UBC DESIGN CHALLENGE

OCTOBER 2, 3 & 4, 2015
VANCOUVER CAMPUS

WORKBOOK

Angèle Beausoleil
Marcelo Bravo
Steve Williams

WHAT'S INSIDE

MORE TECHNIQUES AVAILABLE @ http://dstudio.ubc.ca/toolkit/temporary-techniques/

UBC DESIGN CHALLENGE SCHEDULE AT A GLANCE

DAY 1

TIME	FRIDAY, OCTOBER 2, 2015
4:00 pm	**Participant Registration**
5:00 pm	**Welcome to the UBC Design Challenge** *Moura Quayle* *Kin Lo*
5:15 pm	**Event Schedule and Program Overview:**
5:30 pm	**Challenge Brief:** Water Crisis Expert *Dr. Leila Harris*
6:00 pm	**Intro to Team Formation**
6:15 pm	**Activity**: Individual and Team SWOT
7:15 pm	**Reflection**
7:30 pm	**Intro to Roles of Innovation**
7:45 pm	**Activity**: Role Play Workbook Review
9:00 pm	**Wrap-up:** **Reflection and Questions**

DAY 2

TIME	SATURDAY, OCTOBER 3, 2015
9:00 am	**Day 2 Kick-off** **Team Check-in**
9:15 am	**Intro to Strategic Design**
9:30 am	**Intro to Scenarios** **Technique:** Scenarios **Technique:** Fishbone
11:45 am	**Team Check-in**
12:00 pm	**Working Lunch**
1:00 pm	**Reflection** **Group Assembly** **Present Scenarios**
2:30 pm	**Intro to Problem Exploration and Problem Solving** **Technique:** Experience Journey
3:30 am	**Team Check-in**
4:30 pm	**Prototyping:** Journey Draft (v1.0)
6:00 pm	**Wrap-up**

DAY 3

TIME	SUNDAY OCTOBER 4, 2015
9:00 am	**Day 3 Kick-Off:** *Bruce R. Birmingham Room* **Team Check-in**
9:15 am	**Intro to Pitching** **Design Solutions** **Technique:** Innovation Intent **Technique:** S.T.A.R. Moments
9:30 am	**Practice:** Packaging design solutions.
11:00 am	**Critique and Peer Evaluation** **Peer Pitch in Clusters**:
12:00 pm	**Working Lunch** **and Final Poster Prep**
1:00 pm	**Teams migrate to:** *UBC Alumni Centre*
1:45 pm	**Poster set-up** **Pitching set-up**
2:00 pm	**Finalists Pitch Design Solutions to Judges**
4:00 pm	**Awards ceremony**
4:30 pm	**Closing Remarks and Reception w/Posters** *Dr. Susan Porter*
5:30 pm	**End of event**

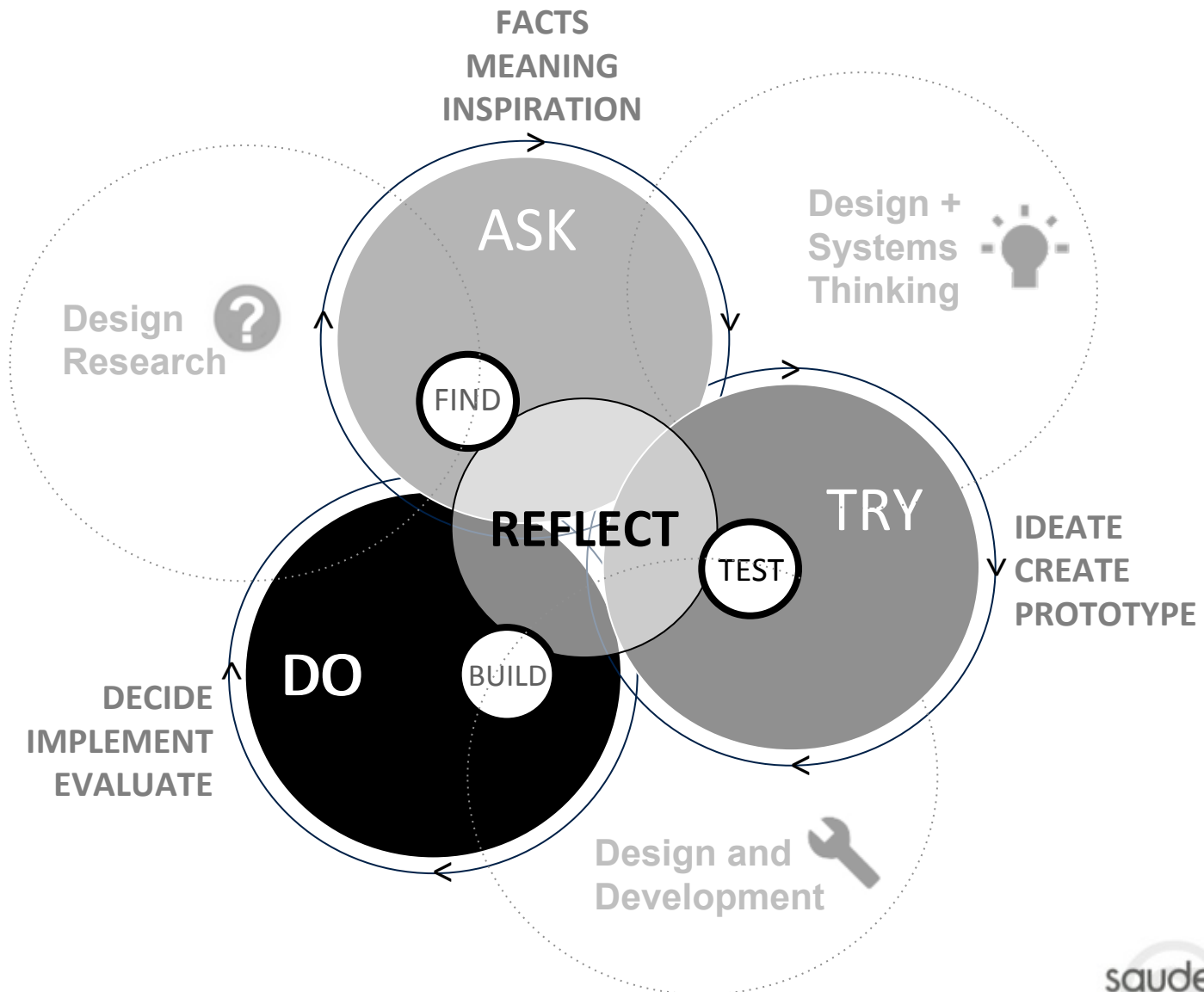# UBC DESIGN CHALLENGE PROGRAM OVERVIEW

ASK

TRY

DO

Day	Techniques	Outputs	Learning Objectives		Materials
Day 1	• **SWOT** • **Innovation Roles**	• Team SWOT • Resourcing plan	**ASK: Question everything** • Personal and team self-assessment • Understanding team member roles • Identifying knowledge/resource gaps • Proposing Challenge capabilities plan • Consider mentorship needs		• Workbook • Whiteboard • DryE_Markers • Post-its • Sharpies
Day 2	• **Scenarios** • **Fishbone** • **Experience Journey**	• Scenarios • Prototype (alpha) • Poster (alpha)	**TRY: New mental models** • Assumption generation. • Creative, critical and systems thinking. • Idea generation. • Problem exploration and definition. • Design Brief development.		• Workbook • Whiteboard • DryE_Markers • Post-its • Sharpies • Large Paper • Markers
Day 3	• **Experience Journey** • **Innovation Intent** • **S.T.A.R Moments**	• Poster (beta) • Poster (final) (Paper/Digital) • Finalists: Pitch Presentation	**DO: Design problem-based solutions** • Develop impactful stories. • Craft Innovation Intent. • Practice effective storytelling in written, oral and visual modes. • Practice of Strategic Design method for sustainable innovation.		• Workbook • Whiteboard • DryE_Markers • Post-its • Sharpies • Large Paper • Markers • AV - slides
ALL	Reflection	• Observations • Insights	Introspection. Creative and critical thinking.		• Whiteboard • DryE_Markers

STRATEGIC DESIGN METHOD

FACTS
MEANING
INSPIRATION

Design +
Systems
Thinking

ASK

Design
Research

FIND

REFLECT

TRY

TEST

IDEATE
CREATE
PROTOTYPE

DO

BUILD

DECIDE
IMPLEMENT
EVALUATE

Design and
Development

STRATEGIC DESIGN PROCESS CREATED BY MOURA QUAYLE AND ANGELE BEAUSOLEIL©2015

sauder
d·studio

http://dstudio.ubc.ca/

UBC DESIGN CHALLENGE LEAD FACILITATORS

Angèle Beausoleil, PhD Candidate
University of British Columbia

Angèle is a PhD candidate in the Interdisciplinary Studies Graduate Program (ISGP) at UBC studying innovation and design processes, an adjunct professor at the d.studio in the Sauder School of Business, and a consultant on strategic design, business modelling and product/service innovation. Prior to graduate studies, Angèle pioneered marketing, branding and digital strategies for Fortune 500 brands as VP Digital Strategy for Cossette West and as VP Innovation and Strategy for Dare North America. Prior to Cossette, she worked with interactive media, animation, television and technology companies. She is a Telus Fund board member, a mentor for Spring Activator and a director for Sanatron Digital Health Accelerator.

Marcelo Bravo, PhD Student
University of British Columbia

Marcelo is an international PhD student in the Interdisciplinary Studies Graduate Program (ISGP) at UBC, integrating research in Political Science and Sociology with a focus on Developmental studies. His research focuses on social capital, civic cultures, social innovation and knowledge translation. His previous work experience includes program design for the Social Development Department at Tecnologico de Monterrey – where he developed service-learning programs and counselled student-lead initiatives for civic awareness. Currently, Marcelo serves as a research assistant for the Student Engagement Project, an initiative lead by VP Students and UBC's Centre for Teaching, Learning and Technology.
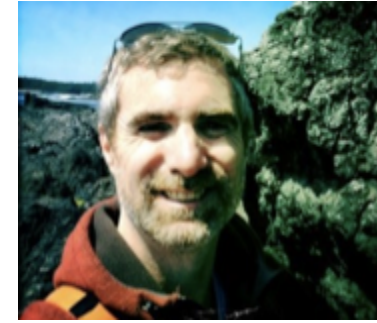
Steve Williams, PhD Student
University of British Columbia

Steve is a PhD student in Resource Management and Environmental Studies at UBC, specializing in Corporate Social Responsibility design, evaluation, impact measurement, and data visualization for sustainability. He is a technology strategist designing and facilitating participant-driven public engagement events. Steve has over 20 years experience in the software industry, combined with years n the social sector including expertise in transparency, accountability, and strategic communication. Steve holds a BA in Political Science from the University of Western Ontario, an MBA in Management of Technology from SFU, a Certificate in Community Economic Development from SFU, a Graduate Diploma in Social Innovation at the University of Waterloo.

MENTORS

Brian Crowe
Director, Water, Sewers
& District Energy
City of Vancouver
Expertise: Infrastructure
planning, integrated
resource recovery,
municipal policy, drinking
water, and liquid waste.

Ryan Hum
Data Scientist &
Strategic Designer
Privy Council Office, Ottawa
Expertise: Strategic design,
policy and data analytics.

Doug Kinsey
Executive Director
Industry Canada (Pacific)
Expertise: Public policy,
economic development and
strategic communications.

Kin Lo
Senior Associate Dean, Students
UBC Sauder School of Business
Expertise: Financial reporting
research, International Financial
Reporting Standards, and
Strategic Management.

Emma Luker
Natural Resource Management
Researcher University of British
Columbia
Expertise: Water governance
and climate change resilience.

Kari Marken
Educational Designer
JumpStart Learning Specialist
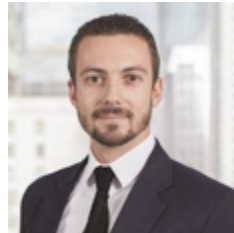*University of British Columbia*
Expertise: Education design and
team building

MENTORS

Scott McKenzie
PhD Student - Resource Management and Environmental Studies
University of British Columbia
**Expertise:** Water law, water governance and water development

Scott Murray
Strategy and Innovation Consultant
Ernst & Young
Expertise: Design Process/ Innovation, Strategy, Business Performance, Mining.

Wendy Mendes
Manager, Community-Based Experiential Learning
University of British Columbia
Expertise: Social innovation, community, regional and urban planning.

Elizabeth Phillips
Founder, Visual Thinkers Communication Design
Expertise: Communications, visual thinking, pitching and packaging.
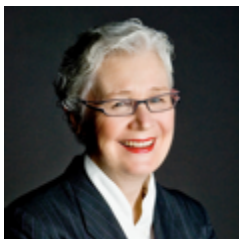
Moura Quayle
Director at Liu Institute for Global Issues and Professor, UBC Sauder School of Business
Expertise: Strategic design, landscape architecture and policy design.

Lucy Rodina
PhD Student, International WaTERS Graduate Fellow
University of British Columbia
Expertise: Water governance, social-ecological systems, urban water systems, water access, inequality, vulnerable populations, resilience, South Africa.

Dharini Thiruchittampalam
Adjunct Professor
Sauder School of Business
University of British Columbia
Expertise: Strategic design, architecture and Aboriginal Affairs.

JUDGES

Mathew Evenden
Associate Dean Research,
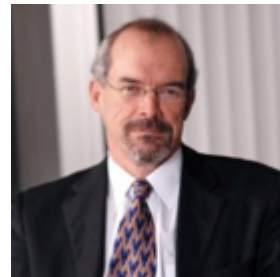*University of British Columbia*

Fiona Macfarlane
Manager Partner,
Ernst & Young
Vancouver, BC

Marc Parlange
Dean, Applied Science,
University of British Columbia

Susan Porter
Dean and Vice-Provost
Graduate and Post-Graduate
Studies,
University of British Columbia

Gerry Salembier
Assistant Deputy Minister,
Western Economic
Diversification

.

PERSONAL SWOT

TEMPLATE

STEP 1: Answer questions starting with Strengths.
STEP 2: Next, answer questions for Weaknesses.
STEP 3: Look deep within yourself.

STEP 4: Answer questions about Opportunities.
STEP 5: Next, answer questions for Threats.
STEP 6: Look outside yourself. Reflect.

DESCRIPTION
SWOT Analysis is a useful technique for understanding Strengths and Weaknesses, and for identifying both the Opportunities available and the existing Threats. It is a useful tool for understanding and decision-making for all sorts of situations in business and organizations.

USES
- Helpful in business and strategic planning.
- To prepare a competitor evaluation.
- To understand resource issues.
- To identify gaps.
- As a marketing tool.
- Helpful in new product development.

STRENGTHS
- What do I do well?
- What are unique resources I can draw on?
- What do others see as my strengths?

OPPORTUNITIES
- What opportunities are open to me?
- What trends can I take advantage of?
- How can my strengths turn into opportunities?

ME

THREATS
- What threats could harm me?
- What is my competition doing?
- What do my weaknesses expose me to?

WEAKNESSES
- What could I improve?
- What skills/talents am I missing?
- What are others likely to see as weaknesses?

Adapted from: ADD Source

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/
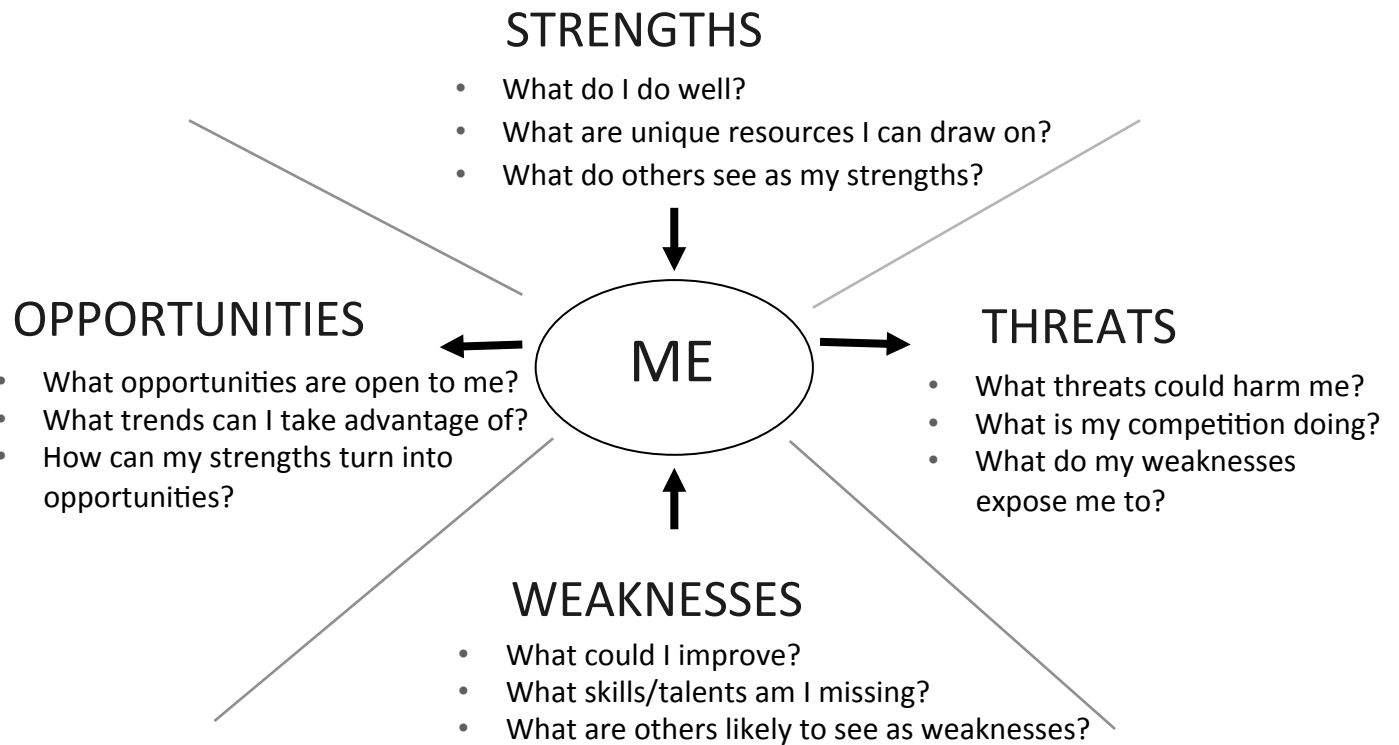
ASK   **TRY**   **DO**

TEAM SWOT

TEMPLATE

STEP 1: As a team, share your Strengths. List.
STEP 2: Next, share your Weaknesses. List
STEP 3: Reflect. Group attributes into clusters.

STEP 4: As a team, connect Strengths to Opportunities.
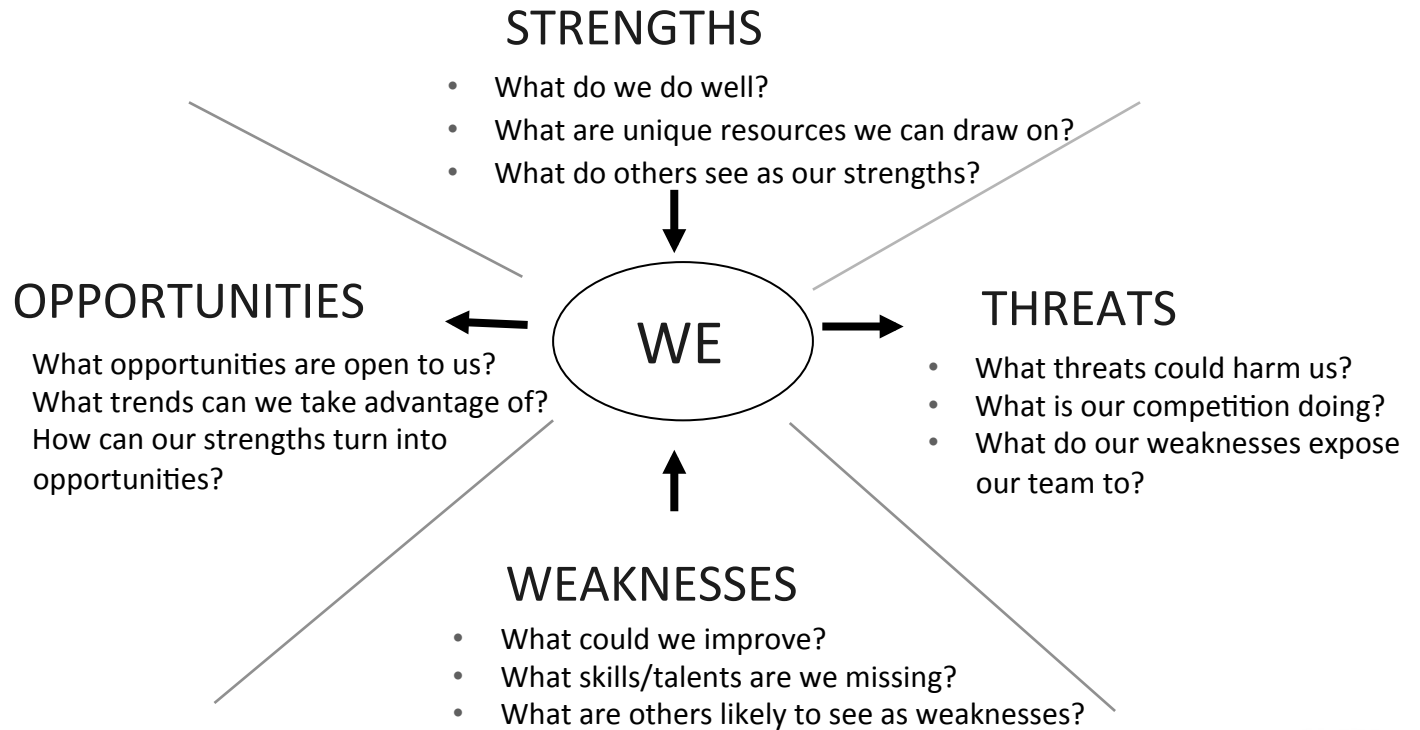**STEP 5**: Next, connect Weaknesses to Threats.
STEP 6: Discuss. Reflect. Group and summarize.

DESCRIPTION
SWOT Analysis is a useful technique for understanding Strengths and Weaknesses, and for identifying both the Opportunities available and the existing Threats. It is a useful tool for understanding and decision-making for all sorts of situations in business and organizations.

USES
- Helpful in business and strategic planning.
- To prepare a competitor evaluation.
- To understand resource issues.
- To identify gaps.
- As a marketing tool.
- Helpful in new product development.

STRENGTHS
- What do we do well?
- What are unique resources we can draw on?
- What do others see as our strengths?

OPPORTUNITIES
- What opportunities are open to us?
- What trends can we take advantage of?
- How can our strengths turn into opportunities?

WE

THREATS
- What threats could harm us?
- What is our competition doing?
- What do our weaknesses expose our team to?

WEAKNESSES
- What could we improve?
- What skills/talents are we missing?
- What are others likely to see as weaknesses?

Adapted from: ADD Source

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   **TRY**   **DO**

ROLES FOR INNOVATION

STEP 1: Reflect on Team SWOT. Ask team members the key questions.
STEP 2: Discuss roles, persona types and identify team capabilities.
STEP 3: Identity gaps and extended resource needs.

TEMPLATE

DESCRIPTION
Roles For Innovation is a technique that aims to match capabilities with key roles for innovation. There are three key roles to make innovation happen: learners, organizers and builders. This tool helps teams identify member's roles for new projects, the hats they can put on and the personas they may need to adopt.

USES
- Helpful in identifying roles for team members.
- Helpful in capabilities assessment.
- To understand resource issues.
- To identify gaps.
- Helpful in new product development.

LEARNERS

Do you question your own worldview and your organization's?

Do you remain open to new insights every day. Are you passionate about seeking knowledge and sharing it?

Persona Types:

- Anthropologist
- Experimenter
- Cross-Pollinator

+

ORGANIZERS

Do you embrace the process of budget and resource allocation?
Do you move beyond "politics" or "red tape" and push the best ideas forward?

Do you recognize this process as a complex game of chess and play to win?

Persona Types:

- Hurdler
- Collaborator
- Director

+

BUILDERS

Do you apply insights from the learning personas and channel the empowerment from the organizing personas to make innovation happen?

Do you make yourself highly visible and are always at the heart of the action?

Persona Types:

- Experience Architect
- Set Designer
- Storyteller

Source: http://www.tenfacesofinnovation.com/tenfaces/index.htm

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   TRY   DO

SCENARIOS

TEMPLATE

STEP 1: Select a problem space.
STEP 2: Discuss possible storylines.
STEP 3: Identify a few characters

STEP 4: Propose a few "roadblocks".
STEP 5: Describe the transformation
STEP 6: Repeat. Generate at least 3-5 scenarios. Test.

DESCRIPTION
Scenarios is a technique for visual dialogue - allowing us to tell stories about how the world might work in the future. It allows to plan ahead in order to be able to choose actions accordingly. When creating a scenario, two elements are essential: the user or customer setting and future environments.

USES
• To make the abstract more tangible and real.
• Helps to understand, analyze, and improve upon the abstract.
• Helps with planning for the future.
• As a tool for product, service, policy and business modeling.

RELATABLE AND LIKEABLE HERO

Snow White
Situation: Snow White takes refuge in the forest with seven dwarfs to hide from her stepmother, the wicked queen.

E.T.
Situation: A group of alien botanists visit earth. After a hasty takeoff, one of them is left behind. And he wants to get back home.

ENCOUNTERS ROADBLOCKS

Complication: Snow White is more beautiful than her stepmother, the queen, so disguised as a peddler, the queen poisons her with an apple.

Complication: Ten-year-old Elliott forms an emotional bond with E.T., a task force tries to hunt down E.T., and he and Elliott get very sick.

EMERGES TRANSFORMED

Resolution: The prince, who has fallen in love with Snow White, awakens her from the spell with "love's first kiss."

Resolution: E.T. and Elliott build a communication device and escape on a bicycle. E.T. is rescued and tells Elliott he'll be in his heart.

Working Title:

Situation: | **Complication:** | **Resolution:**

Adapted from http://resonate.duarte.com/#!page34

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   **TRY**   **DO**

SCENARIOS [ALT]

TEMPLATE

STEP 1: Select a problem space.
STEP 2: Discuss possible storylines.
STEP 3: Identify a few characters

STEP 4: Propose a few "roadblocks".
STEP 5: Describe the transformation
STEP 6: Repeat. Generate at least 3-5 scenarios. Test.

DESCRIPTION
Scenarios is a technique for visual dialogue - allowing us to tell stories about how the world might work in the future. It allows to plan ahead in order to be able to choose actions accordingly. When creating a scenario, two elements are essential: the user or customer setting and future environments.

USES
- To make the abstract more tangible and real.
- Helps to understand, analyze, and improve upon the abstract.
- Helps with planning for the future.
- As a tool for product, service, policy and business modeling.

- Consider Hero's Journey framework;

- Experience a journey through lens of your target audience;

- Silence your critical voice and envision the future;

- Generate many short stories;

- Share your stories with your group; and

- Build upon your team's stories and generate 3-5 scenarios.

Working Title:

Beginning   **Middle:**   **End:**

Adapted from http://resonate.duarte.com/#!page34

sauder
d.studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   **TRY**   **DO**

FISHBONE

TEMPLATE

STEP 1: Identify the problems
STEP 2: Discuss possible factors
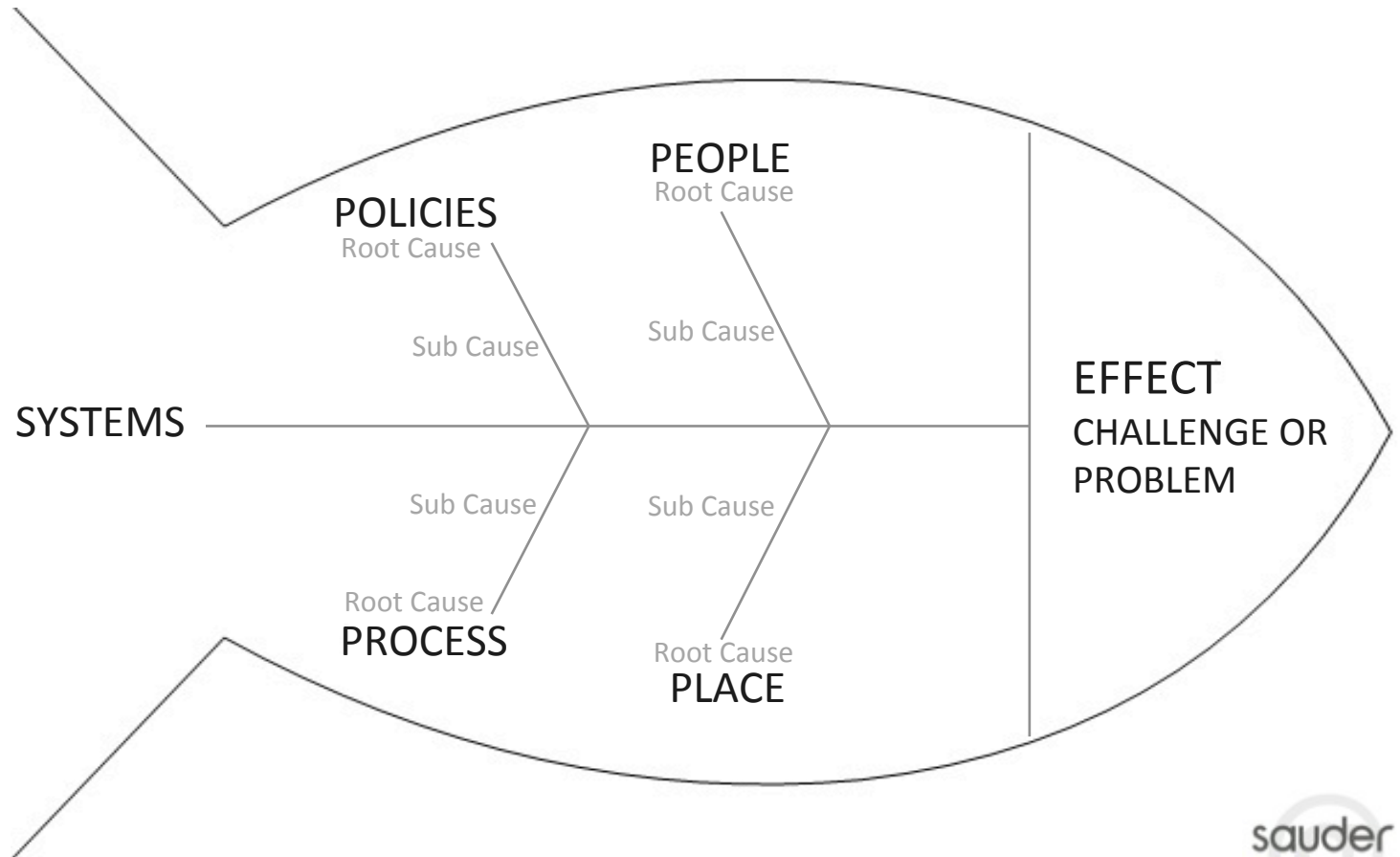**STEP 3**: Identify the causes

STEP 4: Review and identify the "right" problem
STEP 5: Describe or sketch the "right" problem and causes
STEP 6: Summarize into a "Problem Statement"

DESCRIPTION
Fishbone is a useful visualization technique for categorizing the potential causes of a problem in order to identify its root causes.

USES
- In brainstorming sessions to focus conversation.
- To explore all possible causes for a problem.
- To rate the potential causes according to their level of importance and diagram a hierarchy.
- Typically worked right to left, with each large "bone" of the fish branching out to include smaller bones containing more detail.

PEOPLE
Root Cause

POLICIES
Root Cause

Sub Cause

Sub Cause

SYSTEMS

Sub Cause

Sub Cause

EFFECT
CHALLENGE OR PROBLEM

Root Cause

PROCESS

Root Cause

PLACE

Adapted from http://fishbonediagram.org/

sauder d.studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

? ASK   **💡** TRY   **🔧** DO

TEMPLATE

EMPATHY MAP

STEP 1: Identify a user/persona.
STEP 2: Give him/her a name
STEP 3: Select one section.

STEP 4: Answer each question. Accept all assumptions.
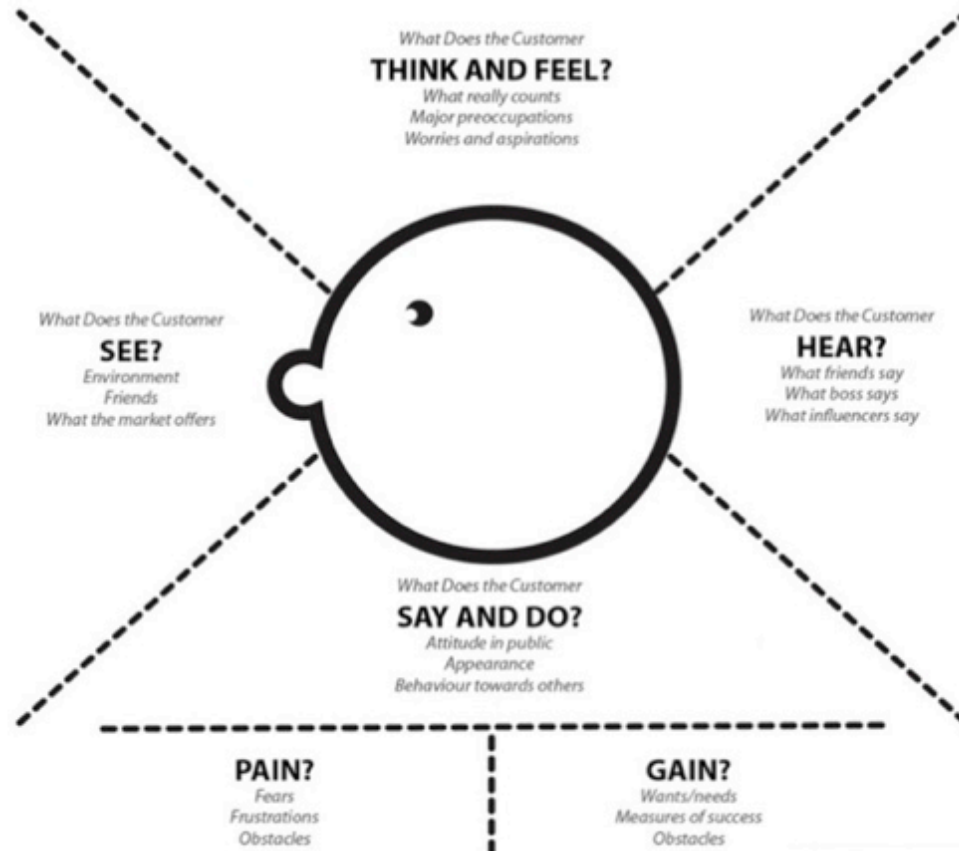**STEP 5**: Discuss assumptions and go deeper into meanings.
STEP 6: Summarize into a "User Profile"

DESCRIPTION
Empathy Map is an approach to finding out as much as possible about a person's experience as a "user" of a space, a process, an objective or an environment. You want to understand the choices that people make and why they make them.

USES
• As a tool to perform user research.
• To understand people's experience as they use a thing, a space or a process.
• Identify key pains to resolve and key gains to provide.

What Does the Customer
THINK AND FEEL?
What really counts
Major preoccupations
Worries and aspirations

What Does the Customer
SEE?
Environment
Friends
What the market offers

What Does the Customer
HEAR?
What friends say
What boss says
What influencers say

What Does the Customer
SAY AND DO?
Attitude in public
Appearance
Behaviour towards others

PAIN?
Fears
Frustrations
Obstacles

GAIN?
Wants/needs
Measures of success
Obstacles

Source: www.xplane.com/

sauder
d.studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   **TRY**   **DO**

EXPERIENCE JOURNEY

TEMPLATE

STEP 1: Identify the problem to solution path.
STEP 2: Begin with mapping "Before"
STEP 3: Identify and discuss possible interactions.

STEP 4: Repeat for "During" and "After"
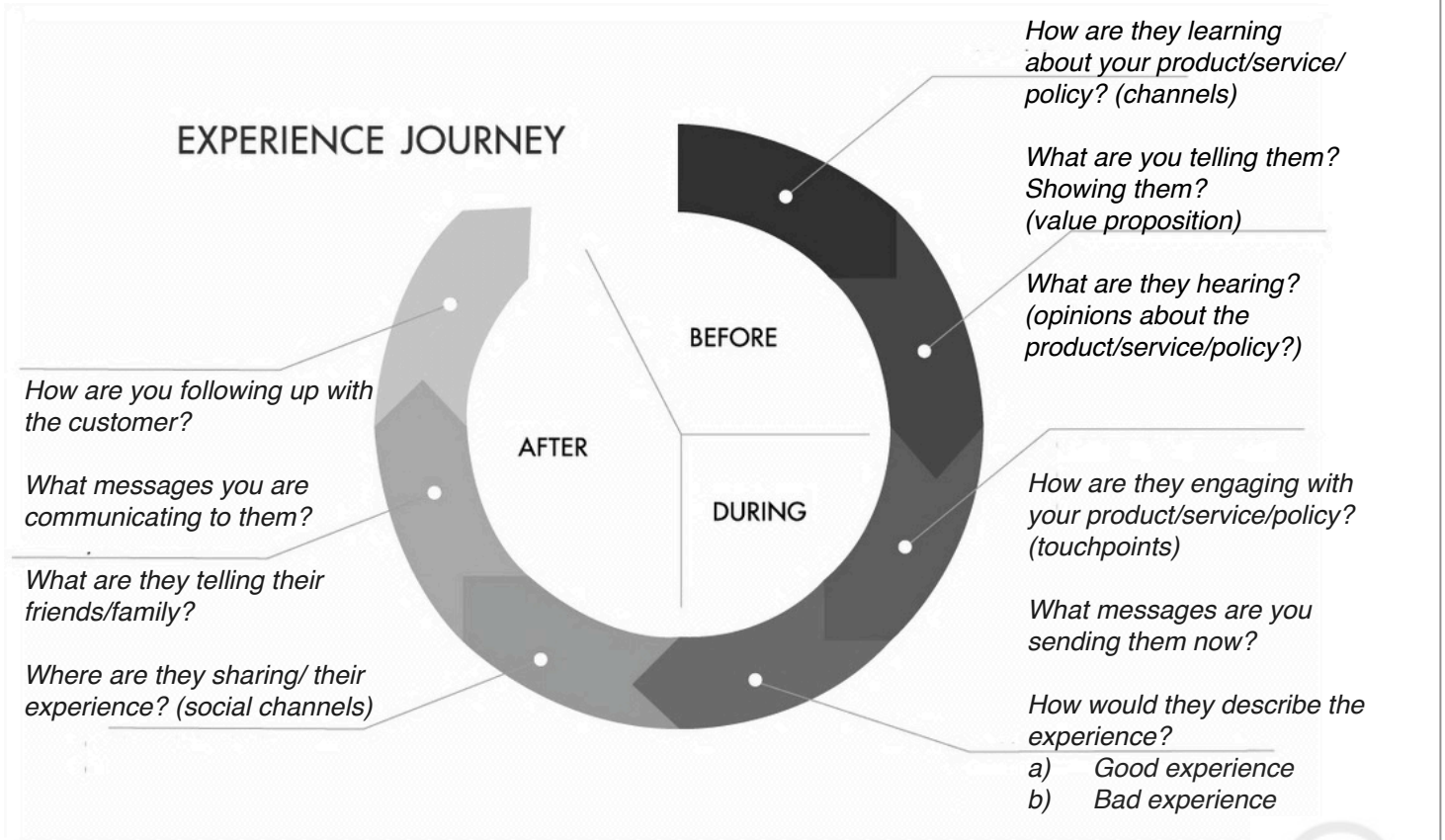**STEP 5:** Add comments to path.
STEP 6: Discuss, summarize and test.

DESCRIPTION

The Experience Journey is a technique that maps the user experience as a journey, similar to planning a route and agenda for holidays. The map is divided into 3 periods: before, during and after. The touch-points record the user actions and intentions and allows you to "connect the dots" and see where the experience gaps and connections are.

USES

- For visualizing their experience along the way.
- Detailed user experience.
- To see gaps in the journey.
- To develop a sense of the flow of the experience.
- To consider the total context of what you are exploring.

EXPERIENCE JOURNEY

BEFORE

AFTER

DURING

How are they learning about your product/service/policy? (channels)

What are you telling them? Showing them? (value proposition)

What are they hearing? (opinions about the product/service/policy?)

How are they engaging with your product/service/policy? (touchpoints)

What messages are you sending them now?

How would they describe the experience?
a) Good experience
b) Bad experience

How are you following up with the customer?

What messages you are communicating to them?

What are they telling their friends/family?

Where are they sharing/ their experience? (social channels)

Source: http://www.adaptivepath.org/

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   TRY   DO

INNOVATION INTENT

TEMPLATE

STEP 1: Answer each question in sequence.
STEP 2: Revisit each question and go deeper.
STEP 3: Clarify and simply with each iteration.

STEP 4: Involve diverse teams in process.
STEP 5: Work on drafts until clear of jargon.
STEP 6: Discuss, summarize and test.

DESCRIPTION
The Innovation Intent is a technique that frames the problem you are trying to solve and guides you through creative and critical questions about your proposed solution.

USES
- For clarifying needs and solutions.
- To understand the specific problem trying to be solved.
- To clarify the user/consumer/audience or community.
- To explore why it impact.
- For competitive analysis.

The problem we are trying to solve is (really solving)....

For whom (audience and/or community)...

Why it matters (social impact)...

How other solution attempts have failed (context)...

What will make our solution different (future state)...

sauder
d·studio

Adapted from: http://www.nakedinnovation.com/

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   TRY   DO

TEMPLATE

INNOVATION INTENT [ALT]

STEP 1: Map onto ASK.TRY.DO. framework.
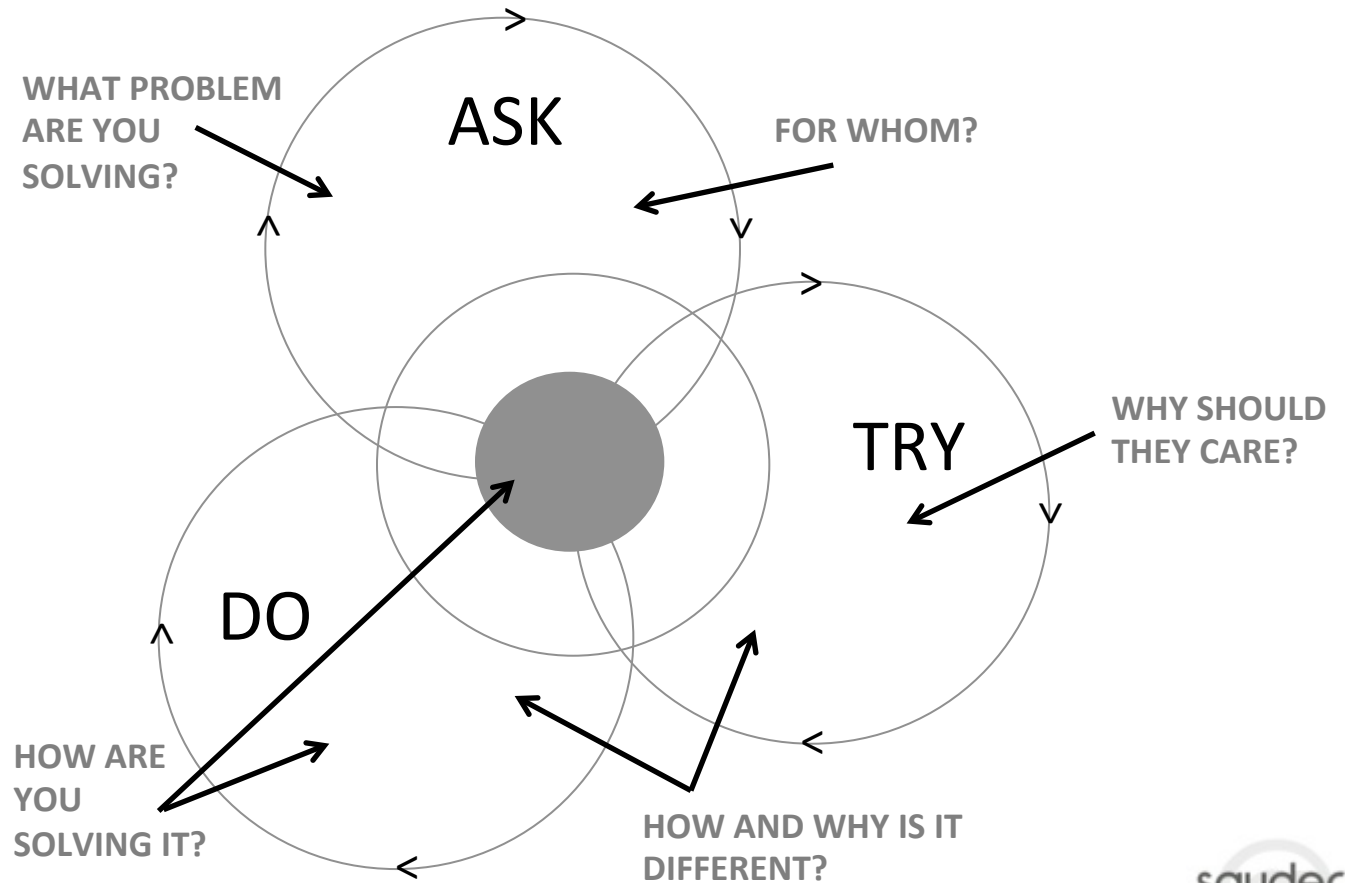**STEP 2:** Visualize the problem and proposed solution..
STEP 3: Reflect each iteration.

DESCRIPTION
The Innovation Intent is a technique that frames the problem you are trying to solve and guides you through creative and critical questions about your proposed solution.

USES
- For clarifying needs and solutions.
- To understand the specific problem trying to be solved.
- To clarify the user/consumer/audience or community.
- To explore why it impact.
- For competitive analysis.

WHAT PROBLEM ARE YOU SOLVING?

ASK

FOR WHOM?

TRY

WHY SHOULD THEY CARE?

DO

HOW ARE YOU SOLVING IT?

HOW AND WHY IS IT DIFFERENT?

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   TRY   DO

S.T.A.R. MOMENTS

TEMPLATE

STEP 1: Answer each question in sequence.
STEP 2: Revisit each question and go deeper.
STEP 3: Clarify and simply with each iteration.

STEP 4: Involve others in the process.
STEP 5: Work on drafts until clear of jargon.
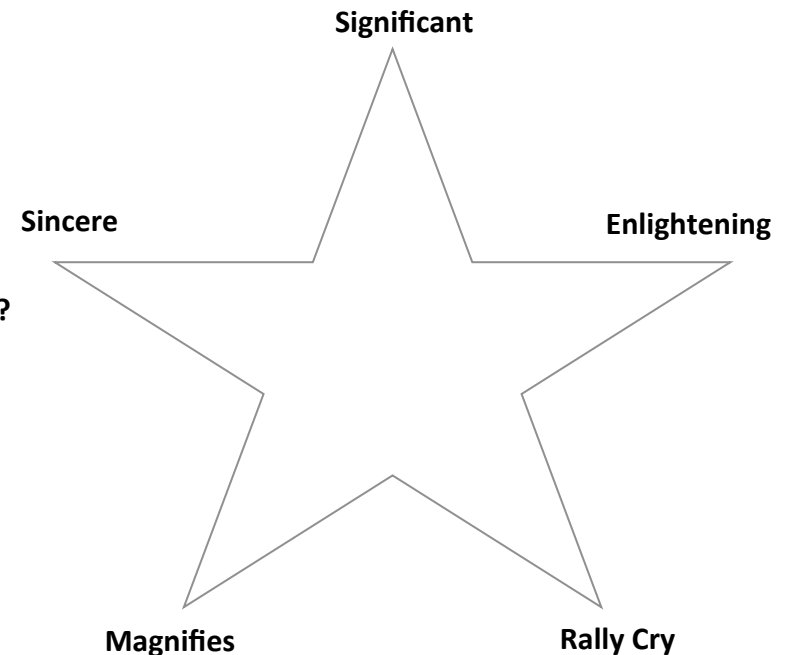**STEP 6:** Discuss, summarize and test.

DESCRIPTION
The S.T.A.R. Moments technique guides you to prepare and deliver a impactful moment or message: Something They'll Always Remember? (aka The Hook).

USES
- To passionately articulate the specific problem trying to be solved.
- To convey meaning and impact of solution.
- To practice good public speaking format..
- For competitive business idea pitching.

Something They'll Always Remember:

1. **What is significant about our cause?**

2. **What is sincere about our approach?**

3. **What is enlightening about the current problem and how we are going to solve it?**

4. **How does it magnify our Big Idea?**

5. **What is our rally cry?**

Significant

Sincere

Enlightening

Magnifies

Rally Cry

Source: http://resonate.duarte.com/#!page177

sauder d·studio

http://dstudio.ubc.ca/toolkit/temporary-techniques/

ASK   **TRY**   **DO**

THANK YOU TO ALL OUR VOLUNTEERS,
SPONSORS AND SUPPORTERS