BrainSwarming™ **Overview and Tips**

by Tony McCaffrey, PhD
tony@innovationaccelerator.com
CTO, Innovation Accelerator, Inc.
www.innovationaccelerator.com

Introduction to *BrainSwarming*:
Stripped down to its essence, ***BrainSwarming*** is a silent method for groups in which participants contribute their ideas in short notes on a structured graph.

3-minute ***BrainSwarming*** video from *Harvard Business Review:*
http://blogs.hbr.org/2014/03/why-you-should-stop-brainstorming/

The benefits of ***BrainSwarming*** over brainstorming are many. Here are a few:

• No more domination of the session by talkative extroverts. There is no talking.
• No need for a facilitator to keep people from dominating or judging. The silence of the *BrainSwarming* process itself keeps people in line.
• No more sharing one at a time. People work in parallel so the work goes much faster.
• No one needs to be a scribe. Everyone is writing and placing their ideas at the correct place on the graph.
• No one needs to create a summary of the session. Take a picture of the graph and send that out or just keep the graph up on the wall for later use.
• No more remembering what people said. It is all visible on the graph.
• No more forcing everyone to be present for the session. The graph remains on the wall so people can contribute at different times.

The Graph:

Leverage the resources to achieve the goal.

That is the basis of the *BrainSwarming* graph. The refinement of the goal grows downward and the interactions of the resources grow upward until the two directions connect (Figure 1).
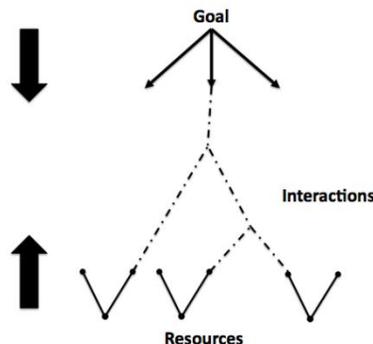

Figure 1: BrainSwarming's Bi-Directional Problem Solving Graph

Example: The Stuck Truck Problem

A UPS driver got the truck stuck beneath the underpass. How can the driver alone free the truck while doing minimal damage to both the truck and the underpass?

Figure 2: UPS Truck

In Figure 3, an initial graph is constructed with Post-It notes on a wall or whiteboard so that all can see. The goal is placed at the top and a few known resources are placed at the bottom.

Figure 3: Initial Graph for Stuck Truck Problem

The only hint initially given to beginners is the following (Figure 4). If you write out something on your Post-It note that begins with a verb (i.e., related to goals and actions), then that note should probably be placed toward the top-half of the graph. If your note begins with a noun (i.e., related to resources), then the note should probably be placed toward the bottom-half of the graph.
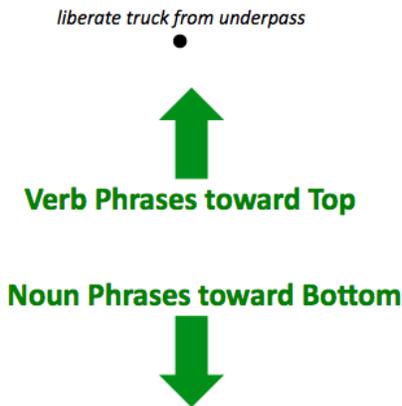
liberate truck from underpass
•

Verb Phrases toward Top

Noun Phrases toward Bottom

•   •   •
truck   road   underpass

Figure 4: Hint for Beginners on Placement of Notes

Without talking, people start writing on Post-It notes and placing them on the wall/whiteboard. As in Figure 5, some will naturally want to refine the goal and will place their Post-Its below the goal growing downward. Others might start dissecting the resources into their parts and features. Someone might think of a new resource and add it to the bottom.
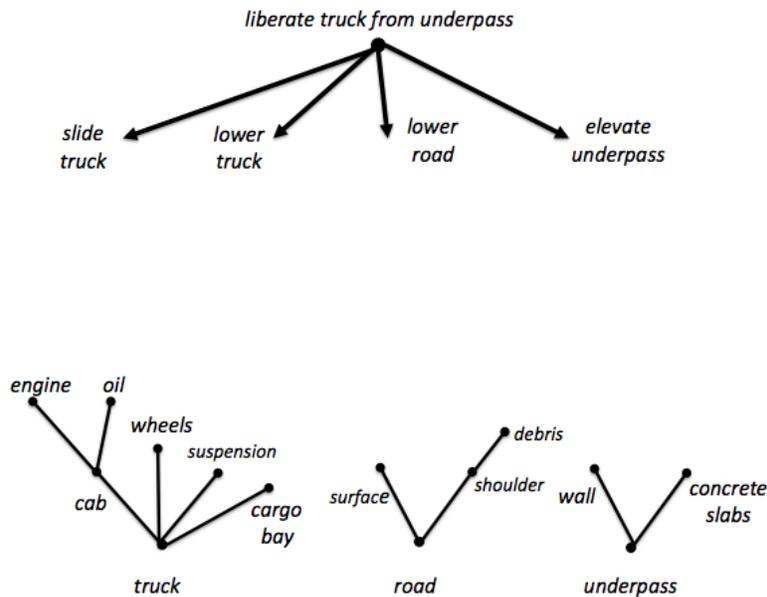
liberate truck from underpass

slide truck   lower truck   lower road   elevate underpass

engine oil
wheels
suspension
cab   cargo bay
truck

surface   shoulder   debris
road

wall   concrete slabs
underpass

Figure 5: Downward and Upward Growth

Others might start interacting the resources together to produce results that partially solve the problem. These interactions will go above the resources. Whenever the two directions connect you have a possible solution (Figure 6).
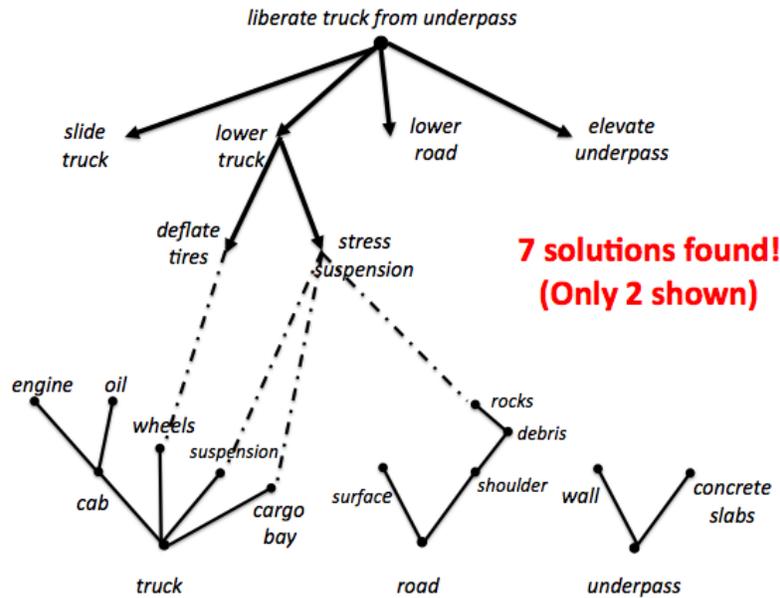
Figure 6: Some Solutions to the Stuck Truck Problem

Figure 6 shows two of the seven solutions that were found by the group that worked on this problem. The classic solution is to deflate each tire a bit so the truck will lower a few inches, which permits the truck to be driven away. The other solution shown in Figure 6 shows how to lower the truck by stressing the suspension by adding weight to the cargo bay. The weight could come from rocks or other things along the side of the road. Five other solutions were found but are not shown in Figure 6—including using the oil from the engine to lubricate the top of the truck.

Facilitator's Role

The facilitator helps keep the graph orderly—since many Post-Its will be added to it in a short amount of time. Also, the facilitator helps participants place their notes in the proper place on the graph and connect them with lines to other notes. The facilitator does NOT have to keep the talkative people from dominating the session—the silence takes care of this automatically. The facilitator does NOT have to keep people from critiquing each other's ideas—the silence takes care of this automatically.

When to Talk Again

After the number of new Post-It notes dwindles, people can then return to talking. Many ways of proceeding are possible, but here are three options.

1) People gather around their favorite ideas and small groups form to further flesh out the idea.
2) People vote for their favorite ideas by placing small Post-Its next to them. The most popular ideas are worked on by small groups.
3) The entire group re-assembles to discuss the ideas as a whole group.

The Grammar of Problem Solving

Every contribution on a Post-It note can be expressed succinctly either as a verb phrase (e.g., *lower truck*) or a noun phrase (e.g., *concrete slabs* and *underpass*).

Working top-down, all goals and goal refinements can be expressed in the form <verb> <nounPhrase> <prepositionalPhrases>.

Examples: (1) *liberate truck from underpass* and (2) *slide truck.*

The <verb> describes the change you want to happen. The <nounPhrase> names what needs changing. The prepositional phrases (i.e., <prepositionalPhrases>) describes any relationship and constraints.

Briefly Answering the *How* Question

<u>Moving Downward</u>
As you move downward from the main goal, *liberate truck from underpass*, you keep asking the question *How?* and answer as briefly as possible. You usually either use the form <verb> <nounPhrase> <prepositionalPhrases> or just a <verb> <nounPhrase>.

Question: *How might you liberate the truck from the underpass?*

Answers: *Slide truck*, *Lower truck*, *Lower road*, *Elevate underpass*: All these examples use the form <verb> <nounPhrase>.

<u>Moving Upward</u>
As you move upward, all your contributions will be noun phrases. Each phrase will either begin with a noun (e.g., *concrete slabs* and *underpass*) or an adjective (e.g., *wide road* and *narrow shoulder*).

Different Types of Problems

We have used ***BrainSwarming*** to solve many types of problems.

1) Technical/Engineering Problems
2) Fundraising Problems
3) Strategic Planning
4) Marketing Problems (e.g., overcome obstacles to product acceptance)
5) Marketing Problems (e.g., create new uses for an existing product)
6) Advertising Problems (e.g., create slogans and images)
7) Human Resources Problems

Contact Dr. Tony McCaffrey (tony@innovationaccelerator) for more information on any of these problems, as well as other types.

Summary and Contact Information

These are just a few ways to help you properly form your **BrainSwarming** graph and organize your group's activity. Dr. Tony McCaffrey is available to lead groups in the **BrainSwarming** process and teach more of the heuristics. Contact him at tony@innovationaccelerator.com

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