

A Visual Overview of the Synectics Invention Model

Adapted by Vincent Nolan and Connie Williams

from a contribution by Heinz Prekel, Synnovation SA

An excerpt from:



Imagine That!

Celebrating 50 years of Synectics
Edited by Vincent Nolan & Connie Williams

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ISBN 978-0-615-41377-8
First Published 2010

Imagine That! celebrates the first 50 years of Synectics, a set of highly specific innovation techniques and behaviors that help individuals and teams work together in creative ways that are positive and action-oriented. Elements include strong collaborative approaches that invite speculation, fun, courage and idea development.

They originally derived from observational analysis of thousands of audio and videotape recordings of live invention sessions and meetings. They have been used successfully around the world in a wide variety of situations over the last 50 years.

The book is a collection of stories and articles from current and former staff members, clients and other associates.

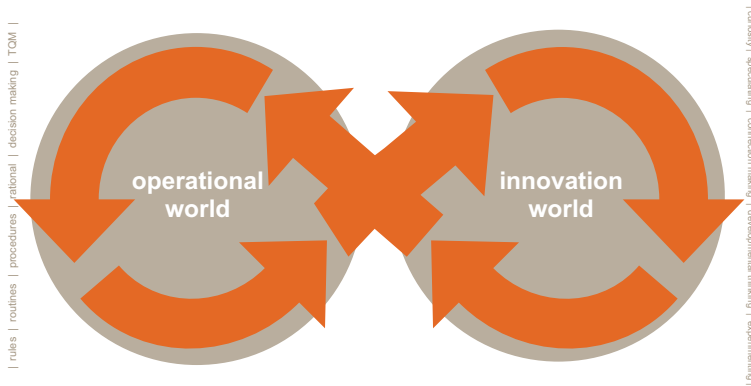


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Cycling Worlds



Paradoxically, organizations thrive by repeating what they do well, but they can only survive in the long term by adapting to the changing environment. The two types of activities, running an efficient operation and innovating in areas such as strategy, processes and new products require different ways of thinking and behaving – operational thinking vs. innovation thinking modes. As Synectics co-founder Bill Gordon said, “The ultimate solutions to problems are rational; the process of thinking of them is not.”

Figure 1: Cycling Worlds: Operational vs. Innovation Thinking Modes

Spectrum of Thinking

The higher you go, the newer the idea but the greater the need for trust in the climate

“What’s an idea that would get you fired?”

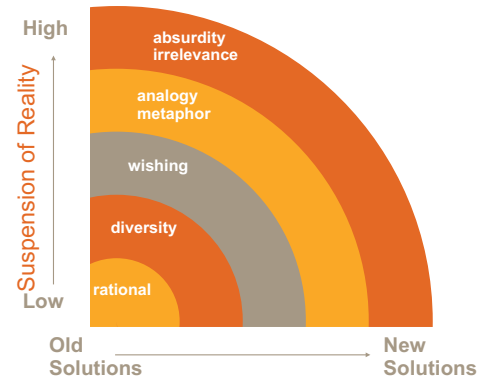


Figure 2: The Spectrum of Thinking

The developmental cycle of the innovation mode requires creative thinking to produce new ideas and processes, which need to be tested and developed before they can be moved into the organization’s routine activities of the operational world. The originality of the creative thinking is enhanced by Synectics use of its Spectrum of Thinking, especially metaphor and apparent irrelevance, and the Excursion technique, which allows one to get away from the problem, generate new associative material and connect back to the issue, with fresh ideas.

The Keys to Success: Climate, Thinking, Action

The Synectics approach relies on bringing the 3 keys of Climate, Thinking and Action together. Foremost is a supportive Climate, which is made up of the behaviors we use to work with others, to give and receive ideas and to build the trust environment for speculative ideas to be offered. Thinking requires pushing our idea boundaries out using the Spectrum of Thinking and Developmental Thinking which takes promising but speculative ideas and builds feasibility into them. Synectics emphasis on Developmental Thinking is a key differentiating feature compared to brainstorming and other creative problem solving techniques. Finally, there is a set of Action steps which move the process along with an

The Secret to Innovation

the creativity and innovation formula

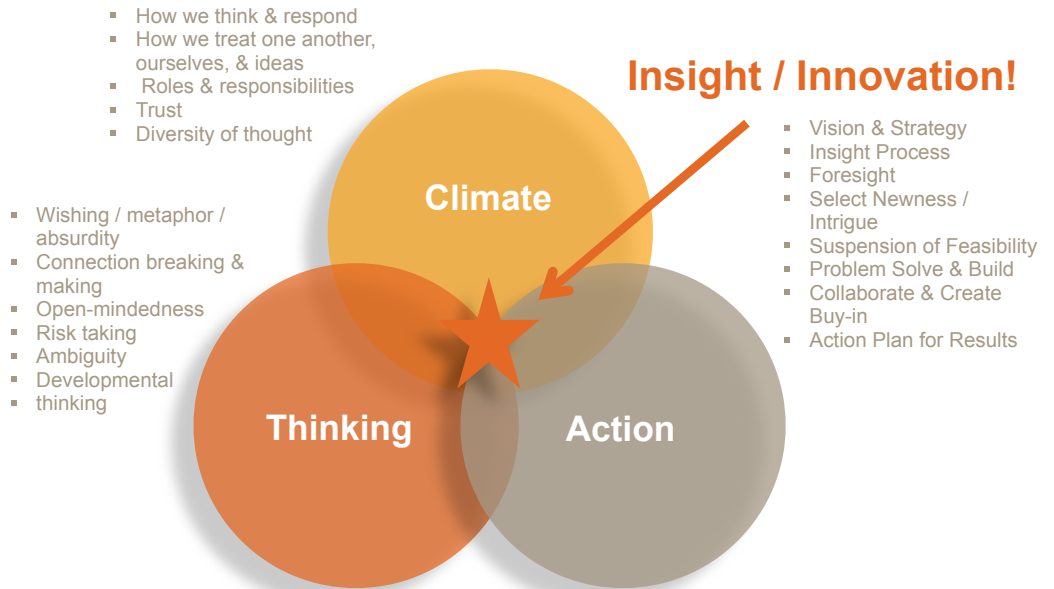


Figure 3: Climate, Thinking and Action

Person in the Pit



Figure 4: The Person in the Pit

emphasis on creative problem solving to get to actionable execution.

The Synectics ‘Client Centered’ Approach

Synectics starts by identifying a Problem Owner (or Client) who has both the motivation and the power to implement any new solution. By giving this person the key responsibility to select new approaches and decide when they are sufficiently robust and attractive to implement, Synectics ensures that action, not just ideas, are the end product

At the outset, the Problem Owner is like a person in a pit, needing the help of others (resources) to find a way out of it. The resources’ role is to offer approaches that are new to

the Problem Owner. They are encouraged to maintain their distance from the Problem Owner’s perception of the situation, rather than try to understand the problem by asking questions (which might take them into the pit themselves!).

Listening to the Problem Owner’s Briefing

Human beings listen both to others as well as to the voices inside their heads, making internal connections with things that we hear and then attending back to the speaker in a back and forth fashion. Instead of fighting the inclination to this back and forth tension, Synectics transformed this natural phenomenon into a way of making new connections.

Skill: In-Out Listening

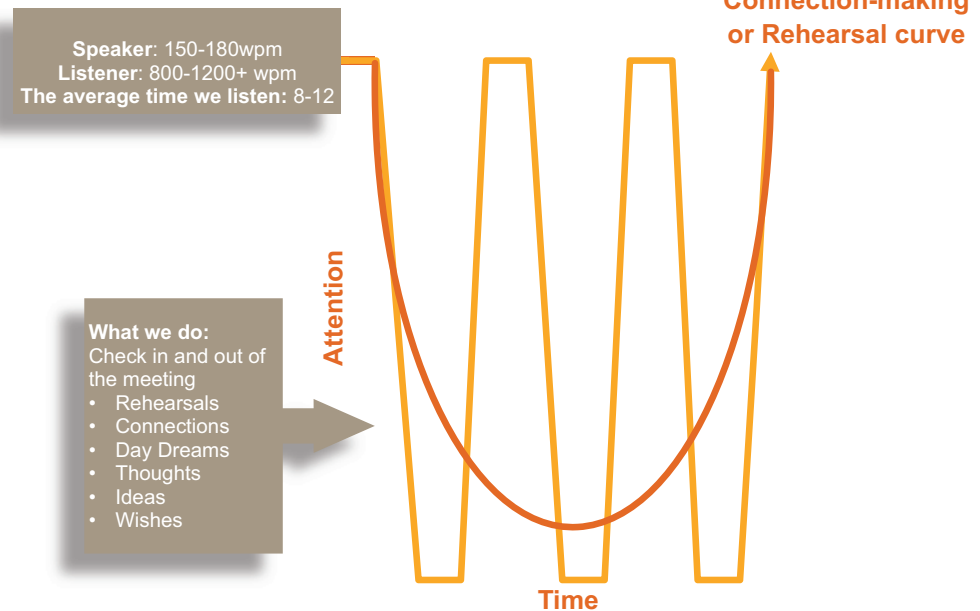


Figure 5: In-Out Listening

So, in a Synectics meeting, the resources are asked to 'listen to associate' on a split pad by capturing their own thoughts and images that are prompted by what they are hearing from the Problem Owner. They note them as triggers for their contributions, no matter how

absurd or random the connections might be. In fact experience has demonstrated that the more random and absurd, the more potential for a breakthrough idea. Of course, sharing those absurd ideas requires a pretty supportive Climate.

In-out Listening & Note-taking

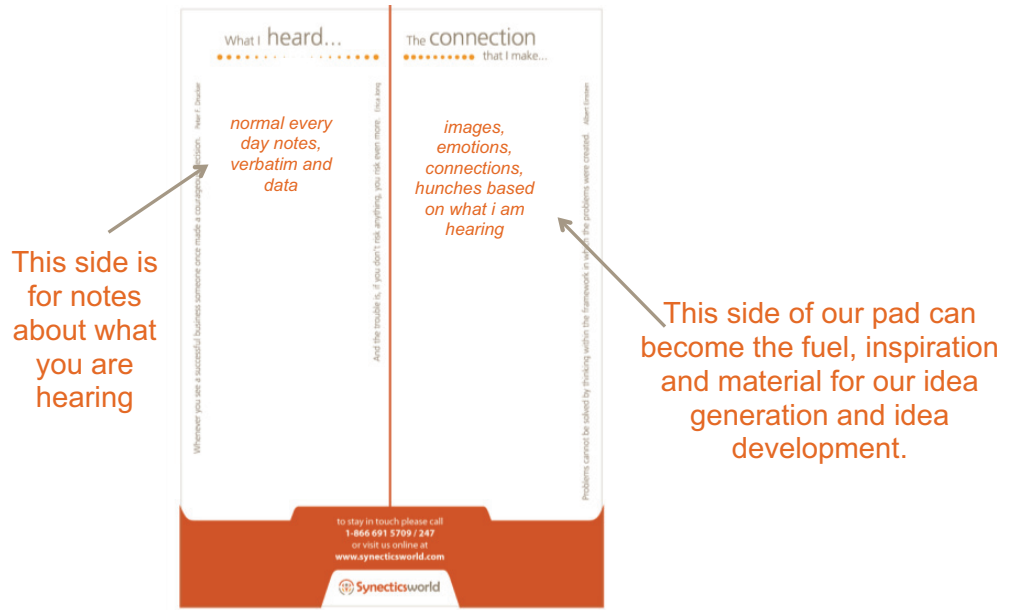


Figure 6: In-Out Listening and Note-taking

The Creative Problem Solving Process

As a summary, the process starts with the task, with the client using an action verb such as Develop, Devise, or Create. A small amount

of background information is shared and the resources and the Problem Owner explore new ideas and one or more are selected for development and then a possible solution is developed.

The Process Diamond



Figure 7: Process Diamond

Generating Springboards

In the exploration phase, the resources are encouraged to speculate about alternative ways of looking at the problem, generating wishes and approximately relevant ideas, known by the umbrella term 'springboards'. Springboards

are beginning thoughts/ideas/ opinions/ issues or fragments of ideas on how to approach the problem starting with "I wish ... or How to ...". The Problem Owner is also encouraged to speculate.

Springboards



Figure 8: Springboards

The purpose of the Springboards is to open up the topic to new approaches by speculating, associating, or generating apparently irrelevant material and making connections from it to the problem – thinking laterally rather than logically.

Selection of Springboards for Development

Springboards (as the metaphor implies) are taking off points for further exploration. They are not

intended to be instant new solutions (though these may arise occasionally, like a hole-in-one at golf). The selection of which springboards to explore is an intuitive choice by the Problem Owner, based on newness and appeal/intrigue, not feasibility. It is not a critical choice – different springboards can lead to the same solution. If a particular springboard leads to a dead end, it is abandoned in favor of another one.

Selection Criteria

developmental selection

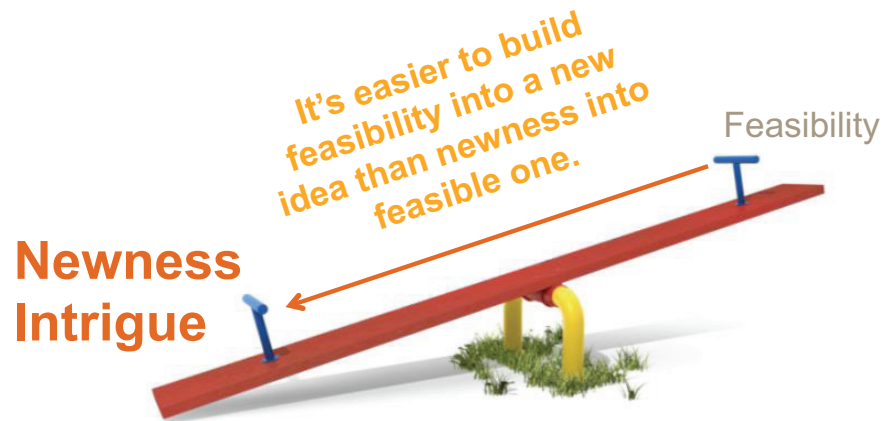


Fig. 9: Springboard Selection Criteria

Idea development

The process for moving from a chosen springboard to a new solution with a commitment to action by the Problem Owner is one of the unique features of Syntectics. It is directed by the Problem Owner alone (unless

he/she explicitly seeks the opinion of others). The rest of the group continue to suspend judgment and offer actionable ideas (rather than goals and wishes) in response to the moving target set by the Problem Owner's evaluation of interim ideas.

Developmental Thinking

two modes of thought

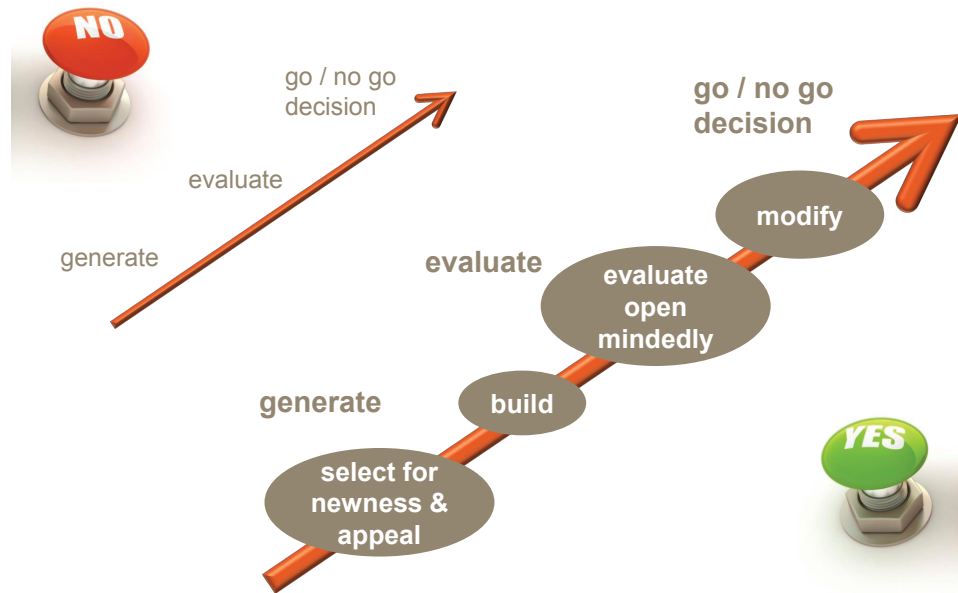


Figure 10: Developmental Thinking

The Developmental Thinking Process

The Problem Owner explains their choice of springboard, specifying why it is attractive and what is needed to move it towards a Possible Solution. The resources generate ideas to meet that need. From a short list of ideas, the Problem Owner selects the one they like best, paraphrases it to check understanding and then specifies all its positive aspects. If it is not yet a

solution, the Problem Owner then expresses what they need to overcome the shortcomings of the existing idea or a need for a different kind of idea. It is a journey of exploration to push an idea over the “threshold of acceptability” – not perfect but strong enough to make it a true possible solution. Each time the Problem Owner evaluates an idea, they provide an insight into how their thinking is evolving.

Developmental Thinking

1. Paraphrase or restate the idea.
2. List specific plusses that identify the pieces/parts of the idea that are helpful, useful, and beneficial.
3. List the concerns, shortcomings or drawbacks of the idea by identifying what's missing or still needs to be solved, and use "invitational" "How to" language to point the direction for continued development. Convert all concerns or negatives into "How to" statements.
4. Solve each concern, one at a time, in order of importance, pushing the idea over the Threshold of Acceptability.
5. Restate modified idea as a Possible Solution with Next Steps.

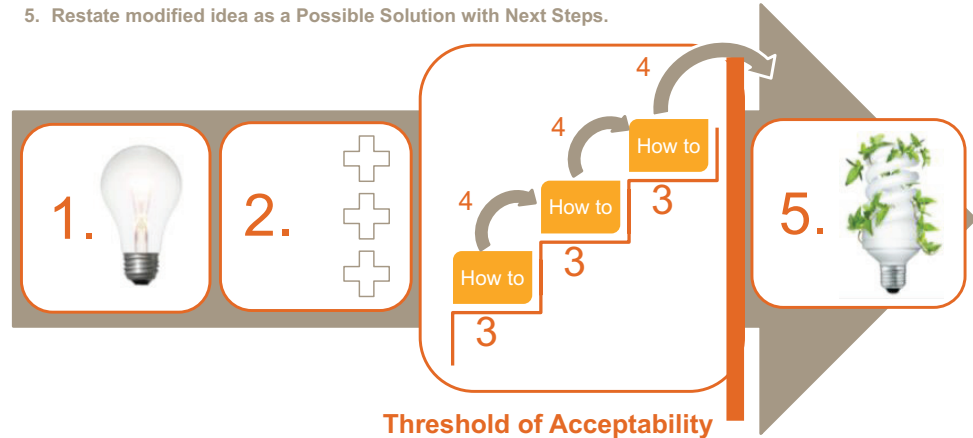


Figure 11: Idea Development

Gaining Support and Commitment

If the Problem Owner needs or wants the support and commitment of colleagues, he submits the Possible Solution to a Group Evaluation, using the same protocol as before. Each member of the group specifies the positives they see in it and any concerns they have in their area of responsibility. Often new plusses emerge in this process which enhances commitment to the idea. They are not normally asked to express second opinions, i.e. "would you do this if you were me?".

The person expressing the concern in their

area of responsibility becomes Problem Owner for the generation of ideas to overcome that concern. If it cannot be overcome, the original Problem Owner will resume the search for a solution which has the plusses of the original idea without the consequential problem for their colleague.

Action Planning

When a possible solution is reached, then an action plan is developed to take the idea forward, with details of tasks, responsibilities and dates. A model of the process Summary is shown below

The Process Diamond

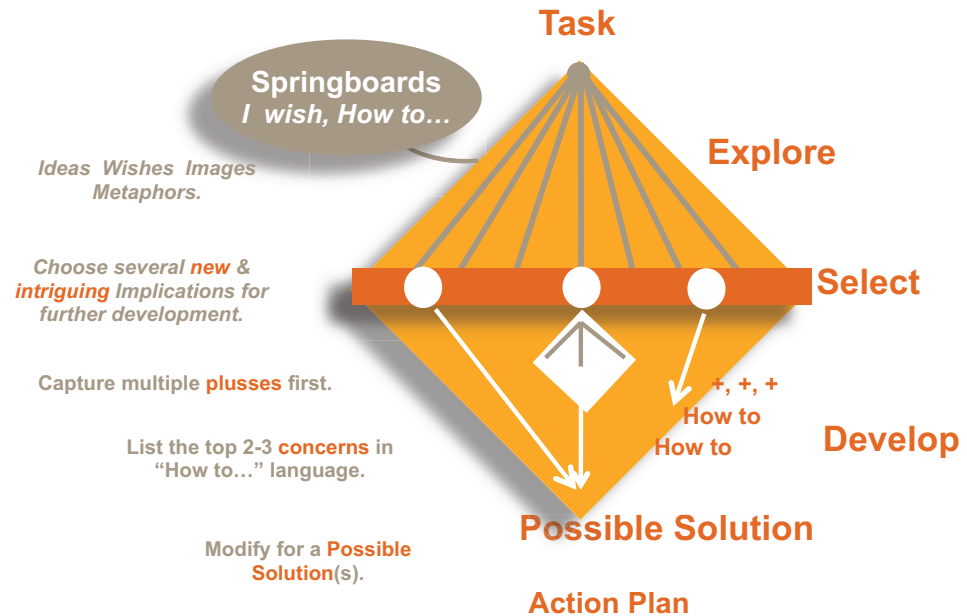


Figure 12: Process Summary

Creating the Climate for Creativity

The aim of the Synectics procedures is to create a climate in which ideas and the people who generate them are protected from treatment they experience as critical or negative – thereby

releasing more energy for productive activity. The benefits of a supportive culture and climate extend beyond the invention environment to work in general. They are explored in more detail in the following section of the book.