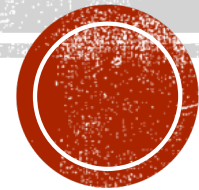# CONSTRUCT A FUTURE

Scenario Analysis, Design Fiction, and Ethical Reasoning

Adapted from Chase Collins and the STS Futures Lab

OVERVIEW: BUILD A FUTURE

- You will go through a series of steps, each giving a new direction to help shape your future.

- With each step take time to brainstorm and flesh out your future.

OVERARCHING QUESTIONS

- What events could account for this future?

- What society thrives under these conditions?

- What technological design choices and/or policies might help this become the best version of the future with respect to your topic?

STEEP MODEL

- What factors have contributed to making this future the way it is?
  - **S**ocietal
  - **T**echnological
  - **E**conomic
  - **E**nvironmental
  - **P**olitical

PROMPTS SHOULD EXPAND, NOT LIMIT

- Take note of:
  - New ideas
  - Complications
  - Realizations about the social, political, and technical conditions of this future
  - Conditions that may be at odds with each other
- Think outside the box: These prompts are not meant to limit your creativity and world, but inspire it, serving as guides to help you navigate the endless possibilities of the future
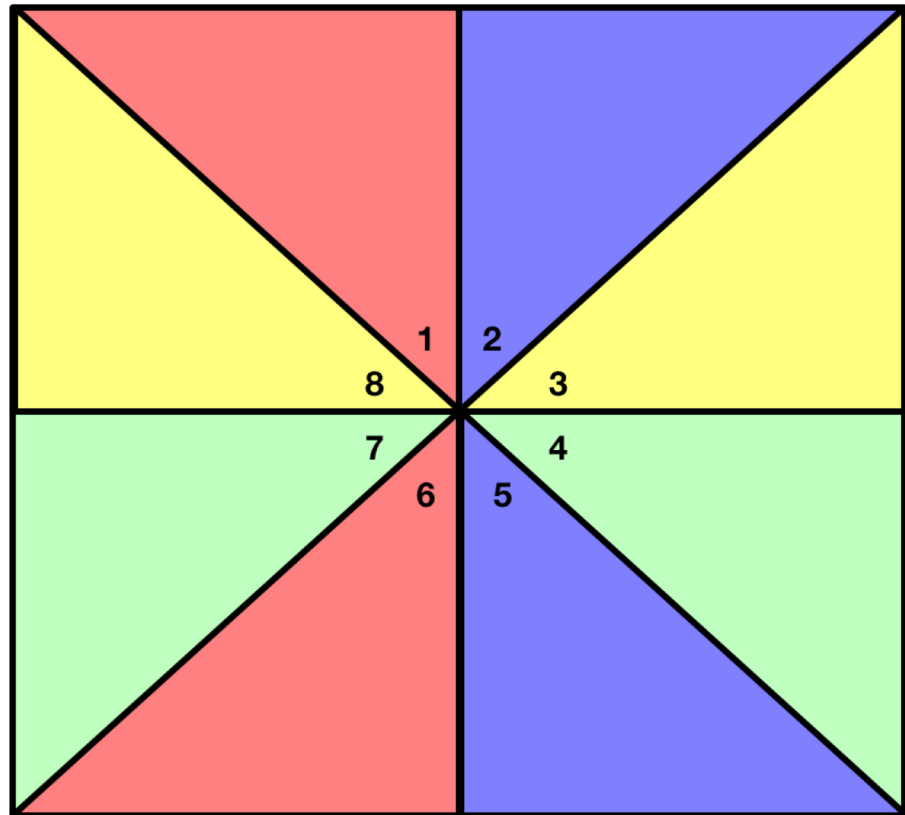
TODAY'S TOPIC: MODIFIED ANIMALS

- "Mississippi dog breeder David Ishee is attempting to genetically engineer bioluminescent pooches by infusing his pet mastiff's sperm with modified genes that 'glow.' By altering canine genes, Ishee hopes to eliminate common disorders in problem-plagued purebreds," Haddad, Michael. "Life Hackers: Biopunks Push the Limits," *Wired*, Feb 2018.

- Imagine a future in which genetically modified animals, including pets, becomes commonplace.

STEP 1: WHAT COULD HAVE LED TO THESE CONDITIONS? (10 MINUTES)

- Use a random number generator 1-8: generate 3 numbers

- Each number correlates to a slice on the pie

- If you generate two pie slices that have the same color, draw another number so that you have three distinct colors

- What accounted for this future? Imagine what STEEP factors lead to this. How does this society work/ function? Who are we in this future? Try building a narrative that accounts for all three conditions being true.
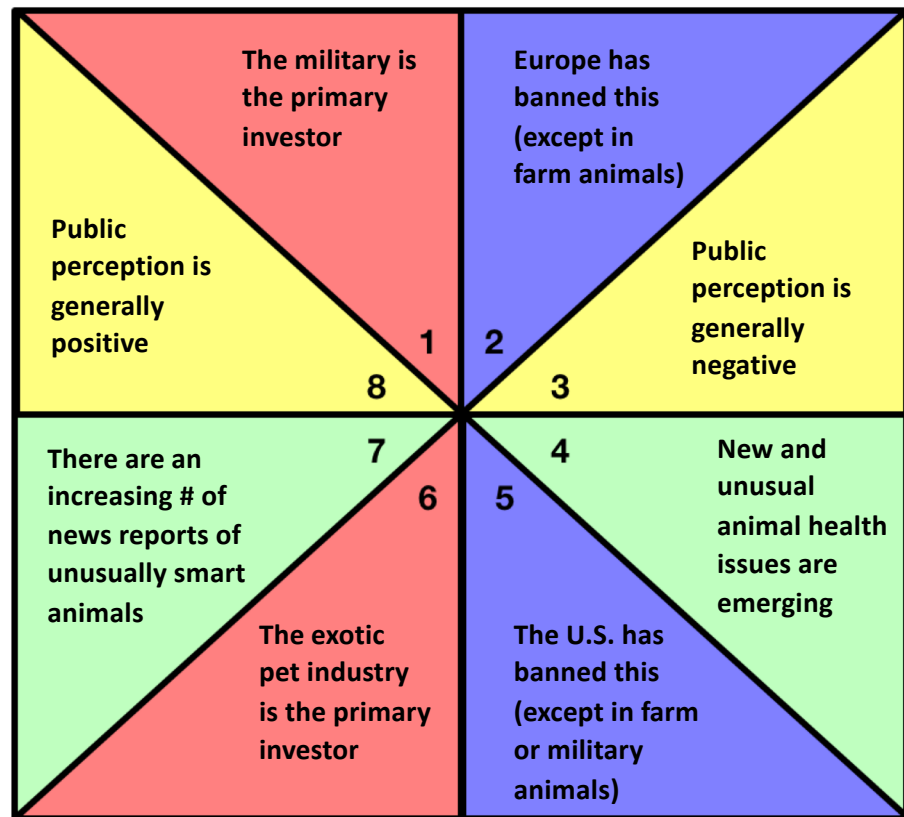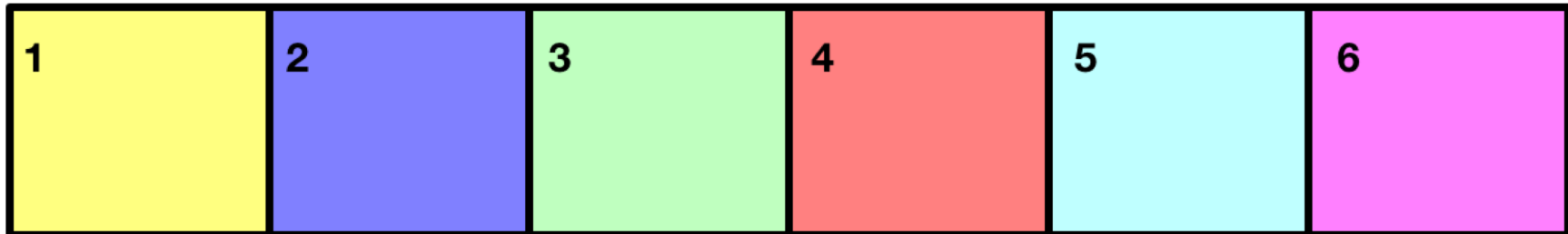
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The military is the primary investor

Europe has banned this (except in farm animals)

Public perception is generally positive

Public perception is generally negative

1 2

8 3

7 4

6 5

There are an increasing # of news reports of unusually smart animals

New and unusual animal health issues are emerging

The exotic pet industry is the primary investor

The U.S. has banned this (except in farm or military animals)

STEP 2: CHOOSE A CONDITION (5-10)

- Use a random number generator 1-6: generate 1 number

- Each number correlates to a scenario

- Given the future you have created, what would the ideal world be with relation to modified animals for this specific scenario? This is part of the same world/society you envisioned in Step 1, but you can develop an ideal that

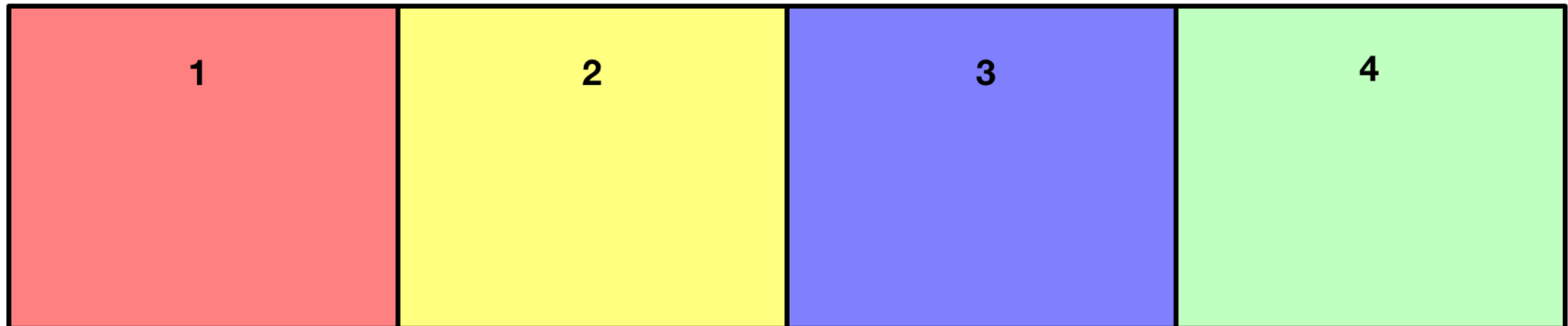| 1	2	3	4	5	6

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1 Assisting someone with illness or disability	2 Protecting animal rights	3 Entering a war zone	4 Promoting adoption of abandoned animals	5 Protecting public health	6 Raising animals for consumption (cows, etc.)

STEP 3: CHOOSE A PERSPECTIVE (5-10)

- Use a random number generator 1-4: generate 1 number

- Each number correlates to a stakeholder perspective on this future

- How does this society work from the perspective of this stakeholder? Describe the norms of society with respect to this technology, and consider the everyday conveniences, struggles, etc. This is still part of the world you began envisioning in steps 1-2.

1	2	3	4

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1 Genetic Engineer	2 Pet Store Owner	3 Police Officer	4 Entrepreneur

STEP 4: PROMPTS (5-10)

- You've purchased a top-of-the-line pooch who has become your best friend. One day, a big news story reveals that your type of dog has been associated with a number of cases in which the dog suddenly turns on their owner and kills them. What happens next?

- A new genetically engineered exotic bird seems to have gotten out into the wild and its wreaking havoc on local bird populations. What happens next?

STEP 5: DESIGN FICTION (10 MINUTES)

- Imagine this state of the art technology is common place, ordinary, nothing special. How might every day practices be different from today in a world in which these modified animals are common place? Imagine a slice of life that raises questions about this future.

- Now on the whiteboard draw a picture/ diagram based on your scenario and ideas.

STEP 6: PUBLIC GOOD (5)

- Imagine you are one of the first developers of the modified animals. And let's assume that you are a good scientist and a good citizen, creating this for the public good.

- In one sentence, what is the ideal you are pursuing? In other words, what are you hoping to achieve with this innovation in terms of the public good?

- Write it on the whiteboard.

STEP 7: ETHICAL REASONING (5-10)

1	
2	
3	
4	
5	
6	
7	
8	

- Use a random number generator 1-8: Select 2 numbers

- Each number correlates to one of the 8 key questions.

- Interrogate the future:
  - Imagine you are the developer of this technology.
  - You may also consider these questions from the perspective of the stakeholder you previously selected.

STEP 7: ETHICAL REASONING (5-10)

1	**Fairness: How can I act equitably and balance legitimate interests?**
2	**Outcomes - What achieves the best short- and long-term outcomes for me and all others?**
3	**Responsibilities - What duties and/or obligations apply?**
4	**Character - What action best reflects who I am and the person I want to become?**
5	**Liberty - How does respect for freedom, personal autonomy, or consent apply?**
6	**Empathy - What would I do if I cared deeply about those involved?**
7	**Authority - What do legitimate authorities (e.g. experts, law, my religion/god) expect of me?**
8	**Rights - What rights (e.g. innate, legal, social) apply?**

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RE-VISIT OVERARCHING QUESTIONS

- What events could account for this future?

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- Other thoughts, comments, questions raised by this scenario analysis?