio of 1:10,500 (archaeologist : resident) (Aitchison / Edwards 2003). Ireland has an even higher ratio: The Leonardo Project in Ireland reports one archaeologist per 2,000 residents.

The figure of 2,400-2,600 employed archaeologists in Germany should also be viewed in light of the number of students in the archaeological disciplines. In the winter semester of 1996 / 1997, a total of 2,362 students registered with majors (Hauptfach), and 3,497 with minors (Nebenfach) in the fields of Pre- and Early History, Archaeology of the Roman Provinces, and Medieval Archaeology (Roth 1996). This level has been constant for more than a decade. According to government statistics, in the winter semester of 2005 / 2006 2,131 students were registered with majors in Pre- and Early History (Lorenzen 2007). Several thousand students in the other archaeological disciplines should also be considered here. In 2005, 188 students completed their studies in Pre- and Early History with a master's degree, a "Diplom", or a PhD (ibid.). An earlier study (Eggert 2001) in the field of Pre- and Early History reports that between 1988 and 2000 a total of 757 masters or Diplom examinations, 410 doctorates and 34 "Habilitation" (postdoctoral lecture qualification) were successfully completed. In Archaeology of the Roman Provinces and Medieval Archaeology during this period 300 masters degrees, 114 doctorates, and 5 "Habilitation" were completed (ibid. Fig. 80).

Regarding the calculated distribution of archaeological jobs in the different categories, the following ratios have been determined: university research and teaching: c. 35.2 %; state archaeology: 18.6 %, private firms, or freelancers: 17.5 %; museums: 13.6 %, research institutes: 7.9 %; and county archaeology: 7.2 %. As explained above, the actual percentage employed in state archaeology should be somewhat higher and the ratio for commercial firms somewhat lower.

**Diagram 25:** Distribution of reported and calculated archaeologists among the states (excluding archaeologists employed abroad).



The distribution of archaeologists throughout Germany generally corresponds to that of the population. As a city state with leading archaeological institutions, Berlin has the highest density of archaeologists. In contrast, archaeologists are underrepresented relative to the population in most of the “new” eastern German states and Saarland.

The comparatively large amount of archaeologists in North Rhine-Westphalia, Bavaria and Baden-Württemberg is due to the fact that the universities in the southern, south western and western regions of Germany offer a wide range of archaeological studies.

## 5.2. Distribution in terms of nationality, age, and gender.

The organisations were asked to provide information on the age, gender, and nationality of their staff. The question in the English questionnaire on the ethnicity of employees was not included.

**Table 7:** Age and gender distribution of all employees in archaeologically active organisations

Age	Number ♀	%	Number ♂	%	Total
under 20 yrs	24	32,0%	51	68,0%	75
20-29 yrs	115	43,7%	148	56,3%	263
30-39 yrs	170	36,2%	298	63,8%	468
40-49 yrs	204	34,9%	381	65,1%	585
50-59 yrs	167	37,1%	283	62,9%	450
over 60 yrs	51	34,0%	99	66,0%	150
<b>Total</b>	<b>731</b>	<b>36,7%</b>	<b>1,260</b>	<b>63,3%</b>	<b>1,991</b>

The study shows that on average men dominate in all employment categories (Table 7). In the age group up to 29 years, the gender ratio is fairly balanced. In the group over 30 years, however, men clearly dominate at 63-66 %. The majority of employed personnel is between 40-49 years old.

**Table 8:** Age and gender of scientists in archaeological organisations

Age	Number ♀	%	Number ♂	%	Total
under 20 yrs	0	0,0%	0	0,0%	0
20-29 yrs	22	41,5%	31	58,5%	53
30-39 yrs	65	31,1%	144	68,9%	209
40-49 yrs	94	34,7%	177	65,3%	271
50-59 yrs	53	31,2%	117	68,8%	170
over 60 yrs	15	25,4%	44	74,6%	59
<b>Total</b>	<b>249</b>	<b>32,7%</b>	<b>513</b>	<b>67,3%</b>	<b>762</b>

The results here are similar to those above. However, in all age divisions of this group, including that of the 20-29 year olds, men dominate at 58.5 %. This dominance is especially evident in the higher age groups and totals 74.6 % among the 60 year-olds. The age group below 20 years is not relevant here. The group of 20-29 year-olds is (due to the longer school and university periods) at 7 % (53) quite poorly represented in comparison to the ratio of this age group among all archaeological staff (13.2%, 263). The average age of female scientists is 43 years, that of males 44 years. The average age of scientists in archaeology is thus only slightly higher than the average of all employees in Germany (c. 42 years)

**Table 9:** Age distribution of scientists, by gender.

Age	Number ♀	% of total ♀	Number ♂	% of total ♂	Number ♀ + ♂	Total %
under 20 yrs	0	0,0%	0	0,0%	0	0,0%
20-29 yrs	22	8,8%	31	6,0%	53	7,0%
30-39 yrs	65	26,1%	144	28,1%	209	27,4%
40-49 yrs	94	37,8%	177	34,5%	271	35,6%
50-59 yrs	53	21,3%	117	22,8%	170	22,3%
over 60 yrs	15	6,0%	44	8,6%	59	7,7%
<b>Total</b>	<b>249</b>	<b>100,0%</b>	<b>513</b>	<b>100,0%</b>	<b>762</b>	<b>100,0%</b>

**Table 10:** Age distribution of Germany's total population from 15 yrs, by gender (in thousands).

Age	Number ♀	% of total ♀	Number ♂	% of total ♂	Number ♀ + ♂	Total %
under 20 yrs	2370	6,5%	2551	7,4%	4921	6,9%
20-29 yrs	4754	13,0%	4969	14,4%	9723	13,7%
30-39 yrs	5770	15,8%	5986	17,4%	11756	16,6%
40-49 yrs	6629	18,1%	6731	19,6%	13360	18,8%
50-59 yrs	5251	14,4%	5143	14,9%	10394	14,6%
over 60 yrs	3176	8,7%	3040	8,8%	6216	8,8%
<b>Total</b>	<b>8595</b>	<b>23,5%</b>	<b>6031</b>	<b>17,5%</b>	<b>14626</b>	<b>20,6%</b>
<b>Gesamt</b>	<b>36545</b>	<b>100,0%</b>	<b>34451</b>	<b>100,0%</b>	<b>70996</b>	<b>100,0%</b>

Regarding the age and gender distribution of the different archaeological categories (Table 11), it should be noted that there are relatively few younger people under 20 employed in heritage management and none employed by the research institutes and universities that responded to the questionnaire. The private firms employ almost no older persons. Only 28 of the total 344 (= 8.1 %) reported employees are between 50-59 years old, and only two (= 0.6 %) are older than 60. The companies employ primarily younger people between 20-29 years old (= 25 %) and 30-39 (=42.2 %). The other categories report a more even age distribution and considerably higher percentages of older personnel between 50-65 years of age. This observation clearly requires a careful analysis, especially in view of the future development of the labour market and the employment situation in private excavation firms.

The figures indicate that in the next 5 years c. 7 %, and in the next 15 years over 20 % of archaeological staff will retire.

**Table 11:** Age distribution of staff, by category, of all responding organisations.

	under 20 yrs	% of cat.	20-29 yrs	% of cat.	30-39 yrs	% of cat.	40-49 yrs	% of cat.	50-59 yrs	% of cat.	over 60 yrs	% of cat.	Total
State Archaeologists	21	1.1%	263	13.4%	468	23.9%	607	31.0%	450	23.0%	150	7.6%	1959
County Archaeologists	4	3.1%	32	24.6%	18	13.9%	32	24.6%	25	19.2%	19	14.6%	130
Museums	1	0.5%	23	11.4%	33	16.4%	56	27.9%	54	26.9%	34	16.9%	201
Universities	0	0.0%	26	9.1%	73	25.5%	102	35.7%	61	21.3%	24	8.4%	286
Private Firms	1	0.3%	86	25.0%	145	42.2%	82	23.8%	28	8.1%	2	0.6%	344
Research Institutes	0	0.0%	8	14.8%	9	16.6%	13	24.1%	17	31.5%	7	13.0%	54
<b>Total</b>	<b>27</b>	<b>0.9%</b>	<b>438</b>	<b>14.7%</b>	<b>746</b>	<b>25.1%</b>	<b>892</b>	<b>30.0%</b>	<b>635</b>	<b>21.4%</b>	<b>236</b>	<b>7.9%</b>	<b>2974</b>

In regard to gender distribution (Table 12 and 13), it is striking that the portion of women employed is lowest in county archaeology and highest in museums. Private firms have the second lowest portion of women. They clearly employ primarily younger men.

**Table 12:** Gender distribution, by category, of all responding organisations.

	♀	% of cat.	♂	% of cat.	Total
State Archaeologists	378	38.3%	609	61.7%	987
County Archaeologists	33	25.4%	97	74.6%	130
Museums	90	44.8%	111	65.2%	201
Universities	106	37.1%	180	62.9%	286
Private Firms	114	33.1%	230	66.9%	344
Research Institutes	21	38.9%	33	61.1%	54
<b>Total</b>	<b>742</b>	<b>37.1%</b>	<b>1,260</b>	<b>62.9%</b>	<b>2,002</b>

**Table 13:** Age and gender distribution, by category, of all responding organisations.

	under 20 yrs		20-29 yrs		30-39 yrs		40-49 yrs		50-59 yrs		over 60 yrs		Total
	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	
State Archaeologists	8	7	43	45	116	74	197	128	161	104	44	20	947
County Archaeologists	3	1	27	5	12	6	19	13	22	3	14	5	130
Museums	0	1	13	10	13	20	36	20	30	24	19	15	201
Universities	0	0	10	16	53	20	66	36	34	27	17	7	286
Private Firms	0	1	52	34	101	44	54	28	22	6	1	1	344
Research Institutes	0	0	3	5	3	6	9	4	14	3	4	3	54
<b>Total</b>	<b>11</b>	<b>10</b>	<b>148</b>	<b>115</b>	<b>298</b>	<b>170</b>	<b>381</b>	<b>229</b>	<b>283</b>	<b>167</b>	<b>99</b>	<b>51</b>	<b>1,962</b>

One of the most important goals of the Leonardo Projects is to reduce the barriers to mobility within the EU. As a result, the nationality of archaeological employees is relevant. The reported figures confirm the impression that relatively few foreigners are employed in German archaeology. Their portion among scientists is 3.8 % (of which 3.0 % are EU-citizens) and the ratio for all archaeological staff is 4.6 % (of which 3.0 % are EU-citizens). The portion of foreigners living in Germany has been fairly constant in the past years, at nearly 9 % of the total population. Thus, it can be said that foreigners are clearly underrepresented in the field of archaeology in Germany.

**Table 14:** Nationality of all employees in the responding organisations.

	Scientists	All employees
Germany	778	1,773
Other EU-Countries	24	56
Other	7	29
<b>Total</b>	<b>809</b>	<b>1,858</b>

### 5.3. Volunteers

Volunteers have always been an important pillar of archaeological work in Germany. In archaeological heritage management, in particular, volunteers function as the “eyes and ears” of the professional departments, which are dependent on information reported from the region. In Baden-Württemberg, for example, smaller excavations and the recovery of finds are sometimes led by experienced and trained volunteers.

The portion of volunteers active in state archaeological heritage management is correspondingly high. In county archaeology, the level is somewhat lower. Care should be taken when these figures are considered in an international comparison: While there are volunteers who are extremely active and invest a lot of time and energy in archaeology (e.g. retired persons), the majority of volunteers do not spend nearly as much time on archaeology as regularly paid employees and cannot, therefore, be directly compared with them.

The importance of volunteers in museums and universities (student projects) should not be underestimated. In commercial excavation companies, of course, they do not play a role.

**Table 15:** Number of volunteers compared to total staff of all responding organisations, per category.

	No. of volunteers	% of employees	All employees
State Archaeologists	1,178	48.3%	2,440
County Archaeologists	65	33.9%	192
Museums	110	16.4%	669
Universities	36	11.7%	308
Private Firms	2	0.5%	396
Research Institutes	5	2.9%	174
<b>Total</b>	<b>1,396</b>	<b>33.4%</b>	<b>4,179</b>

#### 5.4. Support staff

The support staff consists primarily of administrative employees, workers, restorers, technicians, illustrators, photographers, temporary student helpers, security personnel, etc. The portion of non-archaeological, specialised scientists (botanists, zoologists, geophysicists, etc) in this group is low.

It is not possible through internet or other research to accurately determine the size of support staff employed by the organisations that did not respond to the questionnaire. Hence, the following figures should be considered only as rough estimates. The figures compiled from the completed questionnaires were used as a basis and extrapolated to the respective groups as a whole. The high response quotas from the state archaeologists and private firms do, however, provide valid representations of their groups. These results show that the ratio of archaeologists to total number of employees is considerably higher in private firms than in state heritage management. In state archaeology, 356 archaeologists and 2,627 non-archaeologists were reported. This is a ratio of one archaeologist per eight support staff members on average. Among the commercial companies, the ratio is 148 : 245, or 1 : 1.7. These results indicate that private firms in Germany primarily hire archaeologists who are willing to function as all-rounders working in all relevant areas, from the scientific direction of excavations to simple digging. The traditional three-tiered structure of German archaeology described earlier, with a combination of many low-paid workers, some specialists or technicians, and a few scientists does not exist in the excavation companies. Instead, almost all functions are carried out by the archaeologists themselves.

The low portion of support staff in universities is worrisome. In many cases, personnel has been reduced to a few lecturers and a secretarial office. Only a few large institutions still have functioning laboratories or sections for illustrators, IT, or excavation techniques.

The figure for support staff in research institutes, which have generally had smaller personnel reductions in recent years, is to be set much higher.

**Table 16:** Estimated total number of support staff, by category.

	% response	reported No. of support staff	estimated total
State Archaeologists	86.4%	2,627	3,041
County Archaeologists	33.8%	82	243
Museums	19.0%	660	3,474
Universities	30.4%	100	329
Private Firms	43.3%	245	566
Research Institutes	36.4%	144	396
<b>Total</b>		<b>3,858</b>	<b>8,049</b>

In terms of age distribution (Table 17), this group does not differ much from the archaeologists. As expected, more younger people are employed here. Regarding gender, there is a higher representation of women among the non-archaeologists.

**Table 17:** Age and gender distribution of support staff in the responding organisations.

Age	Number ♀	%	Number ♂	%	Total
under 20 yrs	10	47.6%	11	52.4%	21
20-29 yrs	93	44.3%	117	55.7%	210
30-39 yrs	105	40.5%	154	59.5%	259
40-49 yrs	110	35.0%	204	65.0%	314
50-59 yrs	114	40.7%	166	59.3%	280
over 60 yrs	36	39.6%	55	60.4%	91
<b>Total</b>	<b>468</b>	<b>39.8%</b>	<b>707</b>	<b>60.2%</b>	<b>1,175</b>

A look at the qualifications of this group shows that 12.7 % have a university degree. However, this includes only 1.5 % with PhD's, and one Habilitation (0.1 %). These are mostly scientists who are employed as specialists. In recent years the paucity of appropriate jobs has caused many archaeology graduates to take jobs in the low, middle, or upper levels of the public sector as assistants or technicians. The relatively high share of 11.1 % support staff with a masters degree or Diplom is due in part to this phenomenon.

Graduates of the "Fachhochschule" (universities of applied sciences) are primarily found among the restorers, illustrators, (excavation-)engineers, etc. Personnel with "technical qualifications" (14.2 %) include professional excavators who have completed apprenticeships as well as additional vocational training. The majority of persons in this category, however, are workers with only an apprenticeship (36.1 %) and untrained workers with school certificates (27.9 %).

**Table 18:** Highest level of education/training of support staff in the responding organisations (no double-counting; only the highest qualifications).

186 Responses	No. of employees	%
Habilitation	1	0.1%
PhD	15	1.5%
University degree	108	11.1%
Fachhochschule degree	89	9.1%
Technical training	138	14.2%
Apprenticeship	352	36.1%
School certification	272	27.9%
<b>Total</b>	<b>975</b>	<b>100.0%</b>

## 5.5. Salaries of scientists and non-scientists

In Germany, salaries in the public sector are strictly regulated and conform to the pay scales for civil servants and non-civil servants that are agreed upon by the official representatives of the employees and employers.

The level of payment is related to the job description and not necessarily to personal qualifications. Theoretically, therefore, it is possible in the public sector to hire, and pay, an archaeologist with a Habilitation as an excavation worker, as long as s/he is employed only as a worker and not as an archaeologist.

**Table 19:** Salary scale for scientific and non-scientific staff in archaeological organisations

	state and county archaeologists, museums, universities and research institutes	Private firms
<b>Non-scientific staff</b>		
lowest 10%	22,150.00 €	10,000.00 €
lower 25%	23,950.00 €	15,000.00 €
upper 25%	36,950.00 €	30,000.00 €
highest 10%	38,200.00 €	45,000.00 €
Average	29,930.00 €	22,300.00 €

	state and county archaeologists, museums, universities and research institutes	Private firms
<b>Scientific staff</b>		
lowest 10%	36,950.00 €	20,000.00 €
lower 25%	42,500.00 €	25,000.00 €
upper 25%	63,450.00 €	44,200.00 €
highest 10%	70,500.00 €	70,000.00 €
Average	44,830.00 €	32,050.00 €

The gross salaries for fulltime (38.5-42 hrs / wk), non-scientific staff in public archaeological institutions (Table 19) varies between € 20,150 (e.g. excavation worker E3) and € 40,000 (e.g. surveyor E 12). In contrast, the range in commercial companies is considerably larger, with non-scientists earning from € 10,000-€ 45,000. On average, the salaries in the public sector are significantly higher than in the private companies.

The gross annual salary for scientists in the public sector varies between € 36,950 and € 70,500 (A16), depending on the responsibilities and experience of the employee. The average salary here is € 44,830. A few archaeologists who work as directors of larger organisations earn from € 70,000-€ 80,000. Scientists working for private firms are more poorly paid, earning an average € 32,050. The lower starting salaries of €20,000-€25,000 have an effect here.

In the public sector, employees with PhD's are generally paid more than those with lower university degrees. In private companies, the opposite occurs. It is also interesting that persons with a degree from a Fachhochschule are paid on average far less in companies than in the public sector.

The introduction of a salary scale designed for universities has resulted in the fact that the income of scientists working as lecturers and professors has worsened in comparison to the other categories. The highest base level (W3) for university professors is markedly below the comparable salary levels of civil servants in museums and heritage management (A16). As a result, the top salaries of archaeologists in the universities are now lower than that of their colleagues in archaeological heritage management, research institutes, or large museums.

**Table 20:** Average salary and education / training.

	state and county archaeologists, museums, universities and research institutes	Private firms
<b>Average salary</b>		
PhD	46.500,00 €	32.300,00 €
Masters degree	40.120,00 €	36.000,00 €
Fachhochschule degree	32.850,00 €	20.400,00 €
Technical qualification	32.450,00 €	No info
Apprenticeship	28.350,00 €	21.700,00 €

**Table 21:** Salary ranges of the different professions employed in archaeology.

	min. salary	average salary	max. salary
Excavation worker/worker	10.000,00 €	20.150,00 €	34.500,00 €
Illustrator/Photographer	16.800,00 €	26.500,00 €	38.200,00 €
Administrative staff	16.000,00 €	23.100,00 €	44.200,00 €
Technician	13.200,00 €	27.300,00 €	42.500,00 €
Scientist	15.000,00 €	40.800,00 €	90.000,00 €

## 5.6. Employment development

The organisations were asked to provide employment figures for the past years and to forecast future employment. Table 22 documents that, on average, the number of people employed decreased slightly over the past five years. Most of the institutions expect the situation to remain constant in the next five years. Among those predicting a change, the majority expect a staff reduction.

Although the number of volunteers has fallen slightly on average since 2002, almost all responses foresee no change or an increase of volunteers in the future.

Regarding the employment of “1-Euro-workers”, it is interesting that the majority of organisations have been hiring such workers and expect the size of this group to either remain constant, or to increase in the next years.

**Tables 22-24:** Development of employment figures 2006, 2004, 2002 and forecasts 2008 and 2010.

<b>Paid staff</b>	less than today	same as today	more than today	no employees	no business	no info
2006	22	83	29	2	2	1
2004	36	51	42	1	5	4
2002	38	44	39	2	9	7
2008	18	87	20	4	0	10
2010	29	56	19	3	0	32

<b>Volunteers</b>	less than today	same as today	more than today	no employees	no business	no info
2006	3	51	7	30	7	41
2004	6	41	12	26	10	44
2002	9	31	11	27	14	47
2008	2	48	8	26	1	54
2010	4	43	6	18	0	68

<b>1-Euro-Workers</b>	less than today	same as today	more than today	no employees	no business	no info
2006	6	26	15	36	10	46
2004	10	17	12	36	13	51
2008	2	31	8	32	1	65
2010	8	23	9	23	0	76

## 5.7. Hiring requirements, training needs, and evaluation of job entrants

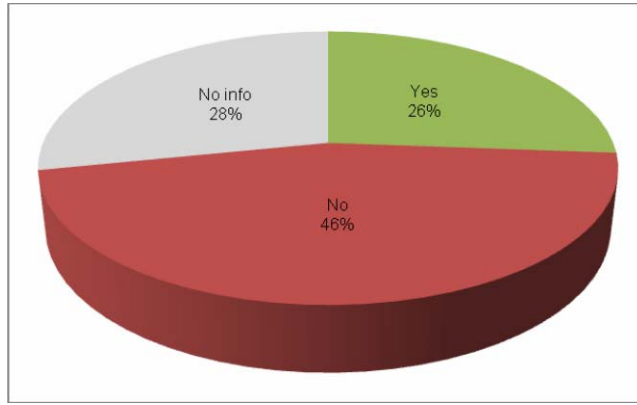
This study also asked the organisations whether they are willing to hire archaeologists without previous work experience (Diagram 26). Nearly half of the respondents answered “No”, one-fourth did not comment, and the remaining fourth answered “Yes”.

It should be noted here that the students of many archaeological disciplines traditionally work in archaeology during their studies. For example, it is common practise in most German institutes of Pre- and Early History for new students to work (as volunteers) on a study-excavation and then to spend vacations as paid workers on research excavations or on excavations run by an archaeological heritage management office. In the past, advanced students were often employed to direct small, local excavations. Museums traditionally also offer jobs to archaeology students. Through regular jobs in museums, or a heritage management office, students have been able to establish valuable contacts to possible future employers.

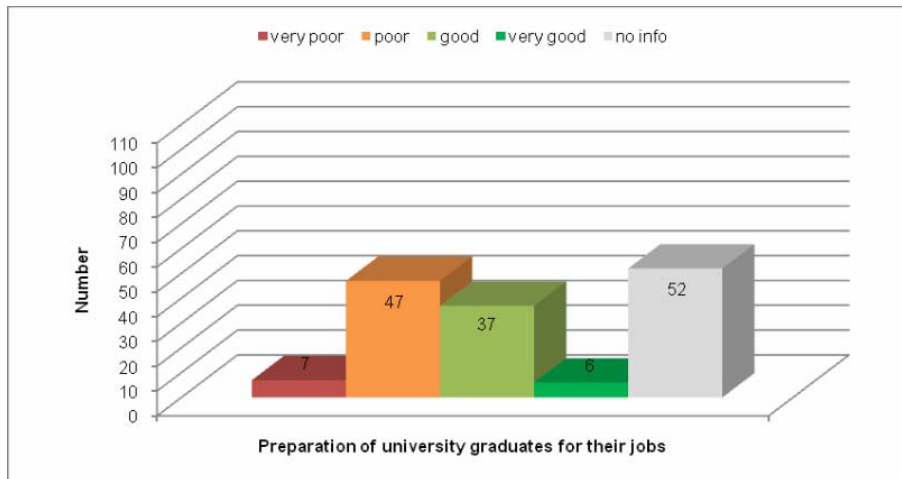
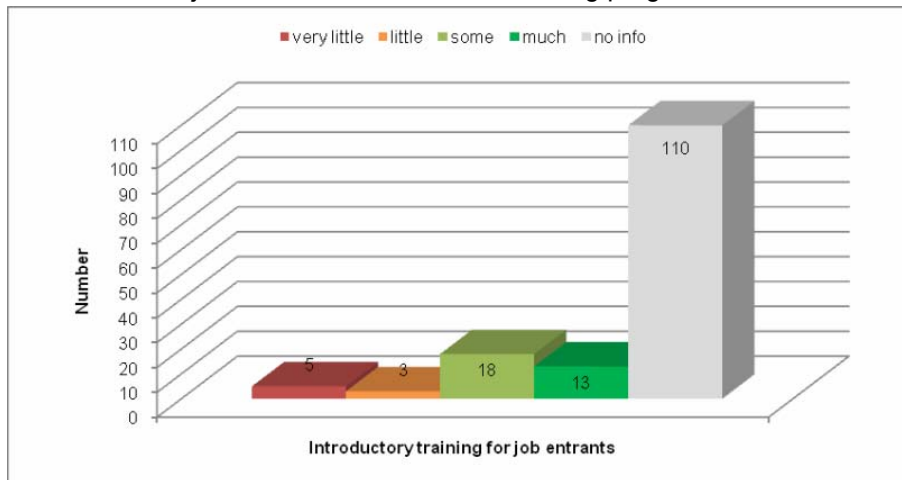
Traditionally, therefore, graduating archaeologists have generally had work experience in their field. The new bachelor and masters degree programmes, however, with their tighter structures, will shorten the time spent in universities, but at the price of less room for additional activities. As a result, the practise of acquiring work experience as a student will probably cease to exist.



**Diagram 26:** Willingness of organisations to hire archaeologists without previous work experience.



**Diagrams 27-29:** Evaluation of job entrants and additional training programmes.





In response to the question of how well university graduates are prepared for their profession, nearly as many organisations answered “good”, or “very good” as those who chose “bad”, or “very bad” (Diagram 28). Surprisingly, the majority of institutions did not answer this question. Apparently, the British question regarding the relevance and efficiency of training programmes for job entrants is not considered to be an issue among the German organisations. Only a small fraction of respondents answered the question. It is a fact that, except for a few postgraduate trainees (Volontariat) in museums and the heritage management offices, there are no specialised training programmes for job entrants in Germany. The general practise here is “Learning by doing”.

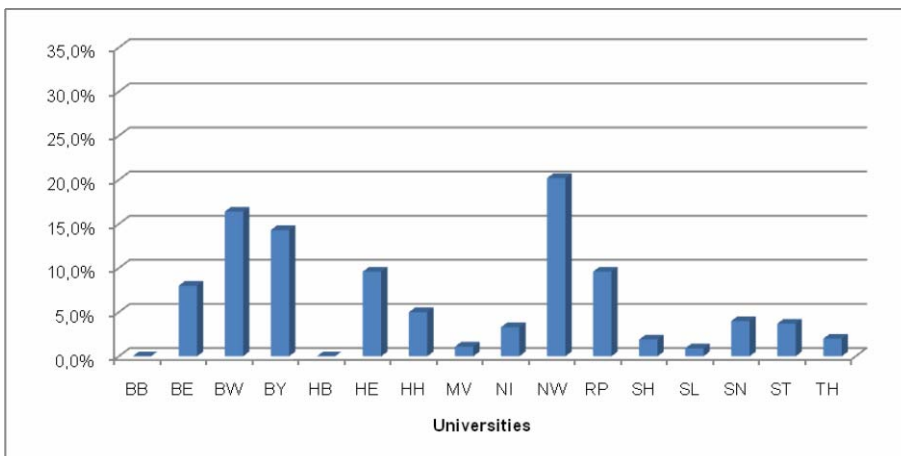
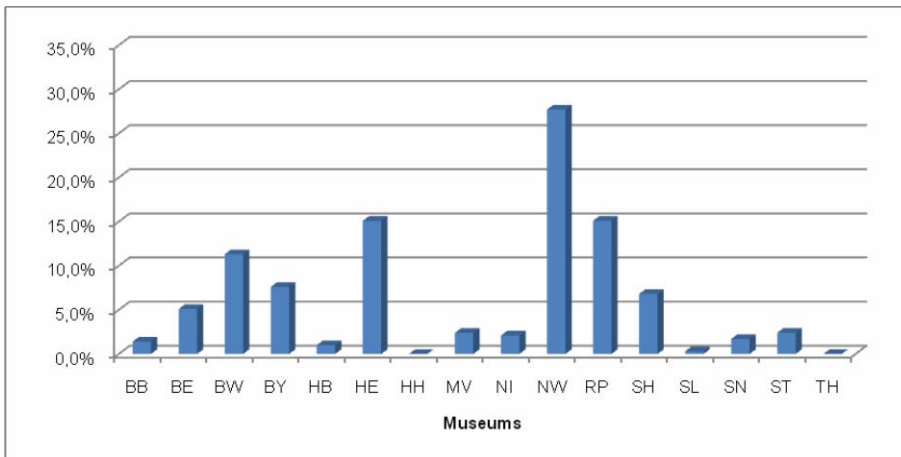
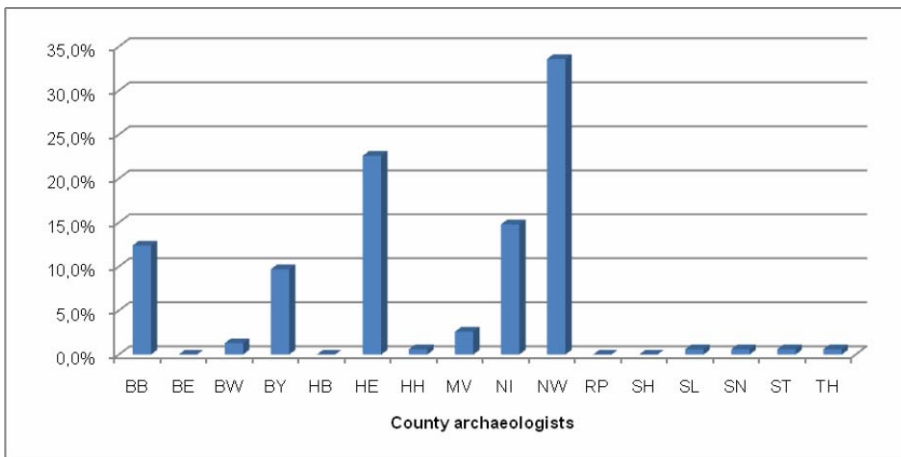
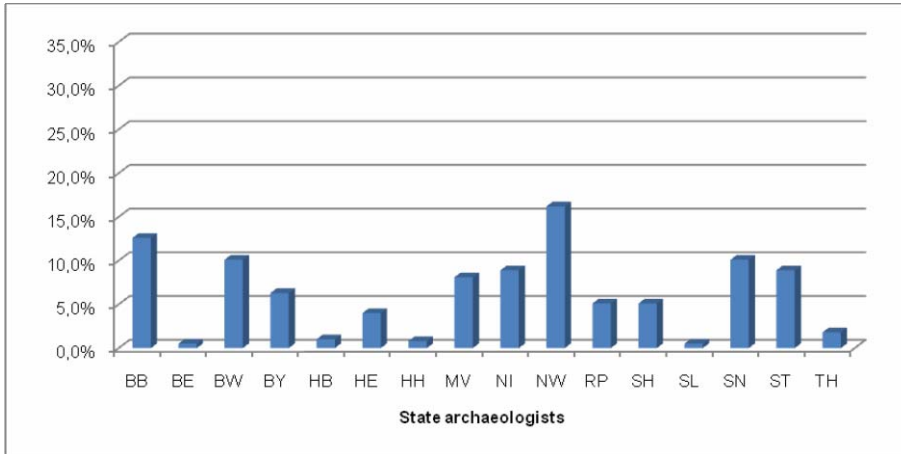
## 5.8. Geographic distribution

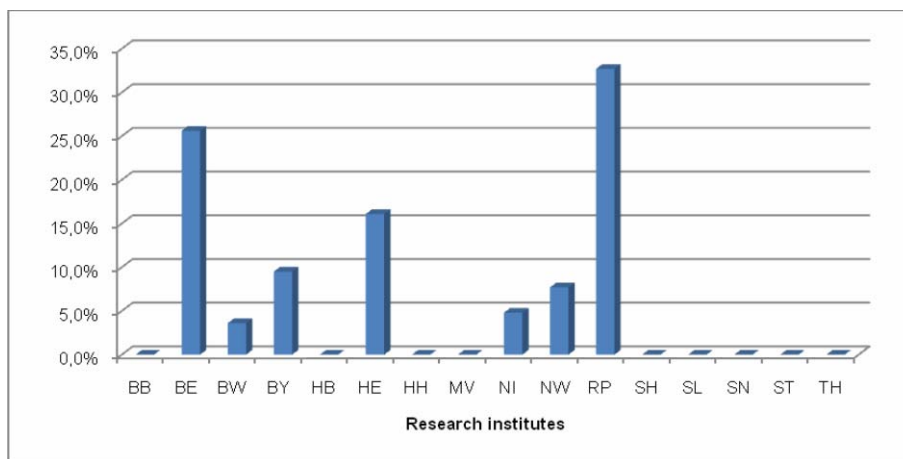
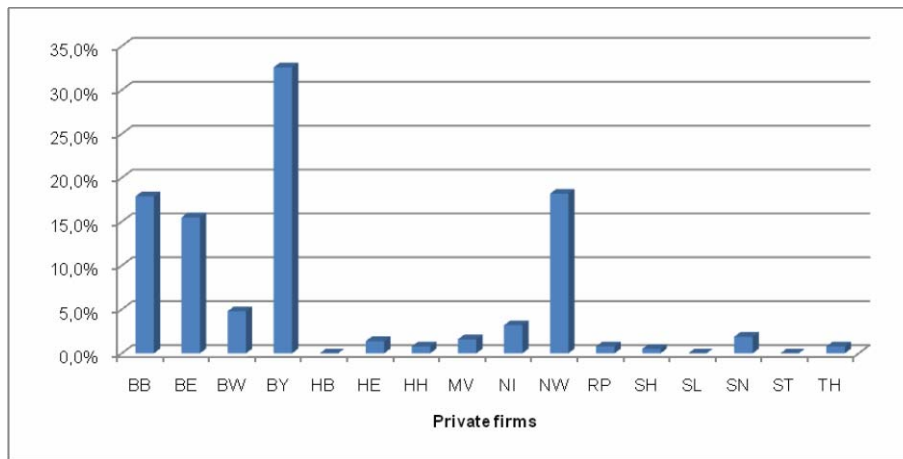
A rough overview of the geographic distribution of archaeologists in Germany has been provided and commented on in Diagram 16. Table 25 and Diagrams 30-35 present a more differentiated view according to organisation category. The distribution of state archaeologists across the country is roughly parallel to the distribution of the population. One distinction is that, unlike the other categories, state archaeology is relatively well represented in some of the new German states. In addition to the population, there are many other factors that should be considered in an analysis of this data, for example the size of the state in terms of territory, the intensity of land usage, the number of other groups working within the state archaeology (e.g. county archaeologists), etc. The geographic distribution of county archaeologists in Germany is known to involve certain areas of high concentration. This is caused by administrative factors. Some of the large states, especially Lower Saxony, Hessen, Brandenburg and North Rhine-Westphalia, tried in past years to develop a network of city and district archaeologists, whereas other states (e.g. Baden-Württemberg, Rhineland Palatinate, and Schleswig-Holstein) focused on the state level of administration. The distribution of commercial archaeological companies reflects the above-mentioned (Ch. 2.4.) legal and organisational situation of each region. The majority of firms are based in Bavaria, Brandenburg and North Rhine-Westphalia. A large number of archaeological companies are also active in Berlin. It is surprising that the commercial sector is relatively underdeveloped in Hessen and the Rhineland Palatinate, two states that have opened the market to excavation firms.

**Table 25:** Geographic distribution of archaeologists, by category (Basis: calculated total figure).

	BB	BE	BW	BY	HB	HE	HH	MV	NI	NW	RP	SH	SL	SN	ST	TH	Total
state archaeologists	50	2	40	25	4	16	3	36	35	64	20	20	2	40	35	7	<b>395</b>
county archaeologists	19	0	2	15	0	35	1	4	23	52	0	0	1	1	1	1	<b>155</b>
museums	4	15	33	22	3	44	0	7	6	81	44	20	1	5	7	0	<b>292</b>
universities	0	60	124	108	0	72	38	8	25	152	72	14	7	30	28	15	<b>753</b>
private firms	66	58	18	122	0	5	3	6	12	68	3	2	0	7	0	3	<b>374</b>
research institutes	0	43	6	16	0	27	0	0	8	13	55	0	0	0	0	0	<b>168</b>
<b>Total</b>	<b>139</b>	<b>178</b>	<b>223</b>	<b>308</b>	<b>7</b>	<b>199</b>	<b>45</b>	<b>61</b>	<b>109</b>	<b>430</b>	<b>194</b>	<b>56</b>	<b>11</b>	<b>83</b>	<b>71</b>	<b>26</b>	<b>2,140</b>

**Diagrams 30-35:** Geographic distribution of archaeologists each category, by %





## 5.9. Staff qualifications

In Part II of the questionnaire organisations were asked about the highest qualifications of their staff. This question was answered in all but 22 of the 363 responses, so that there was a solid database of 341 profiles from 130 institutions.

An analysis of the qualifications of all employees (Diagrams 36-41) reveals that these vary markedly between the categories. As expected, the largest share of personnel with Habilitation degrees is to be found in universities (26 %), followed by the research institutes (9 %) and museums (3 %). In state archaeology and county archaeology, only 1 % has a Habilitation and among the private firms no employees with a Habilitation were reported.

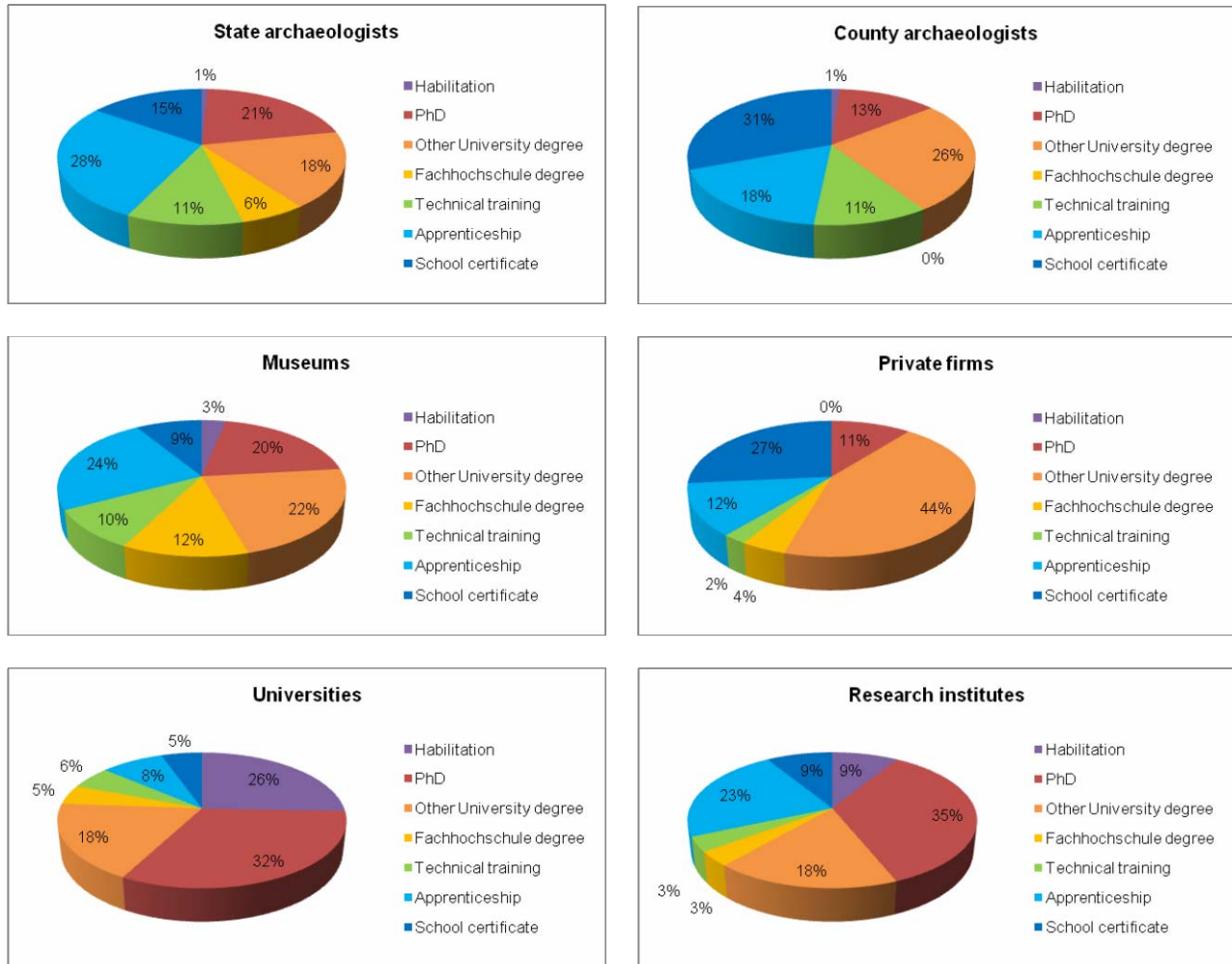
It is interesting to observe the ratio of staff with PhDs and those with other university degrees. In state archaeology 21 % of employees have a doctorate and 18 % a lower university degree. In contrast, the ratio in county archaeology is 13 % and 26 %, respectively. Museums have a balance of PhDs (20 %) and lower university degrees (22 %). In universities and research institutes, the number of persons with doctorates is significantly higher (32 % and 35 %) than those with lower degrees (18 %). There is a noticeably high percentage of university graduates without a PhD in commercial firms (44 %).

Graduates of the Fachhochschule were reported in all categories except county archaeology. Employees with specialised training completed outside of universities were reported in large numbers in state and county archaeology, and in museums.

Employees whose highest qualification is a school certificate are mostly found in county archaeology (31 %) and in the excavation firms (27 %). Persons with such “low” qualifications constitute a much smaller portion of staff in museums (9 %), universities (5 %), and non-university research

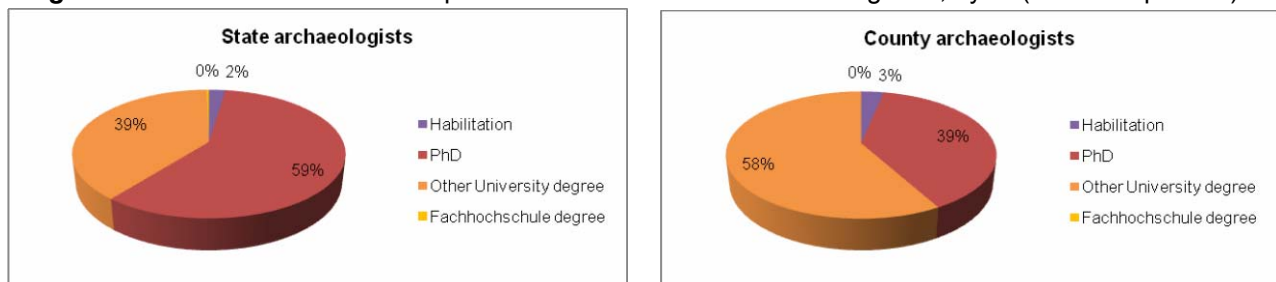
institutes (9 %). This can be explained by the different importance and organisation of excavation activities in these categories, as compared to county archaeology and commercial companies.

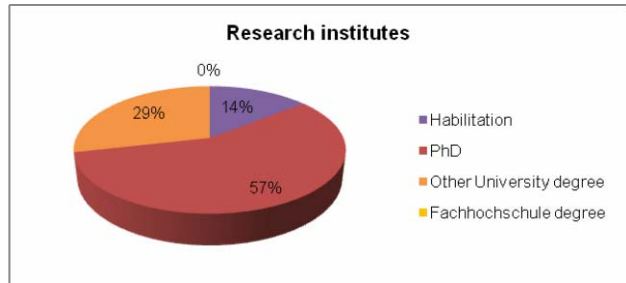
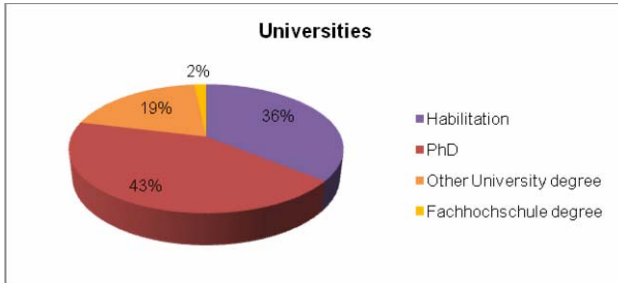
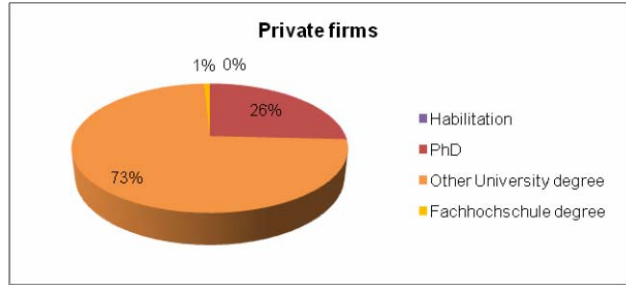
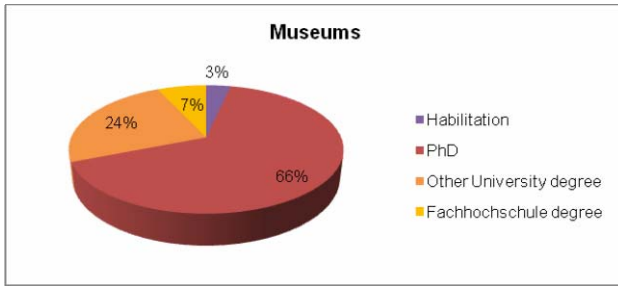
**Diagrams 36-41:** Distribution of staff qualifications in the different categories, by % (basis: responses)



If only the qualifications of the scientists (Diagrams 42-47; 137 responses, no multiple post titles) are considered, it becomes clear that the portion of university graduates without PhDs is unusually high (73 %) in the commercial firms. This is not surprising in light of the current labour market situation and the strong competition for permanent jobs and research positions in the archaeological institutions of the public sector – which prefer to hire archaeologists with PhDs. The ratio confirms the impression that private companies often provide the only opportunity for a significant portion of university graduates to find employment in their field.

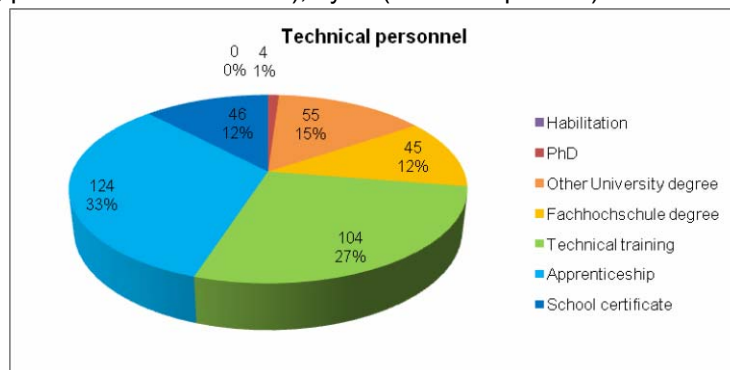
**Diagrams 42-47:** Distribution of the qualifications of scientists in the categories, by % (basis: responses)





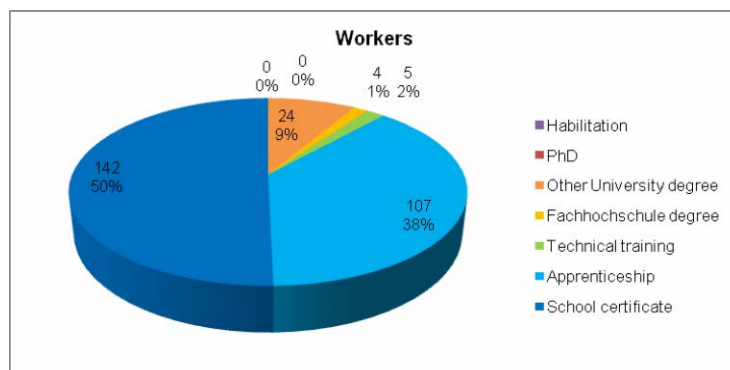
A review of the qualifications of technical personnel (Diagram 48; 343 mentions) clearly shows that a large amount of university graduates are active in this segment. This further supports the opinion mentioned above that many “archaeologists” in Germany cannot find jobs as scientists in the current labour market and have to accept lesser-paying positions in professions that were previously filled with less-qualified staff.

**Diagram 48:** Distribution of the qualifications of technical personnel (photographers, illustrators, restorers, technicians, surveyors, professional excavators), by % (basis: responses).



The situation becomes even clearer when the qualification of workers, i.e. the profile of “worker” and “excavation worker”, is considered (Diagram 49). The data show that nearly one out of every ten “excavation workers” in Germany has a university degree.

**Diagram 49:** Distribution of the qualifications of workers (profile “worker” and “excavation worker”), by % (basis: responses).



## 6. Jobs

The following table provides an overview of the responsibilities and quantitative distribution of personnel in specific profiles. The number of reported workers (“workers” and “excavation workers”) is surprisingly low at 565. It has already been mentioned (Ch. 5.4., Table 16) that relatively few support staff are employed by excavation firms.

Scientists form the largest group of employees. This, too, has been explained above as resulting from the high percentage of scientific staff in the universities.

**Table 26:** Profiles, number of times mentioned and number of reported employees (basis: 332 profiles, no multiple profiles), listed alphabetically.

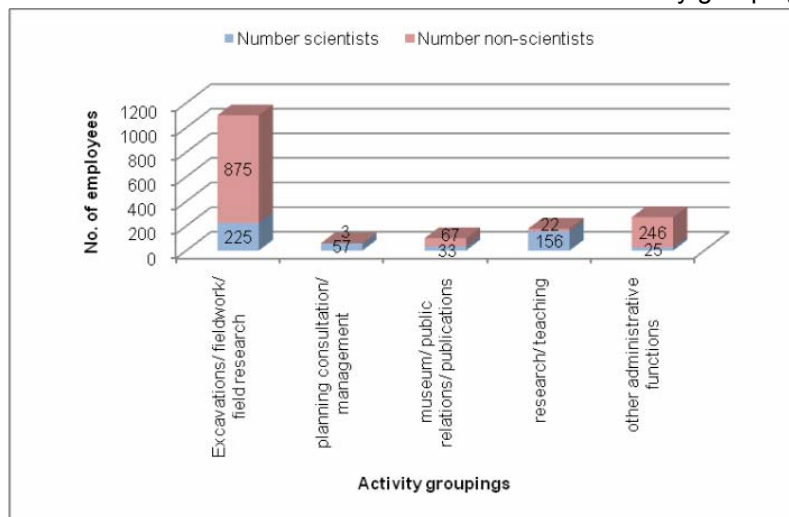
Profile	Specialisation	No. of responses	No. of employees
Excavation worker		12	175
Excavator		16	124
Illustrator		21	57
Photographer		3	4
Postgraduate trainee		1	1
Restorer		17	78
Scientist	without additional specialisation	112	699
Scientist	aerial photography	1	1
Scientist	archaeobiology	3	6
Scientist	editor	4	7
Scientist	excavation	9	61
Scientist	geography	1	1
Scientist	geology	2	2
Scientist	geophysics	1	2
Scientist	library	1	1
Scientist	management	6	6
Scientist	museum	5	6
Staff member	without additional specialisation	47	188
Staff member	EDP	5	9
Staff member	Library	2	3
Staff member	Museum	7	33
Student apprentice (Praktikant)		1	1
Student help		3	7
Technician	without additional specialisation	39	182
Technician	surveying	2	12
Volunteer		2	7
Worker		11	390
“Zivildienstleistender“		2	7
(without title)		4	48
<b>Total</b>		<b>340</b>	<b>2,118</b>

The majority of scientists are primarily concerned with excavations and field work. These are followed by research and teaching, museum / public relations, planning consultation / management and, finally, other administrative work. In contrast, non-scientific personnel are far more involved with excavation/fieldwork than administrative functions.

Table 26 provides an impression of the range of profiles that exists in archaeological organisations in Germany. As expected, the profile of “scientist” is present in nearly all organisations (121 of 137). 54.7 % (75 of 137) organisations employ technical personnel (technicians, surveyors, excavators, restorers, illustrators, and photographers). Administrative staff is represented in 38 % (52) of the institutions. The case of the 22 organisations that reported workers and excavation workers is not representative of the actual situation. For some reason, many organisations did not mention this profile.



**Diagram 50:** Distribution of scientists and non-scientists in the different activity groupings.



### 6.1. Length of contracts and job security

Postgraduates with PhDs could generally be sure of obtaining a permanent job in the public sector into the 1970's. As explained above (Ch.2.1.), the number of graduates then rose sharply and the labour market deteriorated dramatically.

Nevertheless, 63 % of all jobs in the archaeological labour market that were reported in the questionnaire are permanent (Table 27). Most of the short-term jobs have a time span of 6-24 months. A surprisingly high number of contracts have an even shorter term of less than six months. There are very few contracts for a period of more than two years.

The fact that contracts often have very short terms is caused by the increasing emphasis on project-related employment in archaeological research, heritage management and museums. For example, the DFG generally provides funds for a period of 24 months. Many projects (and job contracts) can then be extended, but only after an additional application process. The situation is similar in the case of rescue excavations financed by the "Polluter Pays" principle and led by state archaeologists or excavation firms, or with special exhibition projects organized by museums that have clearly defined time limits.

A significant percentage of archaeologists in Germany is more or less permanently employed through such projects, going from one short-term contract to the next. The phenomenon of "chain-linked projects" is problematic from a legal point of view. In order to provide young scientists with more permanent jobs, the government took steps a few years ago to limit the maximum time that a scientist could be employed without a permanent contract by a university or research institute to 12 years. These measures have, however, proven to be counterproductive, putting those involved at a disadvantage and, as expected, they have not led to an increase of permanent jobs in the scientific sector.

**Table 27:** Contract length, number, and percentage of paid employees (319 responses).

	No. of employees	%
less than 3 months	102	6,6%
3-6 months	88	5,7%
6-12 months	130	8,4%
12-24 months	148	9,6%
over 24 months	103	6,7%
permanent	974	63,0%
<b>Total</b>	<b>1545</b>	<b>100,0%</b>



**Table 28:** Number of employees in each activity grouping and contract length.

	Excavations/ fieldwork/ field research	planning consultation/ management	museum/ public rela- tions/ publica- tions	research/ teaching	other adminis- trative func- tions
<i>Profile responses</i>	85	12	32	40	61
less than 3 months	89	0	0	3	1
3-6 months	64	3	0	4	0
6-12 months	64	0	0	15	12
12-24 months	48	5	4	32	6
over 24 months	25	4	6	28	13
permanent	329	48	76	90	158
<b>Total</b>	<b>619</b>	<b>60</b>	<b>86</b>	<b>172</b>	<b>190</b>

**Table 29:** Employees and contract length. Basis: 202 responses. 1-Euro-worker and ABM are Government employment programmes.

<i>202 responses</i>	Paid	Volunteer	1-Euro-worker	ABM	<b>Total</b>
less than 3 months	106	40	0	0	<b>146</b>
3-6 months	59	12	9	19	<b>99</b>
6-12 months	86	8	45	0	<b>139</b>
12-24 months	100	27	2	2	<b>131</b>
over 24 months	698	43	2	0	<b>743</b>
<b>Total</b>	<b>1049</b>	<b>130</b>	<b>58</b>	<b>21</b>	<b>1258</b>

**Table 30:** Employees in the activity groupings and contract length.

	Excavations/ fieldwork/ field research	planning consultation/ management	museum/ public relations/ publi- cations	research/ teaching	other adminis- trative func- tions
<i>Profile responses</i>	61	7	22	25	32
less than 3 months	134	0	0	6	1
3-6 months	68	3	2	1	2
6-12 months	92	0	5	8	7
12-24 months	33	5	4	23	9
over 24 months	250	47	54	74	112
<b>Total</b>	<b>577</b>	<b>55</b>	<b>65</b>	<b>112</b>	<b>131</b>

## 6.2. Full-time and part-time contracts

Three-quarters of all jobs reported in the questionnaire are on a full-time basis. The percentage of part-time jobs is particularly high in museums, research/teaching, and in other administrative work. In the excavation sector and planning consultation/management, the portion of part-time jobs is not as high. Although the sampling shows that roughly twice as many men are employed on the archaeological labour market than women, 60% of the reported part-time jobs are filled by women.

**Table 31:** Number and percentage of employees with full- and part-time contracts.

	<b>No. of employees</b>	<b>%</b>
full-time	1,617	75,5%
part-time	525	24,5%
<b>Total</b>	<b>2,142</b>	<b>100,0%</b>

**Table 32:** Full- and part-time contracts in each activity grouping.

	Excavations/ fieldwork/ field research	planning consultation/ management	museum/ public relations/ publi- cations	research/ teaching	other adminis- trative func- tions
<i>Profile responses</i>	92	12	39	42	70
full-time	843	52	66	121	151
part-time	204	8	48	60	105
<b>Total</b>	<b>1047</b>	<b>60</b>	<b>114</b>	<b>181</b>	<b>256</b>

**Table 33:** Gender and full- and part-time contracts

	full-time	%	part-time	%
<i>Responses</i>	193		48	
men	458	66,1%	40	39,2%
women	234	33,9%	62	60,8%
<b>Total</b>	<b>692</b>	100,0%	<b>102</b>	100,0%

### 6.3. Sources of funding

The explanations in Chapter 6.1. for fixed-term contracts are confirmed in the table below: A considerable amount (39.1 %) of jobs in the excavation sector is financed through project-related, third-party funds. In research / teaching, one out of four reported jobs is project-funded. In contrast, permanent contracts for “planned”, budgeted jobs (Planstellen) dominate in museums (94.7 %) and planning consultation / management (85.7 %).

**Table 34:** Job funding in each activity grouping.

	<i>Responses</i>	"planned" jobs	%	"unplanned" jobs	%	project- funded jobs	%	<b>Total</b>
Excavations/ fieldwork/ field research	93	270	35,3%	171	25,6%	316	39,1%	<b>757</b>
planning consultation/ management	12	48	85,7%	3	5,4%	5	8,9%	<b>56</b>
museum/ public relations/ publications	36	55	94,6%	2	3,6%	2	1,8%	<b>59</b>
research/ teaching	41	111	66,1%	14	8,5%	42	25,4%	<b>167</b>
other administrative functions	63	169	76,1%	19	8,6%	34	15,3%	<b>222</b>

### 6.4. Job vacancies

A total of 14 job vacancies was reported in the questionnaires: 4 each in the categories of state archaeology and private firms, 3 in universities, 2 in county archaeology and 1 in museums. Conclusions cannot be drawn from these small numbers and because state archaeologists and private firms participated most actively in this study.

**Tables 35-37:** Job vacancies in each organisation category, the states, and the post profiles.

State Archaeologists	4	BE	1	Excavation worker	1
County Archaeologists	2	BW	2	Excavator	2
Museums	1	BY	4	Administrative staff	3
Universities	3	NI	3	Administrative staff EDP	1
Private Firms	4	NW	2	Technician	2
Research Institutes	0	SH	2	Scientist	4
<b>Total</b>	<b>14</b>	<b>Total</b>	<b>14</b>	"Zivildienstleistender"	1
				<b>Total</b>	<b>14</b>

### 6.5. Trade unions

**Table 38:** All employee unions, employee representative associations, and the numbers of organisations and their employees.

	No. of organisations	No. of employees
workers' council (Betriebsrat)	1	14
DBB	12	1,339
IGBCE (DBM)	1	14
Komba	2	273
staff council (Personalrat)	4	363
IG-Bau	1	20
VerDi	38	2,201
<b>Total</b>	<b>59</b>	<b>4,224</b>

The question concerning unions follows the example of the UK pilot project. As expected, the employees of state and county archaeology, museums, universities, and research institutes are mem-

bers of the services union VerDi. Civil servants are organised in the DBB, Deutscher Beamtenbund.

## 7. Qualifications

### 7.1. Qualification shortages

The determination of qualification shortages and the training needs of employees is a major issue in the European study. As previously mentioned, specialised training is almost never offered by the archaeological organisations in Germany, neither for job entrants, nor for experienced staff. Therefore, it is not surprising that far more than half of the institutions reported qualification shortages within their organisations. The monitoring of training needs and the success of training programmes does not occur in Germany.

**Table 39:** Responses to various questions regarding employee qualifications.

Question	Yes	%	No	%	No info	%	No. of Organisations
Is there a qualification shortage in your organisation?	81	56,3%	56	38,9%	7	4,8%	144
Does your organisation have an official training plan?	14	12,3%	91	79,8%	9	7,9%	114
Does your organisation have a training budget?	38	33,3%	66	57,9%	10	8,8%	114
Do you have direct control over your organisation's training budget?	28	24,6%	58	50,9%	28	24,5%	114
Do you record how much time employees spend on training?	45	39,5%	55	48,2%	14	12,3%	114
Do you formally evaluate the impact of training on individuals?	12	10,5%	79	69,3%	23	20,2%	114
Do you formally evaluate the impact of staff training on the organisation?	15	13,2%	78	68,4%	21	18,4%	114
Does your organisation have an incentive system for positive training results?	11	9,6%	84	73,7%	19	16,7%	114
Does your organisation encourage its employees to participate in regular training programmes?	81	71,1%	21	18,4%	12	10,5%	114

### 7.2. Need for know-how and services

The questionnaire also aims to determine to what extent external specialists are used to fill gaps in know-how and services within archaeology in Germany. Regarding general, non-specialised tasks, the responses clearly show a large need for EDP services, followed by editing and layout work, business support and foreign language translations. All other areas, including that of leadership and project management, play a minimal role.

**Table 40:** Functions provided in the last two years by external, non-archaeological specialists for the organisations. The choices were pre-set (112 responses).

112 responses = 100%	external non-archaeological specialists	Responses
Leadership/Org. leadership	12,5%	14
IT	43,8%	49
Personnel management	8,9%	10
Courses for trainers (to become trainers)	3,6%	4
Marketing	9,8%	11
Planning consultation	8,0%	9
Project management	8,9%	10
Management (accounting, taxes, etc.)	27,7%	31
Foreign languages (translation, corrections)	23,2%	26
Customer care	2,7%	3
Editing (layout, etc.)	35,7%	40
Other	15,2%	17

**Table 41:** “Other” reported functions (Table 40)

Natural scientific dating methods (C14, AMS, etc.)
Legal proceedings and law suits
Heritage management laws
Chemists, archivists
Research/analysis
Pedology/geology/geophysics
Building research, dendro dating
Exhibition architecture and design
Natural scientist and technicians
Accompanying studies in non-archaeological disciplines
Rhetoric
Ground excavation
CAD systems
Construction engineer
Geoscience, surveying technique
environmental audits

The majority of complete contracts that were given to external parties, for example public laboratories, or private firms, were for Palaeo-anthropological analysis. Other services included archaeological botany, archaeozoology, geophysical prospection, and finds restoration. In the case of contracts that were partially given to external specialists, additional archaeological work on finds / features and excavations dominate.

**Table 42:** Services completed by external archaeological specialists for the organisations over the last two years.

119 responses = 100%	ext. archaeol. specialists - complete contracts	Responses	ext. archaeol. specialists - partial contracts	Responses
Excavations	6,7%	8	24,4%	29
Non-intrusive prospections (field surveys, geophysics, aerial photography, etc.)	26,1%	31	22,7%	27
Conservation/restoration of finds	21,8%	26	23,5%	28
Additional work on finds/archaeological analysis	10,9%	13	25,2%	30
Archaeozoological analysis	27,7%	33	10,9%	13
Archaeobotanical analysis	29,4%	35	9,2%	11
Anthropological analysis	31,9%	38	13,4%	16
Geodesy	10,1%	12	8,4%	10
Other	15,1%	18	4,2%	5

**Table 43:** “Other” reported services (Table 42)

external archaeol. specialists complete contracts	Pedology research
	Geo-archaeology
	14C, AMS-Dating
	Up-dating the list of registered ancient monuments
external archaeol. specialists partial contracts	Underwater archaeology
	Documentation system and long-term archiving
	Scientific colloquiums, administrative law
	Museum pedagogy and didactic
	Museum design and furnishing, additional park development
	Illustration of finds (free of distortion, true to scale, with directed lighting)
	Geoarchaeology
	Use of metal detectors
	CAD-usage, databanks, survey technique
	Environmental audit, expert opinions
	Geoarchaeology (pedology and soil chemistry)
	Specialized photography, illustration technique, inventory, etc.
	“The question is no longer relevant because of [our] integration in the larger unit Kulturelles Erbe RPL”
	Gen.; scientific progress (meetings)
Training trips: Roman and bronze period sites in the Alps	
CAD systems, digital documentation on excavations, data archiving	

### 7.3. Training methods

**Table 44:** Non-archaeological training planned by the organisations for the next two years.

<b>112 responses = 100%</b>	<b>Planned training</b>	<b>Responses</b>
Leadership/Org. leadership	8,9%	10
IT	49,1%	55
Personnel management	8,9%	10
Courses for trainers (to become trainers)	4,5%	5
Marketing	10,7%	12
Planning consultation	4,5%	5
Project management	13,4%	15
Management (accounting, taxes, etc.)	11,6%	13
Foreign languages (translation, corrections)	3,6%	4
Customer care	5,4%	6
Editing (layout, etc.)	15,2%	17
Other	8,9%	10

**Table 45:** "Other" non-archaeological training reported (Table 44)

scientific colloquia, administrative law
museum didactics, collection management
degree course management
fundraising
software training
technical abilities (CAD, surveys, databases)
CorelDraw, EDP-training, Access, Freehand
job safety

**Table 46:** Archaeological training planned by the organisations for the next two years.

<b>119 responses = 100%</b>	<b>Planned training</b>	<b>Responses</b>
Excavations	43,7%	52
Non-intrusive prospections (field surveys, geophysics, aerial photography, etc.)	23,5%	28
Conservation/restoration of finds	14,3%	17
Additional work on finds/archaeological analysis	44,5%	53
Archaeozoological analysis	7,6%	9
Archaeobotanical analysis	7,6%	9
Anthropological analysis	5,9%	7
Geodesy	10,9%	13
Other	12,6%	15

**Table 47:** "Other" non-archaeological training reported (Table 46)

Documentation system and long-term archiving
Scientific colloquiums, administrative law
Museum pedagogy and didactic
Museum design and furnishing, additional park development
Illustration of finds (free of distortion, true to scale, with directed lighting)
Geoarchaeology
Use of metal detectors
CAD-usage, databanks, survey technique
Environmental audit, expert opinions
Geoarchaeology (pedology and soil chemistry)
Specialized photography, illustration technique, inventory, etc.
Gen.; scientific progress (meetings)
Training trips: Roman and bronze period sites in the Alps
CAD systems, digital documentation on excavations, data archiving

**Table 48:** Training opportunities for staff in the organisations.

	<b>Yes</b>	<b>No</b>	<b>No info</b>		<b>Responses</b>
Do you hire <b>archaeologists</b> without previous work experience?	39	68	25		132
	<b>very little</b>	<b>little</b>	<b>moderate</b>	<b>much</b>	
If yes, how much support do you provide new entrants with training (on average)?	5	3	18	13	39
	<b>very poor</b>	<b>poor</b>	<b>well</b>	<b>very well</b>	
How well are university graduates prepared for their profession, in your opinion?	7	47	37	6	97
How well do currently available training courses match the requirements of the profession, in your opinion?	8	46	29	1	84

**Table 49:** Training possibilities for different employees in the organisations.

<b>135 responses = 100%</b>	<b>Yes</b>	<b>%</b>	<b>No</b>	<b>%</b>	<b>No info</b>	<b>%</b>
Paid staff	100	74,1%	18	13,3%	17	12,6%
Volunteer staff	34	25,2%	11	8,1%	90	66,7%
1-Euro-workers	16	11,9%	21	15,6%	98	72,6%
ABM workers	9	6,7%	12	8,9%	114	84,4%

**Table 49:** Training methods of the organisations.

<b>101 responses = 100%</b>	<b>Paid staff</b>	<b>%</b>	<b>Volunteer staff</b>	<b>%</b>	<b>1-Euro-workers</b>	<b>%</b>	<b>ABM</b>	<b>%</b>
Formal training outside the organisation	44	43,6%	9	8,9%	9	8,9%	2	2,0%
Formal training within the organisation	43	42,6%	15	14,9%	4	4,0%	4	4,0%
Individual training outside the organisation	58	57,4%	7	6,9%	8	7,9%	3	3,0%
Individual training within the organisation	58	57,4%	21	20,8%	12	11,9%	4	4,0%

**Table 48:** Importance of training in the organisations.

<b>127 responses = 100%</b>	<b>not very</b>	<b>%</b>	<b>only a little</b>	<b>%</b>	<b>moderate</b>	<b>%</b>	<b>very</b>	<b>%</b>
How important do you consider vocational training for your staff to be?	2	1,6%	9	7,1%	62	48,8%	54	42,5%

## 8. Appendix I: Profiles

A total of 363 post profiles with information on 2,271 employees were returned. There were no special instructions regarding the reporting of different post titles. In all, 149 different post titles were reported. These were bundled into 15 profiles, in part with specialisations.

### 8.1. All employees

All Employees			2.271 employees		
	<b>Number</b>	<b>%</b>	<b>Gender</b>	<b>Number</b>	<b>%</b>
Paid	1.906	83,9%	Women	717	37,0%
Volunteer	220	9,7%	Men	1.220	63,0%
1-Euro-workers	90	4,0%	<b>Total</b>	<b>1.937</b>	<b>100,0%</b>
ABM	55	2,4%			
<b>Total</b>	<b>2.271</b>	<b>100,0%</b>	<b>Qualifications</b>		
<b>Age</b>			Habilitation	88	5,0%
under 20 yrs	21	1,1%	PhD	361	20,7%
20-29 yrs	263	13,6%	Other University degree	418	24,0%
30-39 yrs	468	24,3%	Fachhochschule degree	98	5,6%
40-49 yrs	585	30,4%	Technical training	141	8,1%
50-59 yrs	450	23,4%	Apprenticeship	359	20,6%
over 60 yrs	140	7,3%	School certificate	280	16,0%
<b>Total</b>	<b>1.927</b>	<b>100,0%</b>	<b>Total</b>	<b>1.745</b>	<b>100,0%</b>
			temporary job	571	37,0%
Full-time	1.617	75,5%	permanent job	974	63,0%
Part-time	525	24,5%	<b>Total</b>	<b>1.545</b>	<b>100,0%</b>
<b>Total</b>	<b>2.142</b>	<b>100,0%</b>	employed over 24 months	743	
<b>Salary</b>			<b>Job financing</b>		
---			budgeted, "planned" job	906	56,7%
			"unplanned" job	249	15,6%
			project-funded job	442	27,7%
			<b>Total</b>	<b>1.597</b>	<b>100,0%</b>
<b>Category</b>	<b>Number</b>	<b>%</b>	<b>States</b>	<b>Number</b>	<b>%</b>
State Archaeologists	1.143	54,0%	BB	192	8,5%
County Archaeologists	123	5,8%	BE	57	2,5%
Museums	188	8,9%	BW	484	21,3%
Universities	280	13,2%	BY	264	11,6%
Private Firms	325	15,4%	HB	8	0,4%
Research Institutes	58	2,7%	HE	113	5,0%
<b>Total</b>	<b>2.117</b>	<b>100,0%</b>	HH	6	0,3%
<b>Activity Grouping</b>			MV	103	4,5%
Excavations/ fieldwork/ field research	1.114	63,1%	NI	285	12,5%
planning consultation/ management	60	3,4%	NW	411	18,1%
museum/ public relations/ publications	132	7,5%	RP	63	2,8%
research/ teaching	189	10,7%	SH	111	4,9%
other administrative functions	271	15,3%	SL	19	0,8%
<b>Total</b>	<b>1.766</b>	<b>100,0%</b>	SN	77	3,4%
			ST	13	0,6%
			TH	65	2,9%
			<b>Total</b>	<b>2.271</b>	<b>100,0%</b>



## 8.2. Scientists

### Scientists

	Number	%
Paid	721	91,0%
Volunteer	60	7,6%
1-Euro-workers	8	1,0%
ABM	3	0,4%
<b>Total</b>	<b>792</b>	<b>100,0%</b>

### Age

under 20 yrs	0	0,0%
20-29 yrs	53	7,0%
30-39 yrs	209	27,4%
40-49 yrs	271	35,6%
50-59 yrs	170	22,3%
over 60 yrs	59	7,7%
<b>Total</b>	<b>762</b>	<b>100,0%</b>

Full-time	567	76,4%
Part-time	175	23,6%
<b>Total</b>	<b>742</b>	<b>100,0%</b>

### Salary

min. salary	15.000,00 €
average salary	38.395,50 €
max. salary	90.000,00 €

Category	Number	%
State Archaeologists	348	43,9%
County Archaeologists	51	6,4%
Museums	32	4,0%
Universities	193	24,4%
Private Firms	133	16,8%
Research Institutes	35	4,4%
<b>Total</b>	<b>792</b>	<b>100,0%</b>

### Activity Grouping

Excavations/ fieldwork/ field research	239	43,2%
planning consultation/ management	57	10,3%
museum/ public relations/ publications	65	11,8%
research/ teaching	167	30,2%
other administrative functions	25	4,5%
<b>Total</b>	<b>553</b>	<b>100,0%</b>

### 792 Employees

Gender	Number	%
Women	249	32,7%
Men	513	67,3%
<b>Total</b>	<b>762</b>	<b>100,0%</b>

### Qualifications

Habilitation	80	11,3%
PhD	338	47,8%
Other University degree	282	39,9%
Fachhochschule degree	7	1,0%
Technical training	0	0,0%
Apprenticeship	0	0,0%
School certificate	0	0,0%
<b>Total</b>	<b>707</b>	<b>100,0%</b>

temporary job	246	37,7%
permanent job	406	62,3%
<b>Total</b>	<b>652</b>	<b>100,0%</b>

employed over 24 months	320
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### Job financing

budgeted, "planned" job	371	63,1%
"unplanned" job	66	11,2%
project-funded job	151	25,7%
<b>Total</b>	<b>588</b>	<b>100,0%</b>

States	Number	%
BB	104	13,1%
BE	46	5,8%
BW	111	14,0%
BY	116	14,6%
HB	1	0,1%
HE	38	4,8%
HH	3	0,4%
MV	35	4,4%
NI	56	7,1%
NW	139	17,6%
RP	40	5,1%
SH	24	3,0%
SL	7	0,9%
SN	50	6,3%
ST	4	0,5%
TH	18	2,3%
<b>Total</b>	<b>792</b>	<b>100,0%</b>

### 8.3. Technical personnel

#### Technical Personnel

	Number	%
Paid	434	95,2%
Volunteer	10	2,2%
1-Euro-workers	10	2,2%
ABM	2	0,4%
<b>Total</b>	<b>456</b>	<b>100,0%</b>

#### Age

under 20 yrs	1	0,2%
20-29 yrs	30	7,1%
30-39 yrs	101	23,8%
40-49 yrs	144	34,0%
50-59 yrs	120	28,3%
over 60 yrs	28	6,6%
<b>Total</b>	<b>424</b>	<b>100,0%</b>

Full-time	371	82,1%
Part-time	81	17,9%
<b>Total</b>	<b>452</b>	<b>100,0%</b>

#### Salary

min. salary	10.000,00 €
average salary	28.872,50 €
max. salary	48.000,00 €

Category	Number	%
State Archaeologists	295	64,7%
County Archaeologists	16	3,5%
Museums	24	5,3%
Universities	45	9,9%
Private Firms	62	13,6%
Research Institutes	14	3,1%
<b>Total</b>	<b>456</b>	<b>100,0%</b>

#### Activity Grouping

Excavations/ fieldwork/ field research	224	64,4%
planning consultation/ management	3	0,9%
museum/ public relations/ publications	19	5,5%
research/ teaching	14	4,0%
other administrative functions	88	25,3%
<b>Total</b>	<b>348</b>	<b>100,0%</b>

#### 456 Employees

Gender	Number	%
Women	161	38,0%
Men	263	62,0%
<b>Total</b>	<b>424</b>	<b>100,0%</b>

#### Qualifications

Habilitation	0	0,0%
PhD	4	1,0%
Other University degree	55	14,2%
Fachhochschule degree	55	14,2%
Technical training	104	26,8%
Apprenticeship	124	32,0%
School certificate	46	11,9%
<b>Total</b>	<b>388</b>	<b>100,0%</b>

temporary job	91	25,5%
permanent job	266	74,5%
<b>Total</b>	<b>357</b>	<b>100,0%</b>

employed over 24 months	179
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#### Job financing

budgeted, "planned" job	276	75,6%
"unplanned" job	19	5,2%
project-funded job	70	19,2%
<b>Total</b>	<b>365</b>	<b>100,0%</b>

States	Number	%
BB	20	4,4%
BE	9	2,0%
BW	54	11,8%
BY	86	18,9%
HB	3	0,7%
HE	2	0,4%
HH	3	0,7%
MV	35	7,7%
NI	51	11,2%
NW	92	20,2%
RP	17	3,7%
SH	19	4,2%
SL	6	1,3%
SN	27	5,9%
ST	1	0,2%
TH	31	6,8%
<b>Total</b>	<b>456</b>	<b>100,0%</b>

## 8.4. Administrative staff

### Administrative staff

	Number	%
Paid	155	66,5%
Volunteer	71	30,5%
1-Euro-workers	3	1,3%
ABM	4	1,7%
<b>Total</b>	<b>233</b>	<b>100,0%</b>

### Age

under 20 yrs	0	0,0%
20-29 yrs	18	8,1%
30-39 yrs	28	12,6%
40-49 yrs	66	29,6%
50-59 yrs	80	35,9%
over 60 yrs	31	13,9%
<b>Total</b>	<b>223</b>	<b>100,0%</b>

Full-time	80	44,0%
Part-time	102	56,0%
<b>Total</b>	<b>182</b>	<b>100,0%</b>

### Salary

min. salary	16.000,00 €
average salary	23.210,50 €
max. salary	45.750,00 €

Category	Number	%
State Archaeologists	71	30,5%
County Archaeologists	5	2,1%
Museums	98	42,1%
Universities	36	15,5%
Private Firms	15	6,4%
Research Institutes	8	3,4%
<b>Total</b>	<b>233</b>	<b>100,0%</b>

### Activity Grouping

Excavations/ fieldwork/ field research	36	14,3%
planning consultation/ management	36	14,3%
museum/ public relations/ publications	25	9,9%
research/ teaching	3	1,2%
other administrative functions	152	60,3%
<b>Total</b>	<b>252</b>	<b>100,0%</b>

### 233 Employees

Gender	Number	%
Women	131	58,7%
Men	92	41,3%
<b>Total</b>	<b>223</b>	<b>100,0%</b>

### Qualifications

Habilitation	1	0,6%
PhD	6	3,7%
Other University degree	17	10,5%
Fachhochschule degree	16	9,9%
Technical training	16	9,9%
Apprenticeship	81	50,0%
School certificate	25	15,4%
<b>Total</b>	<b>162</b>	<b>100,0%</b>

temporary job	16	12,6%
permanent job	111	87,4%
<b>Total</b>	<b>127</b>	<b>100,0%</b>

employed over 24 months	88
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### Job financing

budgeted, "planned" job	102	71,3%
"unplanned" job	13	9,1%
project-funded job	28	19,6%
<b>Total</b>	<b>143</b>	<b>100,0%</b>

States	Number	%
BB	8	3,4%
BE	1	0,4%
BW	25	10,7%
BY	30	12,9%
HB	2	0,9%
HE	38	16,3%
HH	0	0,0%
MV	0	0,0%
NI	16	6,9%
NW	40	17,2%
RP	4	1,7%
SH	42	18,0%
SL	3	1,3%
SN	0	0,0%
ST	8	3,4%
TH	16	6,9%
<b>Total</b>	<b>233</b>	<b>100,0%</b>

## 8.5 Workers

### Workers

	Number	%
Paid	436	77,2%
Volunteer	22	3,9%
1-Euro-workers	61	10,8%
ABM	46	8,1%
<b>Total</b>	<b>565</b>	<b>100,0%</b>

### Age

under 20 yrs	5	1,2%
20-29 yrs	130	31,6%
30-39 yrs	108	26,3%
40-49 yrs	85	20,7%
50-59 yrs	65	15,8%
over 60 yrs	18	4,4%
<b>Total</b>	<b>411</b>	<b>100,0%</b>

Full-time	479	85,1%
Part-time	84	14,9%
<b>Total</b>	<b>563</b>	<b>100,0%</b>

### Salary

min. salary	9.700,00 €
average salary	18.536,50 €
max. salary	34.500,00 €

Category	Number	%
State Archaeologists	424	75,0%
County Archaeologists	31	5,5%
Museums	4	0,7%
Universities	0	0,0%
Private Firms	105	18,6%
Research Institutes	1	0,2%
<b>Total</b>	<b>565</b>	<b>100,0%</b>

### Activity Grouping

Excavations/ fieldwork/ field research	519	99,8%
planning consultation/ management	0	0,0%
museum/ public relations/ publications	0	0,0%
research/ teaching	0	0,0%
other administrative functions	1	0,2%
<b>Total</b>	<b>520</b>	<b>100,0%</b>

### 565 Employees

Gender	Number	%
Women	121	29,4%
Men	290	70,6%
<b>Total</b>	<b>411</b>	<b>100,0%</b>

### Qualifications

Habilitation	0	0,0%
PhD	0	0,0%
Other University degree	24	8,5%
Fachhochschule degree	5	1,8%
Technical training	5	1,8%
Apprenticeship	107	37,8%
School certificate	142	50,2%
<b>Total</b>	<b>283</b>	<b>100,0%</b>

temporary job	129	50,0%
permanent job	129	50,0%
<b>Total</b>	<b>258</b>	<b>100,0%</b>

employed over 24 months	85
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### Job financing

budgeted, "planned" job	98	26,4%
"unplanned" job	141	38,0%
project-funded job	132	35,6%
<b>Total</b>	<b>371</b>	<b>100,0%</b>

States	Number	%
BB	45	8,0%
BE	0	0,0%
BW	262	46,4%
BY	22	3,9%
HB	0	0,0%
HE	0	0,0%
HH	0	0,0%
MV	33	5,8%
NI	84	14,9%
NW	91	16,1%
RP	2	0,4%
SH	26	4,6%
SL	0	0,0%
SN	0	0,0%
ST	0	0,0%
TH	0	0,0%
<b>Total</b>	<b>565</b>	<b>100,0%</b>

## 9. Appendix II: Comments

### 1. State archaeologists

“Number of employees: Pupil apprentices, helpers, sci[entists],...hourly, full contracts. Difficult to comment. Better in Part 2.9: The university graduates that we hire are well prepared; others have no chance. Mostly through own initiative (e.g. excavation experience).”

“With a total of 10 employees (sci. + techn.) training is not practicable: everyone learns for him/herself and we discuss things together.”

“In Part I all employees in heritage management are included (archaeology, architectural monuments, inventory, Dept. 25); in Part II only archaeologists. Information on age, gender, staff qualifications and nationality in Part II not provided. There are some female archaeologists with university degrees employed as “workers” in the heritage management of this state.”

### 2. County archaeologists

“The phenomenon of excavation firms is not sufficiently examined in the questionnaire.”

“We employ Zivildienstleistende<sup>5</sup> who have to participate in regular training activities. However, there are no specialized training programmes for heritage management/archaeology. This is to be desired and should be implemented throughout the country.”

### 3. Museums

“In addition to analytical and methodological practices, the communicative functions of archaeology in museums and in the media should be more formally studied and more clearly presented in order to increase general acceptance of archaeological research in society.”

“Constant changes to the legal system and the absence of a uniform practise (esp. with regard to “Hartz IV”) among the federal employment offices, counties, and commercial institutions (temporary employment agencies and var. employment associations) pose barriers to on-going work and, of course to training. In the case of changes in personnel after ½ -2year periods, each time- and work investment must be discussed - and that is exhausting.”

### 4. Universities

“In universities, training is offered particularly in non-archaeological areas, such as languages, IT, etc. – i.e. areas in which permanent scientific staff are already competent. Therefore low level of participation.”

### 5. Private firms

“We do not employ 1-Euro-workers and ABM<sup>16</sup>- personnel. We employ student help to a large extent. Archaeological measures in relation to construction projects is a main focus of our work.”

“All employees are employed as freelancers and work together as colleagues.”

“We are going to end our activities in the archaeological sector. The pay has gone from bad to worse, it’s almost impossible to feed a family with this (causes: price dumping, demand (contracts) is declining). At the same time the scientific requirements from the state departments are rising, we have to do work that’s not paid for. The worst is the following: There is almost no respect for us at

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<sup>5</sup> Community service in lieu of military service.

<sup>6</sup> Government employment programmes

any social level. Politicians (or political parties) are the worst. Their main argument against archaeology is that we should, please, not make the contractor/investor angry.”

“In commercial project-archaeology, proceeds are stagnating or sinking, while the requirements of the supervisory and specialized authorities are rising. Specialized scientific-technical handling (such as “analyses/evaluations”) are almost never funded. It’s more important to keep the costs of the contractor/funder low. High-quality measurement techniques are always asked for, but not financed. Publications of all kinds are always private affairs. Where are all of the training programmes geared to the specific needs of those involved? Who takes advantage of them, who offers them? Either I don’t know about them, or they don’t exist.”

“As a one-man company, I organise mainly archaeological study trips.”

“Our company works closely with the training organisation of the archaeological research divers. Because of this, and the business sector underwater archaeology, wetlands archaeology there is a continual need for further training. Our company is a main force in the development of methodology for underwater excavations.”

“University studies for Pre- and Early History in Germany are not practice-oriented enough. Training for field archaeologists and excavation directors is neglected.”

“Our training system is not formal; everyone should do their best to determine where his/her strengths are: surveying, documentation, preparation of finds, computer work, etc. Some employees also take advantage of the chance to work as trainees in the state archaeological department in the winter.”

“Let the excavation firms work in Baden-Württemberg, too. Contracts are often awarded arbitrarily by the government departments.”

“We do not perform excavations any more.

- technical work, model-building, reconstructions
- lectures, guides
- “Trips into the Past” for children + adults – hands-on and learning tours”

“What about retirement benefits? What kind of insurance protection do employees have?”

“I am a self-employed archaeologist in a one-man company, no employees.”

“We perform non-intrusive geophysical prospection. We don’t dig.”

[Non-profit organisation:] “Because of the structure of our organisation, it should be noted that I only included long-term employees. We also perform many jobs, including archaeological excavations, with volunteers. In 2007, roughly 120 people were active in this area. They are led by our archaeologists on the digs and we have developed a training programme for them. Through our cooperation with several universities, there are many students who work on our excavations as part of their university study-excavations, as trainees, or, as postgraduates, who direct portions of excavations. These are not included in our figures, however.”

## 10. Appendix III: Covering Letter and Questionnaire

Verband der  
Landesarchäologen  
in der  
Bundesrepublik  
Deutschland



Der Vorsitzende

Landschaftsverband Rheinland/  
Rheinisches Amt für Bodendenkmalpflege  
Endenicher Str. 133  
D-53115 Bonn

Dear Sir/Madam,

Dear Colleagues,

The Verband der Landesarchäologen represents Germany in the EU project “Discovering the Archaeologists of Europe” (Leonardo Programme). The goal of this project is to compile data on the professional situation of archaeologists in Europe and to identify trends in the labour market.

The project is based on two British studies from 1997/98 (Kenneth Aitchison: Profiling the Profession. A Survey of Archaeological Jobs in the UK) and 2002/03 (Kenneth Aitchison, Rachel Edwards: Archaeology Labour Market Intelligence: Profiling the Profession 2002/03) and on a comparable Irish study from 2002 (CHL Consulting Co. Ltd.: Profile of the Archaeological Profession and Education Resources in Ireland). The results of these studies have been published in print and made available online ([www.discovering-archaeologists.eu](http://www.discovering-archaeologists.eu)).

In 2006 the project “Discovering the Archaeologists of Europe” was launched in order to establish an information base that can be used to compare and analyze the professional situation of archaeologists throughout Europe. Participating countries are the United Kingdom (Institute of Field Archaeologists), Belgium (University Leuven), Greece (Syllogos Ellinon Archaiologon, Association of Greek Archaeologists), Ireland (Institute of Archaeologists of Ireland), Malta (Superintendence of Cultural Heritage), the Netherlands (Vereniging van Ondernemers in Archaeologie, Association of Archaeological Entrepreneurs), Slovenia (University of Ljubljana, Faculty of Arts), the Czech Republic (Institute of Archaeology of the Academy of Sciences of the Czech Republic, Prague; European Association of Archaeologists, Prague), Cyprus (Ministry of Communications and Works, Department of Antiquities), and Germany (Verband der Landesarchäologen in der Bundesrepublik Deutschland, Association of State Archaeologists in Germany).

The questionnaire before you has adapted the British example to the situation in Germany. All information provided will, of course, remain confidential and will be used solely for the purpose of preparing statistics for the EU project. After the data has been compiled, all questionnaires will be destroyed, making future correlations between the data and the participating institutions impossible.

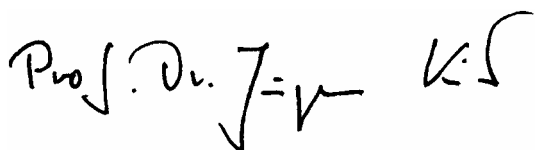
The questionnaire is addressed to public institutions and private firms that employ archaeologists and technical personnel in archaeological functions. It is being sent to museums, the relevant state departments, county archaeologists, universities and commercial companies.

We would appreciate it if you would return the completed questionnaire by **September 10, 2007** to **Ms. Carla Nübold, M.A. (Verband der Landesarchäologen, Landesamt für Denkmalpflege, Berliner Str. 12, 73728 Esslingen, Tel. 0711/90445-141 / mail: [carla.nuebold@rps.bwl.de](mailto:carla.nuebold@rps.bwl.de))**.

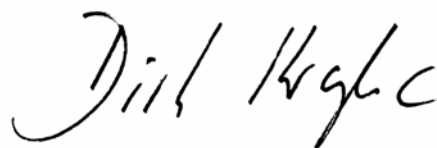
We ask you kindly to assist us in this matter and to respond to the questionnaire. Please also return the questionnaire even if you do not want to provide information on certain items. Should you have any questions, please feel free to contact Ms. Nübold at any time.

Thank you for your support.

Yours sincerely,

Handwritten signature of Prof. Dr. Jürgen Kunow in black ink, consisting of the text 'Prof. Dr. J. Kunow' followed by a stylized signature.

(Prof. Dr. Jürgen Kunow)

Handwritten signature of Priv.-Doz. Dr. Dirk Krausse in black ink, consisting of the text 'Dirk Krausse' followed by a stylized signature.

(Priv.-Doz. Dr. Dirk Krausse)



# Discovering the Archaeologists of Europe

A project of the Institute of Field Archaeologists (IFA) in Reading, UK together with the Verband der Landesarchäologen in Germany. This questionnaire is supported by funds from the Leonardo da Vinci Programme of the EU.

## Part I: The Organisation L11

The director or management of each institution is asked to fill out this part of the questionnaire for the entire organisation.

### 1. Organisational structure and field of activity

Please tick one box that best describes your organisation's structure and main focus of activity.		Excavations/Prospections	Consultation	Museum/Exhibitions	Research/Teaching	Publications
	State archaeology					
	County archaeology					
	University/Research institute					
	Museum					
	Private firm					
	Other					

### 2. Geographic location

Where is your institution based?	State:			
Please indicate the geographic reach of your activities.	regional	national	international	

### 3. Number of staff

Please indicate the number of staff, paid and unpaid, currently working for your institution, including those with part-time and fixed-term contracts.		Paid staff		Volunteers		1-Euro-Workers		ABM-workers	
	Archaeologists								
	Others								
	Total								

Did the number of staff change during last year? Please indicate the minimum and the maximum.		Paid staff		Volunteers		1-Euro-workers		ABM-workers	
		min	max	min	max	min	max	min	max
	Archaeologists								
	Others								
	Total								

### 4. Salary scales

Are the salaries in your institution tied to an official scale system?		Yes	No	No info
If yes, please indicate which scale system	TVÖD federal/county			
	TVÖD state			
	BBesG (Bundesbesoldungsgesetz)			
	other (please specify)			

## 5. Trade unions

Are there any trade unions in your institution?		Yes	No	No info
If yes, which unions are these?	VerDi			
	DBB			
	IG Bau (IG Bauen Agrar Umwelt)			
	other (please specify)			

## 6. Staff employment in the past and estimation of future employment figures

Please indicate how the numbers of employees (in terms of full-time equivalents) have changed in the last years and how you anticipate the numbers to change in the future. Please include employees with part-time and fixed-term contracts.	How do the numbers of employees one year ago (2006) compare to the present?						
	Paid staff	more	same	less	none	no info	not active
	Volunteers	more	same	less	none	no info	not active
	1-Euro-workers	more	same	less	none	no info	not active
	ABM-workers	more	same	less	none	no info	not active
	How do the numbers of employees three years ago (2004) compare to the present?						
	Paid staff	more	same	less	none	no info	not active
	Volunteers	more	same	less	none	no info	not active
	1-Euro-workers	more	same	less	none	no info	not active
	ABM-workers	more	same	less	none	no info	not active
	How do the numbers of employees five years ago (2002) compare to the present?						
	Paid staff	more	same	less	none	no info	not active
	Volunteers	more	same	less	none	no info	not active
	1-Euro-workers	more	same	less	none	no info	not active
	ABM-workers	more	same	less	none	no info	not active
	How do you anticipate the numbers of employees in one year (2008) to compare to the present?						
	Paid staff	more	same	less	none	no info	
	Volunteers	more	same	less	none	no info	
	1-Euro-workers	more	same	less	none	no info	
	ABM-workers	more	same	less	none	no info	
	How do you anticipate the numbers of employees in 3 years (2010) to compare to the present?						
	Paid staff	more	same	less	none	no info	
	Volunteers	more	same	less	none	no info	
	1-Euro-workers	more	same	less	none	no info	
ABM-workers	more	same	less	none	no info		

## 7. Quality standards

Which quality standards are relevant for your institutions?	International Standards Organisation (ISO 9000)	
	Basic principles to ensure good scientific practise (recommendations of the DFG 1998)	
	Excavation standards of the state archaeologists	
	other (please specify)	
Which qualifications do you require of persons to direct an excavation?		

## 8. Staff training

Is there a need for training in your institution?	Yes	No	No info		
Do your employees have the opportunity to participate in training measures?	Paid staff		Volunteers		
	Yes	No	No info		
	Yes	No	No info		
	1-Euro-workers		ABM-workers		
Yes	No	No info	Yes	No	No info
If you answered "yes" to any of the questions, please indicate how you train your staff.	Paid staff		Volunteers	1-Euro-Workers	ABM-workers
	formal training outside the organisation				

formal training in the organisation				
individual training outside the organisation				
individual training in the organisation				
		Yes	No	No info
Does your institution have an official training plan?				
Does your institution have a training budget?				
Is your institution's training budget directly under your control?				
Do you record the amount of time that employees spend on training?				
Do you evaluate the impact of training on individuals?				
Do you evaluate the impact of staff training on your institution?				
Does your institution have a motivation system for positive training results?				
Does your institution encourage employees to engage in continuing professional development?				

## 9. Training supply and demand

Do you hire <b>archaeologists</b> without previous work experience?	Yes	No	No info	
If yes, how much support do you provide new entrants with training (on average)?	very little	little	moderate	much
How well are university graduates prepared for their profession, in your opinion?	very poor	poor	well	very well
How well do currently available training courses match the requirements of the profession, in your opinion?	very poor	poor	well	very well

## 10. Skills gaps

Usage of external specialists or consultants for non-archaeological purposes	Has your institution brought in external specialists or consultants for non-archaeological purposes in the last year?			Yes	No
If yes, please indicate in which areas they were active in your organisation.	leadership/management		project management		
	information technology		business skills (accounting, tax consulting etc.)		
	personnel management				
	training (training to become trainer)		foreign languages (translations, corrections)		
	marketing		customer relations		
	planning consultation		editing (layout, etc.)		
	other (please specify)				

Usage of external specialists or consultants for archaeological purposes	Has your institution brought in external specialists or consultants for archaeological purposes in the last year?			Yes	No
If yes, please indicate in which areas they were active in your organisation.			complete responsibility	partial responsibility	
	conducting excavations				
	conducting non-intrusive prospections (field investigations, geophysics, aerial photography, etc.				
	conservation/restoration of finds				
	scientific preparation/archaeological evaluations				
	archaeozoological evaluations				
	archaeobotanical evaluations				
	anthropological evaluations				
	geodesy				
other (please specify)					

Which non-archaeological skills are a training priority	leadership/management		project management	
	information technology		business skills (accounting,	

in your organisation over the next two years? Please choose up to three.	personnel management		tax consulting etc.)	
	training (training to become trainer)		foreign languages (translations, corrections)	
	marketing		customer relations	
	planning consultation		editing (layout, etc.)	
	other (please specify)			

Which archaeological skills are a training priority in your organisation over the next two years? Please choose up to three.	conducting excavations	
	conducting non-intrusive prospections (field investigations, geophysics, aerial photography, etc.	
	conservation/restoration of finds	
	scientific preparation/archaeological evaluations	
	archaeozoological evaluations	
	archaeobotanical evaluations	
	anthropological evaluations	
	geodesy	
other (please specify)		

### 11. Vocational training

How important do you consider further vocational training for your staff to be?	very little	little	moderate	much
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### 12. Further comments

If you have any further comments about issues that were not covered in this questionnaire, please outline them here.	
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If you have any comments on this questionnaire, please mention them here. We welcome all suggestions.	
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Now please complete **Part II** of this questionnaire: **Post profiles**

## Discovering the Archaeologists of Europe

### Part II: Post Profiles

L1

Please complete this form for every post in your institution, including scientists, technical personnel (excavators, restorers, illustrators, photographers, etc.), other staff members, and workers. Please use one formula for each **profile**, and not one for each person.

Please copy this part of the questionnaire as often as necessary.

Post title (e.g. scientist, restorer, technician, excavation director, etc.)	
number of paid employees with this profile	
number of volunteers with this profile <sup>7</sup>	
number of "1-Euro-workers" in this profile	
number of ABM-workers in this profile	

Please choose the main focus of activities of employees with this profile. Choose only one focus.	excavations/fieldwork/field research	
	planning consultation/management	
	museum/public relations/publications	
	research and teaching	
	other administrative work	

Number of employees with this profile by age and gender		paid staff		volunteers		1-Euro-workers		ABM-workers	
		♂	♀	♂	♀	♂	♀	♂	♀
	under 20 yrs								
	20-29 yrs								
	30-39 yrs								
	40-49 yrs								
	50-59 yrs								
	overt 60 yrs								

Salary		Public sector (eg. A13, A14, E13, E14)	other institutions, gross annual salary	
	minimum			
	maximum			
	average			
Are there additional benefits (perks)?		Yes	No	No info
Do you offer a bonus for strong performance?		Yes	No	No info

Full- and part-time staff (Please indicate the number of employees.)		paid staff		volunteers		1-Euro-workers		ABM-workers		
		Full-time 100%								
		Part-time 50%								
Other (Please specify % and No.)		%		%		%		%		

Contract length of paid staff (Please indicate the number of employees)	Up to 3 months		12-24 months	
	3-6 months		over 24 months	
	6-12 months		Permanent / no limit	

<sup>7</sup> including Zivildienstleistende and those engaged in a year of voluntary community service

Actual length of employment to date/length of volunteer work (Please indicate the number of employees)		paid staff	volunteers	1-Euro-workers	ABM-workers
	Up to 3 months				
	3-6 months				
	6-12 months				
	12-24 months				
over 24 months					

Funding of jobs in the public sector (Please indicate the number of employees)	budgeted, planned jobs	“unplanned jobs”	project funded jobs

Were there any job vacancies within this profile that were hard to fill and advertised for over six months in the past year?	Yes	
	No	
	No info	

How many of the people with this profile have one of these qualifications? (for those with multiple qualifications, please count only the highest one)		paid staff	volunteers	1-Euro-workers	ABM-workers
	Habilitation				
	PhD				
	college degree				
	Fachhochschule degree				
	technical qualification				
	apprenticeship				
school graduate					

Where were these qualifications completed? (Please indicate number of employees)	Germany	
	Other EU country	
	Non-EU country	

Citizenship of the employees in this profile <sup>8</sup> (Please indicate number of employees)		paid staff	volunteers	1-Euro-workers	ABM-workers
	Germany				
	Other EU country				
	Non-EU country				

Number of handicapped people in this activity profile (Please indicate number of employees)	paid staff	volunteers	1-Euro-workers	ABM-workers

<sup>8</sup> This part of the form was used by many of the participating countries in order to have a base for comparison (the issue is very important for some). There was no racist intent whatsoever behind the question.

## 11. Appendix IV: Salary Tables

### Salary Group E

Group	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
E 1		1325.00	1350.00	1380.00	1410.00	1485.00
E 2	1495.00	1660.00	1710.00	1760.00	1875.00	1995.00
E 2Ü	1550.00	1720.00	1785.00	1865.00	1920.00	1965.00
E 3	1625.00	1805.00	1855.00	1935.00	2000.00	2055.00
E 4	1650.00	1835.00	1960.00	2030.00	2100.00	2145.00
E 5	1740.00	1930.00	2030.00	2125.00	2200.00	2250.00
E 6	1820.00	2020.00	2120.00	2220.00	2285.00	2355.00
E 7	1855.00	2060.00	2195.00	2295.00	2375.00	2445.00
E 8	1985.00	2205.00	2305.00	2400.00	2505.00	2570.00
E 9	2125.00	2360.00	2480.00	2810.00	3070.00	
E 10	2410.00	2680.00	2885.00	3090.00	3480.00	
E 11	2505.00	2780.00	2985.00	3295.00	3745.00	
E 12	2595.00	2885.00	3295.00	3655.00	4120.00	
E 13	2900.00	3225.00	3400.00	3740.00	4210.00	
E 13Ü		3225.00	3400.00	3705.00	4490.00	
E 14	3150.00	3500.00	3705.00	4015.00	4490.00	
E 15	3485.00	3870.00	4015.00	4530.00	4920.00	
E 15Ü	4400.00	4890.00	5355.00	5660.00	5735.00	

### Other Salary Groups

€	0	1	2	3	4	5	6	7	8	9	10	11	12	13-15
A 2		1559.12	1596.76	1634.42	1672.08	1709.73	1747.40	1785.06						
A 3		1624.14	1664.20	1704.27	1744.33	1784.42	1824.49	1864.57						
A 4		1661.03	1708.22	1755.37	1802.56	1849.73	1896.90	1944.06						
A 5		1674.46	1734.86	1781.79	1828.71	1875.65	1922.57	1969.52	2016.45					
A 6		1714.10	1765.64	1817.17	1868.70	1920.22	1971.75	2023.30	2074.82	2126.34				
A 7		1789.43	1835.75	1900.60	1965.43	2030.26	2095.11	2159.97	2206.25	2252.57	2298.90			
A 8			1901.55	1956.94	2040.04	2123.13	2206.21	2289.33	2344.72	2400.11	2455.52	2510.91		
A 9			2025.93	2080.45	2169.13	2257.81	2346.49	2435.18	2496.14	2557.12	2618.07	2679.05		
A 10			2182.95	2258.70	2372.31	2485.95	2599.57	2713.21	2788.95	2864.70	2940.43	3016.18		
A 11				2516.37	2632.80	2749.22	2865.65	2982.08	3059.70	3137.30	3214.94	3292.57	3370.18	
A 12				2706.24	2845.07	2983.86	3122.68	3261.48	3354.02	3446.54	3539.08	3631.64	3724.17	
A 13				3046.12	3196.01	3345.91	3495.79	3645.68	3745.60	3845.53	3945.47	4045.40	4145.33	
A 14				3170.29	3364.68	3559.06	3753.42	3947.80	4077.38	4206.96	4336.55	4466.13	4595.72	
A 15							4127.56	4341.27	4512.23	4683.19	4854.16	5025.13	5196.09	
A 16							4558.75	4805.90	5003.65	5201.39	5399.10	5596.82	5794.55	

€	0	1	2	3	4	5	6	7	8	9	10	11	12	13-15
R 1		3271.30	3421.20	3500.12	3703.66	3907.22	4110.77	4314.33	4517.89	4721.43	4925.00	5128.55	5332.11	
R 2				3987.38	4190.94	4394.47	4598.04	4801.60	5005.16	5208.72	5412.24	5615.81	5819.34	
R 3	6403.98													
R 4	6780.26													
R 5	7211.96													
R 6	7619.63													
R 7	8016.19													
R 8	8429.50													
R 9	8942.69													
R 10	10990.66													

€	0	1-15
<b>W 1</b>	3600.55	
<b>W 2</b>	4113.02	
<b>W 3</b>	4994.39	

€	0	1-15
<b>B 1</b>	5196.09	
<b>B 2</b>	6044.72	
<b>B 3</b>	6403.98	
<b>B 4</b>	6780.26	
<b>B 5</b>	7211.96	
<b>B 6</b>	7619.63	
<b>B 7</b>	8016.19	
<b>B 8</b>	8429.50	
<b>B 9</b>	8942.69	
<b>B 10</b>	10536.34	
<b>B 11</b>	10947.08	

€	1	2	3	4	5	6	7	8	9	10
<b>C 1</b>	2846.25	2946.20	3046.12	3146.04	3245.99	3345.91	3445.82	3545.75	3645.68	3745.60
<b>C 2</b>	2852.48	3011.74	3171.00	3330.27	3489.51	3648.76	3808.03	3967.27	4126.52	4285.78
<b>C 3</b>	3141.07	3321.38	3501.71	3682.04	3862.36	4042.68	4222.99	4403.30	4583.63	4763.96
<b>C 4</b>	3989.99	4171.25	4352.52	4533.79	4715.07	4896.33	5077.60	5258.84	5440.11	5621.37

€	11	12	13	14	15
<b>C 1</b>	3845.53	3945.47	4045.40	4145.33	
<b>C 2</b>	4445.01	4604.27	4763.52	4922.78	5082.03
<b>C 3</b>	4944.27	5124.59	5304.91	5485.22	5665.54
<b>C 4</b>	5802.65	5983.90	6165.17	6346.44	6527.71



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