

# What has science communication ever done for us?

Professor Richard Holliman

<http://www.open.ac.uk/people/rmh47>  
@science\_engage

Holliman, R. (2016). 'What has science communication ever done for us?' Science Communicators Association of New Zealand (SCANZ) Annual Conference, 'Connecting science and society'. Otago Museum, Dunedin, New Zealand, 14-16 November.

© Open University: <http://creativecommons.org/licenses/by/4.0>

RichardHolliman ▾ subscribe search jobs dating more ▾ UK edition ▾

theguardian  
website of the year

home UK world politics sport football opinion culture business lifestyle fashion environment tech travel browse all sections

home > science

**Science**  
Political science

# What has science communication ever done for us?

Richard Holliman

As a parliamentary inquiry into science and the public begins, I'd argue there's been a revolution in the way researchers think about science and engagement

- House of Lords, 2000
  - ‘crisis of confidence’
  - new mood for dialogue
- Connecting science & society
  - openness
  - engagement
  - digital
  - organisational change



S250 Science in Context

# connecting science and society: communication & engagement

- Making Science Public
- Science Made Public
- Publics Making Science



[University of Nottingham](https://www.nottingham.ac.uk)

# Part 1:

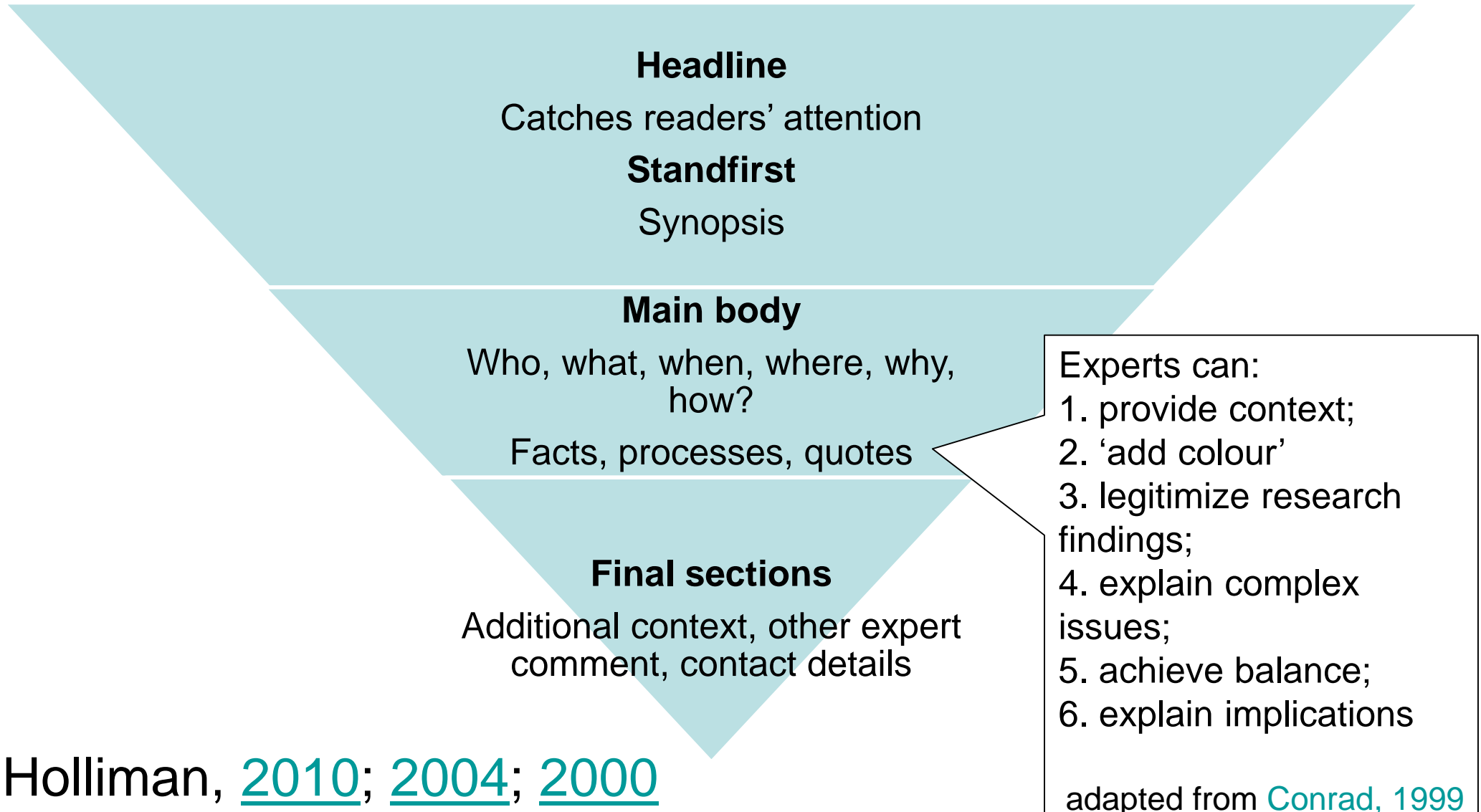
## Making Science Public

“By public sphere we mean first of all a domain of our social life in which such a thing as public opinion can be formed. [...]

When the public is large, this kind of communication requires certain means of dissemination and influence: today, newspapers and periodicals, radio and television are the media for the public sphere.”

Habermas, 1962/1989, p. 55

# Making Science Public: Structuring science news



# Making Science Public: Culture change in newsrooms

- International
- ‘Digital first’
- Data-driven framing
- (Un)Planned content
- Open newslist
- ‘Wikitorial’
- Moderation
- (Un)Paid bloggers

[Holliman, 2010](#); [2008](#)

## Headline

Catches readers’ **& search engines**’ attention

## Standfirst

Synoposis; **multiple media**

## Main body

Who, what, when, where, why,  
how?

Facts, processes, quotes

## Final paragraphs

Additional context, other expert  
comment, contact details

**Reader comments**

# Making Science Public

- ‘Climategate’ recommendations
  - working with media professionals
- ‘Blessed are the mediators’
  - CERN Communications Group
  - Exploring science communication professionals
- Fahy & Nisbet’s ([2011](#)) typology of science journalists
  - Advocate; Agenda-Setter; Conduit
  - Civic educator; Watchdog; Investigative

[Holliman, 2011](#)

[Dorey, 2016](#)



# Making Science Public: A 'starter for ten'

- Can making science public approaches provide effective spaces for connecting scientists and citizens?

# Part 2:

## Science Made Public

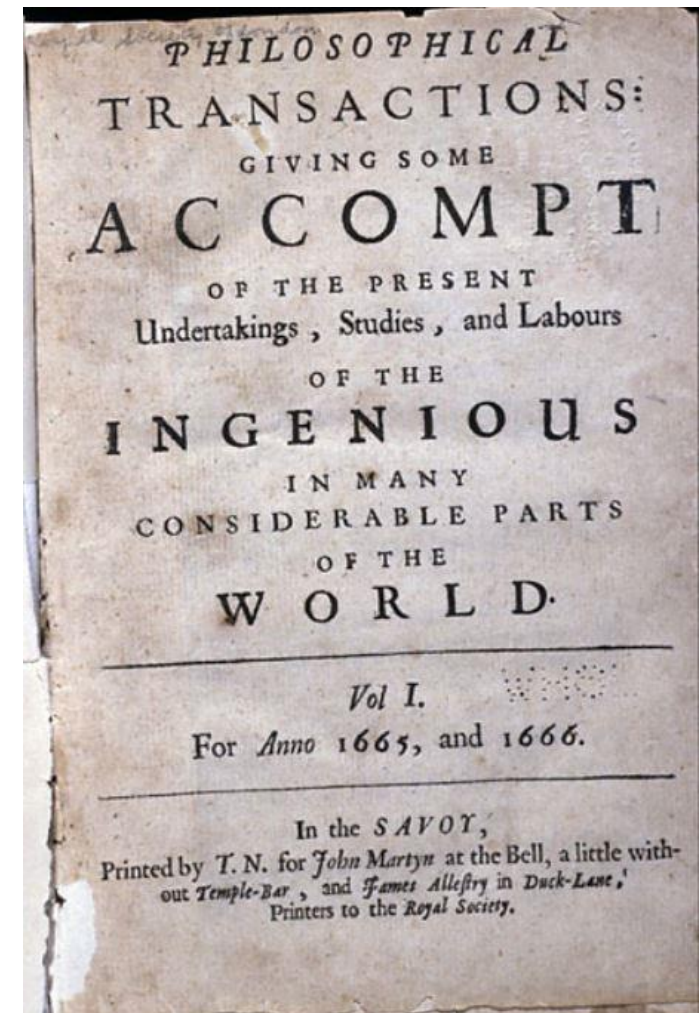
“The Open Scholar is someone who makes their intellectual projects and processes digitally visible and who invites and encourages ongoing criticism of their work and secondary uses of any or all parts of it—at any stage of its development.”

– [www.academicrevolution.com/2009/08/the-open-scholar.html](http://www.academicrevolution.com/2009/08/the-open-scholar.html)

# Science Made Public: Sharing knowledge

“...a process of  
investigation leading to new  
insights, effectively shared”.

[REF, 2014](#)

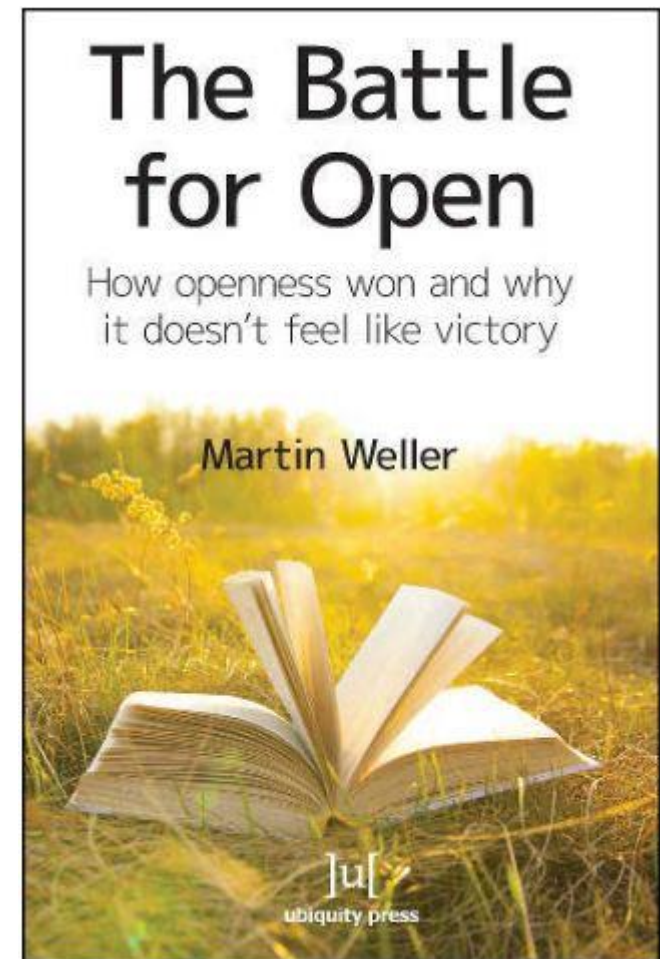


# Science Made Public: Open access publication

'The objective which it is proposed to attain by this periodical may be broadly stated as follows. It is intended, First, to place before the general public the grand results of scientific work and scientific discovery; and to urge the claims of science to move to a more general recognition in education and in daily life.

'Secondly, to aid scientific men themselves, by giving early information of all advances made in any branch of natural knowledge throughout the world, and by affording them an opportunity of discussing the various scientific questions which arise from time to time.'

[Nature at 147 years old](#)



[Weller, 2014](#)

# Science Made Public: Accessing knowledge



Aggregating the world's open access research papers

We offer seamless access to millions of open access research papers, enrich the collected data for text-mining and provide unique services to the research community.

[Read more](#)

[Join us](#)



<https://core.ac.uk/search>

## Information literacy

- Accessing
- Filtering
- Evaluating
- Responding

[Weiner, 2010;](#)

[Vitae, 2012](#)

# Science Made Public meets Making Science Public

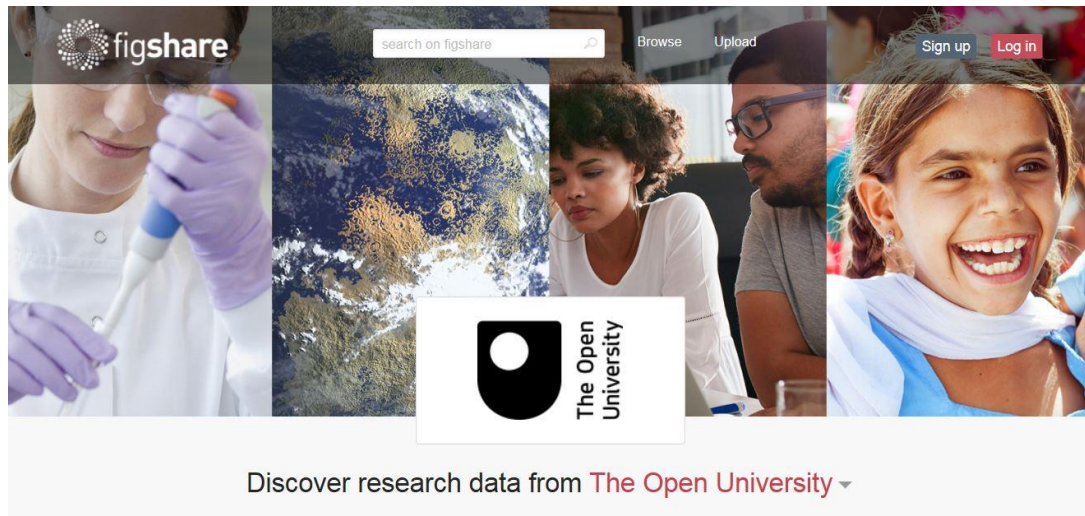
- clarification of FOIA for academic research
  - should it apply, and to what?
- openness and transparency
  - open data, computer codes (proactive)
  - archiving and curation—who owns/holds?

[Holliman, 2011](#)



# Science made public: Open data

## Concordat on Open Research Data



The Concordat on Open Research Data has been developed by a UK multi-stakeholder group. This concordat will help to ensure that the research data gathered and generated by members of the UK research community is made openly available for use by others wherever possible in a manner consistent with relevant legal, ethical, disciplinary and regulatory frameworks and norms, and with due regard to the costs involved.

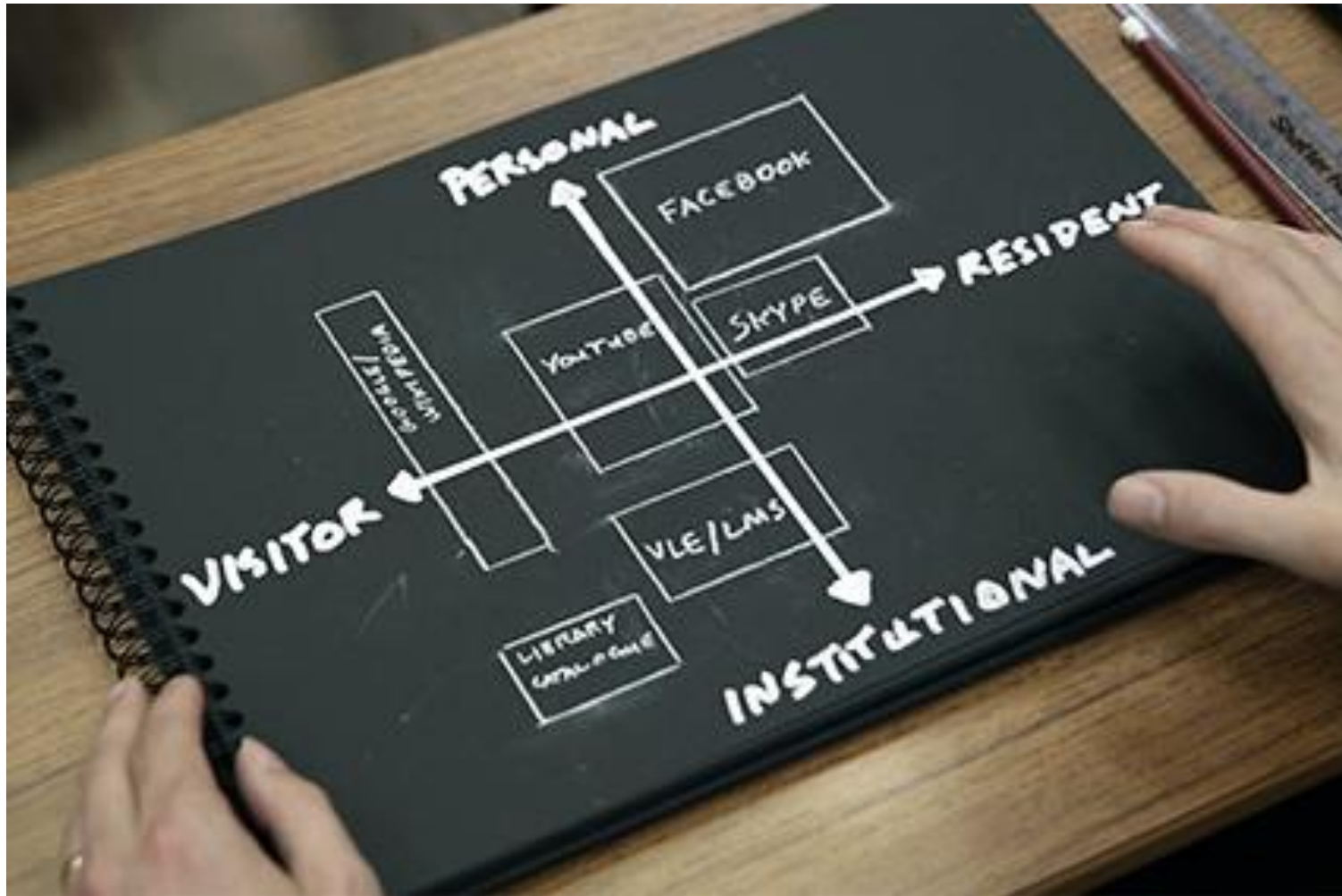


Published 28<sup>th</sup> July 2016

<https://ou.figshare.com>

RCUK, 2016

# Science Made Public Identity & Practice



Grand et al.,  
2016;

Holliman &  
Warren, in  
press

\* David White and Alison Le Cornu (2011) "Visitors and residents: A new typology of online engagement." In First Monday, Vol. 16, No. 9, September 2011. Further information: <http://daveowwhite.com>

# Science Made Public: A 'starter for ten'

- Is open, engaged scholarship a valid and aspirational career option?

# Part 3:

## Publics Making Science

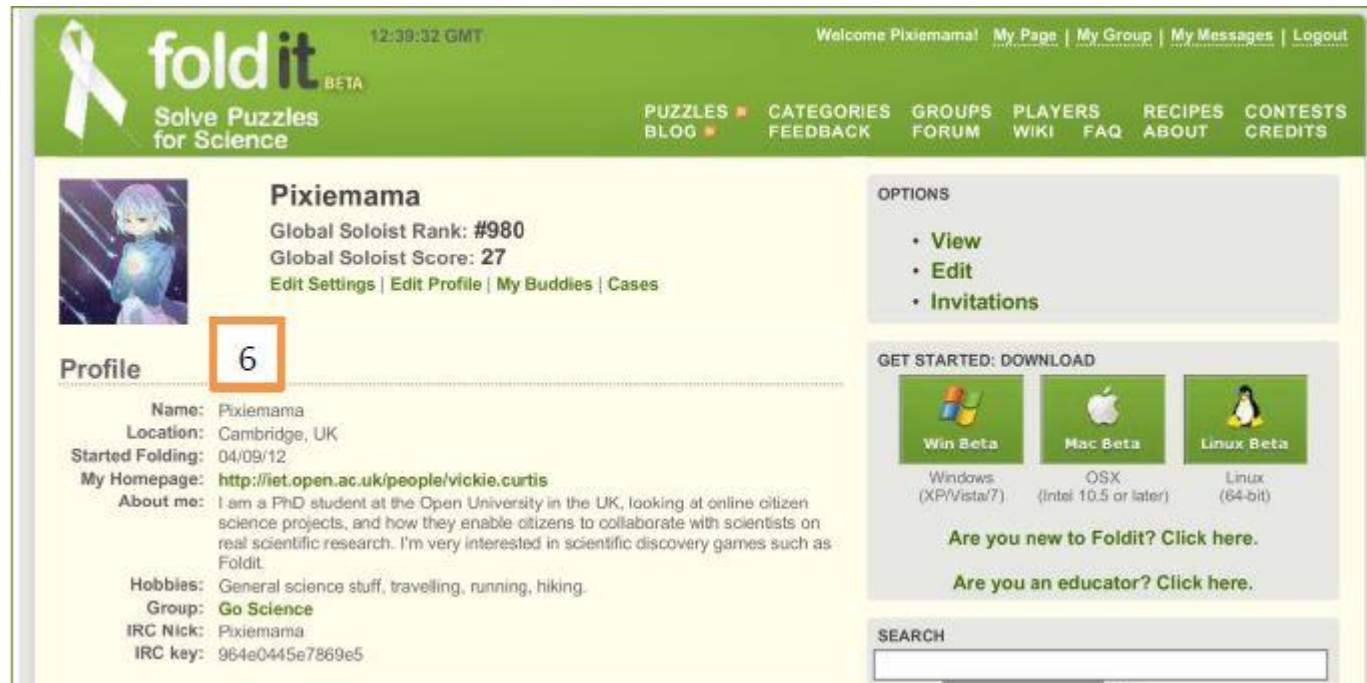


### Communicating Partnership

Emily Banks, Trevor Collins, Peter Devine, Cerys Griffiths, Olusola Ojo, Daniel Roberts, Mark Russell, Tiegan Stratford and Lucy Turner

# Publics Making Science: Citizen science

- Foldit
- ‘Distributed participation’
- Scientist-led
- Volunteers



The screenshot shows the Foldit website interface. At the top, there's a green header with the Foldit logo and navigation links. Below the header, the user profile for 'Pixiemama' is displayed. The profile includes a user avatar, a global soloist rank of #980, and a global soloist score of 27. A red box highlights the number '6' in the profile section. The profile also lists the user's name, location (Cambridge, UK), and a bio stating they are a PhD student at the Open University. On the right side, there are sections for 'OPTIONS' (View, Edit, Invitations) and 'GET STARTED: DOWNLOAD' (Win Beta, Mac Beta, Linux Beta). A search bar is visible at the bottom right.

foldit BETA  
Solve Puzzles for Science

Welcome Pixiemama! [My Page](#) | [My Group](#) | [My Messages](#) | [Logout](#)

PUZZLES BLOG CATEGORIES FEEDBACK GROUPS FORUM PLAYERS WIKI RECIPES FAQ ABOUT CONTESTS CREDITS

**Pixiemama**  
Global Soloist Rank: #980  
Global Soloist Score: 27  
[Edit Settings](#) | [Edit Profile](#) | [My Buddies](#) | [Cases](#)

**Profile** 6

Name: Pixiemama  
Location: Cambridge, UK  
Started Folding: 04/09/12  
My Homepage: <http://iet.open.ac.uk/people/vickie.curtis>  
About me: I am a PhD student at the Open University in the UK, looking at online citizen science projects, and how they enable citizens to collaborate with scientists on real scientific research. I'm very interested in scientific discovery games such as Foldit.  
Hobbies: General science stuff, travelling, running, hiking.  
Group: **Go Science**  
IRC Nick: Pixiemama  
IRC key: 964e0445e7869e5

**OPTIONS**

- View
- Edit
- Invitations

**GET STARTED: DOWNLOAD**

Win Beta  
Windows (XP/Vista/7)

Mac Beta  
OSX (Intel 10.5 or later)

Linux Beta  
Linux (64-bit)

Are you new to Foldit? [Click here.](#)

Are you an educator? [Click here.](#)

**SEARCH**

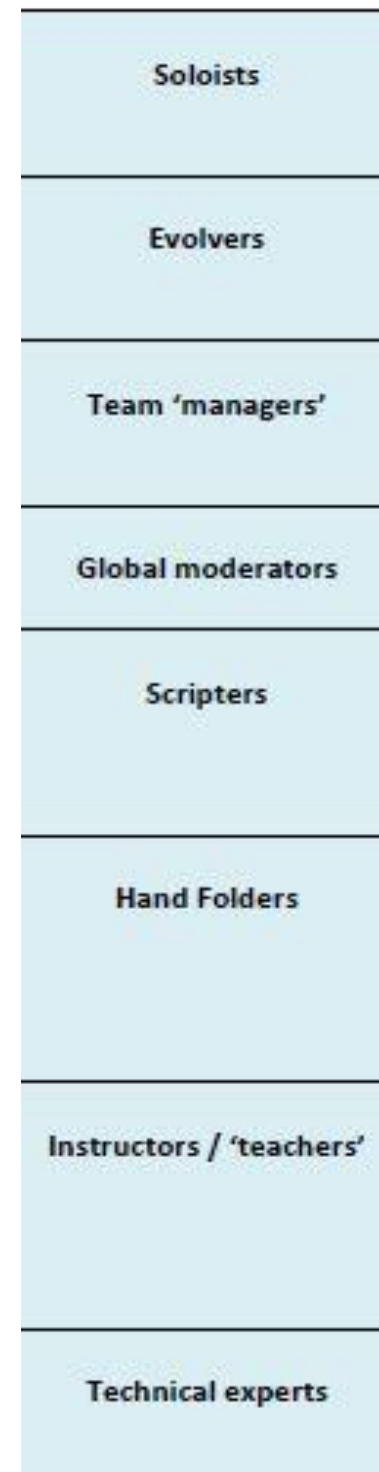
Holliman & Curtis, 2015

# Publics Making Science

## Online citizen science

- ~500,000 registrations
- 200-300 active participants
- Motivation to join
  - ‘contribution to science’
- Motivation to stay
  - community
- ‘Reader to leader’
- Aspects of self-governance
- Role self-distribution

[Curtis, 2015](#)



# Publics Making Science: A 'starter for ten'

- What baseline knowledge, skills and confidence does a citizen need to function in modern society?

# connecting science and society: communication & engagement

- making science public
  - science made public
  - publics making science
- blurred distinctions



[University of Nottingham](#)

# mainstreaming open & engaging research

Concordat for  
Engaging the Public  
with Research

A set of principles drawn up by the Funders of  
Research in the UK

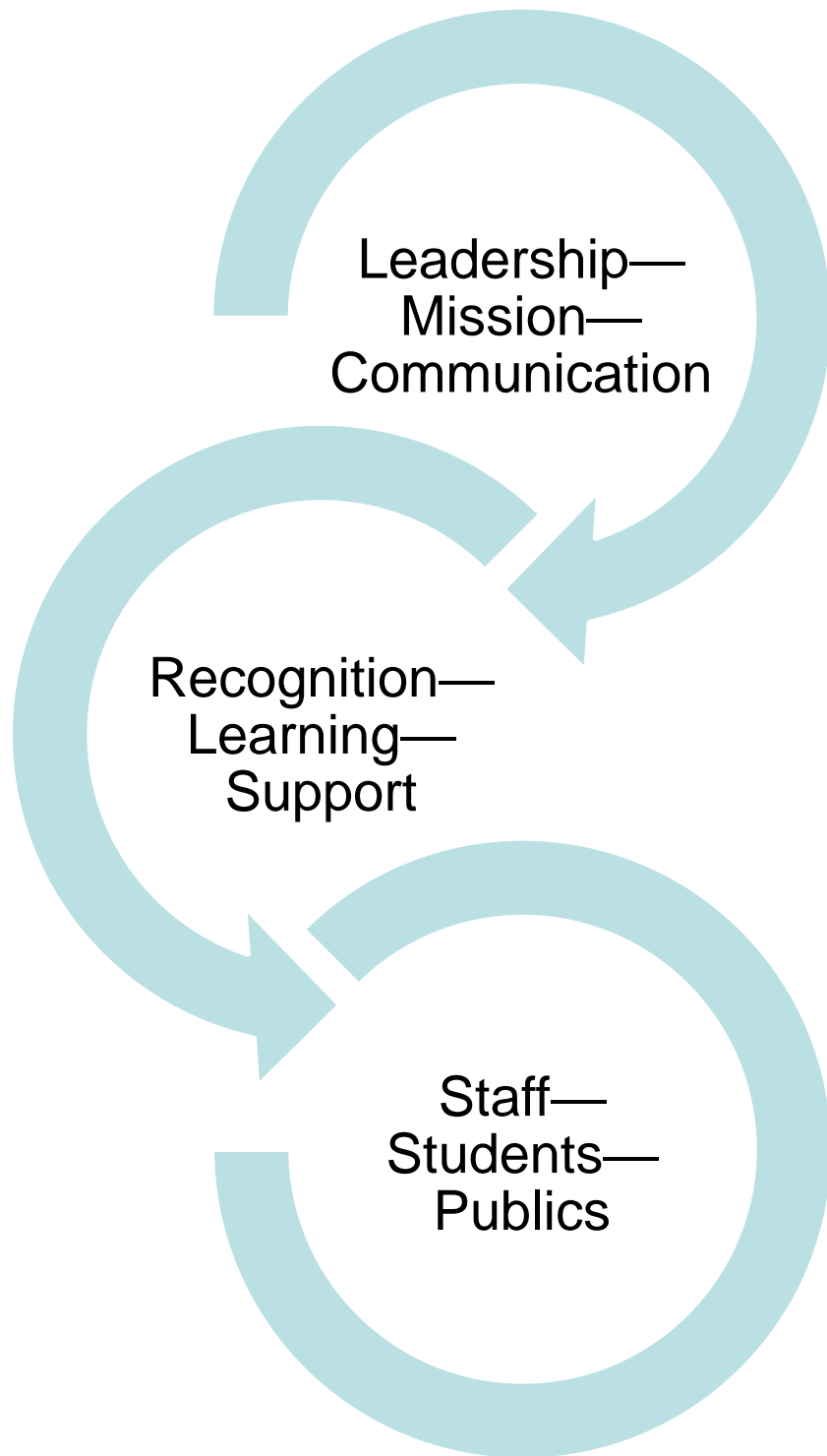
1. A strategic commitment to public engagement
2. Researchers are recognised and valued for excellent PER
3. Appropriate training, support and opportunities
4. Regular reviews of sector's progress

[RCUK, 2010](#)

- emergence of research impact



# catalysing culture change



## An Open Research University



Richard Holliman

Gareth Davies

Fiona McKerlie

Anne Adams

Sally Dibb

Nick Mahony

Tim Blackman

Ann Grand

Astrid Wissenburg

Trevor Collins

Richard Holti



Holliman et al., 2015

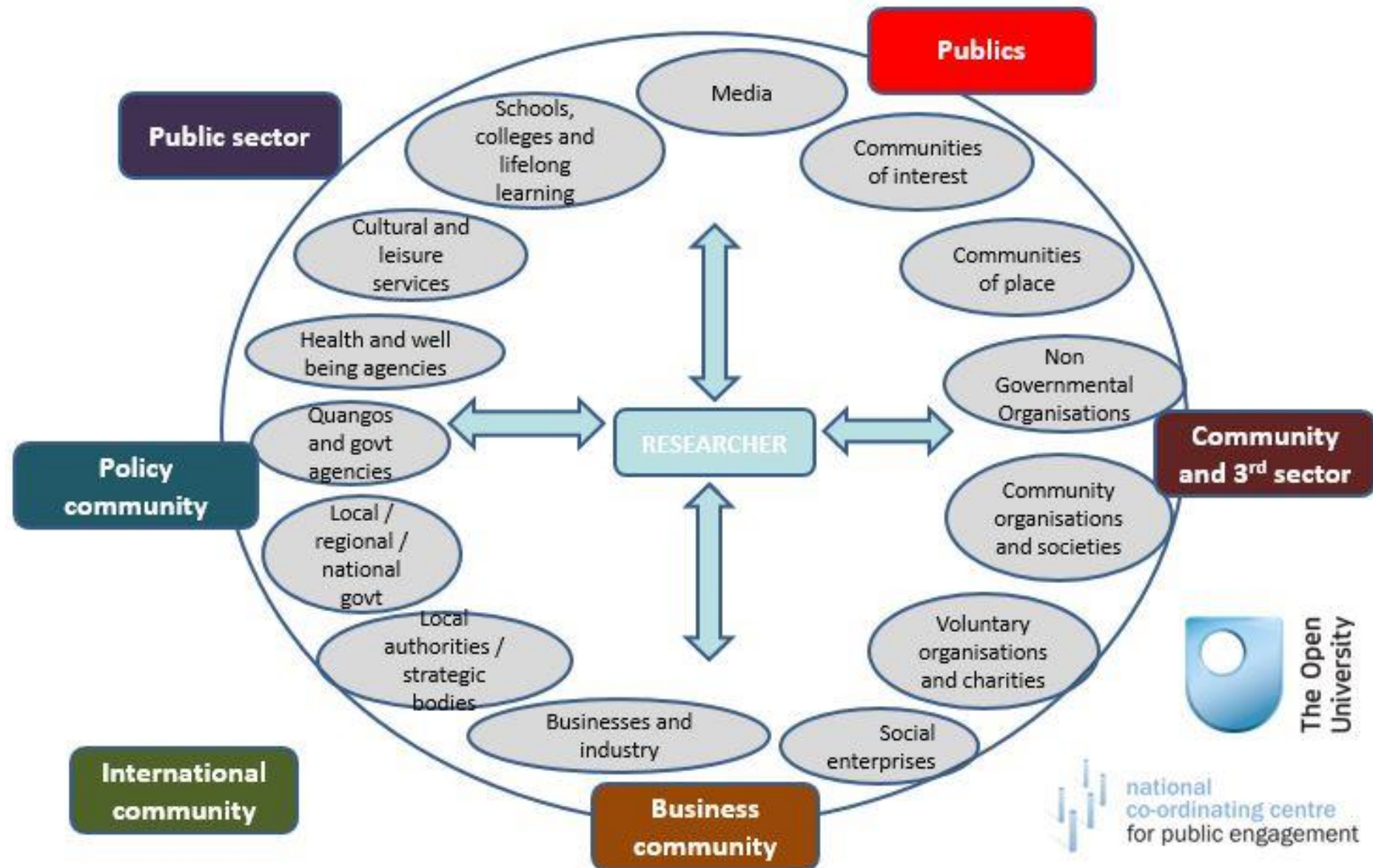
# What was our biggest challenge?

## What is a public?

- PiGs (Publics in General)
- PiPs (Publics in Particular)

[Michael, 2009](#)

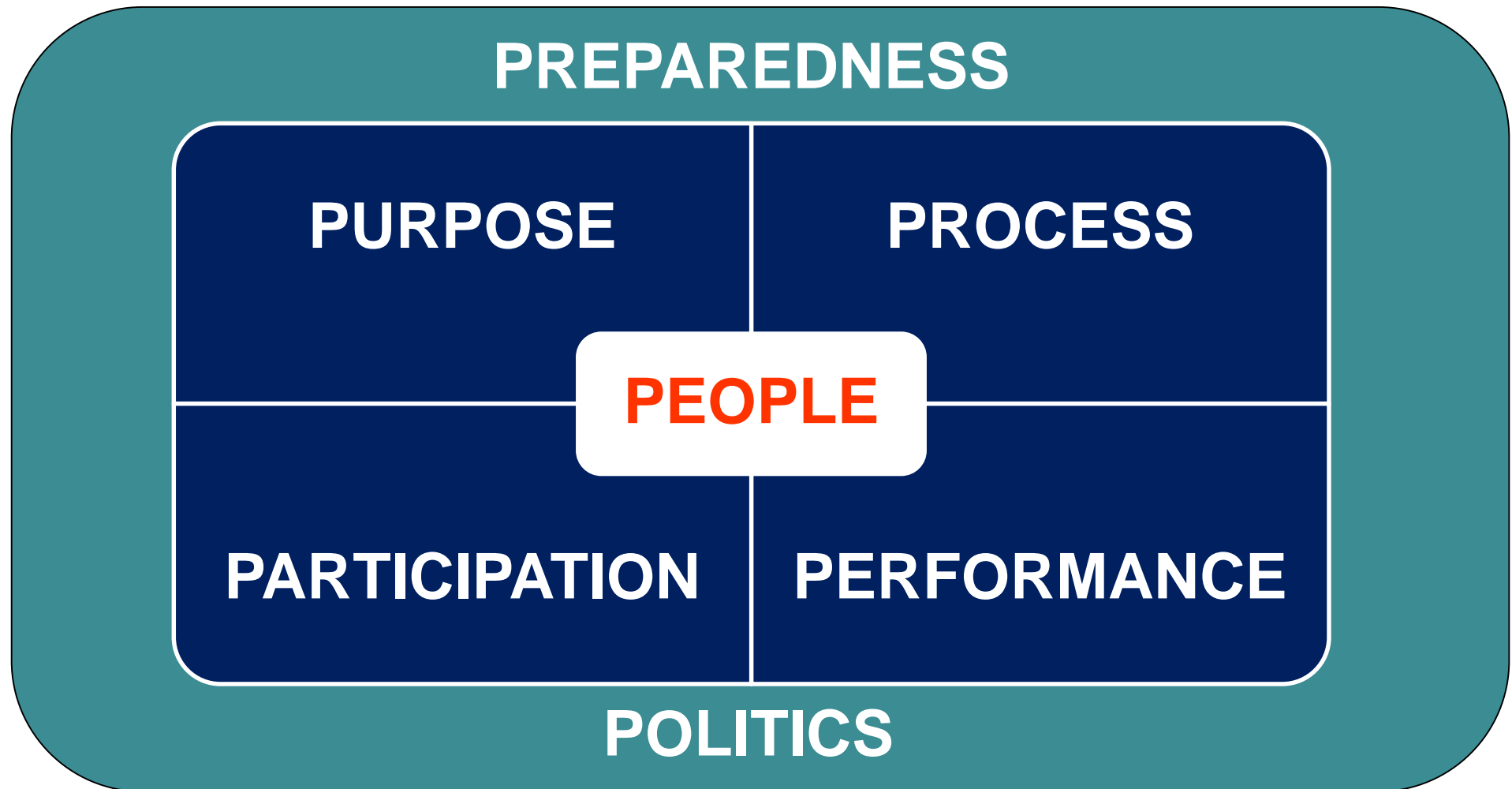
# What is a public in particular?



# What purposes & processes are appropriate?

- Making science public?
- Science Made Public?
- Publics Making Science?
- All or some of the above?

# Holistic planning



[Holliman, 2013](#);

Holliman, *et al.*, in press

# Defining the territory: Consistency within diversity

Engaged research encompasses the different ways that researchers meaningfully interact with various stakeholders<sup>1</sup> over any or all stages of a research process, from issue formulation, the production or co-creation of new knowledge, to knowledge evaluation and dissemination.

---

1. Stakeholders may include user communities, and members of the public or groups who come into existence or develop an identity in relationship to the research process.

[Holliman et al., 2015](#)

# Theme of connections consistency within diversity

- Definition doesn't impose a solution
- Improving capacity AND quality
- From 'Standing on the shoulders of giants' to
- Standing shoulder to shoulder with 'modest witnesses'

adapted from [Haraway, 1997](#)

The screenshot shows the top navigation bar of The Guardian website. On the left, there is a user profile icon for 'RichardHolliman', a 'subscribe' button, and a 'search' icon. On the right, there are links for 'jobs', 'dating', 'more', and 'UK edition'. The main header features the 'theguardian' logo with the tagline 'website of the year'. Below the header is a horizontal menu with various sections: UK, world, politics, sport, football, opinion, culture, business, lifestyle, fashion, environment, tech, and travel. A 'browse all sections' button is located on the far right of this menu. The breadcrumb trail indicates the current location: 'home > science'. The article title is 'What has science communication ever done for us?' by 'Richard Holliman'. The category 'Science' is highlighted, with 'Political science' listed below it. A quote from the article is displayed in an orange box: 'As a parliamentary inquiry into science and the public begins, I'd argue there's been a revolution in the way researchers think about science and engagement'.

RichardHolliman ▾ subscribe search jobs dating more ▾ UK edition ▾

theguardian  
website of the year

home > science

Science  
Political science

What has science communication ever done for us?  
Richard Holliman

As a parliamentary inquiry into science and the public begins, I'd argue there's been a revolution in the way researchers think about science and engagement

- openness to publics, people, methods and ideas; PLAN
- engagement *with* publics, not *to* them; SUPPORT
- digital technologies as social solutions; PARTICIPATORY
- sustainable organisational change; ASPIRATIONAL

# Any questions?

## A few 'starters for ten'

- Can making science public approaches provide effective spaces for connecting scientists and citizens?
- Is open, engaged scholarship a valid and aspirational career option?
- What baseline knowledge, skills and confidence does a citizen need to function in modern society?
- How do we best support those planning for engagement?