



# Facilitator's Guide

Systems Thinking Framework for Decision Making

Harold S Hillman, Ph.D.

Alex Waddell, MBus.



**INTRODUCTION**

- 02 .....Introduction by Harold Hillman
- 04 .....Facilitator’s resources
- 05 .....How to use the facilitator’s guide (including workshop objectives)
- 06 .....Sample workshop session

**AN EXERCISE TO BEGIN**

**Slinky Fashion Case Study**

- 10 .....Slinky Fashion (case study)
- 11 .....First View analysis
- 12 .....Systems View analysis
- 13 .....Differences between the two views of Slinky Fashion

**SYSTEMS FOR DECISIONS TOOLS**

**Using the concept of Systems as the foundation for our Decisions**

- 16 .....Aspects of a Systems Thinking diagram
- 17 .....Components of a Systems Thinking diagram
- 17 .....Key Systems Thinking terms
- 18 .....Making a distinction between loops
- 19 .....A couple of things to be aware of with loops
- 20 .....Fish in the lily pond (case study)

**Three concepts to assist us in using Systems for Decisions**

- 22 .....Mental Models
- 24 .....The Iceberg
- 26 .....The Ladder of Inference

**Three types of loops central to the Systems for Decisions tool**

- 29 .....Balancing Loops
- 30 .....Reinforcing Loops
- 31 .....Multiple Loops

**BUDGET PRESSURE CASE STUDY**

- 34 .....Budget pressure: Case study (phase 1)
- 35 .....Budget pressure: Worksheet (phase 1)

STICKER TO BE HANDED OUT DURING THE WORKSHOP

- 36 .....Thoughts & Observations
- 38 .....Budget pressure: Case study (phase 2)
- 39 .....Budget pressure: Worksheet (phase 2)

STICKER TO BE HANDED OUT DURING THE WORKSHOP

- 40 .....Thoughts & Observations
- 42 .....Budget pressure: Case study (phase 3)
- 43 .....Budget pressure: Worksheet (phase 3)

STICKER TO BE HANDED OUT DURING THE WORKSHOP

- 44 .....Thoughts & Observations

**YOUR SYSTEMS ISSUE**

- 48 .....Use the Systems for Decisions approach on an issue you are facing



# Introduction

- 02** .....Introduction by Harold Hillman
- 04** .....Facilitator's resources
- 05** .....How to use the facilitator's guide  
(including workshop objectives)
- 06** .....Sample workshop session

This guide will help your teams and organisations identify the key variables critical to make better strategic decisions. All too often we get caught up with the 'short-term fixes,' but unfortunately, tend to neglect the longer-term and unintended consequences of our decisions. The 'changing world' is not a new phenomenon and neither is the concept of Systems Thinking. As we leverage the theory and some of the tools outlined in the Fifth Discipline Fieldbook (1994), the Systems for Decisions guide provides an updated and fresh approach to resolving the issues we face today.

**These changes present three pertinent questions.**

1. What changes are we likely to encounter or provoke in the future?
2. How are we going to plan for and adapt to those changes?
3. What are the longer-term and unintended consequences of our decisions?

**Why take a Systems Thinking approach to making decisions?**

1. To learn more about a problem. Is it a problem at all, or is it best framed as a challenge or an opportunity?
2. To determine if the problem is isolated or recurrent. If recurrent, have we any sense of the forces that are driving it?
3. To stay with a problem much longer than we are used to. The quickest way out of a problem is often the shortest way back in. We want to break any recurrent cycle that sits under a problem.
4. To identify the forces at play that sit under a problem and then break the link(s) that will interrupt a vicious cycle.
5. To move away from quick fix solutions and move toward solutions that are transformative across a longer period.
6. To reposition the business to lead change proactively with creative choices, rather than having to scramble and strain resources from a reactive position.





## Facilitator's Resources



Item	Quantity
Post-it notes (large and small)	4
Participant workbooks (two are included in this facilitator pack. Additional copies to be purchased separately)	<b>One per participant</b>
Budget pressure answer stickers for participant workbooks	2
Phase 2 answer	2
Phase 3 answer	2

Log in to [www.sigmoidcurve.com](http://www.sigmoidcurve.com) to get your PowerPoint slideshow of the sample workshop session. Additional instructions to log in are provided at the front of this facilitator pack.

# How to use the Facilitator's Guide

## Workshop Objectives

**The objective for the workshop is to help managers and their teams identify and understand the longer-term and unintended consequences of the decisions they may make.**

Without specifically looking at the longer-term and unintended consequences of our decisions, many of the decisions we make today could jeopardise the future of the organisation. Using the Systems for Decisions tools will assist in reducing the 'I wish I had thought of that,' or the 'I would have done things differently' comments that are often made after an issue or problem has arisen.

### Number of participants

The Systems for Decisions workshop can be used with as many or as few participants as you would like.

- If there are four or fewer participants, the group should work as one
- For groups between five and ten participants, break the group into two
- With groups larger than ten participants, break the group down into sub-groups of four to five
- It is not ideal to have groups larger than six people

### Participant stationary

- Each participant is required to have a Systems for Decisions workbook
- Post-it notes
- Budget pressure answer stickers

### Workshop preparation

1. Rooms can be set-up as per the facilitator's preference. The start of the workshop will be run as a single group. After the break, participants will be split into sub-groups of approximately four to five individuals (depending on the size of the group).
2. Begin the workshop by providing context about how we make decisions. This could be as simple as reading the workshop introduction.
3. Ask the group their opinion on how they make decisions. What do they think about when making decisions? Are there opportunities for improvement?

### Approximate workshop time frames

- 30 minutes to go through the Slinky Fashion exercise
- 60 minutes to teach the Systems for Decisions tool
- 60 minutes to go through the budget pressure case study
- 3-4 hours (roughly ½ day) to work through the group's own issue (optional)



# How to use the Facilitator's Guide

## Sample workshop session

### START

#### Introduction

##### 10-15 Minutes

Begin the workshop by providing context about how we make decisions. This can be as simple as talking about the key points on the Systems for Decisions workshop introduction pages (found in the participant's workbook). You may also have some company specific information which would provide context for the Systems for Decisions workshop.

##### 30 Minutes

- Have participants read the Slinky Fashion case study (page 5) in their workbook
- Focus on the 'First View' to begin. Ask for peoples' opinions around the problems and solutions given in the 'First View' analysis. Was the consultant right?
- Proceed to discuss the 'Systems View' approach
- Without any discussion, ask participants to fill out the differences between 'First View' and 'Systems View' on the template provided in their workbook
- As one group, ask participants to share what they have written

#### Teaching the Systems for Decisions Tool

##### 60 Minutes

- As one group, proceed to teach the concept of Systems for Decisions (pages 11 to 26 in participant's workbook). This includes:
  - Aspects of a Systems Thinking diagram
  - Components of a Systems Thinking diagram
  - Key Systems Thinking terms
  - Making a distinction between loops
  - A couple of things to be aware about with loops
  - Take people through the fish in the lily pond case study (page 15 of participant's workbook)
  - Three concepts to assist us in using Systems for Decisions – *Mental Models, The Iceberg, The Ladder of Inference*

- Teach and discuss the three types of loops (pages 23 to 26 of participant's workbook)

### CONTINUED

## Sample workshop session

### CONTINUED

#### Budget Pressure Case Study

##### 60 Minutes

- Split the larger group into smaller-sub groups of approximately 4-5 people.
- Introduce the budget pressure case study (page 29 of participant's workbook)
- In their groups, ask participants to write and stick their variables (using Post-it notes) on the 'budget pressure worksheet (phase1)'
- When groups have completed the first phase, ask participants to tell the rest of the group how they experienced that process. Was it easy? Was it fast? Why?
- Read the additional phase 2 information, key variables, and instructions (page 33 of participant's workbook)
- Ask groups to complete the exercise on the phase 2 budget pressure worksheet
- When groups have completed the second phase, ask participants to share with the rest of the group how they experienced that process. Was it different to the first phase? Why?
- Give participants the budget pressure answer sticker (phase 2). Have people stick their sticker in the place provided in their workbook (optional). Discuss peoples' answers as a group
- Read the additional phase 3 purpose and instruction sections on the budget pressure case study (page 37 of participant's workbook)
- Ask participants to complete the phase three exercise on the phase 3 worksheet. They will be provided with a phase 3 answer sticker later
- When groups have completed the third phase, ask participants to share with the rest of the group how they experienced that process. How was the third phase different to the first two phases? What was it like focusing in on the longer-term and unintended consequences of decisions?
- Give participants the budget pressure answer sticker (phase 3). Have people stick their sticker in the place provided in their workbook (optional). Discuss peoples' answers as a group

#### Real Life Issue

##### OPTIONAL 3-4 Hours

- Have participants use the Systems for Decisions tool for dealing with a real life issue
- Use the ten step approach provided on pages 48-51 in this facilitator's guide

#### Workshop Wrap-up

##### 10-15 minutes

- Ask participants what they found useful about the workshop?
- What have they learned?
- How will the Systems for Decisions tools influence the way participants approach current or future issues and problems? Is the approach different from before the workshop?
- How did the other concepts of Mental Models, the Iceberg, and the Ladder of Inference have an influence on the Systems Thinking framework?



# Your Systems Issue

**48**.....Use the Systems for Decisions approach  
on an issue you are facing



STEP 3:

**EACH SUB-GROUP ANSWERS THE SYSTEMIC QUESTION**

- First, each person works independent of the others
  - Write every possible answer to the question on a separate Post-it note
  - Limit the individual work to 15 minutes
- Second, each person takes a turn presenting the explanation for each answer written on the Post-its
  - Let everybody have a full go at explaining what they have written and why
  - As they go through their Post-its, have them post them on a wall in no particular order
- After everyone has put their Post-its on the board or wall, gather as a group to get everyone's impressions of the overall response to the presenting problem or challenge



STEP 4:

**NOW HAVE EACH SUB-GROUP CLUSTER THE POST-ITS INTO SPECIFIC THEMES**

- If there are four or fewer participants, the group should work as one
- For groups between five and ten participants, break the group into two
- With groups larger than ten participants, break the group down into sub-groups of four to five
- It is not ideal to have groups larger than six people
- Make sure different departments and divisions are mixed across the sub-groups



STEP 5:

**HAVE EACH SUB-GROUP CONVERT EACH THEME INTO A VARIABLE**

- Go back to page 12 (in participant workbooks) and review the criteria for defining a variable
- Let them debate what the variables should be
- Make sure they understand that no two variables necessarily have the same weight
- Use consensus as a decision making style to agree to the variables

## STEP 6

### **EACH SUB-GROUP FORMS THE VARIABLES INTO A CAUSAL LOOP STORY**

- Go back to pages 23-26 (in participant workbooks) to review the criteria for causal loops
- Let them debate the causal relationship between the variables
- Build the story that brings all the causal relationships together into one system
- Put the causal loop story onto a single flip chart if possible
- Volunteer someone to tell the sub-group's story to the larger group

## STEP 7:

### **THE SUB-GROUPS RECONVENE INTO ONE GROUP TO TELL THEIR CAUSAL LOOP STORIES**

- Each sub-group presents its story to the larger group
- At the end of the story, the other sub-groups get to ask questions for clarification or deeper understanding
- This is not the time to debate the rationale of each sub-group's variables or story
- At the end of this step, there should be individual flip charts next to each other on the wall or the board. Try to have them side-by-side rather than stacked on top or bottom

## STEP 8:

### **THE WHOLE GROUP CREATES ONE STORY**

- The facilitator structures the conversation around the following questions:
  - o What are the common themes across the various causal loop stories?
  - o What are the disparate themes across the various stories? Is there a relationship between the disparate themes? Are the disparate themes external factors or can they fit neatly into the overall story.
  - o What are the reinforcing and balancing connections between the variables?
  - o What do each of the variables weigh in their overall influence on the story?
  - o Are some variables more influential or detrimental than others?
- Volunteer a couple of people to draw the new story on a single flip chart
- The group then gets to review the new story with any further clarifying questions
- Through consensus, the group validates the final causal loop story
- Volunteer someone who can repeat the story back to the entire group for validation



STEP 9:

**IDENTIFY THE MENTAL MODELS THAT SIT BETWEEN EACH OF THE VARIABLES**

- The facilitator structures this step to reinforce that all causal loops are underpinned by Mental Models
- Start where the story begins and follow the causal loop in its natural progression
- The group agrees one Mental Model for each connection point between variables
- The group agrees those Mental Models that are enabling success and those that are disabling success
- The group agrees the disabling Mental Models in the story that need to be changed in order to enable successful outcomes



STEP 10:

**THE GROUP AGREES THE INTERVENTION POINTS IN THE STORY THAT WILL PRODUCE DESIRED RESULTS**

- The facilitator structures this step to have the group identify and prioritise interventions
- The group discusses the short and long-term ramifications of each possible intervention
- The group agrees likely delays associated with each possible intervention
- Write the story in the affirmative so that it describes the optimal desired outcome



## Notes

A series of horizontal red lines intended for taking notes, positioned below the 'Notes' header. The lines are evenly spaced and extend across the width of the page, though they are partially obscured by a large, light gray abstract shape on the right side.



# Systems for Decisions

*The Systems for Decisions tool assists you to:*

1. Learn more about a problem. Is it a problem at all, or is it best framed as a challenge or an opportunity?
2. Determine if the problem is isolated or recurrent. If recurrent, have we any sense of the forces that are driving it?
3. Stay with a problem much longer than we are used to. The quickest way out is often the shortest way back in. We want to break any recurrent cycle that sits under a problem.
4. Identify the forces at play that sit under a problem and then break the link(s) that will interrupt a vicious cycle.
5. Move away from quick fix solutions and move toward solutions that are transformative.
6. Reposition the business to lead change proactively with creative choices, rather than having to scramble and strain resources from a reactive position.

**Sigmoid Consulting** PO BOX 578, Shortland Street, Auckland 1140, New Zealand

**[www.sigmoidcurve.com](http://www.sigmoidcurve.com)**

