Using the power of Collective Intelligence (CI) to identify new archaeology (and having fun doing it!)

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Humap, Placemaker, and DigVentures

"How do you quickly identify sites of archaeological importance without expensive field studies or hours of desk assessments by professionals?"

This was the challenge set for Humap by our partners at DigVentures. Our answer is Placemaker, a tool for harnessing collective intelligence (CI) to identify, annotate and categorise archaeology still in the ground.

DigVentures "is a platform that enables civic participation in archaeology and heritage projects"; they empower the community to get involved through crowdsourced digs and training operations.

In 2020 the world went into lockdown and DigVentures pivoted their efforts into archaeology-from-the-sofa. They needed the platform that would allow people with no prior archaeological training to analyse landscapes and locate sites of potential archaeological interest, with a view to using that data to improve existing records.

This is particularly crucial at a time when much of our landscape is at risk from the climate emergency. We need to catalogue and preserve heritage around the world before it falls into the sea!

Placemaker for exploring and annotating

For too long, creating geographic data has been the preserve of complex and often expensive desktop GIS software. This presents a formidable barrier to allowing collaboration between non-professionals who want to use tools to identify features in a landscape.

Using existing historic environment data showing extant finds and locations of importance, combined with detailed LiDAR scans of project areas and other reference materials, Humap Placemaker is a tool which allows anyone to draw and annotate on a map.

The DigVentures approach

DigVentures provides comprehensive, accredited digital training to participants, (whom they call Pastronauts!). During this process they learn about the features of the landscape they will be assessing and the process of rigorous archaeological analysis.

Guided by professionals and in groups overseen by more experience laypeople, the participants then use Placemaker to conduct a review of a small square of the landscape under study.

When new sites are identified, the platform allows people to quickly identify shapes using simple drawing tools, and annotate them according to a metadata schema.

Is this gamification?

Participants have told us that the process is pretty addictive! Having completed an assigned square, their work is assessed by more experienced team-mates, and they can then move on to another section of the study area.

Of course, this all happens non-linearly and asynchronously. People can dip in and out of their study area, providing a bite-size approach to engagement with heritage in the landscape.

We didn't set out specifically to gamify archaeology, and DigVentures didn't either. Together, we wanted to create something that made archaeology and cultural heritage accessible, democratic, and fun…three words that can definitely be applied to the gamification of archaeology and cultural heritage

The results are impressive

The outcomes were really exciting and surprised even the project team: in our first study area of 220KM^2 2,361 new sites were identified (a 60% increase in documented archaeology).

An audit of data quality (on fidelity, accuracy and completeness) shows that the data was 94% accurate (as opposed to existing data which is usually about 88% accurate).

100 people with limited or no experience in archaeology or geographic computing systems produced professionally valid results and earned significant sectoral experience.