


## CHANGING BRAINS

# Step into the Shoes of Stakeholders Training Guide


### TRAINING LEARNING OBJECTIVES

By doing and debriefing this activity, science and engagement professionals will reflect on attitudes towards public engagement centered on emerging neuroscience research and technologies.


- Science, technology, and society are interconnected.
- People's values determine research directions and which technologies are developed and used.
- Public engagement in neuroscience and technology benefits from many voices.



**Cognitive enhancement drugs**  
Readily available drugs for boosting memory and attention; intended for patients with neurological conditions but used more widely.



**Online brain donor registration**  
A new social network initiative using online sign-ups for donating human brain tissue as social currency.



**Facial emotion detection**  
New security cameras with advanced facial recognition software to detect emotional states, based on publicly available brain data.

### MATERIALS

- Technology cards - 1 set
- Character cards - as many sets as needed for each participant to get a card (8 cards per set—please note some participants will have the same card in larger groups).
- Sticker dots in 2 colors - each participant receives 3 stickers of each color (e.g. red and blue)
- Adhesive tape or other supplies to post the technology cards on a wall, table, or other type of surface with sufficient area for stickers.

*All written activity materials and graphics can be downloaded from [nisenet.org](http://nisenet.org).*

## NOTES TO THE PRESENTER

### Preparation

Before you begin, post the technology cards on surfaces around the room. We suggest posting the cards on large-sized paper or poster board to guarantee room for stickers. This will also help presenters clean up or collect results after the activity. There should be enough space between cards for participants to walk around and read about each topic comfortably. Distribute 3 stickers of each color to every participant.

### Instructions

*Round 1* (about 10 min) – How would you prioritize public engagement efforts about the specific neuroscience topics posted around the room? Place the 3 (color #1) stickers you were given near the posted technology cards you feel are most critical to discuss with the public. You can distribute your stickers one by one or any way you wish.

*Round 2* (about 10 min) – Pick up a stakeholder card and read it. Now consider how this person would prioritize public engagement efforts on the same neuroscience topics. (*If your group is larger than 8*: Find other participants with the same stakeholder card and discuss the person's interests.) What topics do you believe the stakeholder would most want to discuss with scientists and other experts? Now, place your 3 (color #2) stickers on the posters with the most important areas for the stakeholder.

### Conversation

The stickers of color #1 represent the participants' priorities for public engagement around emerging neuroscience research and technologies. By comparing where everyone in the group placed their stickers, participants can reflect on their decisions and discuss the varied opinions about talking to public audiences about these potential applications and research directions.

The character cards are meant to help participants think about these issues from the perspectives of different stakeholders. Comparing the spread of stickers between colors #1 and #2 provide a visual reference for participants to consider and share how stakeholders might view the emerging topics. Be sure to listen to everyone's thoughts and opinions, and feel free to share your own opinions as well. As participants discuss, help everyone to remember that there is no right or wrong answer to the questions this activity raises. Different topics may resonate differently based on many factors. Science provides information that can help us form opinions and make choices—but in public engagement, we must also consider other perspectives such as cultural traditions, community needs, and personal values.

### Suggested Conversation Questions

- Does everyone value the same technologies? How might this vary based on stakeholder?
- How might new technologies change the way we all live in society?
- Do technological changes benefit everyone equally?

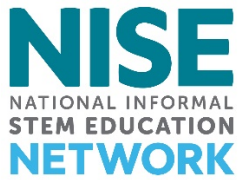
## **Audiences**

This activity was originally designed for professional training in public engagement. However, you can adapt this game to work for different public audiences as a means of direct engagement. In the first round, you could ask participants to think about their own values and place their stickers on the topics that would have the greatest impact on their lives, followed in the second round with instructions to place the second set of stickers on the topics they think would be most important for their character. Choose the number of technology cards and the amount of information you initially share depending on the age and interest of the audience. Some participants may prefer to read the cards themselves, but you may want to read them (or paraphrase them) for younger participants. Remember that you can always share more information if participants ask questions!

If participants seem uneasy or have questions regarding the safety and security of certain topics, you might respond that these are serious factors that scientists—and we as a society—need to consider. As with many new technologies, there are important ethical and social questions surrounding research in neuroscience and technology. Government regulations, biosafety committees, scientific transparency, and informed citizens help to make sure that these technologies maximize benefits and minimize risks. Together, we all have a role in shaping how technologies are developed and used.

## **Related educational resources**

The NISE Network website ([www.nisenet.org](http://www.nisenet.org)) contains additional training resources to help scientists and educators have conversations with museum visitors about technology and society: [http://www.nisenet.org/catalog/tools\\_guides/nano\\_society\\_training\\_materials](http://www.nisenet.org/catalog/tools_guides/nano_society_training_materials)



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