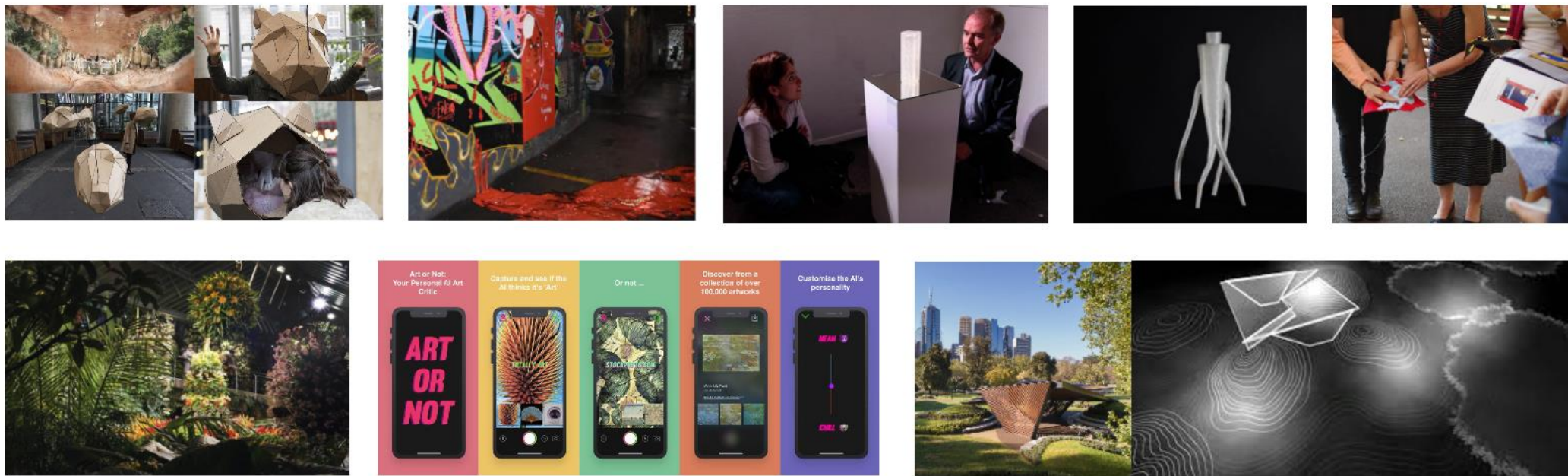


Druk op **Esc** om het volledige scherm af te sluiten

# Interdisciplinary Engagement



# AESIS

NETWORK FOR  
ADVANCING & EVALUATING THE SOCIETAL IMPACT OF SCIENCE



Looking at topic from different perspectives and different scientific backgrounds and tools and bringing them together to a coherent view

Understanding another perspective-that is interdisciplinary engagement to me

finding synergies/ crossing borders/breaking silos

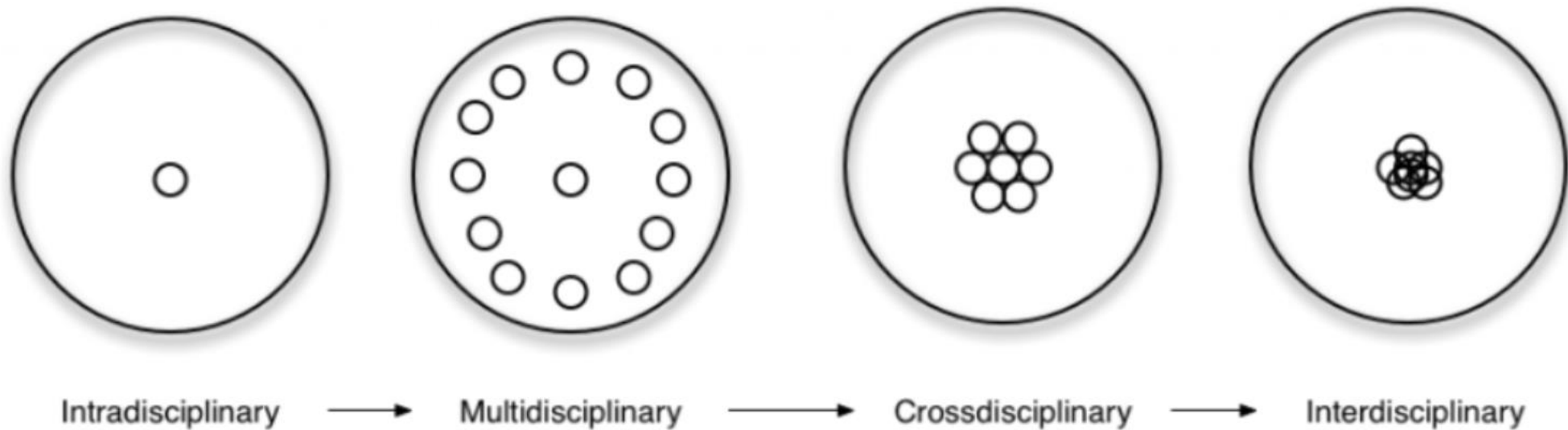
What do we mean by interdisciplinary?

projects/teams/challenges etc. that cross multiple disciplinary boundaries

bringing together / connecting different disciplines

Constructing/investigating something together with people/organisations from different disciplines

*"Once it is determined that there is no longer an intradisciplinary (singular) practice there are commonly four definitions used. Multi-, Cross-, Inter-, and Trans-. Cross- and Multi- refer to disciplines working together although independently from each other. The distinction between the two is that cross- allows viewing from one discipline to the next, which requires a direct side-by-side, or close connection. Multi is more distant although still in proximity. Inter and trans however require interaction."*



	1	2	3	4	5	6
1	<b>Expo</b>  See exhibitors present their best-in-show ideas.	<b>Hackathon</b>  Assemble to tackle an intensive challenge.	<b>Behind-The-Scenes Tour</b>  Get the inside story.	<b>Talent Quest</b>  Thrills, spills and skills in search of the 'best'.	<b>Panel</b>  Experts pick apart a topic from different angles.	<b>Comedy Show</b>  Laugh, think, and sometimes cry.
2	<b>Sit-In</b>  Gather with the like-minded around a cause.	<b>Lecture</b>  Be spellbound by a fantastic presenter.	<b>Masterclass</b>  Upgrade your skills or encounter a new one.	<b>Escape Room</b>  Solve the puzzles to earn your freedom.	<b>Degustation</b>  Sample the finest in good company.	<b>Provocation</b>  Be challenged and have your say.
3	<b>Experiment</b>  Once you step inside, you're the data.	<b>Sport Event</b>  Take to the field or spectate – it's up to you.	<b>Trivia Night</b>  Winning is anything but trivial.	<b>Citizen Jury</b>  Listen, examine, deliberate, decide.	<b>Presenterless Workshop</b>  Open the envelope, read the instructions, begin!	<b>Speed Dating</b>  Ten chances to change your world in ten minutes.
4	<b>Open Mic</b>  Step up to the stage or kick back and enjoy.	<b>Great Debate</b>  Intellectuals go toe to toe, but who wins?	<b>Theatre Performance</b>  Absorb the art of dramatic practice.	<b>Comic-Con</b>  Gather with the enthusiasts on a theme.	<b>Flash Mob</b>  Zombies, violins, Hamlet – at a train station near you.	<b>In-Conversation</b>  Fireside chats between interesting people.
5	<b>Role Play</b>  Wear the hat of another in a tricky situation.	<b>Silent Disco</b>  Tune in to curated sounds in a quiet crowd.	<b>Game Show</b>  Roll up as participants vie for the prize.	<b>Open Space</b>  Collectively set the agenda and discuss deeply.	<b>Relay for a Cause</b>  A team, a run, a swim, an opera – a marathon effort.	<b>Virtual Tour</b>  Strap on a headset and go out of this world.
6	<b>Road Trip</b>  Crank the stereo and go somewhere great.	<b>Movie Night</b>  Butter the popcorn and turn down the lights.	<b>Twitch Stream</b>  Watch live streamers play your favourite games!	<b>Countdown</b>  Hottest 100, 50 to 1, you'll be hooked...	<b>Street Magic</b>  Be confounded where you least expect it.	<b>Casino Royale</b>  Spin the wheel, roll the dice, play your hand...

Ideation tool created by David Robertson. Available under a Creative Commons-Attribution-ShareAlike (CC BY-SA 2.5 AU) license. Icons from The Noun Project.



Degustation about Physiology

Consult with scientists and chefs to create a tasting menu that takes people on a journey through how they perceive taste. From tongue to brain.

Virtual tour from Gemini's circular lab

Engage all stakeholders in the lab to learn to understand their role and design requirements collaboratively for the virtual experience. Becoming part of the process and making one's experience.

Relay for a cause- ask a cab driver to ask his burning question to researchers... take his question to a shopping mall and ask shoppers how they would answer the question the cab driver asked... take the shoppers' answers to my institute researchers and ask them what they thought of the answers.

Relay for a cause - Walk and talk 7 universities involved in the research programme. 50+ companies. One WASP researcher teams up with a researcher from a completely different field from the Faculty of philosophy for a walk and talk around a specific challenge. Aiming for the discussion to result in presentable research ideas. Walk and talk while measuring steps or km walked. The teams that come up with a doable idea and have walked the longest wins.

role play through a serious game that allows participants to act as players in a real situation. For example, Arctic Futures policy simulation where players are assigned roles as government representatives and organizations passing a new treaty.

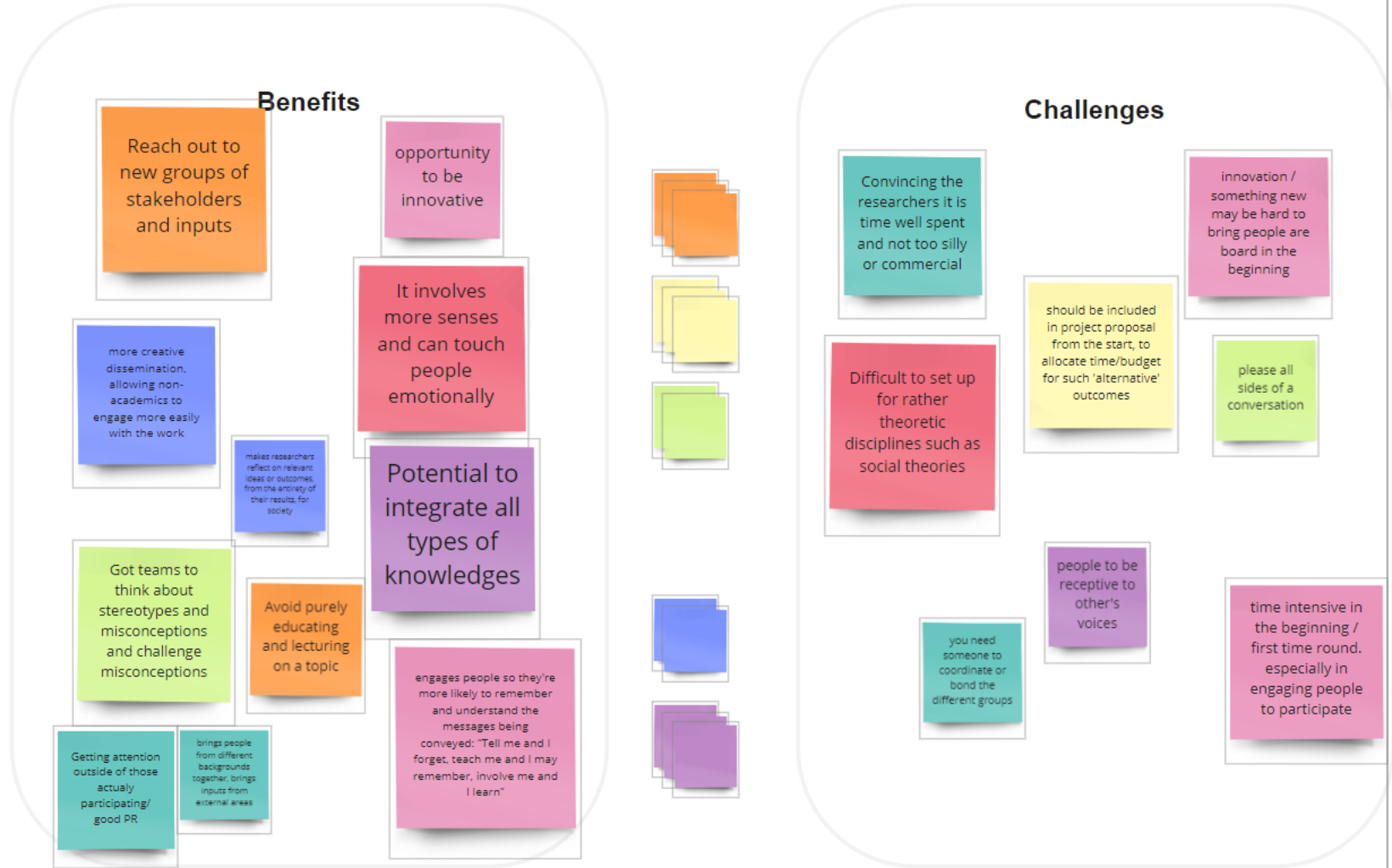
open space. A) chose a topic, B) bring in as many academic disciplines and various types of stakeholders or somehow affected people as possible, C) ask for suggestions for perspectives to be explored, D) set up mixed groups for discussing all these perspectives, E) collect outcomes, F) map further steps

## Benefits and Challenges

Keeping in mind the definition of interdisciplinary, and the types of activities or outcomes that result from interdisciplinary engagement. Let's map out some benefits and challenges.

Some questions that can be considered as you do this are:

- How does it differ from conventional science communication?
- How does interdisciplinary engagement alter what's possible, in terms of narratives, experiences, outcomes and process?
- Why do we need divergent, creative ways to engage people with science?





**The Afterbite (MOUTHY, Science Gallery London, 2016)**

Through a (literal) different perspective members of the public readily engaged with academics whose work had previously not been communicated



**There will be blood (BLOOD, Science Gallery Melbourne, 2017)**

Through a participatory event, and using a location specific to Melbourne, academics and artists had conversations about menstruation - tackling taboos and breaking science out of the textbooks



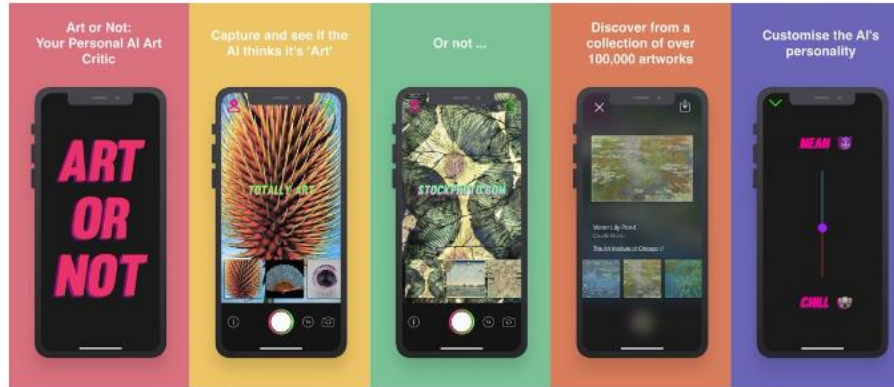
**Spit Crystal (MOUTHY, Science Gallery London, 2016)**

Through an initial provocation from an artist, and deep engagement with academics, old dogmas were challenged and a new line of academic work emerged. The transparency of this journey was displayed as the final piece, engaging people with the process of science.



**Alluring Orchids - Lates (Royal Botanic Gardens, Kew, 2015)**

Using a format popular in London - 'Lates' - and through a series of low-tech, tactile participatory activities inspired by science and horticulture, a new audience came to Kew and engaged with the exhibit.



**Art of Not (SensiLab, 2018-2019)**

Using a research output from the creative tech laboratory, I developed a number of creative events which permitted people to critically reflect on the outcomes and see where they (traditionally thought of as an 'end user') fit into the process of science



**Inclusive Technologies - SensiLab (2018-2020)**

Research development workshops at the start of new research projects not only engaged people traditionally thought of as 'end users' but ensure the research was more equitable and responsible



**SensiLab at MPavilion (2019)**

A fun experiment - put us in prominent location, the team had fun, and through interacting with many different people, new collaborations emerged!

# Challenge!

## THE CHALLENGE

In small teams, you will attempt to create an original science-inspired game.

The aim of your game is to engage players with the complexity of climate change. Not just learning the academic work, but also exploring the societal, political cultural, environmental, ethical and/or other dimensions of an area of climate science research.

The game experience can take any form or structure that you choose - the concept of 'play' and 'exploration' are central, not any particular method.

## WHY THIS CHALLENGE?

Through this collaborative, creative activity I am aiming to give you a first hand experience of who and what is involved in an interdisciplinary engagement activity - and how these collaborations might be navigated.

## HOW WILL THIS WORK?

Each group has a number of different roles, each of which play an important part in an interdisciplinary collaboration.

I have created different characters based on these roles. Each person will take a character, and then as a group you will follow the schedule below.

- Tips:
- Fully immerse yourself in your character
  - Reflect on what you are learning about these different roles
  - Have fun!

Challenge timetable

Time	Stage	Instruction / prompts to make it interesting!
5 mins	Collaboration 'start'	The artist and the scientist disagree about how the science can be creatively interpreted, or what science should be the focus of the game.
10 mins	Ideation	You can't stop coming up with ideas! An idea doesn't have to be a fully formed. Once you have one, write it down, come up with another!
5 mins	Narrowing to one idea (assume prototyping has happened)	It comes time to make your game - and the producer starts to put constraints on the beautiful all-singing all-dancing game due to budget and time restrictions - everyone feels compromised and irritable.  The scientist freaks out about the detail of the science, whilst the science communicator only participates in the idea they think is the way forward.
5 mins	Reflection and evaluation (assuming idea was produced)	The delivery is over and everyone breathes a sigh of relief - looking back you realised you achieved a lot, and learnt even more (promise!).

### Science communicator - "This output directly reflects on me"

Expectation: We have an all star team here, got to show up big with outcomes

Experience of collaboration: Quite a bit, but mostly supporting academic- academic work

Institutional context: Very closely tied to marketing/comms teams within a faculty

### Scientist 1 - "This output directly reflects on me"

Expectation: Sees this as a way to deliver a message (like a lecture informs people)

Experience of collaboration: A couple of outreach activities, but no collaborations

Institutional context: Highly academic peers/ colleagues, little institutional support

### Artist 1 - "I'm here to make a successful work that I can tour"

Expectation: This is a platform for my work, a high profile opportunity and already has an idea coming in

Experience of collaboration: Plenty, coming in with expectations of how it should go

Institutional context: Has worked with similar institutions before but no connection to this one

### Producer - "I'm here to make vague ideas a concrete reality"

Expectation: Has some nervousness about whether the collaboration will work

Experience of collaboration: Freelancer, predominantly working on artistic projects

Institutional context: As a freelancer worked across a number of institutions so used to flexible ways of working

### Scientist 2 - "I'm a key part of helping this project succeed"

Expectation: Willing to see what people can do with the science

Experience of collaboration: Lots!

Institutional context: Has a small supportive community of practice to draw on

### Artist 2 - "I'm here to learn some new processes, and make something interesting with new people"

Expectation: This is a chance to learn from an environment/people which I don't usually have access to

Experience of collaboration: Not a lot of experience so not particularly confident

Institutional context: Has a long history as visitor to this institution, familiar with some staff



## Reflections from the challenge

Thinking about  
the way the  
science is  
structured and  
practiced

Language  
always  
matters

Transparency  
around  
expectations

## Take home points

### Definition of Interdisciplinary Engagement

- An engagement activity that requires interaction between disciplines either in the set up, or in its delivery

### Benefits

- Societal impact
- Innovation
- Diversity and inclusion

### Challenges

- Time and trust
- Project management
- Outcomes defined during development
- (Funding)

### Navigating interdisciplinary collaborations

- Aims and Objectives
- Different voices and views
- Things will never be perfect
- Documentation and evaluation are key
- Remember your audience