

Puzzles, Mysteries, and Muddles

Taming the Wild Things that Keep You Up at Night

A systematic approach to problem solving

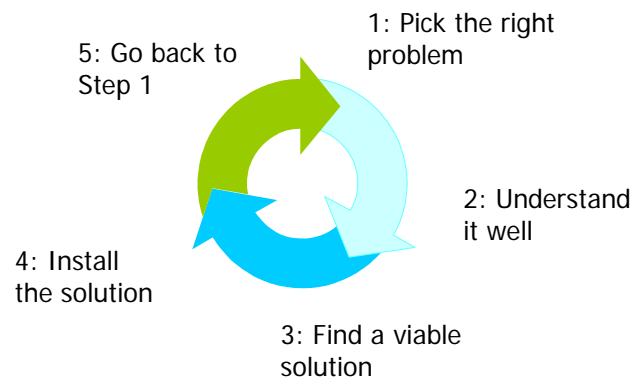
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Your Most Important Process





Real World Organizational Challenges

- Increasing capability through Mergers & Acquisitions
- Avoiding problems of information access and accuracy by installing enterprise-wide data systems
- Improving work flows by business process re-engineering
- Finding focus by implementing strategic plans
- Pursuing cost savings through downsizing
- Finding synergies through better cross functional coordination
- Anything involving executive egos

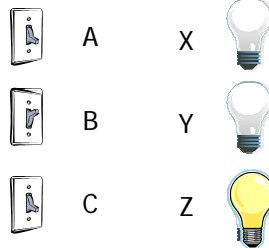
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A Classic Problem

- You are in a room with 3 toggle switches: A, B, & C.
- Each switch controls 1 of 3 incandescent bulbs in another room: X, Y, & Z.
- The lights are out of sight, and you can only go into the other room to inspect the lights ONCE.
- How do you find out which switch controls which light?



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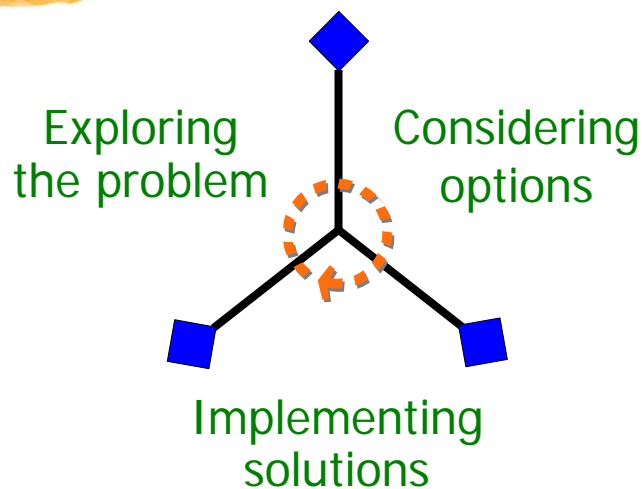


How We Learned Problem Solving

- The problem is provided, not chosen.
- The problem is well bounded.
- All the information given is needed...and adequate.
- Nothing in the problem is “negotiable”.
- The right answer will be obvious once identified.
- We’re confident there *is* an answer!



Problem Solving: the Classic Model





Notes on the Classic Model

- The model is overly analytical
 - All the “people problems” are left to the facilitator to manage
- The model is neutral on the impact of an organizational context on the problem solving process
 - Levels of authority
 - Vertical barriers to communication
- The model presumes a homogeneity in the nature of problems; “one size fits all”




The First Distinction

Problems in the World

Problems that are creating negative consequences, regardless of our thoughts, awareness or actions

Problems in the Group

Breakdowns in the dynamics of the problem solving team that prevent quality of problem solving



Problem Solving in Organizations

Picking the right problems to solve

Deciding how to think about the problem

Queuing up the organization

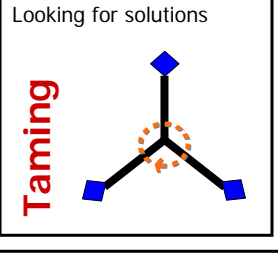
Looking for solutions

Naming


Framing

Aiming


Taming





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Six Types of Problems


 **Puzzle:** Engineering problems with objective answers and approved methods; requires expertise

 **Dispute:** Conflicting interests of different parties focused on the same situation or resource; requires safe forum for negotiated settlement

 **Challenge:** Overwhelming options with only subjective criteria for solutions; requires vision and courage

 **Dilemma:** Simultaneous commitment to incompatible goals; requires shift in mindset and radical collaboration

 **Mystery:** Present decisions depend on unknown future events; need to define and track multiple scenarios

 **Complexity:** Large number of independent actors simultaneously reacting to each other; unclear boundaries, unusual causality

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Puzzles

Engineering problems with objective answers and approved methods; requires expertise



- Well bounded problems
- Variables mostly known ... and knowable
- Objective criteria for solution
- Mostly known methods for finding solutions
- Reusing a known solution is desirable
- Validity of solution is obvious once found
- Clear relationship of parts to the whole allows you to break up the problem into smaller parts

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Challenge

Overwhelming options with only subjective criteria for solutions; requires vision and courage



- Vast number of options
- Non-objective criteria
- Choices require artistry or vision rather than expertise
- Reusing a known solution would be unacceptable
- There is an audience that has to believe in it, implement it, invest in it, or buy it...but can't see it

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Mystery

Present decisions depend on unknown future events; need to define and track multiple scenarios



- Major variables have unknown values...often unknowable by their nature
- The future has numerous probable branches
- Present choices depend on unknown future conditions
- Problem requires constant attention



Dispute

Conflicting interests of different parties focused on the same situation or resource; requires safe forum for negotiated settlement



- Multiple constituencies have conflicting preferences for a common resource or circumstance
- Often represent enduring differences of perspective that will clash repeatedly in the future
- Political maneuvering of players often obscures critical information.



Dilemma



Simultaneous commitment to incompatible goals; requires shift in mindset and radical collaboration

- Efforts toward Goal A undermines Goal B
- Compromise is never satisfying
- Oscillations between unsatisfying extremes
- Often shows up as conflict between two departments



Complexity



Large number of independent actors simultaneously reacting to each other; unclear boundaries, unusual causality

- Unpredictable and uncontrollable dynamics of large numbers of independent actors
- Causal links are circular, reciprocal, or delayed
- System resistance to even desired changes
- Impossible to experiment; any change is permanent and may alter system
- Problem and the solution blend together



Problem Types: why it matters

Puzzle:

- Expertise
- Standard methods
- Use reusable solutions

Dispute:

- Create safe forum
- Surface interests of all parties
- Reasonable compromise

Challenge:

- Intuition...and courage
- Looking past the data
- Novel solutions

Dilemma:

- From 2 goals to 1 dilemma
- Build new relationships
- Focus on learning

Mystery:

- See multiple futures
- Track unfolding events
- Be ready to adjust quickly

Complexity:

- Humility...not in control!
- Watch for emergent events
- "Nudge" the system



Problem Types: a summary

- The problem type encapsulates directions for *how* to resolve it, what *roles* are most useful, and what a *solution* would look like.
- Presuming the wrong problem type is often a fatal error.
 - At the very least, it wastes time and goodwill.
- TAMING is only effective when NAMING and FRAMING and AIMING are sound.

Thank you

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