

# VERITÀ PER GIULIO REGENI



A string of colorful felt balls in various colors (pink, red, teal, orange, green, purple, yellow) is draped across a white background. The balls are connected by a dark, thick cord.

**SIMONA CERRATO | 14 OCTOBER 2021**

# **SCIENTIFIC COMMUNICATION TECHNIQUES: THREE MODELS OF SCIENCE COMMUNICATION**

A group of people, including a woman in a white lab coat and a woman in a patterned shirt, are holding hands in a circle. The text 'TODAY'S SCIENCE' is overlaid in large white letters. The background is slightly blurred, showing other people in a room.

# TODAY'S SCIENCE

**Science is a body of knowledge and methods that allow us to understand the universe, find our place as humans within and shape our world and societies.**

**CONTEXTUALIZED / APPLIED  
TRANSDISCIPLINARY  
DIFFUSED  
UNKNOWN  
UNCERTAIN  
AMBIGUOUS**

# Climate emergency



# Human augmentation



# Space colonies

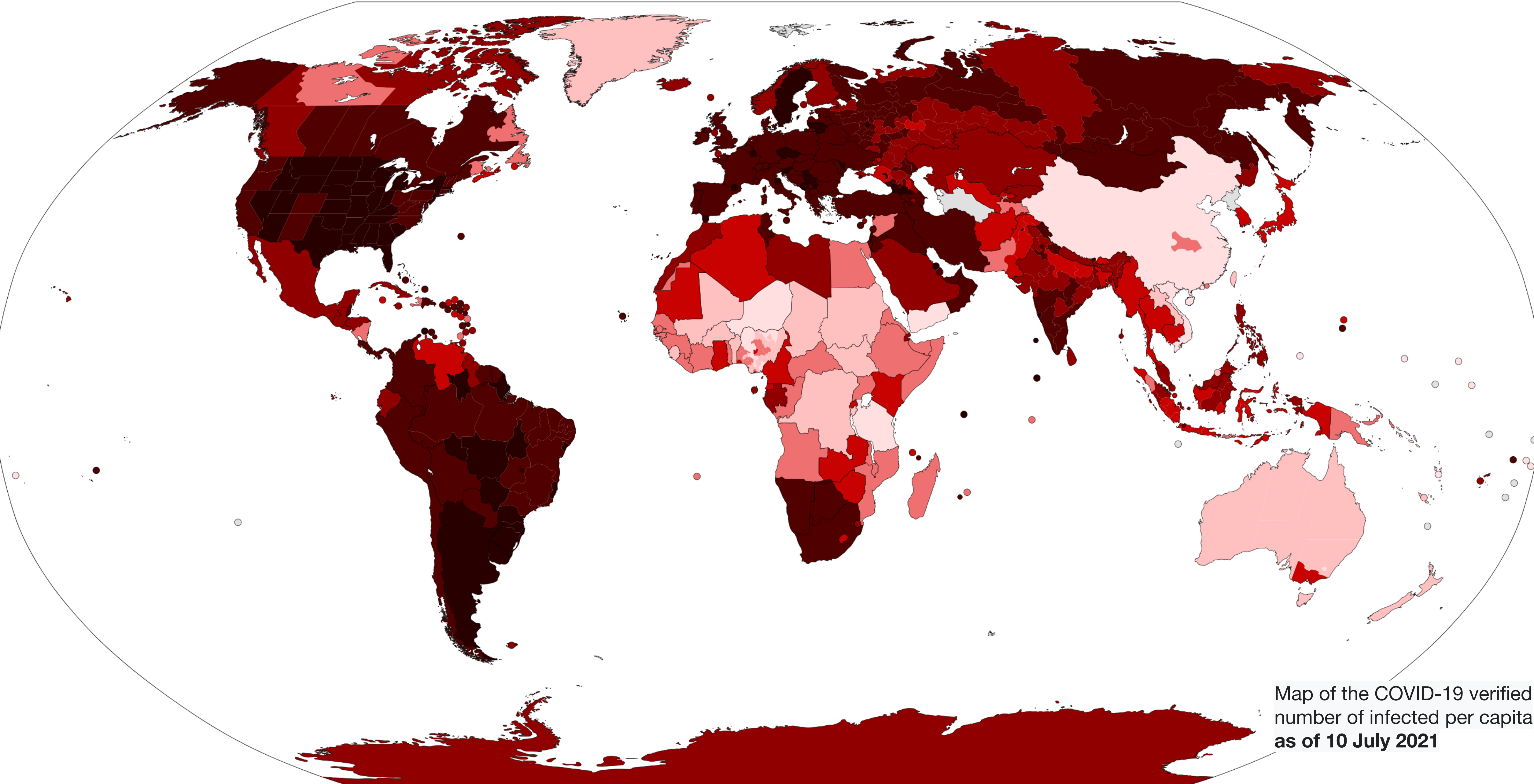




# Artificial Intelligence

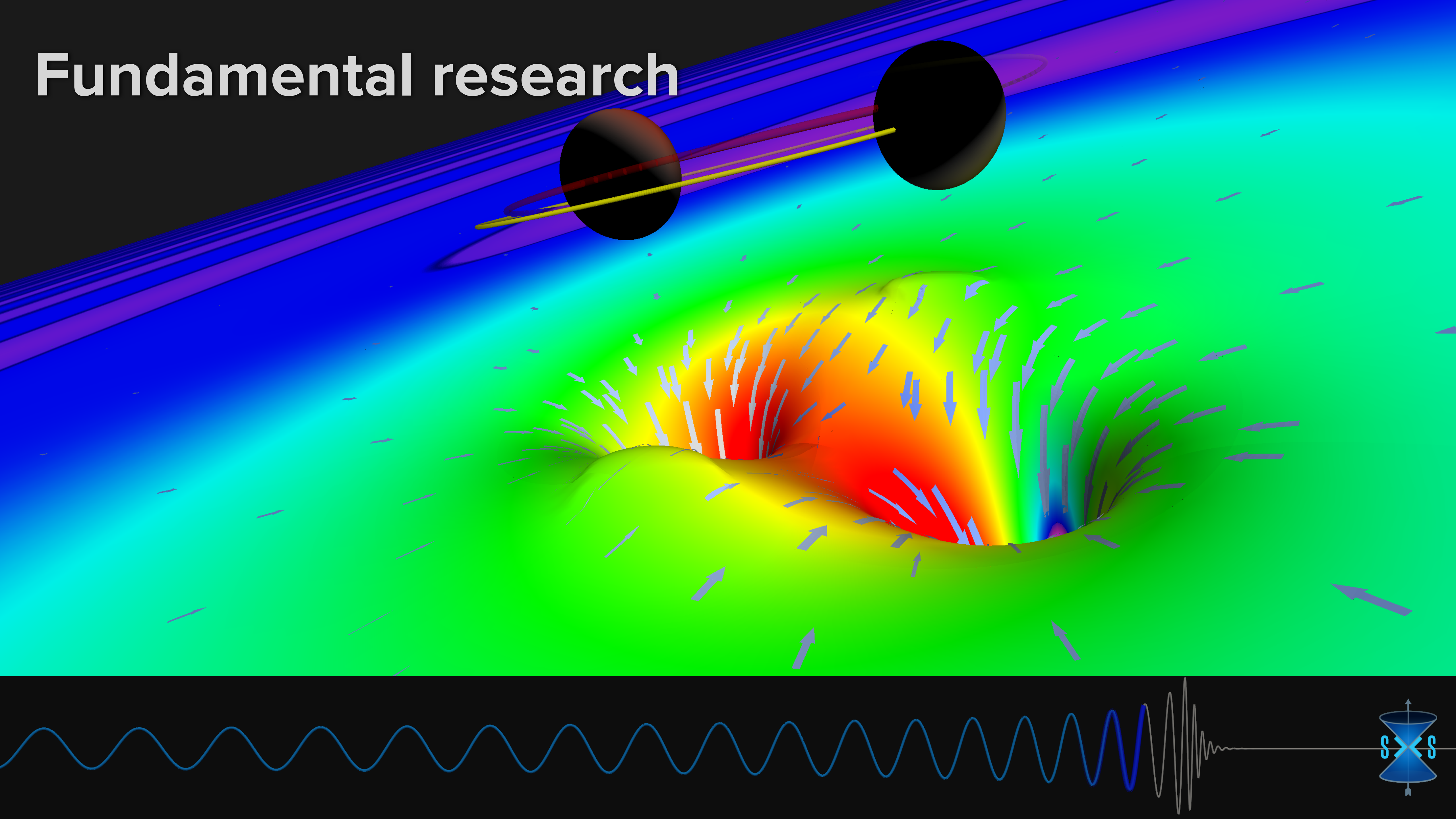


# Global health

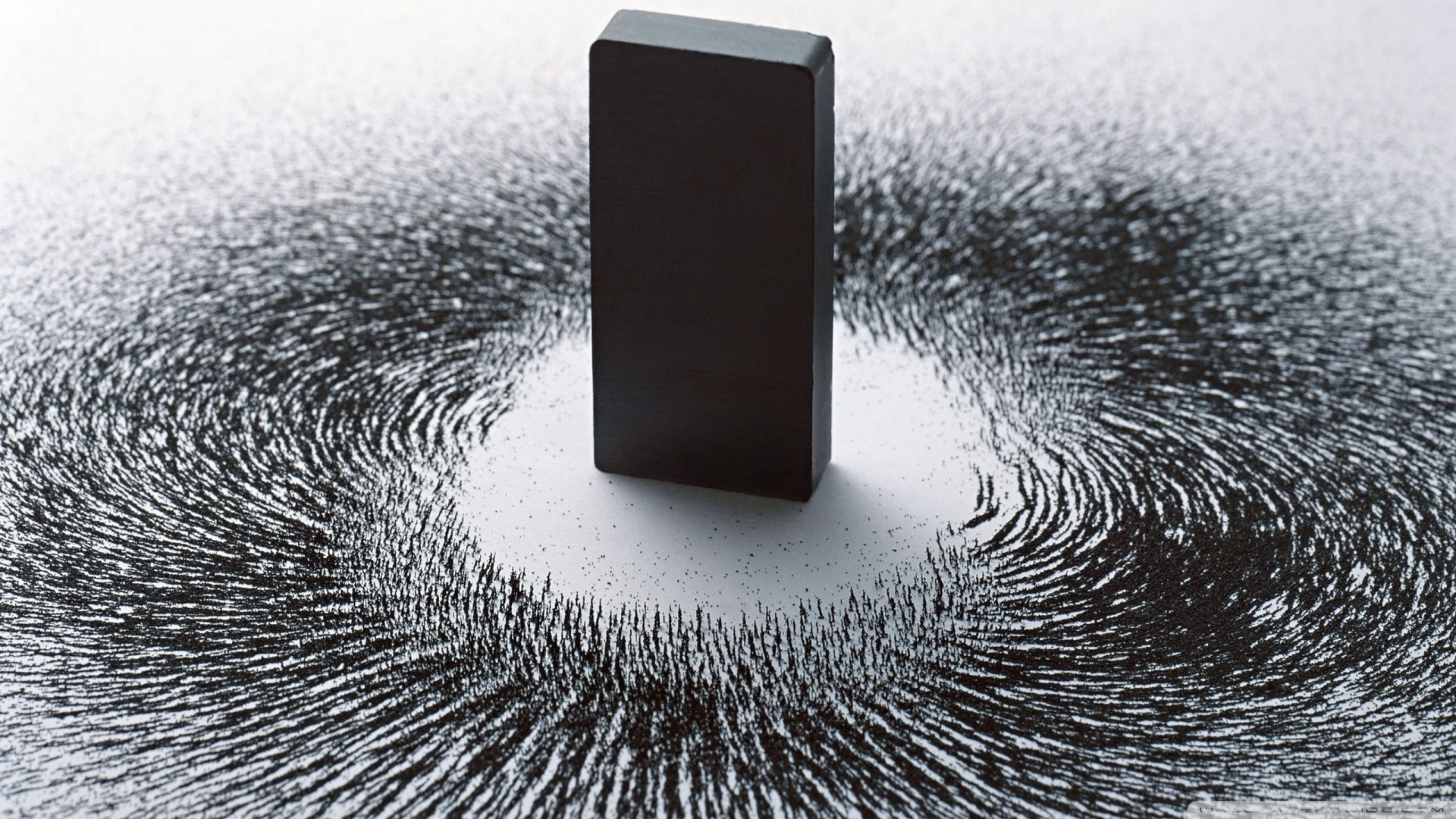


Map of the COVID-19 verified number of infected per capita as of 10 July 2021

# Fundamental research



# DEFICIT MODEL

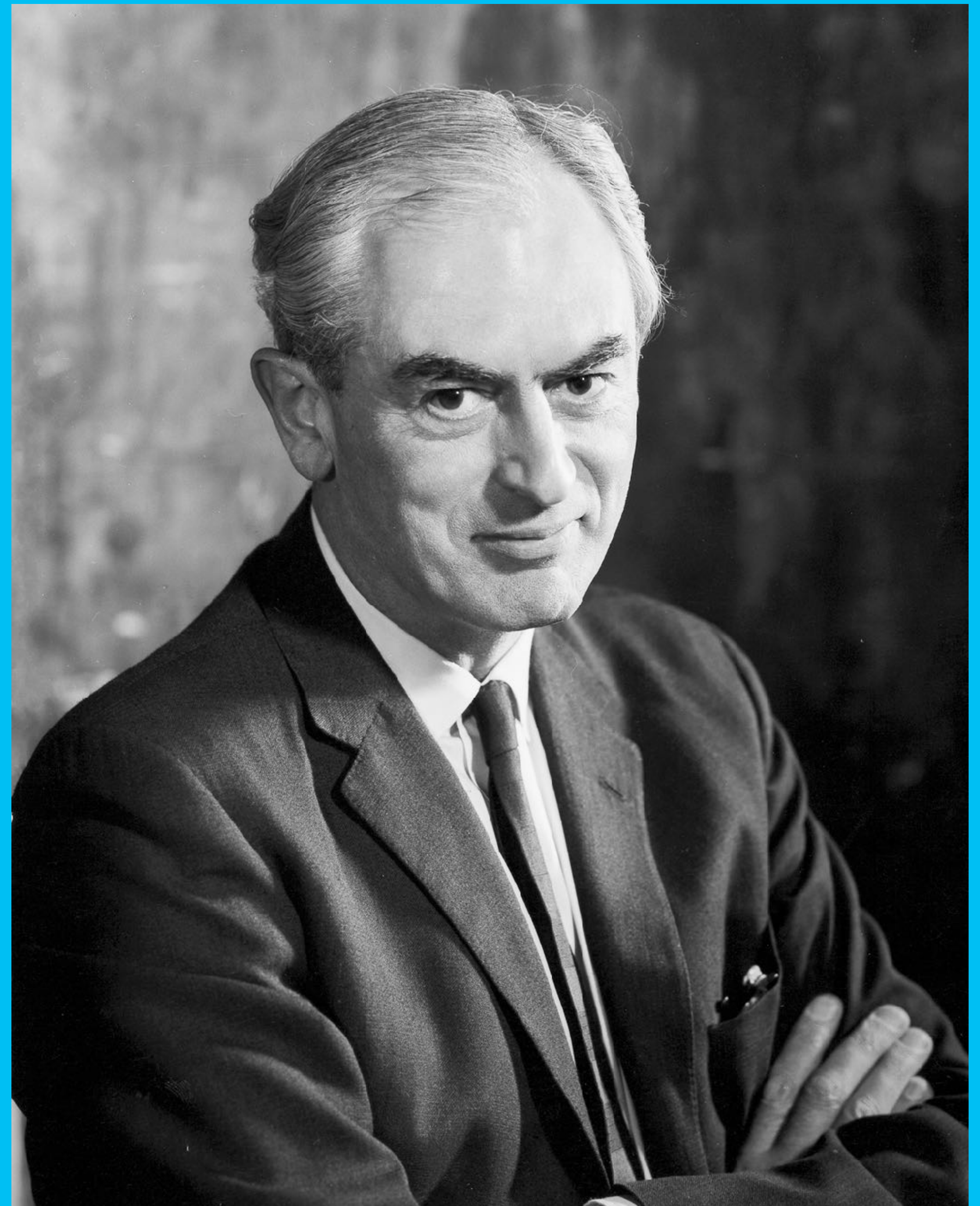


# COMMUNICATION AS A FLOW OF INFORMATION

**More than ever, people need some understanding of science, whether they are involved in decision-making at a national or local level, in managing industrial companies, in skilled or semi-skilled employment, in voting as private citizens or in making a wide range of personal decisions. In publishing this report the Council hopes that it will highlight this need for an overall awareness of the nature of science and, more particularly, of the way that science and technology pervade modern life, and that it will generate both debate and decisions on how best they can be fostered.**

**For their excess of fearfulness,  
the laymen have only themselves  
to blame and their nightmares are  
a judgement upon themselves for  
their deep-seated scientific  
illiteracy.**

**PETER MEDAWAR, NOBEL PRIZE IN MEDICINE, 1977**

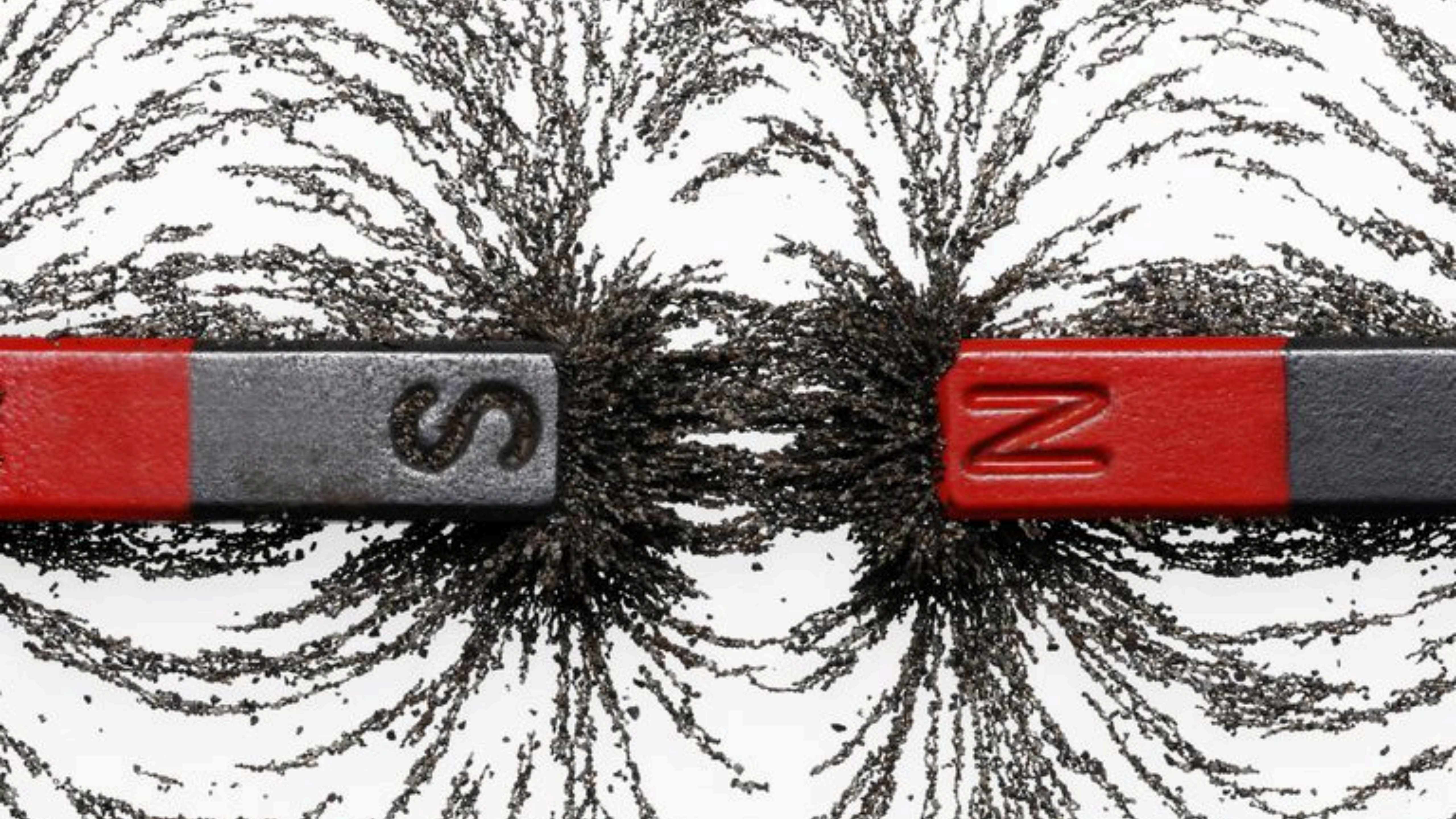


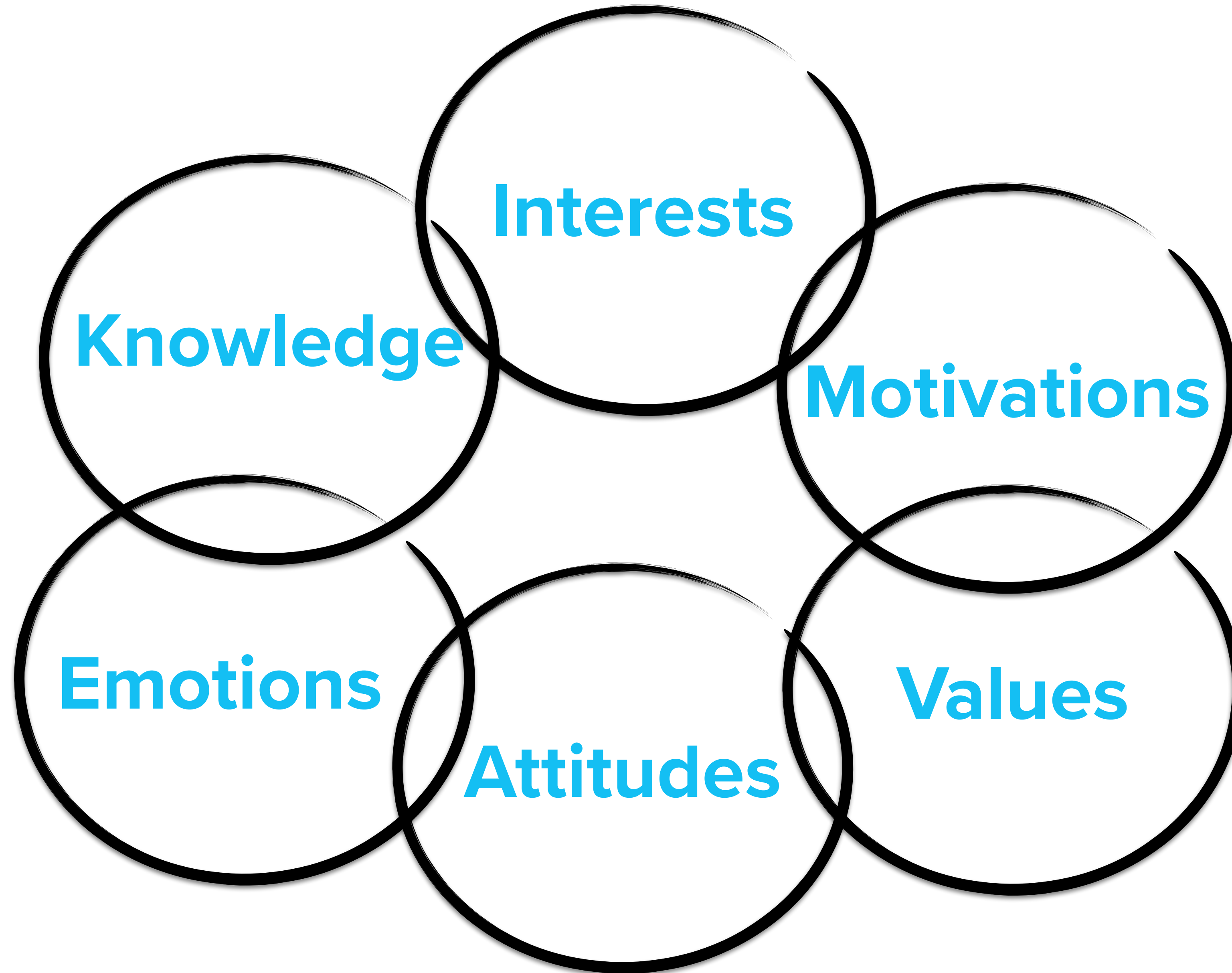
# Deficit model

<b>Main Focus</b>	Public ignorance and technical education
<b>Key Issues</b>	Communicating science, informing debate, getting the facts straight
<b>Communication style</b>	One-way, top-down
<b>Model of scientific governance</b>	Science-led, 'science' and 'politics' kept apart
<b>Sociotechnical challenge</b>	Maintaining rationality, encouraging scientific progress and expert independence
<b>Overall perspective</b>	Focusing on science
<b>Emphasis</b>	Content
<b>Aims</b>	Transferring knowledge
<b>Ideological contexts</b>	Scientism; Technocracy; Rhetoric of the knowledge economy



# DIALOGUE MODEL





**Knowledge**

**Interests**

**Motivations**

**Emotions**

**Attitudes**

**Values**

# Dialogue model

<b>Main Focus</b>	Dialogue, engagement, transparency, building trust
<b>Key Issues</b>	Re-establishing public confidence, building consensus, encouraging debate, addressing uncertainty
<b>Communication style</b>	Two-way, bottom-up
<b>Model of scientific governance</b>	Transparent, responsive to public opinion, accountable
<b>Sociotechnical challenge</b>	Establishing broad societal consensus
<b>Overall perspective</b>	Focusing on communication and engagement
<b>Emphasis</b>	Context
<b>Aims</b>	Discussing implications of research
<b>Ideological contexts</b>	Social responsibility; Culture

# PARTICIPATION MODEL

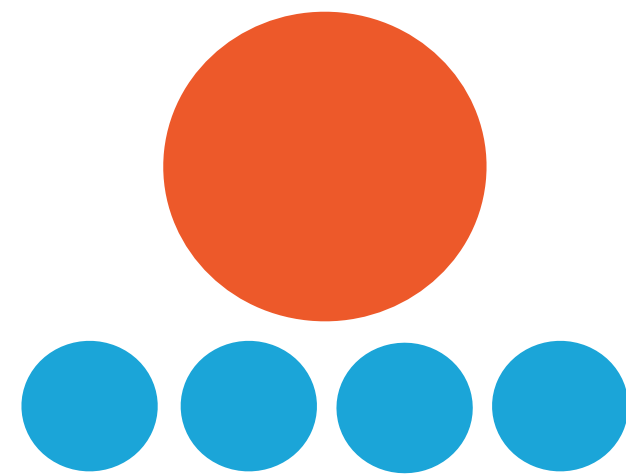


# Participation model

<b>Main Focus</b>	Direction, quality and need for sociotechnical change
<b>Key Issues</b>	Setting science and technology in wider cultural context, enhancing reflexivity and critical analysis
<b>Communication style</b>	Multiple stakeholders, multiple frameworks
<b>Model of scientific governance</b>	Open to contested problem definitions, beyond government alone, addressing societal concerns and priorities
<b>Sociotechnical challenge</b>	Viewing heterogeneity, conditionality and disagreement as a societal resource
<b>Overall perspective</b>	Focusing on scientific / political cultures
<b>Emphasis</b>	Content and Context
<b>Aims</b>	Setting the aims, shaping the agenda of research
<b>Ideological contexts</b>	Civic science; Democracy

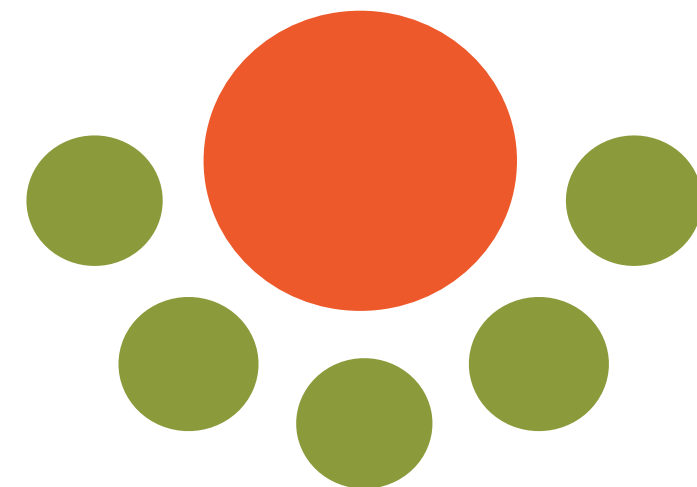
	Deficit	Dialogue	Participation
<b>Main Focus</b>	Public ignorance and technical education	Dialogue, engagement, transparency, building trust	Direction, quality and need for sociotechnical change
<b>Key Issues</b>	Communicating science, informing debate, getting the facts straight	Re-establishing public confidence, building consensus, encouraging debate, addressing uncertainty	Setting science and technology in wider cultural context, enhancing reflexivity and critical analysis
<b>Communication style</b>	One-way, top-down	Two-way, bottom-up	Multiple stakeholders, multiple frameworks
<b>Model of scientific governance</b>	Science-led, 'science' and 'politics' kept apart	Transparent, responsive to public opinion, accountable	Open to contested problem definitions, beyond government alone, addressing societal concerns and priorities
<b>Sociotechnical challenge</b>	Maintaining rationality, encouraging scientific progress and expert independence	Establishing broad societal consensus	Viewing heterogeneity, conditionality and disagreement as a societal resource
<b>Overall perspective</b>	Focusing on science	Focusing on communication and engagement	Focusing on scientific / political cultures
<b>Emphasis</b>	Content	Context	Content and Context
<b>Aims</b>	Transferring knowledge	Discussing implications of research	Setting the aims, shaping the agenda of research
<b>Ideological contexts</b>	Scientism; Technocracy; Rhetoric of the knowledge economy	Social responsibility; Culture	Civic science; Democracy





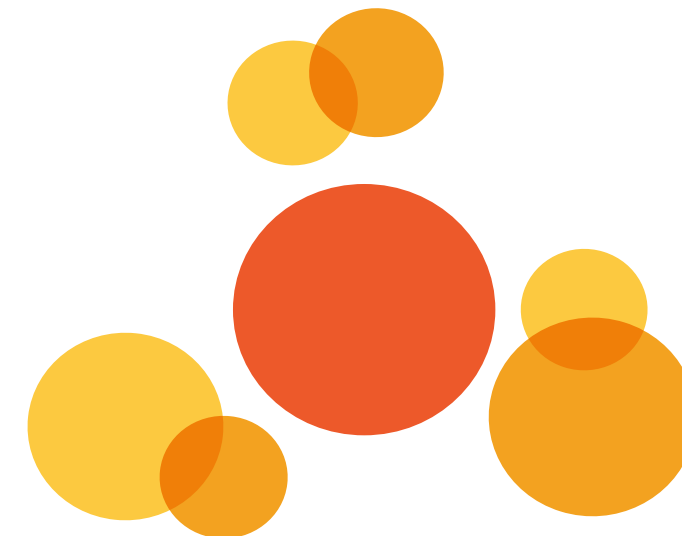
## SPECTATING

Spectating is fundamentally an act of receiving a finished artistic product. It is therefore outside the realm of participatory arts practice.



## ENHANCED ENGAGEMENT

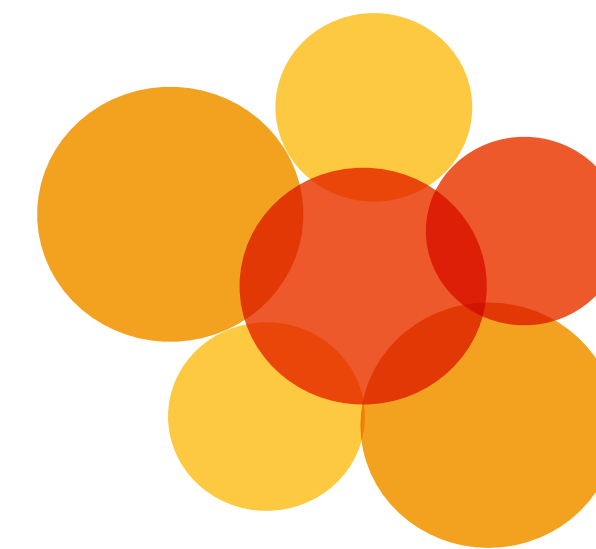
Educational or “enrichment” programs may activate the creative mind, but for the most part do not involve creative expression on the part of the audience member.



## CROWD SOURCING

Audience becomes activated in choosing or contributing towards an artistic product.

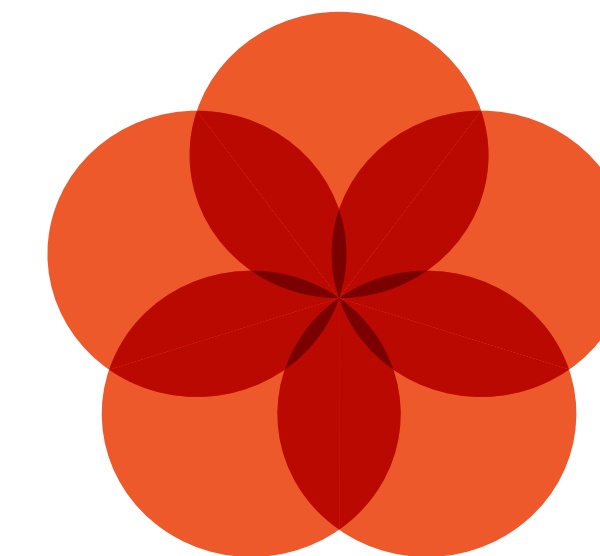
- *Youth mosaics*
- *Photography contests*
- *An opera libretto comprised of Tweets*
- *Virtual choruses*



## CO-CREATION

Audience members contribute something to an artistic experience curated by a professional artist.

- *Participatory theater*
- *Pro/Am concerts*
- *Storytelling events*
- *Participatory public art*



## AUDIENCE-AS-ARTIST

Audience members substantially take control of the artistic experience; focus shifts from the product to the process of creation.

- *Public dances*
- *Community drawing contests*

## PARTICIPANT'S LEVEL OF CREATIVE CONTROL

CURATORIAL

INTERPRETIVE

INVENTIVE

# REFLECT

**SPLIT IN THREE GROUPS AND DISCUSS  
THEN REPORT TO THE OTHERS**

**EXAMPLES**

## DEFICIT MODEL

- TV and radio programs
- Public lectures
- Science articles
- Podcast



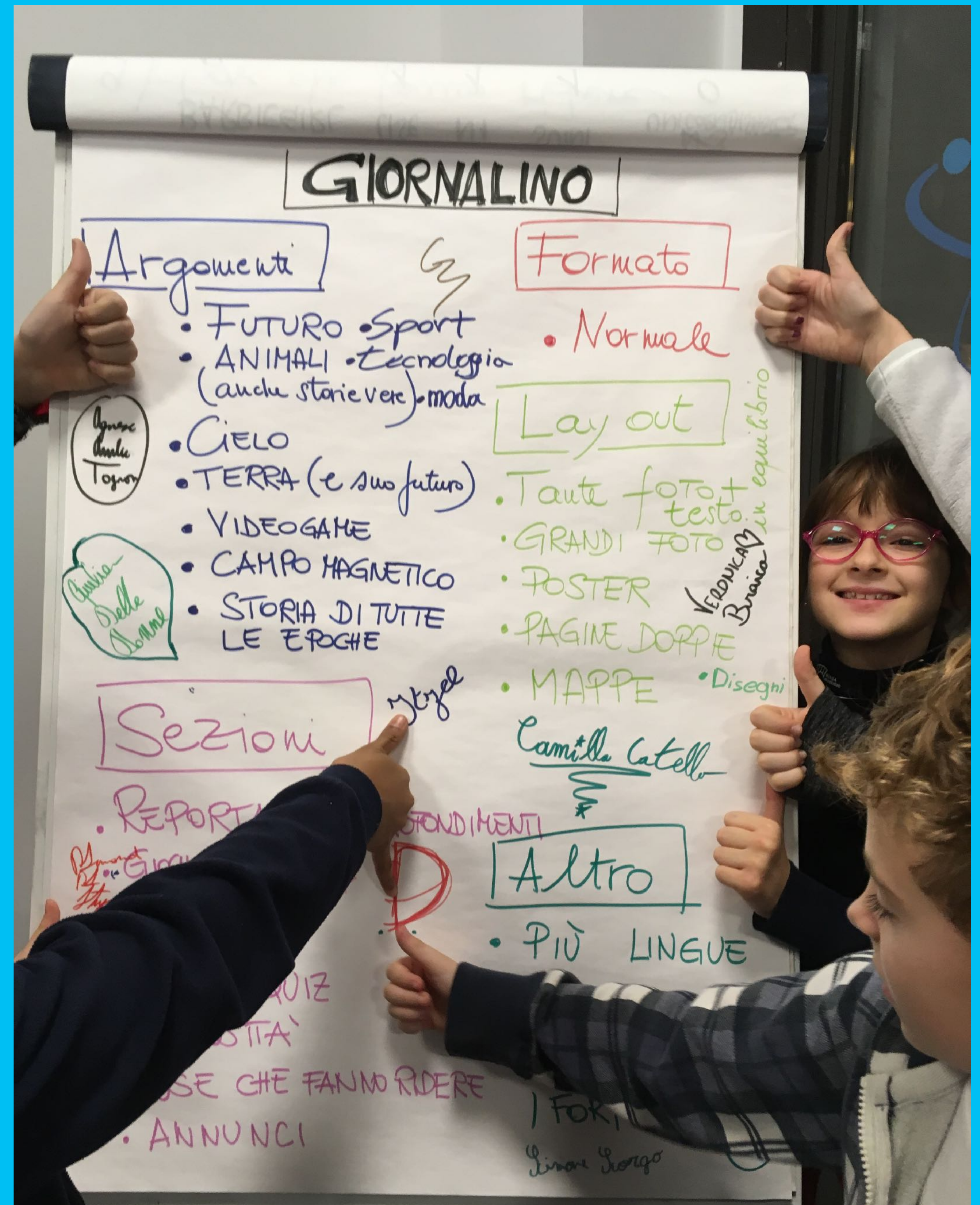
## DIALOGUE MODEL

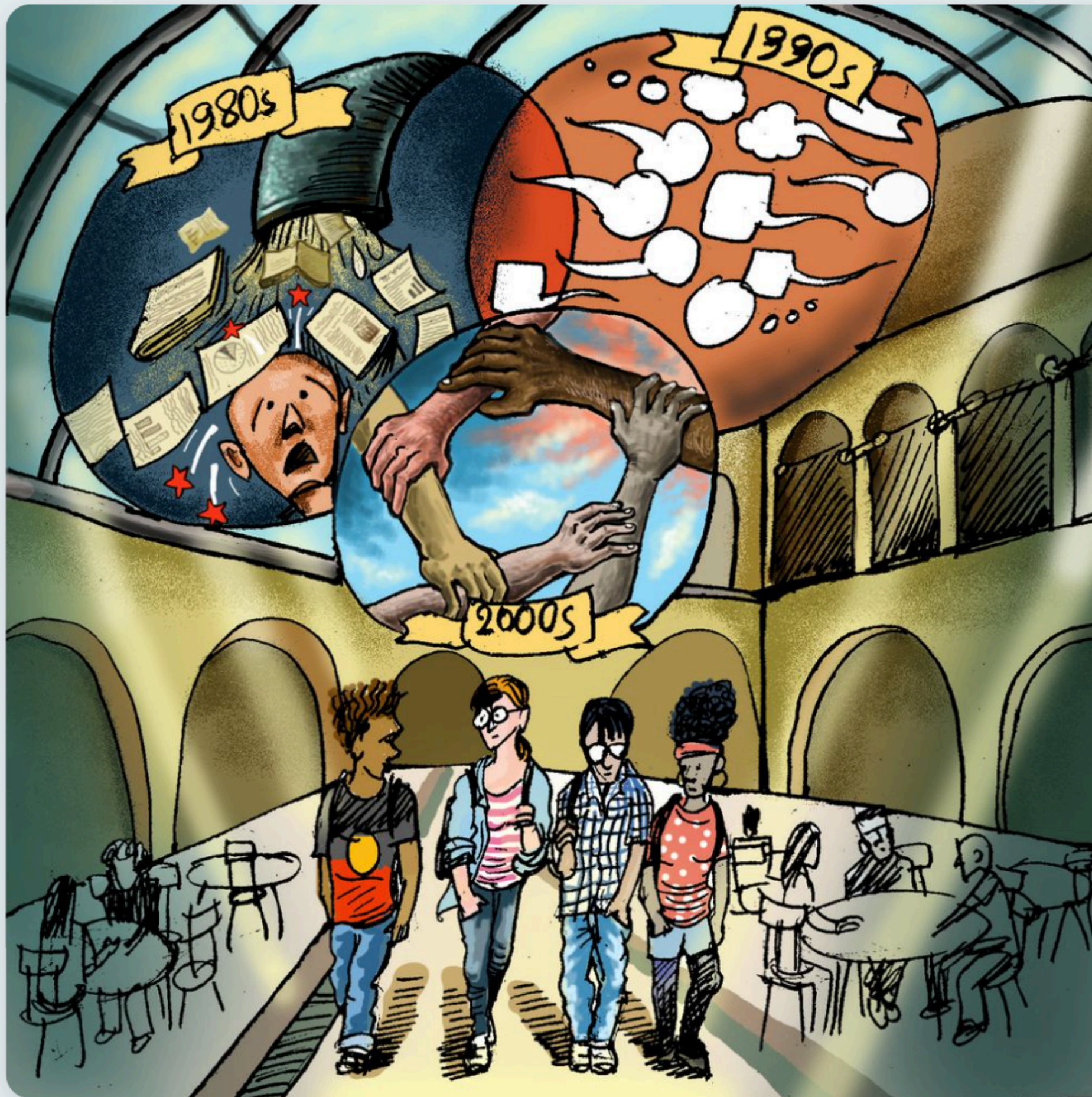
- Discussion games
- Participative exhibits
- Science café
- Interactive labs



## PARTICIPATION MODEL

- Citizen science projects
- Consensus conferences
- Living labs





## An Inclusive History of SciComm

In this flashcard course, learn a brief but inclusive history of science communication. Continue to learn through a discussion among students of scicomm!

52 CARDS

[https://app.us.lifeology.io/viewer/lifeology/scicomm/a-brief-history-of-science-communication?fbclid=IwAR3VrESAy1oGKoGR0-x-rx5WtvAxBnrg8PxePMiBVzvx\\_i\\_2o6jfSurxji04#d510d52a4c41](https://app.us.lifeology.io/viewer/lifeology/scicomm/a-brief-history-of-science-communication?fbclid=IwAR3VrESAy1oGKoGR0-x-rx5WtvAxBnrg8PxePMiBVzvx_i_2o6jfSurxji04#d510d52a4c41)

# READING SUGGESTION

