ToP Design Patterns
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In a nutshell

The ToP Trainers Network in the US has launched an initiative to work on facilitating ToP processes in a virtual environment. The team working on tools for virtual ToP facilitation has been introduced to "Collaborative Engineering" and the idea of "Design Patterns" for facilitation.

We want to identify ToP Design Patterns, the small, distinct facilitation processes, the building blocks we use in designing ToP facilitation processes; the "DNA" of our practice. Once we have identified these ToP Design Patterns, we can identify the virtual functionality and the face-to-face and virtual facilitation tools that are best suited to supporting ToP facilitation. It will very likely be a suite of tools rather than a single application.

The quoted material is from documents listed in "References" and identified by number.

Collaboration
We work with groups; all kinds of groups in all kinds of situations. We facilitate collaborative processes that help them achieve their group work objectives.

> *People frequently join forces to accomplish goals through collaboration that they could not achieve as individuals. By collaboration we mean joint effort toward a goal. Collaboration is essential for value creation and often used for mission critical tasks. A collaboration process is a series of activities performed by a team to accomplish a goal. (1)*

Collaboration Engineering

A new field is emerging. Bob Briggs, who we met through IAF has been a major driving force in this area. He has worked on this from an academic perspective and through the development of "Group Support Systems', a computer application to assist the facilitation process. Another driver has been Danny Mittleman. We also met Danny through IAF. More recently, Doug Druckenmiller, long time ICA colleague and current ICA US Board member and Jon Jenkins, another long time ICA colleague, have become involved. Doug and Danny are both actively involved on our team

> *Collaboration Engineering is an approach that designs, models and deploys repeatable collaboration processes for recurring high-value collaborative tasks that are executed by practitioners using facilitation techniques and technology. Collaboration Engineering processes support a group effort towards a specific goal, mostly within a specific timeframe. The process is built as a sequence of facilitation interventions that create patterns of collaboration; predictable group behavior with respect to a goal. (1)*

Toward a Pattern Language for Facilitation

This is an idea that has grown from a concept in architecture. Christopher Alexander, Sara Ishikawa and Murray Silverstein of the Center for Environmental Structure of Berkeley, California described it in "The Timeless Way of Building" and "A Pattern Language". Their key thought was that the "problems" faced by architects and designers can be solved through the use of some basic design patterns. When a designer is designing something like a house, a computer program or a stapler, they must solve many problems. A single solution that works for many situations is a single design pattern. Each design pattern can have a name and a description, an explanation of why that solution is a good one for that problem and recommendations for use, Many single patterns form a language of useful, design patterns that are related to each other and can be used by designers.

The collaborative engineering community has applied that concept to the field of collaborative group work through the use of "thinkLets."

> A **thinkLet** is a named, packaged facilitation technique that creates a predictable, repeatable pattern of collaboration among people working towards a goal. ThinkLets have become a powerful pattern language for collaboration engineers, who use thinkLet names to describe and communicate sophisticated, complex process designs in a compact form (1)

> "A thinkLet is the smallest unit of intellectual capital required to create one repeatable, predictable pattern of thinking among people working toward a goal. In order to achieve a goal, people must move through a reasoning process. To move through a reasoning process, people must engage in a sequence of basic patterns of thinking. Before it was called, "thinkLet," this concept had other, less apt labels – Recipe, Technique, Reasoning Module. The term, "thinkLet" was coined by David Tobey in March of 2000 as we struggled for an expressive label. "It's like an applet," he said, "but it's a thinkLet." (3)

ThinkLets, we are using the term Design Patterns, have been developed for a lot of different uses. Several in education i.e. Teaching math – basic problem solving patterns that can be used in many different situations.

For facilitators, they are very basic sets of procedures that a facilitator can use to help a group do a specific thing. An easy example is the way we do brainstorming in the Workshop Method. It is a distinct thinking process with a simple set of procedures that allows a group to articulate a broad spectrum of ideas in relation to a focus question. There are tons of specific ways to do brainstorming – each of them that is a distinct process can be called a Design Pattern. Some are variations on a core Design Pattern.

An example of a ThinkLet

Note - - This example is used in the Group Support Systems software. It is not a ToP example. This is one way to describe a thinkLet.

DirectedBrainstorm (2)

Overview
Participants will brainstorm solutions on separate pages. When a solution is submitted, the pages swap and the participant gets a different page with contributions of others to add new contributions or to respond to. The facilitator inspires the group by emphasizing different aspects of the problem.

Metaphor
This thinkLet is named DirectedBrainstorm because the input of the participants will be focused by the emphasis on different aspects of the problem

Script

Do this
Explain that this step is important to generate a First set of solutions. Explain that we are looking for creative solutions to the problem.

Explain the assignment; brainstorm as many creative solutions to the trolley problem as you can think of, based on the different aspects of the problem.

Instructions
Click 'go'
You will get an empty page in front of you
Type in a solution, one solution at a time
Click 'submit'

You will now see a new page that already has a solution from somebody else.
You can now:

Add a new solution independent of the solution that is already there
Elaborate on the solution or respond to it, in this case refer to the random number behind it. Be creative and be inspired by the solutions of others, I will also remind you
about the different aspects of the problem.

After 5 min. give a prompt every 2-3 min to highlight the different aspects of the problem Try to push the group to go further than the obvious solutions and open
doors; Keep in mind the 20 min.

Rules to maintain
One solution a time
When you respond or elaborate, refer to the number of the idea you respond to

What will happen?

Pattern of Collaboration Key pattern: Generate

Participants will generate solutions based on instructions they will read solutions of others and they will listen to your prompts. This will inspire them to come up with new and creative solutions. It might also help to try and push them to go beyond the obvious solutions and open doors.

Expected result
The result of the directed brainstorm is a large list with solutions divided over multiple pages. The list can contain redundancy and double solutions.

Timeframe
We will take 20 minutes for this step. Make sure that you do not reduce the time for this step. If you are behind on schedule, reduce time in other steps, not in this one. The session will be meaning less if it is based on an incomplete list of solutions.

Challenges
After a while the amount of input reduces This is normal, there is a curve in the input of a brainstorm thinkLet, after a while people need more time to read the ideas of others, after that the amount of input will increase again.

Contribution
In this step, we will brainstorm the solutions. Everyone has a chance this way to contribute their ideas for solutions, and participants will inspire each other. Because we divide the input on multiple pages, we reduce the information overload in the session. There will be redundant and double solutions, therefore in the next step we need to reduce and clarify the results to converge to a short list of ideas.

DirectedBrainstorm example
We did directed brainstorm to identify possibilities to improve a production process. During the brainstorm different problems with respect to the process were illuminated. Because people read each other's ideas they became inspired and came up with new creative ideas to improve the process. Some of the best ideas were implemented.

Complex Process Design

When we work with groups, we are called upon to design complex processes to help them through a collaborative thinking process that gets the results they desire.

> *A fundamental assumption in the design of repeatable collaboration processes is that each process consists of a particular sequence of thinkLets that create various patterns of collaboration among the team members. ThinkLets can be used as conceptual building blocks in the design of collaboration processes and as learning modules of facilitation techniques for practitioners and novice facilitators. Each activity in the design of a collaboration process can be supported by one or more thinkLets. (1)*

We're using the term, "ToP Design Patterns." The idea is the same as "thinkLets." We clearly have a 'pattern language' made up of individual ToP Design Patterns. It is in use by thousands of facilitators around the world. We have systems and structures for teaching it. We have books written about it.

A whole ToP workshop uses a series of these Design Patterns. A complex facilitation design uses many more. We modify common ones sometimes and sometimes we use some that are not exactly standard. It depends on the situation.

The best and most obvious application of this ToP Design Pattern approach is the ToP Strategic Planning method. It is a construction of an orchestrated series of ToP Design Patterns. It takes people through an extremely complex thinking process. It is modifiable to meet the needs of each specific situation. It produces results that are predictable in form and unique in their content.

When we design a facilitated event from the beginning, we do a kind of reverse engineering that moves backward from the desired outcome right through a process. We do the same in designing a conversation. We identify the aims, the concrete beginning point, focus on the key interpretive or decisional level question and put together a set of questions that will guide the group's thinking to be able to address that key question in a meaningful and productive way. It usually involves several thinking steps that build toward a result.

Probably each step is a ToP Design Pattern. Each focused conversation or each basic type of Focused Conversation is probably a ToP Design Pattern. That's kind of how we used them in The Art of Focused Conversation. They are conversation templates that can be used and modified that deal with a particular thing.

ToP Design Patterns

For the Virtual Facilitation work, we need to identify the key Design Patterns that are integral to each of our key ToP methods/applications. They are the little bits of the "code" we use when we facilitate.

The following example was done using our original version of the design template. The current version is at the end of the paper.

60 Ideas
A ToP Design Pattern

The Big Picture

Title Your name for this Design Pattern	**60 Ideas** Brainstorming for a Workshop
Metaphor "it''s like . . . " Why you chose this name	We have found that 60 ideas is an optimum number of ideas to address most topics. This form of brainstorming was designed specifically for use in a ToP Consensus Workshop in groups of less than 30 members.
Overview A brief description	Individuals brainstorm in response to a focus question and small groups select key ideas to bring to the whole group.
Type The kind of thinking involved O-R-I-D etc	Objective level – generative thinking Individual brainstorming enables each person to begin the group process with some ideas. It makes for more even participation. The group brainstorm processes the ideas at a very basic level focused on basic, objective understanding and elimination of overlap among ideas.
Role The role it plays in an overall process	This brainstorm provides to foundation for the workshop. It gets out a broad spectrum of the thoughts of the group. It initiates and elicits participation from every member of the group.
Timeframe How long it takes	About 20 minutes. It can be extended. It should not be extended to more than 30 minutes total.

Objectives

Rational Aim What the group will know, learn, create or decide	The group will create a list of responses to the focus question to be used in subsequent stages of the workshop.

Experiential Aim How the group will be different at the end of this Design Pattern	I can get my real ideas into this process. This is getting me reved up to participate more deeply.
Product The tangible results of this Design Pattern	A list of 60 brainstormed ideas written on cards in preparation for the next step in the process.

Script	
Context What to say or do to prepare the group for this **Design Pattern**	The focus question for this workshop is _____. It is important to us because _____ An obvious response to this question might be ____. That's the kind of thing we're looking for in this workshop. Our first step in this workshop will be to brainstorm our responses to this focus question. *(A brief restatement and specific focusing of the overall context. It is designed to put the brainstorm question in perspective for the participants. Providing participants with a few examples of appropriate responses will help them develop quality ideas. It gives the participants an image of the level of specificity.)* In this step, will do 3 things. Brainstorm our own ideas individually Highlight our best ideas Brainstorm in small groups We will then, in the whole group, cluster all the ideas, name each cluster and discuss the results.
Instructions Step by step procedures	**Individual Brainstorm** Our first step in brainstorming will be to work individually. Please make a list of all your ideas in response to this question. You will have 5 minutes for this step. Let us do this work in silence. **Select** Now we will select our top ideas Please put a star ***** beside your 3 best ideas. You will have 2 minutes for this step. **Group Brainstorm** We will now move into groups of 3 – 4 people and brainstorm together. In your groups: Going around the group, share one idea at a time. Discuss the ideas only enough to be sure everyone understands them. It is not necessary that group members agree with each idea. Get all of the main ideas on a list. The list may be on paper or on a flip chart. Select 10 of the clearest ideas. Eliminate overlap among ideas. Honour the diversity of ideas. Write each idea on a card using Large Block Letters. You will have 10 minutes for this step.

Using this Design Pattern	
Materials List the materials needed for this Design Pattern	Note paper Pencils Non-toxic Markers 5" x 8" file cards Flip charts and paper (optional)
Groundrules Specific participation guidelines to maintain in using this Design Pattern	Individual brainstorming needs to be done in silence Group brainstorming needs to preserve the diversity of thought in the group Group members need not agree on each idea Eliminate overlapping ideas, but do not combine ideas to create a larger concept. Maintain specificity.
Use Situations in which this Design Pattern works well	This form of brainstorming was designed specifically for use in a ToP Consensus Workshop. This is best used with groups of less than 30 - 40 participants.
Not use Situations not to use this Design Pattern	Do not use this form of brainstorming if the ideas will not be discussed and processed by the group. Do not use this approach to brainstorming with very large groups of over 40 – 50 members.
Challenges Difficulties a facilitator may encounter in using this Design Pattern	In some groups, participants tend to want to think together. They may not be confident in coming up with ideas without some immediate feedback. Encourage at least 2 minutes of silence before talking with others.
Tips Best practices - advice for using and modifying this Design Pattern	The number of ideas gathered in this Design Pattern can vary. A small group working on a very focused topic may not need to generate as many ideas in order to address the question appropriately. A good workshop requires between 35 and 60 ideas. Less than 35 does not adequately address a substantial question. Workshops with fewer than 35 ideas tend to generate more abstraction than specificity in the ideas and the cluster names. Brainstorms of more than 60 ideas tend to get a lot of overlapping ideas. To determine the number of cards from each small group. Decide the total number of ideas you want in the workshop. A small group of 2 – 4 people is the best size for this exercise Divide the total number of cards by the number of small groups to determine the number of ideas from each small group For example. I want 60 ideas The group is 24 people. I will divide them into 8 groups of 3. 60 divided by 8 = 7 to 8 ideas per group If a group is too small to sub-divide i.e. under 6 people, eliminate the "Group Brainstorm step. Ask individuals to brainstorm a substantial number of ideas, select their best ideas and write them on cards.

Example	
Briefly describe an example a situation in which this **Design Pattern** has been used	A group of 20 mental health professionals wanted to determine what to include in mental health programming. The focus question was, "What elements do we need to include in our programs in order to serve the needs of our clients?"
	For this workshop, it was determined that the maximum brainstorm of 60 ideas was needed. The group was divided into 5 groups of 4 people. Each group was asked to present 12 ideas to the whole group.
	The context for this workshop included presentations on program consolidation by the ministry of health as well as conversations about the clientele and their mental health situation and needs.
	Individuals then brainstormed program elements they felt were necessary. They selected their best ideas and shared them in small groups. In practice, some of the groups brainstormed more than 12 ideas and one group brainstormed less. The result was a good spectrum of their thought in relation to the essential elements of mental health programming for the area.

Using the ToP Design Pattern Template

This file includes two Design Pattern templates. The first one includes a description of each section. The second one, beginning on page 15 is blank. It is to be used to document ToP Design Patterns

To use the template to document your ToP Design Patterns

- Either "save as" and rename the file or copy the blank part of the template and copy it into a new file.
- To work with paper and pencil, you will need to add lines – hard returns in the various sections in order to make enough space to work.

- Determine the scope of the design pattern. Please refer to the "ToP Design Patterns" paper. A design Pattern is, basically, a single step. It may be done on its own or as part of a larger process.
- Enter the Procedures for this design pattern.
- Fill in the section on Using this Design Pattern
- After that, and only after that, fill in the "Big Picture" section. This must be based on the actual steps and instructions of the design pattern.

    This is one of the keys to ToP methodology. It begins on the most basic level of information necessary for the given situation and moves toward greater abstraction. In this case, the most basic stuff includes the actual procedures, questions, instructions and process steps involved. To begin at the beginning of the file will cause a lot of unnecessary anguish, because none of it will make sense until you have the procedures laid out.

A note on variations

In our June meeting, our discussion helped us see that we have a single methodology that has been modified in many ways resulting in several variations. There is no single specific way of applying ToP methodology that is the "final, correct" way. We left that idea behind in about 1980. We have innovated a number of variations over the years.

As we document these variations and provide access to them, ToP facilitators will have access to a wider variety of options to meet the challenges of the situations they encounter. It will enrich our knowledge base and enhance our ability to design ToP applications.

We will need to document several versions of each DesignPattern before we pay a great deal of attention to the variations. For the initial phase of our work, it is more important to simply document the DesignPatterns as they are used.

There appear to be 2 basic kinds of variations. We are, obviously, still learning about this; so this is far from conclusive.

Methodological variations are ways of applying a design pattern in substantially different ways. They include different steps or significantly different ways of doing a process. Methodological variations seem to involve differences in cognitive processing of information.

For example, some facilitators include a step called "tagging" in the "gestalting/clustering/organizing" design pattern and some do not. Neither is more right or wrong than the other, but it is a methodological variation. ToP facilitators make both of these variations work, but they are distinct methodological approaches. In some cases, it is useful to sort ideas into already established categories. This would be a very distinct methodological variation

Procedural variations are minor differences in parameters, instructions and steps. They are much less substantial and seem to be mostly related to differing group needs. An example would be the number of ideas asked of a group in a ToP Consensus Workshop. The differences are entirely situational. We may find, as we document our approaches, that there is a range within which the method is effective. However, it is likely that, within a range, the choice will be related to the number of people in the group, the time available and, perhaps, the experience and comfort level of the facilitator.

References

1. **A Conceptual Foundation of The thinklet Concept for Collaboration Engineering**
   Gwendolyn L. Kolfschoten, Robert O. Briggs, Gert-Jan de Vreede, Peter H.M. Jacob, Jaco H. Appelman
2. **ThinkLets: Building Blocks for Concerted Collaboration**
   Dr. Robert O. Briggs and Dr. Gert-Jan de Vreede
3. ***ThinkLets: Achieving Predictable, Repeatable Patterns of Group Interaction with Group Support Systems (GSS)***
   Robert O. Briggs and David Tobey – Group Systems, Gert-Jan de Vreede – U of Delft and Jay F. Nunamaker, Jr. - U of Arizona

A ToP Design Pattern Template

Step 1

Script - copy these tables for each methodological variation

Variation Name

Context	What to say or do to prepare the group for this design pattern
Procedures	Enter the step-by-step procedures used to facilitate this Design Pattern. Include what you include in you preparation and what you say and what you do in the actual facilitated event.
Ground Rules	General and specific participation guidelines to maintain in using this design pattern

Step 2

Using this design pattern - - in a face to face or virtual environment

If you describe its use in both environments, please copy this section an use one for each description.

Group size	The optimal group size for this Design Pattern. Minimum and maximum
Space needs .	▪ For a face to face situation, describe the physical setting that is best for this design pattern – tables, chairs, walls etc. ▪ For a virtual situation, describe the technological requirements
Timeframe	Low long it takes
Tools	Describe the tools used to facilitate this Design Pattern. ▪ For a face to face situation, it may be a flip chart and markers or a wall and file cards. ▪ For a virtual situation, describe the best known options for virtual tools.
Pre-event preparation	What are the contexts, information, background and instructions that are needed by participants prior to the event. Describe any introduction or orientation to the virtual tools that is required for the Design Pattern to be facilitated effectively
Atmosphere	Describe the environment, ambiance and style that will enable the participants to be at their best.
Preparation	Describe any special preparation needed to make this design pattern successful i.e. Creating graphics, charts, software configuration. etc.
Challenges	Difficulties a facilitator may encounter in using this design pattern

Tips	Best practices - advice for using this design pattern
Modifications	Describe how this design pattern can be successfully modified or adapted. Describe key possibilities and limitations related modification.
Example	Briefly describe an example a situation in which this design pattern has been used successfully.

Step 3

The Big Picture

Name	Your name for this design pattern. The name should capture the imagination and be functional.
Overview	A brief description of this design pattern. "Design Pattern in a nutshell" A paragraph should be sufficient to provide an overall image of the objectives, steps and results.
Metaphor	"it''s like . . . . " Explain why you chose this name
Graphic	A visual image that encapsulates this design pattern.
Level of thinking	Identify the primary level of thinking involved. Identify the level of thinking that finally answers the central question. A Design Pattern may move through a couple levels to reach the main level necessary to respond to the question appropriately. The cognitive process may move carefully and incrementally in some situations and quickly and intuitively in others. You are trying to identify the level that the major processing happens **Objective** – Perception Focusing on the most concrete beginning point for further discussion or collaborative work - building a foundation of basic data about the topic of inquiry - generating initial ideas, observing, remembering or clarifying facts, ideas and information. **Reflective** – Reaction and response Expressing internal relationships to the objective information, Relating to the objective information, expressing immediate reactions, describing memories, making associations and connections among ideas, describing feelings, moods and emotions, **Interpretive** – Judgment Determining the meaning and significance in relation to the topic, making sense – understanding, determining significance, creating meaning, determining purpose, stating implications, considering alternatives and options, **Decisional –** Resolution Articulating commitments, choices and decisions in relation to the topic, making a decision, stating a resolution, choosing among options, forming a consensus, determining profound or transcendental meaning, indicating actions to be done, making assignments, responding to or answering the central question of the inquiry. In some cases, all or several levels of thinking may be included in the steps in order to enable the group to focus on the primary level of thinking involved.

Pattern of Collaboration	Describe the kind of conceptualization the group is trying to do together. This set has been taken from collaboration engineering literature. There may be other ways to describe these functions. The central question is, "What is the group trying to do together." ▪ **Generate** Moving from fewer to more shared ideas. Ideation, brainstorming, creative idea generation, gathering information, data and ideas, reflecting. ▪ **Reduce** Moving from many concepts to fewer concepts. Filtering ideas in relation to a criteria, summarizing, selecting unique concepts, eliminating duplication and overlap, aggregating, clustering, or grouping similar ideas, sorting ideas into categories. ▪ **Clarify** Moving from less to more shared understanding of the concepts. Understanding terminology, stating problems clearly, understanding possible solutions, mutual knowledge, beliefs and assumptions, shared context, clarifying possible options and actions. ▪ **Organize** Moving from less to more understanding of the relationships among concepts. Categorization, classification, sequencing, causal relationships, clustering in relation to a focus question, creating a gestalt, integration or synthesis of ideas. The final 3 may be a unique pattern of collaboration. ▪ **Evaluate** Moving from less to more understanding of the relative value of concepts. Voting, rating, ranking, identifying preferences, surfacing assumptions, identifying evaluative criteria, selecting among options, measuring value in relation to criteria, weighing pro and cons. ▪ **Consensus Building - Commitment** Moving from less to more agreement or acceptance of concepts. Aggregating preferences, resolving disagreements, negotiation, forming shared understanding, creating common understanding or meaning, creating common will, integrating multiple perspectives, expressing commitment, articulating statements of consensus
Best uses	Describe the situations in which this design pattern is best used. The problem it is designed to solve Larger design patterns within which it works well.
Do not use	Describe situation in which it would be inappropriate to use this design pattern
Notes The contributor may want to provide additional explanation of the design pattern.	▪ Enter any notes related to this Design Pattern that are relevant. ▪ Describe the role this Design pattern plays in enabling a group to achieve its desired results. ▪ Describe how this Design Pattern relates to a larger facilitation plan or "meta pattern." ▪ Describe any unique way this Design pattern functions. ▪ Describe any background that will help users understand and use it most effectively. ▪ Describe any unique situations or circumstances that it addresses. ▪ Add any other explanations that are helpful to ToP users and the clients.