Creativity and Creative Problem Solving Styles

MAPP Leaders Training Seminar
Albany, NY
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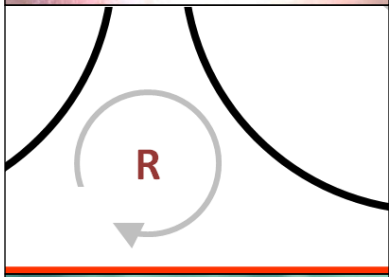

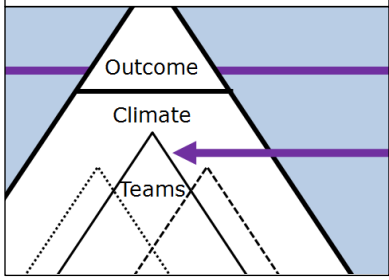

- When you hear the word creativity, who or what comes to mind?

- We are all creative
- We exhibit our creativity in different ways
- Developing creativity involves having an **awareness** of our own **thinking**
- We need to pay attention to what supports our creativity and what takes away from it

- Creativity is made up of
  - Attitude
  - Knowledge
  - Evaluation
  - Imagination

http://www.youtube.com/watch?v=KRLgpAmlRNw)

$2 + 2 =$

$$2 + 2 = 12 - 8$$

$2 + 2 = 12 - 8$

$2 + 2 = \sqrt{16}$

$2 + 2 = 12 - 8$

$2 + 2 = \sqrt{16}$

$2 + 2 =$  - 

2 + 2 =

2 + 2 = 

2 + 2 = Quatro

2 + 2 = 

2 + 2 = Quatro

2 + 2 = Four

$$2 + 2 = 4$$

2 + 2 = 4 expressed in an infinite number of ways

Complex social problems:

- Ill-defined
  - no single solution path, no right or wrong answer
  - problem can be defined in a number of ways
- Novel
  - past experience and knowledge is not sufficient to resolve the present situation
  - responses are needed for new or changing situations
- Ambiguous
  - not enough information
  - too much information, only some of it relevant
  - inconclusive and/or conflicting data
  - changing and/or emerging information

(Based on Puccio, 2010)

- Sometimes creativity means being persistent

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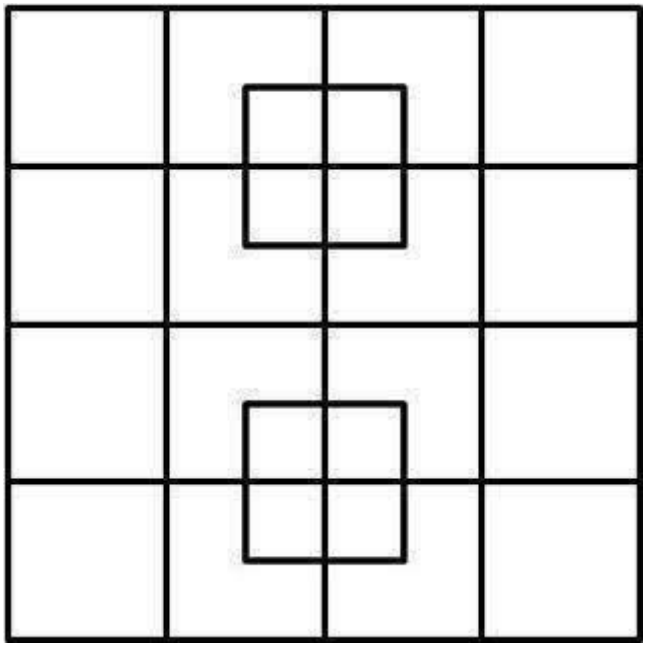

Dog	Cat
Table	Chair
Day	Night

Too often, during the course of our activities, we do not allow our idea generation to go beyond the obvious

Consider how frequently our thinking is predicable

Creativity requires getting beyond the obvious

(Firestien, 2009)

A True Story

- The following is based on an actual meeting at Pacific Power and Light

(Puccio, Murdock, & Mance, 2007)

- How to clear power lines in remote locations after ice storms?

(Puccio, Murdock, & Mance, 2007)

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- Use bears

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- How to clear power lines in remote locations after ice storms?
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- How might we get the bears to climb the poles?

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- How to clear power lines in remote locations after ice storms?
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- How might we get the bears to climb the poles?
- Put pots of honey on top of the poles

(Puccio, Murdock, & Mance, 2007)

- How to clear power lines in remote locations after ice storms?
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- How might we get the bears to climb the poles?
- Put pots of honey on top of the poles
- How might we get the honey to the top of the poles?

(Puccio, Murdock, & Mance, 2007)

- How to clear power lines in remote locations after ice storms?
- Use bears
- How might we get the bears to climb the poles?
- Put pots of honey on top of the poles
- How might we get the honey to the top of the poles?
- With a helicopter

(Puccio, Murdock, & Mance, 2007)

- How to clear power lines in remote locations after ice storms?
- Use bears
- How might we get the bears to climb the poles?
- Put pots of honey on top of the poles
- How might we get the honey to the top of the poles?
- With a helicopter
- A helicopter proved to be a very effective way to blow the ice off the power lines

(Puccio, Murdock, & Mance, 2007)

- Ideas are not solutions
- Ideas can be used to break from usual patterns
  - Using bears was just an idea
  - Using a helicopter became the solution

(Miller, Vehar, & Firestien, 2001)

Break Patterns

- Seek novel and unusual ideas
- Defer judgment
- Build on other ideas

Awareness of Judgment

- It is extremely hard to avoid or defer judgment
- We automatically respond to ideas with a judgment. Is it good or bad, right or wrong, safe or unsafe, realistic or unrealistic
- It requires us to unlearn some of the usual ways we have been taught to think

Phrase Problems as Questions

- Shifts perspective from seeing problem as limitation, into an inquiry about how something might be done
- A problem such as “We don’t have the budget,” is turned into a question starting with one of four statement starters:
  - “How to…”
  - “How might…”
  - “In what ways might…” or
  - “What might be all the ways …”

Phrase Problems as Questions

- The problem “We don’t have the budget,” is turned into questions starting with one of four statement starters:
  - “How to reduce costs?”
  - “How might we pursue other sources of funding?”
  - “In what ways build support for increased funding?”
  - “What might be all the ways to increase sources of funding?”

Forced Connections

- Select an object in your office
- List characteristics/observations of the object
- List connections you can make to the problem statement

Your observations	Connection to the problem
a)	a)
b)	b)
c)	c)
d)	d)

(Miller, Vehar, & Firestien, 2001a)

Visual Connections

- This same process can be applied to photographs
- Select one of the 5 photos
- Make connections between what you see in the photo with the experience of attending the MAPP Leaders Training Seminar

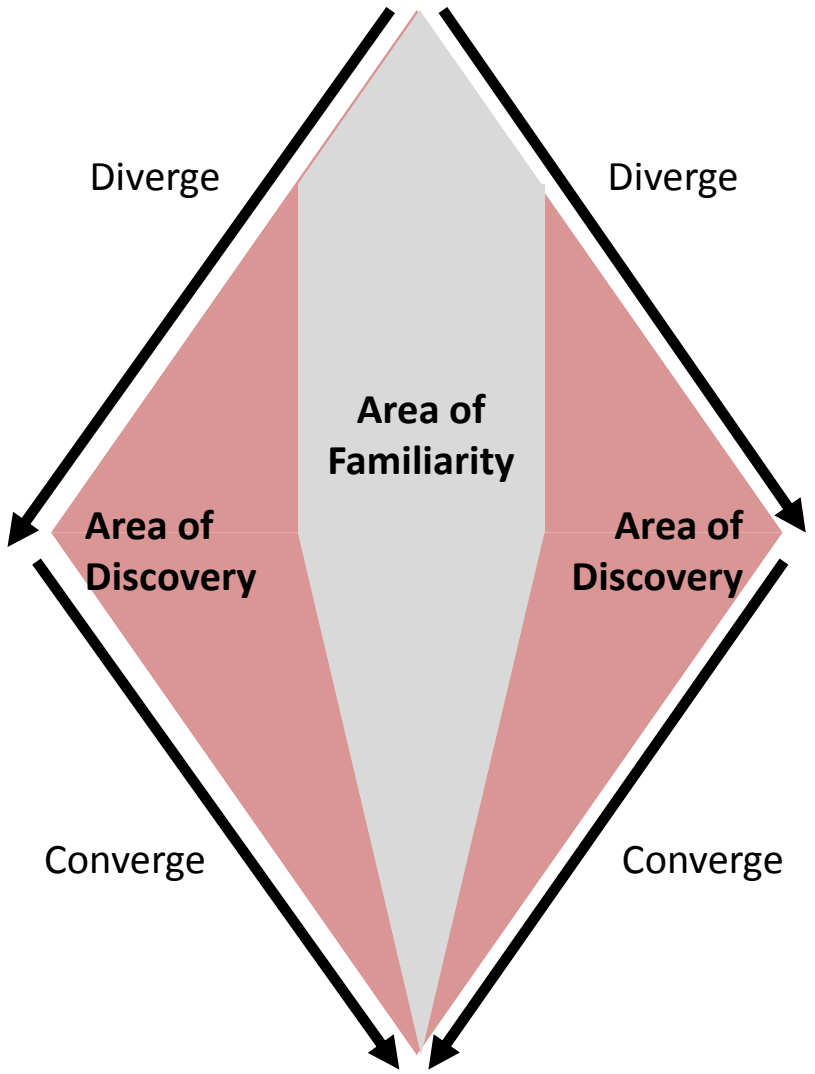




(Miller, Vehar, & Firestien, 2001a)

Dynamic Balance

- Divergent thinking
  - Generating options
  - Attitude, knowledge and **imagination**
- Convergent thinking
  - Evaluating options
  - Attitude, knowledge and **evaluation**



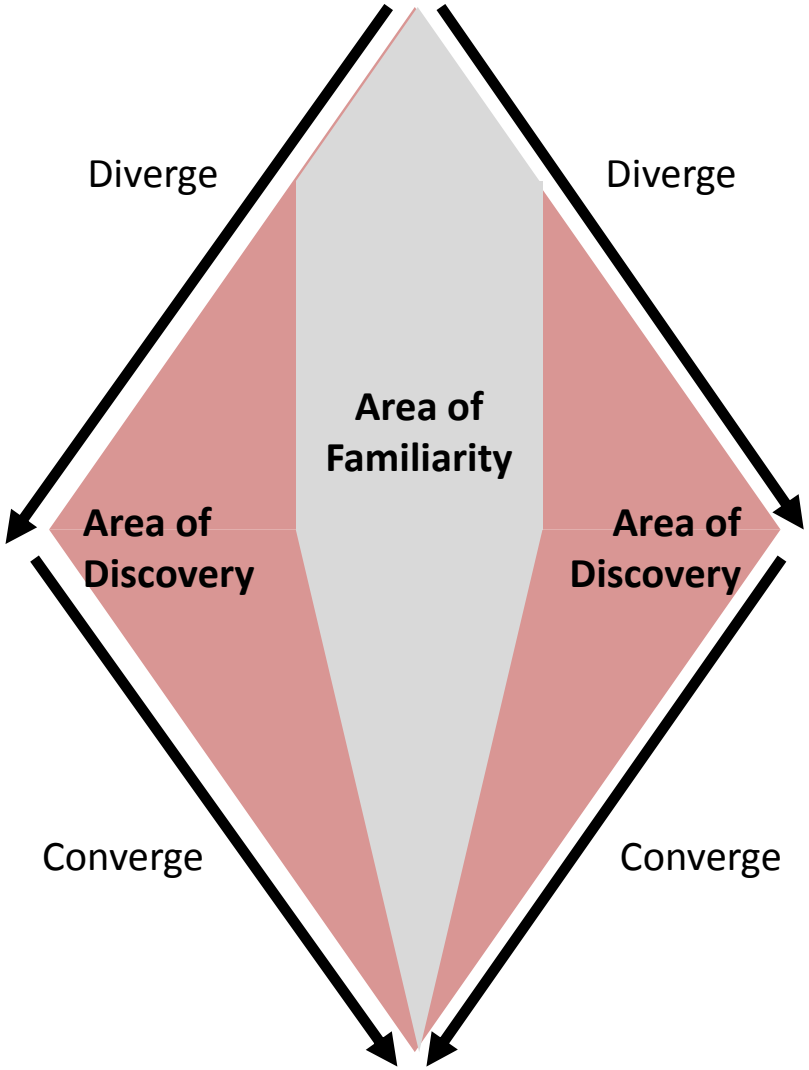
(Puccio, Murdock, & Mance, 2007)

Divergent Thinking

1st third = ordinary

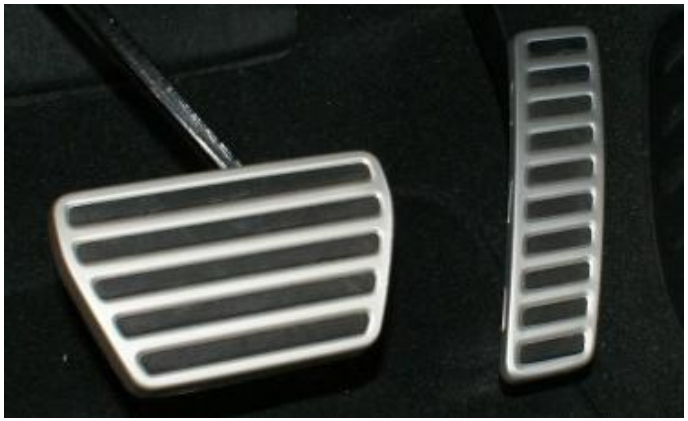
2nd third = wild

Final third = unique & valuable

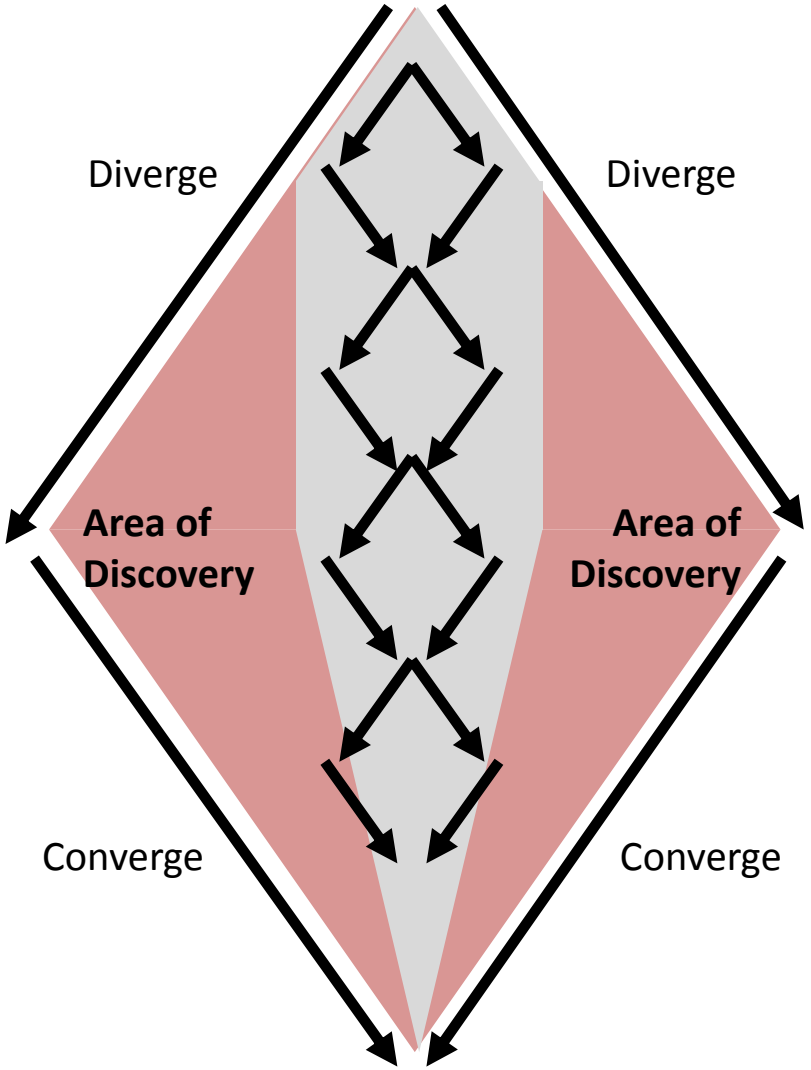


(Puccio, Murdock, & Mance, 2007; Firesien, 2009)

Divergent Thinking



Unless we have the awareness to manage judgment we never get beyond our area of familiarity



(Puccio, Murdock, & Mance, 2007; Firesien, 2009)

Dynamic Balance

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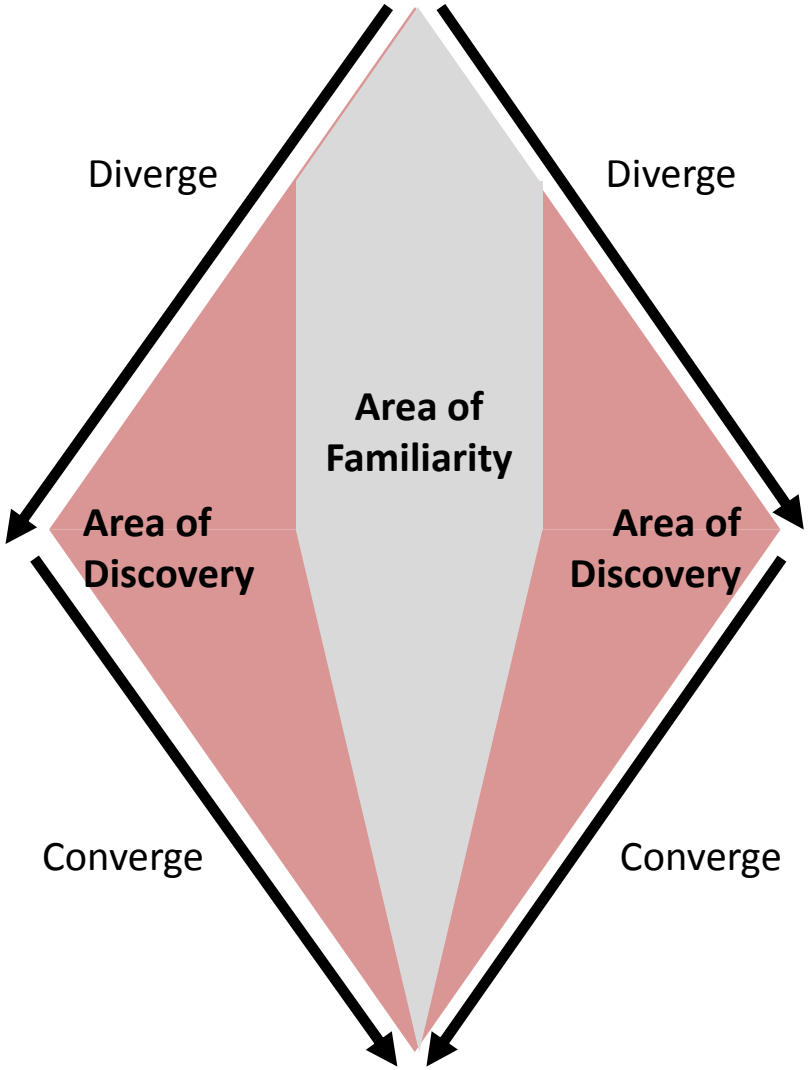
- Convergent thinking
  - Evaluating options



(Puccio, Murdock, & Mance, 2007)

Awareness of Judgment

- Think about what often happens in a meeting:
  - A new idea or a concept is offered
  - There is a request for comments
- **What happens?**

Awareness of Judgment

- Think about what often happens in a meeting:
  - A new idea or a concept is offered
  - There is a request for comments
- **What happens?**
  - Concerns and criticism
  - Questions
  - Praise

Awareness of Judgment

- "the vehicle does not meet the fundamental technical requirement of a motor-car ...”
- “To build the car commercially would be a completely uneconomic enterprise.”

Awareness of Judgment

- "the vehicle does not meet the fundamental technical requirement of a motor-car ...”
- “To build the car commercially would be a completely uneconomic enterprise.”

(Volkswagen. Retrieved June 26, 2009 from wikepedia.com website: http://en.wikipedia.org/wiki/Volkswagen)

Awareness of Judgment

- Over 21 million original Beetles were manufactured
- It is the most successful car design in history

(Volkswagen. Retrieved June 26, 2009 from wikepedia.com website: http://en.wikipedia.org/wiki/Volkswagen)

Awareness of Judgment

It's easy to imagine a critical assessment:

- The engine's in the rear
- It's looks funny
- It's noisy
- It's too small to be comfortable

Awareness of Judgment

Now imagine if the decision making process had required looking at the pluses of the Beetle:

- It's economical
- It's easy to maintain
- The unique design is appealing
- It's fun to drive

Awareness of Judgment

- Judgment gets in the way when it causes us to look for reasons why something **can't** be done, instead looking for reasons why something **can** be done

Applying Affirmative Judgment

PPCO

- **P**luses
- **P**otentials
- **C**oncerns
- **O**vercoming Obstacles

(Miller, Vehar, & Firestien, 2001)

Creativity:
Divergent/Convergent Dynamic Balance

- Have awareness of your judgment and take control of your judgment
- Recognize if something needs to be judged immediately, if it can be judged at a later time, or if it needs to be judged at all
- Recognize and break patterns of automatic thinking
- Separate your imaginative thinking from your judgmental thinking when generating ideas
- Divergent thinking requires deferring the judgment that stops idea generation
- Convergent thinking benefits from affirmative judgment that looks for **potential** and **possibilities**

Creative Process & Problem-Solving Preferences

Creative Problem-Solving Process

Where problem-solving happens

- Facilitated workshops
- Meetings
- Conversations
- Thoughts and emotions

Creative Problem-Solving Process

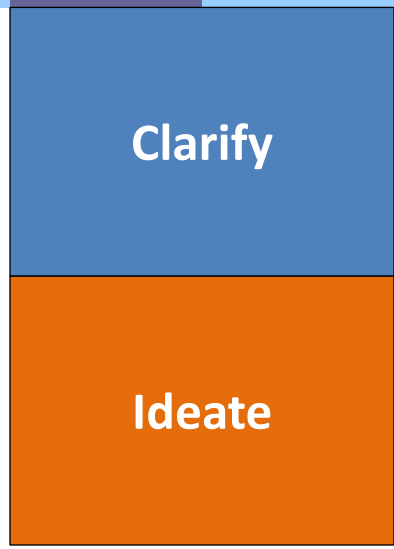
- Problem-solving can be viewed as a process of defined steps that progress toward a solution
- Each step requires unique mental skills
- Most of us prefer some over others

Creative Problem-Solving Process

Clarify

- Clarify
  - Define and clarify the opportunity or challenge

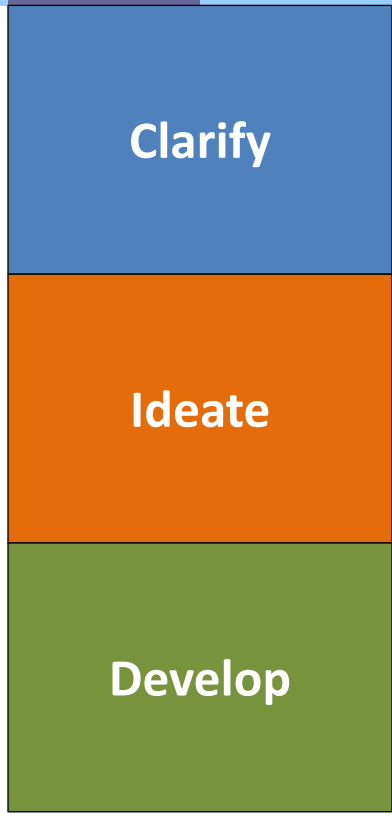
Creative Problem-Solving Process



- Clarify
  - Define and clarify the opportunity or challenge
- Ideate
  - Generate ideas
  - Evaluate and select an idea(s)

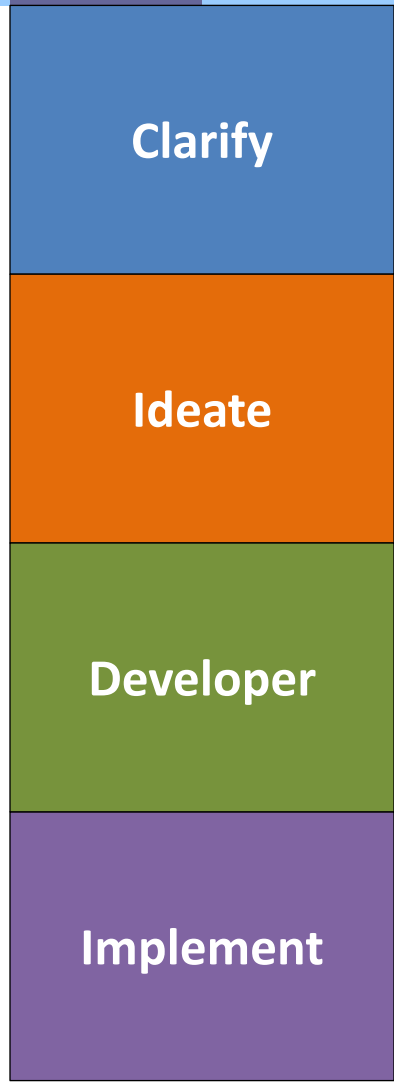
Creative Problem-Solving Process

- Clarify
  - Define and clarify the opportunity or challenge
- Ideate
  - Generate ideas
  - Evaluate and select an idea(s)
- Develop
  - Transform ideas into solutions
  - Test, refine, strengthen solution



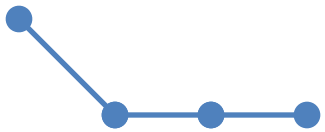
Creative Problem-Solving Process

- Clarify
  - Define and clarify the opportunity or challenge
- Ideate
  - Generate ideas
  - Evaluate and select an idea(s)
- Develop
  - Transform ideas into solutions
  - Test, refine, strengthen solution
- Implement
  - Gain acceptance
  - Put plan into action
  - Evaluate solution over time



Problem-Solving Preferences

- The FourSight assessment indentifies the following problem-solving preferences:
  - Clarifier
  - Ideator
  - Developer
  - Implementer
  - Integrator



Clarifier

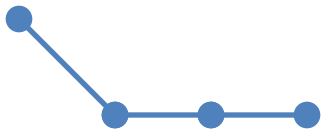
Ideator

Developer

Implementer

Integrator

Problem-Solving Preferences



- These are preferences, not abilities.
- They reflect the mental activities during the process that are the most enjoyable and energizing.
- Preferences can show up as strengths or blind spots in how we approach problem-solving.

(Puccio, 2002; Puccio & Miller, 2010)

Clarifier

Ideator

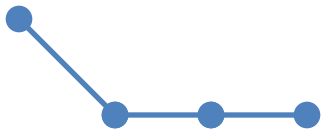
Developer

Implementer

Integrator

Problem-Solving Preferences

- Take a moment to rank your preferences



Clarifier

Ideator

Developer

Implementer

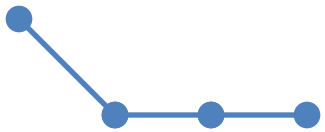
Integrator

(Puccio, 2002; Puccio & Miller, 2010)

Problem-Solving Preferences

Understanding problem-solving preferences helps with:

- Self-awareness
- Empathy



Clarifier

Ideator

Developer

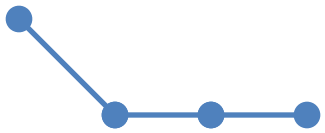
Implementer

Integrator

Problem-Solving Preferences

Understanding problem solving preferences and styles helps us:

- Appreciate and utilize the strengths that each has to offer
- Develop compensating strategies
- Discuss group dynamics with a common vocabulary
- Collaborate better



Clarifier

Ideator

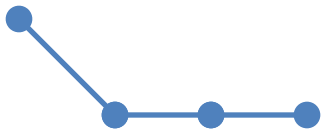
Developer

Implementer

Integrator

(Puccio, 2002; Puc

Clarifiers



What's a **Clarifier**?

- Examines the problem
- Not quick to move to solutions
- Wants to address the right problem
- Gathers information
- Looks at details
- May over analyze and not move forward

Clarifier

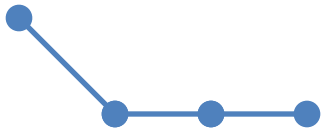
Ideator

Developer

Implementer

Integrator

Clarifiers



Clarifiers are:

- focused
- methodical
- orderly
- deliberate
- serious
- organized

Clarifier

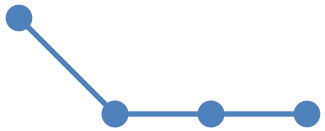
Ideator

Developer

Implementer

Integrator

Clarifiers



Clarifiers need:

- order
- facts
- an understanding of history
- access to information
- to ask questions

Clarifier

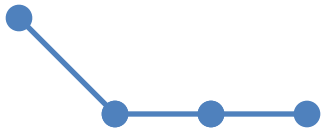
Ideator

Developer

Implementer

Integrator

Clarifiers



Clarifiers annoy others by:

- asking too many questions
- pointing out obstacles
- being too realistic
- identifying what's not well thought out
- overloading people with information

Clarifier

Ideator

Developer

Implementer

Integrator

Ideators

What's an **Ideator**?

- Looks at the big picture
- Toys with ideas and possibilities
- Stretches the imagination
- Takes an intuitive approach
- Thinks in more global terms
- May overlook the details

Clarifier

Ideator

Developer

Implementer

Integrator

Ideators

Ideators are:

- playful
- imaginative
- social
- adaptable
- flexible
- adventurous
- independent

Clarifier

Ideator

Developer

Implementer

Integrator

Ideators

Ideators need:

- room to be playful
- constant stimulation
- variety and change
- the big picture

Clarifier

Ideator

Developer

Implementer

Integrator

Ideators

Ideators annoy others by:

- drawing attention to themselves
- offering ideas that are off-the-wall
- being too abstract
- not being able to stick to one idea
- being impatient when others don't get their ideas

Clarifier

Ideator

Developer

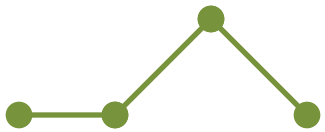
Implementer

Integrator

Developers

What's a **Developer**?

- Puts together workable solutions
- Plans steps to implement an idea
- Analyzes and compares potential solutions
- Examines the pluses and minuses of an idea
- May get stuck in developing the perfect solution



Clarifier

Ideator

Developer

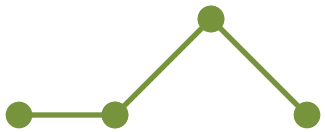
Implementer

Integrator

Developers

Developers are:

- reflective
- cautious
- pragmatic
- structured
- planning-oriented



Clarifier

Ideator

Developer

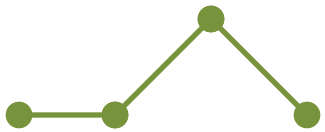
Implementer

Integrator

Developers

Developers need:

- time to consider the options
- time to evaluate
- time to develop their ideas



Clarifier

Ideator

Developer

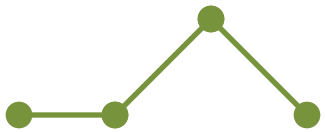
Implementer

Integrator

Developers

Developers annoy others by:

- being too nit picky
- finding flaws in others' ideas
- getting locked into one approach
- spontaneously seeing the shortcomings in an idea



Clarifier

Ideator

Developer

Implementer

Integrator

Implementers

Whats's an **Implementer**?

- Gives structure to ideas
- Makes ideas come to fruition
- Focuses on workable solutions
- Takes the 'Nike' approach ("Just do it")
- May leap to action too quickly

Clarifier

Ideator

Developer

Implementer

Integrator

Implementers

Implementers are:

- persistent
- decisive
- determined
- assertive
- action-oriented

Clarifier

Ideator

Developer

Implementer

Integrator

Implementers

- **Implementers** need:
- to feel that others are moving just as quickly
- to receive timely responses to their ideas
- to have control

Clarifier

Ideator

Developer

Implementer

Integrator

Implementers

Implementers annoy others by:

- being too pushy
- expressing their frustration readily when others do not move as quickly
- overselling their ideas

Clarifier

Ideator

Developer

Implementer

Integrator

Integrators

What is an **Integrator**?

- Easily relates to each preference
- Even energy across four preferences
- Concerned about group harmony
- Bridges style differences and plugs gaps
- May lose own voice by pleasing others

Clarifier

Ideator

Developer

Implementer

Integrator

Integrators

Integrators are:

- steady
- flexible
- inclusive
- team players
- stabilizing influences

Clarifier

Ideator

Developer

Implementer

Integrator

Integrators

Integrators need:

- cooperation
- collaboration
- energy from others
- to feel others are committed to the challenge

Clarifier

Ideator

Developer

Implementer

Integrator

Integrators

Integrators annoy others by:

- Pointing out what's not being done
- Not allowing their voices to be heard
- Being overly flexible
- Becoming peace-makers on teams

Clarifier

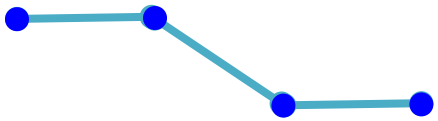
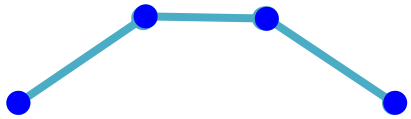
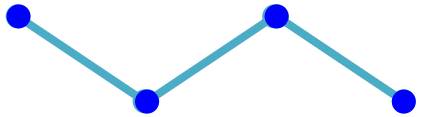
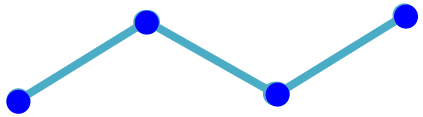
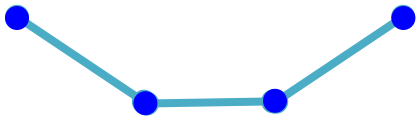
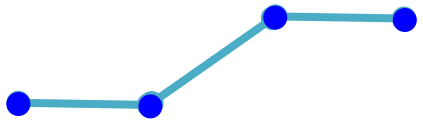
Ideator

Developer

Implementer

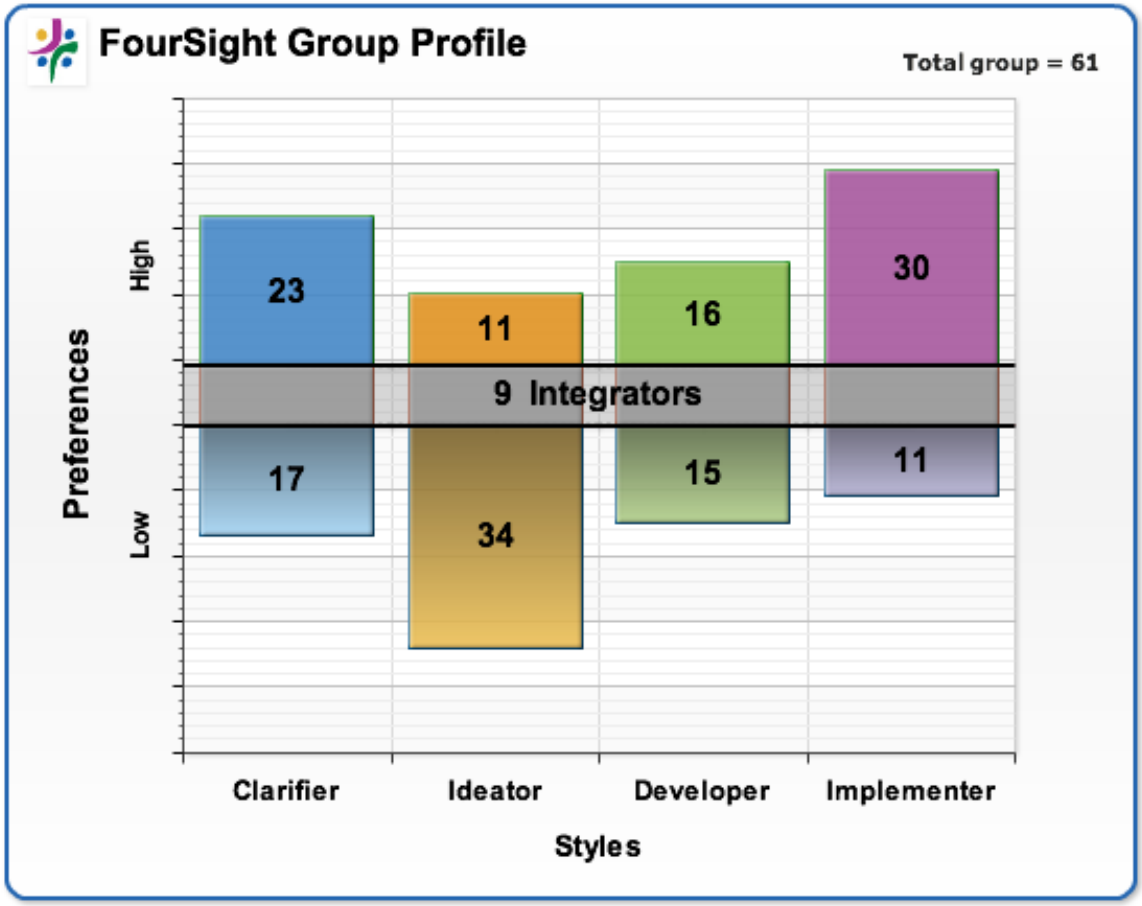
Integrator

Two-way Styles

“Early bird”		“Theorist”	
“Analyst”		“Driver”	
“Accelerator”		“Finisher”	

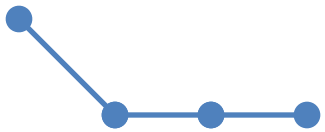
(Puccio, 2002; Puccio & Miller, 2010)

GROUP PROFILE



Problem-Solving Preferences

- Find a partner
- Share styles
- Identify differences, similarities
- Discuss how this might impact your working relationships



Clarifier

Ideator

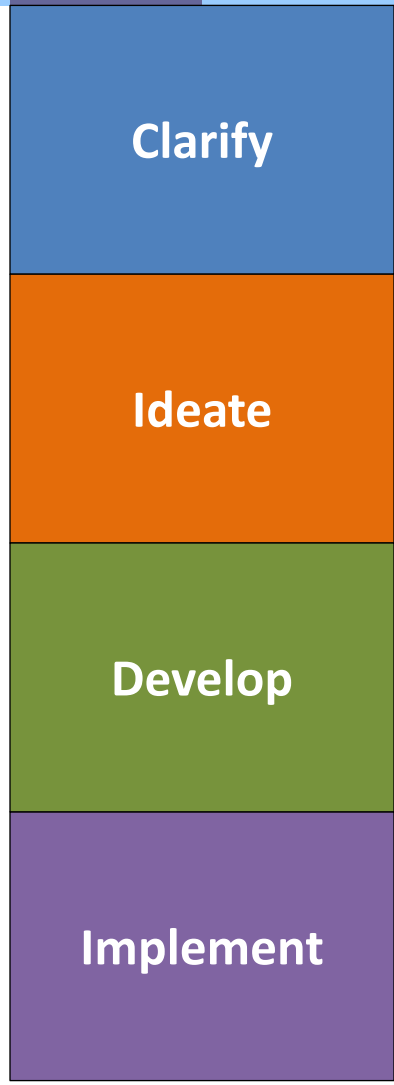
Developer

Implementer

Integrator

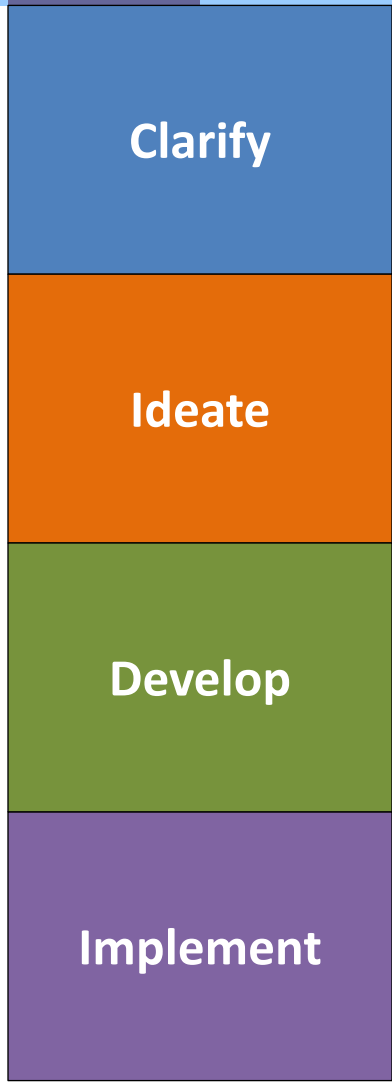
(Puccio, 2002; Puccio & Miller, 2010)

Creative Problem-Solving Process

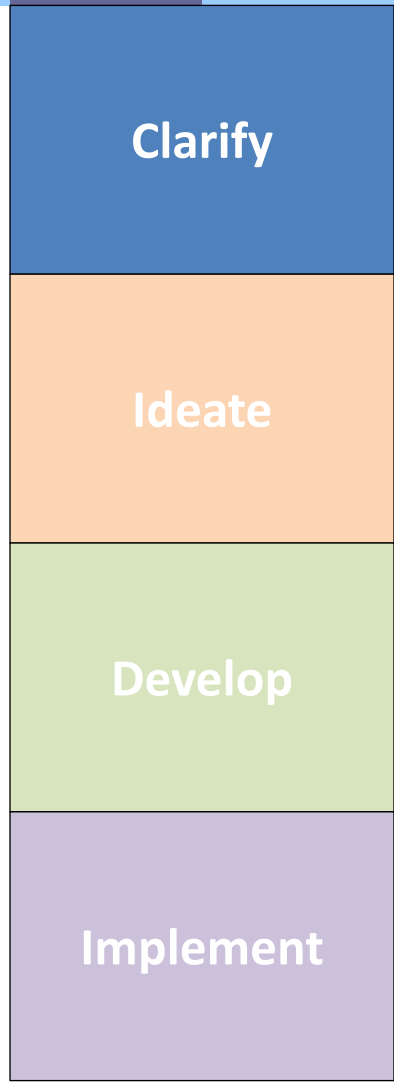


Creative Problem-Solving Process

- Clarify
  - Define and clarify the opportunity or challenge
- Ideate
  - Generate ideas
  - Evaluate and select an idea(s)
- Develop
  - Transform ideas into solutions
  - Test, refine, strengthen solution
- Implement
  - Gain acceptance
  - Put plan into action
  - Evaluate solution over time



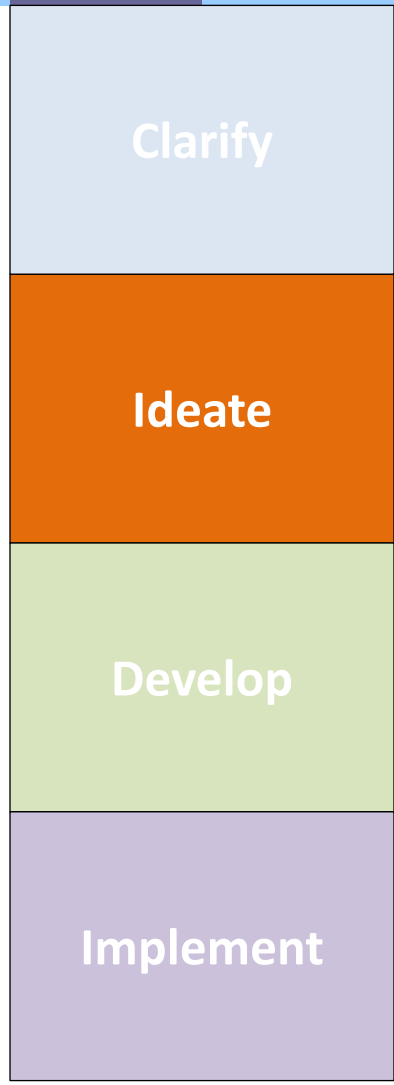
Creative Problem-Solving Process



When you clarify:

- See the situation from all angles
- Understand the background
- Identify key data
- What info are you missing?
- Isolate obstacles
- Know what is relevant

Creative Problem-Solving Process



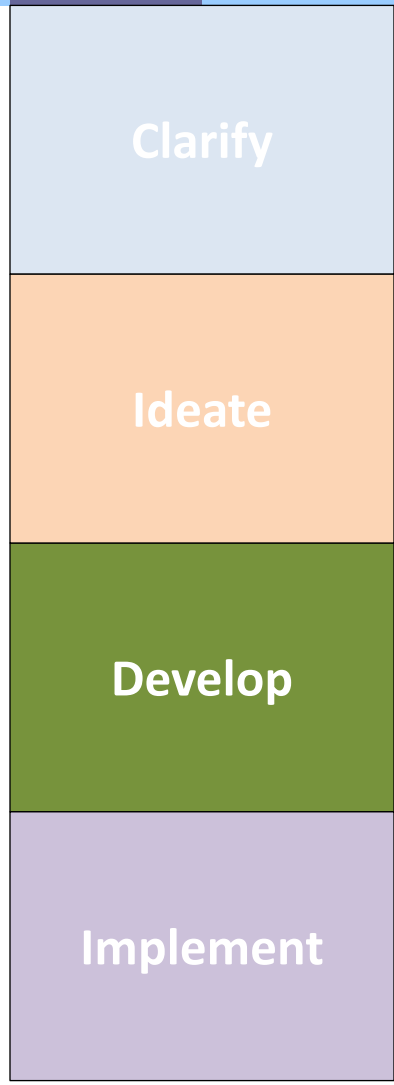
When you ideate:

- List lots of ideas
- Be playful
- Look from a new angle
- Brainstorm to get diverse ideas
- Use random associations

Creative Problem-Solving Process

When you develop:

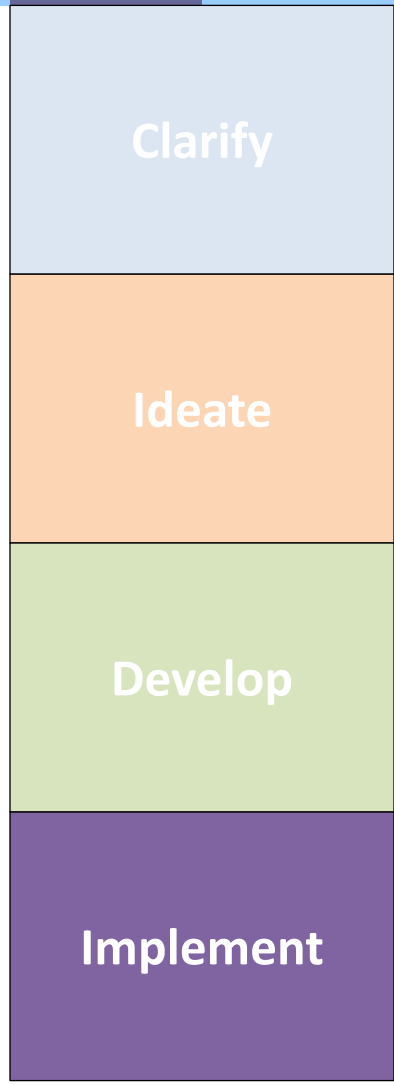
- Say what you like
- Phrase concerns as questions
- Develop criteria for success
- Modify solutions
- Who might assist? Resist?
- Make an action plan



Creative Problem-Solving Process

When you implement:

- Get into action
- Learn as you go
- Test fast. Fail fast. Adjust fast.
- What's working? What isn't?
- Cycle back to other phases



Using What You've Learned

- What is useful
- How to apply
- What will you do differently

Conclusion

Key Takeaways

- Attention is selective. Deliberate creative requires attention to recognize and break patterns of thinking
- Creativity is a deliberate process involving the dynamic balance of divergent and convergent thinking
- It is important to control judgment to move thinking beyond the obvious, generate new ideas, and to see the potential in ideas

Conclusion

Key Takeaways

- Creative problem-solving involves clarifying, ideating, developing, and implementing
- Problem-solving is less about the specific steps in a process and more about the awareness of the specific mental activity required in a particular situation
- Collaboration is enhanced by understanding and appreciating individual problem solving styles

Conclusion

- Questions?
- Comments?
- Thoughts?

Thank You

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