CTSI Workshop

Designing for the future of teaching and learning using a design thinking approach

March 10th, 2022

Statement of Acknowledgement of Traditional Land

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

About me

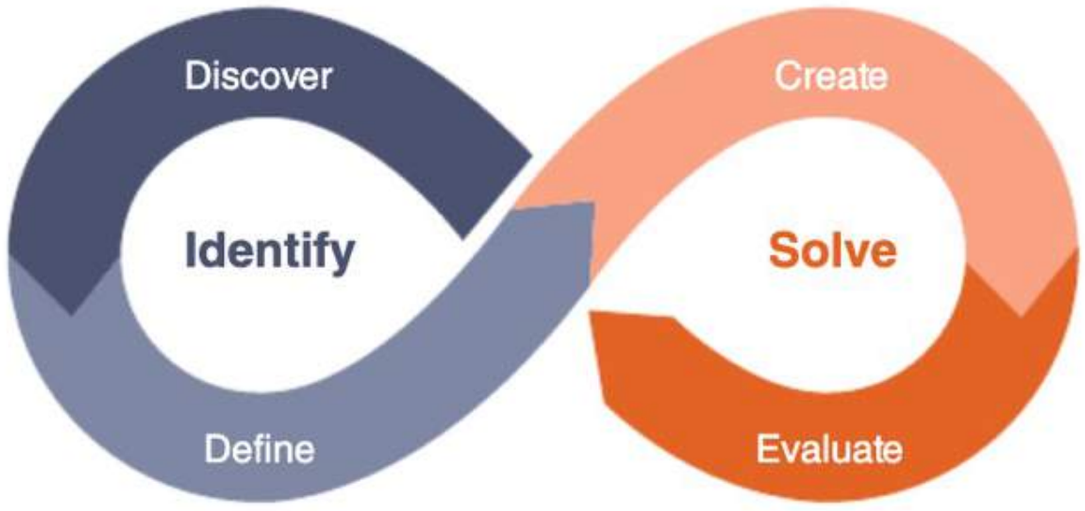
- I’m an Assistant Professor, Teaching Stream
- At the Faculty of Information – iSchool since July 2016, at UofT since September 2002
- Liaison for the UXD Concentration of the MI degree
- Undergrad in Computer Science and Psychology (York U.), Masters in Systems Design Engineering (U. Waterloo), PhD in Industrial Engineering (U. Toronto)
- Teaching HF/HCI/UI/UX for 16 years

About this workshop

- Designing for the *future of teaching and learning* using a *design thinking* approach
- Feed into the work of the 2022 U of T Teaching & Learning Symposium: *Designing for the Future*
- Theme: “where are we now and where are we going?”

TLS2022

DESIGNING FOR THE FUTURE



Design Thinking

Fundamentals

Design Thinking

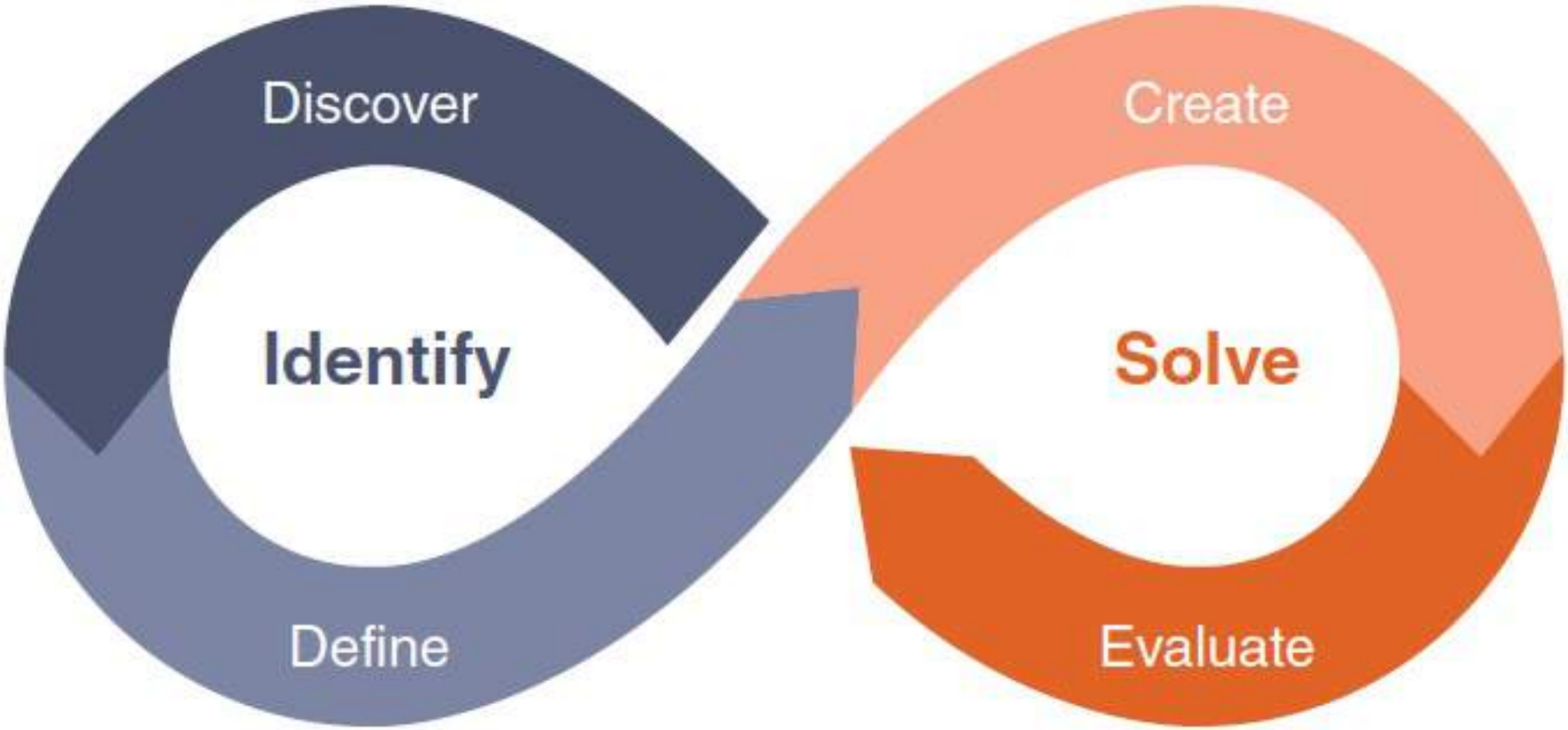
"At its core, design thinking can be construed as a creative problem-solving approach – or, more completely, as a systematic and collaborative approach for identifying and creatively solving problems" (Luchs, 2016)

Source: Luchs, M. G., Swan, K. S., & Griffin, A. (2016). Design Thinking: New Product Development Essentials from the PDMA. John Wiley & Sons.

Design Thinking

- Nonlinear Process
- The Principles and the “Mindset” of Design Thinking
  - People-centric
  - Cross-disciplinary and collaborative
  - Holistic and integrative
  - Flexibility and comfort with ambiguity
  - Multimodal communication skills
  - Growth mindset

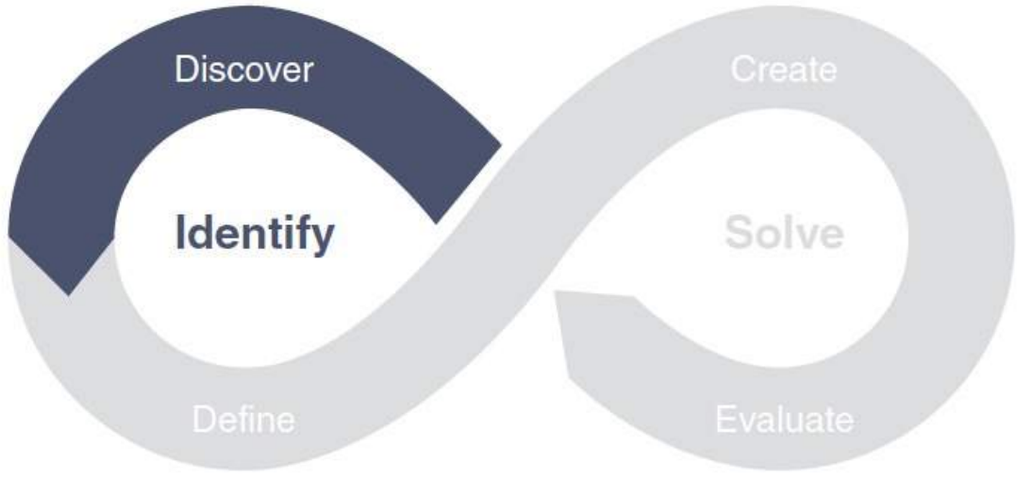
Design Thinking



A framework for design thinking
Luchs (2016)

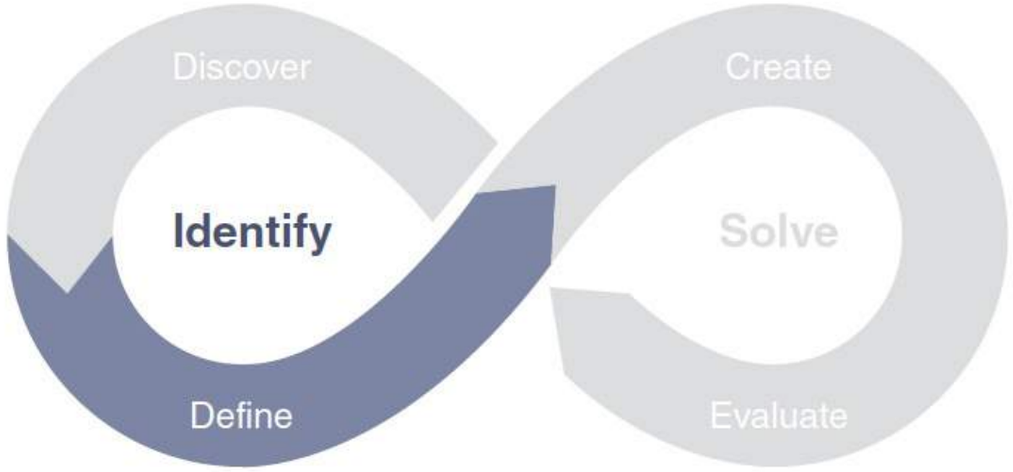
Design Thinking

- Users' context
- Gaining empathy with users
  - Context, experiences, and behaviors
- Data collection
  - Often qualitative
- Synthesizing the data that they have collected
  - Iteration between data collection and data synthesis



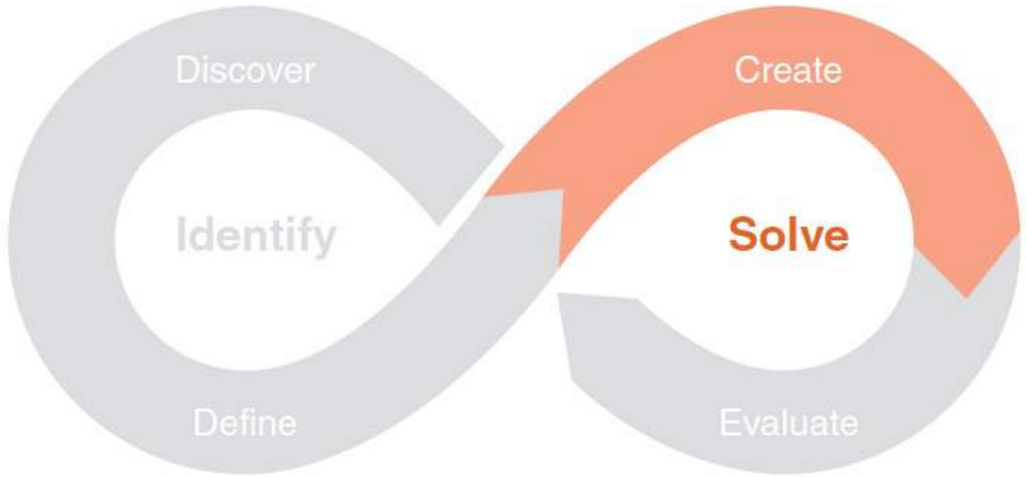
Design Thinking

- Expanded understanding of the user
- User insights and framing of specific insights as well-defined problems to solve
- Opportunities and insights are often framed as discrete “problem statements”
  - Use in the next phase as a basis for idea generation



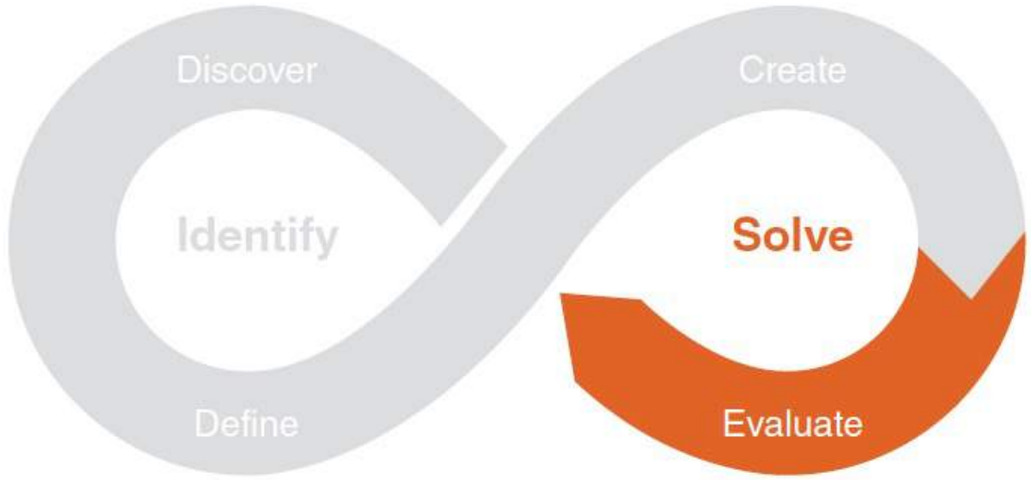
Design Thinking

- Idea generation and prototyping
- Develop a concept or set of concepts that can be shared with the target market for feedback
- Iterations to improve
- Rough prototype

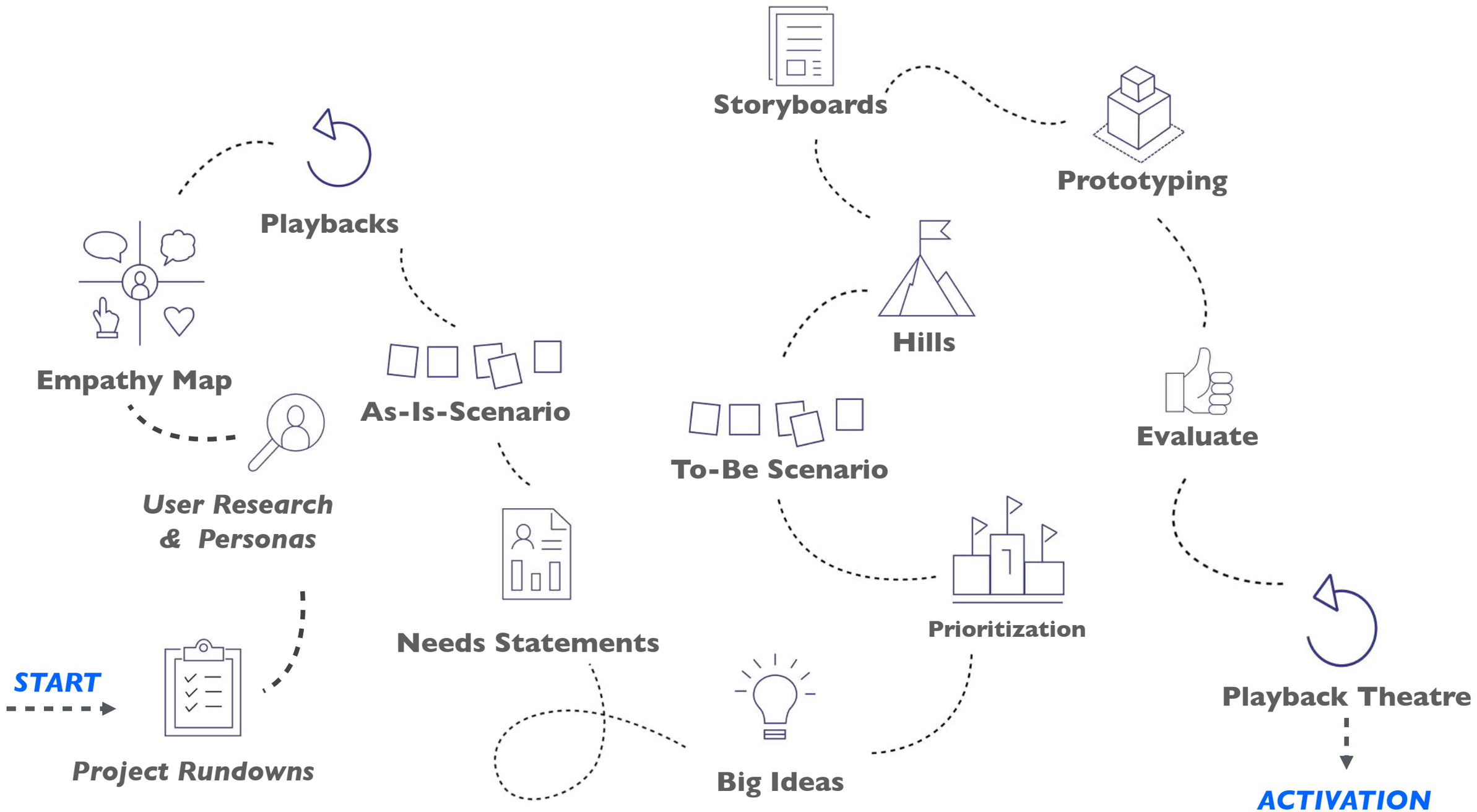


Design Thinking

- Get feedback on concept prototypes, and the ideas and assumptions embedded within them
    - Used to iterate and improve upon the concepts
    - Not the final step
    - Share prototypes with potential users
    - Synthesizing the feedback
        - Similar in spirit to the data synthesis completed during the Discover phase
        - Tangible solution concepts
    - *Iterate*



Typical Design Thinking Journey



Discover

Data Generation

Data Generation

- Research often kicks off the design thinking process
- Data collected with representative users
- Today, you are going to be the “users”
- We will use a studio approach to collect data
  - Collaborative, cooperative groups
  - Hands-on, active learning
  - Challenging activities (wicked problems)
  - Guidance available throughout


00:11:00
Pause
Clear
00:11:00
Pause
Clear

Data Generation

- Principles
  - *Equal voice at the table*: work solo first, then share your ideas. Champion each other
  - *Quantity over quality*: diverge now so you can converge later. Quality will emerge from quantity

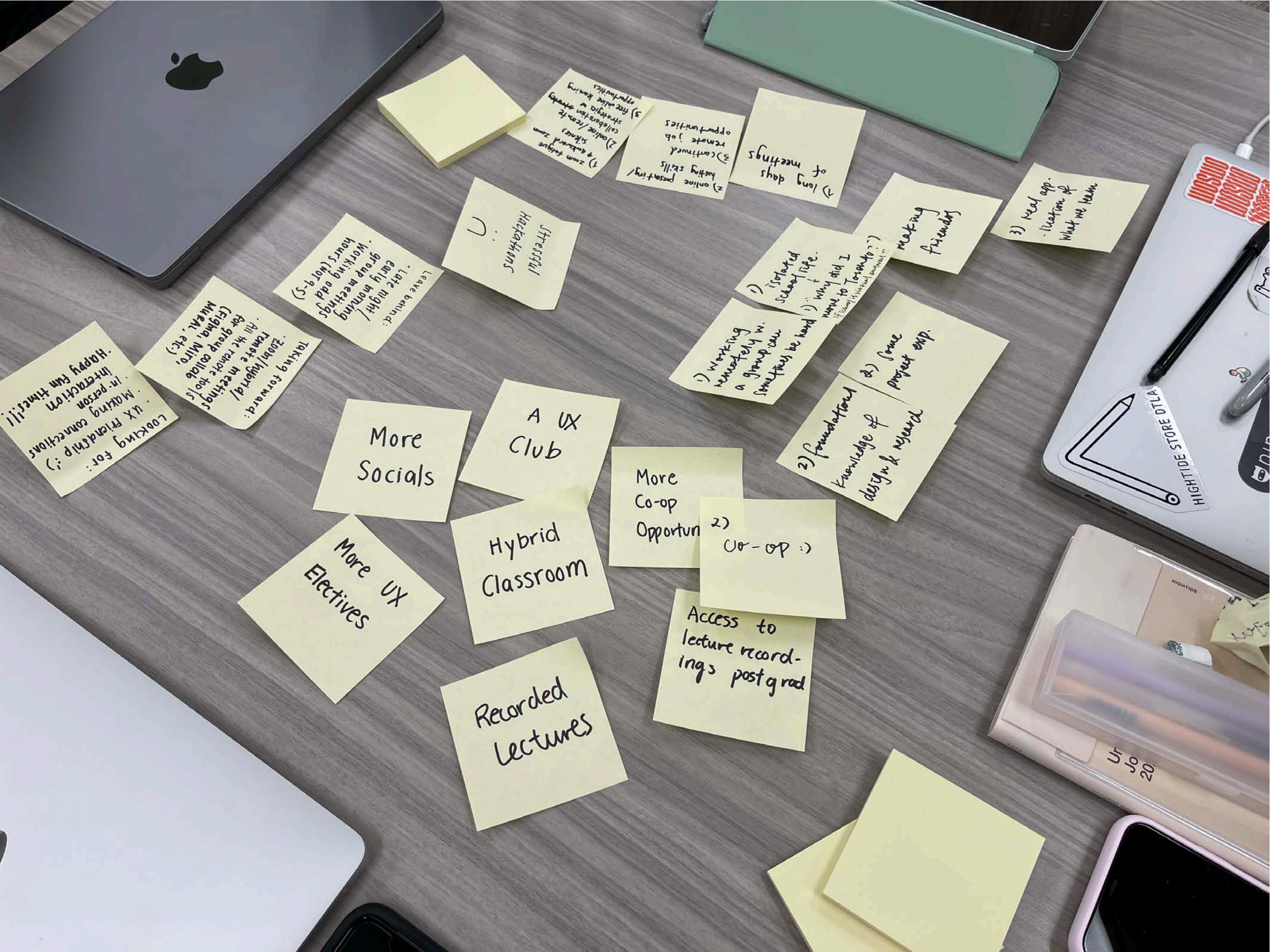
MIRO

- Digital “whiteboard” platform we will be using during the workshop activities to brainstorm and collaborate with each other

Data Generation

- Exercise 1: Data collection and organization
  - Three questions
  - 7 minutes to generate individual data
  - 15 minutes to converge your data in a breakout room using MIRO – identify salient themes
  - 5 minutes to playback in the main room


00 04:27
tv2.ischool.utoronto.ca
in-Class Activity
1. What are you leaving behind?
1. What
2. What
3. What
acer


Looking for:
· UX Friendship :)
· Making connections
· in-person interaction
· Happy fun times!!!
Taking forward:
· Zoom/hybrid/remote meetings
· All the remote tools for group collab (Figma, Miro, MURAL, etc.)
Leave behind:
· Late night/early morning group meetings
· Working odd hours (not 9-5)
Stressful Hackathons :(
1) zoom fatigue & awkward zoom silences
2) online/remote collaboration strategies
2) online presenting/hosting skills
3) continued remote job opportunities
1) long days of meetings
making friends
3) real application of what we learn
1) isolated school life.
1) why did I move to Toronto?
1) Working remotely w. a group can sometimes be hard
Some project exp.
2) foundational knowledge of design & research
More Socials
A UX Club
More Co-op Opportun
2) Co-op :)
More UX Electives
Hybrid Classroom
Access to lecture recordings postgrad
Recorded Lectures
HIGHTIDE STORE DTLA
HIGHTIDE

Data Generation – Questions

1. What are you leaving behind?

2. What are you taking forward?

3. What are you looking for?

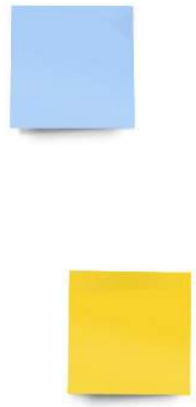
Data Generation – Individual

7 minutes individual work

Data Generation – Converge

- Load MIRO board using the URL in the chat
- Go to the section corresponding to your breakout room number
- Use the first template to insert your data using digital sticky notes
- Converge your data as a group
  - Merge / remove duplicates
  - Identify salient themes (by grouping stickies)
  - Name your themes

Data Generation – Converge

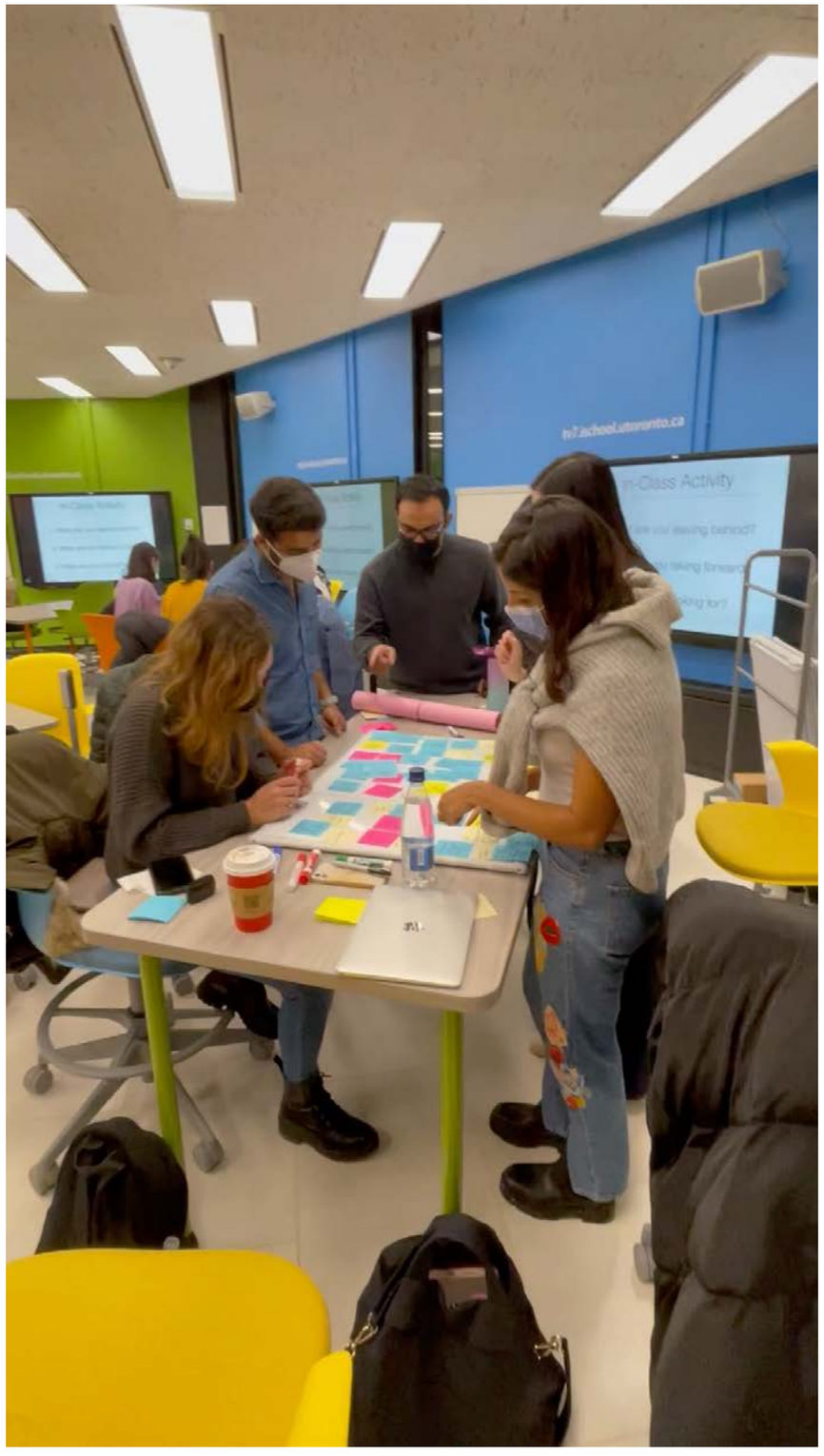
Leaving Behind	Taking Forward	Looking For
		
		
		


WELCOME BACK!


tv7.ischool.utoronto.ca
In-Class Activity
What are you leaving behind?
you taking forward
looking for?

Data Generation – Converge

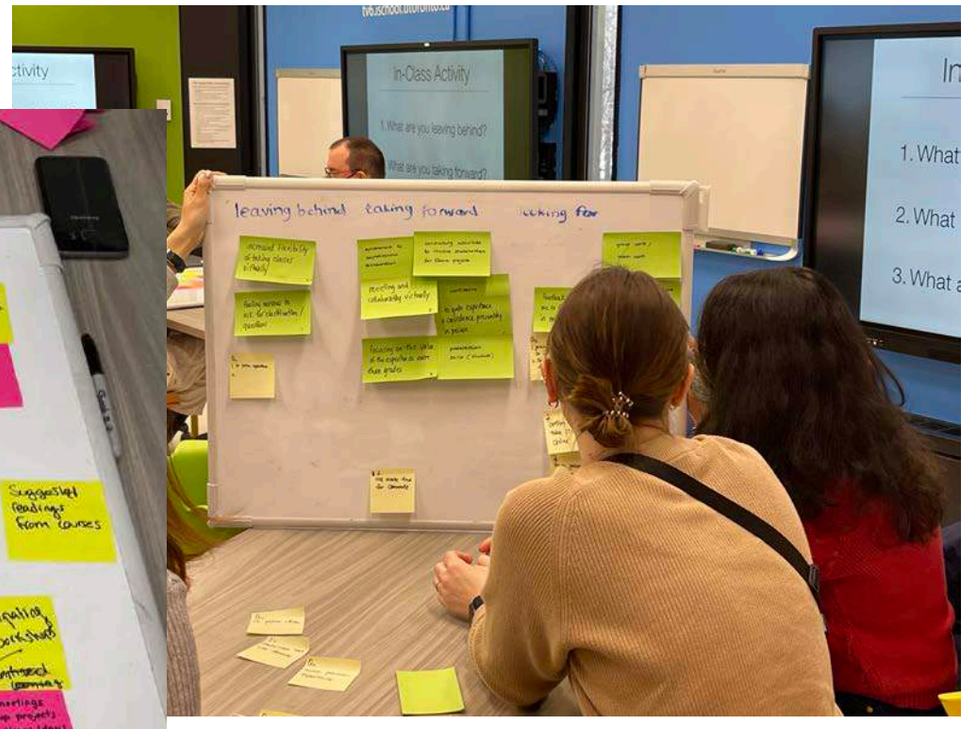
Data Generation – Converge

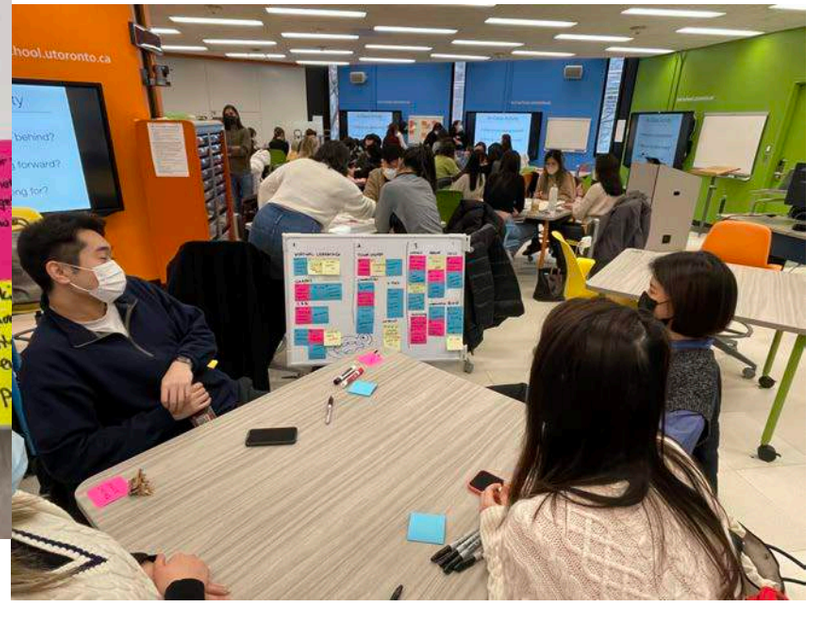


Data Generation – Converge

15 minutes breakout room session

Data Generation – Playback





Define

Identify Opportunities

Opportunity Canvas

- Simple one-pager used to facilitate discussions
- Helps discuss improvements to existing products and services with new opportunities and possibilities
- Further converge data from Define phase

Opportunity Canvas

- Exercise 2: Complete an opportunity canvas
  - Go back to the MIRO board
  - Go to the section corresponding to your breakout room number
  - Use the second template
  - Identify opportunities to design for the future of teaching and learning
  - Informed from data previously collected
  - Use the opportunity canvas provided

Opportunity Canvas

Opportunities: What opportunities exist for the future of teaching and learning?

Users: Who will be impacted by addressing these opportunities (e.g., students, professors, staff, administrators)?

Resources and Support: What are the resources and support we will need?

Technologies: Will any technologies be involved?

Risks and Constraints: What are the risks and constraints we face?

Outcomes: What are the outcomes we expect to achieve?

Opportunity Canvas

15 minutes breakout room session

Opportunity Canvas - Playback

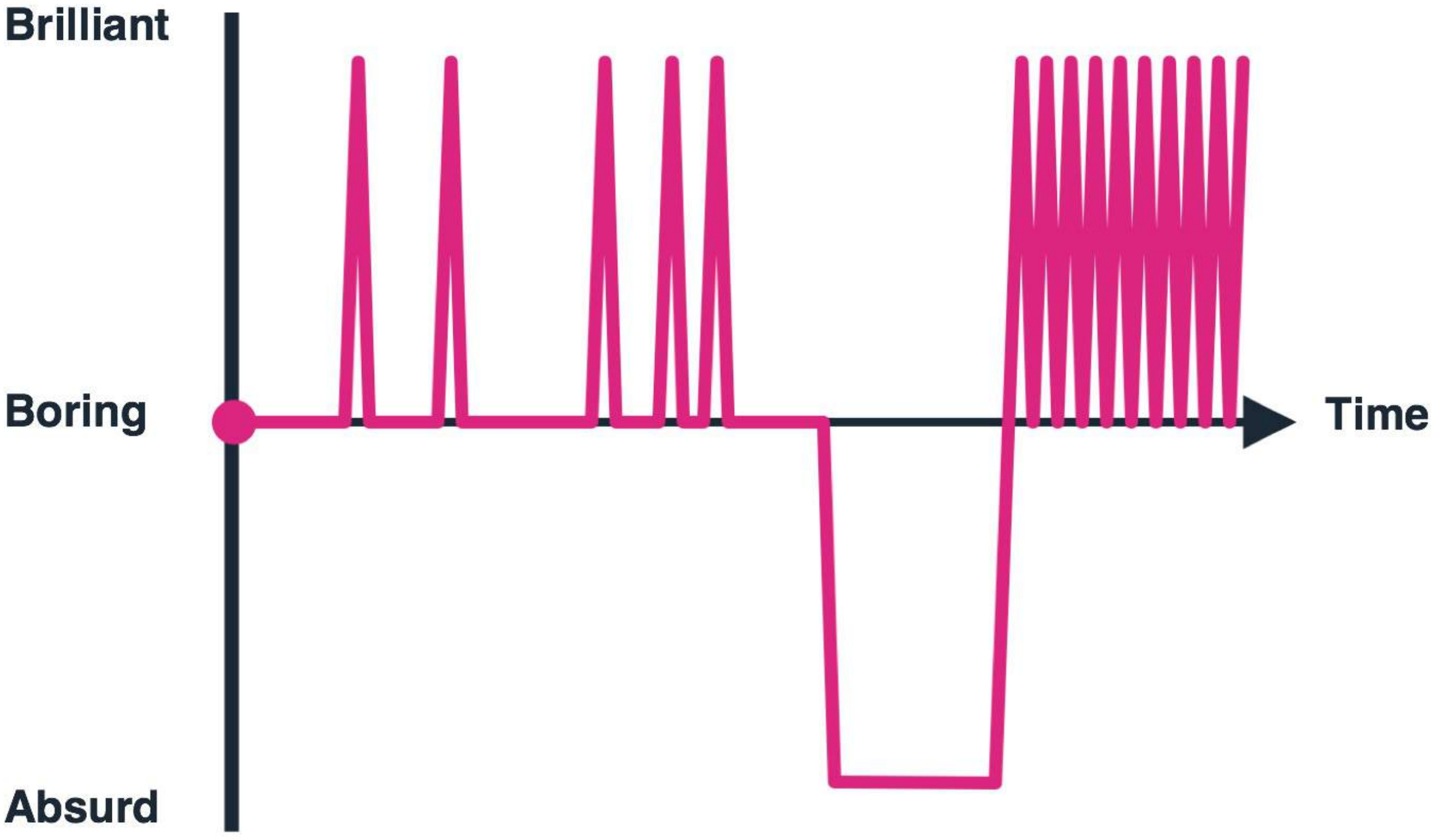
Ideate

Generate Big Ideas

Idea Curve

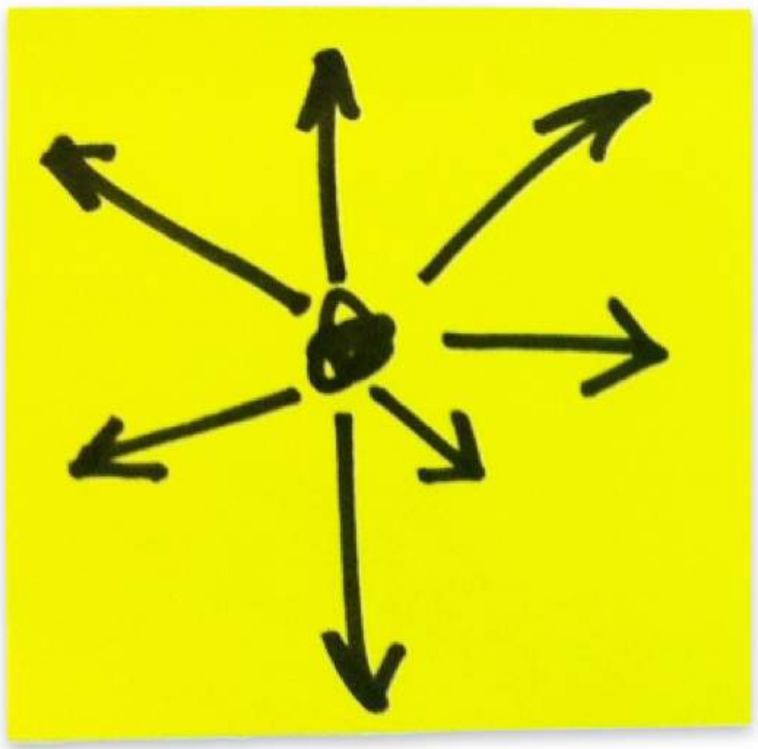
Source: IBM Enterprise Design Thinking

Idea Curve



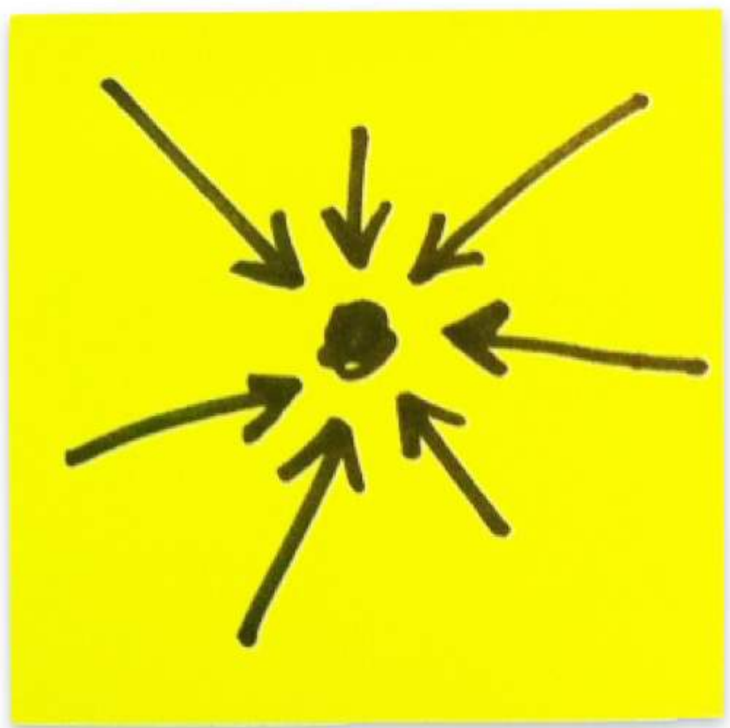
Source: IBM Enterprise Design Thinking

Ideate



Ideate

Cluster and Remix



Converge and Prioritize

Source: IBM Enterprise Design Thinking

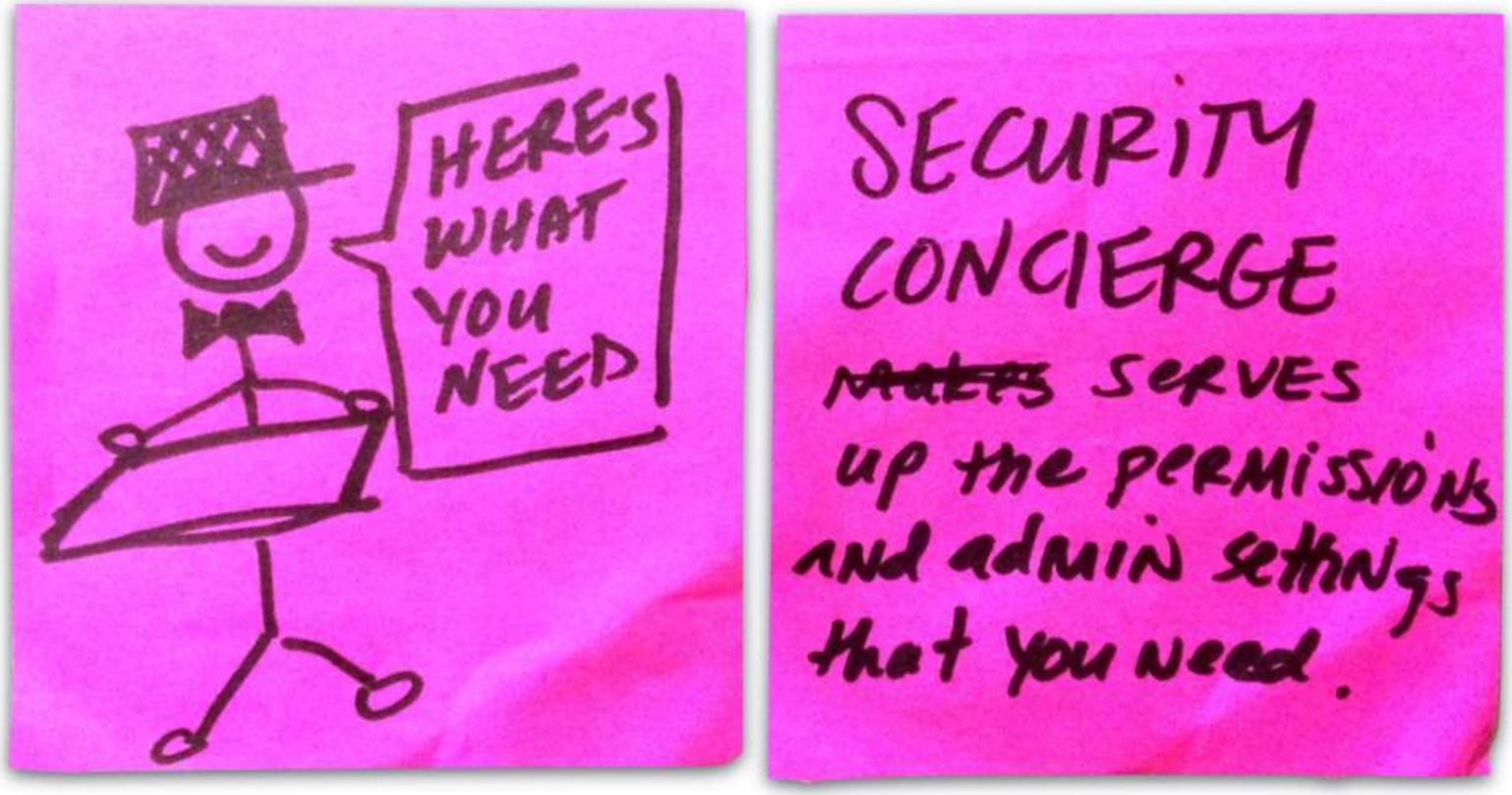
Ideation

- Problem solving with no limitations
  - Defer judgment
  - Go for quantity
  - Encourage wild ideas
  - Build on the ideas of others
  - Stay focused on the topic
  - Have one conversation at a time
  - Be visual
  - Don’t go into much detail
  - Consider “It’s kinda like…”

Source: IBM Enterprise Design Thinking

Big Ideas

- Big ideas are broad and conceptual
- Informed from opportunities
- Not too much detail
- Be visual
- It's kinda like…



Sketch + Headline + Caption

Create at least 3 ideas each!

Source: IBM Enterprise Design Thinking

Big Ideas

- Exercise 3: Complete an big ideas canvas
  - 5 minutes to generate individual ideas
  - Leverage your opportunity canvas as a stepping-stone
  - 15 minutes to converge your ideas in a breakout room using MIRO – complete a big ideas canvas

Big Ideas

5 minutes individual work

Big Ideas Canvas

- Complete a big ideas canvas
  - Go back to the MIRO board
  - Go to the section corresponding to your breakout room number
  - Use the third template
- Discuss and converge your ideas as a group
  - Use the big ideas canvas provided

Big Ideas Canvas

In order to ...
(valuable outcome)

Our Big Idea is ...
(state your Big Idea)

That will ...
(key benefits)

This will transform teaching
and learning by ...

And be successful if ...

While keeping in mind ...
(key assumptions)

Big Ideas Canvas

15 minutes breakout room session

Big Ideas - Playback

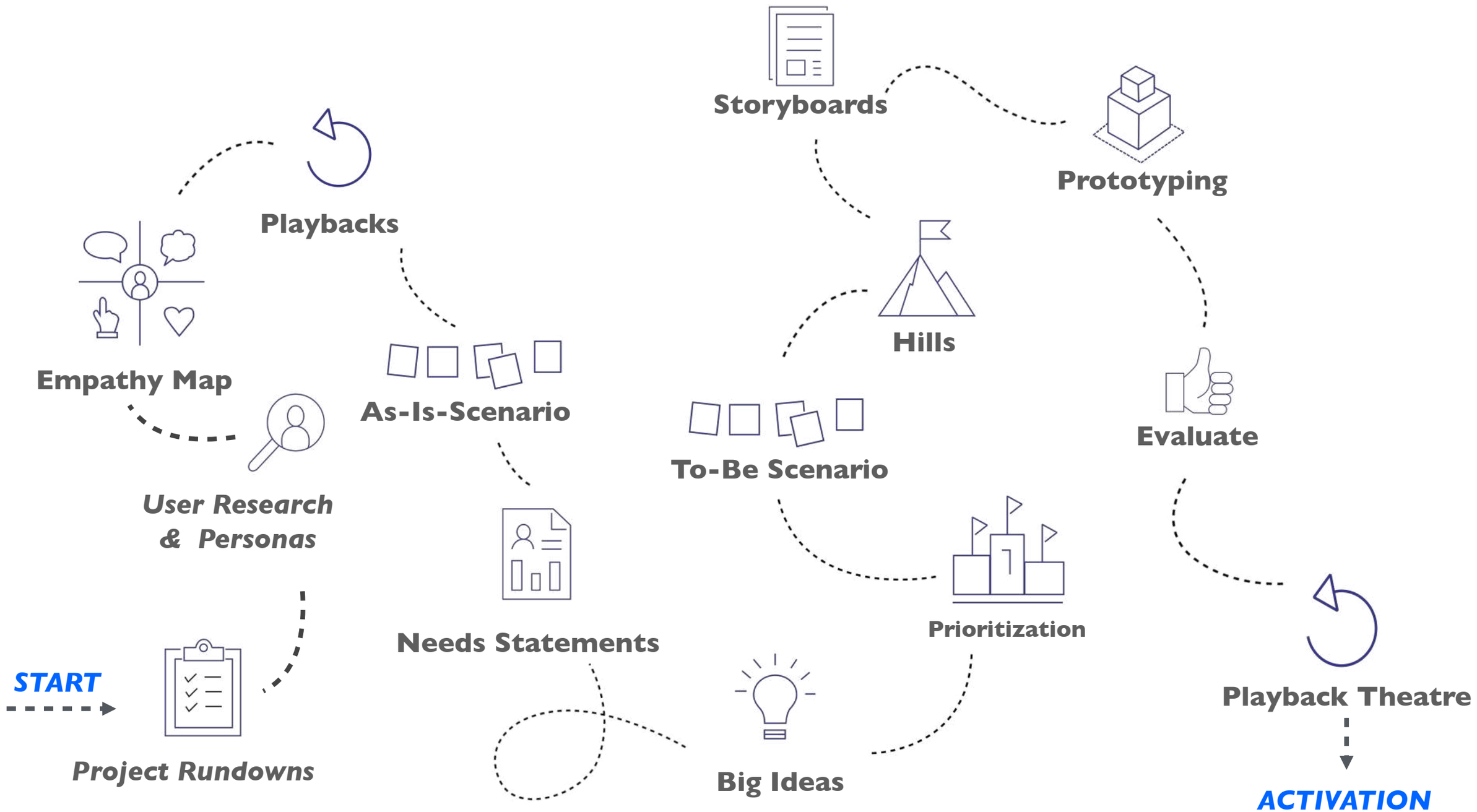
Conclusion

Design Thinking with your students

Conclusion

- Use design thinking in your course design
- Run small exercises with your students
  - Stop-Start-Continue
  - Course feedback
  - Program feedback
- Execute a complete design thinking journey
  - Couse Evaluation data
  - Data collected from students in townhalls

Typical Design Thinking Journey



Conclusion

- This workshop fed into the design and work of the 2022 U of T Teaching & Learning Symposium: *Designing for the Future*

- Any feedback is appreciated as we are still fine-tuning the symposium sessions

TLS2022

DESIGNING FOR THE FUTURE