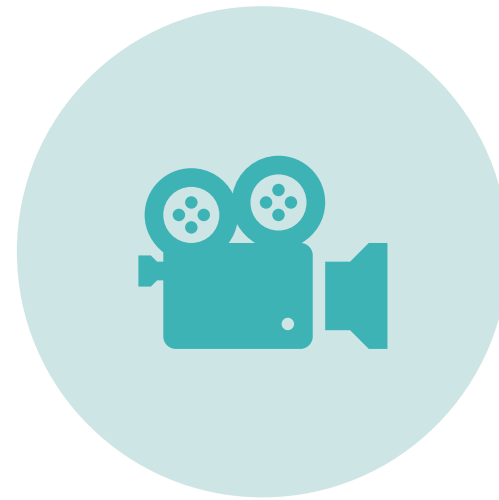


DOCTORAL SCHOOLS WORKSHOP: EFFECTIVE COMMUNICATION FOR RESEARCHERS

8 March 2022



WATCH THE STREAM RECORDING ON YOUTUBE

CONTENT

1. Repurposing science communication

Prof. Iain Stewart

2. Scientific research as a source for policy

Patricia De Clercq

3. An industry perspective on science communication

Filip Arnaut

4. Tips on becoming a science communicator

Marjolein Vanoppen

REPURPOSING SCIENCE COMMUNICATION

PROF. IAIN STEWART

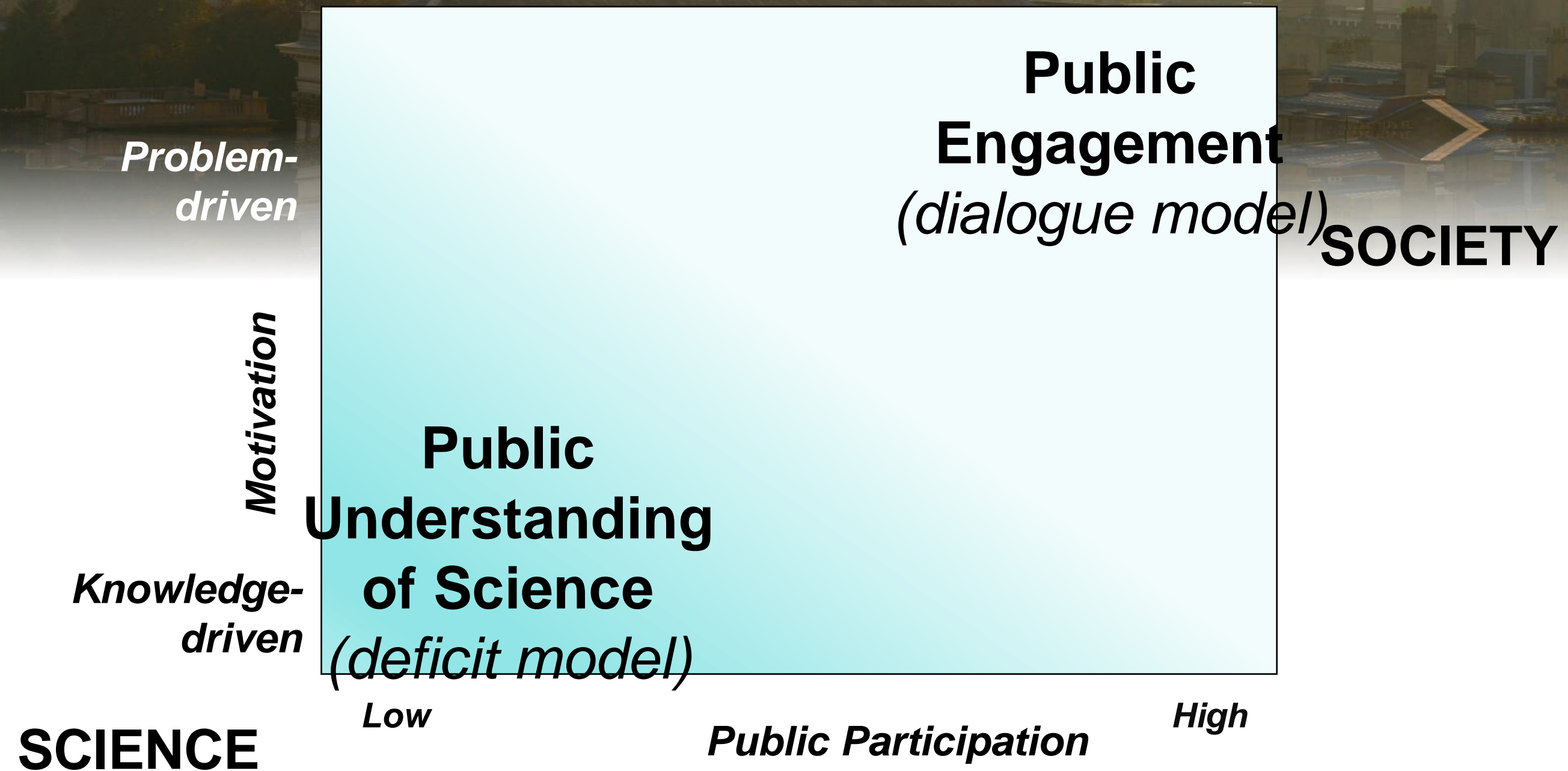
Repurposing science communication *for sustainable human progress*

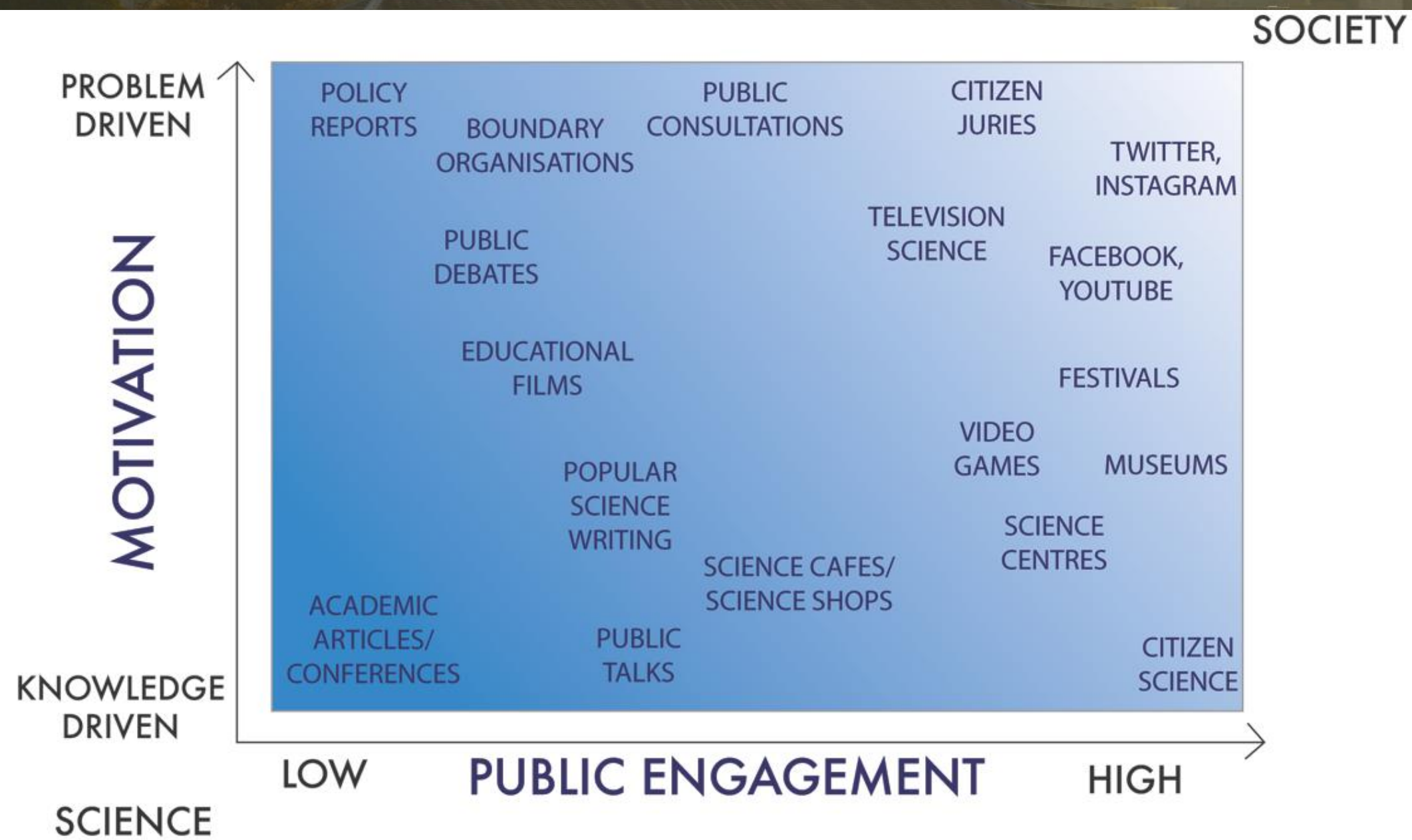
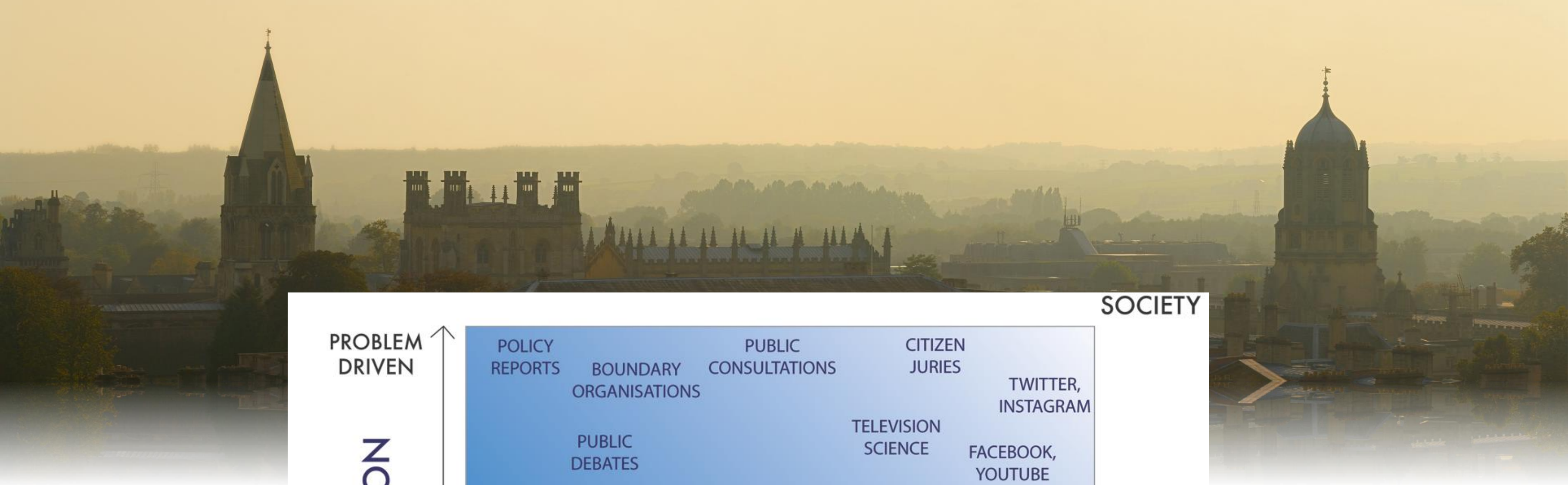


الجمعية العلمية الملكية
Royal Scientific Society

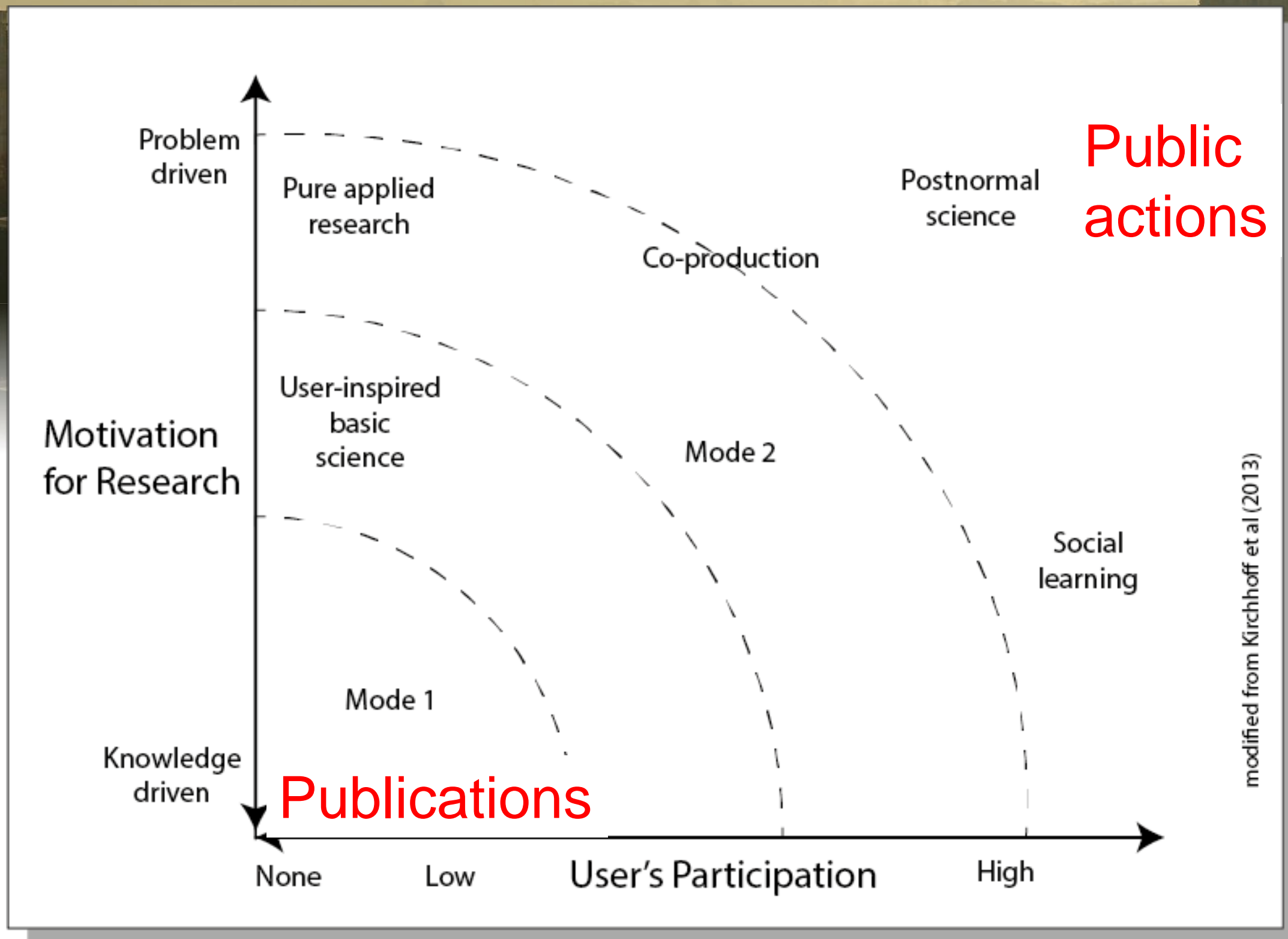
Professor Iain Stewart,
El Hassan Research Chair in Sustainability

@profiainstewart

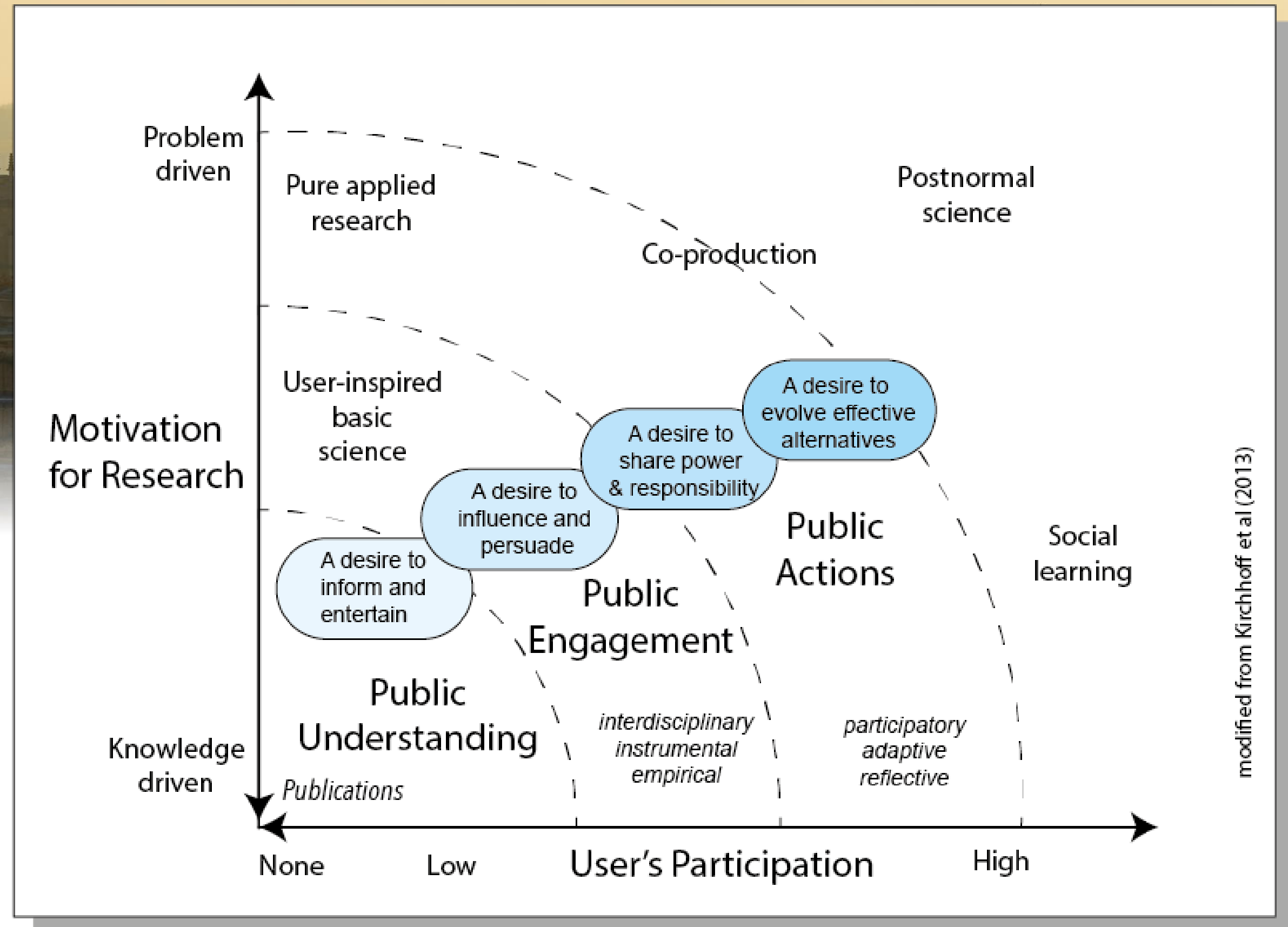


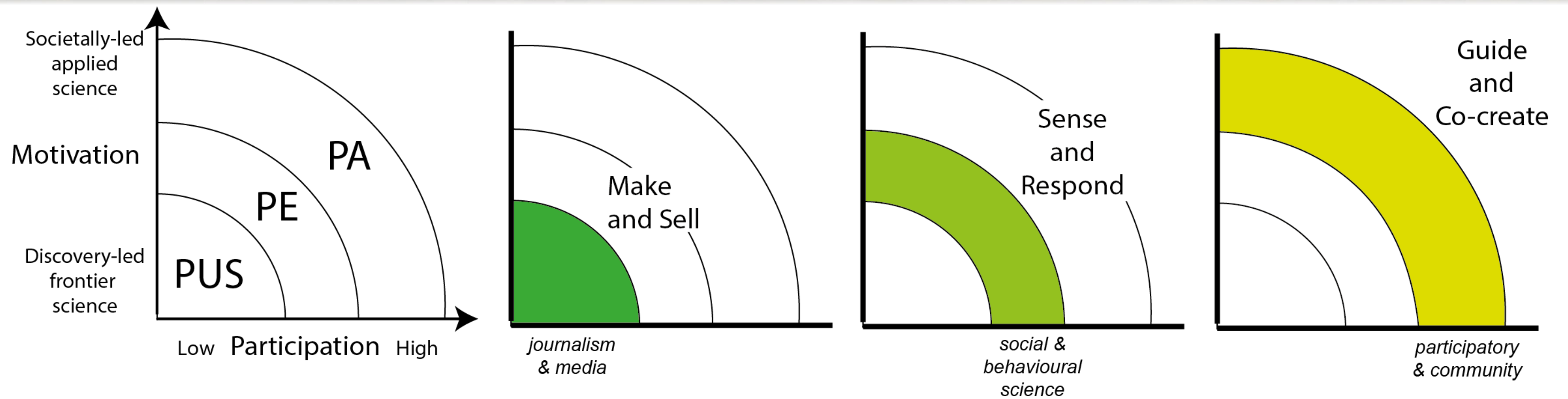


The Science Production Landscape



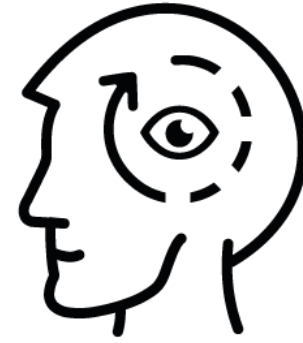
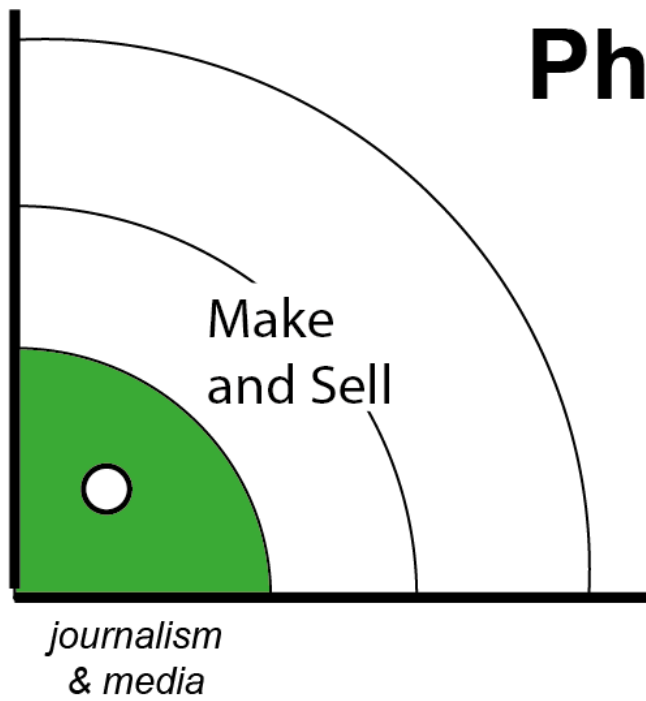
The Science Communication Landscape





Stewart, I.S. and Hurth, V., 2021. Selling Planet Earth: re-purposing geoscience communications. *Geological Society, London, Special Publications*, 508(1), pp.265-283.

Phase 1: Make & Sell - *Be a better communicator*



a lack of information or understanding of science explains why people don't accept scientific claims ('Deficit model')

if science communication was done 'better', people would make choices more consistent with the science

GOALS



to share findings and excitement of science

to share appreciation of science and the scientific method as a way of understanding the world

to raise awareness of a specific issue



more positive public attitude towards research

improve scientific literacy - counter misinformation

influence public debate

increase visibility for sponsors /funding agencies

enhance professional reputation

SKILLS



translating scientific jargon into 'plain English'; understanding story-telling / narrative / imagery

basic media literacy - communication channels and platforms; journalistic practice

media training

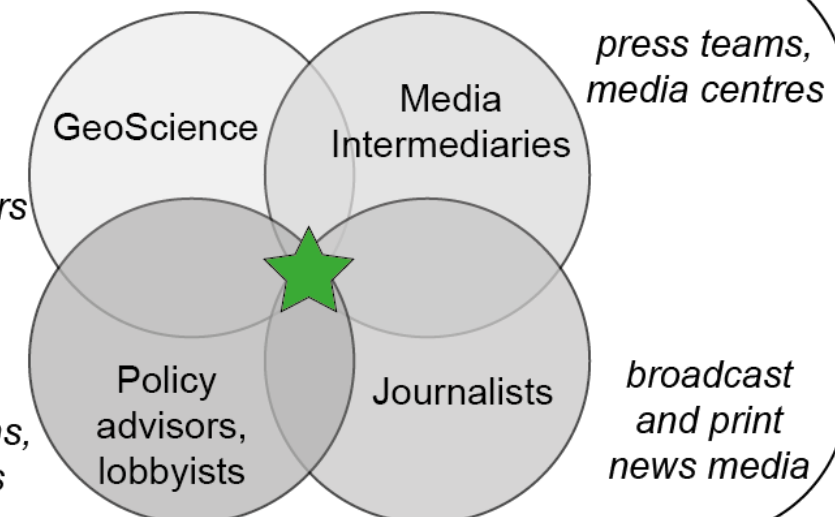
production of creative content

INTERACTIONS

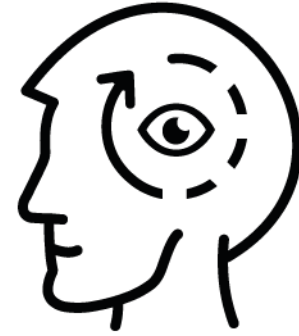
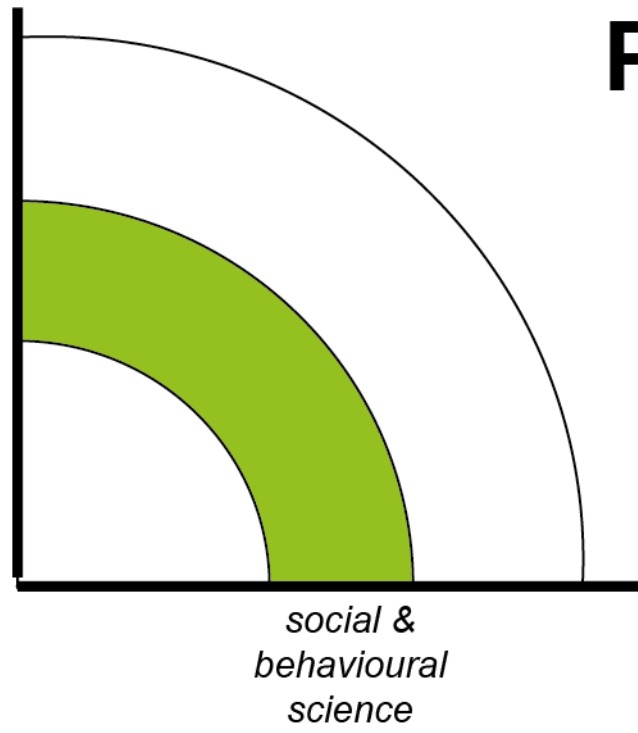


informal community of science communicators

Boundary organisations, think tanks



Phase 2: Sense & Respond - *Know Your Audience*



people rarely make decisions solely on scientific information; they typically take account of their own goals and needs, knowledge and skills, values and beliefs.

there is an empirical science underpinning effective communication

GOALS



- to influence opinions, behaviour and policy preferences
- to secure informed consent / social licence or overcome opposition among stakeholders
- to engage with diverse groups so that their perspectives can inform decision making



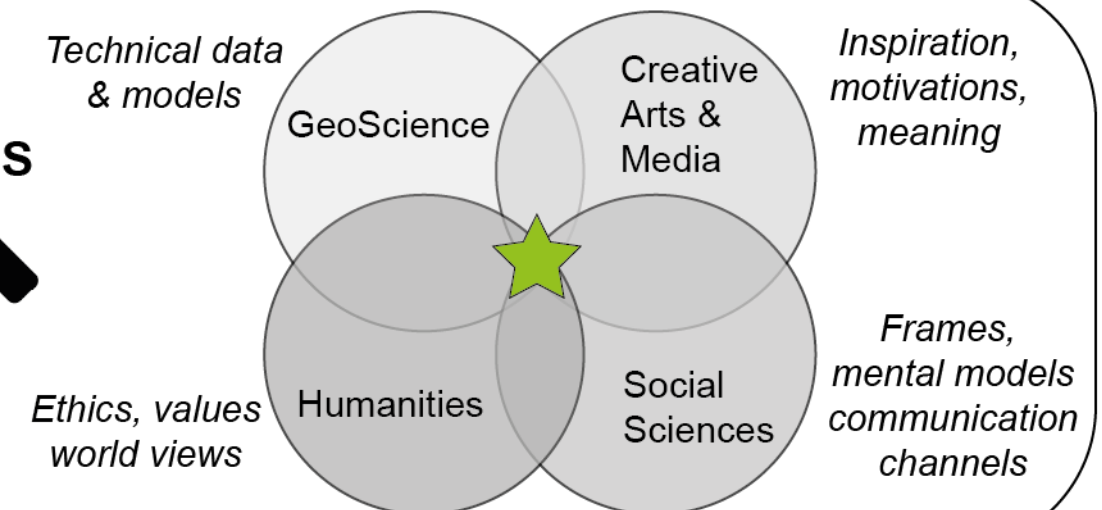
- understand public attitudes to scientific issues
- appreciate the importance of mental models and cognitive shortcuts in people's reasoning
- identify target audiences for key messages
- help establish credibility and trust-worthiness of the messenger

SKILLS

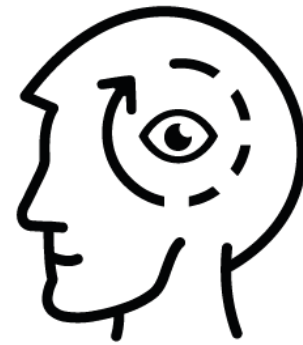
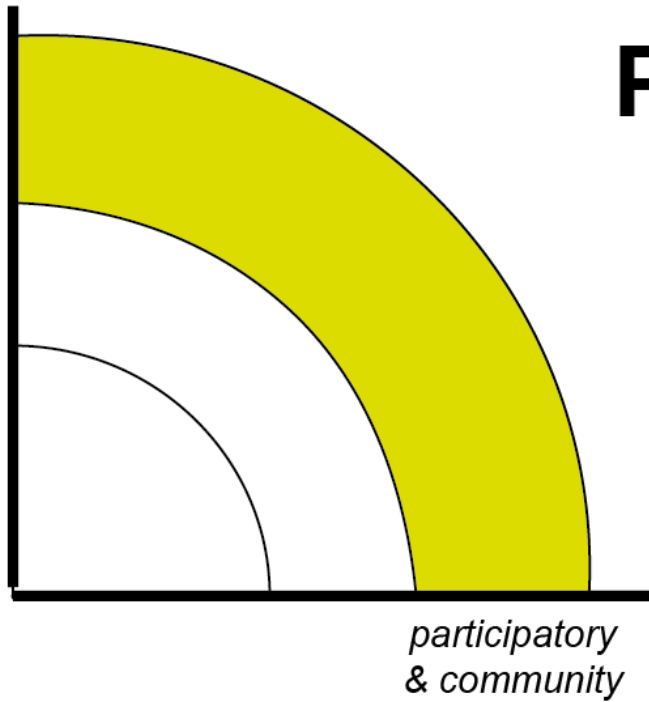


- scientific understanding of the public: mental models - heuristics, emotion and motivated reasoning - cognitive dissonance
- audience segmentation and message framing
- social networks and social identity
- interdisciplinary working

INTERACTIONS



Phase 3: Guide & Co-create - *Know Your Purpose*



setting out a motivating vision for a better future whilst co-creating the path to this outcome with beneficiaries

‘purpose-led’ communications reflect the deeper intent (‘purpose’) of the science communicator

GOALS



build and sustain trust among stakeholders to find common ground for decision making

pluralised and diversified knowledge base

empower stakeholder communities to develop their own strategies and solutions



aligning long-term motivating goals with the right communication approach

through sustained interaction, communications are atuned to local needs and circumstances

impact of communications monitored, adapted and evaluated to maintain effectiveness

SKILLS



interpersonal competence; empathy; authentic listening; dialogic communication

participatory: negotiation, facilitation & conciliation

ethics and self-reflection; co-design of research

theories of change; monitoring & evaluation

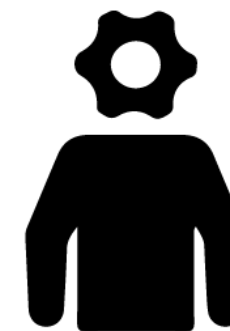
INTERACTIONS

Working as an extended peer community

what is your role???



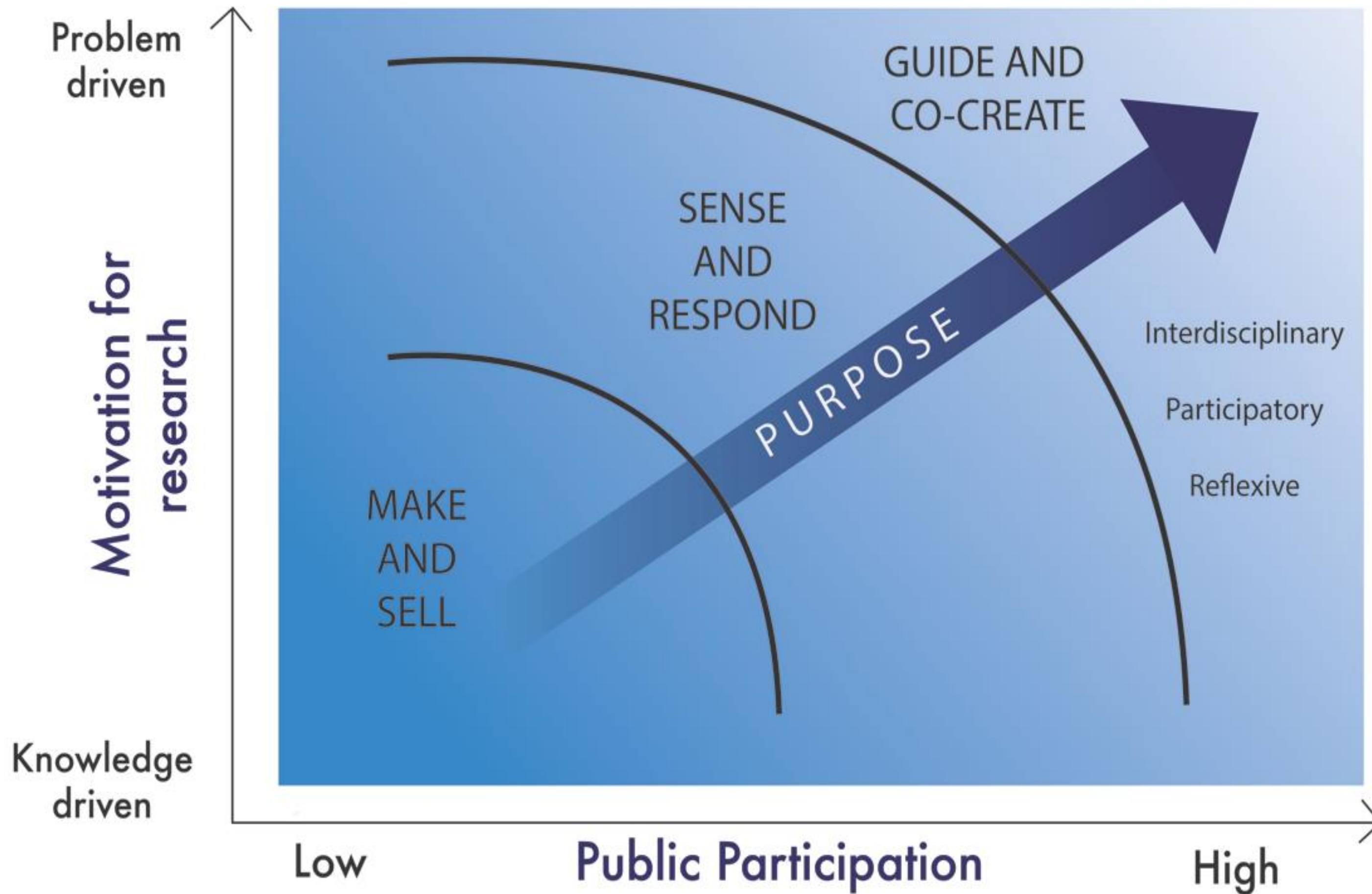
the Facilitator



the Catalyst



the Activist





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Royal Scientific Society



Make & Sell

Sense & Respond

Guide & Co-create

 **Newton-Khalidi
Fund**



*development of training
courses around sci-comm*

*facilitate interaction
with social sciences*

*enhance community-centred
participatory research projects*

 **The
British
Academy**

SCIENTIFIC RESEARCH AS A SOURCE FOR POLICY

PATRICIA DE CLERCQ



DEPARTMENT
OF AGRICULTURE
& FISHERIES

Scientific research as a source for policy

March 2022

Patricia De Clercq
Secretary-General

DEPARTMENT
OF AGRICULTURE
& FISHERIES

What is this about?

► Citation:

- ‘The **study service of the government** builds up **knowledge** derived from universities and other research organizations to **advise** policy makers in area’s such as agriculture, environment, spatial planning (agrobiodiversity, food printing), innovative themes (crowdfunding, insect breeding,..), entrepreneurship and profitability.’
- During the workshop you will receive advise on how to bring your research to the attention of governmental study services.’

Department of Agriculture and Fisheries

- ▶ Under the umbrella of the minister for Agriculture
- ▶ Policy creation and implementation (Flemish and/or European), control and monitoring

→ Based on data, facts and numbers from internal & external sources

→ Factual insight is important for

- × Predicting impact

- Even on-spot calculation of impact of proposed budget/measure (e.g. discussion on the new CAP Budget)

- × Measuring impact

- × Well-considered decisions (esp. on difficult topics)

- × Early adoption of changes and innovation

- × ...

Where do we get our data, information?

- ▶ Both scientific data as practical insights
- ▶ From:
 - Scientific research: universities, ILVO, INBO, ...
 - Practice centers (practical tests)
 - Results from EIP, demonstration projects, ...
 - European platforms
 - Platform for agricultural and food research
 - Agrolink network
 - Own data collection
 - ...



Example: cultivation policy is based on...

- ▶ Scientific research
- ▶ Data from cultivation practice
- ▶ Research on cultivation varieties
- ▶ New cultivation varieties
- ▶ New cultivation methods
- ▶ Debate and evolving insights

Rassen	Opbrengsten 2019 (kg/ha)	Opbrengsten 2019 (%)	Opbrengsten 2020 (kg/ha)	Opbrengsten 2020 (%)	Gemiddelde opbrengst (kg/ha)	Gemiddelde opbrengst (%)
LG Zagora	9708	105	9389	104	9534	105
Abbeyroad	9340	101	9198	102	9262	102
Rafaela	8779	95	9466	105	9154	101
KWS Meridian	9048	98	9041	100	9044	99
Monique	9608	104	9527	106	9564	105
Quadriga	9416	102	9265	103	9334	102
Hedwig	9179	100	7826	87	8441	93
Gemiddelde van de standaard- rassen	9206	100	9025	100	9107	100

So... how to get your research results to us?

- ▶ **Work on your PR & get in touch**
 - 'Unknown is unloved'
 - Get in touch with the policy expert(s)
 - × In the different domains
 - × On different levels (FL, BE, EU)
- ▶ **Stay in contact and close collaboration with your end user**
 - during and after the research project (farmer, policy maker, agrofood industry, consumer, ngo,...)
- ▶ **Formulate clear recommendations**
 - Policy level
 - Agrofood chain level (from farmer to consumer)
- ▶ **Use alle information channels you can find to get your message around**
 - classic channels as tekst, seminar, ... but why not on YouTube, podcast, ...).
 - And adjust your message accordingly to the channel.

AN INDUSTRY PERSPECTIVE ON SCIENCE COMMUNICATION

FILIP ARNAUT



puratos

Food Innovation for Good

The background of the slide is a deep blue space filled with numerous white stars. On the left side, a large, reddish-brown planet (Mars) is partially visible, showing its cratered surface. On the right side, a large portion of the Earth is visible, showing blue oceans, white clouds, and green landmasses. The text is centered in the middle of the image.

IT ALL STARTED HERE ON EARTH
**AT PURATOS, A GLOBAL B2B
COMPANY**



100 year young company creates a vision
to bring bread to Mars

realizing that the journey
is as important as the destination

Challenges going to Mars

“The Mars research program aims to bring innovations that meet consumer demands”

INVESTIGATING HOW TO PRODUCE BREAD ON MARS, REQUIRES US TO :



Limit water
use



Minimize energy
requirements



Produce crops independent of
agricultural land



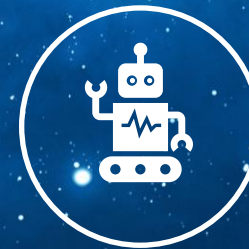
Develop well balanced,
highly nutritional
finished goods




Recycle waste
streams to produce fertilizers or
other circular products



Implement sensor
technologies to
monitor and steer
processes remotely



Evaluate (energy)
efficient baking technologies

The background of the image is a deep blue space filled with numerous white stars of varying sizes. On the left side, a large portion of the Earth is visible, showing the blue oceans and green landmasses of Africa and Europe. On the right side, a large portion of the reddish-brown planet Mars is visible, characterized by its numerous impact craters. Centered over the space between the two planets is a block of white text with a subtle drop shadow.

**At Puratos we strive to grow our positive impact with
the creation of innovative food solutions that
promote health & well-being and steadily move
business, customers, people and the planet forward.**

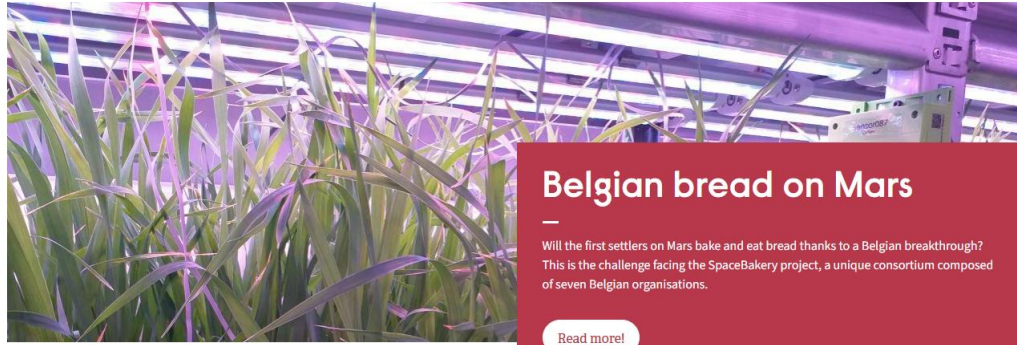


Menu

SpaceBakery

Belgian cutting-edge & disruptive research programme

News Events



Belgian bread on Mars

Will the first settlers on Mars bake and eat bread thanks to a Belgian breakthrough? This is the challenge facing the SpaceBakery project, a unique consortium composed of seven Belgian organisations.

[Read more!](#)

Connections with NASA Canadian Space Agency



Authors: C. Assar Architects & Vincent Callebaut Architectures
Jan 2019 - Mar 2020
68 • 576

Impact



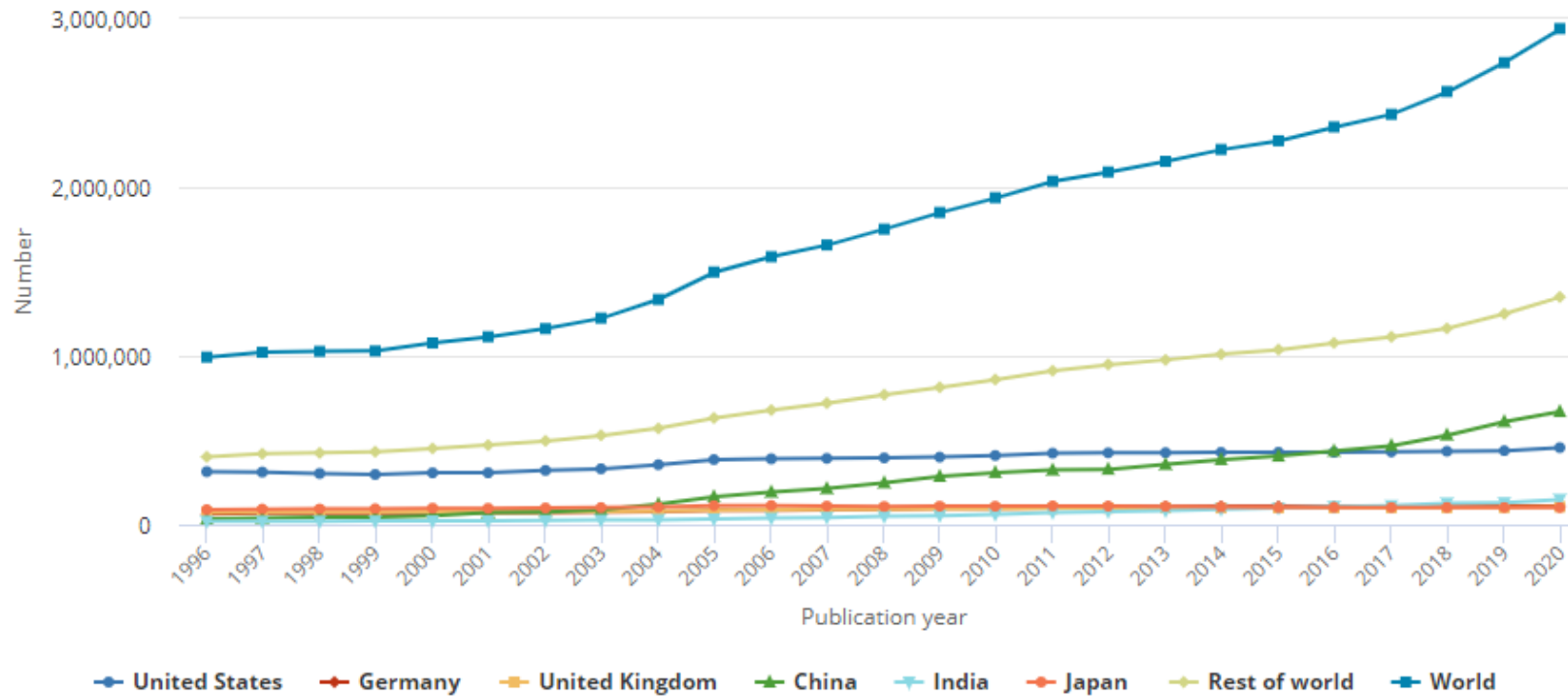

puratos
Food Innovation for Good

Connecting with the scientific world

Industry
perspective

Science overload

S&E articles, by selected region, country, or economy and rest of world: 1996–2020



<https://nces.nsf.gov/pubs/nsb20214/publication-output-by-country-region-or-economy-and-scientific-field>

Pull and Push

Active search - Scopus

Internal newsletters

Patent searches

Thematic publications by interest groups

Journals – Nature – trade journals

Communications from Universities

The Doctoral Thesis



Sustainable protein production on
agricultural effluents using duckweed

Reindert Devlamynck

Zitten onze boeren binnenkort zonder bruikbare grond?



prof. dr. Amaury Frankl



Afspelen

Universiteit van vlaanderen

WAGENINGEN WORLD

MAGAZINE VAN WAGENINGEN UNIVERSITY & RESEARCH OVER WERKEN AAN DE KWALITEIT VAN LEVEN

nr.1 2021



**'Het meeste plastic
wordt door de rivier
vastgehouden'**

Plastic rapen voor de wetenschap,
pag 10

Westnijlvirus bereikt Nederland

Onderzoekers ontrafelen de verspreiding
via muggen, en ontwerpen vaccins

Weinig voedsel te halen uit zee

'We zitten al tegen de grenzen aan,
daar is niet veel winst te halen'

Palmolie langs de meetlat

'Er moet beter worden gekeken naar
de impact van andere oliegewassen'



R0SSOURCES

La revue d'INRAE 25

octobre 2021

Décodez
**Comprendre
le risque
« avalanche »**

Société
**Vers une
alimentation saine
et durable ?**

Futura
**Vaches laitières,
l'avenir est-il
dans le pré ?**

INRA



IOANNA CHATZIGIANNIDOU



ABIG
ALUMNI BIO-INGENIEURS
WETENSCHAPPEN
UNIVERSITEIT GENT

SCIENCE@FBW: MANAGING THE ORAL MICROBIOME: FROM
CONVENTIONAL ANTISEPTICS TO MICROBIOME FRIENDLY
ALTERNATIVES



Why communicate ?



Open up to the world

Social relevance – education

Receiving feedback on research

Connect with more applied fields

Attract partners

Other labs

Collaborators

Funding

Promote yourself

- create extra dimension in CV
- identify alternative career opportunities



Dr. Google

10 Effective Communication Tips for Scientists

1. Know your audience. ...
2. Identify the goals of communication. ...
3. Start with the most important information. ...
4. Avoid jargon. ...
5. Be relatable. ...
6. Provide visuals. ...
7. Stick to three points. ...
8. Talk about the scientific process.



Little Red Riding Hood and the Big Bad Wolf discuss narrative theory

Storytelling

To who?

Challenge (the bad guy)

The journey

success and failure

happy ending

(episode 2)

Be visible & attractive

Easy to read , short sentences no buss words

Pictures and simple graphs

Choose 1 convincing result

What's in it for the reader

Quote to 1 pager

Choose your platform: open access

Multiple media

THANK YOU



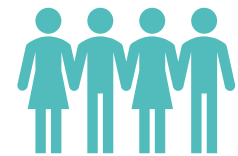
Filip Arnaut farnaut@puratos.com

R&D Director Puratos NV

TIPS ON BECOMING A SCIENCE COMMUNICATOR

MARJOLEIN VANOPPEN

TIPS ON BECOMING A BETTER SCIENCE COMMUNICATOR



Get to know your
target audience



Think about which
questions you're
going to be asked



Be flexible when
working with
professional news
outlets



Find your medium.
Some like writing
articles, others
might enjoy
recording podcasts



State your
expertise!
Refer to others if
you're not
comfortable with a
subject