

CREATIVE WHEELING

A CREATIVITY PROCESS FOR ENGINEERS



By Dave Arch

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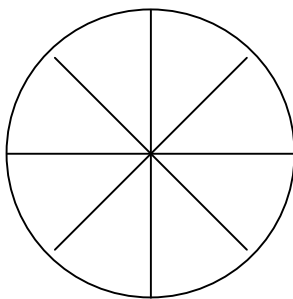
“Although I suppose that only God truly creates, people sure do discover some wonderfully new combinations!”

Picasso took the existing tools of colors, brushes and canvas -- creating new combinations that continue to amaze and inspire. Mozart took a relatively limited number of musical notes and combined them in ways that had never been heard by the human ear. Great fashion designers present to us new blendings of the already present fabrics and colors. Even such great inventions as the light bulb and telephone consisted of finding new ways to relate already existing components.

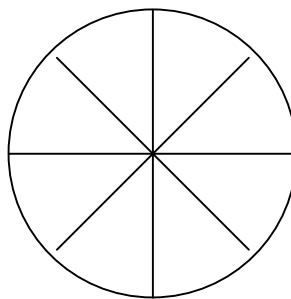
The process of Creative Wheeling expands upon such an understanding of creativity.

The Tools

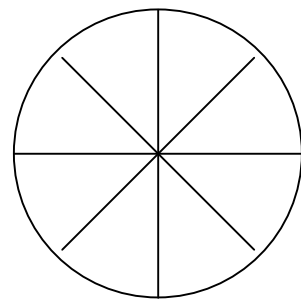
In this Starter Kit you receive a template that look like a vault door with three wheels on each one:



THE PROBLEMS



THE SOLUTIONS



THE RESULTS

The labelling below the wheels assumes that you'll be using these worksheets primarily within a creative problem solving application. However, later you will learn how to modify the labelling to also accommodate differing applications including new product design or program development.

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You'll also find a template of wheels that resemble dials on a combination lock. You will cut out three of these – including the dotted line slot in each wheel.

Although the process of Creative Wheeling can be used both individually and in groups, these instructions will explain how to use them in both large and small groups (i.e. committees and focus groups). Whether used individually or in a group, the process itself consists of three distinct stages: The Brainstorm, The Observations, and The Evaluations.

Stage One: The Brainstorm

After introducing the topic of focus for the problem solving session, distribute the basic vault door worksheets so that each person has one. Give each individual time to personally brainstorm on the question **“What problems do they see contributing to the overall problem under discussion?”** Each person lists some of the different problems they see in one or two word synopses between the spokes within The Problems hub of the wheel. One problem is placed within each space. After a limited amount of time, have them brainstorm in small groups and then finally you as the facilitator receives feedback from the large group.

As with all good brainstorming, all contributions are received without comment or evaluation.

Then the same process (i.e. individual brainstorming, small group, large group) is used on the wheel labelled The Results. The question now asked is **“What will this situation look like when effective solutions have been applied?”** This is the visualization stage in which the desired results are defined and written between the spokes of that wheel.

Finally, the wheel labelled The Solutions is filled in with the same brainstorming process as proposed solutions are suggested by the participants. Once again no comment is made about any of the solutions and no evaluation offered. This brainstorming of solutions prevents participants from looking for “the right answer” and rather provides a vehicle for recording all possible solutions.

Stage Two: The Observations

Then the perforated dials are distributed so that each person receives three. They are asked to remove the perforation so that each now dial has an open slot in it.

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Individually they place those dials on top of their worksheet wheels so that only one of the spoke spaces shows through each dial's slot. They are then to ask themselves **“Will the exposed solution contribute to the remedying of the exposed problem bringing about the exposed desired result?”**

Each person should keep a written record of their own observations.

They should then turn the dial to expose yet another problem, solution, and result -- making notes on observations they might make about the three components now exposed.

Following a time in which each person has several opportunities to rotate the dials and make note of their own observations, small group interaction should occur in which people have opportunity to share their observations with one or two others. Even if the entire group has only four to six people, it has still been found that this stage is important to use if even dividing into small groups of only two people.

At the conclusion of this stage, the entire group is ready for. . .

Stage Three: The Evaluations

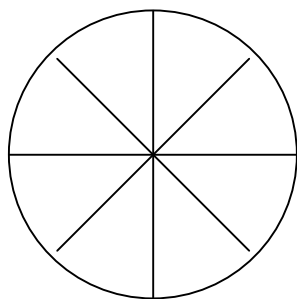
The process of Creative Wheeling has been designed so that by this stage suggested solutions will have become separated from the ego of their contributors. Now the participants are prepared for an open and spirited discussion of the options previously written between the spokes of the centremost wheel (The Solutions). Each will have a series of observations ready to contribute both from their own personal observations as well as the smaller group interaction.

The process as presented above has used the small group interaction as a means of making the observations anonymous so that as observations are contributed in this section of the Creative Wheeling process, no one is sure whether the observation is the product of one person or the result of small group synthesis. Once again the potentially stifling effect of ego involvement has been neutralized.

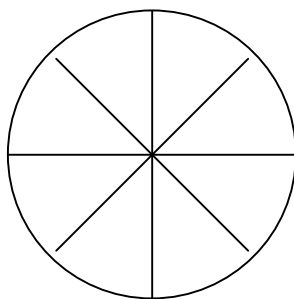
The Applications

Once the process of Creative Wheeling is understood in the problem solving model, transfer to the following applications are easy to make:

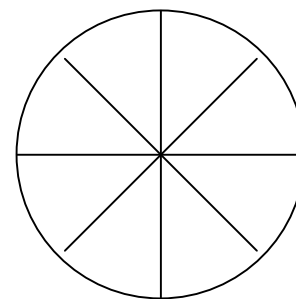
New Program Development



The Needs



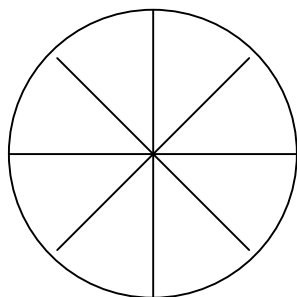
The Programs



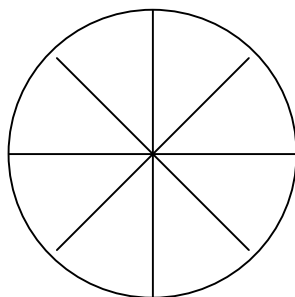
The Results

By using the above labels with the wheels, you can follow the same process with new program ideas being the result of the creative process! “What needs do we see?” “What results are desired?” “What programs might help us create those desired results?”

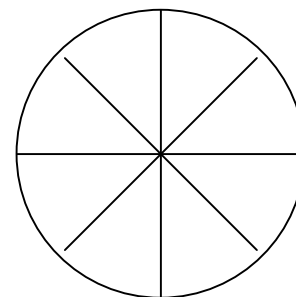
New Product/Structure Design



The Needs



The Products



The Results

Now the questions “What needs are we attempting to meet?” “What results do we hope to see?” and “What products might create those desired results?” guide the Creative Wheeling process.