Building Open Scholarship in Developing Research Cultures

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GOOD SCIENCE INDONESIA

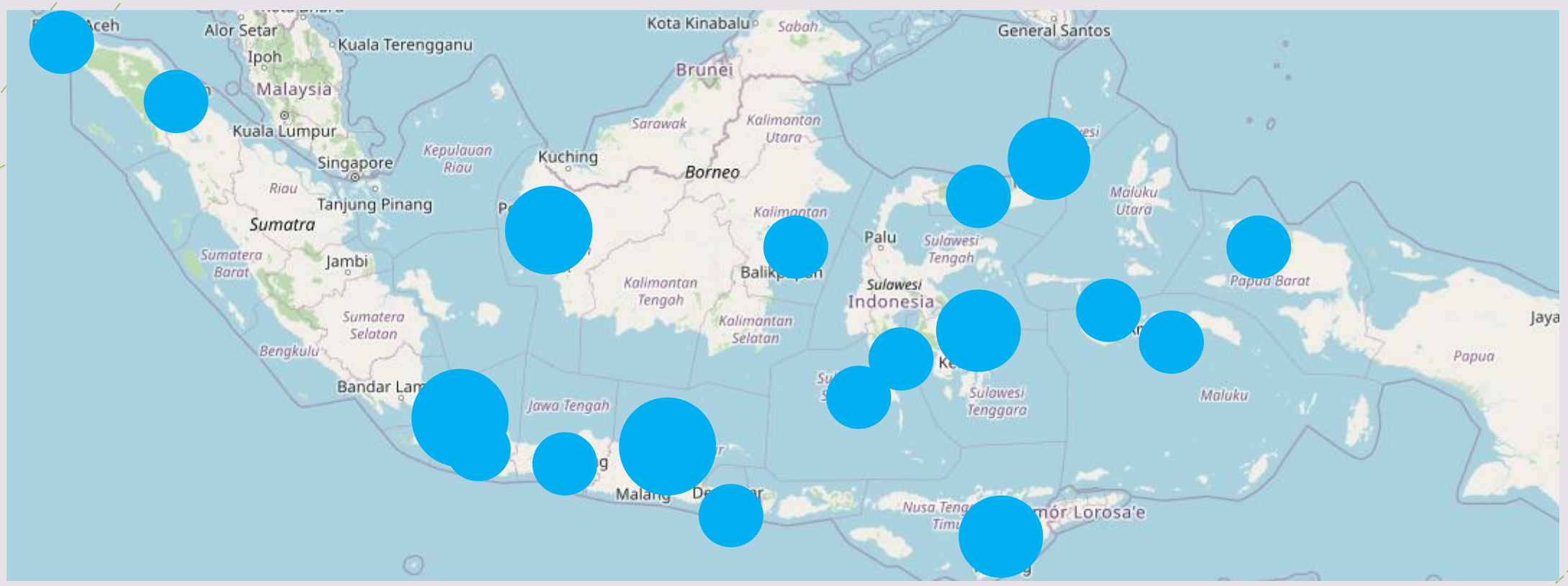
Today's Talk

+ Describing the challenges of OS and science in developing research cultures/ global majority
+ Discussing the role of policy and why shifting it asap

Science for Societal Good

- Over 80% of the world's population live in areas where academic research is still developing, with current science disproportionally being generated by the other 20%
  - The 20% dictate what is interesting, current, and valid in broader science
  - Misrepresentation of reality
- While we all need science, more often than not, the 80% need the scientific process a bit more
- **If science as an enterprise is truly for global societal good – and more than personal achievement - then one of the best things we can do is build systems for locally generated, credible science**

Webinar Sains 2019

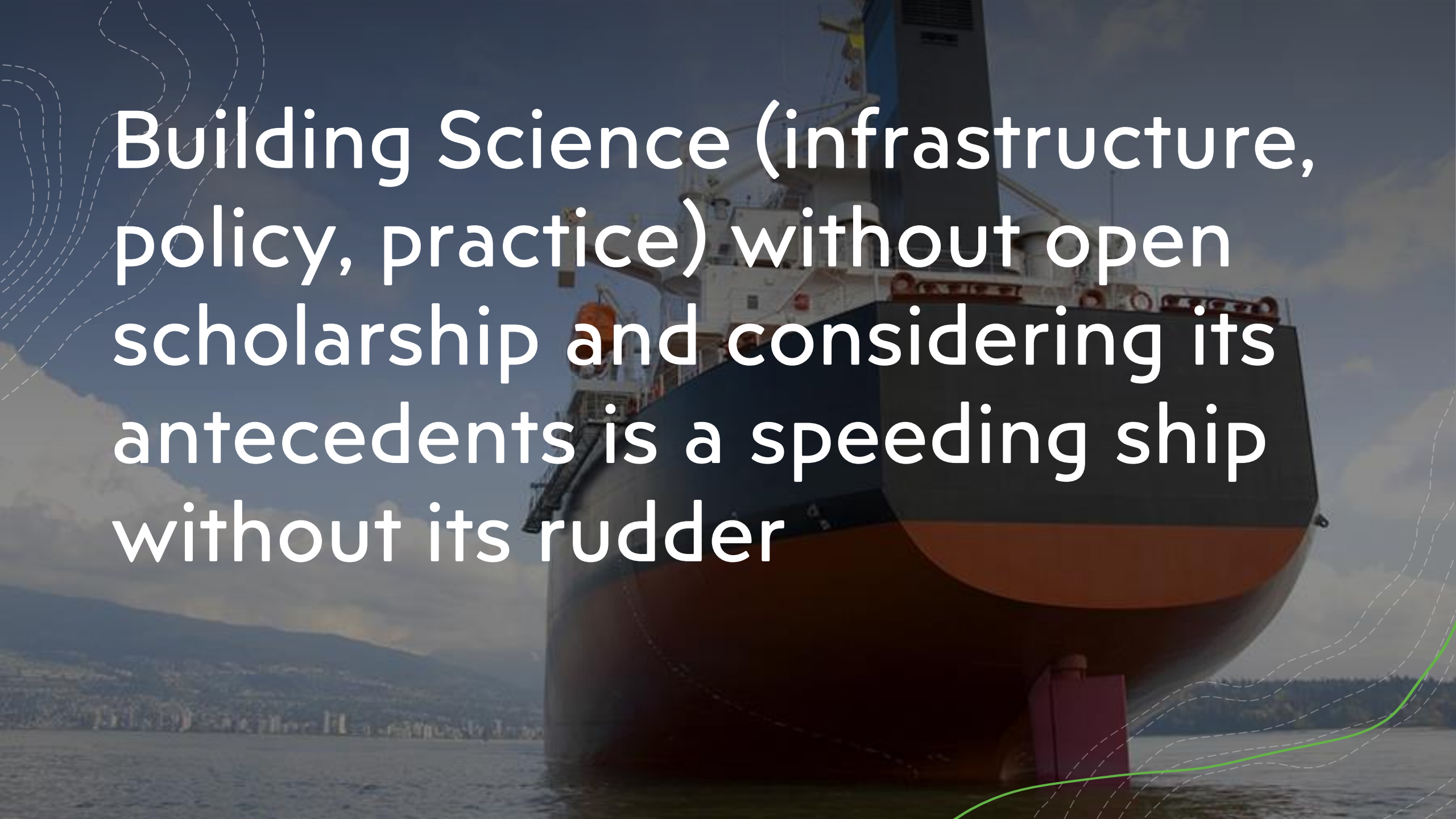


1000+ Researchers
30+ Academic and Government Institutions
Led to more collaborations between grassroots and government

Challenges to Science and OS in these Regions

+ Government policies which prioritize problematic metrics
+ Survival based on publication e.g. 1st year level B researcher in one of Indonesia's largest university earns $5000
+ A lack of infrastructure e.g. access to the literature, finance staff, storage servers, ethics panels
+ A lack of prior research experience in some countries
+ No funding for travel resulting in a lack of international network and up to date research
+ Vastly different research interests from preeminent research groups/ journals despite making up most of the world's population and geography
+ Some academic and government systems rely on a deeply hierarchical structure – even if the powers may be have never engaged with the research process
+ **In sum, pressure to produce lots of research by US, EU and AUS standards, without the infrastructure and means to do so**

Developing Research Cultures (especially LMICs) **cannot waste precious resources producing bad science**



Building Science (infrastructure, policy, practice) without open scholarship and considering its antecedents is a speeding ship without its rudder

Rebuild Open Science for Asia, Africa and Latin America (Nature Comment In press for 5th November 2020)

1. Set appropriate national policies
2. Retool universities for research
3. Train researchers (undergraduates) for open science
4. Make space (for developed research cultures)
5. Reflect and adapt (to avoid detrimental practices being ingrained)

Engaging with Policymakers

Engage with Policymakers

Why?

+ Typically in the Global Majority, decision making and resources are more centralized with less university and researcher autonomy
+ Recent rapid introduction/shifts in policy towards increasing research quantity with severe consequences to ‘catch up’
    + E.g. Plano nacional de Pós-graduação & Indonesian publishing requirements for students
+ Due to its recent introduction, and rapid change, research cultures are still labile

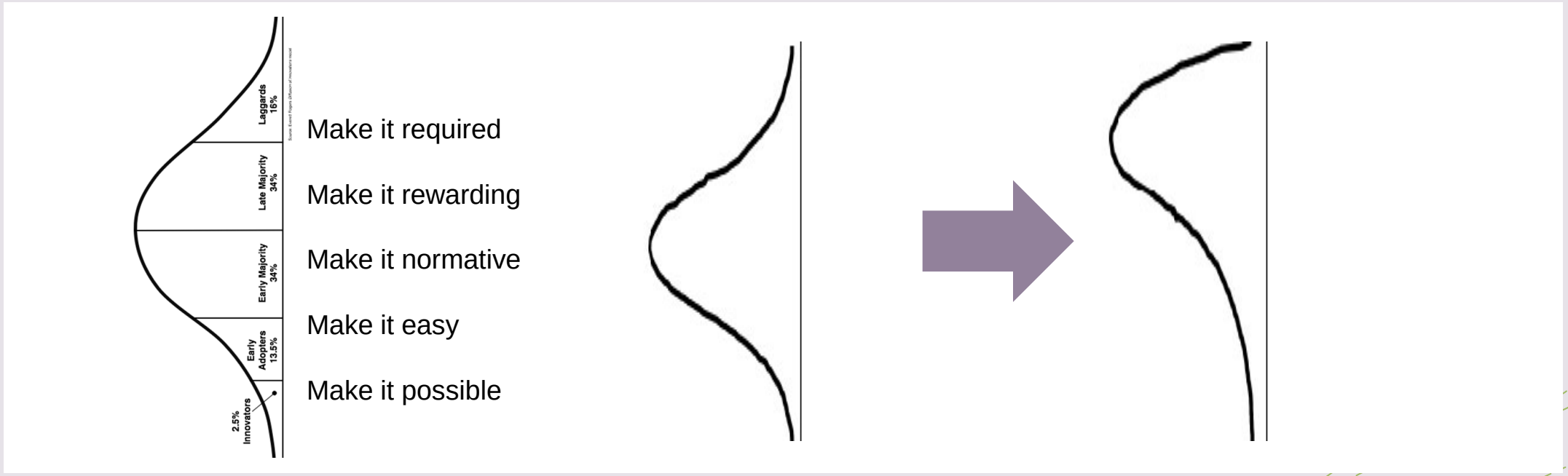
Engage with Policymakers

Consequences

1. Due to sudden increase in publication demands, without the infrastructure or research culture to support it, people find *creative* ways to fulfil demands
    1. Gaming the system, predatory journals, paper mills (Indonesia, Malaysia, Thailand, India, Thailand)
2. Dependency on top down efforts – a lack of autonomy or perceived control (essential to change according to the Integrative Behaviour Theory of Change)

Engage with Policymakers

An illustration



Engage with Policymakers

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2. Dependency on top down efforts – a lack of autonomy or perceived control (essential to change according to the Integrative Behaviour Theory of Change)
3. Rapid shifts will not allow new behaviours (even good ones) to set due to either:
    1. Uncertainty – not sure if this will change
    2. Challenge from older academics e.g. quality and credibility practices may conflict

Thus political engagement is **paramount**

Engage with Policymakers

What needs to happen?

+ Introduce policies that will build credibility before current practices set

How?

+ Grassroots need to align with national interests by reframing OS
  + Reframing OS - Indonesian Open Access controversy
  + Design efforts that also align with national goals – multi-national projects
+ Policymakers need to expand their implementation plan to include all researchers – not just the ‘productive’ ones

Engage with Policymakers

Policy is perhaps one of the biggest factors in how open science will progress in developing research cultures due to researcher dependence on government, and whether we need to **undo** problematic practices and how long they will take.

Additional Point – Inclusivity

- To empower ALL researchers to produce credible research, we need to meet them where they are
  - E.g. in one of the webinar sessions, after we discussed QRPs, a researcher asked 'So I do I p-hack?'
  - Many researchers were not privileged to have strong research training, and thus struggle with basic skills e.g. sifting through the literature
  - Thus policymakers need to understand the situations to ensure buy in – even for 'good' practices
    - Data stealing

Future Plans

- A South East Asian Science Workshop geared towards all researchers and students, addressing the questions:
  - How do I produce quality research? (literature reviews, study design etc.)
  - How do I produce a lot of it? (project management and tools)
  - How do I make it usable? (credibility, open scholarship, post publication quality control)
- Building research in Indonesia by using a grant for collaborative data collection in Suicide Prevention
  - Opening the data for researchers to use
  - Collaborating with the National Repository for researchers to familiarize themselves with
- Arranging national conferences in Latin America

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