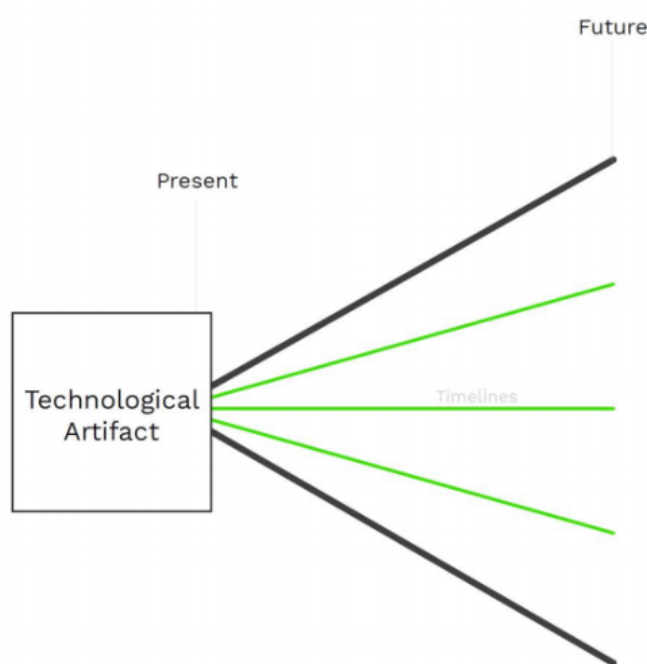


Threat Timelines

This game, *Threat Timelines*, uses fictional headlines to help you imagine threats on a 5-year time horizon. It focuses on three topic areas: anonymity and privacy; data storage and transfer; and trust and social cohesion.



This game uses multiple timelines, extending from the present, to help surface threats approximately five years in the future.

Steps

- Step 1: As a group, decide on an artifact—a technology, system, or feature—that you want to explore.
- Step 2: Using sticky notes, participants individually brainstorm potential news headlines related to their artifact. Place headlines on the large shared timeline triangle to create timelines of events related to the technology.
- Step 3: Shift into a broader discussion to reflect on insights from the activity.

Materials needed

1. Digital Version

- Digital shared whiteboard where participants can place virtual sticky notes
 - Virtual shared deck of cards (e.g., <https://deck.of.cards/>)
2. Face to Face Version
- A large timeline triangle drawn on a large piece of paper or white board
 - Sticky Notes
 - Index Cards
 - Sharpies or markers
 - A standard deck of playing cards

Step 1

We start the activity by telling participants:

In today's activity, we will create a range of future stories surrounding a system or technology, and explore those stories from different viewpoints.

The goal of this activity is to think about possible futures, and reflect on emerging risks to cybersecurity and infrastructure security.

Remember: our goal is to explore possibilities for the future so that we can take action in the present. We are not predicting the future.

Participants then decide on an artifact—a technology, system, or feature—that they want to explore. Some groups (such as a project team) may already have one in mind.

Example Systems/Technologies

- Facebook
- A nuclear power plant
- Facial recognition technology
- Deepfake technology
- Ransomware/extortionware

Facilitation Tips

Suggested timing: 5 minutes

- Participants might want to take a few seconds on their own to brainstorm some ideas before discussing with the group
- The artifact doesn't necessarily need to be “speculative” or “futuristic” – it can be done with existing or even historical technologies!

- If participants come up with more than one system/technology, have them choose one for now, but save the other ideas for later.

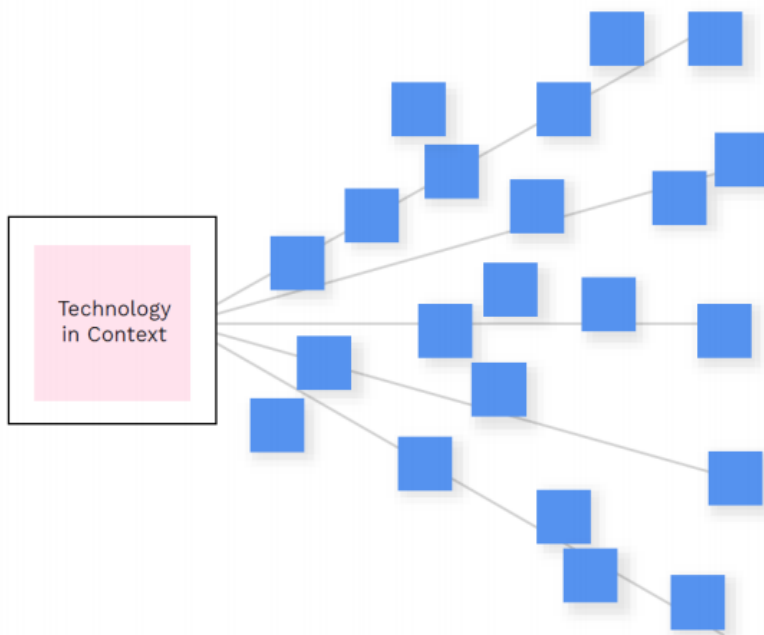
Step 2

Players take turns pulling a card from a standard deck. The suite of the card dictates the theme of the headline.

- SPADES: Anonymity and privacy.
- HEARTS: Data storage and transmission.
- DIAMONDS: Trust and social cohesion.
- CLUBS: Name a new stakeholder.

For example, if you pick a Spade, come up with a headline around Anonymity and Privacy. If you pick a Club, come up with a possible stakeholder (a user, an indirect user, a business owner, a member of the public, etc...); the next person to draw a card must use that stakeholder in their headline.

Write down your headline and place it on the timeline. Continue this step, circulating the deck of cards, until at least a few timelines have gotten to five or so years into the future.



Separate timelines will branch out into the future. Each headline will come before, after, or at the same time as another headline on its timeline. Slowly complete several timelines as you work your way through the deck of cards.

Example Headlines

- Try your best to place headlines in chronological order. Verbalize if it comes "after," "before," "at the same time," or "separate from" other headlines on the board.
- Conflicting timelines are okay! That's why timelines are separate.
- Feel free to use existing headlines as jumping off points.

Tips for Placing Headlines

- Employee camera went off during intimate moment at work: employee fired.
- This guy hacked his posture sensor to lower his health insurance premium. Doctors hate him!
- For efficiency, Tesla batteries store data about usage. Then they got 'extortionware'.

Facilitation Tips

Suggested timing: 10-20 minutes

- Imagining headlines
 - Encourage participants to have fun with this step. Clickbait headlines, social media posts, as well as traditional headlines are fine!
 - Encourage participants to try to come up with at least one positive and one negative headline.
 - The goal of the headlines step is to try to avoid creating hyperbolic dystopian or utopian visions of the future, but instead focus on banal and every-day outcomes that can be both partially positive and negative]. Reminding participants to create both positive or negative headlines helps encourage this.
 - If participants had unused systems/technologies from Step 1, they might consider creating headlines depicting the artifact getting adopted in new contexts.
- Placing headlines
 - While headlines do not need to be placed in a "strict" chronology, placing them roughly in a logical order provides a useful, but flexible set of constraints and helps elicit discussion of secondary and tertiary effects, as well as potentially unanticipated outcomes.

- When participants place a new headline on the timeline, have them verbalize if it comes “after,” “before,” “simultaneously,” or “separate from” another headline already on the chart.
- Encourage participants to continue writing and sharing new headlines as new ideas come up.
- Some participants may dispute the congruence of some headlines. Remind participants that conflicting headlines are fine. Real technologies get adopted and used in varying, sometimes conflicting ways, and that should be reflected in these activities.

Step 3

Participants shift into a broader discussion to reflect on insights they have had going through the activity. What can we do today to make these threats less harmful in the future?

Facilitation Tips

Suggested timing: 5-15 minutes

- Consider asking participants to reflect on what they might change or do going forward, after completing this activity.