Note on Ideate

“While we cannot foresee the eventual results of creativity – of the attempt to impose our desires on reality, to become the main power that decides the destiny of every form of life on the planet – at least we can try to understand better what this force is and how it works. Because for better or for worse, our future is now closely tied to human creativity. The result will be determined in large part by our dreams and by the struggle to make them real.” (Csikszentmihalyi, 1996, p. 6)

“So if the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent.” (Csikszentmihalyi, 1996, p. 12)

The ultimate objective of the Ideate step of the Problem Finding, Problem Solving process is to generate a number of alternative solutions to a problem, and then select a small number of them to take into the Experiment phase of the process. Here’s an example of how Realize fits with the rest of the process:

• In Understand and Observe, you established a research question and collected a lot of data – by reading, seeing, observing, and engaging. For example, you might be in the Customer Relationship Management (CRM) business, and have asked “How do companies share information about customers across the organization?” In your subsequent observation work in companies, you might see people chatting casually about customers they recently visited while eating lunch in the cafeteria, and you might watch others input customer-related data to an internal company blog or wiki.

• In the Extracting Insights phase you sought to identify patterns, assumptions, or unacknowledged opportunities from the data you collected in Understand and Observe. In our CRM example, you might draw a two-by-two matrix that with one axis displaying the degree to which customer information is captured using technology and the other axis showing the size of the organization. From this you might extract the insight that “large companies fail to capture valuable customer information, as they lack a means to recreate the ‘water cooler’ talk of smaller organizations. Hence a new solution must engage people informally to encourage their participation in contributing customer data.”

• In the Ideate phase, you will turn the insights gained during Extracting Insights into a number of concepts. In our example, the concepts might range from literally placing water coolers all around the company (think about the kitchens at Google) to using an application like Yammer to engage employees throughout the company in a conversation about customers. In your concept generation, you might leverage knowledge of trends in social networking to help you imagine some of your solutions. As you exit the Ideate phase, you will narrow the number of concepts you’ve generated to a small number that you want to take back out and test during the Experiment phase. In our example, you might choose a Yammer format, a Twitter format or some sort of chat format as the three concepts you take forward.

• In the Experiment phase, you build a prototype of the concepts you wish to test, take them out to collect feedback on them, and then choose one to fully prototype and take forward.
**What’s a Concept?**  
*—noun*
1. a general notion or idea; conception.  
2. an idea of something formed by mentally combining all its characteristics or particulars; a construct.  
3. a directly conceived or intuited object of thought.  (Dictionary.com, 2010)

So, a concept is basically any idea you have about the topic at hand. Concepts can range from a small adjustment to the company’s website that you think will make it easier to use, to a sweeping change in how the company generates revenue. “Options do not necessarily have to represent disruptive business models. They may be innovations that expand the boundaries of your current business model to improve competitiveness.” (Osterwalder & Pigneur, 2010, p. 136)

The types of concepts you generate depend on the level of abstraction with which you look at a problem or challenge. Suppose I asked you to build a bridge for me. You might think of a beam bridge, an arch bridge, a cantilever bridge, or a suspension bridge. But if you asked me why I wanted a bridge, and I told you that I needed to get to the other side of a body of water, then you might think about tunnels, boats, wetsuits, helicopters, ... and bridges. If you asked me why I wanted to get to the other side, and I told you that I needed to get a message to the other side, you would imagine a phone, email, message in a bottle, a megaphone and other such options.

It is thus important to start the concept generation step with an appropriately defined “point of view”. In your business model generation work, you may take the point of view of an end customer of the organization, of the owners of the organization, or those who fund the organization. Each point of view will lead you to surface a different (but perhaps, and maybe hopefully, overlapping) set of options. You may start your business model concept generation at different points in the business model canvas as well – what else might you do with the activities and resources the company has now? What other market segments might you serve? What different channels or customer relationships might you form? (Osterwalder & Pigneur, 2010, pp. 138-141) All of these questions force you to take different points of view about your organization, and thus will yield different concepts.

**Dynamic Balance**
At the core of the ideation process is the notion of dynamic balance between diverging (generating options) and converging (evaluating options), depicted below (Puccio, Murdock, & Mance, 2007, p. 40). In short, you must always understand whether you are diverging or converging. You cannot do both at the same time.


**Concept Generation**

The objective of concept generation is simple: generate as many concepts as possible. Quantity matters. This phase of the Ideate process is divergent, and thus relies heavily on the rules for diverging:

1. **Defer judgment**: avoid premature evaluation and closure
2. **Strive for quantity**: “quantity yields quality”; generating more options will create more “good ideas” (Miller, Vehar, & Firestien, 2001)
3. **Seek wild and unusual ideas**: look at options in a different way than before. It is easier to make a wild idea more acceptable than to make a basic idea wilder.
4. **Build on others’ ideas**: the best ideas often build upon existing ideas
5. **Be visual**: when possible, express options visually as shown in your Osterwalder text

Following the diverging rules can be difficult for a team of people, and it is thus valuable to assign a facilitator in your team to enforce the rules. This person ensures that everyone in the group is heard, and that the team defers judgment – in any form – of ideas to the concept selection phase. Concept generation also draws on creative rather than critical thinking skills as described in the table below.

<table>
<thead>
<tr>
<th>Critical Thinking</th>
<th>Creative Thinking</th>
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<tbody>
<tr>
<td>analytic</td>
<td>generative</td>
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<tr>
<td>convergent</td>
<td>divergent</td>
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<td>vertical</td>
<td>lateral</td>
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<td>probability</td>
<td>possibility</td>
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<td>judgment</td>
<td>suspended judgment</td>
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<td>focused</td>
<td>diffuse</td>
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<td>objective</td>
<td>subjective</td>
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<td>answer</td>
<td>an answer</td>
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<td>left brain</td>
<td>right brain</td>
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<tr>
<td>verbal</td>
<td>visual</td>
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<tr>
<td>linear</td>
<td>associative</td>
</tr>
<tr>
<td>reasoning</td>
<td>richness, novelty</td>
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<tr>
<td>yes but</td>
<td>yes and</td>
</tr>
</tbody>
</table>

Table from (Harris, 1998)
Approaches to Generating Ideas

The use of questions rather than statements is a great way to start the concept generation process. It is also a good way to express your concerns about something, as it creates positive energy around resolving those concerns. Four of the question starters commonly used to generate options include:

- **How can we...?** (e.g., how can we double the size of the company in the next 18 months?)
- **How might we...?** (e.g., how might we deliver this product through a direct sales channel?)
- **In what ways might...?** (e.g., in what ways might we more regularly interact with our customers?)
- **What might be all the ...?** (e.g., what might be all the ways we can apply our company’s resources to generate revenue?)

These questions can be a good jumping-off point for a concept generation session.

You can also use forced connections to help you generate new ideas. Simply show the team an object or a picture (e.g., of a real or fictitious character such as Mickey Mouse, Gandhi, the Who) and then ask the question “when you look at this object or picture, what ideas do you come up with to solve the problem or meet the challenge?” (Miller, Vehar, & Firestien, 2001).

Making analogies can also trigger new ideas. Try listing all the letters of the alphabet, then coming up with an animal for each letter, and finally generating ideas around those animals. A llama might make you consider how to make your car spitproof. A leech might make you think about how to make your branding stickier. Taking a walk, visiting a museum, or spending a little time observing a piece of fruit – the packaging on a banana is pretty remarkable! -- might also give you new inspiration.

Approaches to Capturing Ideas

The classic approach to capturing the ideas from a concept generation session – one that many of you have likely experienced – is to have someone stand at a whiteboard or flipchart and capture all of the ideas generated by the group. Research on this approach has shown that it results in what is called “production blocking”. The person with the pen cannot write as fast as the group can generate ideas, and generally filters or edits those ideas as they are tossed out by the group. So, it is better to let the individuals in the group capture their ideas and then post them to share them with others.

As you have experienced in this class, capturing ideas on post-it notes – one idea per post-it – is a quick and easy way of getting a lot of ideas on the table quickly. Another way of capturing ideas is to create a half-sheet like the one shown below. On the top of the half-sheet, write the title of your concept. Under that, provide a very short description of what your concept does. Then sketch a simple graphic that represents your concept, and add any required details as to why or how your concept works, and why it is great. Use a heavy pen so your concept can be readily seen when posted.
At the end of the concept generation process, you will have hundreds of concepts with which to work. It is often helpful to cluster the concepts so that as you move into the concept selection phase, you have a smaller set of options to work through.

**Concept Selection**

The objective of the concept selection process is to discuss, combine and narrow down the options generated in concept generation to a small number of viable options. This phase of the Realize step relies on the converging rules, and we repeat them. The converging rules help you to make choices while at the same time working on various options to make them stronger (Treffinger, Isaksen, & Dorval, 2003).

1. **Be affirmative**: evaluate options by considering what may be good first rather than going directly to the negative
2. **Be deliberate**: avoid fast decisions; put aside your assumptions and biases to give options a fair chance
3. **Check your objectives**: remember your original purpose and use your objectives as your main criteria (specific criteria may also be added)
4. **Improve ideas**: while converging, it is possible that new options or combinations of options will emerge or you will find ways to make ideas more appealing. Write them down and include them in your diverging options
5. **Consider novelty**: give your options a chance; it is easy for groups to be conservative during the convergence phase
Approaches to Concept Selection

There are many approaches to doing concept selection that range from the relatively informal to more formal methods. The approaches include:

- External decision (e.g., letting the boss decide)
- Product champion (i.e., letting the person who is most vested in the success of the project decide)
- Intuition (either individual or team)
- Multi-voting or dot-voting (see the notes below and the toolkit)
- Pros and cons (i.e., identifying the pros and cons of each of the options)
- Decision matrices (see the notes below and the toolkit)
- Prototype and test (which we will talk about in the Experiment phase)

In multi-voting, you simply give each person on the team a small number of stickers, or dots, (see dot-voting instructions in the toolkit for more detail), and let them affix each of those stickers to the options they like best. You can then focus on the options with the most stickers, discuss them, combine them, etc. to take to the next stage of the process, Experiment. Note that implicit in a multi-voting approach is either 1) everyone in the group shares a similar notion of the criteria on which the options are to be evaluated or 2) the criteria on which the options are to be evaluated are represented in a balanced way in the group (e.g., there is a marketing person, a technology person, a supply chain person, a finance person, etc. participating in the voting).

Card sorting requires that you take all the options you are considering and write them on index cards or post-it notes. You then rank the options from best to worst (following the more detailed instructions in the toolkit) to determine which options are the most preferred. Card sorting has similar issues to multi-voting, as it doesn’t force the team to make explicit the criteria being used to evaluate options.

Concept selection matrices are more formal approaches to concept selection requiring that you not only identify a set of options from which to choose, but that you also clearly identify the criteria you will use to evaluate those options. Concept screening compares all the concepts to a reference concept, judging them simply as better (thus getting a +), worse (thus getting a -) or the same (thus getting a 0). The concepts with the most pluses are considered for further steps, as well as concepts such as Concept F in the chart below, that have pluses for criteria on which other options didn’t fare as well (load handling in this case). The features of concept F that create the + might be added to the other concepts going forward.
Concept scoring is often used after concept screening, and is more fine-grained as it includes numerical evaluations of the concepts against each of the criteria. As in the chart below, you might rate each option on a scale from 1 – 5 on each criterion, weight the criteria, and then calculate a score. Again, while you may go with the option that has the highest score, you might find characteristics of other options that are valuable to include in the final option(s).

**Concept Scoring**

When doing concept screening and scoring with teams, it is useful to have each individual on the team complete the matrix individually. Then when the team meets, the focus can be on points of difference.
rather than argue through ratings on which the team agrees. There are automated tools available to collect this kind of evaluation data.

**Summary**

The Ideate step of the Problem Finding, Problem Solving process aims to:
- Generate a number of alternative solutions to a problem
- And then select a small number of them to take into the Experiment phase of the process.

The tools used for concept generation include:
- Forced connections
- Analogies

The tools used for concept selection include:
- Dot-voting (or multi-voting)
- Card sorting
- Concept screening matrix
- Concept scoring matrix
References


