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“Using Creativity and Innovation Tools”

November 12, 2008
Gary Vansuch

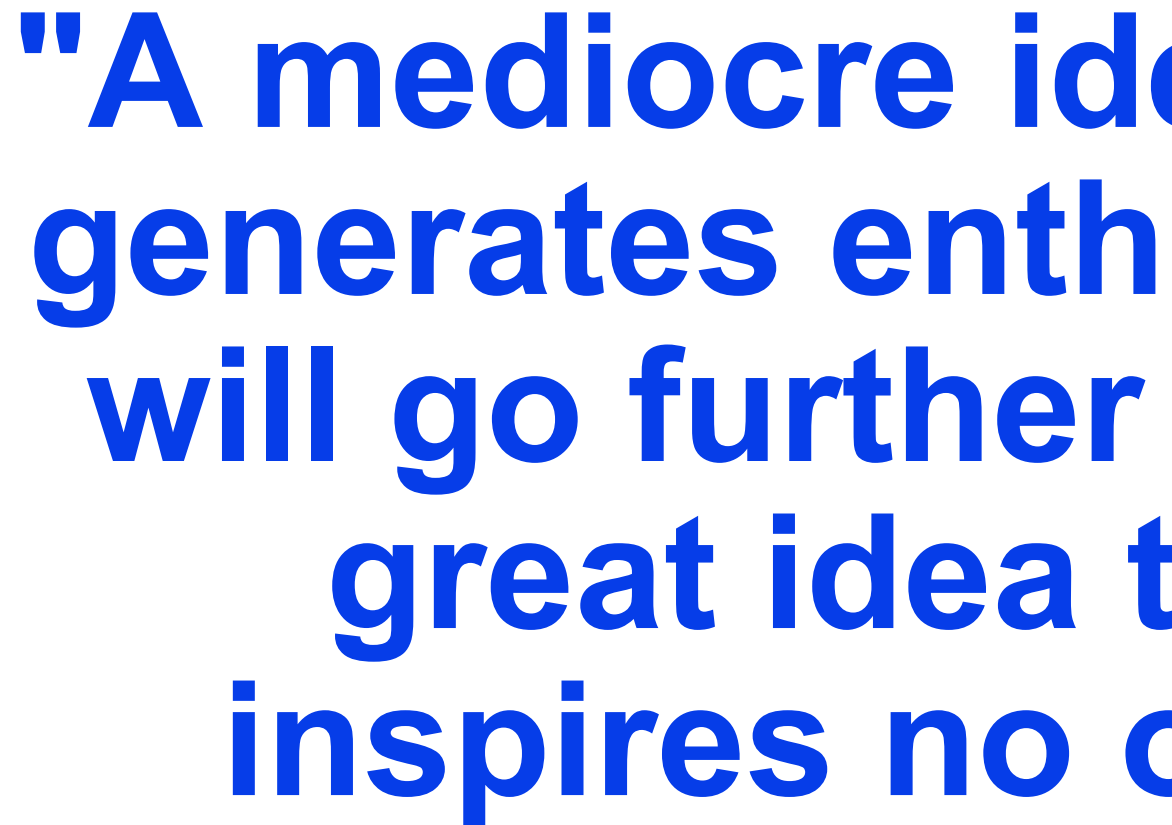


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**"A mediocre idea that
generates enthusiasm
will go further than a
great idea that
inspires no one."**

- Mary Kay Ash




What was advertised

Minds are like parachutes: they function best when they are open!

So, open up your mind to the possibilities of creativity and innovation in your organization. At our November meeting, we will explore some "mental tools" that can help us keep an open mind, question assumptions, see different perspectives more clearly, develop new ideas, and recognize when it is time to change our operations.

A new idea is the beginning, not the end, of the creative process. It must jump over many hurdles before being embraced as an organizational product or solution. The organizational climate plays a crucial role in determining whether new ideas bubble to the surface or are suppressed. We will discuss how to nurture an organizational climate to that will help good ideas blossom!

A decorative border composed of small, multi-colored squares and diamonds in shades of blue, yellow, orange, red, green, and purple, arranged in a pattern that follows the left and top edges of the slide.

**My goal is to help you
get ideas which will
inspire and to help
you take them far.**



What is on the agenda tonight

- **What is creativity, and why is it important**
- **Principles of creative thinking**
- **Techniques for spurring creativity**
- **Organizational influences on creativity**
- **Along the way, tips for what you can do**



Creativity and Innovation

- Procedures to enhance innovative thinking are not new!
- Creative thinkers have employed them successfully for centuries.

A quick warm-up





Groupthink

A type of thought exhibited by group members who try to minimize conflict and reach consensus without considering different ideas (and critically testing, analyzing, and evaluating their own ideas)

Members of the group specifically avoid promoting viewpoints outside the comfort zone of consensus thinking

Groupthink

Bay-of-Pigs

“... people, especially those convinced of the truth of their position, are often unwilling to avail themselves of important pertinent information ...”



Groupthink

Bay-of-Pigs **Cuban Missile Crisis**

In the Cuban missile crisis, virtually the same set of policymakers produced superior results (thankfully!)





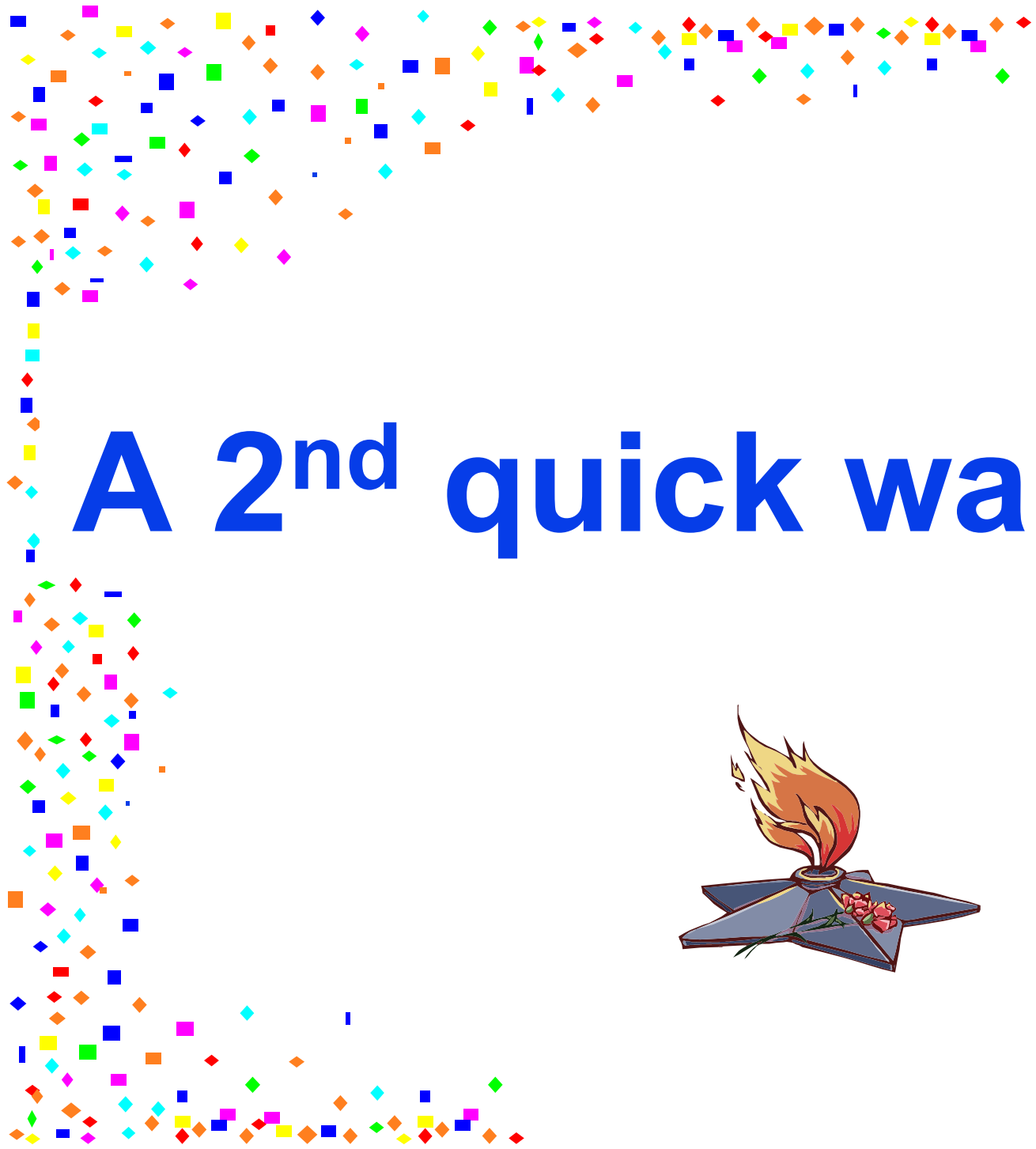
Groupthink

What can you do about it?



***Key Point 1: Use lessons
learned***

Recognizing that there is a problem
is the first step in doing something
about it



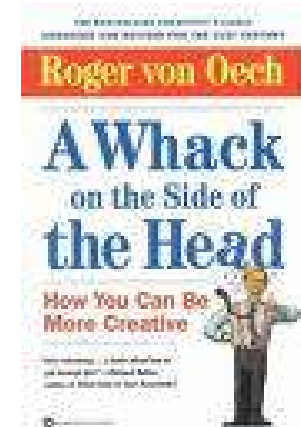
A 2nd quick warm-up



Key Point 2: Avoid the first-right answer syndrome

- Getting one “right answer”, and stopping there

- “Look beyond the first right answer” -- Roger Von Oech's 'A Whack on the Side of the Head'





Who is creative? Who **NEEDS** to be creative?

- A person's intelligence, as measured by IQ tests, has little to do with creativity, but the organizational environment exercises a major influence.
- New and appropriate ideas are most likely to arise in an organizational climate that nurtures people's development and interpersonal communication.



Roadblocks to being creative and innovative

- Don't have any incentive.

- Don't have the time.

- Disconnected from key technical expertise.

- Not trained, adept, or comfortable with proactive, creative thought.

- Don't have immediate or easy access to critical knowledge.

- Can't look beyond immediate problem-solving needs.



Who is creative / innovative?

- **Old view: creativity is something one is born with, and that it cannot be taught or developed, is largely untrue.**

- **New view, based on research: While native talent, per se, is important, it IS possible to learn to employ one's innate creative talents more productively.**

- **With understanding, practice, and conscious effort, people CAN learn to produce more imaginative, innovative, creative work**



Recognizing when people are more creative

- Playful and display sense of humor
- Adventurous
- Spontaneous
- Intrinsically motivated
- Persistent
- Curious
- See opportunities and possibilities
- Have trouble following the rules



Recognizing who can be creative

- **Look in the mirror!!!**
- **Look around you!!**



Key Point 3: EVERYONE can be creative and innovative

And, as evidenced in the Kennedy administration, everyone **NEEDS** to be creative and innovative

However, it is **NOT** automatic



Creativity

□ “ ... creativity in science, or in any other discipline, may require the abrasive juxtaposition of unique sets of life experiences ... ”

□ -- Dr. Mario R. Capecchi, Nobel Prize winner



Cultural considerations

Scientists possessing more creative ability produced more innovative work only under the following favorable conditions:

✓ When the scientist perceived himself or herself as **responsible for initiating new activities**. The opportunity for innovation, and the encouragement of it, are--not surprisingly--important variables.

✓ When the scientist had considerable **control over decisionmaking** concerning his or her research program--in other words, the freedom to set goals, hire research assistants, and expend funds. Under these circumstances, a new idea is less likely to be snuffed out before it can be developed into a creative and useful product.


✓ When the scientist felt **secure and comfortable** in his or her professional role. New ideas are often disruptive, and pursuing them carries the risk of failure. People are more likely to advance new ideas if they feel secure in their positions.

✓ When the scientist's administrative **superior "stayed out of the way."** Research is likely to be more innovative when the superior limits himself or herself to support and facilitation rather than direct involvement.

✓ When the project was relatively small with respect to the number of people involved, budget, and duration. Small size promotes flexibility, and this in turn is more conducive to creativity.

✓ When the scientist **engaged in other activities**, such as teaching or administration, in addition to the research project. Other work may provide useful stimulation or help one identify opportunities for developing or implementing new ideas. Some time away from the task, or an incubation period, is generally recognized as part of the creative process."

Lessons learned here???



Key Point 4: The “culture” is very important to creativity

Build your creativity culture based on some key principles



Principles of creative thinking



Principle 1: Deferred Judgment

➤ **Most important principle.**

➤ **The idea-generation phase of analysis should be separated from the idea-evaluation phase, with evaluation deferred until all possible ideas have been brought out.**

➤ **Stimulating the imagination and critical thinking are both important things, but they do not mix well.**

➤ **A judgmental attitude dampens the imagination: self-censorship of one's own ideas and/or fear of critical evaluation by colleagues or supervisors.**



Principle 2: **Quantity** Leads to Quality

- Quantity of ideas leads (eventually!) to quality.
- The first ideas that come to mind will be those that are most common or usual (and / or, suggested in the past)
- It is necessary to run through these conventional ideas before arriving at original or different ones
- In looking for usable new ideas, **seek to generate as many ideas as possible before evaluating any of them.**



Principle 3: No Self-Imposed Constraints.

- Thinking should be allowed and indeed encouraged to range as freely as possible.
- **Needed to free people from self-imposed constraints, (analytical habit, limited perspective, social norms, emotional blocks, etc)**



Principle 4: Cross-Fertilization of Ideas

- Cross-fertilization of ideas is important and necessary.
- Ideas should be combined with each other to form more and even better ideas.
- Creativity will be stimulated by any activity that brings more concepts into **juxtaposition** with each other in fresh ways
- **Personal interaction stimulates new associations** between ideas and induces greater effort to help maintain concentration on the task.



Working with others

□ **As a general rule, people generate more creative ideas when teamed up with others; they help to build and develop each other's ideas.**

□ **IMPORTANT NOTE: This is NOT standard committee meetings or coordination processes which force consensus based on the “lowest common denominator” of agreement**

□ ***Seek to structure groups to avoid blind conformity and encourage healthy debate***

□ ***Let people know it is their duty to speak up when the situation warrants it.***



Also, Working individually

- Thinking things out alone also has its advantages: individual thought tends to be more structured and systematic than interaction within a group.
- Optimal results come from alternating between **individual thinking and team effort** (while following the other principles, also)



Ideas and organizational climate

- A new idea is the beginning, not the end, of the creative process.
- It must jump over many hurdles before being embraced as an organizational product or solution.
- The organizational climate plays a crucial role in determining whether new ideas bubble to the surface, or are suppressed



Principle 5: Creativity helps Idea Evaluation, also (!!)

□ Creativity techniques are concerned with stimulating the flow of ideas and do not directly help you determine which ideas are “best”.

□ However, **creativity techniques DO aid in evaluation**, however, in the sense that the ability to generate more alternatives helps one see more potential consequences, repercussions, and effects that any single idea or action might entail.

□ ... that you may NOT have thought about otherwise ...

Groupthink: what to do

You are not necessarily doomed to groupthink!

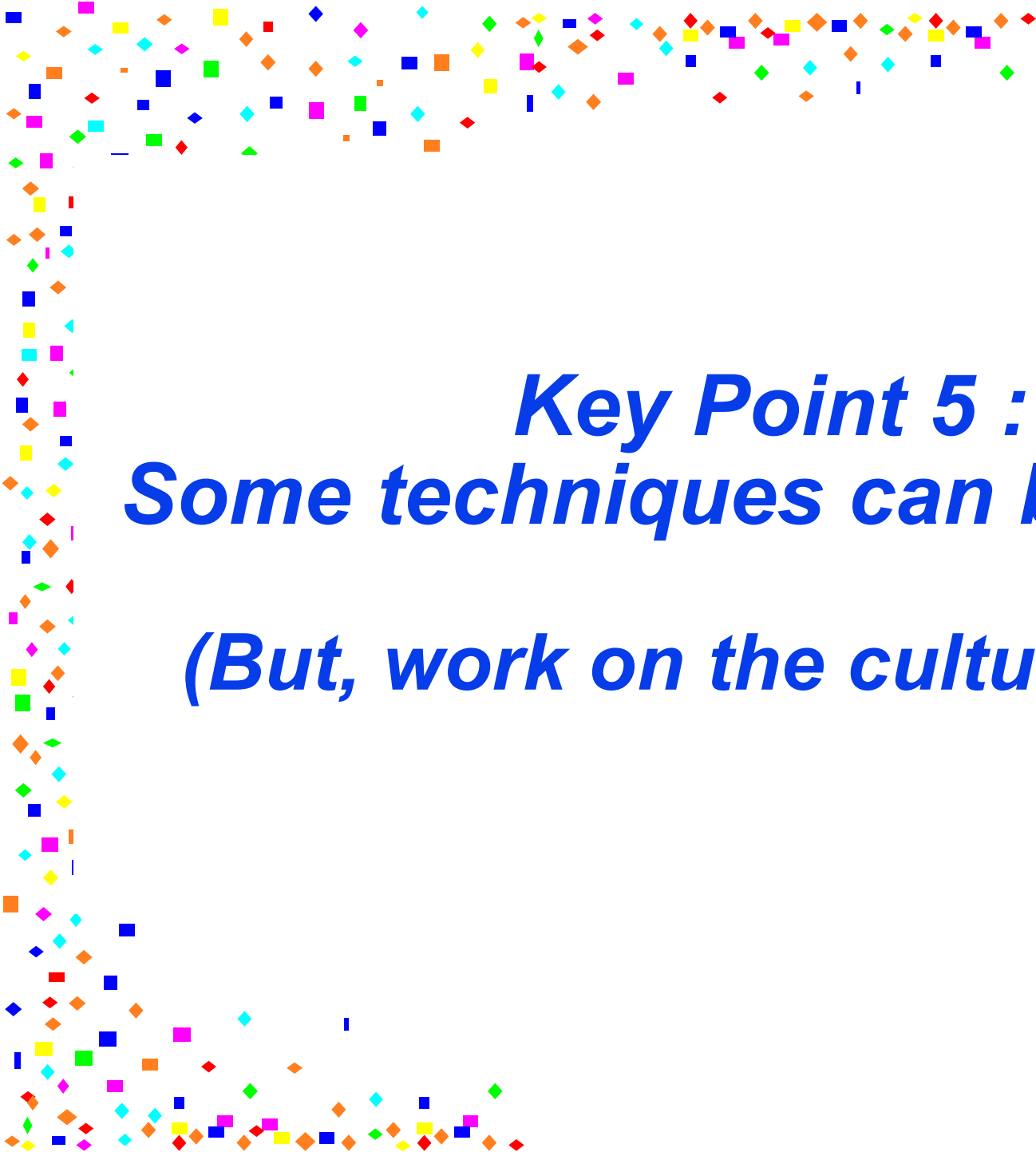
1. Leaders should assign each member the role of “idea generator”. This allows each member to freely air objections and doubts, and bring up different ideas.
2. Higher-ups should **AVOID** expressing an opinion when assigning a task to a group.
3. The organization could set up several independent groups, working on the same issue.
4. **All effective alternatives should be examined.**
5. Each member should discuss the group's ideas with trusted people outside of the group.
6. The group should invite outside experts into meetings. **Group members should be allowed to discuss with and question the outside experts.**
7. At least one group member should be assigned the role of Devil’s Advocate (designate curmudgeon). This should be a different person for each session.





Key Point 4 redux: The “culture” is very important to creativity

Build your creativity culture based on some key principles



Key Point 5 :
Some techniques can be helpful
(But, work on the culture first!!)

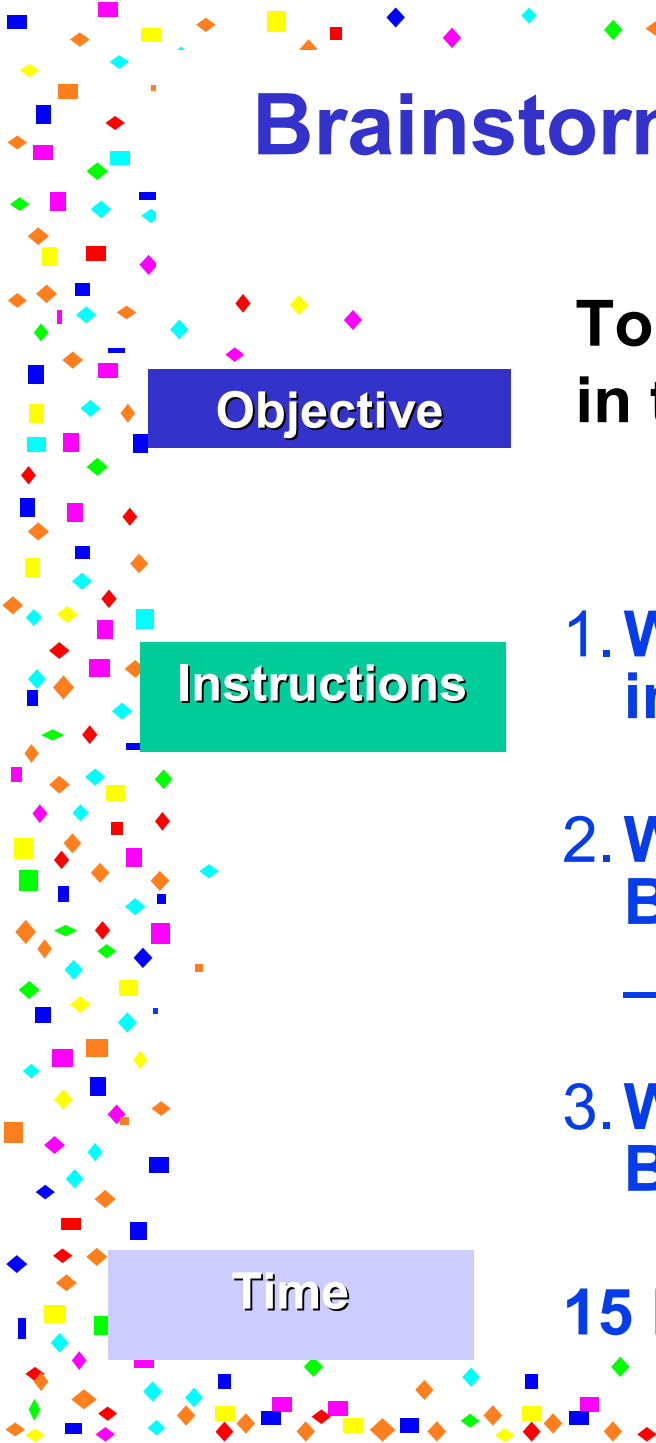


Some techniques to promote creativity



Brainstorming

- Free flowing idea generation technique
- Write down all ideas as they are presented
- No judging or pre-selecting
- Encourage everyone to participate
- Work list to point of “exhaustion”
- Evaluate list on subjective and/or objective criteria



Brainstorming Example: Full Group Exercise

Objective

To Develop Awareness and Proficiency in the Use of Brainstorming in Writing

Instructions

1. What Is The Purpose Of Brainstorming in Improving _____?
2. What Are Some Rules for Developing Brainstorming Techniques for _____?
3. What Are The Key Challenges Of Using Brainstorming to _____?

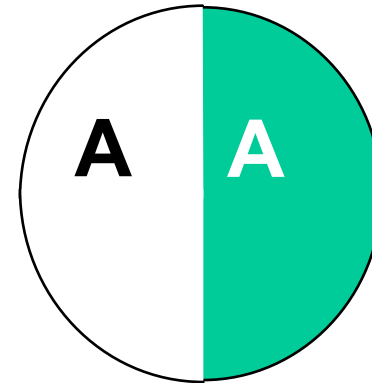
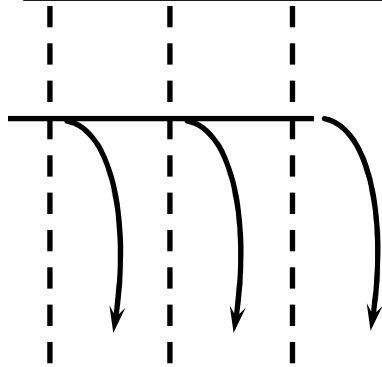
Time

15 Minutes

Modified Brainstorming Two Approaches

Channels

Anti-Solution





“Channels” Brainstorming (Affinity Diagramming)

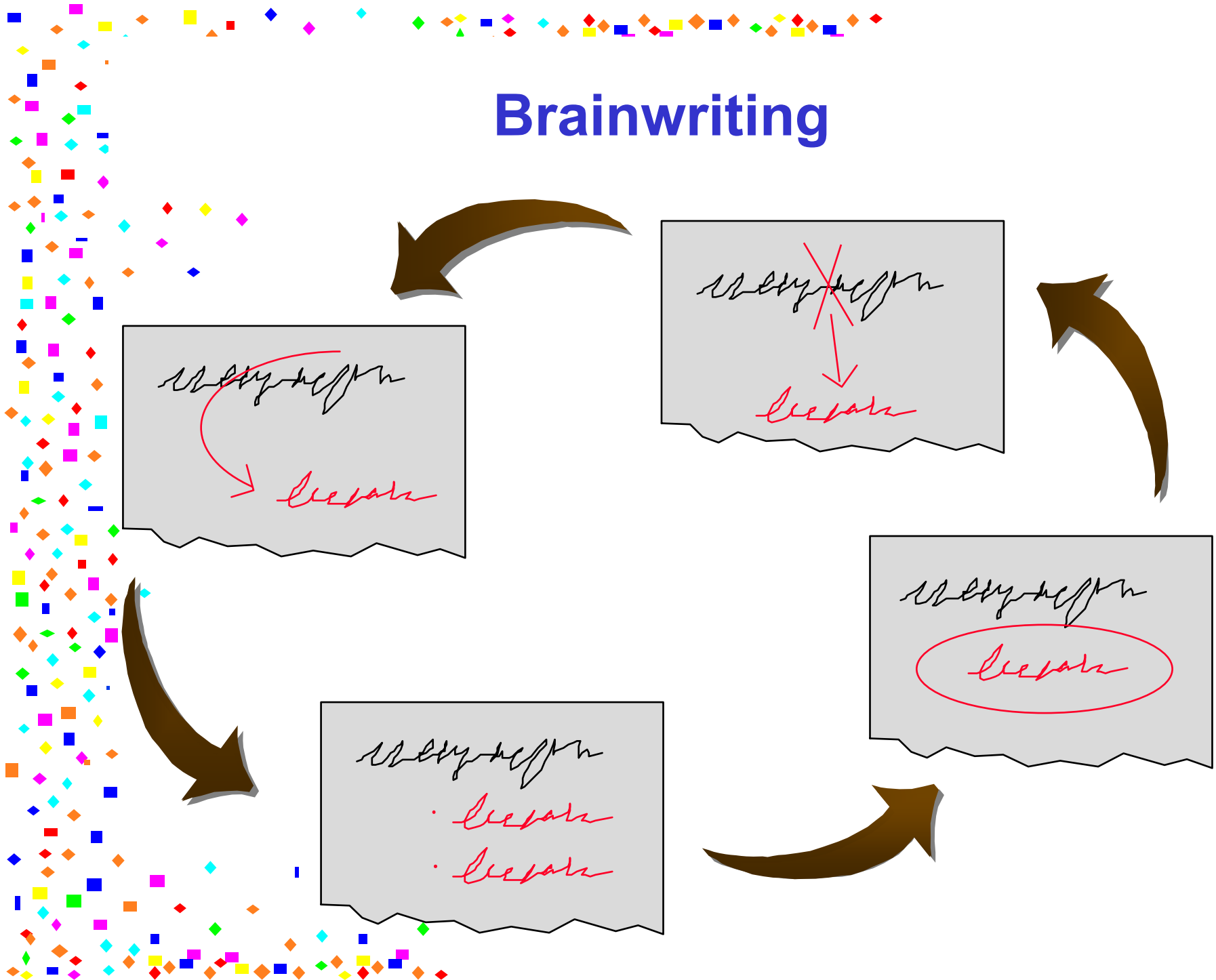
- List categories pertinent to the topic or issue on a flipchart or writing board
- As ideas emerge, place them under the most applicable (appropriate) category
- Approaches
 - “Free form” -- Look for any idea, then categorize
 - One category at a time
- Variation
 - Use “Post It” Notes to allow more flexibility in changing category titles and/or idea location



“Anti-Solution” Brainstorming

- Fun approach to idea generation
- Good at breaking tension
- Process:
 - Brainstorm ways to make the situation “worse”
 - Once list completed, evaluate each “idea”
 - Consider ways to make it better
- Example: Real objective-- “Develop better thesis sentences”
 - Anti-solution Objective-- “Develop weaker thesis sentences”
- Strategic variant: **Kill the company**
 - If I were a competitor, how would I (legally) kill our company?
 - Then, develop countermeasures

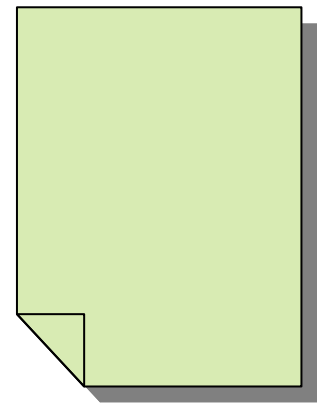
Brainwriting





Brainwriting: The Concept

- Team approach to generate many ideas in short time
- Combines many aspects of traditional brainstorming except:
 - No open discussion - ideas are written
 - Reduces tangents, “socializing”, and other distractions
 - Reduces “monopolizing” effect of vocal members
 - Increases input from less assertive members
- Conflict/controversy management technique





Brainwriting: The Process

- Identify a topic or discussion area
- Each team member writes a single idea about topic on a sheet of paper -- one idea per sheet (multiple ideas per person permitted)
 - Variation: 3 ideas across the top
- Rotate to your right
 - Variation: Place all sheets in middle of table and Members take a sheet (not their own) from stack
- Examine the idea
- Make comments/suggestions/questions
- Pass sheets around the table until all have seen

- Evaluate ideas later using some type of ranking scheme



Designated Curmudgeon (Devil's Advocate)

□ Someone who brings up and defend a minority point of view or an unusual idea. He or she may not necessarily agree with that view, but may choose or be assigned to represent it as strenuously as possible.

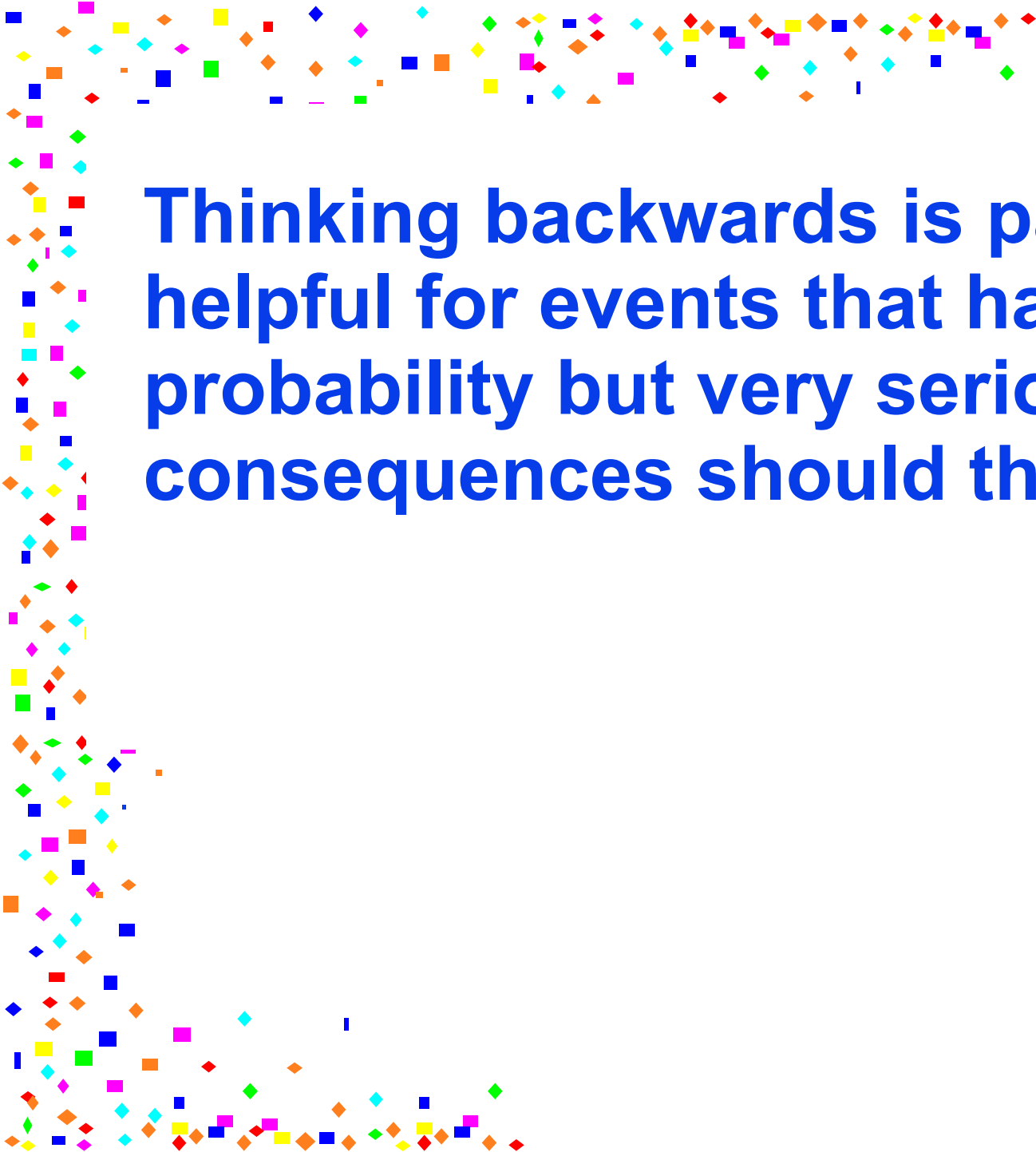
□ The goal: expose conflicting interpretations and show how alternative assumptions and images make the world look different.

□ Requires time, energy, and commitment to see how the world looks from a different perspective.



Thinking Backwards

- Start with an assumption that some event you did not expect has actually occurred.
- Then, put yourself into the future, looking back to explain how this could have happened.
- Thinking backwards changes the focus from whether something might happen to how it might happen.
- Putting yourself into the future creates a different perspective that keeps you from getting anchored in the present.



□ **Thinking backwards is particularly helpful for events that have a low probability but very serious consequences should they occur.**



SCAMPER

SCAMPER Is A Checklist Of Idea-Spurring Questions

S = Substitute?

C = Combine?

A = Adapt?

M= Modify or Magnify?

P = Put To Other Uses?

E = Eliminate Or Minify?

R = Reverse? = Rearrange



SCAMPER: The Process

- 1. Isolate the challenge or topic you want to think about**
- 2. Ask SCAMPER questions about each step of the challenge or topic and see what new ideas emerge. Asking the questions is like tapping all over the opportunity with a hammer to see where the hollow spots are.**



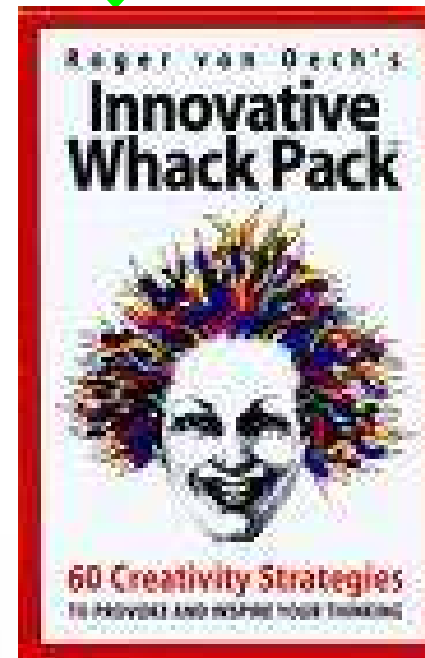
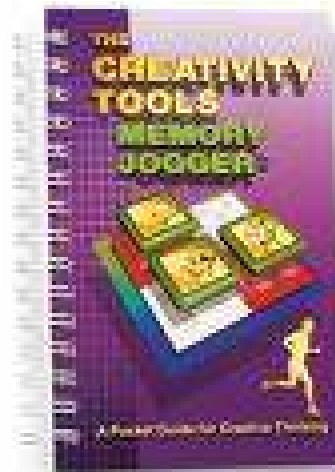
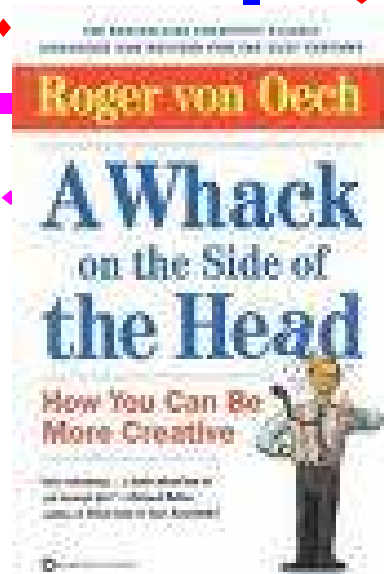
Role playing

- Role playing is commonly used to overcome constraints and inhibitions that limit the range of one's thinking.
- Playing a role changes "where you sit." It also gives one license to think and act differently.



Some other Creativity Techniques

		Examples
Fluency	stimulate generation of ideas	<ul style="list-style-type: none">• brainstorming• brainwriting• mindmapping• storyboarding
Excursion	push mind to grope for illuminations	<ul style="list-style-type: none">• forced relationships• random words• dreams• assumption challenging
Pattern Breakers	force restatement of problems in novel ways	<ul style="list-style-type: none">• metaphors• analogies• imaginary brainstorming
Shake-up Exercises	help to loosen up group & enhance receptivity to wild ideas	<ul style="list-style-type: none">• humor• group fantasies





Key Point 6:

Be proactive in bringing this to your organization; also be aware of what could hurt your efforts



TOP TEN CREATIVITY BLOCKS

1. You couldn't locate the procedure for creative thinking.
2. Mistakes will get you a pink slip.
3. Creativity seems like too much fun and you have REAL work to do.
4. The idea police will nab you if you color outside the lines.
5. New ideas in your group are promptly used for skeet practice.
6. Spock and Data were your only role models on how to think.



TOP TEN CREATIVITY BLOCKS

7. “THEY” wouldn’t let you.

8. The last time anyone had fun the thought police hauled them away.

9. It is better to look good than be creative.

10a. The light bulb over your head was unscrewed to save energy during the last heat wave.

10b. You stand behind your ideas - FAR, FAR behind your ideas.

10c. If you were the creative type, you would have invented Post-It Notes.



Creativity Killers

- 📌 Using new ideas for target practice
- 📌 Stopping at the first good idea
- 📌 Failing to get a sponsor to support implementation
- 📌 Defining the problem incorrectly or in a manner that suggests a solution
- 📌 Obeying imaginary constraints



The Creative Organization

- Expects people to be creative, and let them know it
- Focuses creative efforts on goals that are important to the organization
- Looks for opportunities within “problems”
- Spends time formulating the problem before solving it
- Considers a range of alternatives before selecting one
- Comfortable with making mistakes before getting it “right”



Harnessing Creativity

Focus -

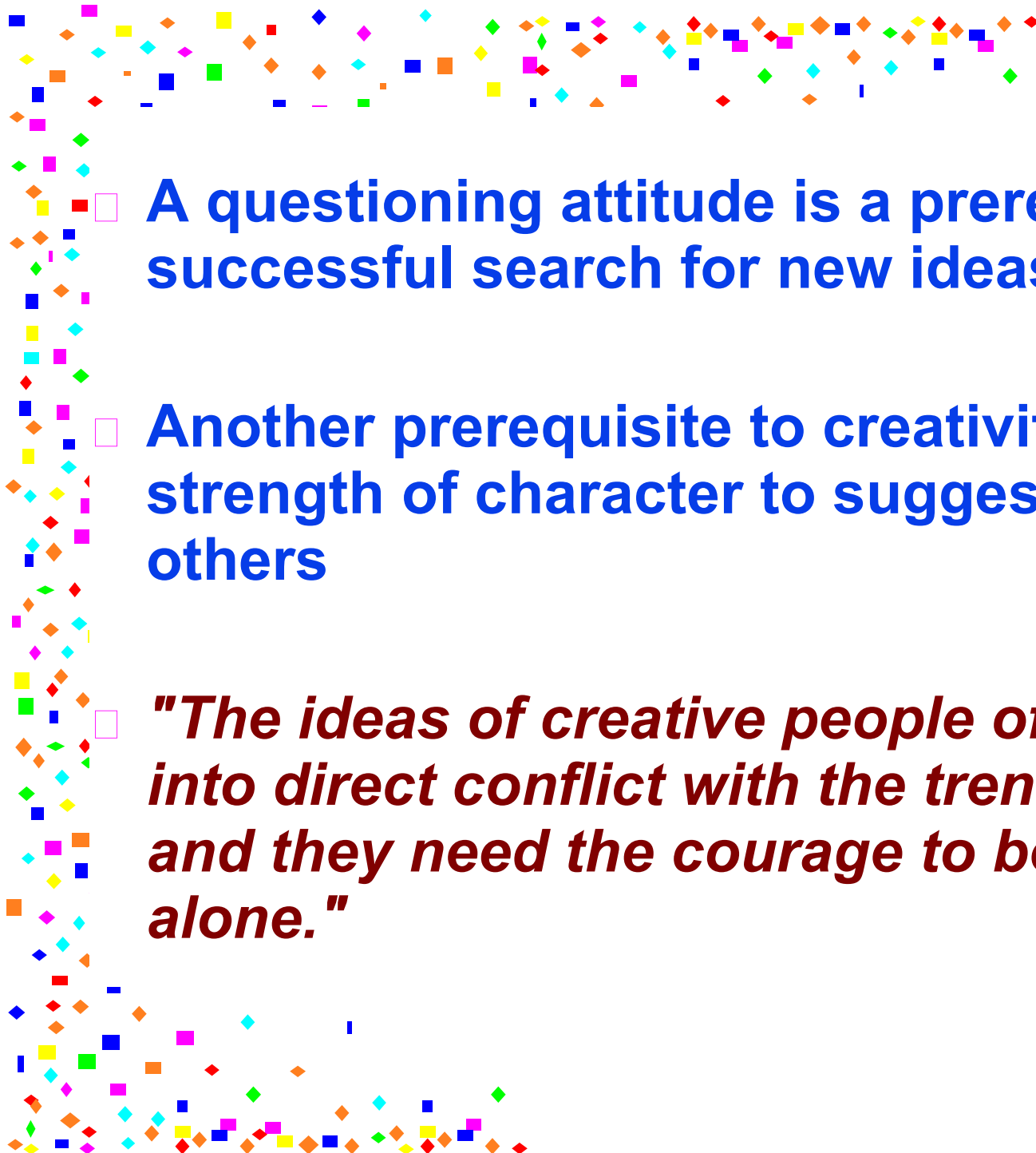
- Know the vision & organizational goals
- Apply your creative energies to things that matter to the organization
- Frame problems broadly

Unlock -

- Play with outrageous ideas; look for what you can use
- Explore other sandboxes; look for connections
- Practice mental fluency; develop multiple options
- Pull the plug on idea stoppers; use yes and in place of yes but

Harvest -

- Select and combine the best ideas for further development



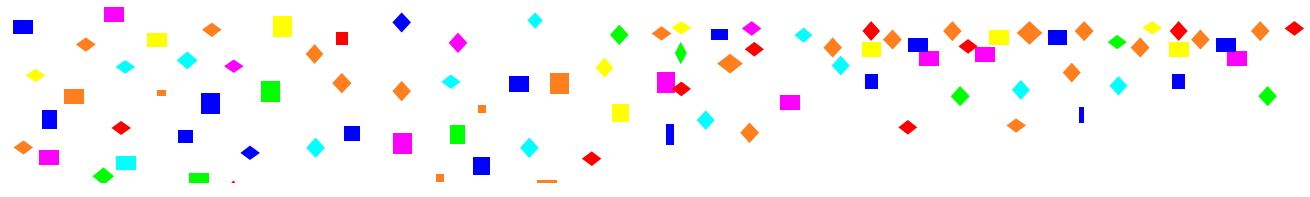
- A questioning attitude is a prerequisite to a successful search for new ideas
- Another prerequisite to creativity is sufficient strength of character to suggest new ideas to others
- *"The ideas of creative people often lead them into direct conflict with the trends of their time, and they need the courage to be able to stand alone."*



□ **Learning and practicing creative problem-solving techniques does not change your native-born talents but helps you achieve your full potential.**

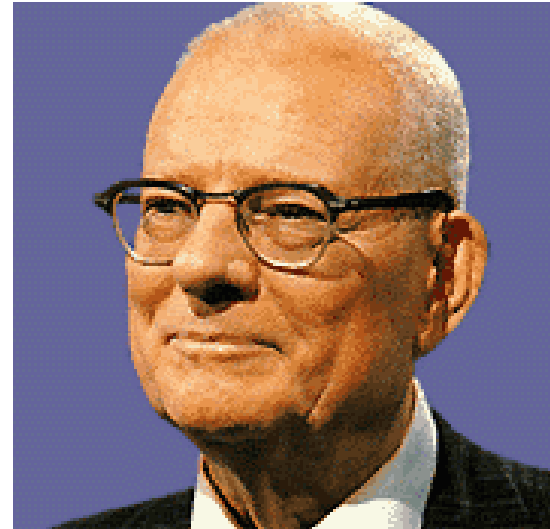
□ **Most people have the ability to be more innovative than they themselves realize.**

□ **The effectiveness of this depends, in large measure, upon your drive and perseverance in taking the time required for thoughtful analysis despite the other pressures of business life.**

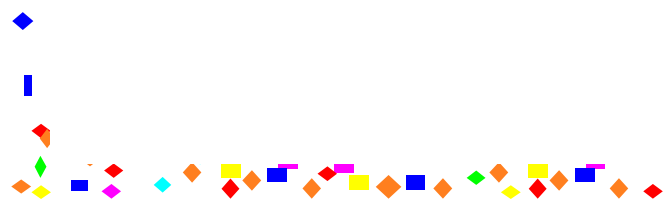


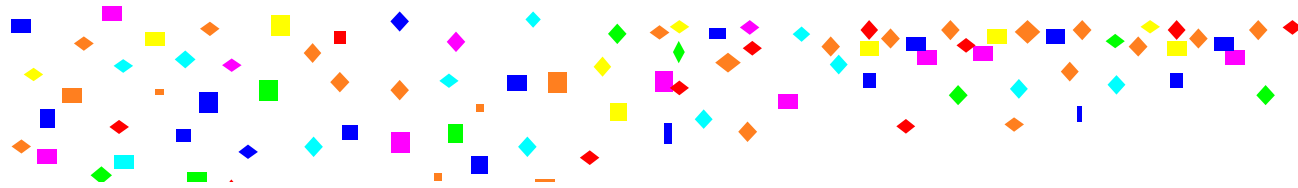
And ... finally

Key point #7:



**“It does not matter where
you start as long as you
start now.”**





And ... finally

Key point #7 (restated):

“A good plan violently executed now is better than a perfect plan executed next week ”

– General George S. Patton



Summary of Key Points

Key Point 1: Use lessons learned

Key Point 2: Avoid the first-right answer syndrome

Key Point 3: EVERYONE can be creative and innovative

Key Point 4: The “culture” is very important to creativity

- Principle 1: Deferred Judgment
- Principle 2: Quantity Leads to Quality
- Principle 3: No Self-Imposed Constraints
- Principle 4: Cross-Fertilization of Ideas
- Principle 5: Creativity helps Idea Evaluation, also (!!)

Key Point 5: Some techniques can be helpful (But, work on the culture first)

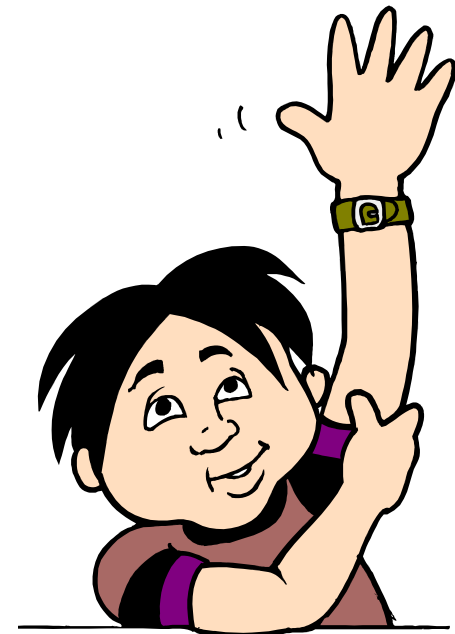
- Brainstorming
- Anti-Solution
- Brainwriting
- Designated Curmudgeon (Devil's Advocate)
- Thinking Backwards
- SCAMPER
- Role playing

Key Point 6: Be proactive in bringing this to your organization; also be aware of what could hurt your efforts

Key point #7: “It does not matter where you start as long as you start now.”



**Do you have any
(easy) questions?**





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Ευχαριστώ

ขอบคุณ

Vielen
Dank

Grazie

THANK YOU

Obrigado!



Gracias

תודה

Köszönettel

Bedankt

Hvala

Merci