

Evaluation Results

Project: PTDC/CPC-EAT/3366/2014

Title: Ciência, História e Arte na Numária da República Portuguesa

FCT's decision (*Artigo 11º* do Regulamento)

Not Recommended for Funding

Evaluation Panel Statement and Rating

Criterion A - (i) Relevance and originality of the project proposed (based on the state-of-the-art in a determined scientific area and previous work done by the proposing team); (ii) Methodology adopted for carrying out the project; (iii) Expected results and their contribution to scientific and technological knowledge; (iv) Resulting publications and articles; (v) Contribution towards promoting and disseminating science and technology; (vi) Production of knowledge that can be incorporated into and applied to the business sector, if applicable.

- **Rating:** 9
- **Comments:** This is a strong application of a truly integrative interdisciplinary nature in the study of the history and materials of the Escudo in the Republic (1918-1976). The team has a strong track record in this area of research and the literature review is very detailed. Its originality lies in the material studies with non-destructive methods in relation to historic events (social, economic, artistic, iconographic, biographic) and political change. This will result in a coin composition database with open access on an interactive online bilingual portal and a coin photographic archive by using the Reflectance Transformation Imaging (RTI) method (surface capture under changing lightening conditions) including a built-in RTI viewer on the website for users to capture their coins. It is very detailed in the technical specifications. The outputs listed are in accordance with the criteria of evaluation: 1 book, 7 international and 2 national papers (1 journal named), 9 international and 1 national conference participation, 4 reports, organisation of 4 conferences, 1 MA, 1 software, 1 prototype, 3 promotional brochures. The project offers a strong promotion of science and technology studies in close engagement with history. The interactive website will be a key tool to publicly promote the research outcomes and new technology to validate coins online. The non-invasive techniques in the analysis of the material composition will have potential impact for future conservation and evaluation. The prototype of the RTI viewer software on the interactive website could offer commercial potential as well as the interlinkage with museums although this is not an objective of the project; there is also a reported reinforcement of the market value of coins in the past through increased research and public attention. The expected results may provide a basis for the development of other researches on the study of numismatics but also for any other area that is of social and everyday objects.

Criterion B - (i) Scientific productivity of the team (references to publications and citations in published works, other relevant indicators); (ii) Abilities and skills to adequately execute the proposed project (team configuration, Principal Investigator's (PI) qualifications); (iii) Ability to involve young researchers in training; (iv) Availability of the team and non duplication of objectives in relation to other projects underway; (v) The degree of internationalization of the team; (vi) Degree of success in previous projects in relation to the Principal Investigator (PI) (in the case of young PIs, this requirement must be assessed based on the potential revealed by the PIs curriculum vitae in the absence of prior concrete accomplishments); (vii) Level of commitment of any companies participating in the project (if applicable).

- **Rating:** 4
- **Comments:** (i) The team is composed of relatively young, early career, researchers except the two professors from History and technical experts from NOVA.ID.FCT. The CI Nuno Valerio, who is specialised in European banking history and leads the historical research at the GHES-ISEG, has an exceptionally strong track record as is also evident in the extensive publication list. The PI has a strong publication track record of scientific articles in peer-reviewed journals. (ii) The PI has not yet led a research project. The fact that there is no provision for mentoring put in place is worrying for such a large-scale project. The time commitment of 70% alone does not make up for this oversight. (iii) There is a good consideration of young researchers and also of platforms for their interactions. The team involves four BIs in history, physics, conservation science, web development and 30% of the budget is dedicated to research fellows. Young researcher will be encouraged to participate in the "Ciência Viva" program (school communications). Moreover, considering that there are young researchers (specially PhD) involved in the investigation, it is to assess whether the research can be also used in education. (iv) There is no other project listed. (v) The team is Portuguese; there is not much consideration of internationalisation. (vi) The PI has since her PhD in 2003 participated as post-doc (until 2008) and assistant researcher in a number of research projects but has not led a project yet. There are no other indications in the application or CV that this has been recognised and a strategy been put in place to manage this. This seems a serious shortfall that the applicant appears not to be aware of this. (vii) There are two involved institutes; LIBPhys in Caparica for the creation of an elemental composition database, the coin photographic archive by the RTI method; UNINOVA (Institute for Development of New Technologies) is also involved in the development of the portable RTI capture.

Criterion C - (i) Organization of the project in terms of the proposed objectives and resources (duration, equipment, size of the team, institutional and management resources); (ii) Institutional resources of the proposing and participating entities (technical-scientific, organizational and managerial and, when appropriate, co-funding capacity on the part of companies).

- **Rating:** 9
- **Comments:** (i) The PI is fully committed to the project (70%). Each task has a precise time allocation of each research member which support the clear work plan structure, task division and time schedule of this project. The management structure is very robust and provides clear details how the team will communicate with each other, e.g. weekly meeting PI and research fellows and corresponding workgroup, monthly seminars at IPFN-IST for knowledge exchange. Each project group will attend one international conference (concrete examples are listed for each group) which are budgeted for. (ii) The justification of resources is very detailed and seems appropriate. Existing equipment is listed as well as the rational for additional new equipment. There are no other co-funded sources from external sectors.

Criterion D - Contribution to the body of knowledge and competence of the National Science and Technology System (expected effects and results).

- **Rating:** 8
- **Comments:** This is a resubmission which had an "outstanding" ranking but was not funded previously. It has strengthened its team with the participation of the Centre of Economic and Social History of the School of Economics and Management (N. Valerio), the Centre of History, heritage and societal changes and the Laboratory of the South (M. Roque) (without further details of its involvement) and museum involvement (archival access at the Portuguese Bank Museum and Numismatic Museum of the Portuguese Mint House). The application has extended its research focus and builds on recent publications and acquisition of technologies and techniques

(light dome and Arduino board control for the camera). The project has a strong case for support in terms of its scientific merits with a strong publication record of the team. It envisages to contribute with new knowledge in the entanglement of historical research and material analysis of the Escudo coins during the first and second Republic. It has a strong output and dissemination plan as well as public engagement. One of its outcomes will be a software application for the interactive website and the development of non-invasive evaluation technologies as complementary techniques to study the changes of coins in terms of compositional materials and iconography within the economic, political, social, artistic historical context. It provides a strong research proposal which should produce outstanding outcomes. Furthermore, the contribution will depend on the way in which the research will put together all the scientific expertise involved and, most importantly, how they will be able to act as operational models for other related areas of study.

Criterion E - Potential economic value of the technology (if appropriate), namely in terms of its impact on the competitiveness of the national socio-economic system.

- **Rating:** 7
- **Comments:** The RTI set-up adapted for coins will be available online and might have international impact; another outcome is a portable prototype for image acquisition; there is no notion of a patent or any further economic exploitation but potential impact for use in museums and heritage institutions. (It is not clear whether the brochures will promote the prototype or the project in general) Prof. N.Valério, expert in economic and business Portuguese history from GHES-ISEG, seems key to the leveraging of the project in its historical, political component. The project is timely with the celebration of the centenary of the first commemorative Escudo and the website will be opened coinciding with the launch of the 20-cent coin.

Overall Rating: 7

Overall Comments: The research aims at finding tools for analysis and storage of the history and numismatic heritage of the Portuguese Escudo. The innovation lies in alternative systems of relief and this justifies the importance of specific and sectorial research. In addition, the project seems to be excellent in its scientific, technological and multidisciplinary conception with a strong integration of historical research that is to be brought in connection with the materials study of the Escudo coins during the first and second Republic. The team consists mainly of early career researchers, except some technicians from participating companies and two professors from history, with an exceptionally strong track record (Prof. Valerio in particular). It proposes significant outcomes that add to the understanding of the material composition of the coins and involves a strong dissemination and public engagement section including an open access interactive web application of a RTI capturing tool. It is envisaged to have significant impact albeit in a very specialist field that is very focused on Portugal and its former Empire. There is a major weakness in the proposal which is in the management section; the PI has not previously led any research projects and there is no indication of mentorship. This is easily rectified but the fact that this has not been recognised is worrying and it is questionable in how far the PI is aware of the implications of a large scale project leadership as proposed here. This is seen as purely a management issue and not to be confused with the scientific standing of the PI.