



## HUMAN SYSTEMS DYNAMICS INSTITUTE

### **What's Magic About the Magic 21?**

Most of the things you do and problems you solve are familiar to you. You have done them before; you have seen someone else do them; or they resemble something you have previously seen or done. They are "tame" problems. Tame problems can be solved in traditional ways. Divide it up into parts, and solve the parts separately. Consult an expert who knows the answer. Replicate a solution that worked before.

Your challenging and most interesting problems are different. You have never solved, or seen someone else solve the problem before. They are "wicked" problems because they cannot be solved at all. Traditional problem solving methods do not work. In fact, wicked problems are impossible to solve no matter what method you use, old or new. They will never be solved, but you still have to take action to deal with them. Examples of wicked problems include world hunger, social justice, weeds in your yard, climate change, and chronic illness. None of these will ever be solved once and for all. All of them require ongoing engagement, innovation, and creativity forever.

These wicked problems are the special territory of human systems dynamics. Our models and methods work well on tame issues, but other approaches do, too. HSD was created to help you see, understand, and influence problems that are impossible to solve.

Along with Adaptive Action, Pattern Logic is an essential part of the HSD approach to wicked problems. In the same way that Aristotelian Logic helps you understand and work with predictable causes and relationships, Pattern Logic helps you deal with the unpredictable world of wicked problems. Pattern Logic gives you a discipline to:

- ▶ See, understand, and influence how a situation is bounded and defined. We call these systemic features "containers." (C)
- ▶ See, understand, and influence the differences within the container of the situation that make it more or less fit for function. We call those systemic features "difference." (D)
- ▶ See, understand, and influence the connections across differences and among items inside the container. We call these "exchanges." (E)

Altogether, the CDE of a situation constitutes its pattern, and the discipline of working with the CDE is called Pattern Logic.

**Nothing is intractable.**

The theory and practice of HSD offer many Models and Methods to support your work with Pattern Logic. All of them help you focus in on the condition that define and hold the potential to transform patterns of meaning and action. One, in particular focuses very specifically and explicitly on the CDE components of Pattern Logic. That is the Magic 21.

## What?

The first Adaptive Action question is to ask, "What are the current patterns in the situation?" So, the first way you use the Magic 21 is to capture underlying, significant patterns in the situation.

Looking at all the patterns relative to your wicked issue, choose three that stand out most powerfully. Reflect on what you see and begin to fill in a grid like the one below.

1. Fill out the first row of the grid:
  - a. Name the container that bounds the first of your patterns.
  - b. Identify three significant differences that shape that pattern.
  - c. Identify three exchanges that are contributing to the wicked issue in the context of that container.
2. Repeat for the other two rows, identifying additional containers and the significant differences and exchanges within each of those.

When you are finished, you will have named 21 conditions that shape or contribute to the wickedness of your issue. We sometimes call this a CDE Portrait, but we also recognize it as Magic 21.

<b>Container (C)</b>	<b>Difference (D)</b>	<b>Exchange (E)</b>
1st container	difference difference difference	exchange exchange exchange
2nd container	difference difference difference	exchange exchange exchange
3rd container	difference difference difference	exchange exchange exchange

The magic arises because any one of the 21 conditions can be a lever for change. Change any one of them, and the pattern of the wicked problem will shift.

Nothing is intractable.

## Example

You recognize a pattern that in your organization, people are “meetinged-out”. They complain about too many meetings that accomplish nothing, and tie up precious time. You create the following Magic 21.

<b>Containers</b>	<b>Differences</b>	<b>Exchanges</b>
1 <sup>st</sup> Container - Agenda	types of items on the agenda perspectives about what the meeting is for positional power of people in the meetings	people talk about things that are irrelevant too many people talk at once decisions never get made
2ND Container - Expectations about the purpose of the meeting	hidden and personal agendas interests and values about the discussion intentions for final decisions	people drop out of conversations that don't address their needs people come to the meeting unprepared for the discussion people bring up un-scheduled topics
3rd Container - Expectations about meeting norms	arrivals and exits at different times in the meeting levels of participation and contribution informal power balance	people are rude to each other people engage in paper work during the meeting cell phones go off at all times in the meeting

## Your Turn

<b>Containers</b>	<b>Differences</b>	<b>Exchanges</b>

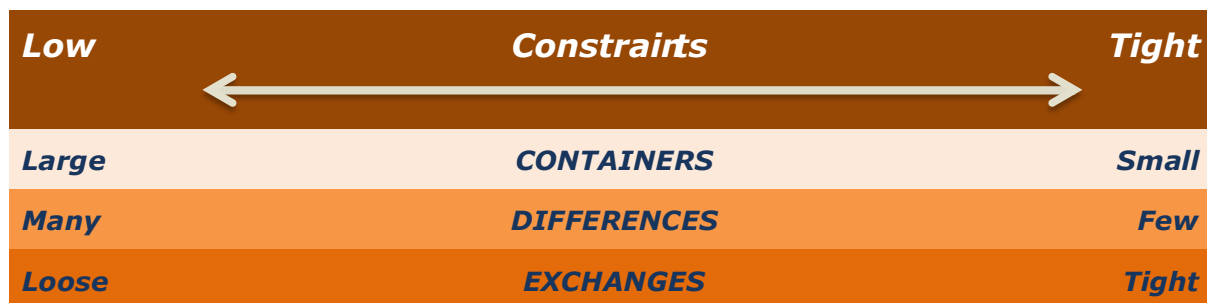
Nothing is intractable.

## So What?

When the picture of the current state is complete, you can go to the second step of the Adaptive Action process, to consider what it means and what are your options for action.

Looking at the pattern of the issue through the lens of the table of CDES, you can begin to assess the power and potential of the pattern. Consider the following questions:

- ▶ Where does the system seem to be over-constrained? under-constrained?
- ▶ In what ways do the conditions constraining the system and contributing to the wicked issue?
- ▶ What level of constraint might be best fit?
- ▶ What actions might shift constraints in the system?



## Example

As you begin to identify where the tensions are, you can also begin to think about how you might shift conditions to increase or decrease the tensions.

- ▶ Containers
  - ▶ **In the Agenda:** Low constraint (general descriptions of agenda items, loose facilitation) allows for broad discussion, deep sharing. High constraint (specific agenda items, tight facilitation) allows for quick decisions; concise, clear conversation.

Nothing is intractable.

- ▷ **In Expectations of the Purpose of the Meeting:** Low constraint (general guidelines, little direct supervision) allows for individual decision making, autonomy. High constraint (specific expectations, frequent reporting) allows for quick learning, high levels of compliance.
  - ▷ **In Meeting Norms:** Low constraint (loose or nonexistent norms) allows for freedom and personal choice. High constraint (clearly stated and agreed-upon norms) allows for predictability, compliance.
- ▶ Differences
- ▷ ○ **In the Agenda:** Low constraint (high diversity, lots of ideas) allows for exploration on a broad scale, multiple possibilities. High constraint (high similarity, clear expectations) allows for compliance and consistency,
  - ▷ **In Expectations of the Purpose of the Meeting:** Low constraint (unclear expectations, multiple intentions and interests) allows for ranging exploration with little or no progress toward closure. High constraint (clear and tight expectations,
  - ▷ **In Meeting Norms:** Low constraint (unclear or competing norms, uneven use of the norms) allows for personal expressed and varying participation. High constraint (strict adherence, high agreement) allows for consistency across meetings, predictability.
- ▶ Exchanges
- ▷ **In the Agenda:** Low constraint (multiple people talking at once, irrelevant topics) allows for broad exploration and personal expression. High constraint (people talk one at a time, people stick to the topic) allows for deep exploration and shared meaning
  - ▷ **In Expectations of the Purpose of the Meeting:** Low constraint (broad expectations, multiple perspectives) allows for exploration and experimentation. High constraint (clear, coherent expectations) allows for consistency and quick progress.
  - ▷ **In Meeting Norms:** Low constraint (no norms or unenforced norms) allows for unpredictability and surprise. High constraint (adherence to the norms) allow for speed and clarity.

## Your Turn

Conditions	Tensions
Containers	
Differences	
Exchanges	

## Now What?

So how do you choose which condition to shift? As you reflect on the possible actions, ask yourself:

- ▶ Which one(s) are within the scope of what you can do?
- ▶ Which one(s) will move you and your colleagues toward best fit at any given time, keeping mind that each situation is unique, and fitness depends on the context.
- ▶ Which one(s) is the easiest?
- ▶ Which one(s) might have the greatest impact on the whole?
- ▶ Which one(s) might draw others into collaboration?

## Example

You decide you need a common set of norms that set expectations, while allowing for difference in purpose from one meeting to the next. You have the authority to ask for that and you believe others will agree with you and take action to engage in developing and implementing a set of norms.

Nothing is intractable.

Just choose.

- ▶ Decide who will do what.
- ▶ Determine how you will see and judge the degree or success of the change you create.
- ▶ Set your timelines.

Or, you engage others in helping you, making sure all standing meetings are accounted for and that people will take the responsibility for setting norms in their ad hoc meetings as well. You agree to come back to the question in 3 months to see if people are less disgruntled by the meetings they attend and if more gets accomplished in the meetings that occur.

Then take action.

- ▶ Watch the system to see what happens.
- ▶ When you are at the end of the timeline, or when you see a shift in the pattern, go back to the original matrix and adapt it according to the current reality.
- ▶ Identify your next challenge.

Or, at the end of the three months, you find that people are feeling better about the meetings, but they realize people have varying degrees of skill at facilitating meetings and in managing the logistics and planning for meetings. Returning to the Magic 21, you recognize that while the same containers may apply, there may be aspects of the differences and exchanges that may not still hold true.

## Your Turn

Options for action 1:
Option for action 2:
Options for action 3:
Option for action 4:

## ***Next What?***

When you have chosen and taken action the pattern naturally shifts in ways you may not expect. As soon as that happens, you can begin your next cycle of Adaptive Action. Using Pattern Logic to see what current patterns hold, to understand how they are supporting or constraining the system, and taking action to shift toward more coherence and energy and usefulness.

## **Example**

So you return gather colleagues together and reflect on the challenges of varying skills, using a new Magic 21 matrix to identify the conditions that contribute to that pattern.

## **Your Turn**