

# Creative Problem Solving and Project Management: Essential Slides

Communities Care WNY Family Caregivers Respite Pilot Program

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## Divergent Thinking

**Divergent thinking** is a process of generating multiple ideas, solutions and possibilities on demand. In this process, individuals or groups become deliberately creative and open themselves up to breakthrough thinking.

**Divergent thinking** is a broad search for many diverse and novel alternatives.

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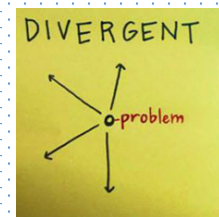
## Diverging to Clarify

Divergent thinking can also be used to help clarify, formulate or reframe the challenge in order to decide what problem the team will solve.

The language we use to describe a problem will determine how we will go about solving it.

## Ground Rules for Divergent Thinking

- Defer judgment...All evaluation is ruled out.
- Strive for Quantity...More ideas increases the likelihood of generating/developing useful ideas.
- Build on other ideas...How can ideas be extended or combined?
- Seek novelty...It is easier to tame a wild idea.



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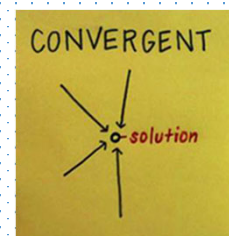
## Convergent Thinking

**Convergent thinking** involves the delicate task of judging and making decisions. Done right, fledgling and underdeveloped ideas that might otherwise be overlooked or dismissed stand the chance of being developed into robust and brilliant solutions.

**Convergent thinking** is a focused affirmative evaluation of alternatives.

## Guidelines for Convergent Thinking

- Apply affirmative judgement...Carefully consider the strengths of an idea.
- Be open to novelty...Entertain highly original options that you might otherwise eliminate.
- Be deliberate...Consider what is realistic, useful or that can be improved upon.
- Stay on course...Keep the original goal in mind.



# The Creative Problem Solving Model



- Universal and intuitive
- Research based
- Distinct steps
- Unique thinking skills

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## Clarify

Exploring the vision & identifying the challenge



## Ideate

Generating ideas



## Develop

Transforming solutions & bringing ideas to life



## Implement

Exploring acceptance & formulating a plan

The FourSight Model

Nielsen & Thurber (2010) based on the work of Puccio & Miller (2003)

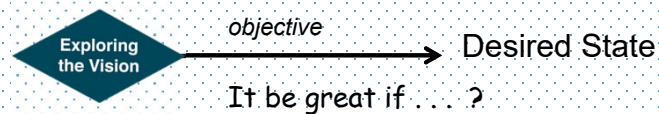
## Clarify: Exploring the Vision



**Purpose:** Develop a vision of a desired outcome.

**Cognitive Thinking Skill:** Visionary Thinking  
Articulating a vivid image of what you desire to create.

**Affective Skill:** Dreaming  
Imagining as possible your desires and hopes.



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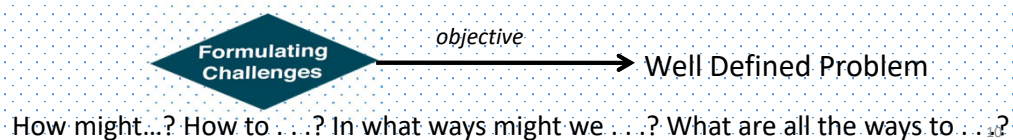
## Clarify: Identifying the Challenge



**Purpose:** Identify the gaps that must be closed to achieve desired outcome.

**Cognitive Thinking Skill:** Strategic Thinking  
Identifying the critical issues that must be addressed and pathways needed to move toward desired future.

**Affective Skill:** Sensing Gaps  
Become consciously aware of discrepancies between what currently exists and is desired or required.



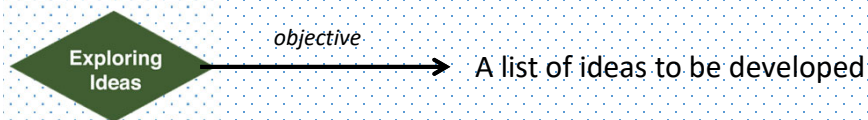
## Ideate: Exploring Ideas



**Purpose:** Generate novel ideas that address important creative questions and challenges.

**Cognitive Thinking Skill:** Ideational Thinking  
Producing original mental images and thoughts that respond to important challenges.

**Affective Skill:** Playfulness  
Freely toying with ideas.



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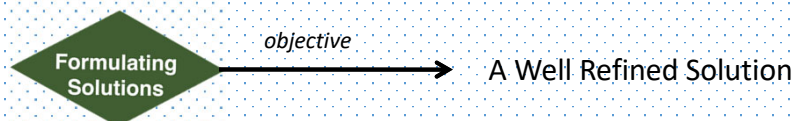
## Transformation: Transforming Solutions



**Purpose:** Move from ideas to solutions.

**Cognitive Thinking Skill:** Evaluative Thinking  
Assessing the reasonableness and quality of ideas in order to develop workable solutions.

**Affective Skill:** Avoiding Premature Closure  
Resisting the urge to push for a decision.



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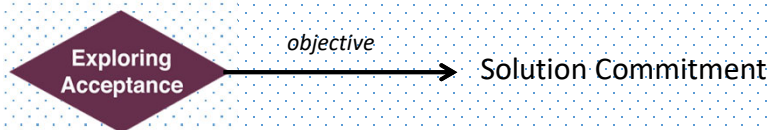
## Implementation: Exploring Acceptance



**Purpose:** Increase the likelihood of success and buy-in.

**Cognitive Thinking Skill:** Contextual Thinking  
Understanding the interrelated conditions and circumstances that will support or hinder success.

**Affective Skill:** Sensitivity to Environment  
The degree to which people are aware of their physical and psychological surroundings.



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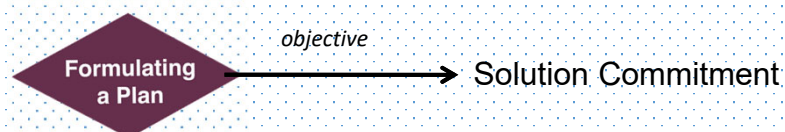
## Implementation: Formulating a Plan



**Purpose:** To develop an implementation plan.

**Cognitive Thinking Skill:** Tactical Thinking  
Devising a plan that includes specific and measurable steps for attaining a desired end and methods for monitoring effectiveness.

**Affective Skill:** Tolerance for Risks  
Not allowing yourself to be shaken or unnerved by the possibility of failure or setback.



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Project Management

## Process Groups



**Initiating:** Casting a vision for what will be accomplished throughout the duration of that project.

**Planning:** Taking the broader ideas established within the initiating stage and defining and refining them in greater detail.

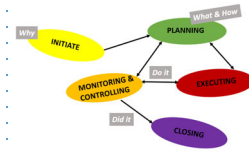
**Executing:** Coordinating people and resources to carry out the project.

**Monitoring & Controlling:** Identifying and troubleshooting problems as they arise and adjusting when needed.

**Closing:** Formulizing the acceptance and closure of the project.



## Knowledge Areas



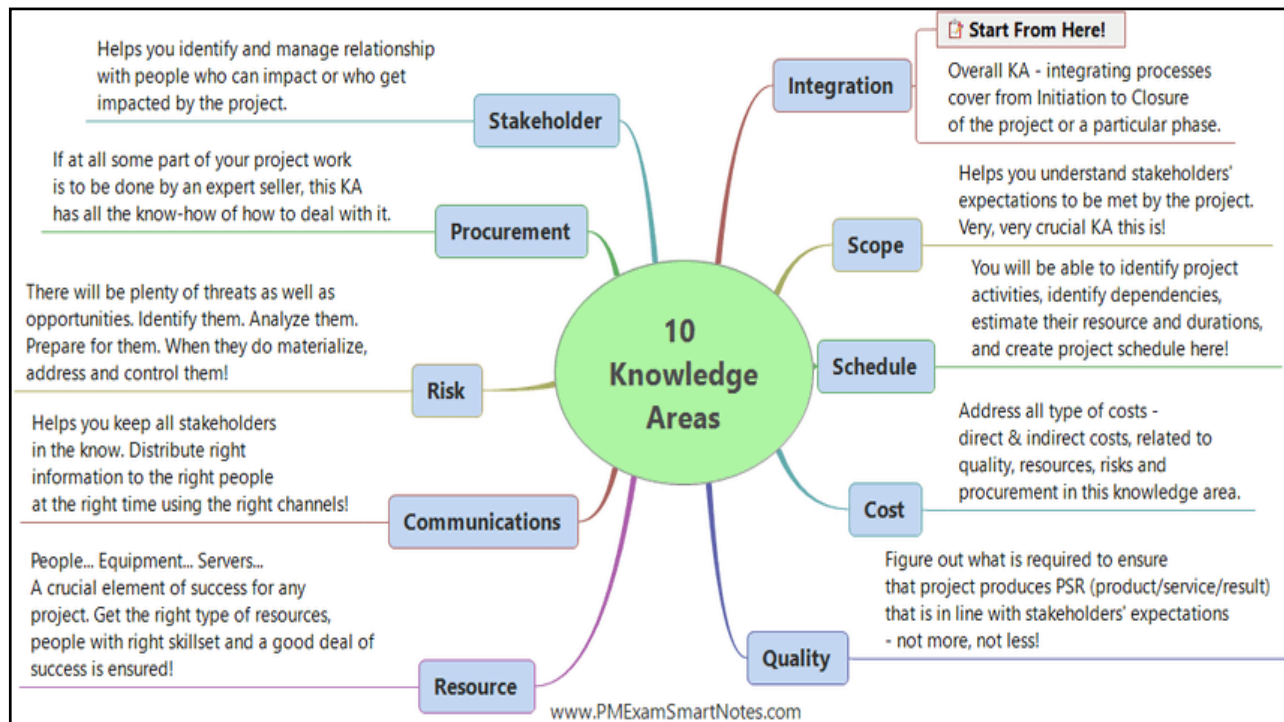
- Cover the 10 core components of projects
- Provide a framework
- Not every project will employ all the knowledge areas
- When considered and applied in practice across the process groups project success increases

## Knowledge Areas

I saw six cars quickly ram Carl's rear passenger side.

Integration Management  
 Scope Management  
 Schedule Management  
 Cost Management  
 Quality Management

Resource Management  
 Communications Management  
 Risk Management  
 Procurement Management  
 Stakeholder Management



## Integration Management

- Outlining the project: Charter
- Coordinating the tasks that hold the whole project together
- Doing the work
- Managing the working
- Monitoring the work
- Making adjustments
- Incorporating adjustments to plan and work



## Charter: A Project Roadmap

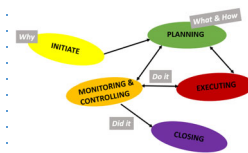
- Business need - Context...why the need and what's the rationale?
- Project Sponsor - Who is the lead and has authority to embark on this pilot?
- Project name - What are we calling this new respite project?
- 10K Scope - What will you create?
- 10K Cost - What budget information can you provide?
- 10K Timeline - What are the proposed start and end dates and milestones?
- 10K Risk - Any anticipated issues or known concerns?
- Assumptions - With whom will you collaborate?
- Project Success - How will assess success of the pilot?

## Integration Management

- When thinking about all the knowledge areas that are included your respite pilot project, how will you coordinate all the necessary activities?
- Of all the things your pilot **could** be, **could** offer, **could** provide, how did you decide what it will and will not do, offer, provide?
- Along the way, your team may discover new information that makes it impossible for them to complete the respite pilot program as originally planned. What consideration have you given to responding and incorporating necessary changes?

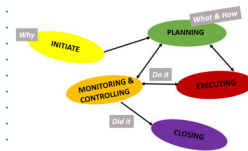


## Integration Management



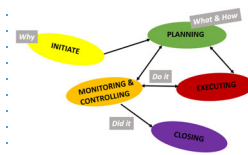
- What might be all the ways to monitor progress along the way both in the proposal submission and pilot project implementation?
- How might you decide what changes to the pilot project are acceptable?
- There will be learning along the way that could be of assistance to you and/or other in future work and endeavors. What considerations will you give to capturing and sharing these insights?

## Integration Management



- What might be all the conditions outside of the team's control?
- What practices exist that you might leverage and/or employ in your proposal and pilot program??

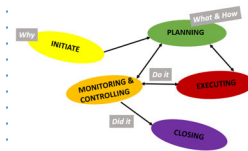
## Scope Management



- Outlines the work and deliverables that will be required to complete the project
- Collecting stakeholders' requirements and expectations
- Defines success criteria
- Breaking the scope down into manageable components
  - What are the specifications of the new respite idea?
  - What do we need to do to “pull off” establishing this new idea?

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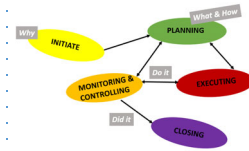
## Schedule Management



- Dividing the project into tasks, which are scheduled with start dates and deadlines
- Sequencing Activities - Determining the order and dependencies between the activities
- Estimating Activity Durations - Estimating the required time to perform each activity
- Developing the Schedule - Once the duration of each activity, (and the resources are known to complete it) the schedule can be developed

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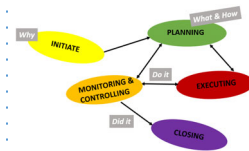
## Cost Management



- Forecasting the cost of each step of a project and even including budgeting for mishaps or compensating for any foreseeable obstacles
- Considering the cost of the human and physical resources and when those costs will be incurred
- Estimating costs of each activity to complete the project
- The ideal sequence is to plan SCOPE, SCHEDULE, RESOURCE then COST
- For increased precision, estimate costs from each activity in the WBS and roll up to the project level
- The project budget is comprised of all the activities in the WBS

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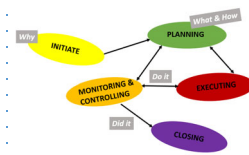
## Quality Management



- Safeguards against subpar deliverables by establishing quality standards for the project...in advance
- Determining the degree to which the project fulfills requirements and satisfies the needs for which it was undertaken...*Did we build the thing right?*
- Committing to continuously improving processes - However small, no matter who

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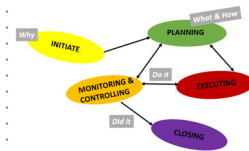
## Resource Management



- Focusing on resources used to complete the project including human capital and any equipment/supplies that will be used to complete tasks
- Managing, leading and developing the team
- *Estimating time needed for each resource (human and supply)*
- Assigning personnel responsible for project deliverables – Responsibility Matrix

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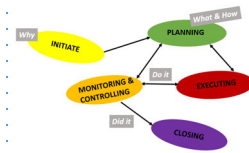
## Communications Management



- Determining who needs what information, who will share it with them and how
- Setting up a communications plan and maintaining the necessary lines of communication within the team and across stakeholders
- Strategizing communications for project and stakeholder needs
- Identifying the number of communication channels
- Determining communication methods

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## Risk Management



- A **risk** is an uncertain event or condition that, if it occurs, has a positive **or** negative effect on a project's objectives
- Identifying risks (positive and negative)
- Quantifying and qualifying risks
- Planning risk responses
- Determining the depth of a risk register

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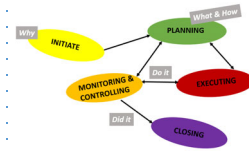
## Procurement Management

- Performing the work necessary to purchase or acquire products, services, or results needed from **outside** of the project team
- Understanding two key roles: buyer and seller
- Determining how to solicit
- Applying the best contract strategy for the project need

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## Stakeholder Management



- Identifying all possible stakeholders - Anyone positively or negatively impacted by the project
- Assessing stakeholder role and desired outcome on the project and setting clear expectations
- Managing stakeholder satisfaction throughout the project
- Analyzing and documenting the relevant information regarding stakeholder interests, involvement, interdependencies, influence and potential impact on project success
- Creating a stakeholder registry

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## Warm Ups

- To briefly train you in the tool we will be using
- To “sanction” the time for speculation
- To create a judgment free zone
- To prep for the “real” work!

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## Tools Covered

- Brainstorming
- Forced Connections
- Highlighting (H/C/R)
- Word Dance
- Story Boarding
- Creative Questions (H2, HM, IWW, WMBAT)
- Brainwriting
- Card Sort
- Pluses, Potentials, Concerns, Overcoming Concerns (PPCo)
- Sequencing

## Stick'em up Brainstorming

- ✓ Write your idea on a Post-it
- ✓ Say your idea/creative question out loud so that others in the group can hear it
- ✓ Stick your idea/creative question on the chart paper
- ✓ Hand you idea/creative question forward
- ✓ One idea/creative question per Post-it

## Forced Connections

The goal is to *force a connection* between two totally unrelated things, **the prop** and **the challenge**, to stimulate thinking and **create more ideas**.

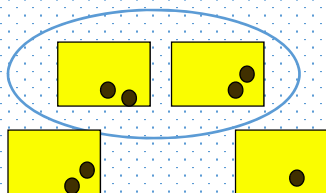
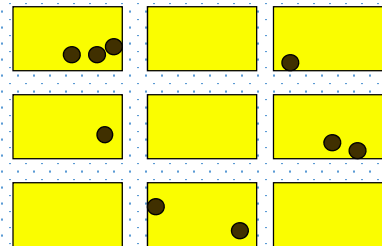
These new ideas are often more novel and unusual.

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## Highlighting

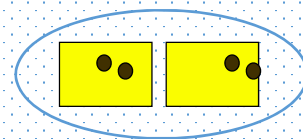
### 1. Mark the "Hits"

- Interesting
- New insight
- Workable
- Solves the problem
- Promising direction
- Feels good in your gut



### 2. Cluster the related "hits" together

3. **Restate** the cluster to capture its essence and state as an action or creative question

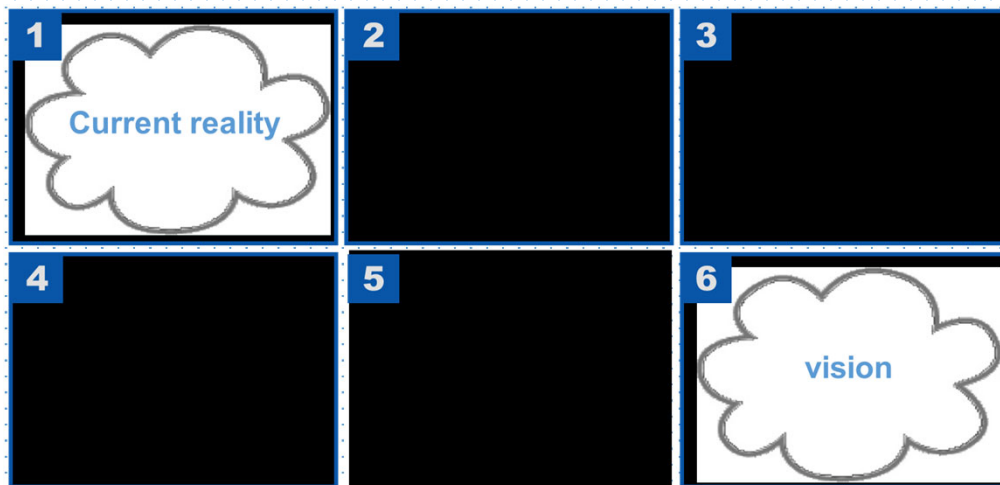


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## Word Dance: Musical Chairs with Words

Divergent tool to generate **substitute** phrases, nouns, verbs for alternative meaning-making and representation.

## Identifying Future Opportunities with Storyboard!



I wish...

It would be great if.....

## Creative Questions

- How to...(H2...)
- How might...(HM...)
- In what ways might...(IWWM...)
- What might be all the...(WMBAT...)

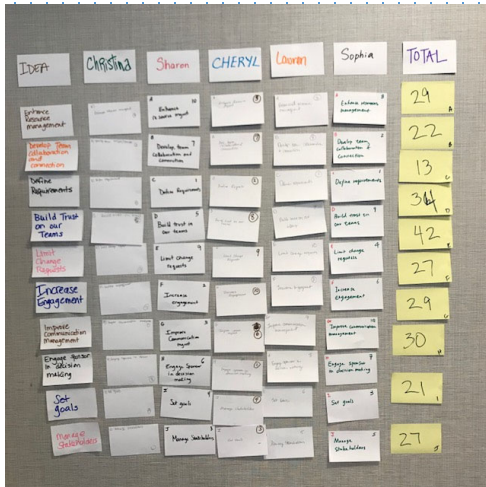
## Brainwriting

*Who might give a hoot about building a new senior center in town?*

	Idea #1	Idea #2	Idea #3
Person A	Person A writes an idea here...	...and another idea here	...and another here.
Person B	Person B writes their idea here, perhaps a new idea...	...or one which builds from an earlier idea	... or a combination of both ideas
Person C	Person C contributes here, adding their ideas in this row...	... which build on any ideas on this page ...	... or may be entirely new

Write down the creative challenge  
 Write three ideas  
 Get a new sheet  
 Read the creative challenge  
 Read the ideas  
 Add/build on ideas  
 Get a new sheet  
 Repeat

## Card Sort



Card sort is a **convergent** tool that helps you **compare, rank and prioritize**. It can be used to rank requirements, ideas, solutions, creative questions or criteria. Card sort also helps you to generate group consensus. This tool is best suited for prioritizing up to 15 options.

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## Pluses, Potentials, Concerns, Overcoming Concerns (PPCo)

- 1. Pluses:** Find value in the idea – express what you like about it.
- 2. Potentials:** What opportunities might be possible if the idea worked?
- 3. Concerns:** Present issues as creative questions to invite new thinking.
- 4. Overcoming concerns:** Brainstorm ways to overcome stated challenges.

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# Evaluation Matrix

Options	Criteria							Decision		
	\$250,000	100 X 100 Backyard	4 bedrooms	Accessibility	Good Schools	Intangibles				
265 Brentwood	D	C	D	E	B	D			X	
276 Berryman	A	B	D	B	A	B	X			
22 Pinewoods	E	B	C	B	E	C				
156 Crescent	C	D	E	D	C	E				
10171 Greiner	E	B	E	E	B	C			X	
160 W. Main	E	E	E	E	B	B				

**Decision**

USE  
MODIFY  
DISCARD

H2  
MM  
IWW  
WMBAT

Rating Scale:  
E = Poor  
D = Not good  
C = Okay  
B = Good  
A = Excellent

What is going to be done?	Who will do it?	By When?	Support/Report?
<u>Short Term Actions:</u> (Next 10 days)			
<u>Intermediate Actions:</u> (Three months)			
<u>Long Term Actions:</u> (4 months and ongoing)			
<u>Imminent Term Actions:</u> (Within 10 days)			