



IDEATION: OVERVIEW

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BUT FIRST...

DONE ANY
NEEDFINDING,
TRENDWATCHING
OR TECHWATCHING
YET?

NEEDS VS. SOLUTIONS



<http://blog.intercom.io/interview-bob-moesta-part-2-of-2/>

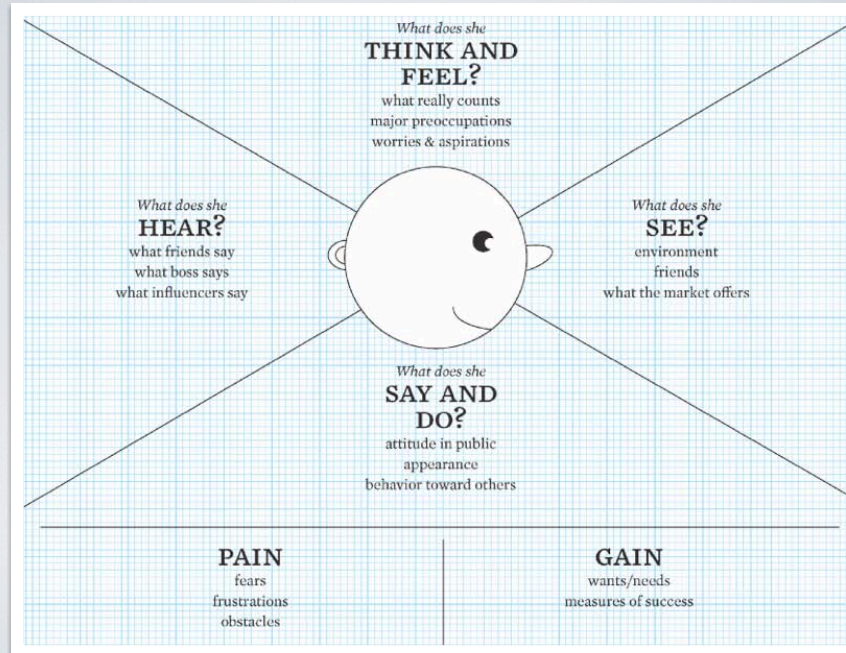
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Even if thinking in terms of solutions might spur creativity and enthusiasm within your team, it is absolutely crucial that you state needs in solution-independent ways. For example "a new idea for how to brush teeth" implies that the solution involves some kind of brush. In a solution using sound waves, there is no brushing involved. A solution-independent way of describing such a need would be, for example, "to clean teeth". Looking for needs rather than specific solutions keeps all possible solutions open for consideration and avoids prematurely limiting possibilities.

TWO EXAMPLES

OF HOW TO ORGANIZE
YOUR OBSERVATIONS AND
INSIGHTS

CUSTOMER EMPATHY MAP



CUSTOMER EMPATHY MAP

1

WHAT DOES SHE SEE?

DESCRIBE WHAT THE CUSTOMER SEES IN HER ENVIRONMENT

- What does it look like?
- Who surrounds her?
- Who are her friends?
- What types of offers is she exposed to daily (as opposed to all market offers)?
- What problems does she encounter?

2

WHAT DOES SHE HEAR?

DESCRIBE HOW THE ENVIRONMENT INFLUENCES THE CUSTOMER

- What do her friends say?
Her spouse?
- Who really influences her, and how?
- Which media Channels are influential?

3

WHAT DOES SHE REALLY THINK AND FEEL?

TRY TO SKETCH OUT WHAT GOES ON IN YOUR CUSTOMER'S MIND

- What is really important to her (which she might not say publicly)?
- Imagine her emotions. What moves her?
- What might keep her up at night?
- Try describing her dreams and aspirations.

XPLANE / Osterwalder et al

CUSTOMER EMPATHY MAP

4

WHAT DOES SHE SAY AND DO?

IMAGINE WHAT THE CUSTOMER MIGHT SAY, OR HOW SHE MIGHT BEHAVE IN PUBLIC

- *What is her attitude?*
- *What could she be telling others?*
- *Pay particular attention to potential conflicts between what a customer might say and what she may truly think or feel.*

5

WHAT IS THE CUSTOMER'S PAIN?

- *What are her biggest frustrations?*
- *What obstacles stand between her and what she wants or needs to achieve?*
- *Which risks might she fear taking?*

6

WHAT DOES THE CUSTOMER GAIN?

- *What does she truly want or need to achieve?*
- *How does she measure success?*
- *Think of some strategies she might use to achieve her goals.*

XPLANE / Osterwalder et al

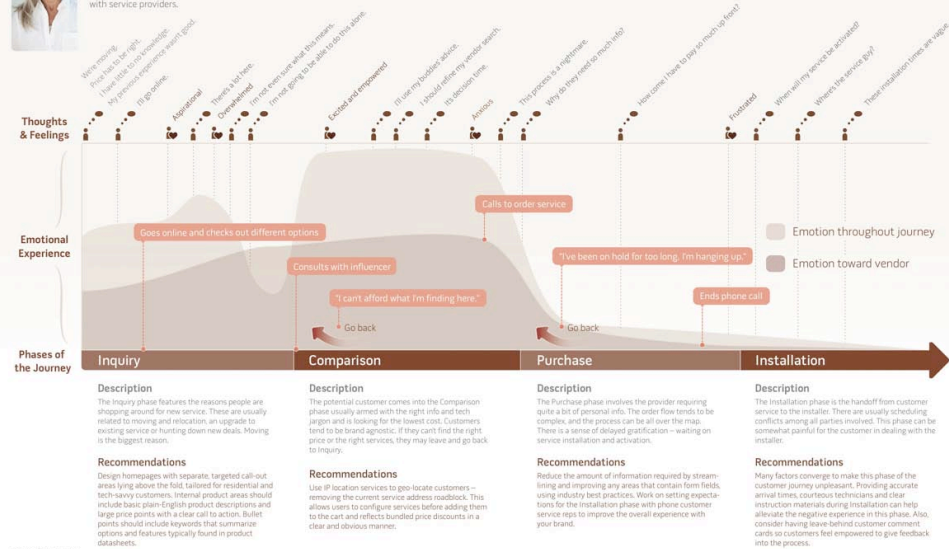
CUSTOMER JOURNEY MAP



Sarah's Broadband Provider Journey

Sarah is moving her family of three. She knows she's going to need phone and internet service. The effective and contextual factors that will affect Sarah's choice in broadband vendors are price, and her existing knowledge of and previous experience with service providers.

effective



CUSTOMER JOURNEY MAP



<http://www.uxmatters.com/mt/archives/2011/09/the-value-of-customer-journey-maps-a-ux-designers-personal-journey.php>

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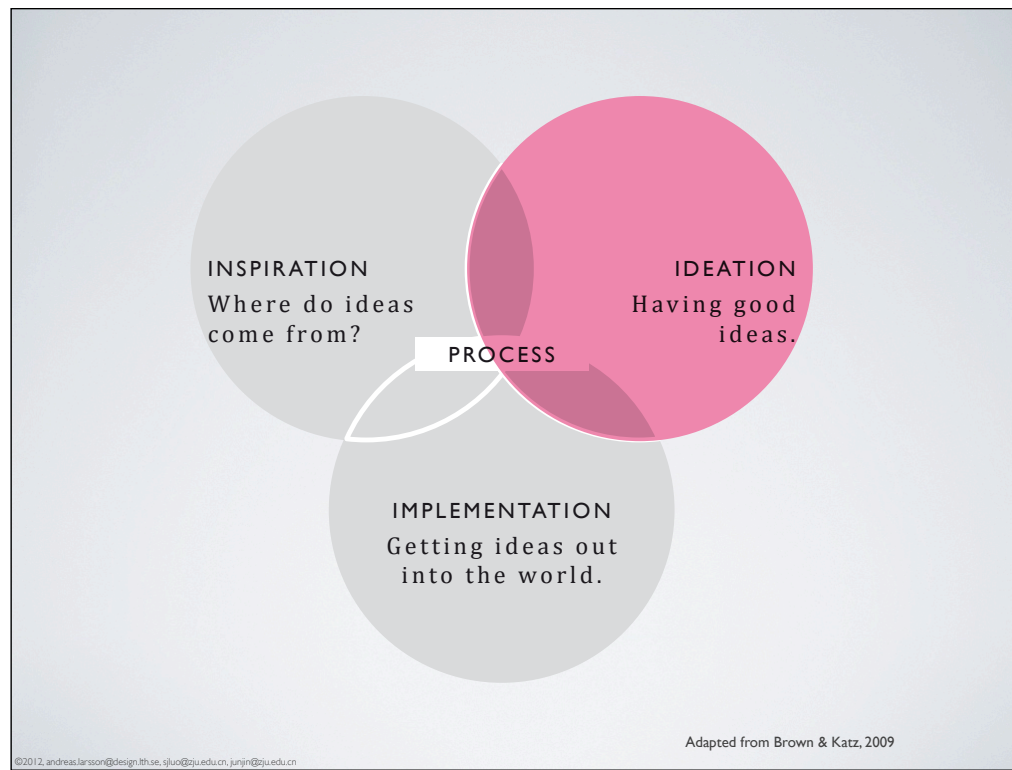
EXERCISE

WHEN YOU HAVE GAINED
INSIGHTS,
WHAT DO YOU DO
WITH THEM?

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Students discuss in groups of two or three.

Follow up with a moderated all-class discussion.



The Inspiration dimension is about having good ideas. It is about translating Insights into ideas.

FROM INSIGHT TO IDEAS

GOING FROM “WHAT IS?” TO “WHAT IF?”

Liedtka & Ogilvie, 2011

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This is where you go from a deep understanding of current reality to envisioning new futures.

Today, eating fast food is “like this”, what if eating fast food would be “like this”?

Today, going by public transportation is “like this”, what if public transportation would be “like this”?

Today, visiting the hospital is “like this”, what if visiting the hospital would be “like this”?

SURPRISE AND DELIGHT



HOW TO GENERATE SURPRISE AND DELIGHT?

QUITE DIFFERENT FROM TRADITIONAL
PROBLEM SOLVING

Gray, Brown & Macanuso, 2010

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Andreas's friend and colleague Prof. Larry Leifer from Stanford University often shows this amazing video to show what design and innovation really is about. The excitement that Luxo Jr shows is really what we are after.

From an innovation perspective, ideation is about finding ways to surprise and delight customers, users and colleagues. This is quite different than traditional problem solving, which is often about “fixing things” that are somehow broken.

Do you see the difference?

If a product or service doesn't work as expected, we are unhappy. Fixing the problem might not make us ecstatic, we will merely be satisfied that things are back to normal.

Innovations are more about exceeding expectations, and that requires creative ideas that often go way beyond traditional, known “solutions”.

“I’m just not a
creative person.”

DON'T EVER SAY THIS AGAIN ;-)

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We’ve talked earlier about the skills of an innovator, that it is actually possible to develop these skills.

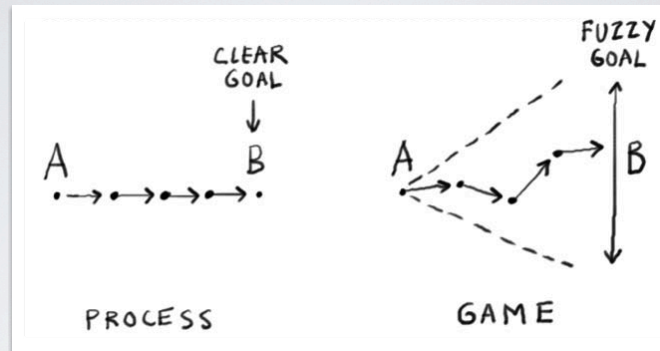
And, it doesn’t have to take you 10,000 hours. There are tools, strategies and mindsets that can generate quick results, and we will introduce some of them to you.



There's this nice book called Gamestorming which I think summarizes many of the key skills and mindsets that I personally think are useful for creating a creative and innovative team, and I think they are also useful to think about as a person.

XPLANE has made a great poster about the ten essentials of gamestorming. We won't go through all of these exactly as they are written here, but if you happen to read the book later, you'll recognize that many of the essentials are also essentials in this course.

PROCESS VS. GAME



Gray, Brown & Macanuff, 2010

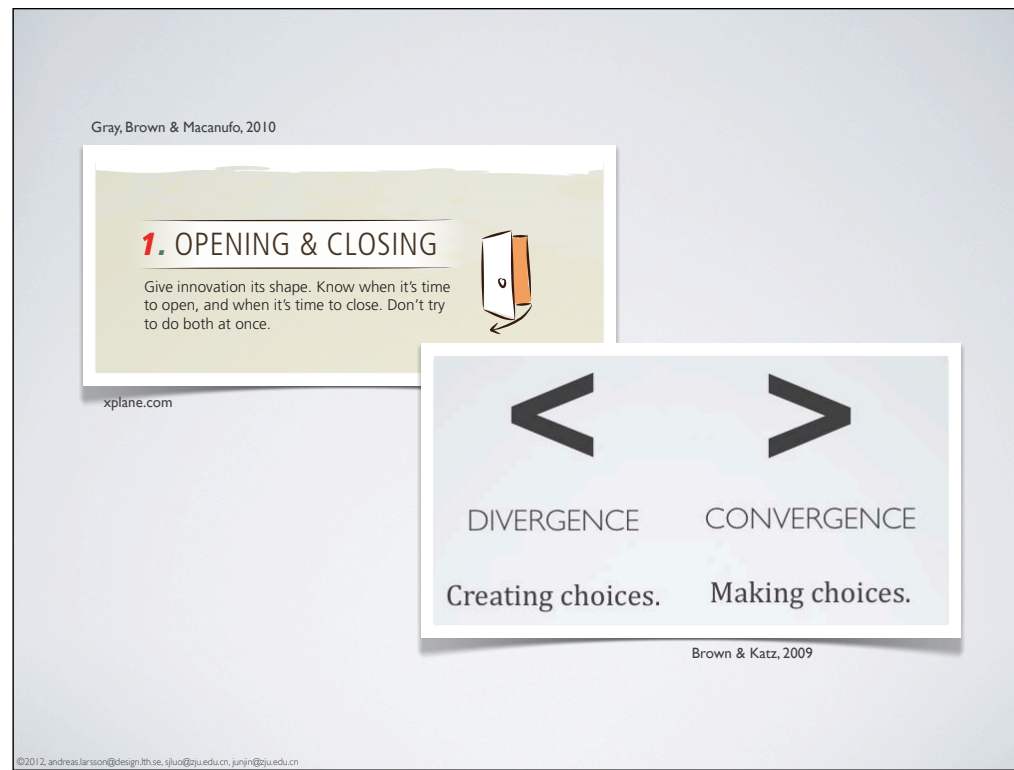
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First of all, let's look at the difference between a process and a game, or between incremental development and radical innovation, if you will...

We don't want predictability so much as breakthrough ideas, which are inherently unpredictable.

New, by definition, means "not seen before", so if you want to truly create something new, there is simply no way to precisely define the goal in advance, because there are too many unknowns.

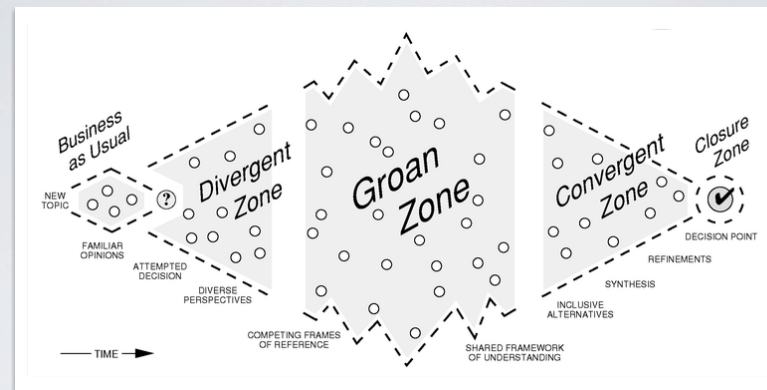
While a business process creates a solid, secure chain of cause and effect, gamestorming (we call it ideation here, but call it what you want) creates something different; not a chain, but a framework for exploration, experimentation and trial and error.



We've talked about divergence and convergence earlier.

Divergence is about creating choices, convergence is about making choices.

You need to make sure that your team members understand when the objective is to open the solution space and when it is time to close it.



Kaner et al, 2007

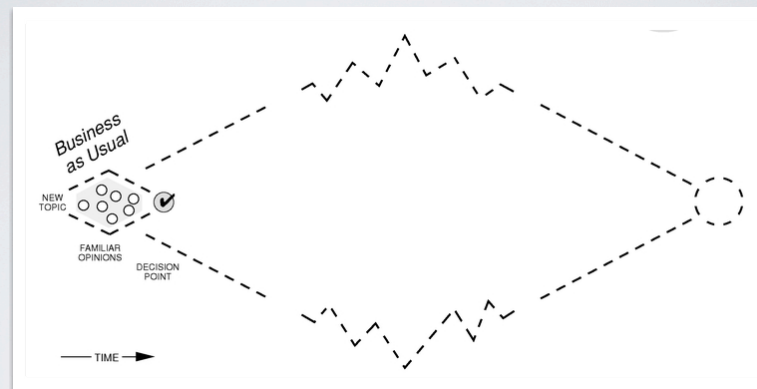
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One thing to keep in mind is that your team needs to support everyone to do their best thinking,

This means encouraging full participation, promoting mutual understanding and cultivating shared responsibility.

We have Kaner's model here, which is basically the same as any divergent-convergent model. I'll just quickly introduce a few important things.

BUSINESS AS USUAL



Kaner et al, 2007

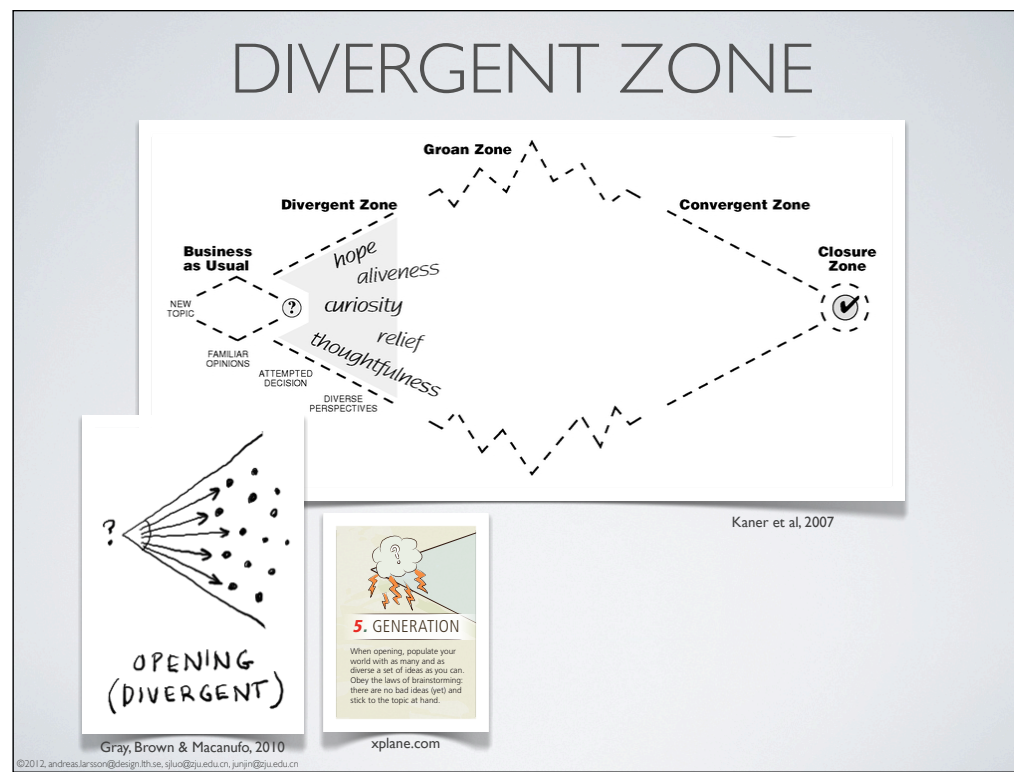
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First of all,

We need to make sure that we stay out of this end of the model completely; business as usual.

If people agree too quickly, there's usually something wrong. That's often what Irving Janis calls "groupthink", the tendency that group members try to minimize conflict and reach a consensus decision without critical evaluation of alternative ideas or viewpoints.

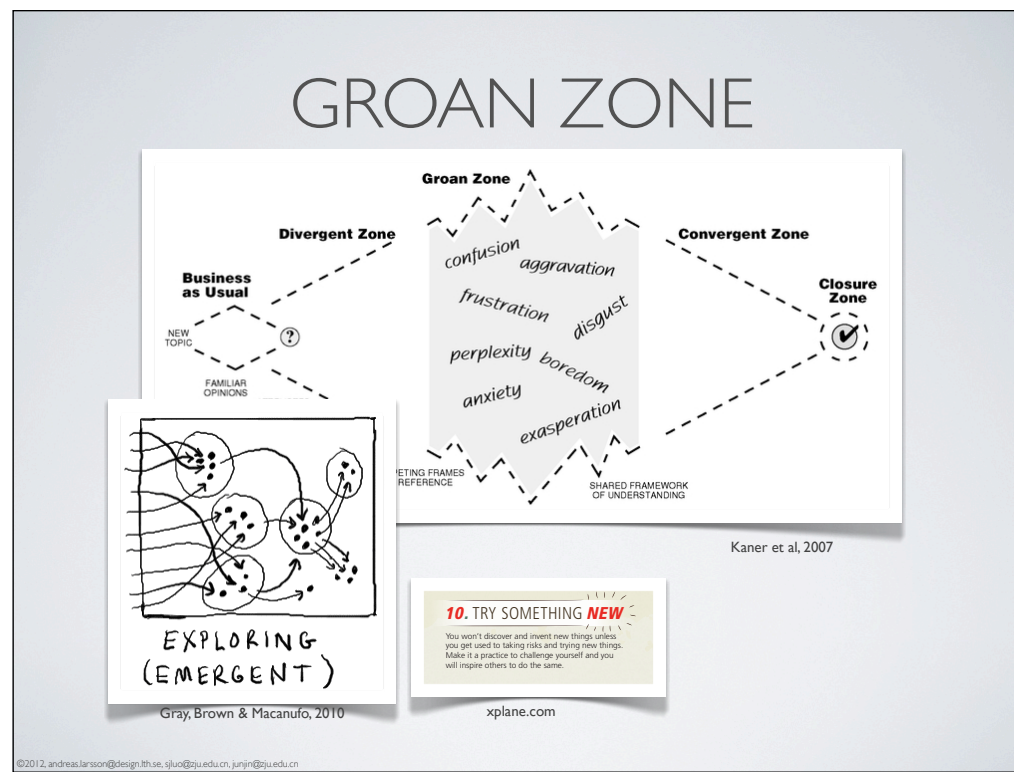
Be careful.



In the divergent zone, the attitude of suspended judgment rules. It's about opening people's minds, opening up possibilities. Blue-sky thinking, brainstorming, energy, optimism.

This is probably the most important thing to keep in mind, to help create a relaxed atmosphere where people feel permitted to speak freely without risking being embarrassed by criticism.

As long as you play by the basic rules of the divergent zone, people usually find this work to be quite fun. A lot of laughter and curiosity.



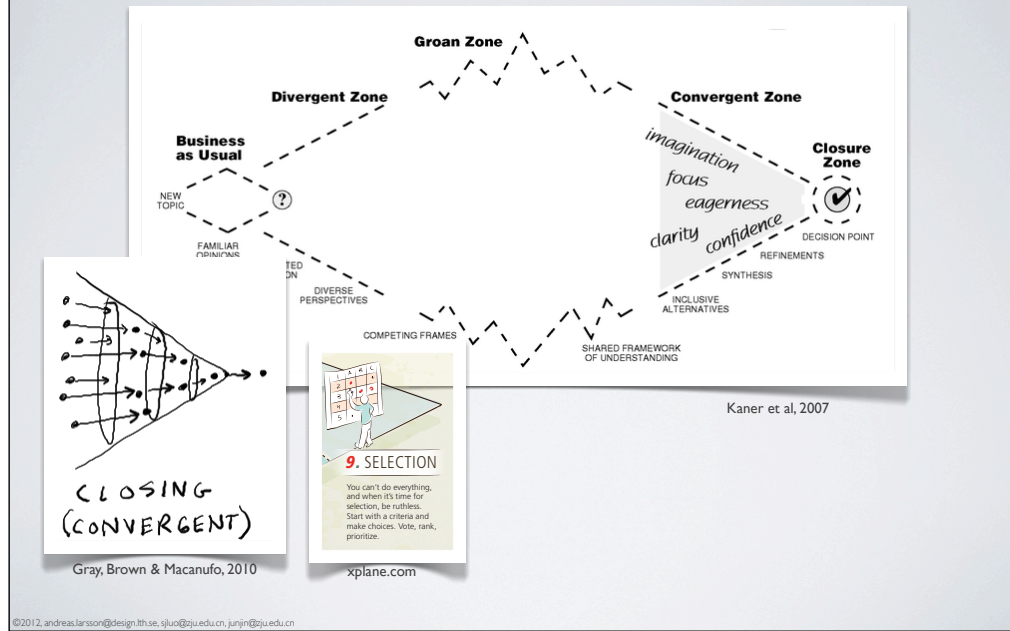
Well, next is where the problems usually start coming.

Team members have come up with a lot of ideas and diverging points of view. But what to do next?

It can lead to a paralysis of unlimited opportunity. Everything is possible, but how do we proceed? And that's where the frustration kicks in. Some people feel misunderstood, some will agree to anything just to end the discussion.

We've talked about innovation happening in the discomfort zone earlier. If there is any advice we can give you, it is that you embrace the groan zone. Hang in there. Look for patterns and analogies, try to see old things in new ways, sift and sort through ideas, build and test things.

CONVERGENT ZONE



In the convergent zone there is a feeling that “we’re getting things done!” and the level of confidence increases in the team.

You’re moving toward conclusions - toward decisions, actions, and next steps. You assess ideas critically. You can’t do everything. Where do you want to invest your time and energy?

So, many teams are actually quite happy during the divergent and convergent zones, because things are happening, and even if you don’t know exactly where you are going to end up, at least you are not standing still or moving backwards.

PLAY THE GAME



TIP

SEVEN BRAINSTORMING RULES

» **Defer judgment**

There are no bad ideas at this point. There will be plenty of time to judge ideas later.

» **Encourage wild ideas**

It's the wild ideas that often create real innovation. It is always easy to bring ideas down to earth later!

» **Build on the ideas of others**

Think in terms of 'and' instead of 'but.' If you dislike someone's idea, challenge yourself to build on it and make it better.

» **Stay focused on topic**

You will get better output if everyone is disciplined.

» **Be visual**

Try to engage the logical and the creative sides of the brain.

» **One conversation at a time**

Allow ideas to be heard and built upon.

» **Go for quantity**

Set a big goal for number of ideas and surpass it! Remember there is no need to make a lengthy case for your idea since no one is judging. Ideas should flow quickly.

IDEO HCD Toolkit

KEY TAKEAWAYS

1. FROM “WHAT IS?” TO “WHAT IF?”

2. SURPRISE AND DELIGHT

3. OPENING & CLOSING

4. EMBRACE THE “GROAN ZONE”

5. PLAY THE GAME

KEY READINGS

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INSPIRATION

Gamestorming

A playbook for innovators, rule-breakers and changemakers

<http://www.gogamestorm.com/>

design activity

CO/DESIGNING

<http://www.servicedesigntools.org>



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Creativity, Innovation, Tools, Techniques, Books, Disc

Mycoted is a company dedicated to improving Creativity and Innovation provide a central repository for Creativity and Innovation on the Internet puzzles, book reviews etc, that is open to all - and can be written by all.

Current featured article

Synectics

Synectics is, in our experience, one of the most useful systems for creative problem solving. It is based on a simple concept for problem solving and creative thinking - you need to generate ideas, and you need to evaluate ideas. Whilst this may be stating the obvious the methods used to perform these tasks are extremely novel.

<http://www.innovatorstoolkit.com/>

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EXERCISE

DIVERGENCE

CREATING CHOICES

BRAINSTORMING



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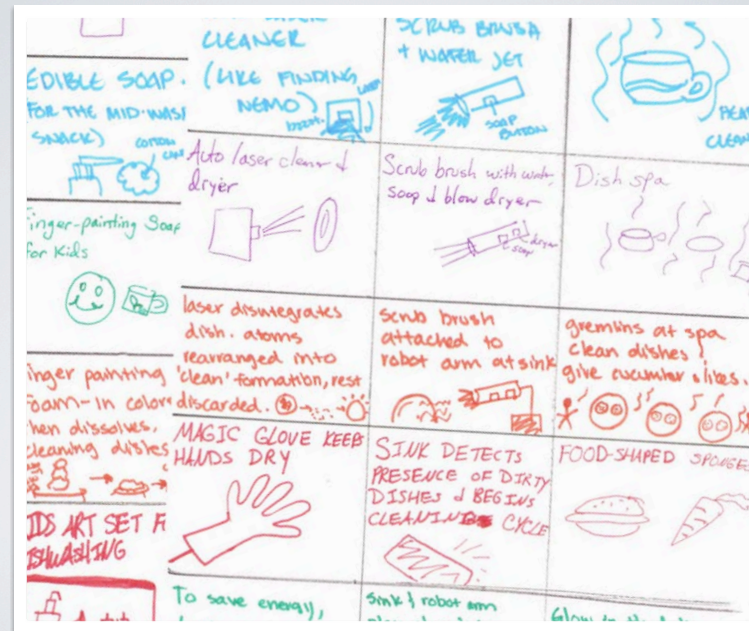
Example:
Brainstorming in a workshop at a Swedish manufacturing tool company.

Exercise:

1. Remember the “rules of brainstorming”.
2. Make sure to record all ideas
3. Select a brainstorming theme, e.g. “How might we make it easier for people to...”
4. Allow people to brainstorm individually first (to avoid groupthink)
5. Perform a group brainstorm

Tip: you might want to start with two persons discussing the individual ideas, then add a third person, then a fourth person, and so on.

BRAINWRITING



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<http://blog.lib.umn.edu/gnm/0168/5701gnm>

Example: Student project from Minnesota. Main theme: washing dishes by hand.

Exercise:

1. Write a theme on top of the paper. The same theme or different themes.
2. Add an idea on the first row.
3. Pass the sheet of paper to the next person, who also adds an idea, using the existing ideas as stimuli where possible.
4. Repeat until all sheets are filled up (or get more sheets).



Exercise: Object brainstorming starts with a question, such as “How will the next generation of [fill-in-the-blank] work?” This question may ask participants to reimagine an existing product or invent something new.

1. Explore the objects and to take some time to play with them. The objects may inspire participants to think about how a new thing could function, or how it could look or feel. The long, hinged mouth of a stapler may suggest a new way to bend and fasten steel. A telescoping curtain rod might inspire thinking about a collapsible bicycle. Likewise, an object’s personality, such as a rugged toolbox, might suggest how a laptop might be designed. Most objects explain themselves, and the results can be very intuitive; participants are likely to stumble on fully formed ideas.

2. After a set amount of time, the participants share their ideas, document them, and decide on next steps. This may be as simple as voting on an idea to pursue in more detail, or it may mean moving into another brainstorming exercise.

WHAT IF...?

IMAGINED CONSTRAINT (What would happen if X was true?)

What would happen if we were no longer allowed to have ANY contact with our customers?

... voice calls were free worldwide? In 2003 Skype launched a service that allowed free voice calling via the Internet. After five years Skype had acquired 400 million registered users who collectively had made 100 billion free calls.

... furniture buyers picked up components in flat pack form from a large warehouse and assembled the products themselves in their homes? What is common practice today was unthinkable until IKEA introduced the concept in the 1960s.

... airlines didn't buy engines for their airplanes, but paid for every hour an engine runs? That is how Rolls-Royce transformed itself from a money-losing British manufacturer into a service firm that today is the world's second biggest provider of large jet engines.

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Don't forget to continuously ask "what if?" questions. Challenge conventional assumptions with "what if?" questions. These questions help us break free from constraints imposed by current models. They should provoke us and challenge our thinking.

Managers of a daily newspaper might ask themselves: what if we stopped our print edition and went entirely digital?

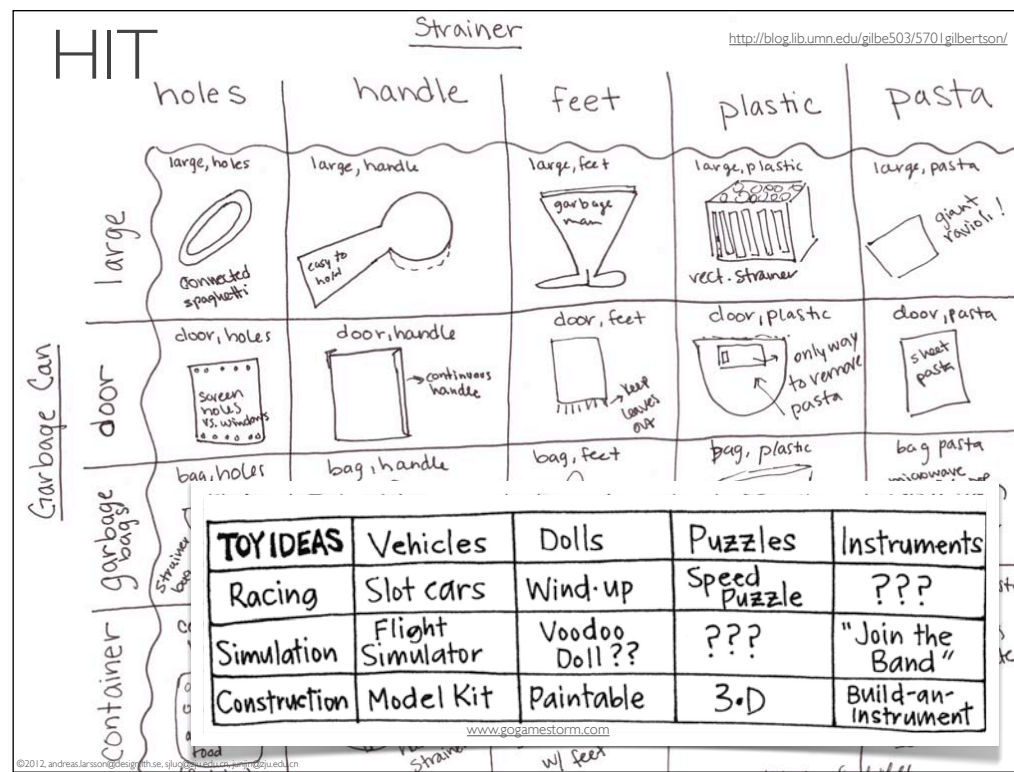
COVER STORIES



Cover stories can be used in the implementation space as well, but in the ideation space it is useful for creating ideas.

Exercise:

1. What would you like mainstream media to say about your conceptual solution (that you haven't yet created)?
2. Present for the rest of the class.



Rules of thumb:

- * A new idea can be generated from remixing the attributes of an existing idea.
- * A new idea is best understood by describing its two essential attributes.
- * The more different or surprising the combination of the two attributes, the more compelling the idea.

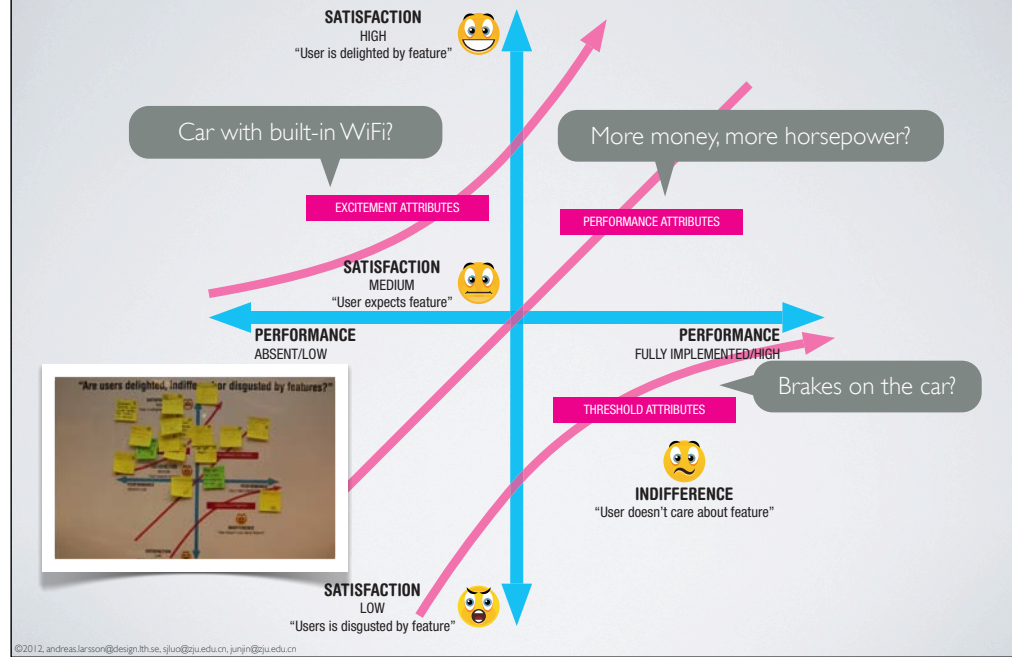
1. Decide on two categories of attributes that will define your matrix. For example, a toy manufacturer might look at its product line by type (vehicles, figures and dolls, puzzles, and instruments) and by type of play (racing, simulation, construction).
2. Use these lists to populate a matrix, creating a grid of new possible combinations.

EXERCISE

CONVERGENCE

MAKING CHOICES

KANO SATISFACTION MODEL



Threshold Attributes: Which users expect to be present in a product.

Performance Attributes: Which are not absolutely necessary, but which are known about and increase the user's enjoyment of the product.

Excitement Attributes: Which users don't even know they want, but are delighted when they find them.

Indifference Attributes: Users don't really care about these features.

1. Brainstorm all of the possible features and attributes of your product or service, and everything you can do to please your customers.
2. Classify these as "Threshold", "Performance", "Excitement" and "Indifference".

PUGH MATRIX

| Pugh Matrix Example | | | | | | |
|--|---|---|---|---|---|---|
| (Automatic Hair-Washing Solutions/Designs) | | | | | | |
| Expectations | 0 | 1 | 2 | 3 | 4 | 5 |
| Ease of Use | - | - | - | - | - | - |
| Clean (No water or shampoo spill) | S | + | + | + | + | + |
| Comfortable | S | + | + | S | S | S |
| Speed | + | - | - | S | S | S |
| Efficacy | + | + | + | + | + | + |
| Reliable | + | + | + | + | + | - |
| Optional Features | S | + | + | + | + | + |
| Cost | + | + | + | + | + | + |
| Noise | S | S | S | + | S | S |
| Easy to Maintain | S | S | S | S | - | - |
| Total +'s (better than datum) | 4 | 6 | 6 | 6 | 4 | 4 |
| Total -'s (worse than datum) | 1 | 2 | 2 | 1 | 3 | 3 |
| Total S's (same as datum) | 5 | 2 | 2 | 3 | 3 | 3 |
| Comparison | 3 | 4 | 4 | 5 | 1 | 1 |

| Concept Summary | |
|--|--|
| 0 - Human Washing Method | |
| 1 - Reclining Chair with Spray Nozzle & Bristles | |
| 2 - Massage Table with Spray Nozzle & Massage Jets | |
| 3 - Massage Table with Spray Nozzle & Fitted Massage Hood | |
| 4 - Straight Chair with Fitted Massage Hood & Music | |
| 5 - Straight Chair with Fitted Massage Hood & Foot Massage | |

EXHIBIT 36.1 (Downloadable)

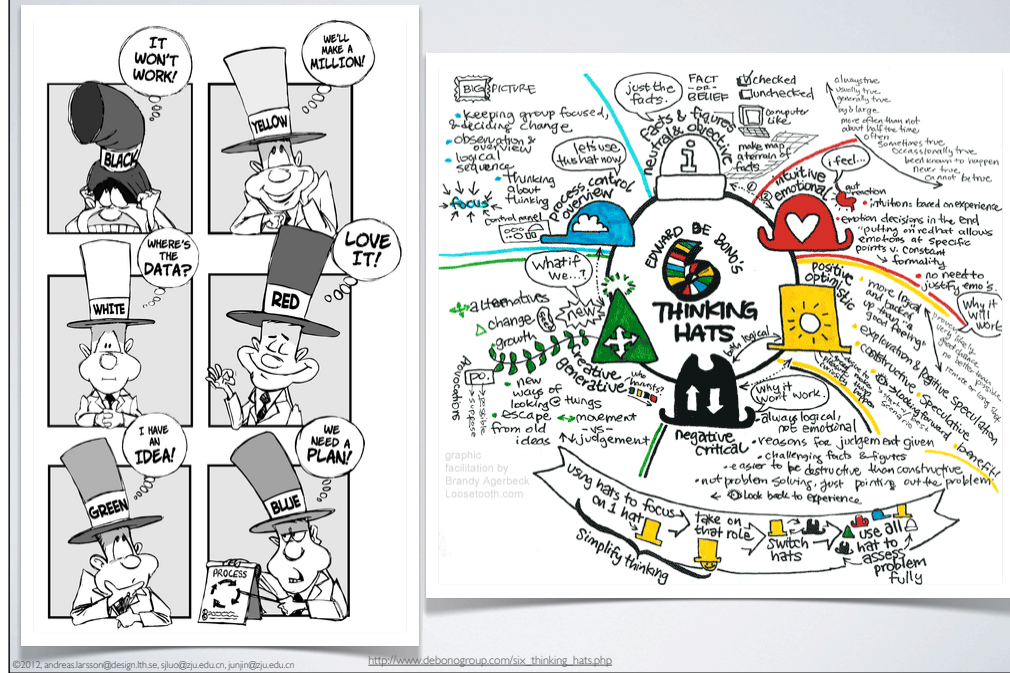
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A Pugh Matrix assists in evaluating multiple ideas or design concepts against each other in relation to a baseline, or datum.

1. Determine a baseline (datum)
2. Select the concepts to be evaluated
3. Define evaluation criteria
4. Use the criteria to compare concepts

SIX THINKING HATS



You and your team members can learn how to separate thinking into six clear functions and roles. Each thinking role is identified with a colored symbolic "thinking hat." By mentally wearing and switching "hats," you can easily focus or redirect thoughts, the conversation, or the meeting.

The White Hat calls for information known or needed. "The facts, just the facts."

The Yellow Hat symbolizes brightness and optimism. Under this hat you explore the positives and probe for value and benefit.

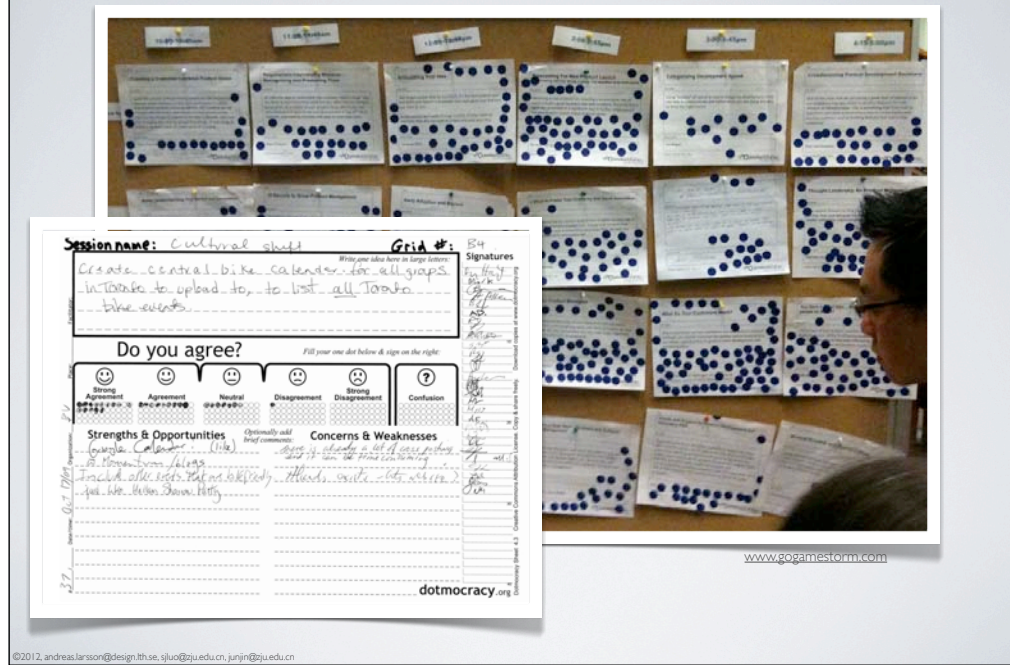
The Black Hat is judgment - the devil's advocate or why something may not work. Spot the difficulties and dangers; where things might go wrong. Probably the most powerful and useful of the Hats but a problem if overused.

The Red Hat signifies feelings, hunches and intuition. When using this hat you can express emotions and feelings and share fears, likes, dislikes, loves, and hates.

The Green Hat focuses on creativity; the possibilities, alternatives, and new ideas. It's an opportunity to express new concepts and new perceptions.

The Blue Hat is used to manage the thinking process. It's the control mechanism that ensures the Six Thinking Hats guidelines are observed.

DOT VOTING



After a brainstorming session, ask the group to cast their votes by placing a dot next to the items they feel the most strongly about. They may use stickers or markers to do this. As a rule of thumb, giving each participant five votes to cast works well.

Participants cast their votes all at once and they may vote more than once for a single item if they feel strongly about it. Once all the votes are cast, tally them, and if necessary make a list of the items by their new rank.

This prioritized list becomes the subject of discussion and decision making. In some cases, it may be useful to reflect on ideas that didn't receive votes to verify that they haven't been left behind without cause.