Freely accessible participatory tools for diagnosing heritage metals: a challenge for users and decision-makers

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The online availability of participatory digital applications, enabling conservation-restoration professionals-CR (collection managers, conservator-restorers) to better diagnose the materials in their care, based on databases that they contribute to enriching, meets a real need to master an expertise that is otherwise entrusted to researchers (analysts). Once they have acquired this expertise, CR professionals will consolidate their knowledge and establish a partnership with researchers, rather than a relationship of dependence, working towards the desired interdisciplinary approach.

While everyone can be satisfied with such an approach, its very existence and sustainability depend on the energy that everyone can devote to it. The organisation of dedicated training courses and workshops to raise awareness and reflect on the impact of such tools also contributes to their dissemination and gradual integration into the practices of professional communities.

For around ten years, the Haute Ecole Arc Conservation-restoration - HE-Arc CR, Neuchâtel, has been developing freely accessible, portable, low-cost, easy-to-use, easily accessible and minimally invasive analysis tools/applications for heritage metals in order to better diagnose them, in partnership with other HE-Arc domains (Engineering and Management) and by involving numerous end-user (museums, conservation-restoration laboratories, etc.). Everyone is convinced of their value. But it has to be said that the communities concerned are finding it difficult to integrate them into their day-to-day work.

By analysing the causes of this disaffection, we can try to remedy the situation. The criticism levelled at the tools developed is that mastering them requires a significant investment of time. This is true, as it is for all the tools you want to use professionally. Professionals therefore have to make choices between the tools/applications they want to use and those they need to master. Today, every professional has to carry out multiple tasks on a daily basis (administrative, IT, management) not really related to their field of expertise, which require them to use applications that are just as different from each other and which they need to use to the best of their ability. We are campaigning to ensure that the tools developed, which are considered essential to our communities, receive the investment required to master them properly. The fact that they are not only consultative but also participative encourages each user, who is a stakeholder, to become more involved. Another problem, linked to the previous one, is the lack of relevance of the results obtained. The developers have established existing databases. Enhancing these databases, through user input, is a key stage in the optimisation of tools/applications. Here again, the investment of both parties counts. Time must therefore be made available by users and also by their managers, who allocate it to them. These issues are currently being discussed as part of the Innovators Grant ENDLESS Metal project (IG16215) funded by the COST association (https://www.cost.eu/actions/IG16215/).

In addition to user issues, there is also the question of the development and sustainability of tools/applications over time. It's easy to see that a tool/application is not updated and its development stagnates. Users turn away. Institutions that host these tools/applications and invest in their maintenance must take into account the fact that they are thereby reinforcing their level of competitiveness and excellence. Their decision making is therefore strategic and must pay off in the long term through the return they derive from it.

Clearly, the implementation of participative digital tools/applications involves not only the users but also the decision-makers in the long term. The investment is far from negligible, but in the long term we can expect to see changes in the way we work, with more interdisciplinarity between professional communities.

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