

## Building capacity through innovation: survey summary

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### Introduction

This report summarises the results of a survey undertaken as part of the *Building capacity through innovation* project (7879). The aim of the survey was to generate some baseline data from historic environment professionals who commission, specify and monitor archaeological work to better understand

- how people find out about new innovative practice
- how it is currently incorporated into working practices
- what the barriers are to consistent use and application

Members of the Chartered Institute for Archaeologists (CIfA) and the Association for Local Government Archaeologists (ALGAO) were included in the circulation and a total of 62 survey responses were received. Over half of the respondents (58%, n=36) represented Local Authorities, with 19% (n=12) representing private companies. The remaining respondents were associated with multi-disciplinary consultancies, charitable trusts, national agencies and higher/further education. The questions and responses are summarised below.

### **Does the identification and implementation of innovative techniques/methods feature in your organisation's business model/plan/strategy?**

There were 61 responses to this question with over half (62%) indicating that the identification and implementation of innovative techniques/methods **did** feature in their organisation's business model/plan/strategy. However, 23% indicated that it did not, with a further 15% being unsure either way.

**Headline:** Generally, those completing the survey were aware that their organisations were committed to identifying and implementing innovative techniques – however, the remainder were either not sure or stated that their organisation did not incorporate this. These results may also be related to the role of the person undertaking the survey and their level of knowledge related to the content of their organisation's business plan.

### **Does your organisation have a budget to facilitate research into innovation/development/research collaborations?**

There were 62 responses to this question with over half (56%) indicating that their organisation **did not** have a specific budget to facilitate research into innovation/development/research collaborations. However, 23% of respondents highlighted that their organisation did have a budget with 21% stating that they were not sure. Those with specific budgets were evenly spread across organisation types, with most associated with private companies, multi-disciplinary consultancies and charitable trusts. A smaller number were associated with national agencies and local authorities.

**Headline:** These results illustrate that while a commitment to facilitating innovation may form a key business target and be contained within a plan or strategy, in most cases there is no defined budget to support it.

**How do you tend to find out about new approaches/techniques/technologies?**

Respondents were given six categories to choose from to narrow down how new approaches/techniques/technologies are being learned about. These included: colleagues/contacts; publications/news items; specialist networks; conferences/seminars/events; web search and other. Most respondents (88%) answered colleagues/contacts in response, followed by publications/news items (71%), conferences/seminars/events (69%), specialist networks (53%) and web searches (45%). The ‘other’ category comprised Historic England Science Advisors, ALGAO working groups, social media and in-house research.

**Headline:** These answers indicate that word of mouth/networking amongst colleagues and across professional networks forms a key source of information for professionals, closely followed by publications/news items and conferences/events.

**Have you been able to apply innovative approaches to your area of archaeological practice?**

There were 60 respondents to this question; 65% indicated that they had been able to apply innovative approaches to their area of archaeological practice, while the remaining 37% had not. Of those who answered ‘No’ a lack of funding was highlighted, with one respondent also suggesting that the Cifa Standards and guidance left little room for innovation, especially in the context of quick project turnaround. Of those who answered ‘Yes’, the following examples were given:

GIS data
3D scanning
Virtual/augmented reality
Photogrammetry
ISP in sourcing ceramics, forensic reconstructions
Chemical analysis of soils – Fourier transform infrared spectroscopy (FTIR)
Ancient DNA/isotopes
Portable X-ray fluorescence (PXRF) scans on site
OSL dating techniques
Developing new HER platform
New approaches to archiving
Project management/administrative approaches and decision making

**Headline:** These results, and particularly the examples provided, illustrate that innovation is not just perceived as new technologies or techniques but also as new approaches in methodology/project management and decision making. Defining what the sector means by innovation is essential, as much innovative practice may be being missed if it is perceived by most as only applying to new technologies or practical methods.

**How do you approach incorporating the use of innovative techniques on certain projects?**

Respondents were given five categories to choose from to narrow down how innovative approaches/techniques/technologies were being incorporated into projects. These included: outlining them in the specification; communication with the client; communication with the advisor; research collaborations; and other. Of the 60 respondents, over half (68%) indicated that they used the specification to incorporate innovative techniques, followed by 42% via communicating with an advisor, 33% via communicating with the client, 30% and 30% via other means. The latter included

commissioning grants, personal advocacy (by attending conferences and presenting results) and communication with Historic England Science Advisors, consultants, developers and archaeological agents. The point was also made that innovation may be reactive and not specified at the outset of a project. In addition, while some respondents indicated that research strategies to include innovative techniques were discussed and agreed ahead of a project, others highlighted that the cost (in some cases) of employing a specific technique may be borne by the sub-contractor as it was sometimes difficult to justify additional costs to the client.

### **Do you think Regional Research Framework objectives encourage the use of innovative approaches on projects?**

There were 62 respondents to this question showcasing a clear division in opinion but also some uncertainty regarding Regional Research Framework (RRF) objectives and whether they encourage the use of innovative approaches on projects. In total, 24% answered 'Yes', 26% , answered 'No' and 35% were not sure. Other responses included the fact that some areas did not have a specific RRF, that RRFs were quite variable and the fact that RRFs in their current format were by their nature static and would be out of date relatively quickly. The development of a wiki-based format for RRFs would remedy the latter, enabling updates to practice as they happen, which would help to disseminate and encourage the application of innovative techniques/approaches as they become available.

### **LOCAL AUTHORITY ADVISORS ONLY: How do you encourage the use of innovative approaches on certain projects?**

This question was aimed specifically at Local Authority advisors to find out how they specifically encourage the use of innovative approaches on projects. Four answer options were provided as follows: in the brief/specification; as part of pre-application advice; via general communication; and other. There were 37 respondents and most (70%) stated that they used both communication and the specification for this purpose, with 43% incorporating this into any pre-application advice given. Other responses included outlining information in Post-Excavation Research Design Specifications (PERDS) (specific to Scotland), making local research strategies available online for wider comment and update, and through communicating and working collaboratively with Historic England colleagues and universities.

### **LOCAL AUTHORITY ADVISORS ONLY: What type of information would you need before recommending/approving the use of a new innovative approach/technique/method on a project?**

This question was aimed specifically at Local Authority advisors to find out what information was needed before a new approach/technique/method could be recommended for a project. Five answer options were provided as follows: evidence of previous project use; previous results to compare; practitioner feedback; published reports/grey literature; and other. There were 39 respondents with most highlighting that previous results (72%), previous use (69%) and practitioner feedback (64%) was required followed by publications/written reports (49%). Other responses included evidence of cost/benefit, applicability to certain physical site conditions (eg geology), advice from Historic England Science Advisors and reference to Historic England guidance. It was also highlighted that for some new methods and innovative approaches information and especially previous results were sometimes not easily available, but this did not always preclude their use.

### **Would a published review of new techniques/methods/case studies be useful?**

This question was directed at all completing the survey and asked if publishing a review of new techniques/methods or case studies would be useful. In total there were 61 responses with the clear majority (85%) answering 'Yes' and just 2% answering 'No'. The remaining 13% were not sure either way.

### **What other information would be useful?**

All respondents were asked what additional information would be of use to them when considering the use of innovative practices. There were six categories to choose from, including: commercial availability; cost and resource implications; timescales involving use (lead-in/delivery times); case studies; training opportunities; and other. All categories were popular, but cost and resource were the highest at 88%. The 'other' responses included highlighting the benefits of a consistent approach across Local Authorities towards innovation, and ensuring all parties were involved in the discussions.

### **What are the barriers to accessing and using innovative approaches/technologies on projects?**

Respondents were given 14 categories to choose from when asked to identify the potential barriers to using innovative approaches/technologies on projects. These included the following: cost; time pressures; lack of awareness of new approaches; training; lack of in-house expertise; equipment/software; client/advisor approval; adherence to Standards and guidance; commercial availability; lead in/delivery times associated with use; little evidence of previous use; not sure where to look to find more information; and other. There were 62 respondents to this question, and all options were highlighted as potential barriers, with the most frequent identified as cost (76%), time pressures (69%) and a lack of awareness (66%). The 'other' answers highlighted constraints associated with the planning system and the ability to justify the use of a new technique or approach for planning-led projects. Others highlighted the lack of resourcing for professionals to be able to effectively identify and contemplate the use of new approaches, in addition to the availability of some specialist services for commercial projects that require a quick turnaround, for example OSL laboratories.

### **How do you think these barriers could be overcome to achieve better awareness and application?**

There were 48 responses to this free text question, which invited comments and ideas related to how the barriers identified could potentially be overcome to achieve a better awareness of innovation and to encourage its implementation. The answers varied but the key themes focused on greater communication and collaboration between historic environment professionals; the regular circulation of thematic papers/case studies by CIfA, ALGAO and/or FAME focusing on different methods and techniques; more training/seminars/webinars to better promote opportunities and to highlight lessons learned; advice on how to be cost effective in the application of innovative techniques; the production of an online guidance document outlining different approaches, pros/cons, associated costs and applicability; and the use of current networks – for example, the Historic England Science Advisors – as a regular channel/conduit for circulating information to those within their areas.

### **Summary**

The survey information provided illustrates that the identification and application of innovative practices is variable across the sector, differing from county to county and from project to project. This is of course dependent on project circumstances and various identified barriers to implementation. The need for a more centralised and consistent approach to publicising information about new innovations utilising regular communication methods (publications/forums) was a consistent theme throughout. It is clear that regular updates and a repository of easily accessible information is required for a more sustainable and consistent approach.

This was also emphasised when conducting a search for publicised examples of innovative approaches for the purposes of a review to supplement this survey data. There are varying instances of publicised case studies and reports in a wide range of specialist journals, books and grey literature that focus on different innovative methods and techniques. However, they are dispersed, difficult to collate and not always written in relation to their commercial applications. The survey feedback indicates that specific information (related to costs/applicability in different conditions, time, etc) is required for consideration on commercial projects, so a tailored approach for a commercial audience is needed to support future implementation. A search of *The Historic Environment: Policy and Practice* journal, which is aimed at all archaeological practitioners, both professional and voluntary, also draws a

relative blank. The remit of the Journal is to demonstrate best practice, appropriate methods, and the enhancement of technical and professional skills. However, locating examples for a review proves problematic and time consuming, which again emphasises the need for a different approach to the collation and dissemination of information to professionals. The potential to utilise already existing member and specialist networks (CIfA, ALGAO, FAME and Historic England – specifically the Historic England Science Advisors) to support the regular dissemination of updates should be considered.