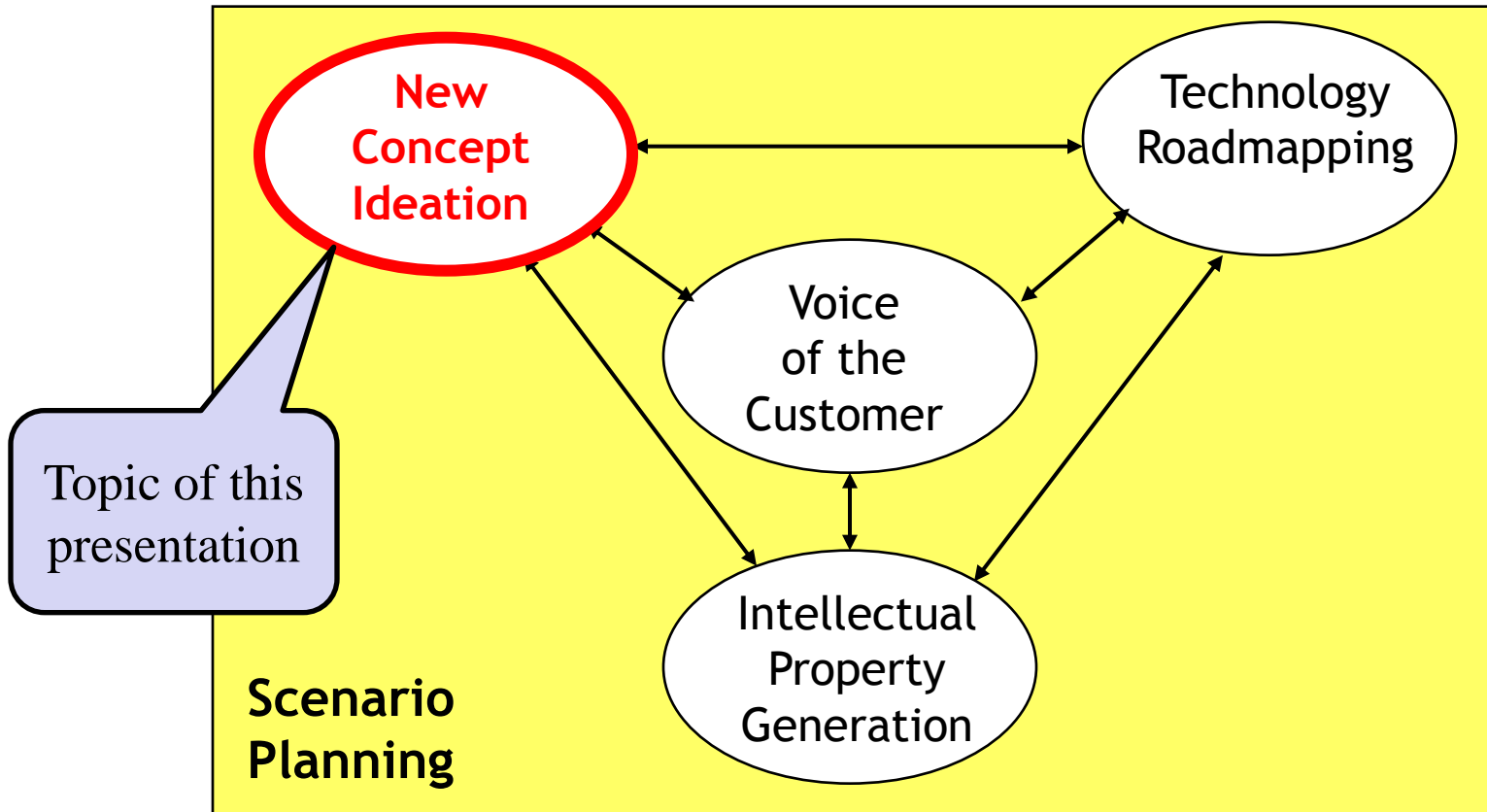


New Concept Ideation

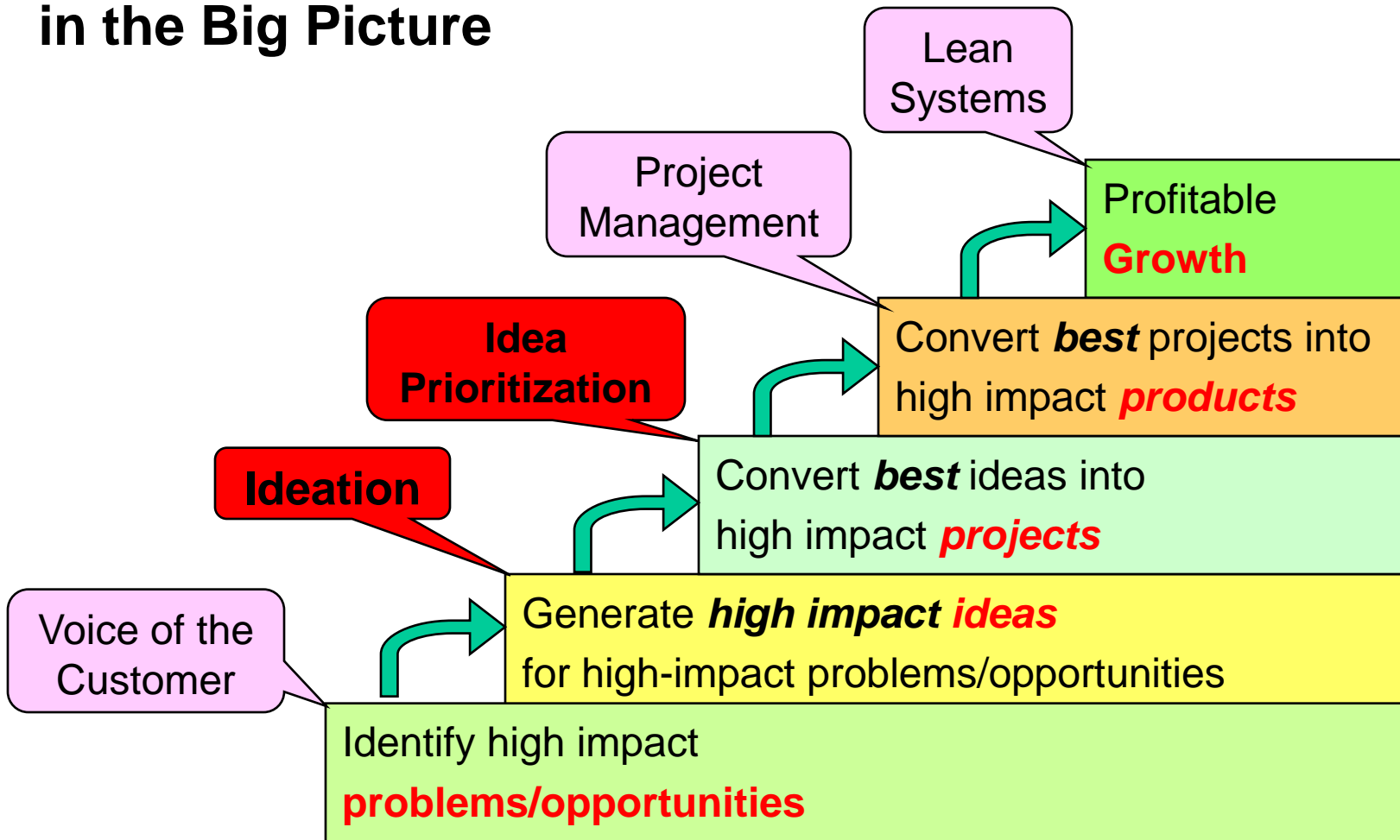
**Systematic processes
for generating innovative
concepts**



An Integrated Strategic Technology Planning and Development Environment



Where Ideation fits in the Big Picture



Input Ideas:

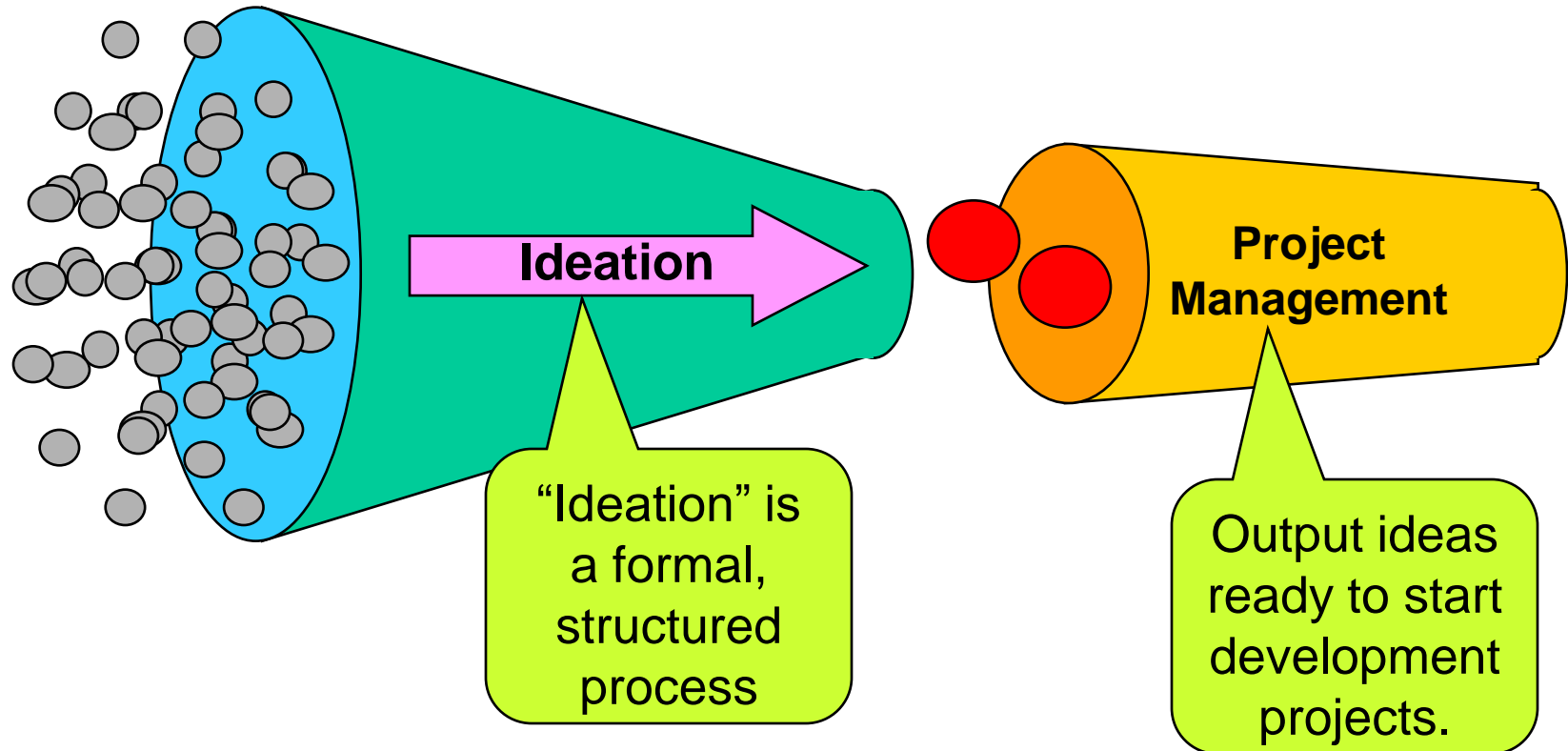
- Many
- Crazy
- Stupid
- Bad
- Random



Output Ideas:

- Few
- New
- Different
- Good
- Out-of-the-box

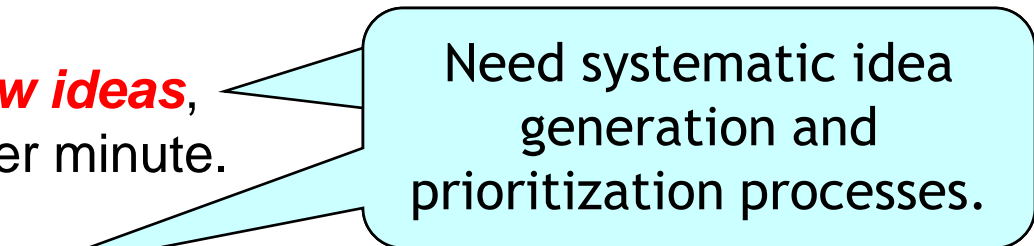
**What is
Ideation?**



Four Goals of an Ideation Process:

To stimulate *large* improvements in -

1. Quality and volume of *new ideas*,
 - More good ideas per minute.
2. Idea-to-project *hit-rate*,
 - More good ideas end up in products.
3. *Cross-linking* of ideas to create *new* opportunities,
 - Generate many new ideas in parallel – feed off each other.
4. *Visibility* of plans, activities, results, and methods,
 - People can see that you are making good progress!



Need systematic idea generation and prioritization processes.

WARNING!

- **Ideation process is FUN!**
 - Work = Fun
- **But it can look like you are NOT working.**
 - Fun \neq Work
- **But this really works.**
 - We will try to prove this in this course.

New Concept Ideation Process:

Purpose

- Generate **breakthrough solutions**:
 - Not interested in **incremental** (small) changes,
 - Looking for totally **unexpected** solutions,
 - **Drives research** into new technology areas (what **must** we work on?).
- Generate/discover **new customer needs**:
 - Not just directed at **known/existing** customer needs,
 - **Discover** = Find things that no-one has recognized as a need.
 - **Generate** = Invent new needs, reveal new possibilities.
 - **Stimulates** creation of new markets.

- 
- Crazy
 - Stupid
 - Bad
 - Random

New Concept Ideation Process:

Desired Strengths

- Improves **effectiveness** of unstructured “brainstorming”:
 - More good ideas per minute per person,
 - **Captures** what was said by who (for IP protection).
- **Liberates** inventors from artificial/inappropriate constraints:
 - Eliminates assumptions about what’s “in the box”,
 - Gives participants permission to think “outside the box”
- **Inclusive** - provides equal opportunity for all ideas/inventors:
 - No person can dominate idea **generation**,
 - No person can dominate idea **selection**.
 - Highly **democratic**.

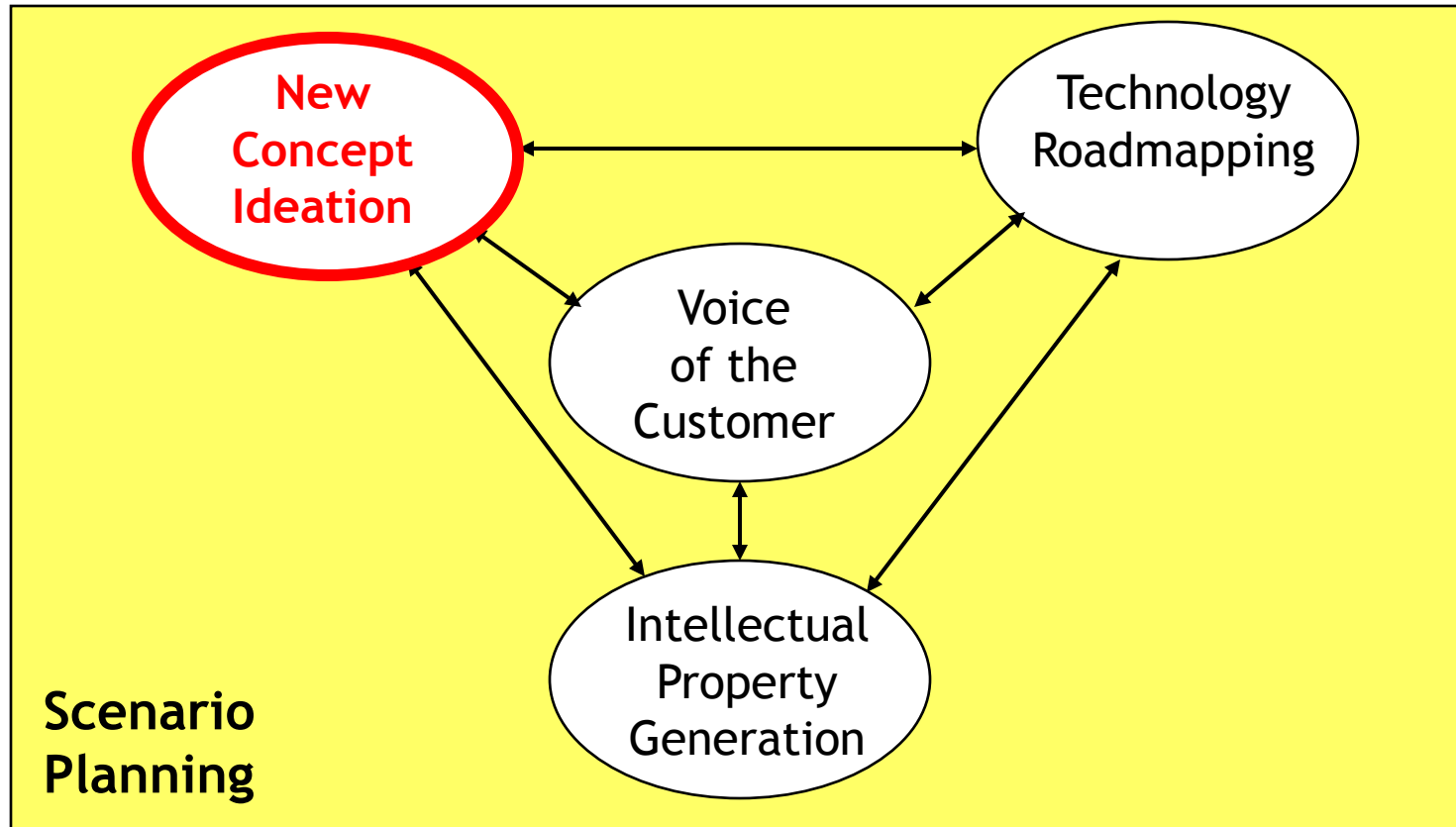
New Concept Ideation Process:

Potential Weaknesses

- Can lack *focus*:
 - Can get *way* out of the box, or into some totally different box,
 - Tendency is to want to capture *everything*,
 - “*Lottery ticked innovation*” - you may be a winner!
- Can miss the customer *value proposition*:
 - Great idea, but *who cares*,
 - Why are we doing this ideation session? For who?
 - Can we *really* make money on this?
- Needs a *destination* for ideas:
 - File cabinets full of posters.
 - What do we do *now*?
 - Where did I *put* that idea?

Weaknesses of Ideation are eliminated by other processes,

Ideation **eliminates weaknesses** of other processes.



What Actually IS “Ideation”?

- **Event (like a meeting):**
 - Defined start and stop points,
 - 1 hour to 3 days,
 - 5 to 100 people.
- **Purpose:** Discover **radically** new **problems** and/or invent new **solutions**.
- **Objective:** Efficiency - Increase rate of viable concepts per minute vs. non-structured (brainstorming) approaches.

- 
- Crazy
 - Stupid
 - Bad
 - Random

What Actually IS “Ideation”?

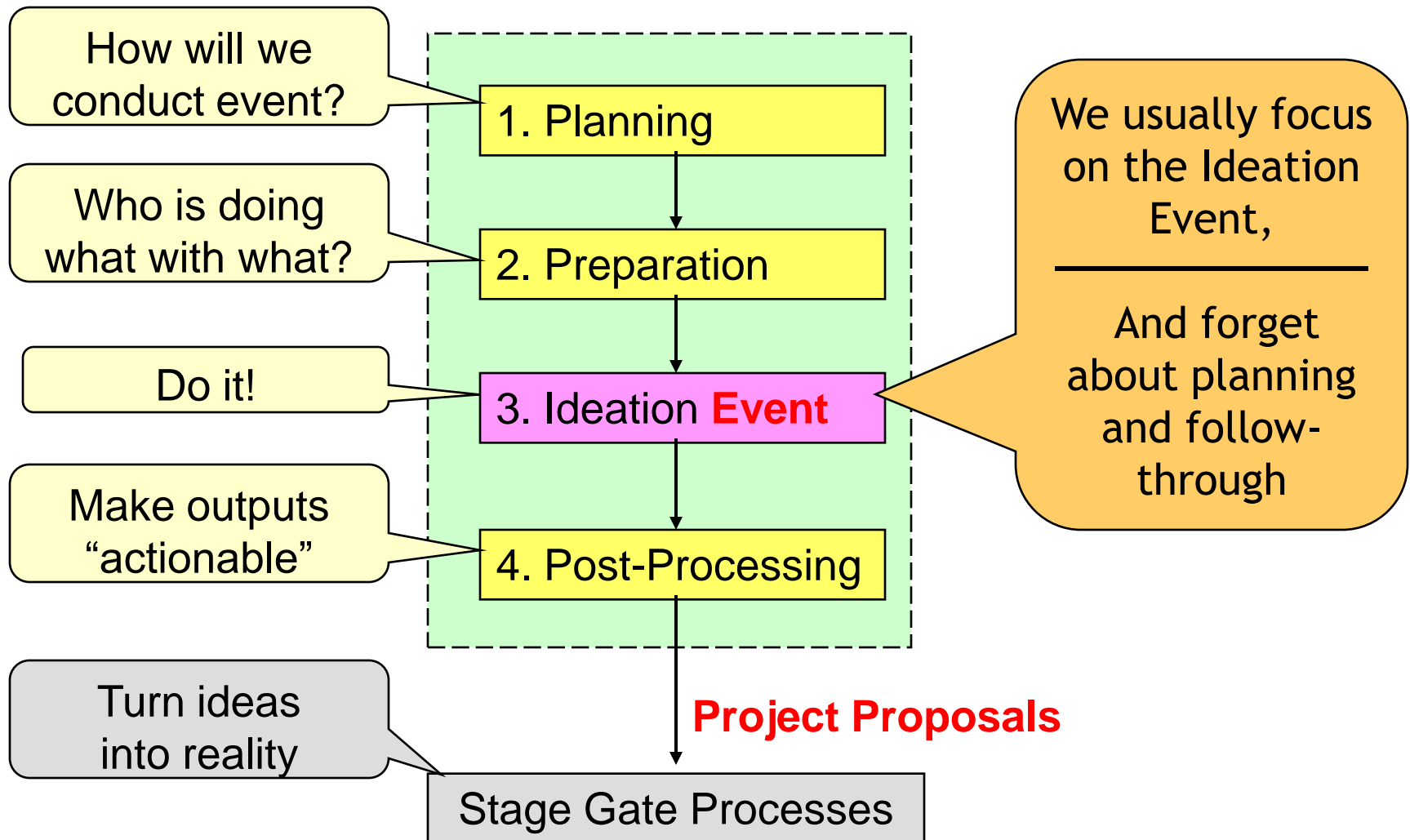
Process: **Systematic** sequence of actions (vs. brainstorming).

- Clearly-defined event goals (**Why** are we doing this?),
- Measurable event objectives (**What** will we walk away with?),
- Specific event inputs and outputs (document **deliverables**),
- “Standard” process actions, inputs, and outputs are **adaptable** to accommodate different or changing event goals and objectives.

Implementation:

- Employs well-defined **boundary conditions** to keep event focused,
- Utilizes **appropriate tools** to enhance quality and productivity of event,
- Typically employs well-trained, experienced **facilitator**,
- Typically employs **multidisciplinary** participants.

High-Level View of Ideation Process



Who are the Primary Ideation Process “Stakeholders”?

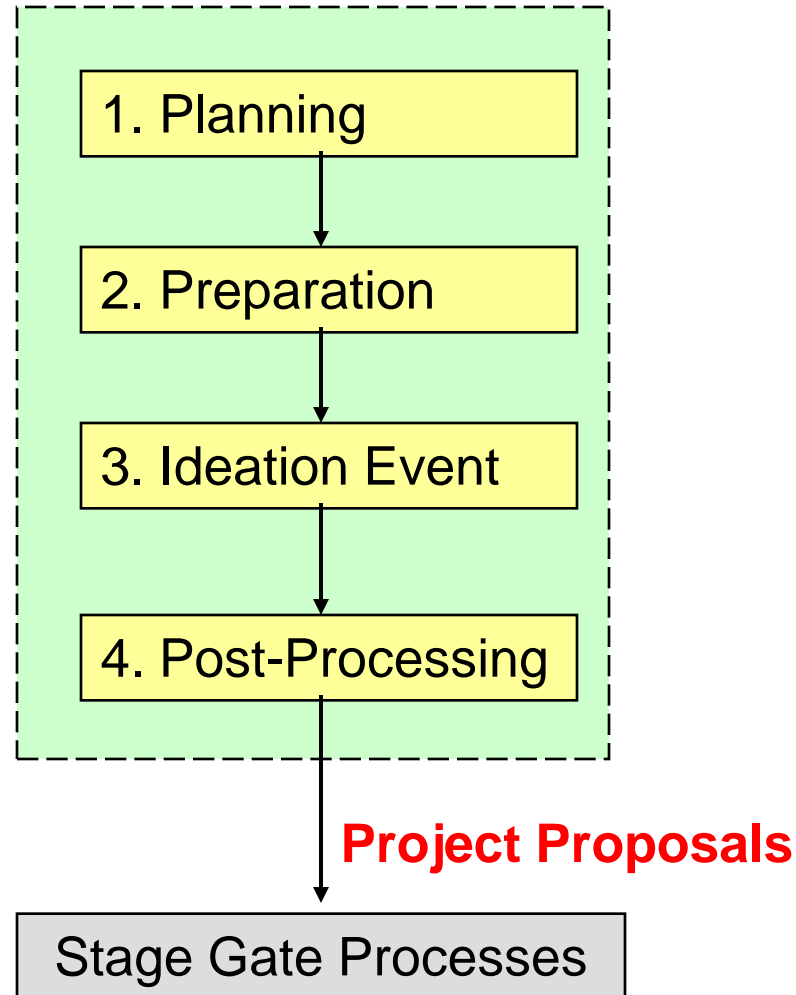
- **Sponsor:** The individual **requesting** the generation of new concepts using the ideation process. Can be the person with the problem that needs to be solved.
- **Organizer:** The person responsible for insuring that **all steps** in the ideation process are executed in an appropriate manner.
- **Facilitator:** The person responsible for **guiding** the ideation event.
- **Ideators:** The individuals that **participate** in the ideation event.
- **Customer:** Representatives from groups responsible for planning and executing **projects** that **result** from the ideation process.

Note: A particular individual may play more than one role in this process.

Who are the “Ideators”?

- **Multi-Disciplinary Staff:** Who is going to design, build, and sell all this stuff?
- **Customers:** Who is going to use this stuff?
- **Patent Attorneys:** Who is going to protect the IP generated?

High-Level View of Ideation Process



Activity		Sponsor	Organizer	Customer	Facilitator	Ideators
1. Plan	1.1 Sponsor comes forward	Hi				
	1.2 ID problem/solution domain	Hi				
	1.3 ID organizer	Hi	Hi			
	1.4 ID customer	Hi	Lo	Hi		
	1.5 Define focus/theme	Lo	Hi	Hi		
	1.6 Define outputs	Lo	Hi	Hi		
	1.7 ID facilitator		Hi	Hi	Hi	
2. Prepare	2.1 Determine approach		Hi	Lo	Hi	
	2.2 ID ideators		Lo	Hi	Lo	
	2.3 Determine venue		Hi	Hi	Lo	
	2.4 Select tools/techniques		Lo		Hi	
	2.5 Prepare materials		Hi	Hi	Hi	
	2.6 Review materials					Hi
3. Event	Generate ideas		Hi	Hi	Hi	Hi
4. Process	4.1 Group/consolidate ideas		Hi	Hi	Optional	Optional
	4.2 ID/prioritize "winners"		Hi	Hi	Optional	Optional
	4.3 Select projects	Optional	Lo	Hi	Optional	Optional
	4.4 Define projects			Hi		
	4.5 Hand-off to project team			Hi		

Steps in the Ideation Event

1. Facilitator introduces:

- A. Goal - Specific needs/problems we will be addressing,
- B. Objectives - What we expect out of the event,
- C. Support information - Support goals and objectives.
- D. Participants - Participants introduce themselves.

2. Facilitator applies various techniques:

- A. Facilitator describes technique to be applied in the session.
- B. Participants generate ideas.
- C. Ideas are summarized.
- D. Ideas are grouped/consolidated.
- E. Participants “vote” on ideas.

3. After all sessions have been run:

- A. Ideas from all sessions are grouped/consolidated,
- B. Participants “vote” to select top ideas to propose as projects.
- C. Individuals that will prepare the projects.

Short-Term Benefits of an Ideation Event:

- Discover/invent new, distinguishable and potentially sustainable **solutions** to customer problems.
- Discover/invent unrecognized or new customer **needs**.
- Spread and confirm ideas **generated elsewhere**.
- Generate enthusiasm -> buy-in -> **ownership** of new ideas.

Long-Term Benefits of an Ideation Event

- Enhance **networking** among technologists.
- Establish a pan-organization (vs. location-centric) technical **community** (in large companies).
- Improve employee satisfaction:
 - **Involvement** (having an impact on the Big Picture),
 - **Security** (focus beyond current problems).
- Get low-value ideas **off the list** once-and-for-all!

Here's a good book that describes various **ideation techniques**:

99% Inspiration:

Tips, Tales & Techniques for Liberating Your Business Creativity

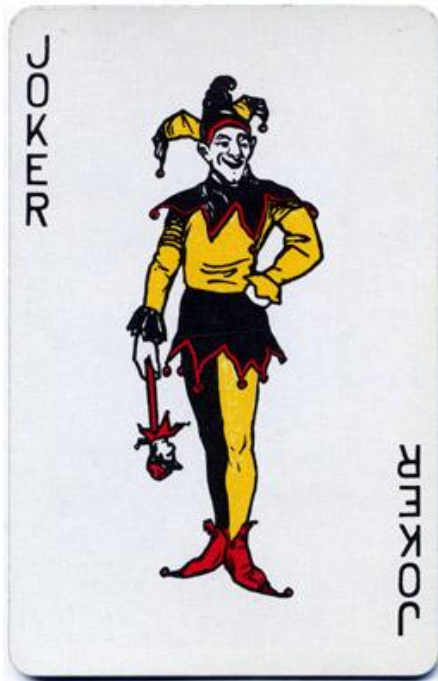
by [Bryan W. Mattimore](#)

Unfortunately, the book is out of print, but used copies are available.

We will use several of Bryan's techniques in this class.

You can find a summary of Bryan's techniques [here](#).

The following is an example of one of Bryan's ideation techniques...



Ideation Technique Demonstrations

From [Ideation Techniques](#)
By Bryan Mattimore

PROBLEM RE-DEFINITION

What Is It?

The Problem Re-Definition Technique helps you invent new ways of looking at a problem -- and ultimately come up with other, even better answers -- by first, re-defining that problem.

Rationale:

Words carry with them their own creative limitations. Put another way, how a problem is defined will often determine the kind and quality of ideas that will be generated to solve it.

The problem re-definition technique allow you to literally create 1000's of different ways to define a problem, and therefore helps you generate potentially 1000's of different ideas to solve that problem.

To Facilitate:

Step 1: Start with an opportunity/problem statement, or creative challenge. “How could we...” is a good way to begin the statement.

Step 2: Write this creative challenge on a flip chart at the front of the room.

Example: “How could we sell more insurance to Catholics?” (From a real-world challenge from the Catholic Knights Insurance Company, Milwaukee, Wisconsin.)

Step 3: Next, pick three of the more interesting words in the sentence and generate creative alternatives (8 to 10) for each choice.

Step 3 Hint:

You might think of choosing words that represent a “who, when, when, where and/or how.” In the above example, the three words you might choose therefore are: “we”, “sell”, and “Catholics”.

So for the first word: “we”, the eight to ten creative alternatives for “we” could be:

- the sales force,
- the clergy,
- friends of Catholics,
- church-goers,
- Catholic family members,
- Catholic Knights (CK) board members,
- CK customer service reps,
- sales force relatives,
- CK’s PR department,
- policy holders.

Step 4: Continue creating alternatives for the other two selected words, writing them on the flip chart in columns as shown on the next slide (under the original opportunity challenge):

How do <u>we</u>	<u>sell</u> more life insurance to	<u>Catholics?</u>
sales force	license	Catholic
doctors		
the clergy	give away	Catholic
athletes		
friends of Catholics	test run	Catholic students
church goers	co-market	Catholic donators
family members	promote	Catholic schools
CK Board members	advertise	Catholic dioceses
CK customer service	tele-market	Catholic summer camps
sales force relatives	network	Catholic grandparents
CK's PR department	incentivize	The Vatican
policy holders	reward	Catholic Evangelists

Step 5: Re-define the opportunity by randomly combining words from each of the three to give us an entirely new opportunity statement, for example.

- How do we get friends of Catholics to be incentivized to sell life insurance to Catholic grandparents?
- How do we get Catholic Knight Board Members to license the selling of life insurance to Catholic schools.
- How do we get policy holders to be rewarded for the selling more life insurance at (or to) the Vatican?

What Next?

These fairly crazy combination sentences are then used as starting points/brainstorming triggers to generate new ideas.

So, for instance, opportunity re-statement #1 could be taken literally - maybe you really could figure out a way to incentivize friends of Catholics to sell life insurance to Catholic Grandparents.

Could you create a sales force of retirees (friends of Catholics) to network and sell life insurance to Catholic Grandparents?

Or how about a program to incentivize grandparents to give life insurance policies to their children for the sake of their grandchildren?

Ideation Demonstration

- We will demonstrate the problem re-definition technique for the problem defined on the next slide.
- After the group generates the three-column list of words, each participant will select a set of words that they find interesting.
- Then, they will write a new problem statement on a sheet of paper.
- Participants will then briefly describe their problem to the group.
- The group will then vote for the idea that they feel has the most potential for an innovative solution to the original problem.
- Participants will mark the problem sheets with an X, three X's (votes) per participant.

Ideation Demonstration: Fiberglass Boat Scrubber

- Boats tend to collect organic matter on surfaces below the water line.
- It is desirable to remove this build-up periodically:
 - It looks bad,
 - It creates a drag on the boat.
- This is often done manually by having a diver go down and scrape off the build-up.
- This manual process is undesirable because:
 - It is not a very desirable job,
 - What is scraped off typically is left in the water, causing potential environmental issues
 - It can mar the finish on fiberglass boats.

Problem statement:

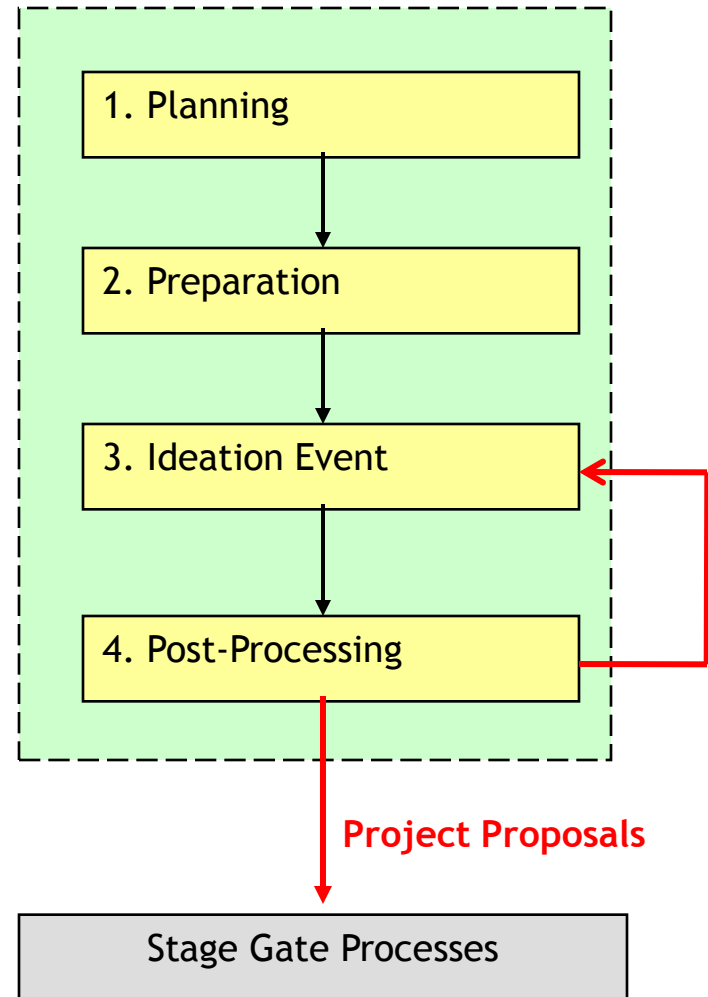
How could we scrape algae off of the bottom of a boat?

After we generate, expand, and prioritize new problem statements,

We could initiate projects related to the top problems.

Or, we could use these problem statements as seeds for additional ideation.

Here, we will use the top new problem to demonstrate another ideation technique...



Brainwriting - What Is It?

- As its name implies, Brainwriting uses writing as its creative modus operandi.
- Each participant writes down on a sheet of paper an idea they would like the group to consider.
- Then, they pass their sheet to their immediate neighbor who uses this idea to:
 - trigger a build-on the original idea or
 - trigger an entirely new idea.
- Sheets are passed and passed again until each “idea sheet” arrives back at its original owner.

Brainwalking - What Is It?

- We've invented a variation of Brainwriting that we call Brainwalking™.
- Instead of writing ideas on 8 x 11 sheets of paper, participants write their ideas on sheets of flip chart paper on the wall. (You'll need as many sheets as there are participants.)
There are three major advantages to doing it this way:
 - Participants are up and moving. It's more fun to generate ideas this way. Typically there's greater group energy, and ideas end up being posted around the room for everyone to see and read.
 - It's reinforcing for participants to see so many ideas generated in such a short time.
 - Participants will often find themselves reading (during breaks) and building on these ideas throughout the day.

Rationale:

- This is the most powerful technique we know of for getting a lot of ideas out very quickly. Why?
- Because each person generates at least one (and possibly several) idea(s) on each pass of the paper.
- If you have twelve people in a group and pass the paper five times, in as little as fifteen minutes, the group has generated 60 ideas.

Hints:

- The great advantage of this technique is that you get a lot of ideas very quickly.
- It also assures participation from everyone in the group.
- Note: If there are team members who are too shy or scared to say anything, this is a good technique to get them participating.
- The limitation of Brainwriting is that the ideas you do get, in spite of the amount, can sometimes be fairly “close in...” not tremendously “out of the box.”
- A variation of the basic Brainwriting technique is, on one of the passes, have each participant write down a silly - or just plain terrible idea - as a way to get more out of the box thinking. (See Worst Idea Technique).
- Another possible limitation of the technique is that each participant is constantly following the thought stream/ideas of his neighbor.
- To get around this, have participants, on the second pass, pass the idea sheets two spaces to the right, on the third pass, pass three spaces to the right, etc.

Worst Idea - What Is It?

- The Worst Idea, as its name implies, is a creative technique in which the facilitator asks participants to come up with the worst possible idea they can. A really awful, occasionally disgusting, sometimes repulsive idea.
- Example: Think of the worst possible idea you can for soup. How about a soup with rocks in it? How about a soup that has green slime...eye of newt, or even snot in it? How about throw-up soup?

Rationale

- Sometimes a group can have “creative performance anxiety.”
- The group may be pressing too hard for a great idea—and coming up dry.
- The Worst Idea Technique relieves much of this performance anxiety.
- Why? Because what is someone going to say, “your idea wasn’t bad enough”?!
- To get a great idea, we often have to be willing to have a lot of bad ideas first.
- Because our analytic training has taught us to reject bad ideas quickly in our search for good or great ideas, we will often short circuit “bad” germs of ideas with internal chatter like, “that’s stupid” or “that would never work.”
- Paradoxically, it’s these “bad” ideas that can lead us to look at a problem in an entirely new, often unconventional, way, and ultimately lead to a breakthrough concept.

Notes on Worst Idea:

- The facilitator begins by simply asking the group for the “worst possible ideas you can think of” - and records on flip charts what’s being said.
- Invariably the first “worst idea” out of a participant’s mouth will not be that bad. i.e. “How about a vegetable soup that’s got no vegetables in it.” The facilitator should then “push the envelope” and give an example of a really awful idea, “How about soup that’s made of cement,” as a way to stimulate the group.
- After a sufficient number of “worst ideas” have been recorded on flip charts (usually 15 - 20), the facilitator picks one of the most interesting/awful ideas - - and tries to help the group turn it into a good or great idea by using one of two prompts.
 - Prompt #1: “As bad as this idea is, is there something of value in it that could turn it into a good idea?”
 - Prompt #2: “This idea is really bad. If we did exactly the reverse, or opposite of this idea, could we create a valuable new idea?”

Ideation Demonstration

Here, we will use the output of our Problem Redefinition ideation session as the start for our BrainWalking session.

After BrainWalking, we will vote for the best concept.

In “real life” we would conclude this by writing a project proposal.

