

# Your Audience Comes First:

The Key to Effective Communication and Engagement

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**“If you build it, they will come.”**

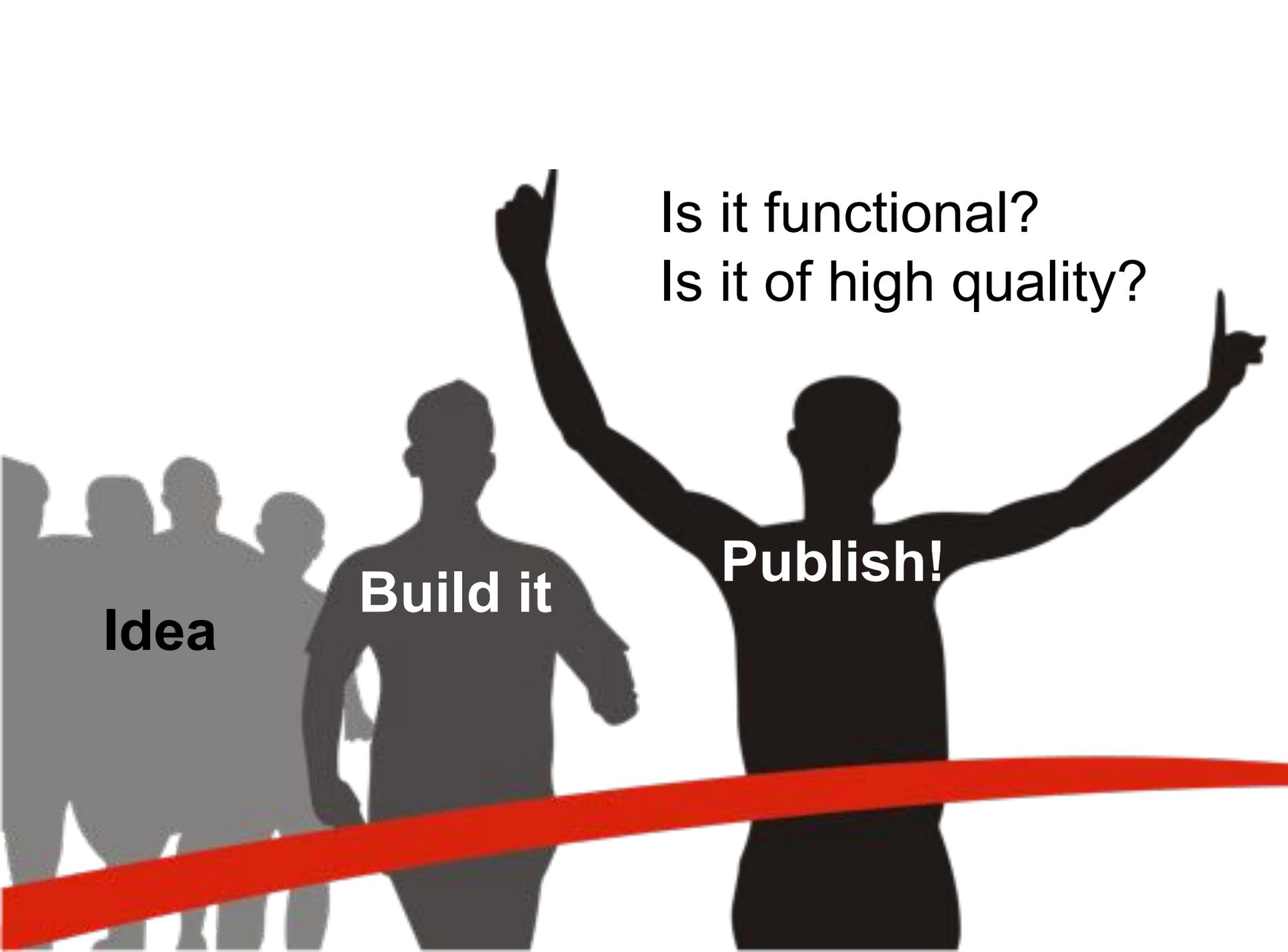
*Field of Dreams*



**Idea**

**Build it**

**Publish!**



**Idea**

**Build it**

**Publish!**

Is it functional?

Is it of high quality?

# What is a gateway?

(my experience  $\approx$  naïve user's experience)

Forst | CIPRES

www.phyl.org/index.php

Cyberinfrastructure for Phylogenetic Research

Part Collaborative XSEDE

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Secure: https://materialsproject.org

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# NANO is HUGE

LARGEST NANOTECHNOLOGY ONLINE RESOURCE

400 Simulation tools | 1.4M Users | 4500 Resources

...ing and state of the art electronic provides open web-based access to predicted materials as well as powerful materials.

Register to start using

Material Details

First Reported Reference: 0.0000 ...

Formation Enthalpy/Atom: -4.1000 eV

Energy Bandwidth: 0.0000 eV

Volume: 7.18 pm<sup>3</sup>

Space Group: ...

eBird 2009 | ITHAKA SR

Publications Services

## eBird 2009

A Two-sided Market for

Galaxy

Classify Galaxies

To understand how galaxies formed we need your help to classify them according to their shapes. If you're quick, you may even be the first person to see the galaxies you've added to classify.

Begin Classifying

The Yang Zhang Lab

http://zhanglab.com.med.umich.edu

Zhang Lab

UNIVERSITY OF MICHIGAN

Home Research Services Publications People Teaching Job Opening News Forum Lab Only

Online Services

Yang Zhang's Research Group

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We are interested in:

- Protein Structure Prediction
- Protein Design
- Structure Based Function Annotation
- Sign Mutation and Genetic Diseases
- Protein-Protein Interactions
- G-Protein Coupled Receptors
- Ligand Screening and Structure-Based Drug Design

Determining structure and function of protein molecules is a cornerstone of modern biology and medicine. One of the main focuses of our lab is to develop computational methods to predict 3-dimensional structure of protein molecules from amino acid sequence, and to deduce the biological functions based on the sequence-to-structure-to-function paradigm. The second focus of our lab is to combine computational algorithms and biochemistry experiments to design new protein molecules with enhanced functionality that nature proteins could not achieve. We are also working on modeling ligand-protein and protein-protein interactions, with particular interest in new drug screening targeting the human G-protein-coupled receptors (Zhang, 2008 ...).

Job opening

- Postdoctoral position in protein design.** We are in search of postdoc candidates who are interested in protein design and have wet lab experience on protein engineering and structure determination (Zhang, 2008 ...).

What I notice: ***variance***

(in audience, purpose, content, context)

# Variance in **audience**

**With potential users**

**With current users**

**With advisors/collaborators**

**With funders**

# Variance in **purpose**

**Draw in potential users**

**Guide first time or current users**

**Seek suggestions for improvement**

**Secure funding**

# Variance in **content**

**Need** (the problem the gateway solves)

**Application** (the approach the gateway uses)

**Uniqueness** (how the gateway is different from other tools)

**Functionality** (how the gateway works)

# Variance in **context**

**Website/portal**

**Professional meetings** (posters, talks)

**Listservs**

**Social media?!**

What I notice: ***variance***

...where does that come from?!

The image features three silhouettes of people against a white background. The first silhouette on the left is a group of four people, with the word 'Idea' written in black text to its right. The second silhouette in the middle is a single person with the words 'Build it' written in white text across their chest. The third silhouette on the right is a single person with their arms raised in a 'V' shape, with the word 'Publish!' written in white text across their chest. A thick red diagonal line runs across the bottom of the image, starting from the left and extending towards the right.

**Idea**

**Build it**

**Publish!**

## **Working assumption:**

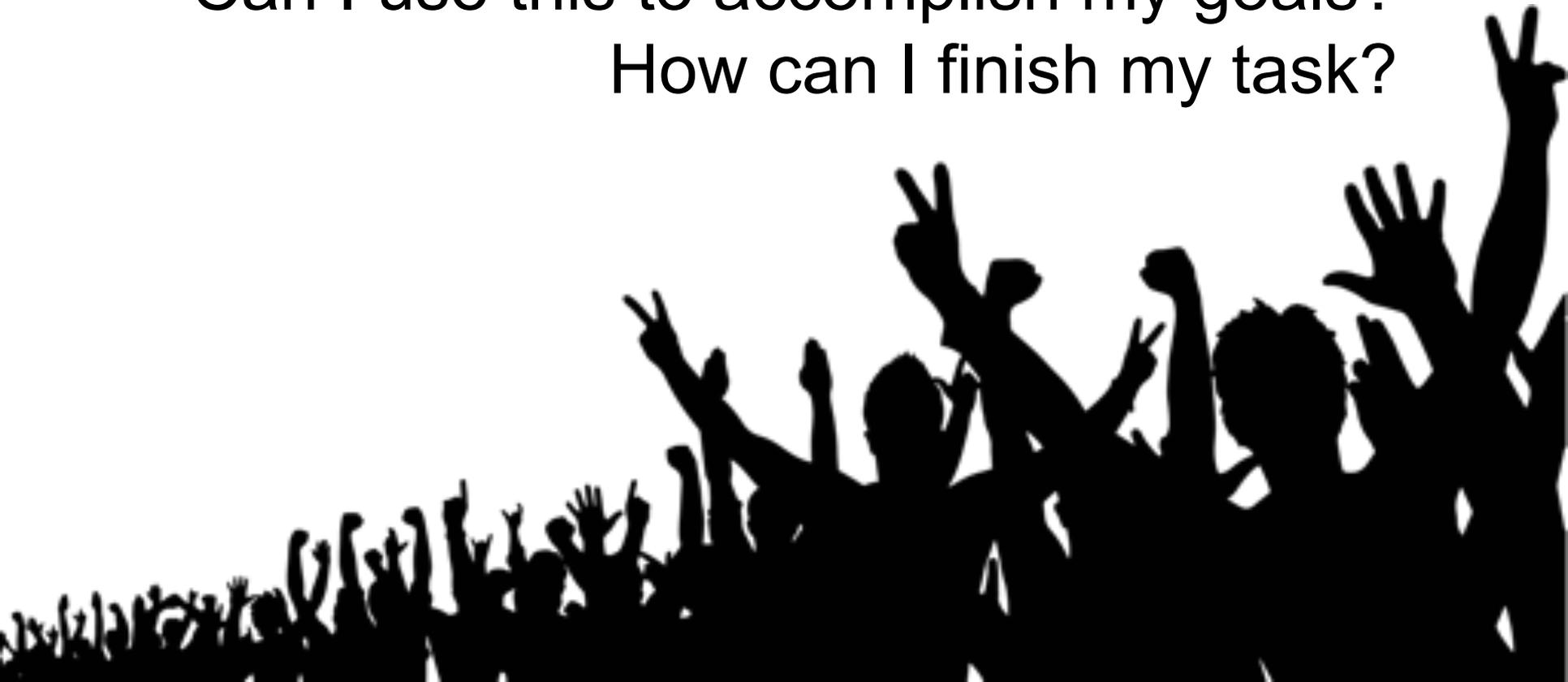
You want your gateway to be successful.

# What defines success (*developer*)?

- Gateway is functional
- Gateway is of high quality
- Gateway gets used & cited
- Gateway is sustainably supported

Changing perspective:  
from ***developer*** to ***user***

Can I use this to accomplish my goals?  
How can I finish my task?



# What defines success (*user*)?

- Easy to find the gateway
- Easy to navigate the gateway for different purposes
- Easy to apply the gateway to different tasks

“Design based on the way *that people are*, not how we wish that they were.”

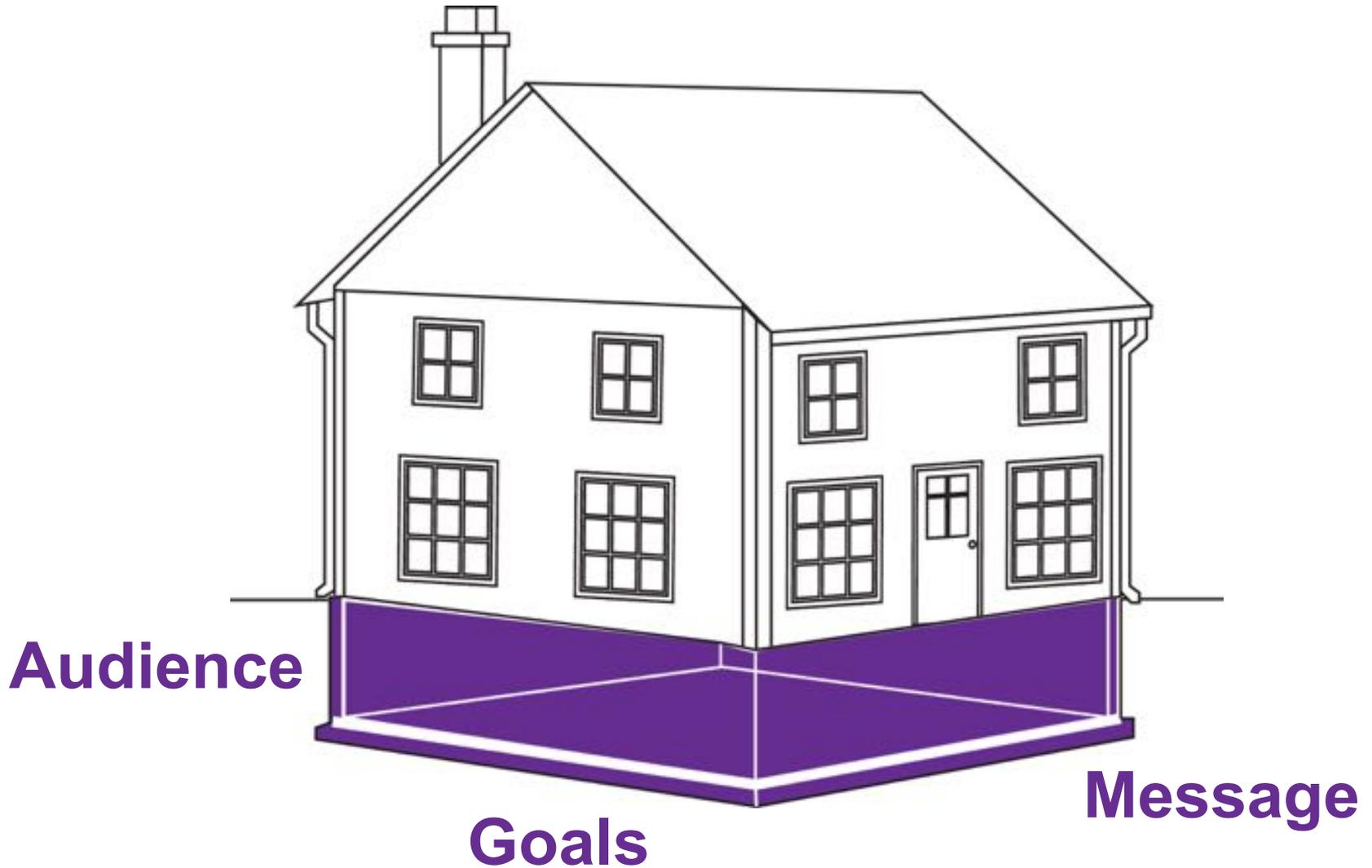
Holly Witteman

(Adapt your communication approach to help to determine a gateway’s success.)

**Assume a user-centric  
communication strategy.**



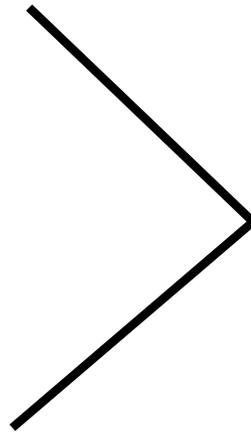
# Focus on the foundation.



**Audience**

**Goals**

**Message**



**High impact decisions**  
(relatively) little time

# The Checklist

- Define/profile the **audience**
- Align the **goals** (yours, the audiences')
- Uncover and polish the **central message**

**Anyone can be a great communicator!**

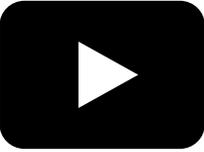
#1 Rule of Communication:

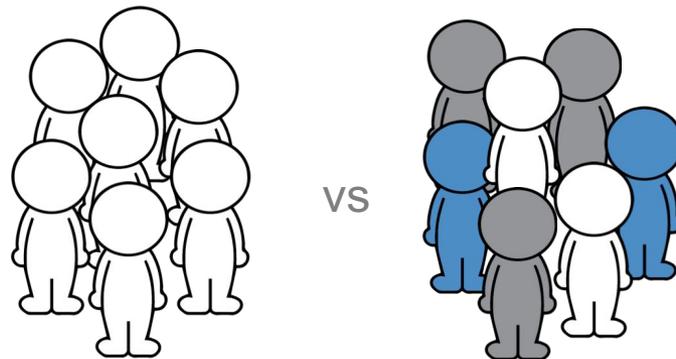
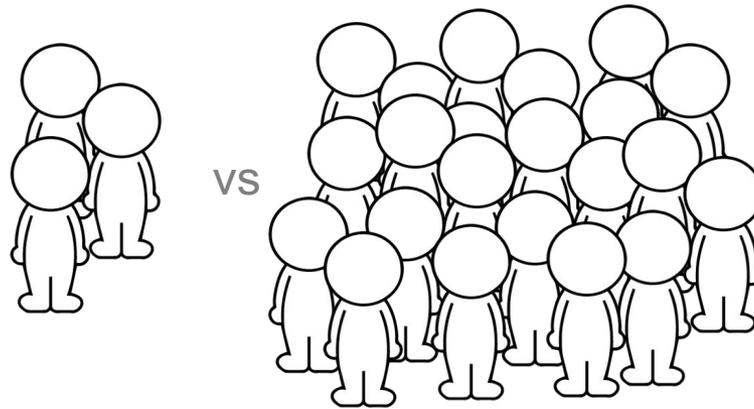
***Know Your Audience!***

**(& communicate for *their* benefit!)**

**Context? How many people? How similar?**



a vs  vs 



Context? How many people? How similar?

**Their interests? Why are they there?**



**Context? How many people? How similar?**

**Their interests? Why are they there?**

**Background knowledge/expertise?**



# The Curse of Knowledge

Context? How many people? How similar?

Their interests? Why are they there?

Background knowledge/expertise?

**Shared specialized vocabulary?**





*translation*

**Context? How many people? How similar?**

**Their interests? Why are they there?**

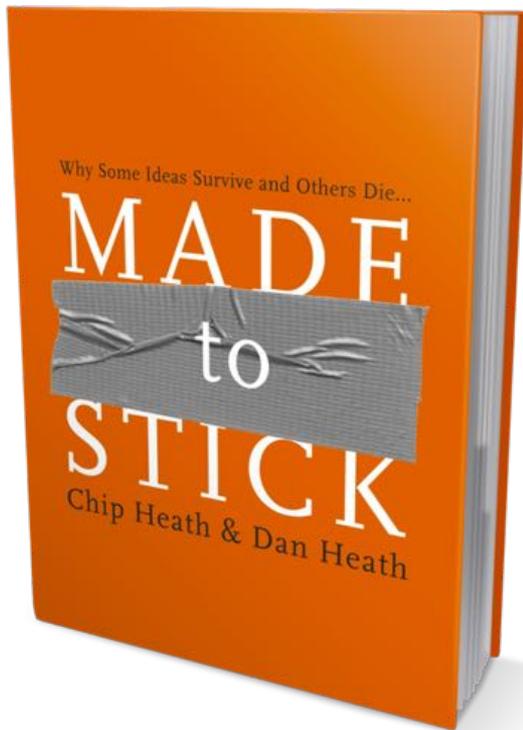
**Background knowledge/expertise?**

**Shared specialized vocabulary?**

**Use this understanding to *tailor* your effort.**

# The Checklist

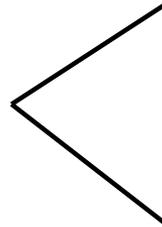
- ✓ Define/profile the **audience**
- ❑ Align the **goals** (yours, the audiences')
- ❑ Uncover and polish the **central message**



# Commander's Intent

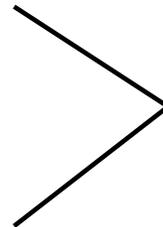
(your goal)

# Audience Goals



Learn/explore something new?  
Apply research to a problem?  
Find a valuable resource?

Share your latest research/data?  
Highlight application of tool to problems?  
Raise awareness of a valuable resource?



# Speaker Goals

Effective communication: audience and speaker goals *align*

|          |              |
|----------|--------------|
| Audience | <b>Goals</b> |
| Speaker  | <b>Goals</b> |

(Can help to determine a “good” speaker goal.)

# The Checklist

- ✓ Define/profile the **audience**
- ✓ Align the **goals** (yours, the audiences')
- ❑ Uncover and polish the **central message**

and talks  
for the  
**focus**  
his new  
of

A note about webpages...

...**one message** per page.

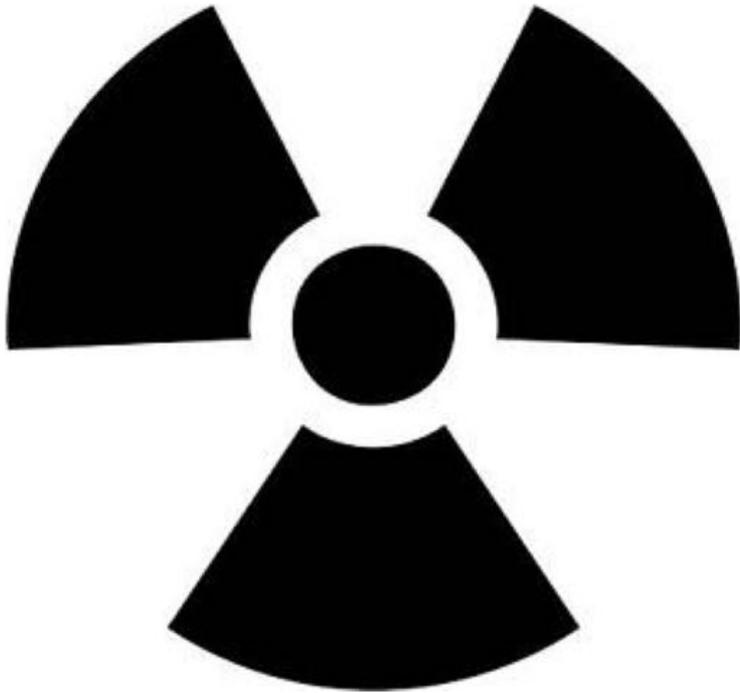
Define ***one*** central message

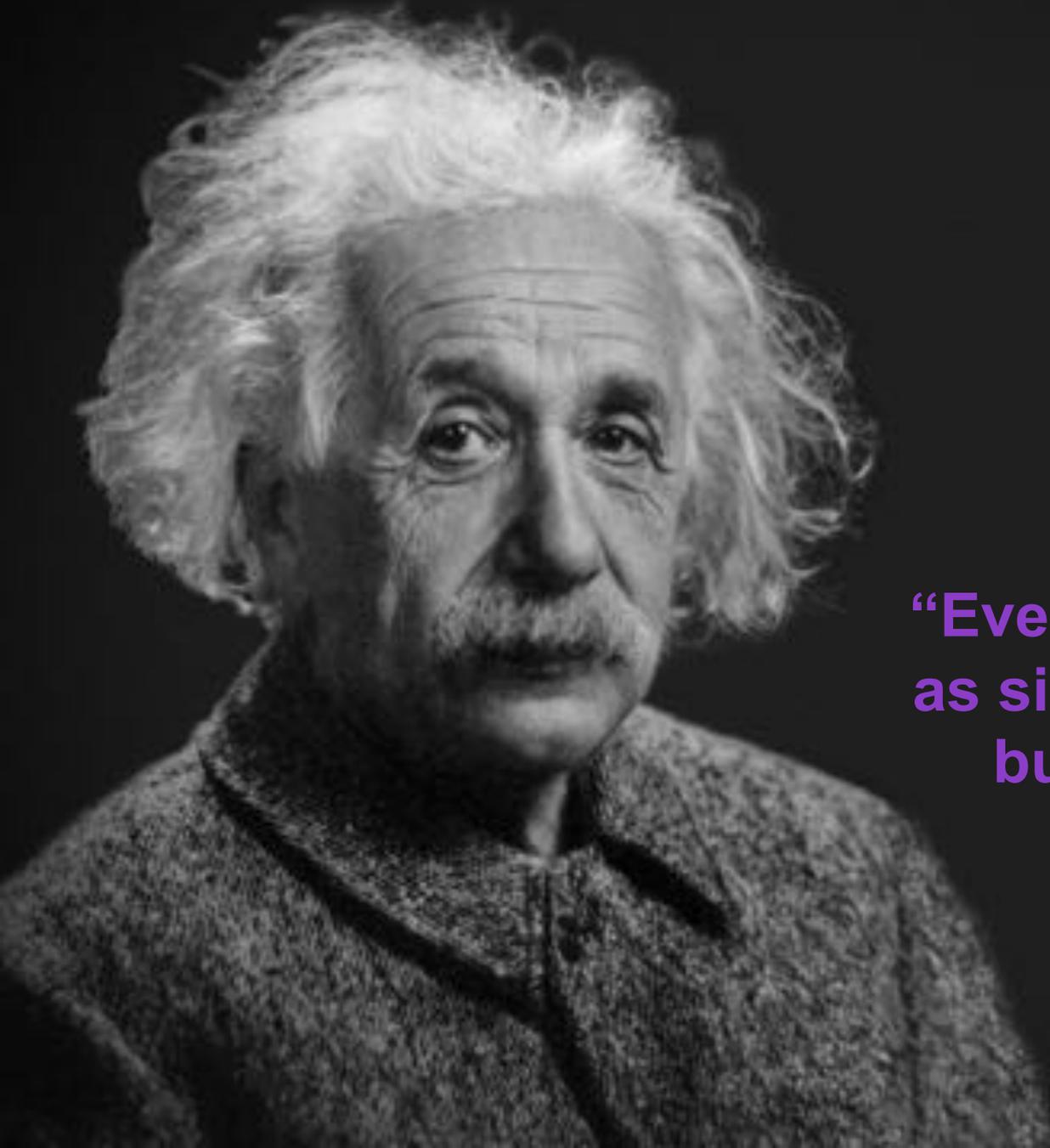
“Every block of stone has a statue inside it, and it is the task of the sculptor to discover it.”

Michelangelo



# Half-Life





**“Everything should be  
as simple as possible,  
but not simpler.”**

Albert Einstein

# The Checklist

- ✓ Define/profile the **audience**
- ✓ Align the **goals** (yours, the audiences')
- ✓ Uncover and polish the **central message**

# The Checklist

- ✓ Define/profile the **audience**
- ✓ Align the **goals** (yours, the audiences')
- ✓ Uncover and polish the **central message**
- (Develop everything else)

With a solid foundation, the features of the house have stability

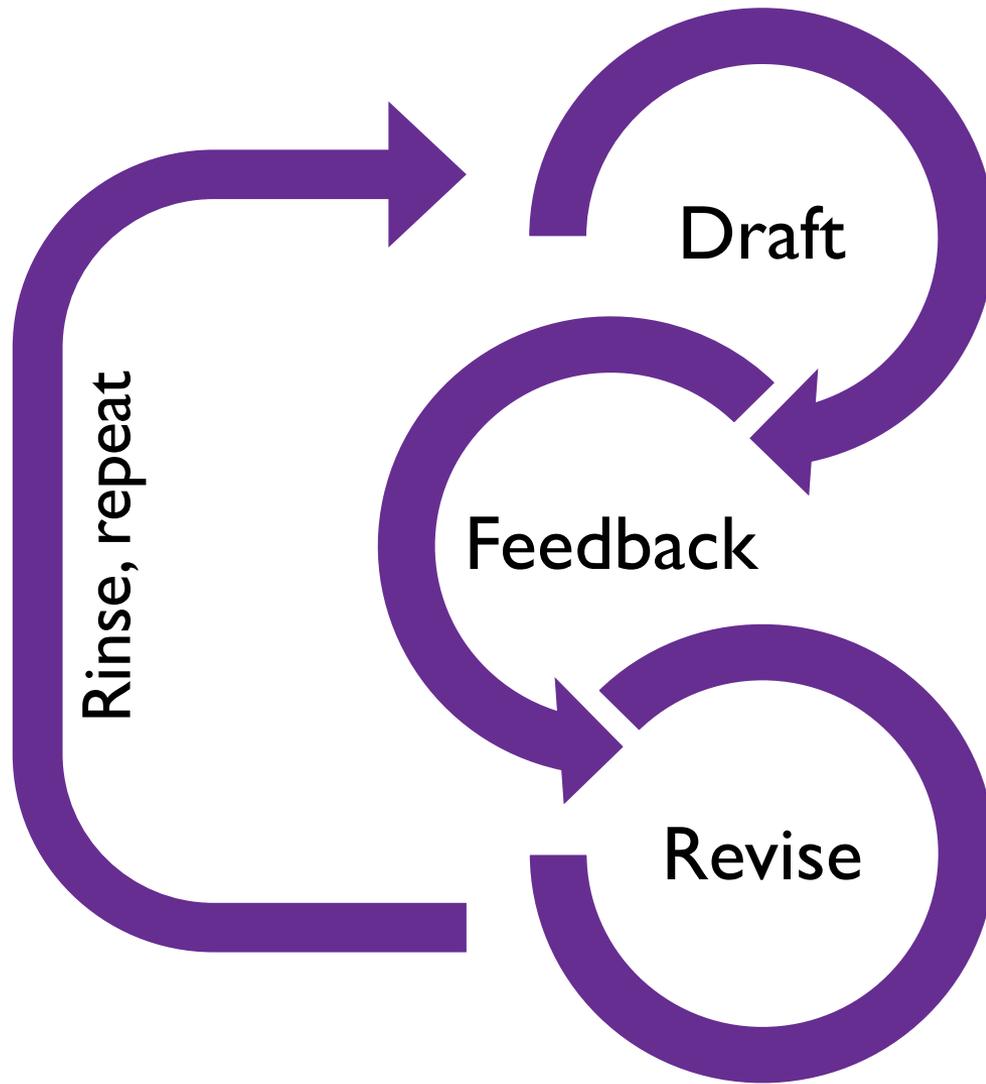
**Language  
Design**



# The Checklist

- ✓ Define/profile the **audience**
- ✓ Align the **goals** (yours, the audiences')
- ✓ Uncover and polish the **central message**
- ✓ (Develop everything else)

**Anyone can be a great communicator!**



Beyond gateways...

**...all the same recommendations apply.**

# Short-form vs. long-form communication

Papers

Grants

Posters

Advisory Board  
Meetings

Professional talks

Interviews

Lay-audience talks

Reviews

Elevator pitches

Podcasts

Lab meetings

Listservs

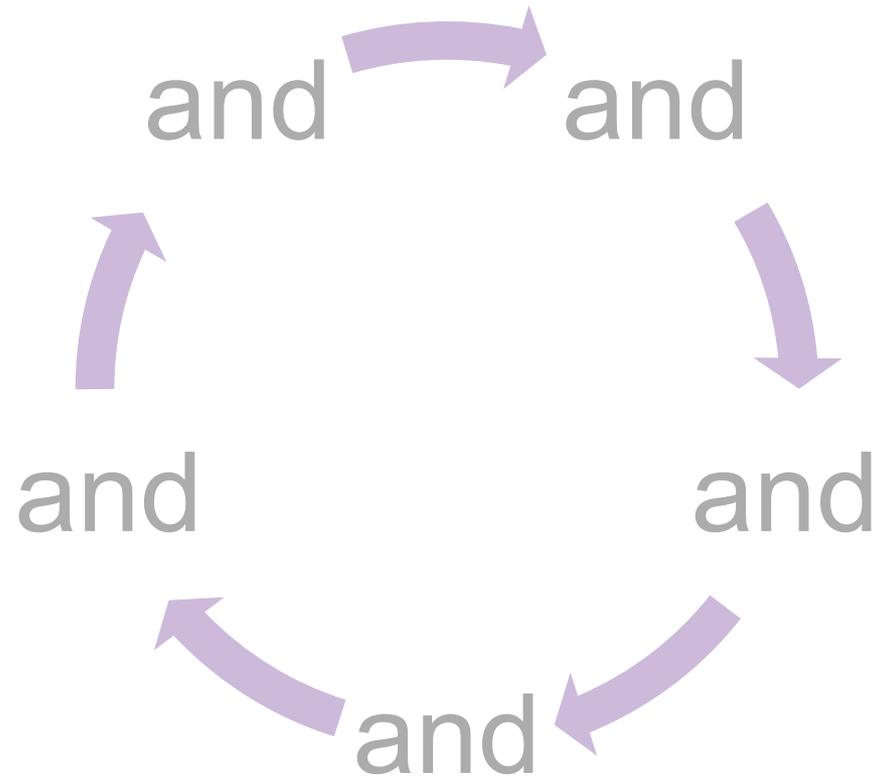
# The Checklist

- ✓ Define/profile the **audience**
- ✓ Align the **goals** (yours, the audiences')
- ✓ Uncover and polish the **central message**
- Construct the **narrative**
- (Develop everything else)

# Narrative is (also) foundational.



Most scientists speak like...



**What's the takeaway?**

# Stories are vehicles to deliver messages



## **Necessary qualities for a good story:**

1. Your audience must understand it.
2. Your audience must care about it.

# Make a narrative *understandable* with structure:

1.

A.B.T.

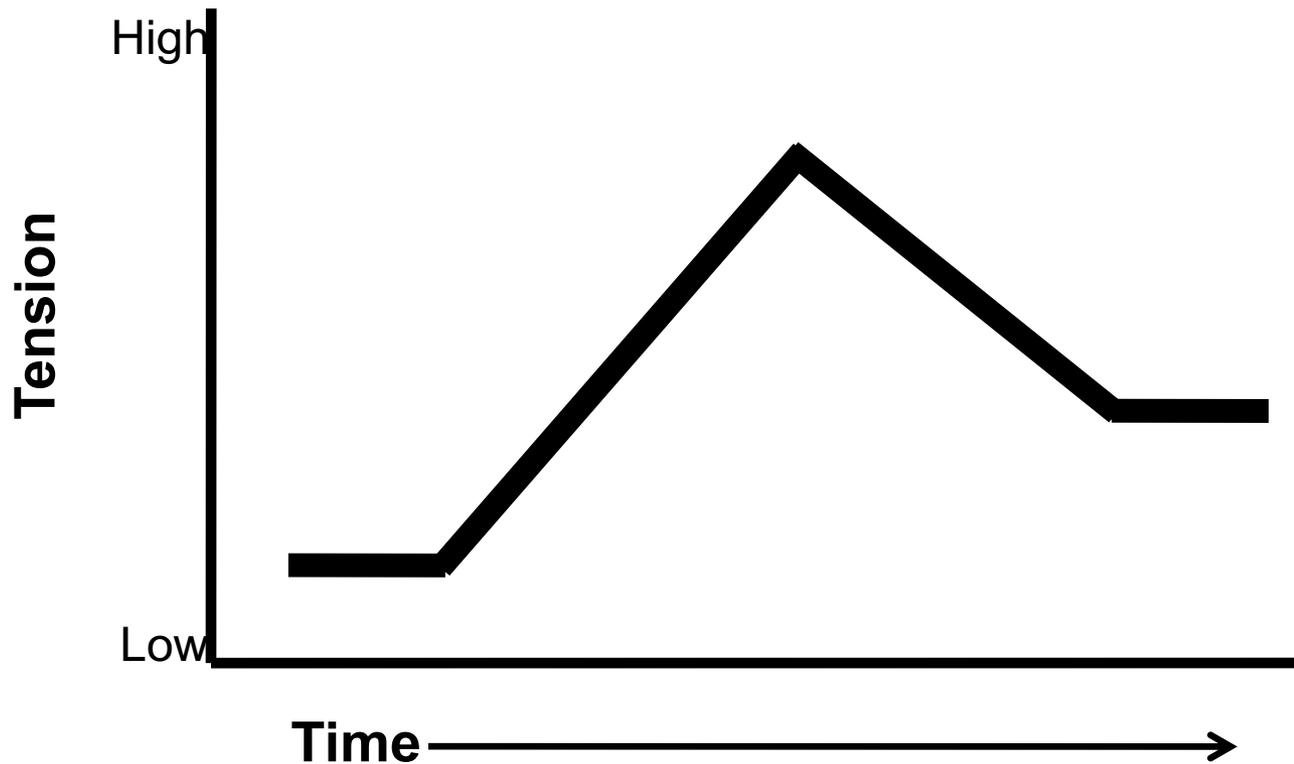
2.



3.



# Make a narrative *compelling* with tension:



What's compelling for your *audience*?

# Practice these skills.

**PIs:** This is critical for your students to succeed.  
(And good for you, too!)

**Trainees:** This is critical for your professional development.



Researchers Expanding Lay-Audience Teaching and Engagement ©

Learn more:

The screenshot shows a web browser window displaying the EdX course page. The browser's address bar shows the URL: <https://www.edx.org/course/communicating-understanding-scientific-research-michigan-teachout-3x>. The page header includes the EdX logo, navigation links for Courses, Programs, Schools & Partners, and About, along with a search bar and the user name 'ElyseAurbach'. The main content area features a banner for the 'Stand up for Science: Practical Approaches to Discussing Science that Matters' course, which is part of the 'TEACH-OUT SERIES' from the 'UNIVERSITY OF MICHIGAN'. The banner includes a play button icon and a large yellow 'M'. Below the banner, there is a description of the course and a green 'Enroll Now' button. To the right of the 'Enroll Now' button, there is a note about archived future dates and an option to receive email notifications. The page is divided into three main sections: 'About this course', 'What you'll learn', and a course details sidebar. The 'About this course' section includes a rating of 4.5/5 stars based on 2 reviews and a note that the course is archived. The 'What you'll learn' section lists five learning objectives. The sidebar provides details such as course length (1 week), effort (3-4 hours), price (FREE), institution (MichiganX), subject (Science), level (Introductory), language (English), and video transcripts (English).

edX Courses ▾ Programs ▾ Schools & Partners About ▾ Search:  ElyseAurbach ▾

Home ▾ All Subjects ▾ Science ▾ Stand up for Science: Practical Approaches to Discussing Science that Matters



## Stand up for Science: Practical Approaches to Discussing Science that Matters

In this Teach-Out, scientists and non-scientists reach out and RELATE to build communication skills to more effectively discuss knowledge.

**Archived**  
Future Dates To Be Announced

[Enroll Now](#)

I would like to receive email from The University of Michigan and learn about other offerings related to Stand up for Science: Practical Approaches to Discussing Science that Matters.

**About this course** 2 Reviews 4.5/5 ★★★★★

**This is an Archived Course**  
EdX keeps courses open for enrollment after they end to allow learners to explore content and continue learning. All features and materials may not be available, and course content will not be updated. Check back often to see when new course start dates are announced.

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### What you'll learn

- Understand why science communication is both important and challenging
- Develop strategies to effectively bridge communications between public audiences and scientific researchers
- Understand expert perspectives on different areas of public engagement with science
- Shape a compelling, message-focused STEM narrative for a specific audience
- Discuss important issues in science communication with others

|                      |  |
|----------------------|--|
| 🕒 Length:            | 1 week                                     |
| 🕒 Effort:            | 3-4 hours                                  |
| 💰 Price:             | FREE<br>Verified Certificate option closed |
| 🏛️ Institution:      | MichiganX                                  |
| 📖 Subject:           | Science                                    |
| 🎓 Level:             | Introductory                               |
| 🗣️ Language:         | English                                    |
| 📺 Video Transcripts: | English                                    |

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**Focus on the foundation.**