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june
2008
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With a commercial approach to archaeology now widespread, academics across the world have been looking toward quality management. **Willem Willems** and **Monique van den Dries** explain why

Archaeology is changing. It is no longer purely an academic endeavour but is becoming increasingly commercialised. There have always been quality-related issues in archaeology, but there are now new challenges and varying approaches to quality in archaeological practice which is no longer dominated by the academic world.

A characteristic of previous generations of archaeologists is that they were motivated by a deep and genuine interest in the past, whether they could make a good living out of it or not. Their career – if any – was in the pursuit of knowledge about the past and they usually worked as a curator or academic. It was almost taken for granted that one did one's utmost to achieve the highest quality results in such a context.

But the practice of archaeology has changed a great deal in recent years and this assumption has come into question. This change dates back to the 1960s when archaeologists became aware that their source material was rapidly disappearing, while only a tiny fraction of the information could be recorded by rescue operations. Its survival needed a more fundamental approach, requiring archaeologists to influence the political and socio-economic decision-making process and to gain the support of the general public.

In most of the western world, existing notions of historic preservation through the legal protection of

ancient monuments were replaced by more dynamic concepts of managing archaeological resources in the framework of spatial planning systems. Gradually, this moved into legal frameworks. This first took place in the US in the 1960s, a decade or so later in many parts of Europe and has since spread around the world. As a result archaeological research became an obligatory part of construction-related planning processes and created a vast increase in archaeological fieldwork.

As long as archaeology was largely an academic discipline, the issue of quality management was never seriously addressed. The question arose with the introduction of commercial archaeology. Commercial work depends on market principles to operate and this is still only the case to a limited degree in archaeology. The 'archaeological market' is predominantly an artificial creation that exists because the state wants archaeological information and creates legislation with which developers have to comply. The product bought from an archaeological contractor is not of interest to a developer and moreover has to be delivered to the state. Thus, there is no economic impetus for quality of the archaeological product and there are strong motives for wanting to buy it as cheaply as possible.

A response to this situation would be for the state, which after all intends to secure archaeological information, to provide regulatory mechanisms to counterbalance undesirable effects of the artificial market. This is indeed what happens in many countries. Controlling the access of archaeological contractors to the market is one such tool. In many countries a permit is needed before archaeological services may be supplied, while government supervision is another relatively common mechanism.

However, a government-based solution is not readily available everywhere. Notably in certain countries, state interference is normally limited, so the problems posed by the market have mostly been dealt with through private mechanisms. In several countries this has led to the creation of professional associations that established standards of performance on the one hand and defined ethical principles on the other. Depending on the social and legal national context in countries where this type of organisation now exists, it may have a role in

defining the profession and in developing systems of quality control. It may also embody aspects of a trade union and be involved with training and education. In many other countries, however, these types of organisation have not even begun to be created. Despite the fact that the need for such an organisation may not be felt in some systems, it seems likely that this will happen in future years, as more countries change to market systems for archaeology.

Apart from the need for quality management as perceived by archaeologists and arising from academic and public concerns, the need for quality techniques was also stimulated by the interaction between the traditional approach of archaeologists and the commercial approach of builders and developers. As well as being an active form of research, all archaeological fieldwork is also a production process, the quality of which can, in principle, be improved by controlling the process of the work, the methodology and techniques that are used, the staff employed and the end-product. In fact, as archaeological research became part of complex and strictly organised planning or building processes, reliable project management skills were demanded from archaeological contractors.

A third aspect to quality management is the social relevance of archaeology. Societies need archaeology. What precisely this need consists of is discussed in a wealth of recent archaeological literature and is hotly debated in journals such as *Public Archaeology* and at meetings of the World Archaeological Congress. From the simple fact that the management of archaeological resources is supported by legislation as well as public budgets, it can be deduced that it does contribute to the well-being of society.

The need for quality management in the archaeological discipline has been dealt with in various ways, depending on the situation and the available legal frameworks in different countries. Some countries, such as Ireland and some German states, have allowed commercial archaeology for many years but have not defined minimum scientific and technical requirements, meaning mechanisms for quality control are largely a matter for individual companies. Others, such as Romania and Sweden, do not have commercial archaeological contractors, but an elaborate quality control system, primarily based on the

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need to make archaeology available to the public. A third possibility is that a country allows commercial archaeology but only under the provision of an elaborate system of quality control. This is the case in the Netherlands.

A free-market system for archaeology was introduced in the Netherlands in 2001 in order to cope with the increasing amount of work that a policy change had generated and which had created substantial funding of research. Until then a very restrictive licensing system – by which only universities, the State Archaeological Service and municipalities could obtain an excavation permit – was used to guarantee the quality and relevance of archaeological investigation. But with the introduction of commercial archaeology, the need for a quality assurance system became apparent.

Firstly, it was necessary to clarify the responsibilities of the various parties that are involved in the archaeological heritage management process. In the Netherlands, a fair treatment of the archaeological resource and acquisition of knowledge about the past remains the government's responsibility and it is felt this cannot be guaranteed by the mechanisms and instruments of private parties. Therefore, the Ministry of Education, Culture and Science set up a system in which the local, regional or national authorities decide on what must be investigated. They are responsible for the project outline on the basis of which a developer can put the project out for tender to archaeological contractors.

However, this does not guarantee that the excavations, documentation and reports of the contractors meet the required academic standards. A framework of quality assurance measurements was set up to address this. One part is organised through legislation and supervision and the other depends on self-regulation by the archaeological community.

The public instrument consists of a law stating that nobody is allowed to excavate without a licence and a permit is only given to contractors who can demonstrate that they are capable of working according to the quality standard. Another way of maintaining the boundary between the publicly and the privately organised instruments was established through an independent state inspectorate which verifies whether the work is being done properly in practice.

Finally, there is a legal obligation to report all information resulting from fieldwork and other

activities to a central information system that is maintained by the state service. It includes information on all sites and finds in the Netherlands.

The private instrument of the quality system covers the quality of the work in the field by three methods. Firstly, a quality standard was developed that describes how the archaeological processes should be carried out and the requirements for the documents that are involved, such as project outlines, field drawings and reports. It also prescribes who (eg senior archaeologist, specialist) is allowed to carry out a particular activity. All critical activities must be checked, registered, and if necessary, approved by a person with a particular status.

The Dutch Archaeology Quality Standard has been successfully operational since 2001. In 2004 an English version of the standard was published by Willems and Brandt and it is available as a PDF at www.erfgoedinspectie.nl/archeologie. For comparable UK standards, visit www.archaeologists.net/modules/content/index.php.

Secondly, a professional register is being developed to define who is allowed to carry out the critical activities that the standard defines, ie which employees of the contractors meet the necessary quality requirements.

Thirdly, a research agenda was set up. This was intended to help the authorities to decide on what should be excavated or not. In the past, research goals were set by the government and by universities and towns with a municipal archaeologist. Now the majority of decisions for fieldwork lie in the hands of around 450 municipalities that do not have their own archaeologist. Therefore, the need for 'research agendas' was identified to help to guide these local authorities. There is more information at www.noaa.nl.

Whatever their background or goal, working on quality management has taught archaeologists important lessons. Firstly, defining instruments and managing both the responsibilities and the quality of procedures, products and persons, are useful approaches to quality assurance. However, it is extremely important that all of these factors operate in the way they were intended to. If one instrument is missing, the system may immediately lose its balance and coherence.



Furthermore, if a quality system is to be built from scratch, it is necessary to get commitment from the entire archaeological community. This can be accomplished by involving stakeholders from all subfields. With so many people involved, it may take a while to achieve consensus, but the result will be that almost the entire community approves. This is necessary from a quality management perspective, but it also emancipates the discipline of archaeology.

A final lesson, however, is that quality management

may be an important tool for archaeologists, but it is not a cure-all. A quality assurance system is not enough to guarantee the quality of the knowledge that is gained from the archaeological work. It is difficult to maintain the academic quality that we have been used to and to simultaneously benefit from the more efficient and modern approaches stemming from commercial archaeology. Nevertheless, this will be one of the most important challenges for archaeologists over the forthcoming decade. 🍷

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They are the authors of *Quality Management in Archaeology*, published by Oxbow Books.

Quality in archaeology in the Netherlands

At this point it is hard to assess whether quality techniques in archaeology in the Netherlands are working in practice. Major parts of the system, such as a professional register, have not yet been fully implemented and the legal framework, within which the system is meant to function, has only just become operational.

But there are already some positive effects. A growing number of archaeologists are complying with the standard and most fieldwork meets its demands. Effectively, the quality of data and documentation is more comparable and coherent and therefore more durable and accessible for future analytical research. Furthermore, all information on sites is recorded in the central archaeological information system and the results of field projects are generally published within two years. This is a huge improvement in comparison with the traditional situation and the benefits for future research will be enormous.

A final positive effect has been the experience of the entire archaeological community in the Netherlands working together to develop the individual parts of the quality system. Without a doubt, ties have been strengthened across the discipline.

Nonetheless, there are still aspects that need serious attention. While most procedural demands are met during work in the field, there seems to be less attention given to scientific demands. In recent years studies have shown that the quality of knowledge products, such as project outlines, site evaluations and final reports, is far from sufficient.

At the moment the system as a whole has insufficient incentives to encourage the production of a relevant research output. The results of the various studies on the quality of the output, together with audits of the inspectorate on field projects, show that there is a growing tendency to perform field projects merely as a craft, rather than as a research enterprise. An important reason for this is that archaeological contractors have to deal with ferocious economic competition as there are not enough profitable projects to go around. As a result, they have been forced to drop their prices. This has led to the undesirable side-effect of profit margins falling below what is economically sustainable. Often there is not enough time and money to put a sustained effort into knowledge products such as excavation reports. Added to a shortage of employees who are capable of performing to an academic level while time constraints are getting worse, this may lead to a loss of quality in output.

A second reason is that most developers and builders select archaeological contractors on economic grounds and their ability to manage the project, rather than on their academic qualities. Also, within development-led archaeology there is not much focus on getting the most out of field projects in terms of knowledge gain. For instance, a lively discourse within the archaeological community in relation to development-led archaeology is lacking. Companies, municipalities and universities are largely working on their own and there is not much academic or methodological dialogue going on. In addition and as a result of being a small country, the Netherlands does not have a flourishing academic journal and there are few conferences on academic subjects. Therefore there is not a great deal of stimulation and debate for those working in the discipline in this country.