

Remote Sensing & Citizen Participation

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Background to project

- Collaborative (Participatory) GIS research project between JS (NTU) and local communities, heritage networks and/or custodians engaged in the management, documentation and interpretation of historic buildings and cultural heritage sites
- Time scales: 3-5 years
- Funding?
- Outputs:
 - Measurable
 - Building capacity
 - Empowerment
 - Agenda for change
 - New guidance for community 'mappers'

Context

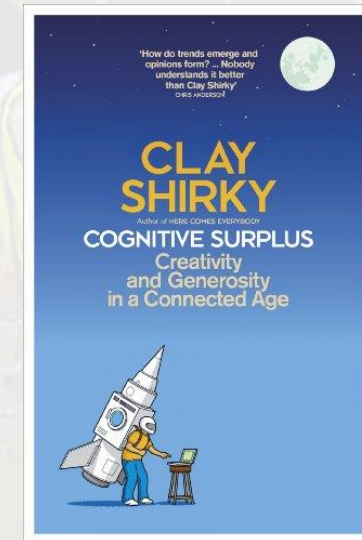
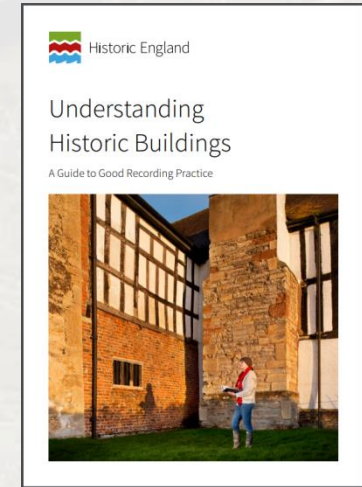
- Tangible cultural heritage constantly exposed to risk through:
 - natural and anthropic disaster
 - environmental decay
 - neglect
 - uncontrolled development
- World is losing its architectural and archaeological heritage faster than it can be documented
- Cultural and socio-economic imperative to ensure this is safeguarded for future generations
- Enshrined within most international charters (e.g. Athens 1933, Venice 1965, Burra 1979)

Rationale

- Widely acknowledged that **documentation** is key to establishing 'value & significance' as well as shaping future conservation management strategies
- Until now, largely the remit of academics, survey consultants and statutory advisors such as HE as part of ongoing management

However:

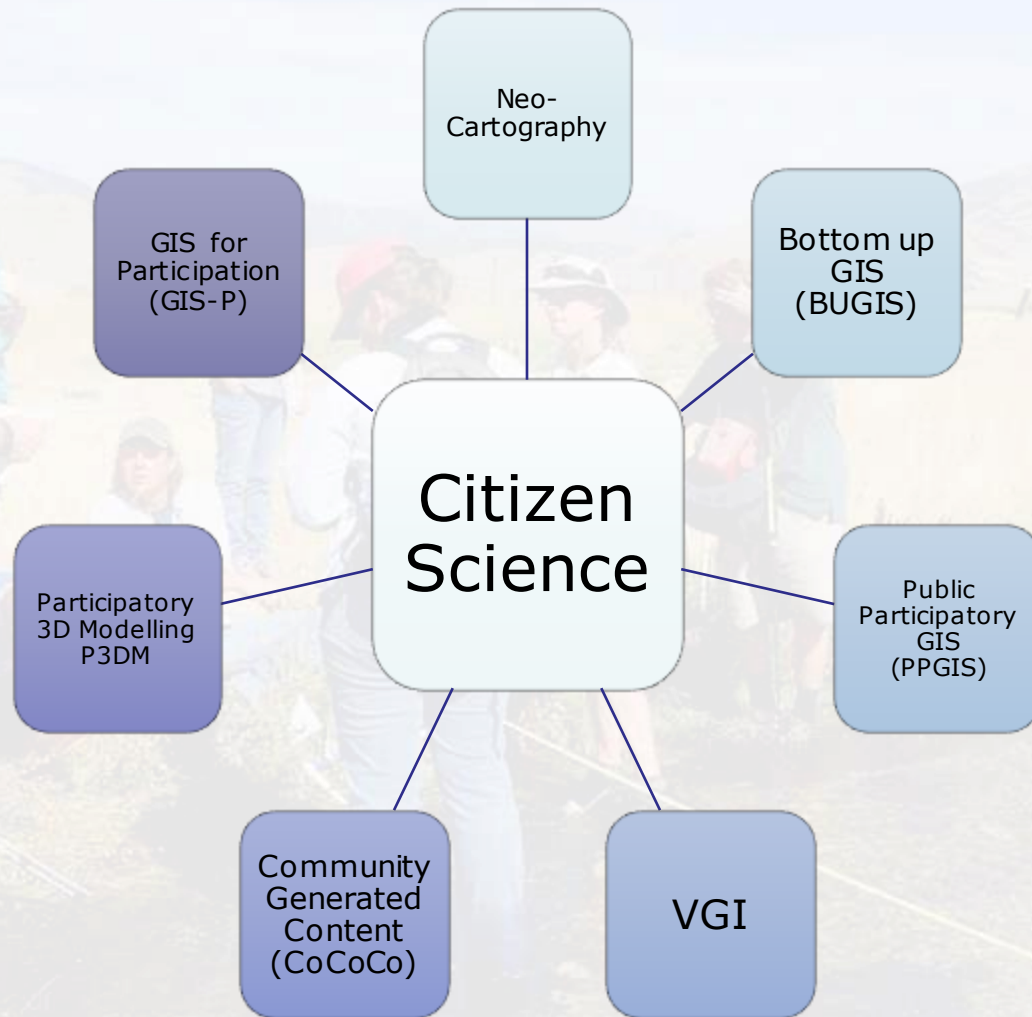
- Interest in '*citizen science*' initiatives involving SIT & GIS have burgeoned over recent decades (PGIS)



What do we mean by Participatory Geographical Information Systems (PGIS)?

- Umbrella term for a number of 'citizen science' practices
- Notoriously difficult to define, owing to its many forms
- Useful definitions:
 - *"Promotes interactive participation of stakeholders in generating and managing spatial information"* (Rambaldi, 2006)
 - *"...where citizens play an active role in collecting, sharing reporting and interpreting personally collected data to help facilitate scientific research"* (Paulos, 2009)

PGIS (also known as)



Run **CoCo** how to Run a Community Collection online



Remote Sensing

- Form of (spatial) data capture that does not rely on physical contact with the object
- Typically:
 - Ground based (Terrestrial)
 - Airborne (UAV, aircraft, satellite)
- Common techniques include:
 - Terrestrial Laser Scanning
 - Aerial LIDAR
 - Aerial Photogrammetry
 - Terrestrial Photogrammetry
 - Thermal Imaging
 - Hyperspectral imaging
 - etc.

Project Objectives

Build on earlier PGIS initiatives such as 'Know your Place' and Lincoln CC/GLHER work with 'Arches' platform to:

1. Build capacity within heritage trust networks to enhance understanding of recording/interpretation opportunities of heritage assets
2. Evaluate potential of aerial photogrammetry to visualise and model archaeological landscapes, buildings and monuments using 'off-the-shelf' low cost consumer UAV's within community led projects
3. Develop improved guidelines for the collection of aerial datasets/3D modelling within PGIS initiatives to ensure interoperability with Heritage Inventory systems such as 'Arches' and HE's *Metric Survey Specification*
4. Deepen existing community engagement & understanding of recording techniques for the development of conservation management plans and enhancement of Heritage Interpretation Programmes/presentation

What can participants expect?

- Small group 'field' workshops, with emphasis on participant led decision making
- Access and full use of university survey equipment (Total Stations, GPS and UAV platforms and laptop etc.)
- Access and ownership of all outputs/deliverables (3D models/orthophotos/vector diagrams (AutoCAD) for integration within local HER inventories and community interpretation programmes
- Improved awareness/understanding of recording techniques leading to enhanced decision making within existing/future projects

CAA & VisitEngland Launch '400ft Britain', Drone Photography & Videography Competition

BY STEVEN FLYNN | OCT 21, 2016 | DRONE FILM & PHOTO FESTIVALS



"400ft Britain", drone photography and videography competition recently launched by CAA & VisitEngland, aims to celebrate the beauty of UK's countryside while promoting safe flying.



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Public Lab Aerial Imagery in Google Earth

by gonzoearth | April 30, 2013 14:23 | 4,324 views | 0 comments | #7132

How can you help?

- Collaboration/partnership opportunities?
- Access to sites/buildings (rural?)
- Networking
 - Heritage Trust Network
 - Churches Conservation Trust
 - Canal & River Trust
 - Local community groups
- Opportunities to work with HER databases/Arches
- Buildings at risk/sites
- Funding?

Useful links

- Public Lab: citizen science community concerned with environmental matters. Found at: <https://publiclab.org/>
- Know your Place initiative. Found at: <http://www.kypwest.org.uk/>
- Co-Producing a 3D Imaging Programme at Derby Museums found at: <https://blog.sketchfab.com/co-producing-3d-imaging-programme-derby-museums/>
- National Trust's Cyril Diver Project
<https://www.nationaltrust.org.uk/studland-beach/features/the-cyril-diver-project>
- CITiZAN (Coastal and Intertidal Zone Archaeological Network) network of volunteers working across a range of UK sites
<https://citizan.org.uk/resources/key-zones/>

References

- *"Participatory spatial information management and communication in developing countries"* Rambaldi, G. et al, 2006
- *"Designing for doubt citizen science and the challenge of change"* Paulos, E., 2009.

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Any questions?

