TRENDS IN (DUTCH) ACADEMIA

and their relation to science communication practice

Dieudonnée van de Willige

WHO'S TALKING?

From 2018 – now:

- Science communications advisor at a university
- Board member of Dutch association for science communication SciCom NL

Maastricht University

SCICOM NL

Until 2018:
Communication-curious PhD researcher

Utrecht University

SO WHAT?

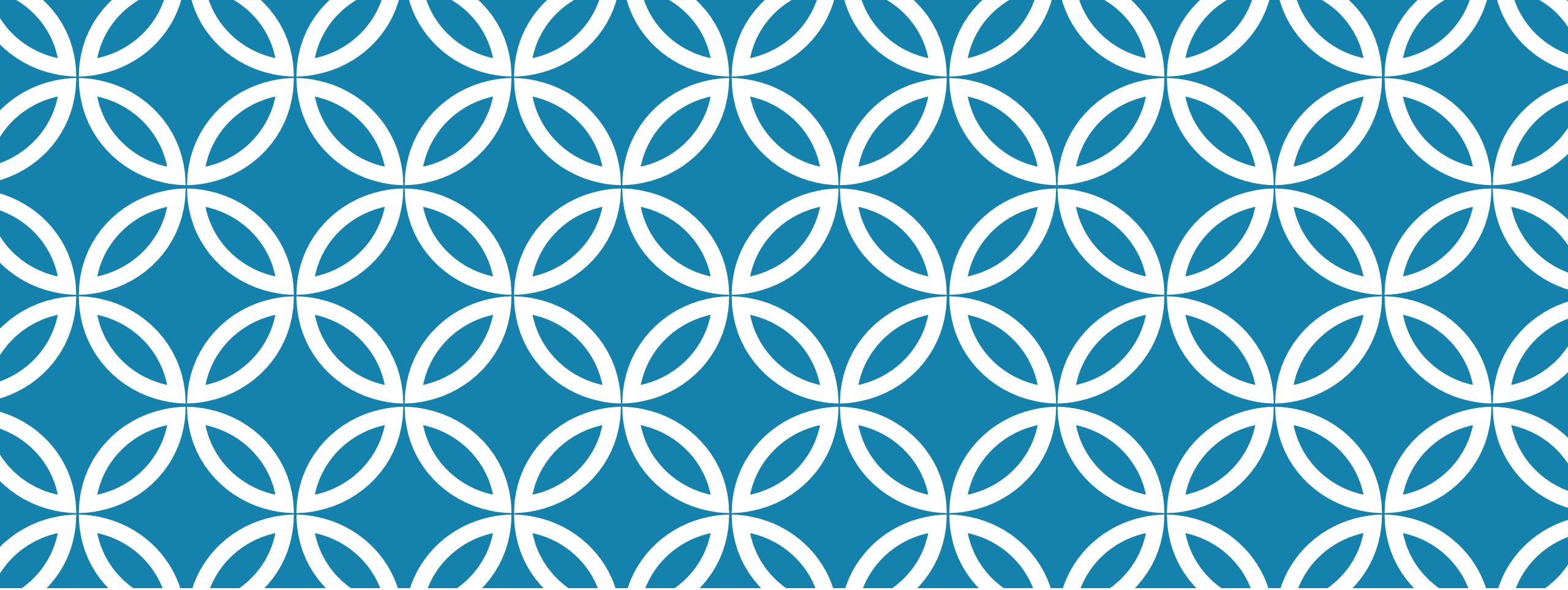
→ Observations from working in both worlds

- Not an academic study…

→ We need to bridge academia and science communication more effectively!

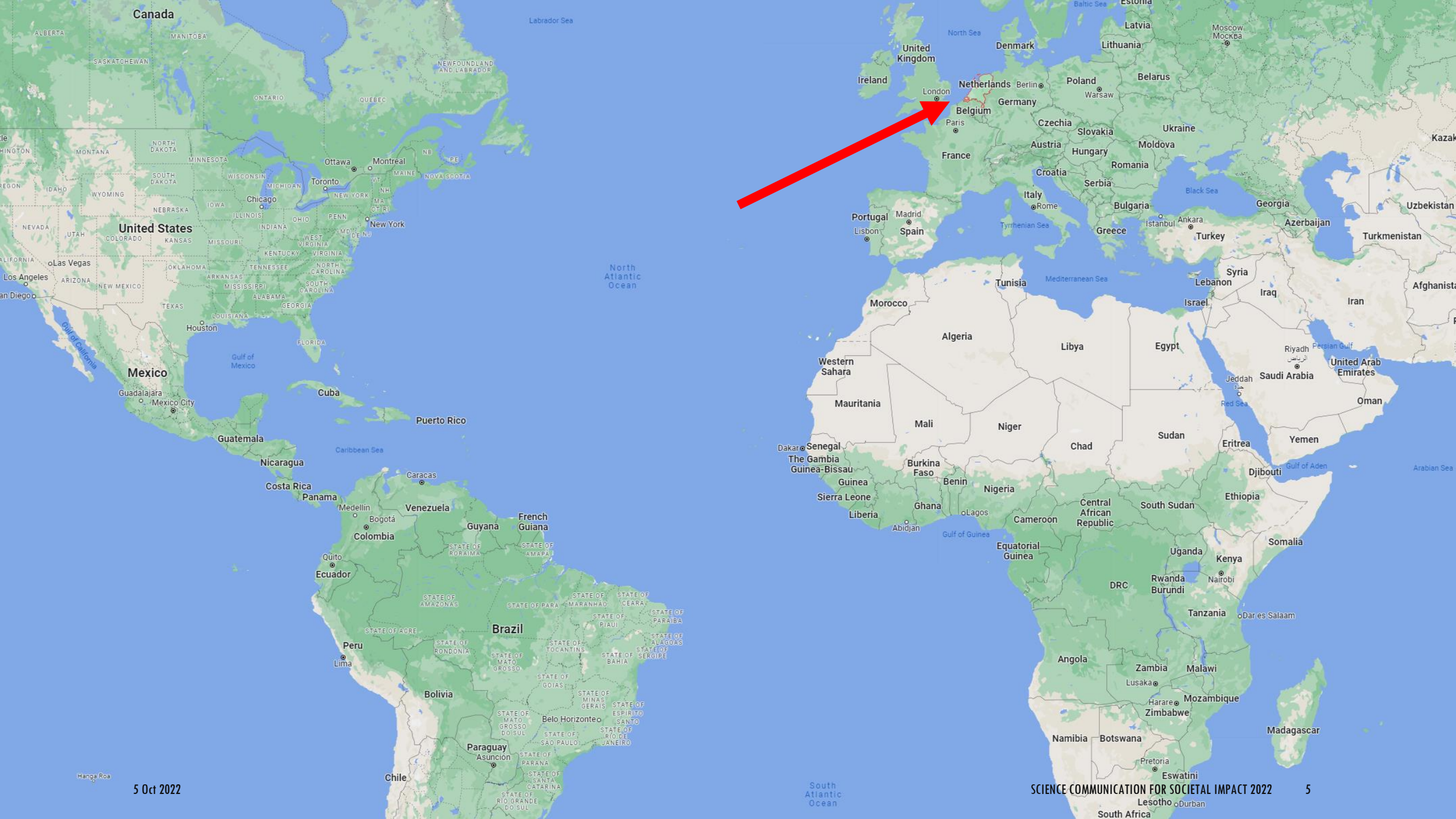
- Academic working culture already affects science communication practice
- Changes will affect us too – so let's explore the space together and be proactive

- Focused on the Netherlands, but far from the only place where these dynamics exist



MEANWHILE IN THE NETHERLANDS

Contemporary Dutch academia in a nutshell


Canada
United States
Mexico
Brazil
Peru
Bolivia
Paraguay
Chile
Venezuela
Colombia
Ecuador
Guyana
French Guiana
Cuba
Puerto Rico
Guatemala
Nicaragua
Costa Rica
Panama
Caribbean Sea
Gulf of Mexico
Gulf of California
North Atlantic Ocean
South Atlantic Ocean
Labrador Sea
United Kingdom
Ireland
Netherlands
Belgium
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Syria
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Jordan
Saudi Arabia
United Arab Emirates
Oman
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Western Sahara
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Chad
Sudan
Eritrea
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Ethiopia
Somalia
Senegal
The Gambia
Guinea-Bissau
Guinea
Sierra Leone
Liberia
Burkina Faso
Benin
Nigeria
Ghana
Cameroon
Central African Republic
South Sudan
Equatorial Guinea
Uganda
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Rwanda
Burundi
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Namibia
Botswana
Madagascar
South Africa
Lesotho
Eswatini
Mediterranean Sea
Black Sea
Red Sea
Persian Gulf
Gulf of Aden
Arabian Sea
Gulf of Guinea
Tyrrhenian Sea
North Sea
Baltic Sea
Ottawa
Montreal
Toronto
Chicago
New York
Houston
Los Angeles
Las Vegas
Mexico City
Guadalajara
Caracas
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Istanbul
Ankara
Riyadh
Jeddah
Dakar
Abidjan
Lagos
Nairobi
Dar es Salaam
Lusaka
Harare
Pretoria
Durban

LANGUAGE LIMITATIONS…

SCIENCES	=	“WETENSCHAP”
SOCIAL SCIENCES	=	“WETENSCHAP”
HUMANITIES	=	“WETENSCHAP”
		+
ALL THINGS SCIENTIFIC METHOD	=	“WETENSCHAP”

ACTORS IN SCIENCE COMMUNICATION

- Institutional
  - Advisors
  - Press officers
- Freelance
  - Practitioners
  - Trainers
- Science museums
- Etc

National Centre for Science Communication

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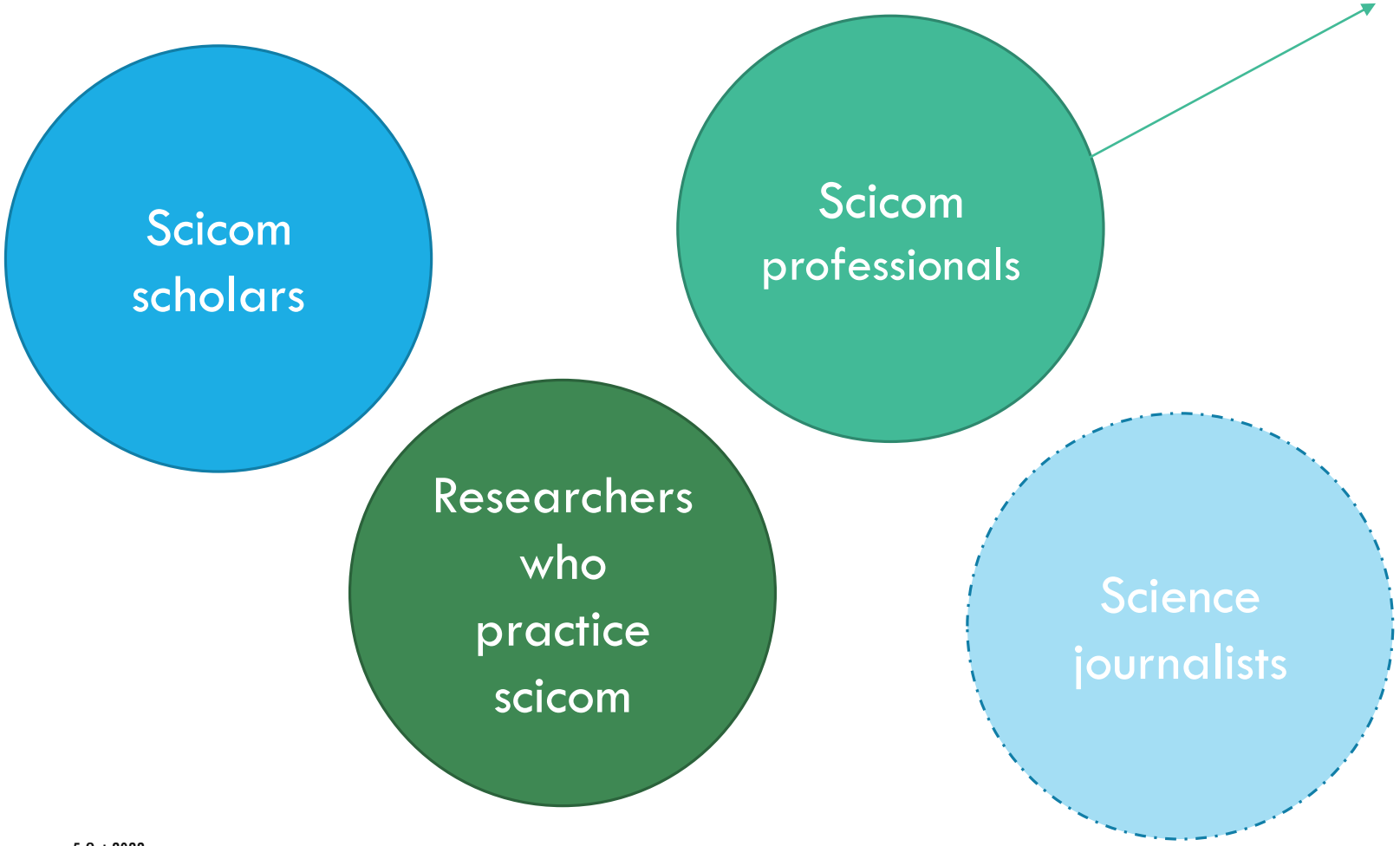

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National Center for Science Communication

DUTCH HIGHER EDUCATION

- 18 million people in the country
- 14 research universities
- 8 university medical centres
- 36 universities of applied sciences

- Research and education are considered to be of high quality
  - Dutch researchers are among the most productive and most-cited internationally (Rathenau Institute[1])
  - Universities perform well in prominent world rankings – methodological flaws aside… (UNL[2])
  - In 2022, a quarter of first-year students in higher education come from abroad (Statistics Netherlands[3])

[1] https://www.rathenau.nl/en/science-figures/output/publications/citation-impact-all-scientific-publications-international
[2] https://www.universiteitenvannederland.nl/f_c_rankings.html
[3] https://www.cbs.nl/en-gb/news/2022/11/40-percent-international-first-year-students-at-dutch-universities

PEEKING BEHIND THE ACADEMIC CURTAIN

All is not well at universities!

→ Grassroots academic protest movements

- WOinActie w/unions (2020): on average 12-15 hours structural overwork per week, more than half of respondents experience stress and psychological health problems[1]

→ 2021 investigation: structural underfunding of approx. 800 million euros a year (PwC for Dutch government[2])

[1] https://www.aob.nl/wp-content/uploads/2020/01/WOinactie-Inventarisatie-Structureel-Overwerk-Universiteiten.pdf
[2] https://www.rijksoverheid.nl/ministeries/ministerie-van-onderwijs-cultuur-en-wetenschap/documenten/kamerstukken/2021/03/05/onderzoeken-bekostiging-middelbaar-beroepsonderwijs-hoger-onderwijs-en-onderzoek

4 KEY INFLUENCES

1. Work pressure: too many tasks, too little time
2. Competition for small amount of permanent positions
3. Individualism
4. Strong hierarchies

WHAT DOES SUCCESS CURRENTLY LOOK LIKE?

→ It's mostly about an individual's research metrics

- Research output: quantity, author position, type of journals
- Number and volume of research grants
- Number of PhD students
- Other field-specific research indicators…

→ Other tasks – like education or leadership – matter much less in practice

"In my recent annual assessment, I had really good student evaluations and nice results in impact and teamwork. That was great and all, and my supervisor said it almost qualified as excellent, but the qualification 'excellent' is only given to people that brought in a pile of cash. So I had to mind my publications and my grants. (…)"

- Anonymous junior researcher on performance assessment, when interviewed for a bachelor's thesis by Utrecht University student Femke van de Glind[1]

[1] Bachelor's thesis Femke van de Glind: *De jonge wetenschapper als schaap met vijf poten?* Utrecht University, 2022. Quote translated from Dutch. https://tauu.uu.nl/wp-content/uploads/2022/07/Femke-van-de-Glind-Bachelorscriptie-BO-De-jonge-wetenschapper-als-schaap-met-vijf-poten_.pdf

4 KEY INFLUENCES

1. Work pressure: too many tasks, too little time
   All tasks are expected, yet mostly research is valued
2. Competition for small amount of permanent positions
   Time spent *not* doing research could jeopardize the next career step
3. Individualism
   Splitting tasks could jeopardize the next career step
4. Strong hierarchies
   Self-sustaining effect: senior researchers tend to favour research, operate relatively independently, and play a major role in hiring and promotion decisions

SCIENCE COMMUNICATION?

Great news – even in the current system,
a lot of academics find time and motivation!

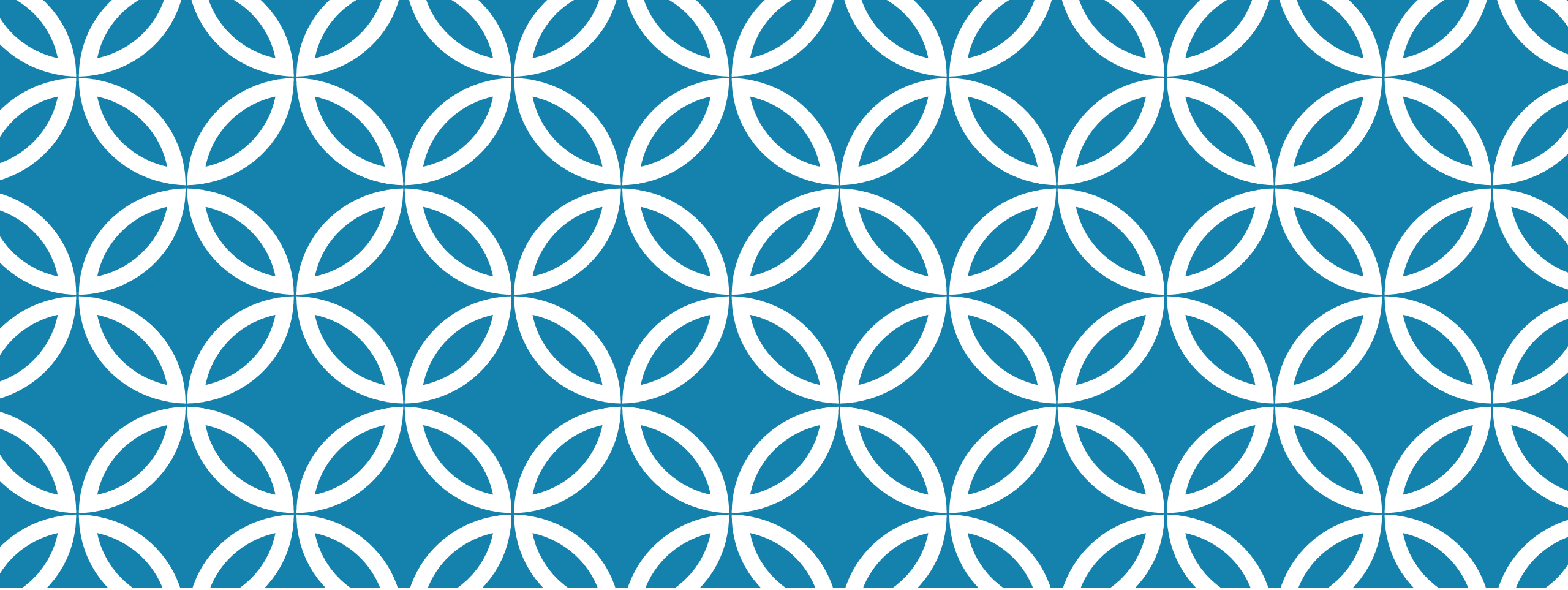
But often…

- → Unpaid work
- → Outside of/on top of other tasks
- → Relatively few support structures at institution and peer level
- → Little (if any) time and space to develop skills and knowledge
- → Widely varying responses from colleagues: good *and* bad

"Don't be too well known outside the field. I hate to say this, but the evidence is there: if you have too high of a public profile, people look at you suspiciously. Actual quote: "I'm glad we didn't hire Dr. X; he spends too much time in the New York Times and not enough time in the lab." And that's the point -- it's not that people are jealous that you are popular, it's that they are suspicious you care about publicity more than you do about research."

- American physicist Sean Carrol in 2011, blogging on the topic of getting tenure at a major research university[1]

[1] Sean Carroll (2011), blog "How to get tenure at a major research university?". https://www.discovermagazine.com/the-sciences/how-to-get-tenure-at-a-major-research-university



TAKEAWAY #1

Our interaction with researchers is influenced by the academic system they're in. Explore it!

OVER TO YOU!

→ I know my country's academic system and its values.

O Not at all O A bit O Very well

→ I would describe it as…

- Competitive
- Individualistic
- Hierarchical
- Research-dominated

O Not at all O A bit O Very O I'm not sure

WELL THAT DIDN'T SOUND GREAT AT ALL

2013: Position paper by academics of 'Science in Transition'[1]

"This [an approach defined for an integral research assessment] has implications for career development and talent management. Managers of knowledge institutions will have to aim for diversity to offer opportunities to a different kind of researcher working for a completely different résumé and a different career, both inside and outside academia."

2019: Position paper 'Room for Everyone's Talent', aka Recognition and Rewards

- By Dutch universities (VSNU/UNL), university medical centres (NFU), Royal Netherlands Academy of Arts and Sciences (KNAW), and governmental science funding bodies (NWO/ZonMW)

[1] Science in Transition (2013). Position paper: Why science does not work as it should and what to do about it. http://www.scienceintransition.nl/app/uploads/2013/10/Science-in-Transition-Position-Paper-final.pdf

RECOGNITION AND REWARDS STARTING POINTS

- → Diversifying and vitalising career paths
  - Research
  - Education
  - Leadership
  - Impact
  - (Patient care)
- → Achieving balance between the individual and the collective
  - "Team science"
- → Focusing on quality over quantity
- → Stimulating Open Science

VSNU, NFU, KNAW, NWO and ZonMw (2019). Position paper: Room for Everyone's Talent: Towards a New Balance in Recognising and Rewarding Academics. https://recognitionrewards.nl/about/position-paper/

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FOR YOUR READING LIST

Position paper available at https://recognitionrewards.nl/

WORK IN PROGRESS

Dutch universities are currently figuring out how to approach Recognition & Rewards

- Approaches vary – not all policies are public or finished at this point in time
- Attention for science communication/public engagement similarly varies
- Opposition too: mostly focuses on research evaluation and international position

WORK IN PROGRESS

Policy documents are starting to explicitly mention a role for science communication!

- June 2022: policy letter by Dutch science & education minister Robbert Dijkgraaf[1]
- July 2022: The Young Academy (Royal Netherlands Academy) in response to the announcement of a Dutch national centre for science communication[2]

[1] Beleidsbrief Hoger Onderwijs en Wetenschap (2022), https://www.rijksoverheid.nl/documenten/kamerstukken/2022/06/17/aan-de-tweede-kamer-beleidsbrief-hoger-onderwijs-en-wetenschap

[2] De Jonge Akademie (2022), Maak wetenschapscommunicatie een integraal onderdeel van wetenschapsbeoefening. https://dejongeakademie.nl/publicaties/2263903.aspx

EUROPEAN ADOPTION

European Agreement on Reforming Research Assessment (July 2022)[1]

"Recognise the diversity of research activities and practices, with a diversity of outputs, and reward early sharing and open collaboration. Consider tasks like peer review, training, mentoring and supervision of Ph.D candidates, leadership roles, and, as appropriate, science communication and interaction with society, entrepreneurship, knowledge valorisation, and industry-academia cooperation."

350+ organisations from 40+ countries have expressed interest in being involved;

Available for signing since September 28: https://coara.eu/agreement/signatories/

[1] European Commission (2022), Agreement on Reforming Research Assessment. https://research-and-innovation.ec.europa.eu/system/files/2022-07/rra-agreement-2022.pdf

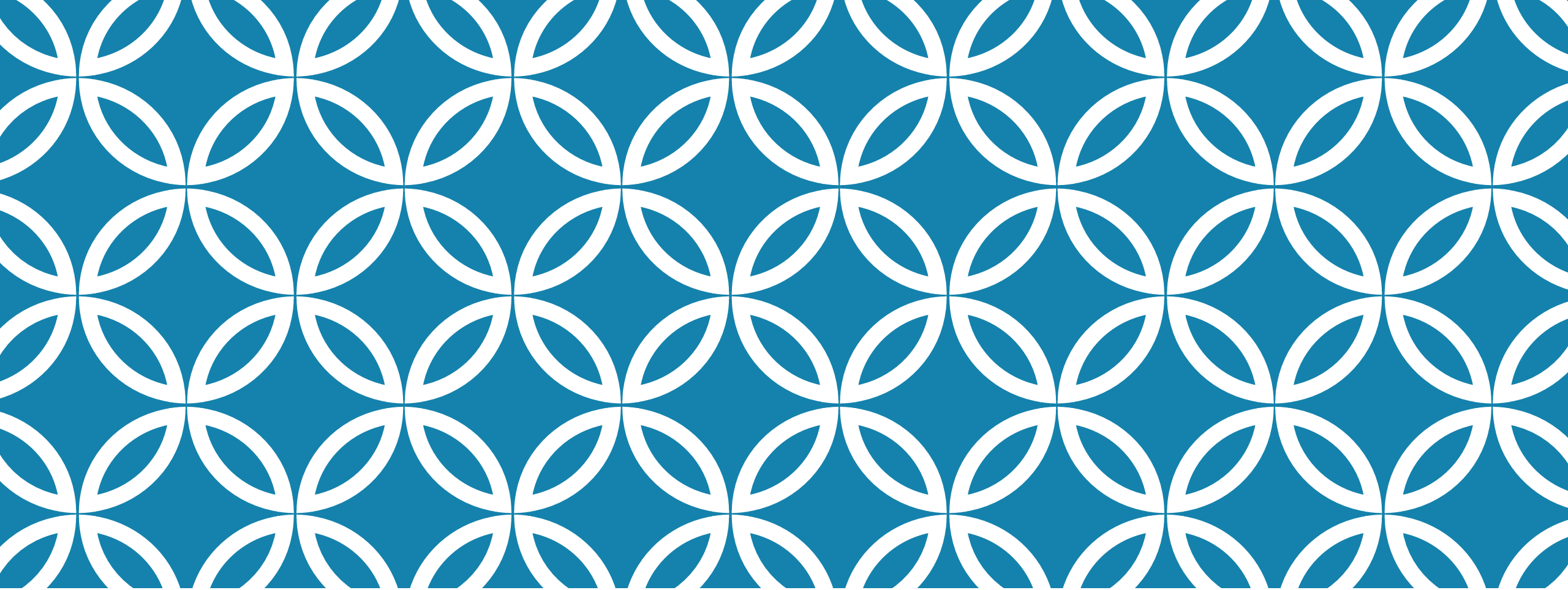
YOU SHOULD PROBABLY JUST READ THIS TOO

Agreement available at https://coara.eu/

IN THE NEAR FUTURE..?

- → Researchers get more time and space for science communication?
- → Science communication can become a specialisation in research teams?
- → Science communication will become part of career milestones for some researchers?

We'll get back to this in a second…



OPEN SCIENCE

The other ‘new’ kid on the block

OPEN SCIENCE AMBITIONS

UNESCO Recommendation on Open Science[1], adopted by 193 member states:

"For the purpose of this Recommendation, open science is defined as an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, (…)."

[1] UNESCO (2021), programme and meeting document 'Recommendation on Open Science'. https://unesdoc.unesco.org/ark:/48223/pf0000379949.locale=en

Dutch minister of Science and Education on Twitter:

"Open Science must become the norm"

(of course, this appears in actual policy documents as well ☺)

OPEN SCIENCE ADOPTION

→ Strongly international movement

→ In the Netherlands:

- 12 Open Science Communities (= almost full coverage!)
- Special law ('Taverne amendment') to allow full open access coverage
- Open access is a condition for governmental funding via Plan S coalition: 90% in 2021[1]
- National Programme Open Science[2]

→ Intertwined with Recognition and Rewards programme

[1] https://www.nwo.nl/en/news/ninety-percent-nwo-and-zonmws-research-publications-are-open-access
[2] https://www.openscience.nl/en/home-2/

OPEN SCIENCE = SCIENCE COMMUNICATION?

UNESCO Recommendation on Open Science[1], adopted by 193 member states:

"For the purpose of this Recommendation, open science is defined as an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community."

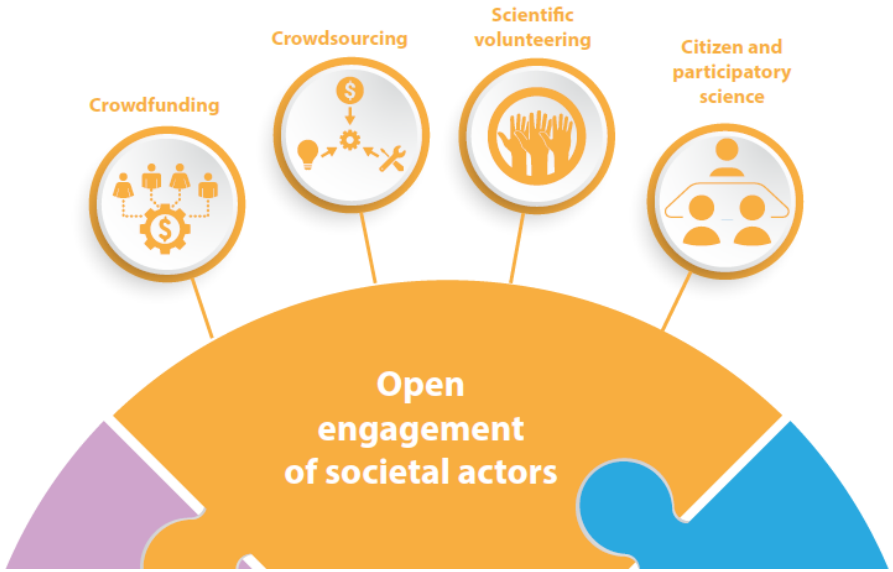
[1] UNESCO (2021), programme and meeting document 'Recommendation on Open Science'. https://unesdoc.unesco.org/ark:/48223/pf0000379949.locale=en

OPEN SCIENCE = SCIENCE COMMUNICATION?

UNESCO Recommendation on Open Science[1], adopted by 193 member states:

"(…) and it [open science] builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems."

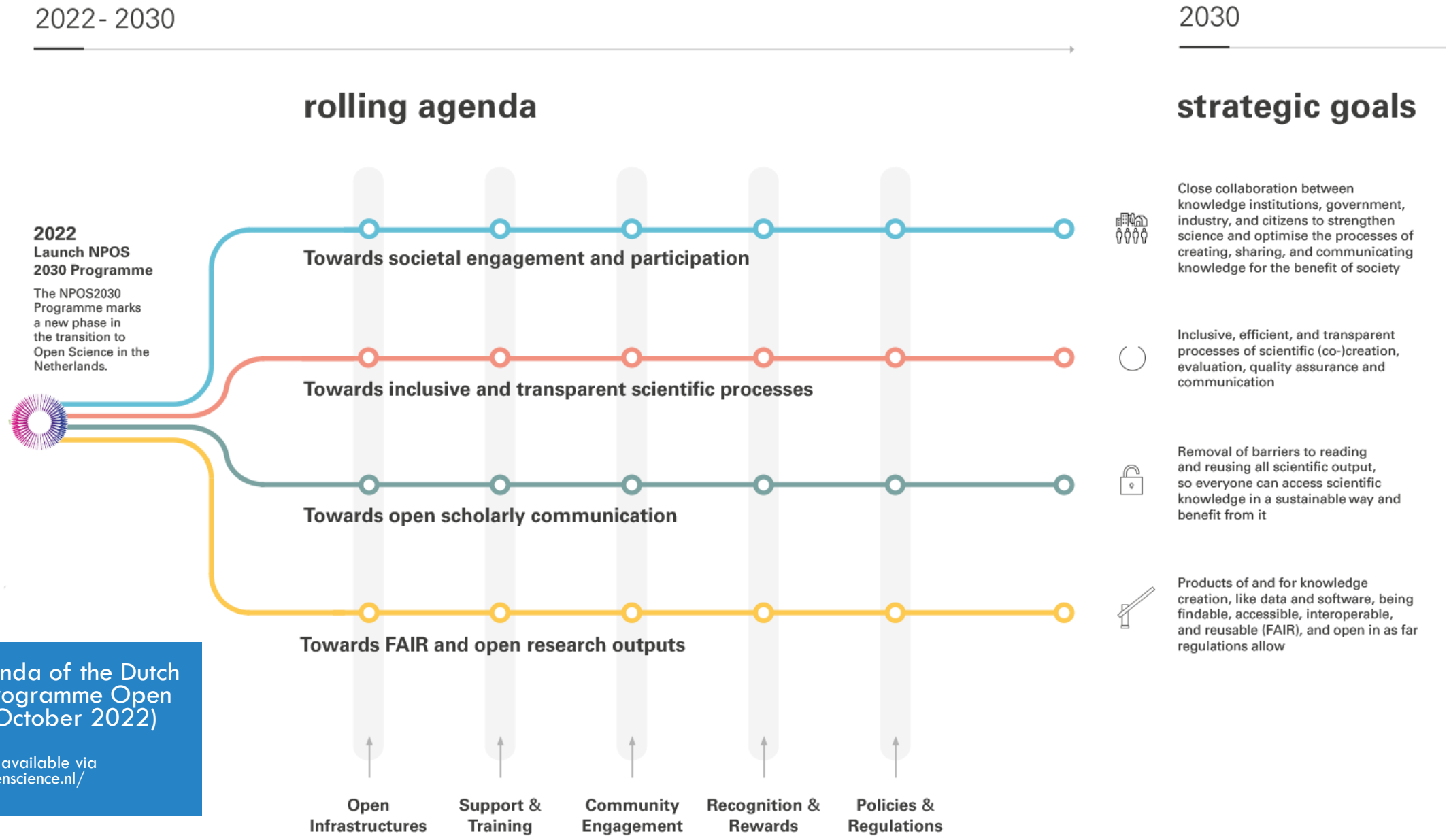
→ strong focus on participation and dialogue



[1] UNESCO (2021), programme and meeting document 'Recommendation on Open Science'. https://unesdoc.unesco.org/ark:/48223/pf0000379949.locale=en

ONE MORE DOCUMENT FOR THE ENTHUSIASTS

Recommendation available at https://www.unesco.org/en/natural-sciences/open-science



Rolling agenda of the Dutch National Programme Open Science (v October 2022)

Taken from, and available via https://www.openscience.nl/

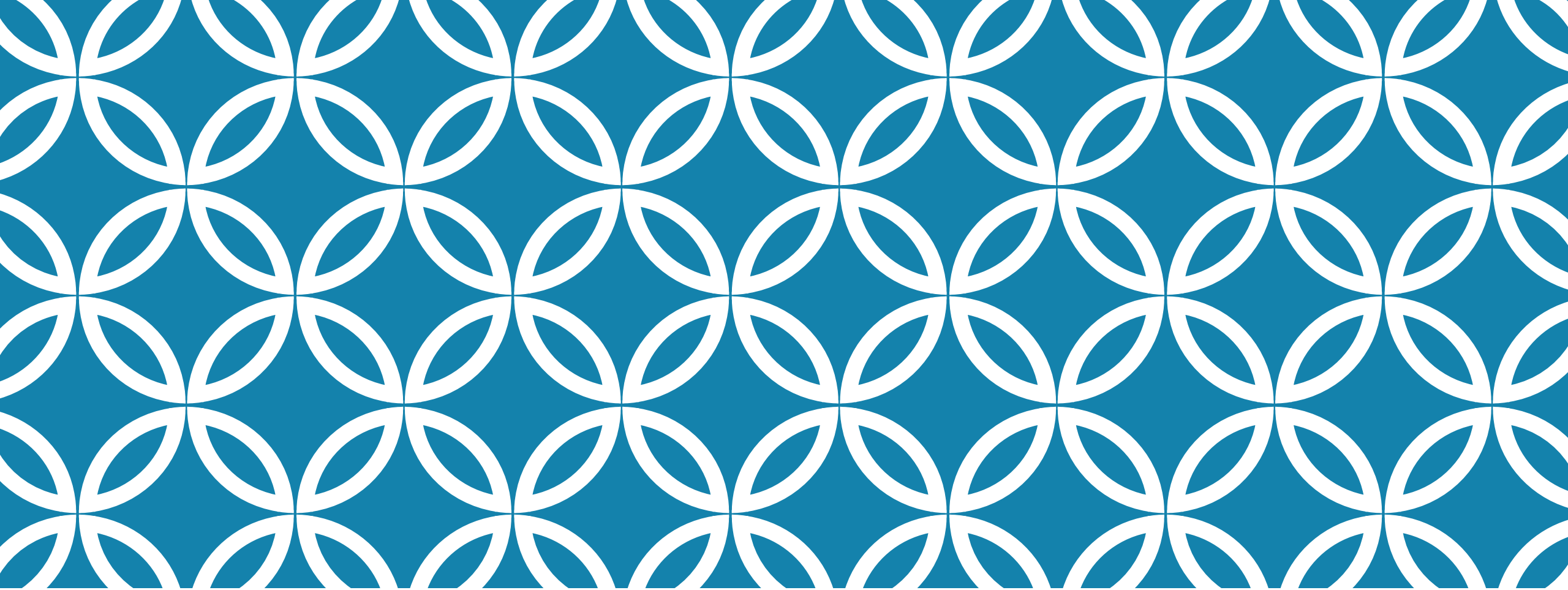
IN THE [illegible] FUTURE..?

Disclaimer

- → Researchers get more time and space for science communication?
- → Science communication can become a specialisation in research teams?
- → Science communication will become part of career milestones for some researchers?

~~We'll get back to this in a second…~~

- → Open Science is the new standard in research?
  - Strong public engagement and citizen science angle
  - Societal impact leading



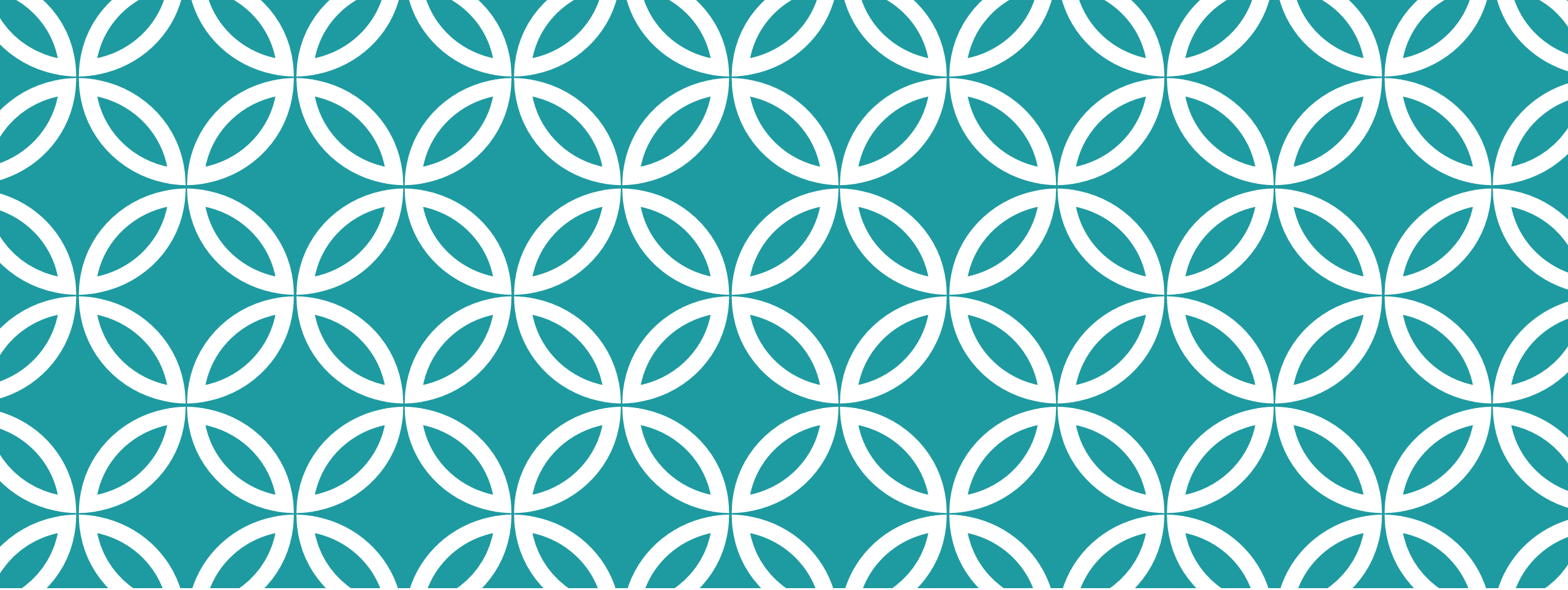
TAKEAWAY #2

Influential academic change movements are turning their attention towards science communication. Embrace it!

INEVITABLE QUESTIONS

Something to think about during the upcoming break:

Which questions and challenges do you see for the implementation of science communication career tracks for researchers?



BREAK

See you in 45 minutes!

SHORT RECAP

In the Netherlands (Europe? The world?), systemic reforms might result in…

- Recognition for researchers' science communication activities
- Time, space, and resources for science communication by researchers
- Academics taking on the role of science communicator within their team
- Bigger emphasis on societal impact (vs self-serving goals like PR, marketing)

Even if you're somewhere where this horizon looks different, I think these results are worth striving for in f.i. policy design!

INEVITABLE QUESTIONS

Share your ideas in the chat:

Which questions and challenges do you see for the implementation of science communication career tracks for researchers?

5 INEVITABLE QUESTIONS

1. What sort of science communication should be recognized and rewarded?
2. Which professional development resources do we need to put in place?
3. How do we fairly evaluate communicating researchers?
4. Who is going to evaluate communicating researchers?
5. How do we co-align current science communication practice?

MY VALUES

1. EQUAL OPPORTUNITIES
2. PROFESSIONALIZATION
3. SCIENCE & SOCIETY AS BENEFICIARIES

Q1: WHAT SORT OF SCIENCE COMMUNICATION?

A1: You're learning about it this week! ☺

Should align with best practices in the science communication field, including:

- Evidence-based choices
- A coherent strategy connecting goal, audience, message and means
- Conscious choice for dissemination, dialogue, or participation
- Evaluation cycle

Should not exclude researchers, for instance by judging field of study

Q2: WHICH RESOURCES TO PUT IN PLACE?

A2: Aim for increasing the independence of communicating researchers.

Should stimulate efficient use of time and resources:

- Special attention to strategy (theoretical frameworks) and feasibility, i.e. budgeting
- Access to, and creation of, professional networks and resources
- Reflection on the relation between science and society and own values
- Skill classes (writing, presenting, social media) only become relevant *after*

Should be equally accessible to all researchers

Q3: HOW TO EVALUATE RESEARCHERS?

A3: Based on their (growth in) knowledge and skills, not by solely focusing on their output or impact.

3

You can't evaluate people like you evaluate a science communication project!

- Outcomes and impacts are subject to random influences (positive and negative)
- Outcome steering discourages bold choices, experiments and difficult projects
- Outcomes and impacts are strongly field-dependent
- The volume (or even quality) of output is meaningless without context

Q4: WHO IS GOING TO DO THE EVALUATION?

A4: Peer review comes up a lot in the European Agreement on Reforming Research Assessment. Science communicators need to get involved! ☺

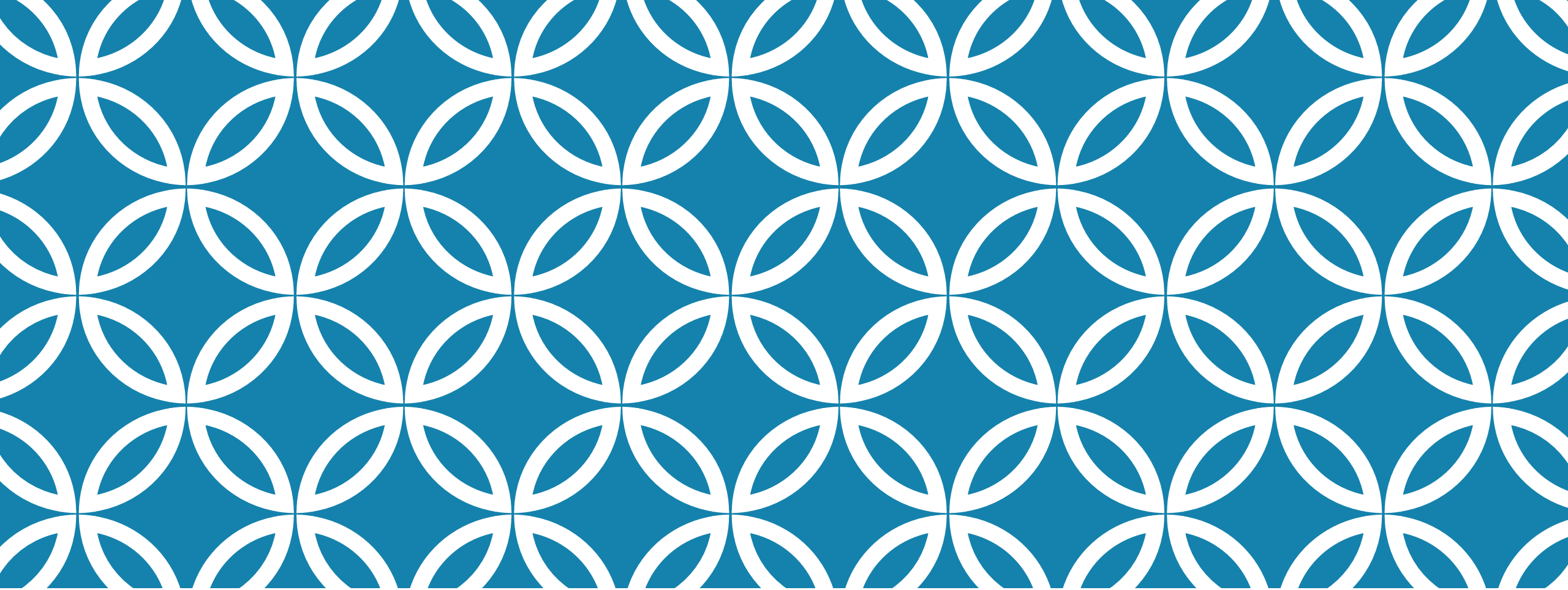
We can explore multiple avenues:

- Co-create recognition and rewards criteria
- Take part in appraisals
- Design instruments for guiding peer review

Q5: HOW DO WE ALIGN CURRENT PRACTICE?

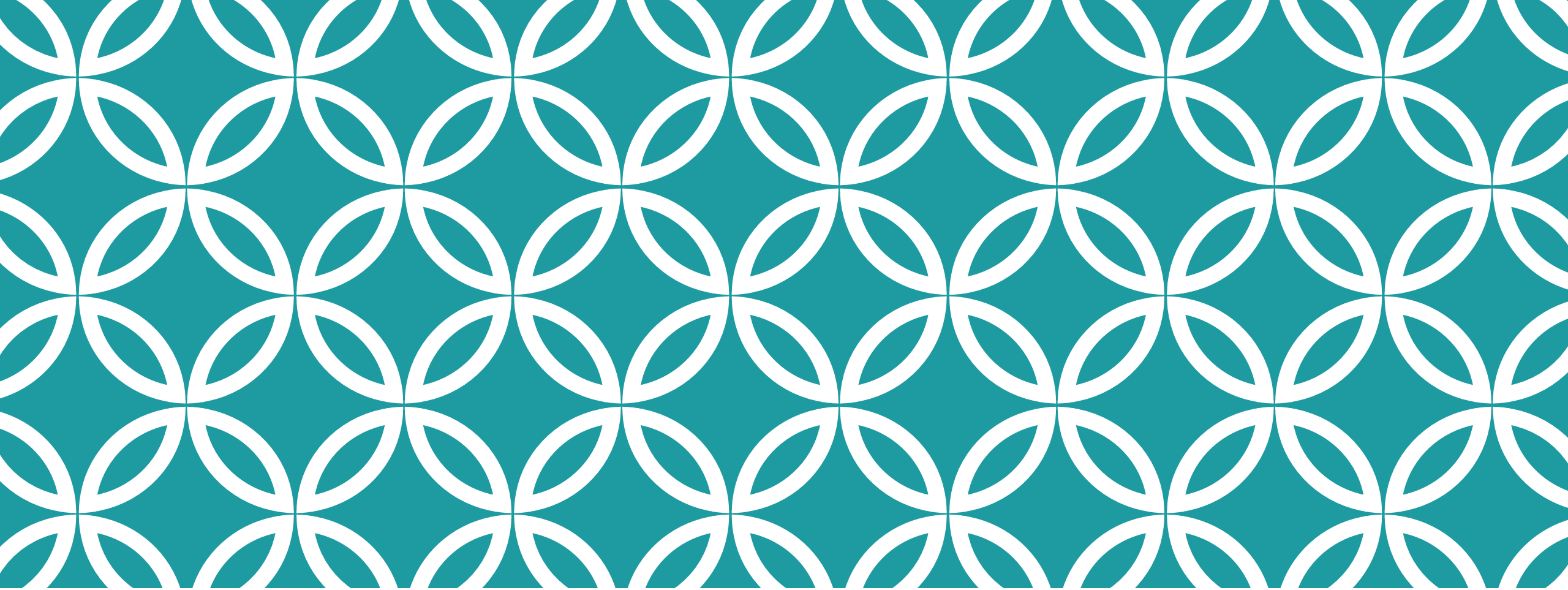
A5: From the perspective of communications support, we need to keep shifting:

Execution	→	Advice, training, empowerment
Institutional gains	→	Societal gains
Branding, focus areas	→	Inclusion
External support	→	Internal participation



TAKEAWAY #3

The criteria we choose to recognize and reward science communication will directly affect the future. Leverage them!



OVER TO YOU!

Time for a brainstorm

LET'S GIVE SYSTEMIC REFORMS A PUSH

Four transitions:

- Recognition for researchers' science communication activities
- Time, space, and resources for science communication by researchers
- Academics taking on the role of science communicator within their team
- Bigger emphasis on societal impact (vs self-serving goals like PR, marketing)

Every group tackles one of these topics in a breakout room:
Come up with ways in which you can help this transition (20 min discussion)
Appoint 1 person who recaps back in the plenary session (max 3 min per group)