

Evaluation of research and professional activity of research-oriented institutes of the Czech Academy of Sciences for the period 2015–2019

Final Report

Name of the Institute: Institute of Archaeology of the CAS, Prague, v. v. i.

Evaluated teams and their leaders:

1. Department of Prehistorical Archaeology (Petr Květina)
2. Department of Medieval Archaeology (Jana Maříková Kubková)
3. Department of Natural Sciences and Archaeometry (Alžběta Frank Danielisová)
4. Department of Information Sources and Landscape Archaeology (David Novák)

Part A: Evaluation of the institute

Strengths:

- The largest archaeological institution in the Czech Republic;
- irreplaceable role in archaeology in the Czech Republic due to current legislation (Act No. 20/1987 Coll., On State Monument Care);
- key research infrastructure and central information system;
- excellent position and visibility in the international context;
- effective executive management;
- quality and capacity of the staff; increasing number of international projects;
- increasing number of excellent outputs with international impact;
- close cooperation with universities regarding PhD study programmes.

Weaknesses:

- Insufficient institutional subsidies;
- lack of funding for high-profile research equipment;
- heritage management burden;
- salaries not competitive with some neighbouring countries.

Opportunities:

- ambitious strategic plan;
- archaeological science laboratory which could act as a hub for Czech archaeology;
- developing research directions "Beyond Europe" and "Cross-cultural studies";
- strengthening of collaboration with CAS Institute of Archaeology in Brno.

Threats:

- Insufficient funding, unpredictable political decisions related to a new Act on National Heritage.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
Researchers of the IAP have reached internationally excellent results as well as world-leading results.	
H1.2	Contribution of workers on the outputs reached
Participation of researchers is quite evenly distributed among all evaluated teams.	
H1.3	Quality of all outputs and results
The IAP has produced more than 900 outputs. Compared to the previous evaluation period, the number of articles in impact-factor journals has increased significantly (roughly threefold; currently approx. 10% of all outputs). However, the prevalence of articles in other journals can be clearly seen (approx. 50%). Chapters in scientific books and contributions to proceedings also form a significant portion (approx. 30%). A total of 69 books have been published, mostly by the IAP or by Czech publishing houses; nevertheless, a trend in publishing monographs internationally is also noticeable (with Archaeopress Oxford,	

Archaeolingua, Oxbow Books, Habelt Verlag or Sidestone Press). Generally, the results presented include both internationally excellent outputs and publications of great national importance, showing the field's strong anchoring in the national context.	
H1.4	The most valuable discoveries and findings in the fields, their importance for the field
<p>Research of rondels in Neolithic Europe; participation in the research of ancient European DNA (the study of the formation of Bronze Age populations in Europe); the collaborative work on archaeogenetics is of world-leading importance.</p> <p>Landscape archaeology studies and application of remote sensing techniques have maintained an excellent position.</p> <p>The assessment of the long-term archaeological research on the Prague Castle and Vyšehrad Castle can be included among the most valuable research results of national importance.</p> <p>Development of the Archaeological Information System (AIS CR) ranked the Czech Republic among the top in this field.</p>	
H1.5	Contribution of the participation of the authors in large collaborations
The IAP has significantly increased its involvement in large international projects during the evaluated period. The given strategy ensures that this trend will not only be maintained, but also intensified.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
The outputs are of a high societal relevance and strongly reflect the mission of both the CAS and the Institute. The new strategy (see below) may significantly increase its international scope.	
H2.2	System functionality for knowledge transfer into practise, its usefulness for society. The impact of the institute's activity on proper practice in society in the area of social sciences and humanities
<p>The IA has an irreplaceable role in archaeology in the Czech Republic. It provides a research infrastructure of key importance (Archaeological Information System of the Czech Republic, the Archaeological Map of the Czech Republic, Digital Archive of the AMCR and other services).</p> <p>IAP manages the most extensive specialised library in the country.</p> <p>Due to Act No. 20/1987 Coll., On State Monument Care, the IA is responsible for a specific segment of national heritage management. Close cooperation with the Institute of National Heritage makes it possible to share data at the national level. Involvement in projects such as ARIADNEplus or SEADDA ensures compatibility of the Archaeological Information System with the international environment.</p> <p>The IAP also has an important coordination role in the field and ensures high standards in field research.</p>	
H2.3	Relation to practice
Relation to practice is shown by research services (see above) and extensive rescue research activities focused on archaeological sites endangered by modern development	

(contractual research) and also the transfer of technologies (e. g., AMCR software and data).	
H2.4	Participation in AV21 strategy
The IAP is involved in the programmes “Europe and the State: Between Barbarism and Civilisation” and “Digital Humanities - Memory in the Digital Age”. A number of activities have contributed to the fulfilment of the strategy, e.g. exhibitions with large societal impact (“The Heritage of Charlemagne” or “Restoration of Prague Castle in 1918-1929”) and the creation of websites “Archaeological Atlas of the Czech Republic” or the “Portal of Non-professional Collaborators in Archaeology”.	
H2.5	Cooperation with regions of the Czech Republic
The irreplaceable role of the IAP based on Act No. 20/1987 Coll., On State Monument Care, is reflected in coordination and supervisory activities in all regions of Bohemia (e.g. Archaeological Regional Committees). In addition to rescue excavations concentrated mostly in Prague and Central Bohemia, the IAP cooperates with a number of regional authorities and was also involved in several projects supported by the INTERREG programme.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the teams and the institute with similar international and national institutes
The IAP has a leading position at the national level and an excellent position at the international level.	
D1.2	Scope and quality of international and national cooperation and the role of the institute in such cooperation; engagement in broad international cooperation
The IAP has deepened and expanded international cooperation during the evaluated period, which has been implemented mostly on the European level. However, a trend in the extension of research cooperation to other continents can be seen (North Africa and Asia Minor). The Institute was the co-researcher of 7 international projects (e.g. ERC Consolidator Grant, Horizon2020 or Interreg). Currently, it has nearly 20 agreements (“Memoranda of Understanding”) with mostly European partners.	
D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
Workers of the IAP have been highly active in organizing sessions at conferences, workshops or entire conferences at both the international and national level as well as invited lectures. Members of the IAP and its teams received many awards and prizes (e.g. European Heritage Prize, Scientific Prize of the Czech Academy of Sciences, awards and prizes regarding books, projects etc.).	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
The proposed strategy is ground-breaking in respect to the long-term national research traditions in the field. IAP plans to implement two main conceptual changes in research	

<p>strategy: a) <i>“The connections between specialisation in specific historical periods (both in terms of personnel and team) and the project direction of the IAP and its teams shall be further broken.”</i>, b) <i>“The previously very strongly supported emphasis on the national or Central European regions shall also continue to be suppressed.”</i> This strategy is ambitious but realistic. It may ensure the leading position of the IAP at the national level and strengthen its place in the international academic context as well as increase its impact and visibility within world archaeology.</p> <p>The absence of sufficient funding of high-profile devices mentioned in the report might represent a major problem in the future.</p>	
D2.2	Assessment of the previous research objectives and their achievement
<p>Three principal goals for the period of 2015-2019 have been achieved: 1) despite the insufficient institutional subsidy, the necessary funding from other sources has been ensured (grants, contract archaeology and purpose-subsidy support from the CAS); however, the unchanged budget structure represents a potential weakness (see above); 2) the high research standard has been maintained and in many aspects increased (e.g., internationalisation or unification of national archaeological data sources); 3) the recommended restructuring of some research teams has been implemented.</p>	
D2.3	Assessment of implementation of recommendations from past evaluation
<p>All principal recommendations have been met.</p>	
D2.4	Success in receiving grants
<p>The IAP was notably successful in receiving grants on both the national (principal investigator and co-investigator) and international levels (co-investigator; a total of 43 grant projects were received).</p>	
D2.5	Adequacy of instrumental equipment
<p>It has proven to be difficult to maintain up-to-date quality of the technical and instrumental equipment of the IAP. “Insufficient instrumentation and laboratory equipment” is mentioned in the report; but a specific strategy to solve the situation was not suggested (see below).</p>	
D2.6	Effectiveness of management
<p>The IAP has a well-thought-out organizational structure and effective executive management.</p>	
D2.7	Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth
<p>The institute has a balanced qualification and age structure with a good proportion of young research assistants and researchers as well as experienced senior scientists. A large number of employees with a university degree who are not categorized as researchers probably reflects the activities of the IAP that are related to heritage management. The IAP has an effective internal evaluation system regarding the annual assessment of each researcher, which also ensures career and qualification advancement.</p>	
D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
<p>The Institute has taken effective measures to secure work-life balance. The commission has not identified any problems regarding gender issues.</p>	

D2.9	Relation of the institute with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.
Not applicable to research teams in this discipline	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
<p>Employees of the Institute taught an impressive number of courses at seven Czech universities (a total of 417!) during the evaluated period and also two courses abroad. More than 100 successfully supervised BA, MA and PhD theses show the intensive involvement of IAP researchers in the training of future archaeologists.</p> <p>In cooperation with the University of West Bohemia and the University of South Bohemia, the “Doctoral School of Archaeology” has been established and is supported by the EU Operational Program. Another joint PhD study programme was launched with Charles University in Prague.</p> <p>Many researchers are also members of academic boards and scientific councils of numerous universities and faculties in the Czech Republic and abroad.</p>	
D3.2	Effectiveness of joint research centres
We are not aware of such centres.	
D3.3	Success rate in supervision of PhD students
The report mentions fourteen successfully defended PhD theses supervised by the staff of the IAP. However, the report does not state how many PhD students out of a total of 40 supervised by researchers of the IAP have not successfully completed and how many of them are still studying.	
D3.4	Participation of PhD students in the outputs
PhD students are involved in most research projects of the IAP, and they have also participated in a corresponding number of outputs.	
D3.5	Participation of the institute in master or bachelor studies
The IAP is highly active in teaching at Czech universities (see above).	
D3.6	Assessment of cooperation intensity with universities in the form of teaching
Very intensive cooperation with most of the university departments of archaeology in the country.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
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<p>The IAP has an effective PR strategy and is highly visible in the media. Outreach activities include media outputs, public lectures, guided site tours, interactive programmes, websites, applications and other digital services for the public. The Institute also organized a number of successful national and international exhibitions, which have had a far-reaching societal impact. The public archaeology activities of the IAP are of great importance for the positive perception and understanding of the field.</p>	
D4.2	Publishing activities and its quality
<p>The IA publishes a series of monographs, two leading archaeological journals, Archeologické rozhledy and Památky archeologické (both included in the WOS), and the Castrum Pragense periodical. Publications by the IAP have long been defining excellent standards in the field.</p>	
D4.3	Participation in professional organisations in the area of research and development
<p>The secretariat of the European Association of Archaeologists has its seat in the IAP. The Institute is well represented in many professional national and international organizations (both collectively and individually), and it also mediates international contacts at the national level.</p>	

Other comments of the commission:

- An international advisory board should be implemented which would provide feedback regarding global research context and assist in further internationalisation of the IAP.
- The IAP should support cross-cultural and diachronic topics as well as the "Beyond Europe" research direction.
- The commission strongly recommends that a central archaeological science laboratory in the Department of Natural Sciences and Archaeometry of the IAP be established. This would also act as a hub for the Institute of Archaeology in Brno and generally for Czech archaeology as a whole. Such a plan would certainly require the full support of the CAS.
- The IAP should continue to strengthen the involvement of students.

Part B: Evaluation of teams

1. Department of Prehistorical Archaeology

Strengths:

- A strong group of staff with clearly defined priorities, and a significant number of publications in top-rank international journals;
- good success in bringing in grants;
- excellent progress in working with large datasets and publishing important excavations.

Weaknesses:

A big problem is the reliance on project money to support the research activities of the teams. This also causes problems in the workload relating to the administration of the projects. The need to bring in money also means that some staff members are assigned to rescue archaeology and heritage issues, which are not the primary responsibility of the Institute.

There is a further need to involve students at the undergraduate and postgraduate levels, which is currently an area of weakness.

Opportunities:

There is scope for applying for international grants, probably in collaboration with a university or foreign research organisation. This would enable the team to work in a more focused way on their research priorities.

Threats:

The pandemic has caused problems with the progress of work, and this could continue for some time. The lack of a new Heritage Act is a further problem, meaning that staff will continue to be diverted to rescue work.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
The department produced a strong set of outputs, including some of world-leading quality. Out of 24 submitted for evaluation, 18 fell into classes 1 and 2 (75%), a level not achieved by many other teams in the evaluation process.	
H1.2	Contribution of workers on the outputs reached
All team members have contributed to one or more output.	
H1.3	Quality of all outputs and results

While the selected outputs are very strong, the overall set is also good; many are in local or national journals (e.g. Arch. Rozhledy) but their quality is good, and there are others that could have been selected.	
H1.4	The most valuable discoveries and findings in the fields, their importance for the field
The publications with authors led by M. Ernée are especially strong: the cemeteries at Mikulovice and Miškovice are of international importance, expertly published. The crucial site of Bylany continues to provide material for important outputs. The article by Olalde et al (2018) is world-leading; a team member contributed to it.	
H1.5	Contribution of the participation of the authors in large collaborations
The most obvious example is the article by Olalde et al (2018), a crucial account of the Beaker phenomenon in Europe. Contributions on the amber route are also excellent, in publications by large groups of authors.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
The team has contributed in a significant way to the outreach of the Institute as a whole, for instance with many public lectures and contributions to exhibitions.	
H2.2	System functionality for knowledge transfer into practise, its usefulness for society. The impact of the team's activity on proper practice in society in the area of social sciences and humanities
The main area here concerns the heritage aspects of the work undertaken. Although this is not the team that has most to do with knowledge transfer, it has contributed to the set of activities concerned with data acquisition and processing and to the Archaeological Atlas of the Czech Republic.	
H2.3	Relation to practice
As with the Institute as a whole, the team contributes to the Digital Archive system, and makes its publications available on open access.	
H2.4	Participation in AV21 strategy
The team contributes to the work of the whole Institute on "Europe and the state: between barbarism and civilisation" and "Digital humanities - Memory in the digital age", as well as the website of the Archaeological Atlas.	
H2.5	Cooperation with regions of the Czech Republic
The team has long-standing and fruitful collaborations with Czech universities, for instance the University of West Bohemia, and collaborates with heritage institutions across the republic, not only in Prague.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
The team has built a well-deserved reputation for excellence in both excavation and analysis, and stands comparison not only with other national organisations (e.g. the Brno Institute) but also with those in neighbouring countries (notably Poland, Austria).	
D1.2	Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation
Several examples are provided of international collaborations, all of them noteworthy. In addition, the team regularly takes part in collaborations with comparable groups in Bavaria and Slovakia. Collaboration with the Max Planck Institute in Jena is especially commendable.	
D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
The team has been very active in this respect, and the list of lectures given and conferences attended is impressive. Two major awards were given to team members in the period under review.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
The team and its leader have a lively appreciation of how the group should operate. Their goals are realistic and achievable.	
D2.2	Assessment of the previous research objectives and their achievement
The objectives of the previous assessment seem to have been approached realistically. A new direction has been that of excavating in Sudan. This is work carried out in collaboration with a team from London and thus brings few risks and many opportunities.	
D2.3	Assessment of implementation of recommendations from past evaluation
The objective of enhancing international collaborations has been achieved. Although no ERC grants have been won, there has been success in boosting the size of the team through collaborations and outreach to students. The glass research has been moved to another team.	
D2.4	Success in receiving grants
As the list of grants indicates, this team has been successful in obtaining or contributing to a significant number of grants. The awards mentioned above have led to further grants.	
D2.5	Adequacy of instrumental equipment
There is sufficient and appropriate geophysical equipment, which is frequently and profitably used. Most of the equipment is considered in the remit of another team (see below).	
D2.6	Effectiveness of management
Management is apparently very effective.	

D2.7	Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth
The age structure of the team is good, with a strong preponderance of workers between 35 and 45. The qualifications of the researchers are appropriate (MA, PhD level or higher). Team members appear to have opportunities to enhance their professional skills when necessary.	
D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
We were not aware of any significant issues in these areas.	
D2.9	Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.
Not relevant to research teams in this discipline	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
The Institute as a whole has a wide range of collaborations with universities in the Czech Republic and beyond. The prehistoric team has worked especially with Charles University and the universities of South Bohemia and West Bohemia.	
D3.2	Effectiveness of joint research centres
A doctoral school of archaeology has been established, led by a member of the team. It is not stated how this is performing.	
D3.3	Success rate in supervision of PhD students
Four PhD students are listed as being supervised by team members, evidently with significant success.	
D3.4	Participation of PhD students in the outputs
The students have played a significant part in the published work of the team, as shown by the account submitted.	
D3.5	Participation of the team in master or bachelor studies
Team members have contributed many lectures and courses to study programs at these levels, though to what extent this involves supervision is not clear.	
D3.6	Assessment of cooperation intensity with universities in the form of teaching
The papers indicate a high level of cooperation in terms of giving lecture courses.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
The team has contributed to a number of outreach activities, as the papers describe, and has given a sizable number of public lectures, contributing also to exhibitions at home and abroad. The members have also been active on social media and developed apps to show off their work.	
D4.2	Publishing activities and its quality
This department has produced a good number of contributions to popular science publications in addition to its extensive output of scholar journal articles, books, and book chapters.	
D4.3	Participation in professional organisations in the area of research and development
Collaboration with institutions at home and abroad has been good, leading to developments in method, practice, and theory.	

Other comments of the commission:

2. Department of Medieval Archaeology

Strengths:

- A long research tradition related to sites of national importance and unique collections of archaeological material (e. g., Prague Castle and Vyšehrad Castle);
- the ability to assess expertly large data sets from long-term studied sites of key importance;
- a stable and highly qualified team;
- research grants;
- excellent outputs at the national level and an increasing number of excellent international results.

Weaknesses:

- Close focus on Prague and Central Bohemia ("Pragocentrism");
- only peripheral interest in areas/topics in other parts of the country or outside the Czech Republic (with some exceptions, e.g., excellent comparative study of later medieval Prague and Wrocław urban material culture or research on the Chebsko/Egerland border region and studies extending to Bavaria);
- structure of the department divided into research groups related to individual sites indicates the importance of the heritage agenda.

Opportunities:

- Implementation of an overarching research profile;
- putting studied topics into a wider European context;
- further development of international cooperation;
- further strengthening of cooperation with the archaeological sciences.

Threats:

Potentially, the possible dominance of the heritage agenda, leading to the diversion of researchers from their core areas of work.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
The selected outputs include internationally excellent results and world-leading outputs. Out of 27 outputs submitted for evaluation, 3 have been assessed as class 1, 11 as class 2, 11 as class 3 and only 2 as class 4.	
H1.2	Contribution of workers on the outputs reached
Members of the department are included in the outputs.	
H1.3	Quality of all outputs and results
Internationally published results can mostly be found in conference proceedings and edited volumes. Publications in major international journals are mostly represented by papers related to archaeological science.	

An increasing number of internationally relevant outputs represents a significant trend, which should be further supported. The monographs selected for evaluation are of great importance, and other outputs are also of high quality.	
H1.4	The most valuable discoveries and findings in the fields, their importance for the field
The assessment of long-term research on Prague Castle, Vyšehrad Castle and some other sites is of great importance on the national level.	
H1.5	Contribution of the participation of the authors in large collaborations
The CEC project and 2020 Ariadne plus program.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
The high societal relevance of outputs is underlined by the national importance of many of the sites and topics studied.	
H2.2	System functionality for knowledge transfer into practice, its usefulness for society. The impact of the team's activity on proper practice in society in the area of social sciences and humanities
The Department has been highly effective due to the amount of heritage work; workers of the team are responsible for the management of archaeological heritage at several sites of key importance, where they have established high standards of field research.	
H2.3	Relation to practice
Notably strong.	
H2.4	Participation in AV21 strategy
The AV 21 Strategy project has improved the financial security of the department.	
H2.5	Cooperation with regions of the Czech Republic
The department cooperates with regional institutions (research and project activities, exhibitions or other popularization activities).	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
The Department has an excellent position at the national level and is increasing its international visibility. Establishment of the Europa Postmedievalis conference platform by team members and the publication of a series of its proceedings (Archaeopress Oxford) demonstrates an excellent international position and the visibility of post-medieval archaeology in the IAP.	
D1.2	Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation

The Department closely cooperates with both academic and heritage institutions in the Czech Republic and has been developing international cooperation mostly in the Central European context (e.g., Leibniz-Institut für Geschichte und Kultur des östlichen Europa in Leipzig, Wrocław University, and the Polish Academy of Sciences).	
D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
The team has been highly active in this respect. The report provides information regarding many significant conferences and workshops which were organised during the evaluated period.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
The Department plans to develop further current research directions with some stronger accent on broader comparative research within the European context. Great emphasis is placed on rescue research, which is at the same time perceived as a great burden. This contradiction raises the question of whether these obligations should be shared with a specialized heritage institution (the Institute of National Heritage). The heritage management agenda appears to distract employees from fundamental research more than in other departments (according to the report).	
D2.2	Assessment of the previous research objectives and their achievement
The Department, which was established in 2017 by merging two departments (Medieval Archaeology and Prague Castle), continued most of the research directions of the previous research teams. An attempt to change the traditionally emphasized topics was made, as well as a partial shift towards broader, internationally oriented research directions. This development is desirable; it seems to be at the halfway point and should continue.	
D2.3	Assessment of implementation of recommendations from past evaluation
Recommendations from the last evaluation have mostly been met. However, the position of the post-medieval archaeology team remains unclear to the members of the commission. The team has achieved excellent results and is highly visible internationally, yet it has not been recognized as an independent research group.	
D2.4	Success in receiving grants
The Department is successful in receiving grants, especially at the national level. It should increase its effort to lead international grant projects or be involved in broader international cooperation.	
D2.5	Adequacy of instrumental equipment
See evaluation of the Institute in Part A above.	
D2.6	Effectiveness of management
The Department has effective management.	
D2.7	Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth

The team seems to be stabilised and has a balanced age structure.	
D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
See evaluation of the Institute above.	
D2.9	Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.
Not relevant to teams in this discipline	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
The Department has intensive involvement in educational activities at Czech universities.	
D3.2	Effectiveness of joint research centres
We are not aware of such centres specific to this team.	
D3.3	Success rate in supervision of PhD students
There were two successfully defended PhD theses supervised by researchers from this department. It is not stated how many PhD students out of a total of 7 supervised by the staff of the Department have not been successfully completed, and how many of them are still studying.	
D3.4	Participation of PhD students in the outputs
PhD students are involved in research projects and also participate in publications.	
D3.5	Participation of the team in master or bachelor studies
A total of 21 successfully finished BA thesis and 16 MA theses show intensive activities by researchers from this department in educational activities.	
D3.6	Assessment of cooperation intensity with universities in the form of teaching
Employees of the department are involved in teaching at five Czech universities.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
The department has a highly effective strategy with a wide range of popularisation efforts including public lectures, guided site tours, interactive programmes, websites, applications as well as both successful international and national exhibitions, with virtual exhibitions.	
D4.2	Publishing activities and its quality

A total of 269 outputs demonstrates the effectiveness of the team. The team reaches excellence at the national level, and it should maintain the trend of increasing the number of articles in high impact journals (11x) and other internationally relevant publications (books, book chapters, contributions to proceedings published internationally).	
D4.3	Participation in professional organisations in the area of research and development
Department members have a large number of memberships on editorial boards, university councils and boards and scientific committees.	

Other comments of the commission:

3. Department of Natural Sciences and Archaeometry

Strengths:

The team is well led and widely respected for the work it does. It has done excellent work in most of the fields in which it is active. It has much of the equipment it needs in house and has collaborations with other institutions where in-house support is not possible.

Weaknesses:

There is a danger that ongoing financial and staffing problems could weaken particular research areas, for instance the group working on palaeoanthropology, where two staff members are no longer part of the team (one sadly deceased). There is also a danger that resources will be insufficient to acquire new equipment or replace old.

Opportunities:

The introduction of new techniques, e.g. cementochronology, offers excellent new possibilities. The ability to collaborate with top international research teams, e.g., the Max Planck Institute in Jena, will provide opportunities for Institute researchers to publish in top journals on world-leading topics.

Threats:

The lack of a new Heritage Act means that staff will continue to be diverted to rescue work. The need for resources is a continuing threat to the viability of certain areas where there are intense financial or personnel needs.

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
There is a high level of achievement in the quality of the outputs selected. Out of 21 submissions for the Phase I evaluation, 15 achieved levels 1 or 2. Most of these were in top international journals.	
H1.2	Contribution of workers on the outputs reached
Almost all the team members contributed to at least one of the high-level outputs. There is no evidence of poor performance from any team member.	
H1.3	Quality of all outputs and results
While some of the outputs were in journals or other publications of local or national interest, in general there is a high visibility of the team's work through publication in top journals.	
H1.4	The most valuable discoveries and findings in the fields, their importance for the field
It is clear from the selected outputs that there were several outstanding achievements, for instance the work on the corpus of Celtic coins from Stradonice by J. Militký, the work on human impact on mountain areas, that on horse domestication by R. Kyselý, and that on glass by N. Venclová and colleagues. In addition, the collaborative work on archaeogenetics is of world-leading importance.	

H1.5	Contribution of the participation of the authors in large collaborations
The team has collaborations with a number of organisations at home and abroad. Examples are given of work with a whole series of institutions in the area of water environments; the archaeogenetics group has an important collaboration with other groups in Europe, while the archaeometry group works with the University of Calgary. Work on textiles in the coming period will be under the aegis of a COST programme.	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
The results obtained are regularly put before the wider world in lectures and exhibitions. This is part of the wider mission of the Institute, to make its work relevant to society at large and not just to an academic audience.	
H2.2	System functionality for knowledge transfer into practise, its usefulness for society. The impact of the team's activity on proper practice in society in the area of social sciences and humanities
The skills that team members need are frequently those that would translate easily into requirements for employability (data processing, software skills, specific skills in chemistry, biology, genetics etc). These represent a strong position to enable knowledge transfer to areas of relevance to society in general.	
H2.3	Relation to practice
The skills of team members are part of the wider remit of the Institute as a whole, as shown by the listed activities: rescue and research excavations, advice on heritage assets including Prague Castle, and the management of data.	
H2.4	Participation in AV21 strategy
While the team does not have projects specific to itself under this heading, it takes part in the activities of the Institute, including the Digital Humanities programmes, and the Archaeological Atlas of the Czech Republic.	
H2.5	Cooperation with regions of the Czech Republic
Like the Institute as a whole, the team is involved in a series of collaborations across the Republic. The results of excavation invariably mean the involvement of this team, as do efforts for the Archaeological Atlas.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
The team has done excellent work, which compares favourably with the best internationally. Obviously, it cannot be equally proficient in all areas it works in, as these represent only a selection of what might be done. In some of the highly specialised areas, notably aDNA or archaeogenetics, the Institute does not have the resources required, so it must work with those labs which do.	

D1.2	Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation
All the teams are involved in international and national collaborative efforts, which are leading to excellent outputs. A series of such collaborations are listed (North Africa, Sudan, Oman, central Asia, Paris, Jena, Uppsala, Geneva, Mannheim, etc., as well as work within the Horizon 2020 programme). Overall this is a remarkable set of achievements.	
D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
The information provided illustrates that several high-profile conferences and workshops were organised in the review period.	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
The team has developed very much in line with the perspective set out at the time of the last evaluation.	
D2.2	Assessment of the previous research objectives and their achievement
The team has critically assessed the previous period and adapted itself in accordance with the recommendations made.	
D2.3	Assessment of implementation of recommendations from past evaluation
The team has endeavoured to fulfil all the recommendations, in so far as resources allow. There has been some restructuring, notably the move of the Archaeobiology group from the Landscape team, and the Restoration laboratory coming in from Rescue Archaeology. These moves appear to have resulted in a more coherent set of research groups.	
D2.4	Success in receiving grants
A significant number of the many grants obtained by the Institute as a whole involve this team.	
D2.5	Adequacy of instrumental equipment
The Department is well-equipped for most of the tasks it undertakes, though inevitably more would be welcomed if resources were available. It was explained to us that grants can be made from the Academy centrally to obtain particularly expensive equipment, and for some projects use is made of labs abroad, with samples prepared in house. But more central support for infrastructure is necessary.	
D2.6	Effectiveness of management
As far as we could judge, the Department is very effective.	
D2.7	Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth
The age structure of the group is good, with a preponderance of staff in the range of 39-50 years and relatively few above 60. This suggests that the Department is well placed to be	

effective for many years to come. Most of the research staff have at least master's degrees, and many have doctorates.	
D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
We were not aware of any issues in this area.	
D2.9	Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.
Not relevant to research teams in this discipline	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
The document lists a large number of lectures and courses given by team members, mostly in Prague but also at other universities in the Czech Republic.	
D3.2	Effectiveness of joint research centres
We are not aware of such centres specific to this group.	
D3.3	Success rate in supervision of PhD students
Three doctoral theses were defended during the review period, which seems satisfactory.	
D3.4	Participation of PhD students in the outputs
Two FTE equivalents are filled by PhD students; the overall number is higher, and we are told that all groups involve PhD students.	
D3.5	Participation of the team in master or bachelor studies
A very large number of master's and bachelor students were supervised by team members, who presided over the defence of no less than 41 theses.	
D3.6	Assessment of cooperation intensity with universities in the form of teaching
The list of teaching provided seems more than adequate. Obviously, there could be a danger that staff would become diverted to teaching at the expense of ongoing research.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
The team has been involved in a significant amount of outreach activity, notably through the mass media but also in the form of public lectures and Open Days. Two exhibitions are listed where the Department had a significant input.	
D4.2	Publishing activities and its quality

The scholarly output is very impressive. No detailed information on publication for outreach was provided.	
D4.3	Participation in professional organisations in the area of research and development
A significant number of team members are on the international committees of research organisations, and several are on editorial boards of major journals.	

Other comments of the commission:

We believe that the work of the team is very impressive, and the department acts as the leading institution for its specialties in the Czech Republic. It would seem a good idea, therefore, if it did more to serve as a hub for these aspects for the republic as a whole and especially for the Brno Institute.

4. Department of Information Sources and Landscape Archaeology

Strengths:

- A strategy that is theoretically well-grounded and well-thought-out;
- effective interconnection between the building of the archaeology information system and
- well formulated research topics;
- excellent position of Czech landscape archaeology and application of remote sensing methods in a broad international context;
- leading position in advanced applications of digital methods in archaeology and processing
- of big data sets at the national level;
- excellent position of Czech archaeological data infrastructure in the international context; active involvement in the integration process of existing archaeology information systems in Europe;
- involvement of a significant number of young researchers.

Weaknesses:

- Budget structure;
- high percentage of project-funded staff reaching more than 50%;
- significant number of employees dependent on receiving grants.

Opportunities:

- Further integration of Czech archaeological data infrastructure at the European level;
- large potential for further large international collaboration;
- greater involvement in teaching at universities in the education of specialists who will be required in the future.

Threats:

The crucial dependence on grant-based financing represents a great potential threat not only to the department but also to the IAP and to Czech archaeology as a whole (key importance of the central information system and other infrastructure for the field); possible new legislation on the heritage and the unpredictable effects of such legislation on the obligations of staff members (especially as regards the potential new Heritage Act).

Main criterion: 1. Quality of results (H1.1-H1.5)

H1.1	Quality of selected outputs of Phase I
10 outputs were submitted, 1 fell into class 1 and 5 into class 2.	
H1.2	Contribution of workers on the outputs reached
Members of the department contributed to most parts of the selected outputs.	
H1.3	Quality of all outputs and results
Several members of the department have published articles in major international journals. The increasing number of excellent and internationally relevant outputs represents a	

significant trend which should be further supported. The selected monographs represent significant contributions to the field, and other outputs are also of a high quality.	
H1.4	The most valuable discoveries and findings in the fields, their importance for the field
Spatial analysis and modelling (for prehistoric settlement, landscape interpretation, medieval elite residences, formation processes); research results on radiocarbon dating (clustering of calibrated radiocarbon dates).	
H1.5	Contribution of the participation of the authors in large collaborations
The Department was involved in large collaborations related to several projects (LandCover6k programme, ARIADNEplus or SEADDA).	

Main criterion: 2. Societal relevance (H2.1-H2.5)

H2.1	Societal relevance of outputs and results pursuant to CAS and institute mission
<p>The work of the team is of a high societal relevance and pursuant to the mission of the CAS and the Institute.</p> <p>The societal relevance is underlined by the:</p> <ul style="list-style-type: none"> - key importance of the central archaeological information system - potential of landscape archaeology to contribute significantly to the understanding of the causes of increasing problems in contemporary land use and management, especially with respect to climatic and ecological changes. 	
H2.2	System functionality for knowledge transfer into practise, its usefulness for society. The impact of the team's activity on proper practice in society in the area of social sciences and humanities
Development of the archaeological information system and data infrastructure administration are pivotal for Czech archaeology and other historical sciences. The team plays a crucial role in defining standards in digital archaeology as well as in landscape archaeology and remote sensing.	
H2.3	Relation to practice
The team is active in the development of digital services for professionals as well as for the public (e. g., AIS CR infrastructure and using digital platforms, such as the Archaeological Atlas of the Czech Republic or the Archaeology Online portal).	
H2.4	Participation in AV21 strategy
Within the framework of the IAP strategy.	
H2.5	Cooperation with regions of the Czech Republic
The department has been developing close cooperation with all regions of Bohemia, especially with respect to the use of the central archaeological system.	

Further criterion: 1. Position in international and national context (D1.1-D1.3)

D1.1	Comparison of the team with similar international and national institutes
<p>The team has a leading position at the national level and an excellent position in a broader international context.</p> <p>It is involved in exchanging experience and preparing methodological manuals and standards in the framework of the Working Group for Archaeological Archives within the European Archaeological Council.</p>	
D1.2	Scope and quality of international and national cooperation and the role of the team in such cooperation; engagement in broad international cooperation
<p>The team cooperates intensively with both academic and heritage institutions at the national level and has been developing an effective international research network related to its research activities.</p>	
D1.3	Participation of the workers in scientific community activities (organizing of conferences and workshops, invited lectures, awards)
<p>Members of the department have been highly active in organizing sessions at conferences, workshops or entire conferences at both the international and national levels, and also in invited lectures. Publications of the team have received several awards (e.g., Archeologický atlas Čech/Archaeological Atlas of the Czech Republic and One Hundred Years in Archaeology).</p>	

Further criterion: 2. Vitality, sustainability and strategy (D2.1-D2.9)

D2.1	Direction in line with the perspective of the planned research directions
<p>The Department has an ambitious programme, with clearly defined goals in landscape studies as well as in the development of research infrastructure.</p>	
D2.2	Assessment of the previous research objectives and their achievement
<p>Almost all objectives have been achieved.</p>	
D2.3	Assessment of implementation of recommendations from past evaluation
<p>The Department was established due to the restructuring of the IAP in 2017, based on recommendations of the previous evaluation. It has met both the general recommendations for the IAP and specific recommendations for its predecessor (Department of Landscape Archaeology and Archaeobiology).</p>	
D2.4	Success in receiving grants
<p>The team has been very successful in receiving a large number of international grants (e.g. ARIADNE, INTERREG or SEADDA projects) as well as national projects.</p>	
D2.5	Adequacy of instrumental equipment
<p>See the evaluation of the Institute above.</p>	
D2.6	Effectiveness of management
<p>Highly effective.</p>	

D2.7	Assessment of professional structure, development strategy and the strategy of keeping best scientists, age structure, career and qualification growth
The Department has well balanced professional and age structures. The problems with the “the lack of competence of graduates” mentioned in the report may be addressed via targeted communications and cooperation with instructional programs.	
D2.8	Creating work-life balance conditions, assessment of approach towards possible gender issues
See the evaluation of the Institute above.	
D2.9	Relation of the team with regard to the integration, development and sustainability of the research centre funded by the National Programme of Sustainability II.
Not relevant to research teams in this discipline	

Further criterion: 3. Cooperation with universities and participation in education (D3.1-D3.6)

D3.1	Scope of cooperation with universities on national and international level
Cooperation with universities is represented by both pedagogical work (members of the team teach at four universities) and research activities, e.g., cooperation with the Faculty of Nuclear and Physical Engineering of the Czech Technical University in Prague (RAMSES project), and with the Institute of Archaeology at the University of South Bohemia (Březnice project).	
D3.2	Effectiveness of joint research centres
We are not aware of such centres specific to this group.	
D3.3	Success rate in supervision of PhD students
Two successfully defended PhD theses were supervised by the researchers of the Department. It is not stated how many PhD students out of a total of 6 supervised by the staff of the Department have not completed their degrees successfully and how many of them are still studying in their programs.	
D3.4	Participation of PhD students in the outputs
PhD students are involved in research projects and also participate in publications.	
D3.5	Participation of the team in master or bachelor studies
Three successfully finished BA theses and four MA theses were supervised by members of the Department.	
D3.6	Assessment of cooperation intensity with universities in the form of teaching
There has been intensive involvement of team members in pedagogical activities at four universities.	

Further criterion: 4. Outreach activities (D4.1-D4.3)

D4.1	Sufficiency of media strategy and activities in the area of research popularisation
The Department has a highly effective media strategy. Its wide range of popularisation efforts includes media outputs, public lectures, digital resources, websites and services for the public and exhibitions.	
D4.2	Publishing activities and its quality
Publication activities (a total of 134 outputs) indicate an increasing number of articles in high impact journals (11x) and other internationally relevant publications.	
D4.3	Participation in professional organisations in the area of research and development
Members of the Department participate in many editorial boards, university councils and boards, and scientific committees.	

Other comments of the commission:

Commission 10 - History and archaeology
Evaluated teams No.: 1, 2, 3, 4

Commission Chair: Prof. Gary B. Cohen

Commission Deputy Chair: Pavel Vařeka

Commission Members:

Peter Bugge
Alessandro Catalano
Maciej Gorny
Anthony Harding
Barbara Horejs
Dušan Kováč
Hana Píchová
Alain Soubigou