



# TRUST, HONESTY AND THE AUTHORITY (AND MISDEMEANOUR) OF SCIENCE





Science, healthcare and strategic communication

## SO, HERE WE ARE

COVID-19 pandemic has challenged the old-fashioned model of science communication.

New findings were seized on immediately by politicians, the media and social media.

This so-called 'infodemic' can erode the credibility and funding of scientific research

*Plus AI applications.*



# WHAT WENT WRONG?

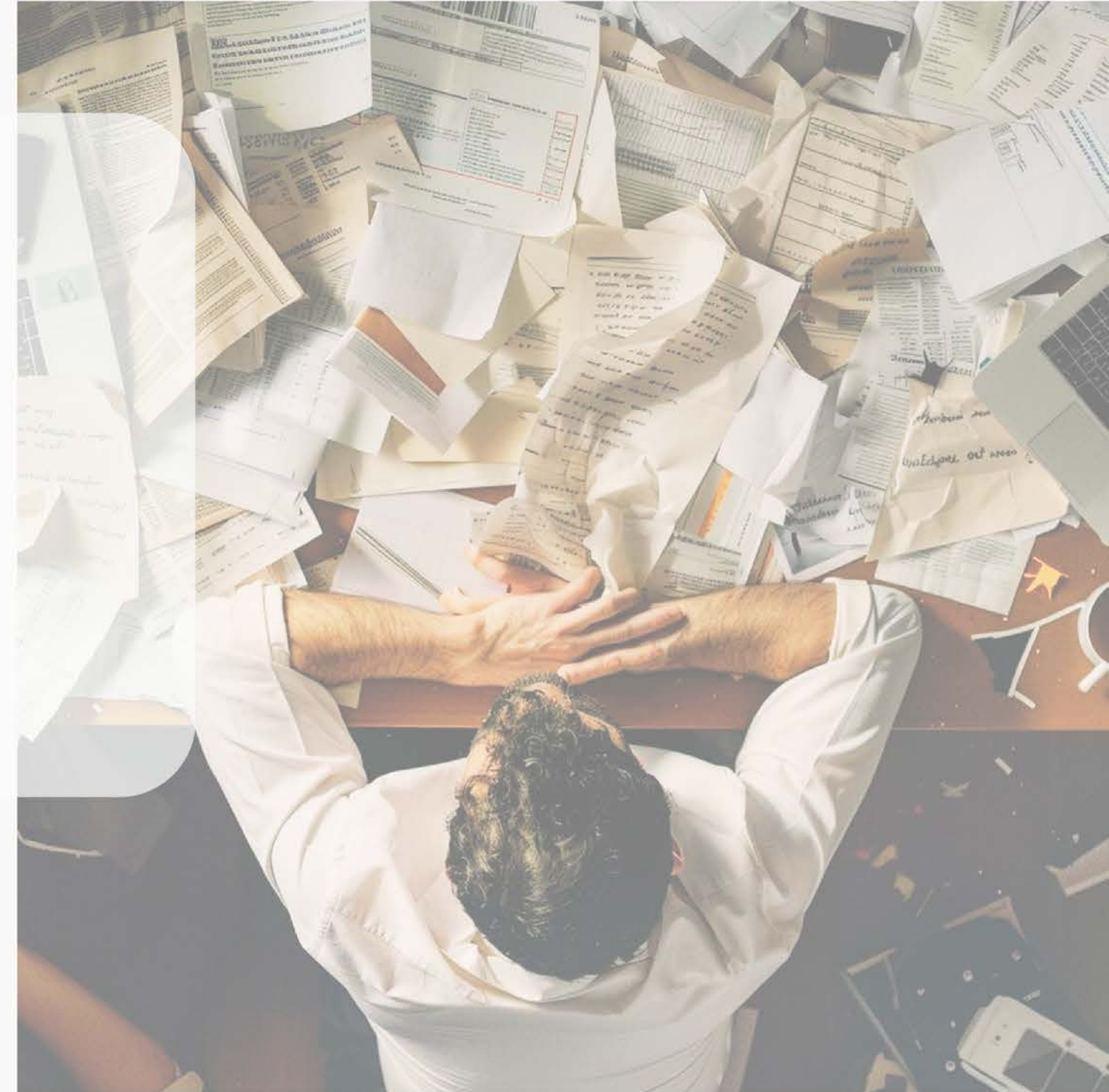


## POOR COMMUNICATION MANAGEMENT

Ideally scientists would communicate results as explanations that answer “*what?*” or “*how?*”

Stories that most interest the public and policymakers are focused on the “*so what?*”

Leads to problems in translation of findings into manuscripts, grant applications and media story



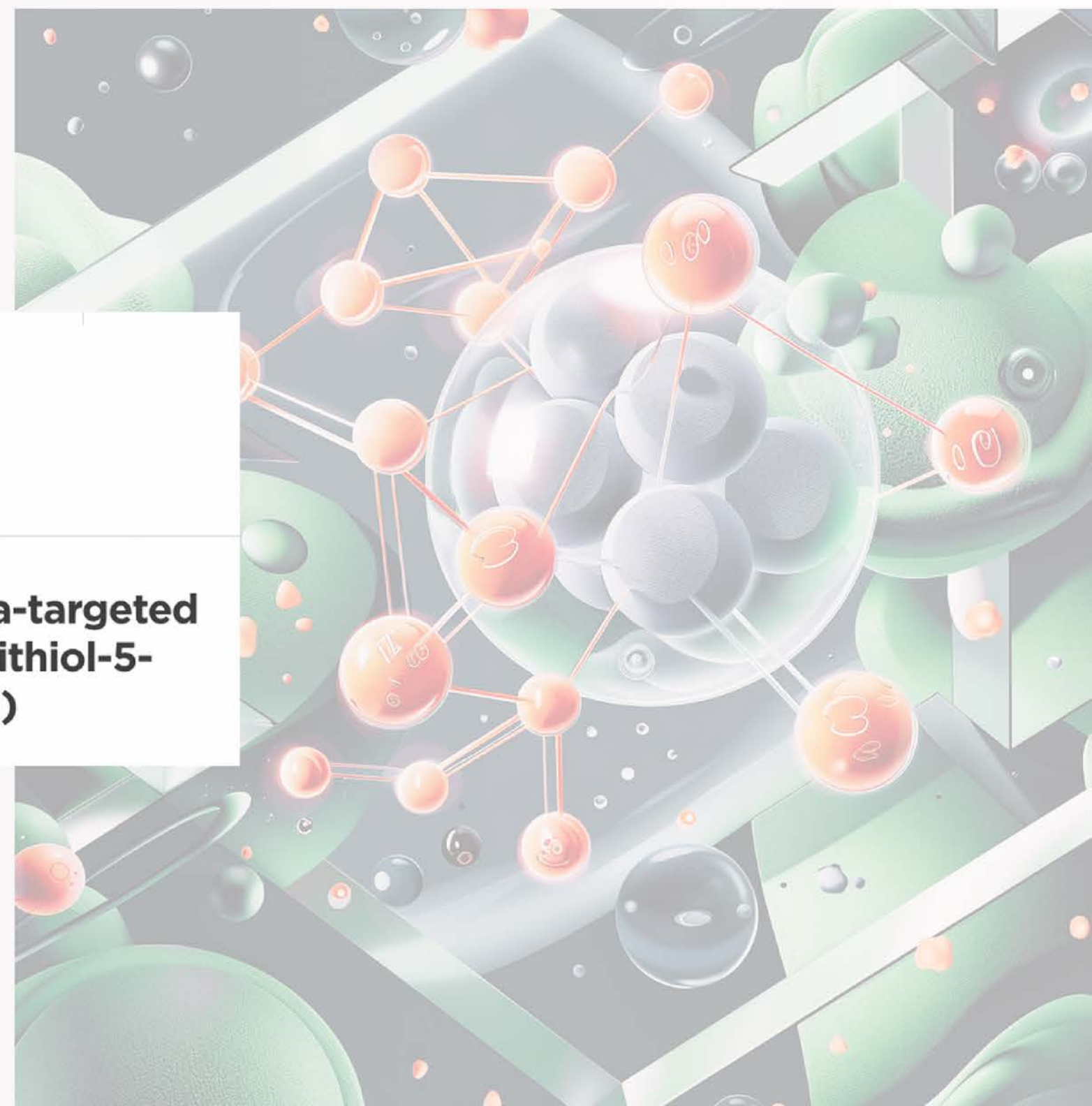


## MEDIA REPRESENTATION OF SCIENCE



From the journal:  
**MedChemComm**

**The synthesis and functional evaluation of a mitochondria-targeted hydrogen sulfide donor, (10-oxo-10-(4-(3-thioxo-3*H*-1,2-dithiol-5-yl)phenoxy)decyl)triphenylphosphonium bromide (AP39)**





## MEDIA REPRESENTATION OF SCIENCE

JULY 11, 2014

# TIME

### Scientists Say Smelling Farts Might Prevent Cancer

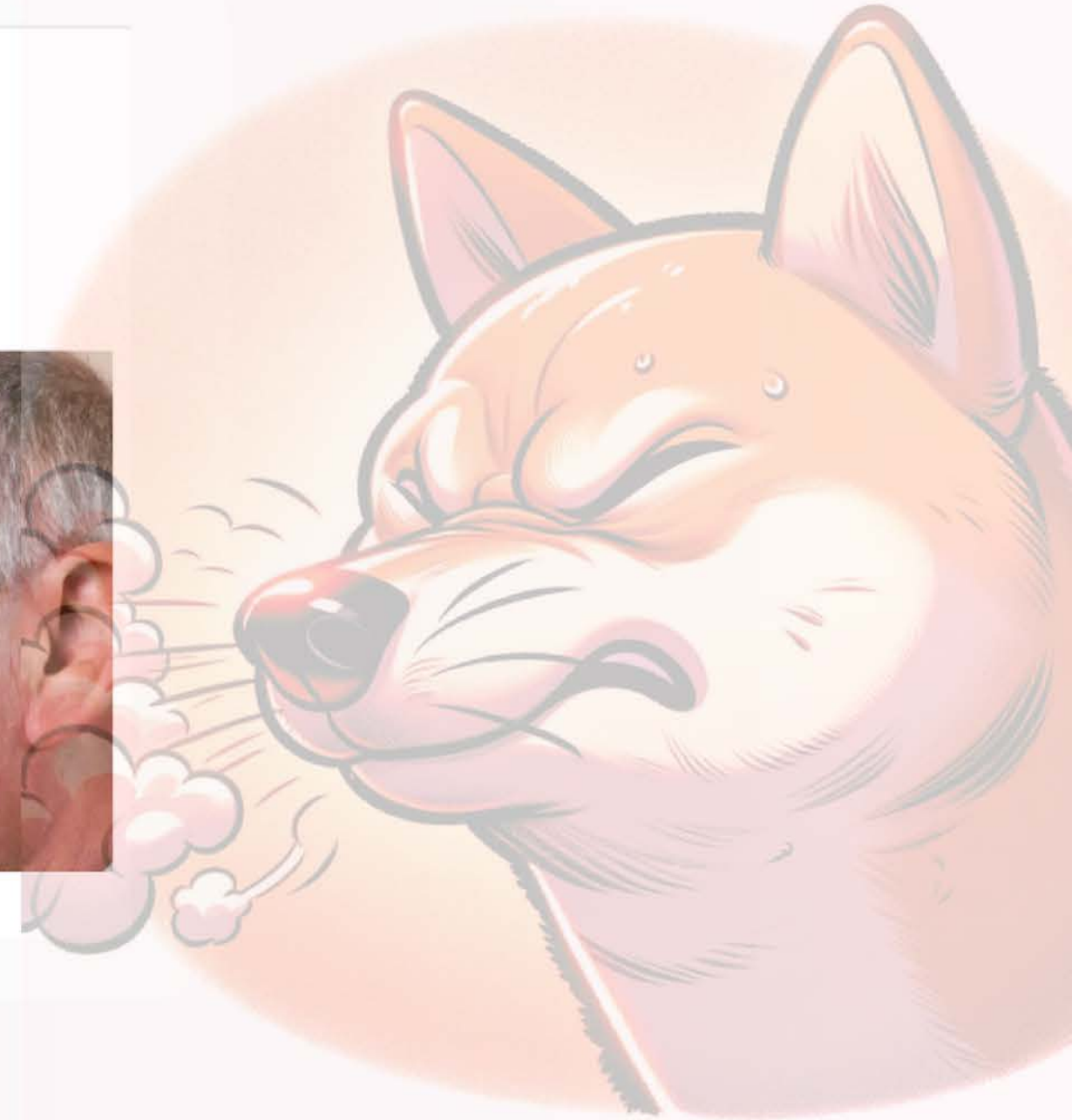
It has been a weird week in health news. First doctors said that Justin Bieber might save young boys' lives (the "hip" bowl cut is actually a form of sun protection — skin cancer be gone!), and now scientists out of the University of Exeter are implying that smelling farts could actually prevent cancer, among other diseases.

### Silent, not deadly; how farts cure diseases

A recent study from the University of Exeter has been reported as showing that smelling farts can cure cancer, as well as many other diseases. Although the study itself doesn't actually say this at any point, if farts do have healing powers it would have numerous wide-reaching implications



Something smell rotten about these reports of farts curing diseases. Photograph: 33344.000000/Getty Images Photograph: 33344.000000/Getty Images



# WHAT WENT WRONG?



## MEDIA REPRESENTATION OF SCIENCE



Resveratrol improves exercise performance and skeletal muscle oxidative capacity in heart failure



MEDIA REPRESENTATION OF SCIENCE



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**Drinking a Glass of Red Wine is as Healthy as an Hour at the Gym**

By [Joanna Fantozzi](#) | January 29, 2015

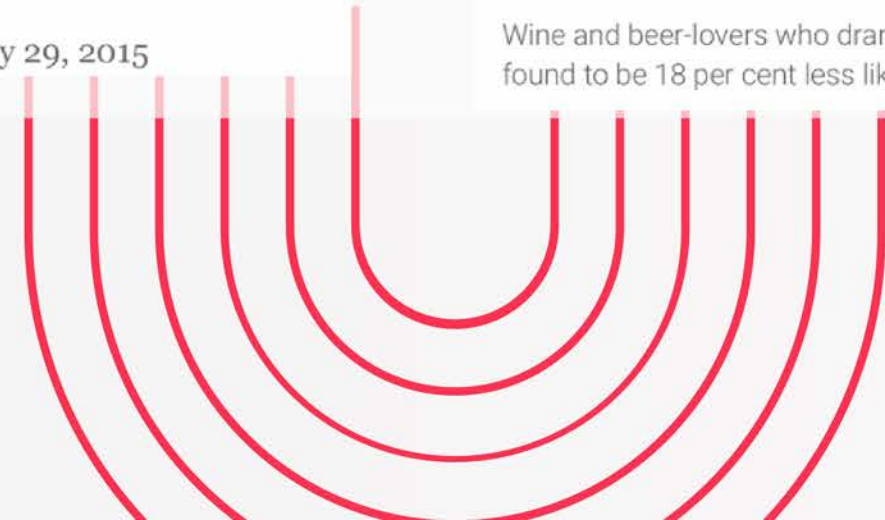
**Drinking wine better than exercise if you want to live a long life, study finds**

Brittney Deguara · 10:08, Jan 30 2019



UNSPLASH

Wine and beer-lovers who drank two glasses a day were found to be 18 per cent less likely to die prematurely.



MEDIA TENDS TO FOLLOW THE LEAD OF PRESS RELEASES

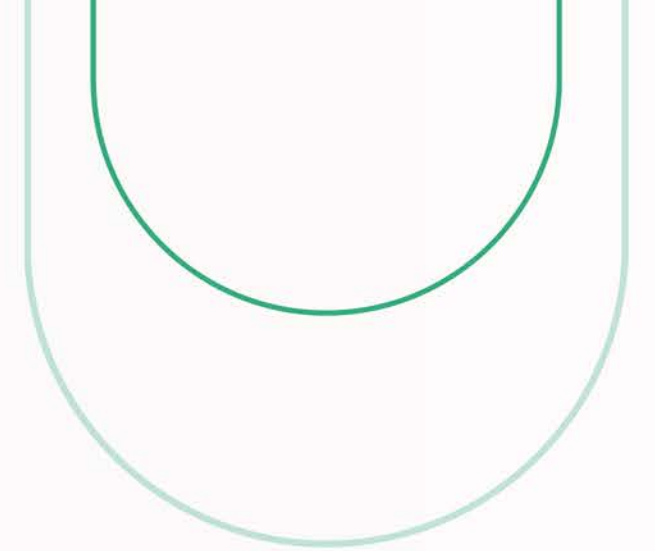
nature  
human behaviour

LETTERS

<https://doi.org/10.1038/s41562-018-0454-9>

Experience with anonymous interactions reduces intuitive cooperation

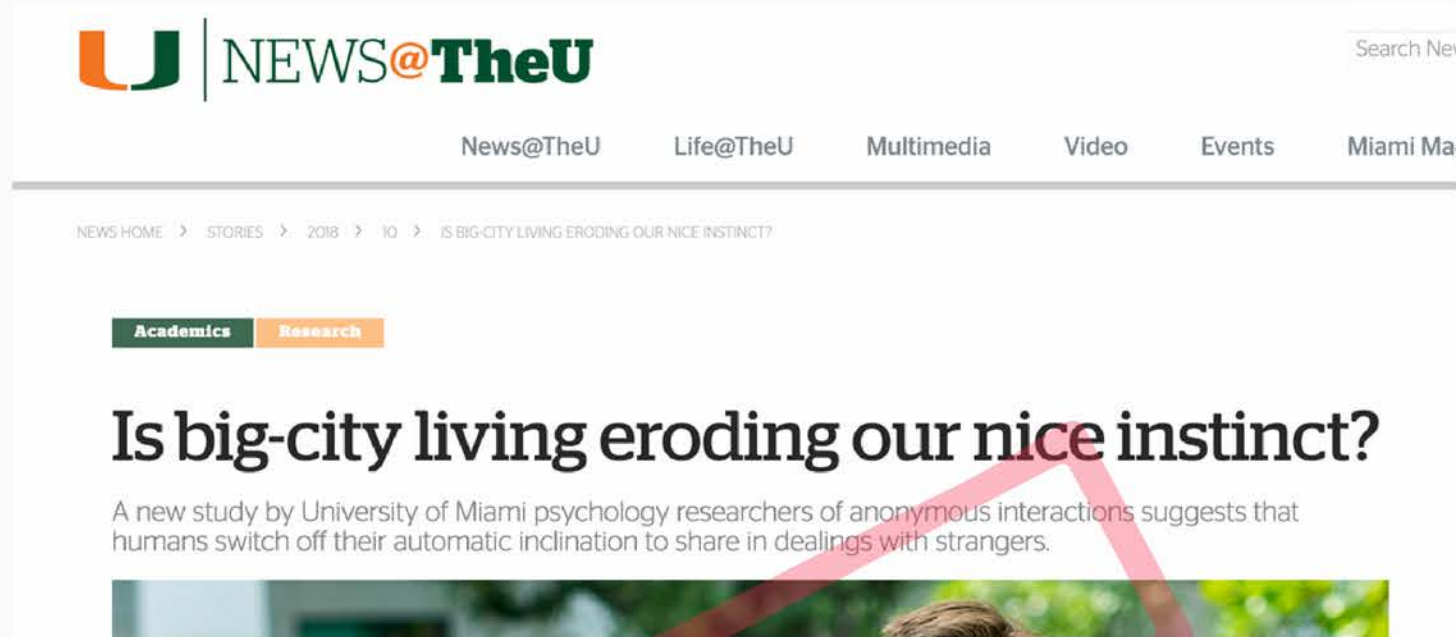
William H. B. McAuliffe<sup>1</sup>, Daniel E. Forster<sup>1,2</sup>, Eric J. Pedersen<sup>1,3</sup> and Michael E. McCullough<sup>1\*</sup>





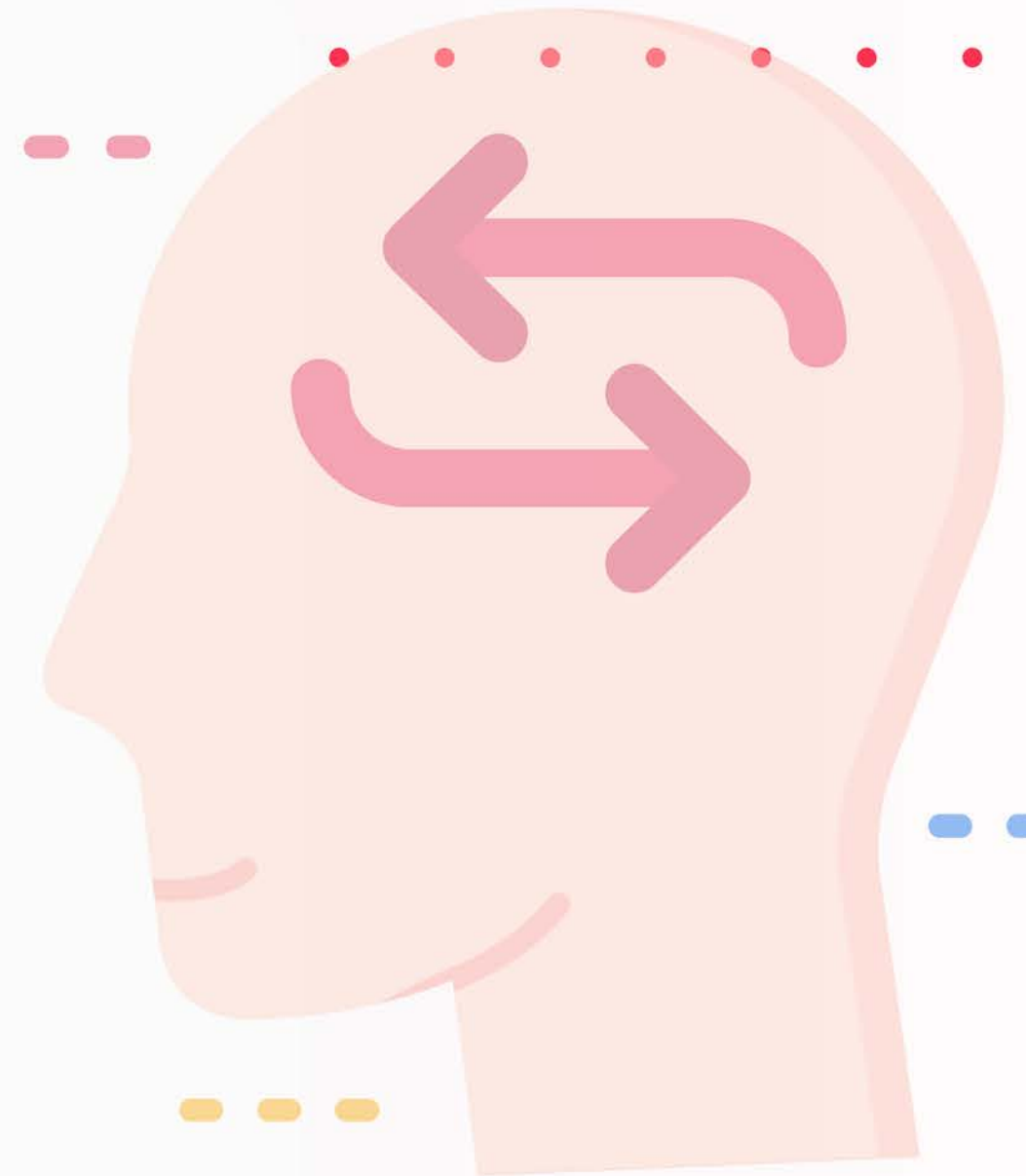
# WHAT WENT WRONG?

## MEDIA TENDS TO FOLLOW THE LEAD OF PRESS RELEASES



Home / India News / City life makes humans less kind to strangers: Study

### City life makes humans less kind to strangers: Study



# WHAT WENT WRONG?

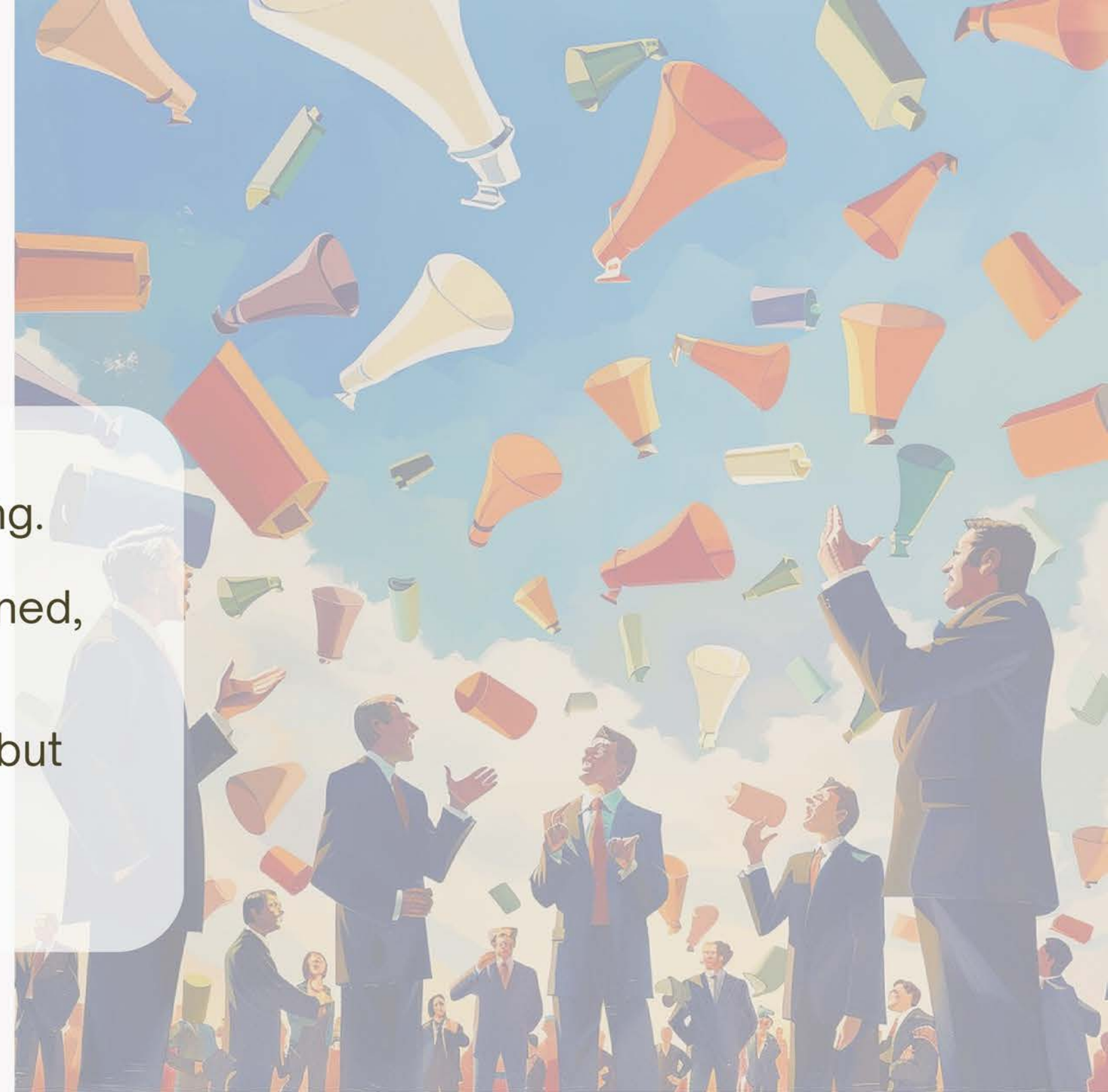


## WHEN MORE IS NOT MORE

Communication is not information dumping.

The narrative should focus on a well-defined, well-planned, goal-oriented story.

The story is not just to inform the reader but also to persuade.



# WHAT WENT WRONG?

## THE GAP SCIENTIFIC LITERACY AND PUBLIC UNDERSTANDING





## KNOWLEDGE GOVERNANCE MONOPOLY AND OVERSIMPLIFICATION

Science communications not seen as priority to nurture relationships with the public.

Oversimplification can become harsh noise in communication channel that leads to transmission of false message.

Need to examine metaphor of choice, and make sure not to muddle the message itself.



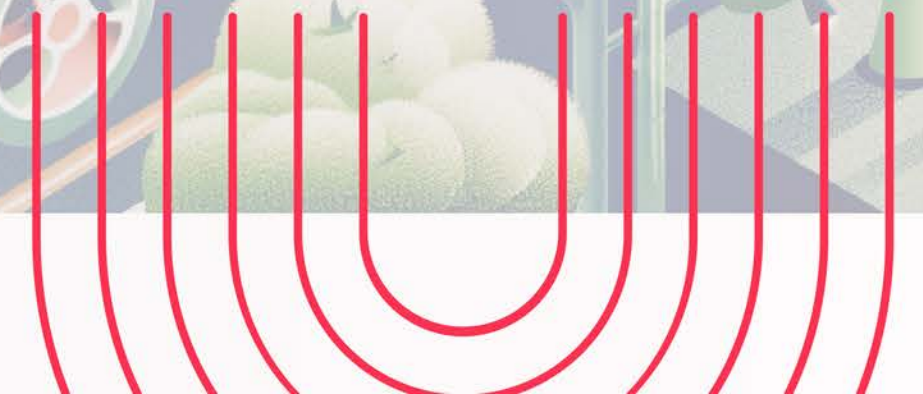
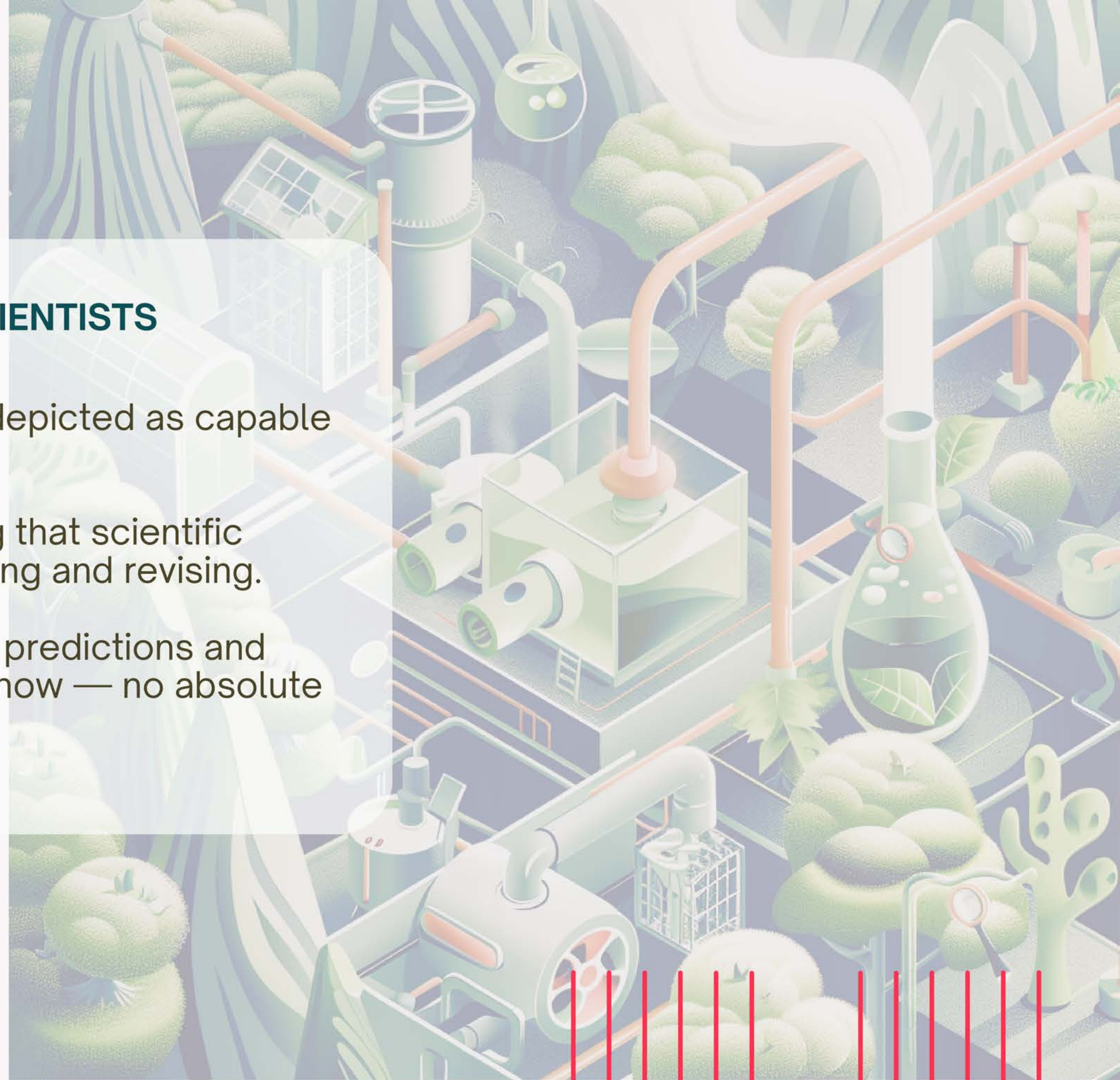


## INACCURATE PORTRAYAL OF SCIENTISTS AND SCIENCE

In popular media scientists often depicted as capable of solving any catastrophe.

Public lacks a basic understanding that scientific method involves questioning, testing and revising.

Inching ever closer to the answer, predictions and answers based on what we know now — no absolute truth.



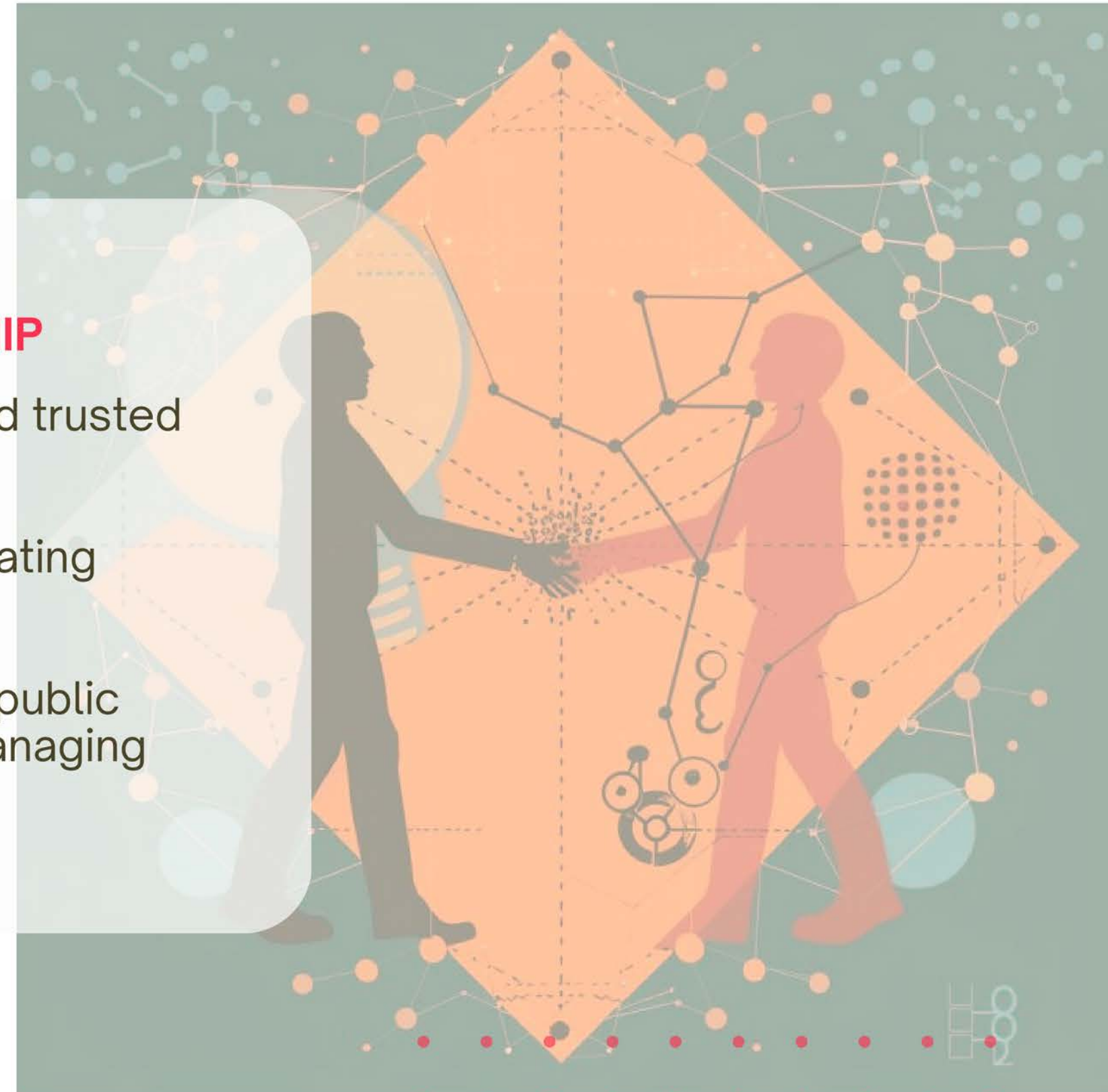


## **NOURISH THE SCIENCE-PUBLIC PARTNERSHIP**

The public need to have direct, meaningful and trusted relationships with excellent scientists.

Scientists need to be dedicated to communicating their work to a broader audience.

Institutional communication departments and public outreach programs should support them in managing relationship strategically.





## IMPROVE SCIENCE COMMUNICATION AWARENESS AND TRAINING

Scientists can only influence the public if they show tenacity, tactfulness, good listening and empathy.

Need to understand that not all journalists have a background in science writing, and not all science communication efforts require journalism training.

Working knowledge of how to use different communication channels — and the potential pitfalls of each.



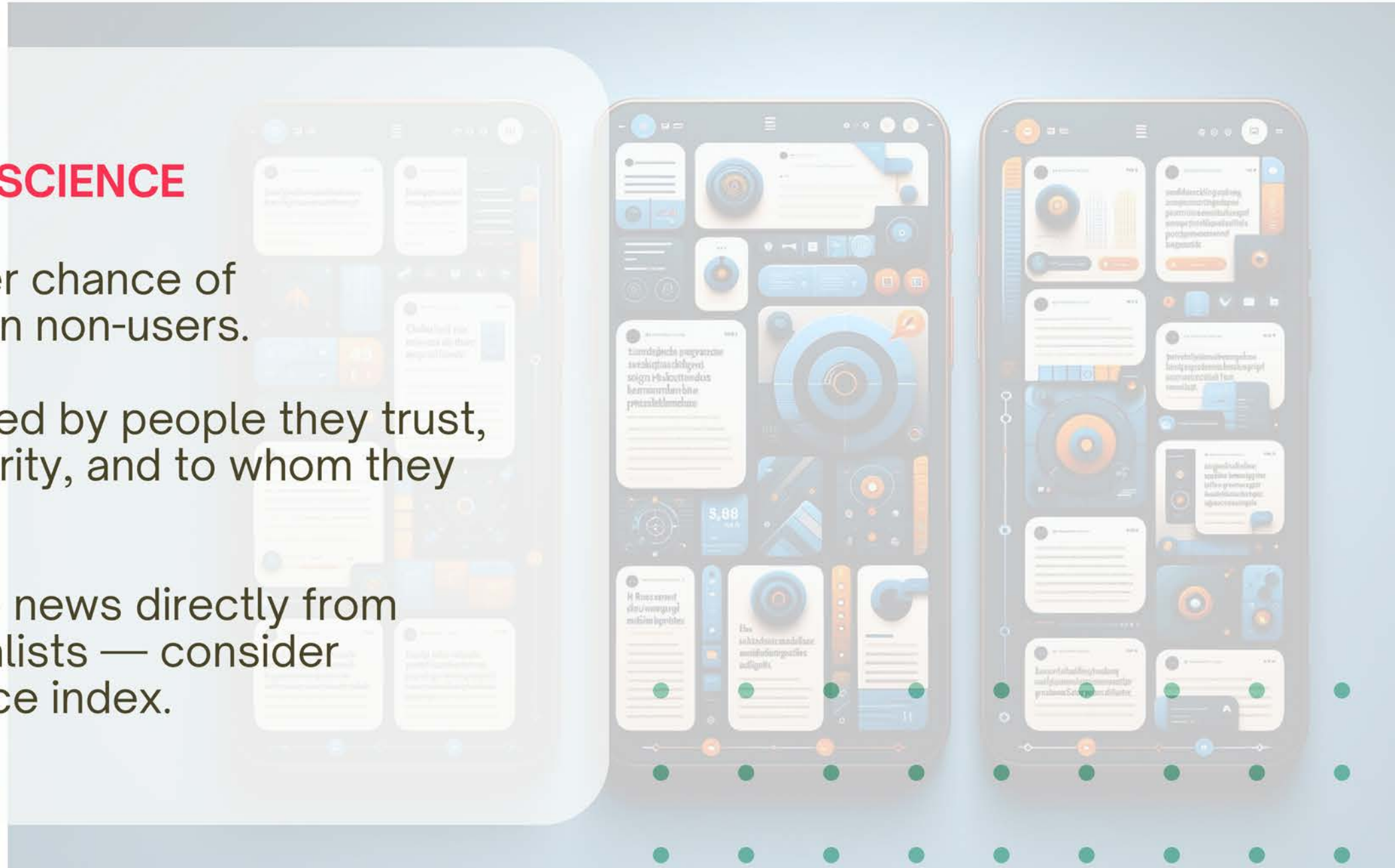


## SOCIAL MEDIA AND TRUST IN SCIENCE

Social media users have greater chance of encountering science news than non-users.

People engage with news posted by people they trust, with whom they perceive similarity, and to whom they feel closer.

Social media users get science news directly from experts, rather than from journalists — consider individualism and power-distance index.







## ENSURE GOOD REPUTATION AND REPRESENTATION

People want to see themselves being represented.

Listen to people who are trustworthy — but also likeable and relatable.

Show your human side.



Emerging technologies in  
science communication:  
*So now what?*

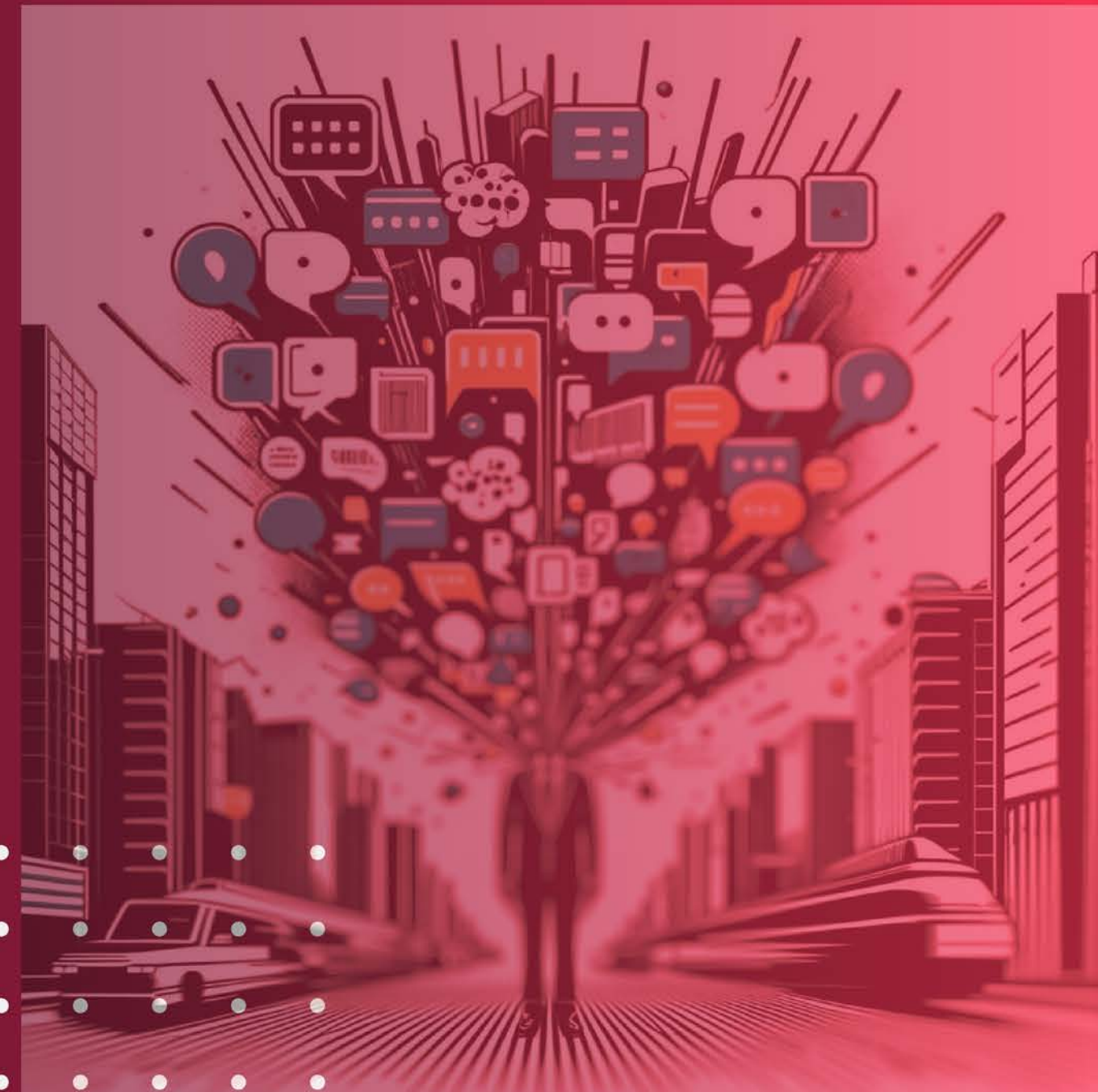


**E**nsure your audience can reach you, let them hear your voice and know that you are authentic. Interaction is key.

**L**earn with no limits. Be curious about new ways to tell your story.

## CUT TO THE CHASE, CUT THROUGH THE NOISE

**C**aptivate your audience with a story of craftsmanship and design. Invest in creating tailored content with a personal touch.





If I may...?

(A real-world scenario)



The process begins with isolating bovine stem cells cultured in a lab to multiply into the required cell types. These cells are then arranged and layered using a 3D printer to replicate the exact marbling pattern of genuine Wagyu beef. This method allows **unprecedented control** over fat and

**In a truly ingenious approach**, researchers from [Osaka University](#), led by [Professor Michiya Matsusaki](#), have successfully 3D printed wagyu beef with the meat's iconic marbling. This is achieved by combining bovine satellite cells and adipose-derived stem cells. The process involves cultivating cells that differentiate into muscle, fat, and blood vessels from stem cells harvested from wagyu cattle. These are then **intricately layered** using precise 3D bioprinting techniques to mimic the **complex marbling** for which wagyu beef is famous, a **once unimaginable feat**.

The **motivation behind this monumental study** stems from a **compelling need** to understand the real impact of green tea—a beverage consumed by millions worldwide and reputed for its health benefits—on one of the most prevalent cancers globally. Amidst conflicting reports from smaller

The **groundbreaking study**, led by Wenhao Jiang of [New York University](#) and colleagues Andrew Stickley and Michiko Ueda from [Waseda University](#), **delves into** nearly four decades of data from 1975 to 2014. Published in the **prestigious journal** *Social Science & Medicine*, the research employs spatial panel data analysis to investigate the impact of park density on suicide rates across Tokyo. By examining 886,440 cases of suicide alongside changes in urban greenery, the researchers were able to identify **a clear and consistent pattern**: areas with more parks saw **significantly lower** suicide rates, especially among women and older adults. Their analysis revealed that in large urban centres, every incremental increase in park density per 1000 people was linked to a **marked reduction** in suicide rates. This **relationship held true** even after adjusting for socio-economic factors and population density, suggesting a protective effect of green spaces against mental distress.

The findings, **rigorously peer-reviewed** and published in the *Japanese Journal of Clinical Oncology*, were **eye-opening**: green tea showed no significant overall effect on reducing colorectal cancer risk. These results align with **other comprehensive studies** across Japan, suggesting that green tea's reputed benefits might not extend to cancer prevention as hoped. However, **subtle trends hint at reduced risk for certain male groups**, highlighting the complexity of dietary influences and the

Green tea **has been celebrated** for centuries for its abundant health benefits, especially its potent antioxidants known as catechins. These compounds have **sparked global interest** due to their potential anticancer properties. Despite **promising** laboratory tests, human epidemiological studies present a **complex picture**. Researchers from [Gifu University](#) have spearheaded long-term studies to explore this **intricate relationship**, seeking **definitive answers** through **rigorous** population-based research.

So, is green tea a miracle cure for colorectal cancer? Probably not. However, the rigorous investigation into its effects helps **demystify** the role of diet in cancer prevention and paves the way for future research focused on individual susceptibilities and benefits. As researchers **unravel the complex interactions** between our diet and health, their work **remains a testament to the power of rigorous scientific inquiry** and its potential to effect **meaningful change** in **public health paradigms**.

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## ARMS SINGAPORE CHAPTER SYMPOSIUM: CURRENT CHALLENGES FACED BY RESEARCH MANAGEMENT PROFESSIONALS IN 2024

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Join us for the ARMS Singapore Chapter Symposium: Current Challenges faced by Research Management Professionals in 2024, where we delve into the pressing issues confronting Research Management Professionals today.

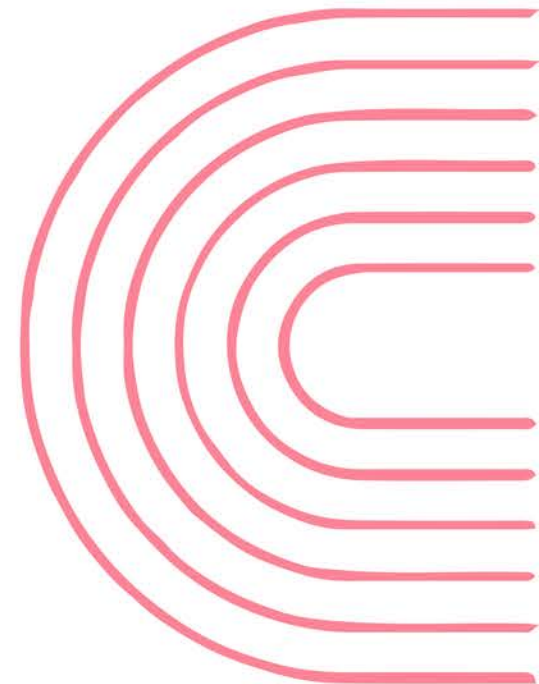
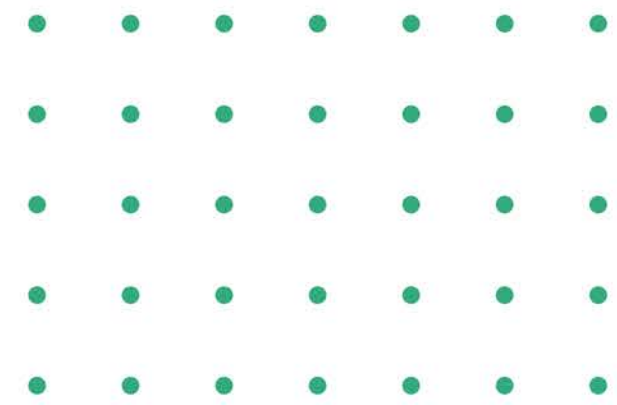
In an era marked by unprecedented challenges, Research Management Professionals play a pivotal role in navigating complexities and driving research excellence. This symposium offers a platform for sharing insights, best practices, and innovative solutions to tackle the multifaceted challenges confronting the research landscape.

From funding uncertainties to evolving regulatory frameworks and the transformative impact of technologies, we explore the dynamic landscape that Research Management Professionals navigate daily.


Engage with fellow professionals, industry experts, and thought leaders as we chart a course towards overcoming obstacles and seizing opportunities in research administration and management.

Join us to collaborate, learn, and inspire at the forefront of research administration excellence.


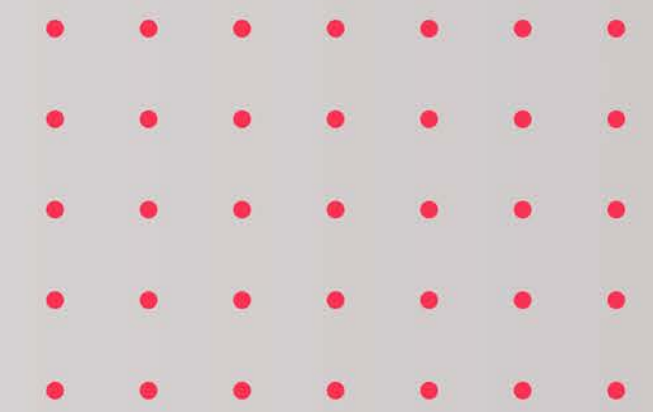
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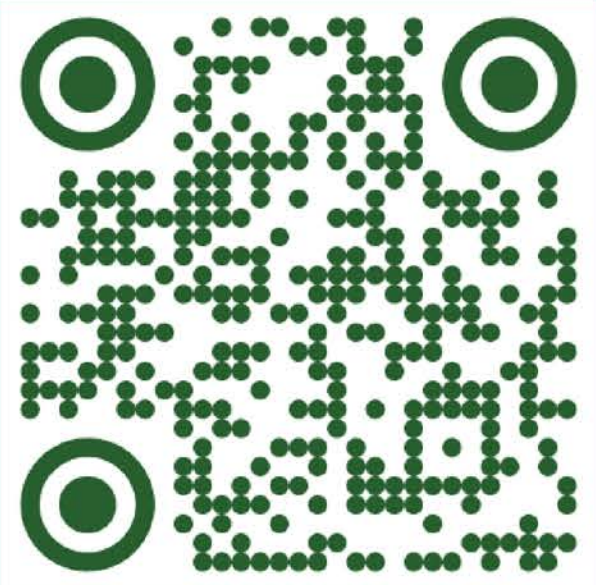


# ALL IN GOOD FAITH

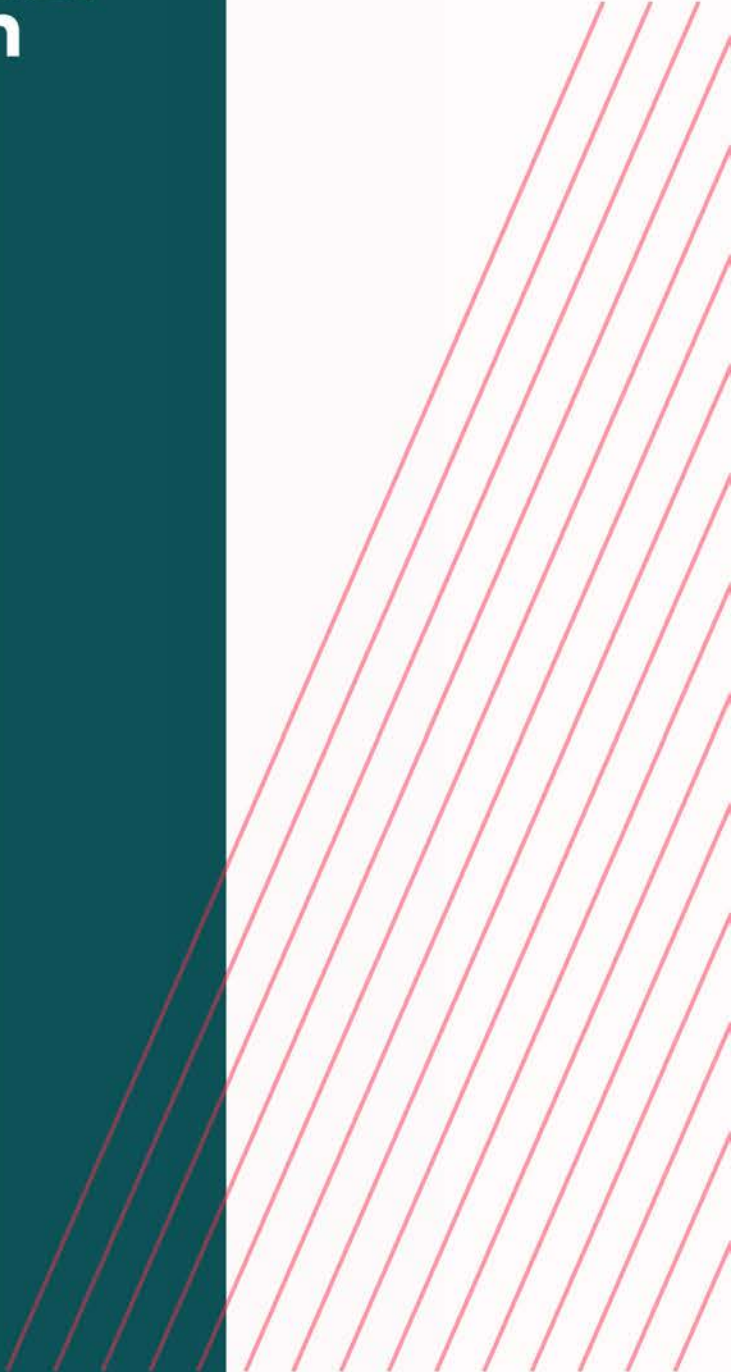


Just as one is saying that we ought to trust scientists or someone of authority, so one is saying that they ought to deserve to be regarded as trustworthy people.





**LET'S MAKE IT  
HAPPEN TOGETHER**





THANK YOU

Any questions?

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