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"Understanding Childhood Obesity" Group Model Building Project

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Roles of Facilitation Team

Group model building involves successfully managing multiple roles from starting a session, to facilitating an exercise, and documenting the process.¹ While a session could potentially be completed by as few as two experienced facilitators, the results may be compromised as the facilitators have to balance group process with the need to produce outputs using a series of structured exercises. Consequently, group model building is typically done in teams with one or more roles assigned to each team member. Below are some of the team roles needed for this project along with a description of their primary function and qualifications:

Meeting opener/closer: The meeting opener/closer convenes the meeting and brings the meeting to a close. This person is familiar with the project and its importance, and usually a recognized leader within the group. They provide a context for the overall issue and process. They do not have to be someone who was on the core modeling team or participated in the design of the sessions. The primary function of the meeting opener/closer is to start and end the meeting and set the overall stage for the group model building activities.

Modeler: The modeler is someone who is experienced in system dynamics modeling and modeling software (e.g., Vensim, iThink/STELLA) and has some experience in group model building. The modeler develops the model and helps the group reflect on model structures that emerge during the session.

Facilitator: The facilitator is someone who has some experience in system dynamics and group model building facilitation. The facilitator works focuses on developing the diagrams, introducing concepts from system dynamics, and translating participants' statements into phrases that are easier for the modeler to use.

Recorder: The recorder will take notes during the large group discussions. The primary function of the recorder is to document the discussion and products, and then distribute the documentation to members of the facilitation team. Sessions may have an additional recorder if needed.

Wall builder: The wall builder is someone who is able to cluster concepts in meaningful categories based on the conversation in the room. It is helpful if the wall builder have some familiarity with the context of the issue being discussed. The wall builder arranges participants' results on the wall into clusters as part of an exercise.

Reflector: The reflector is someone experienced in building and analyzing system dynamics simulation models and group process facilitation. The reflector reviews the progress of the session with participants, draws out insights that are based in the model, and highlights products and deliverables produced during the session.

Production coordinator: The production coordinator takes products being developed during the session (e.g., causal loop diagrams) and creates a tangible deliverable that participants can use during and after the session. It is important that the production coordinator is familiar with the printing and production facilities, software packages being used (e.g., Vensim, iThink/STELLA, PowerPoint), and has some experience preparing printed materials involving system dynamics diagrams.

¹ Richardson, G. P., & Andersen, D. F. (1995). Teamwork in group model building. *System Dynamics Review*, *11*(2), 113-137.

Debriefer: The debriefer is usually someone with small group facilitation skills and typically in a position during the session to observe the overall group process (e.g., the process coach, reflector, or sometimes a recorder). The debriefer takes primary responsibility for convening the facilitation team after the session has been completed and lead the facilitation team through a structured debrief eliciting initial reactions and then identifying what worked and what could have been improved for the next session.

Table of Facilitation Team Members and Roles

Roles	GMB Session 1	GMB Session 2	GMB Session 3
Convener/Closer			
Facilitator			
Modeler			
Wall Builder			
Recorder			
Reflector			
Debriefer			

Detailed Agenda: Session 1- 90 minutes

Purpose of the Session:

Time	Activity	Description
7:00am	Room Setup	Members of the GMB team arrange the room.
7:30am	Welcome and Introduction to GMB Session	<i>The convener</i> welcomes participants and opens the meeting. Introduction of participants and facilitation team and provides a brief introduction to the project and the purpose of the session, including the local community's data on childhood obesity.
7:40am	Graphs over time script	The <i>facilitator</i> introduces the "Graphs over Time" exercise and gives participants 5 minutes to draw as many graphs over time as they can on "Things that affect or are affected by childhood obesity in your community."
		At the 4-minute mark, the <i>facilitator</i> gives a 1 minute warning and tells participants to prioritize graphs over time from most favorite (on the top) to least favorite (on the bottom). Then in a round-robin fashion, the <i>facilitator</i> asks participants to share one graph over time. The <i>facilitator</i> takes each graph and brings it to the front of the room to the <i>wall-builder</i> . The <i>wall-builder</i> organizes the graphs over time into clusters of variables on wall. The <i>recorder</i> takes notes on each the definition of each variable and story associated with the dynamics. The <i>modeller</i> records each variable discussed by participants in STICK-E for the next script.
8:05am	Connection	The facilitator introduces the connection circle script.
	Circles	The goal of a connection circle exercise is to find the connections between different concepts or variables that contribute to or are affected by some issue—in this case childhood obesity in your community.
		We can start by taking two of the concepts you created in the first exercise.
		Then you create lines with arrows that are drawn showing you how one concept affects another. The facilitator walks through the example reflecting both the direction and polarity of the relationship between the variables. He lets participants know that they can include other variables not included in the list generated from the graphs over time exercise.
		The <i>modeler</i> draws the links as the facilitator is speaking, and STICK-E is projected.
		Are there any questions so far?
		The facilitator (Andrew) says that we are going to proceed in round-robin fashion around the group. Please pick two variables from this list or feel free to add

		another, then describe how the first influences the second.
		Please know that there are no right or wrong answers.
		The <i>recorder</i> is recording the stories shared and conversations between participants. The <i>reflector</i> is recording any insights particularly interesting stories, reactions, group dynamics, etc. during the activity.
		At 8:50AM, the <i>reflector</i> will give the <i>facilitator</i> an indication that there is 5 minutes remaining. The facilitator will ask participants if there are any last links they would like to add and closes the activity.
8:55am	Closing	The <i>reflector</i> then highlights insights gained in the session and explains the next steps including going over the notes and cleaning up the diagram to continue to build on the next meeting. The <i>closer</i> thanks participants for their time, invites them to stay after if they have more questions, lets them know of the deliverables that will be emailed, and reminds them of the next meeting time/date.
9:00am	Close Session	Session finished.
9:00am	Debrief	The <i>debriefer</i> leads the facilitation team through a debriefing of the group model building exercise.

Detailed Agenda: Session 2 – 90 minutes

Purpose of the Session:

Time	Task Duration	Activity	Description
6:30am	30 mins	RoomSetup	Members of the GMB team arrange the room.
7:00am	5 mins	Welcome and introduction	<i>The convener</i> welcomes participants and opens the meeting. The vision for improved childhood obesity is reiterated to the group as a restatement of the purpose of the workshop.
7:05am	10 mins	Model presentation:	The presenter gives a brief outline of the development of the model from last workshop's outputs to the current version of the map.
7:15am	25 mins	Community Feedback on GMB Model	<i>The facilitator</i> at the front of the room explains the purpose of the exercise, inviting participants to use sticky notes to provide different types of feedback to the new version of the model.
			Participants can convey positive comments (<i>"things I liked"</i>), concerns or proposed changes (<i>"things I think are wrong/need to be changed"</i>) and comments (<i>"this is new knowledge/this</i> <i>requires further investigation"</i>). Positive sticky notes should be identified by green post it notes, concerns or changes with red, and general comments with a blue.
			At this stage participants are also invited to add any links to the CLD that they think are missing, or add polarity to any connections which are missing polarities from the first version of the CLD.
			<i>The facilitator</i> gives 30 minutes to write and display comments. With 5 minutes to spare, the <i>facilitator</i> instructs participants to place their remaining comments.
			When the time has elapsed, the <i>facilitator</i> thanks the group for their participation. Diagrams are retained for later use.
7:40am	15 min	Problem Solving	<i>The facilitator</i> explains specific problems found in the model from workshop 1. Participants discuss solutions to the problems as the <i>modeler</i> is updating the current version of the map on STICKE
7:55am	30 mins	Live Model Update	<i>The facilitator</i> recaps on the issues and clarifications requested from the <i>modelling team</i> . A short exercise is conducted where the facilitator probes the participants on variables

			which may need clarification, or connectionswhich might need to be revisited.Throughout the discussion, the <i>modeler</i> is
			updating the current version of the map on
			STICKE to reflect the participants' commentary.
8:25am	n/a	Close session	The <i>closer</i> thanks participants for their time,
			invites them to stay after if they have more
			questions, and reminds them of the date and aims
			of the next session.
8:45am	10-20	Debrief	The <i>debriefer</i> leads the facilitation team through
	mins		a debriefing of the group model building
			exercise.

Detailed Agenda: Session 3- 3.5 hours

Purpose of the Session:

Day Time	Evening Time	Task Duration	Activity	Description
8:30am	4:00pm	60 mins	Room Setup	Members of the GMB team arrange the room.
9:30am	5.00pm	10 mins	Welcome and Introduction	Welcome to country and community leader points to the relevance and importance of the work. The convener welcomes participants and opens the meeting. The vision for improved obesity is reiterated to the group as a restatement of the purpose of the workshop.
9:40am	5:10pm	20 mins	Best practice & Evidence Part A	The Presenter gives the group an understanding of why obesity is important and the magnitude of problem and how this approach is promising to tackle it
10:00am	5:30pm	5 mins	Model presentation:	The <i>Presenter</i> gives a brief outline of the development of the model from last workshop's outputs to the current version of the map.
10:05am	5:35pm	5 mins	Reading the causal diagram	The <i>facilitator</i> leads a brief discussion of how to read a CLD.
10:10am	5:40pm	35 mins	Community Feedback on GMB Model	 The facilitator at the front of the room explains the purpose of the exercise, inviting participants to use sticky notes to provide different types of feedback to the new version of the model. Participants can convey positive comments ("things I liked"), concerns or proposed changes ("things I think are wrong/need to be changed") and comments ("this is new knowledge/this requires further investigation"). Positive sticky notes should be identified on a green post-it, concerns or changes on a red post-it. At this stage participants are also invited to add any links to the CLD that they think are missing, or add polarity to any connections which are missing polarities from the first version of the CLD. The facilitator gives 15 minutes to write
				<i>The facilitator</i> gives 15 minutes to write and display comments. With 5 minutes to

r	r			
				spare, the <i>facilitator</i> instructs participants
				to place their remaining comments.
				When the time has elapsed, the <i>table</i>
				<i>facilitators (all)</i> lead the group through a
				quick debriefing exercise in table groups,
				around likes/dislikes from the model and
				variables/linkages added.
				, j
10:45am	6:15pm	20 mins	Best practice &	The Presenter gives participants a 10-15
			Evidence Part B	slides summary of current best practice and
				evidence regarding the community based
				prevention of obesity.
11:05am	NA	10mins	Morning Tea	Break
NA	6:35pm	20 mins	Dinner Break	Guests tea
11:15am	6.55 pm	40 mins	Identifying and	The <i>facilitator</i> introduces participants to
			prioritising action	the next activity. Participants will be given
			ideas	slips of A5 paper, and are instructed that
				the next 40 minutes will be spent
				identifying action ideas. Participants are instructed to examine the map, and look
				for "areas" or "parts" of the map where we
				could potentially introduce an intervention
				to improve the outcome of obesity.
12:15pm	7.35 pm	30 mins	Prioritization	Table facilitators lead the tables who work
12.10pm	7.55 pm	(daytime)	1 Hornizanon	in groups. Groups are asked to prioritise
		(000)00000)		actions based on feasibility and likely
		20 mins		impact in groups of three (top 5/group) and
		(evening)		then for the whole table (top 3/table).
		с с <i>,</i>		As they are sharing the Facilitator is
				checking that action ideas fit with pre-
				prepared action theme list, and adds to
				theme list for those not included.
				Then the facilitator asks each table to
				provide 1 - 2 examples of priority actions
				discussed on one pre-prepared theme area
				each. Then the Facilitator asks the table
				facilitators if there are additional priority
				themes that their table discussed.
				During this process the Scribe has transferred the examples and additional
				transferred the examples and additional priority themes onto individual butchers
				paper and placed them on the wall for the
				next session.
12:45	7.55 pm	15 mins	Session closing	<i>The Closer</i> presents the participants with a
12.15	/ piii	15 111115	Session crosing	list of the action ideas they prioritized at
				the end of the last session. The participant
				are asked to add their names to the priority
				themes they are interested in on A3 sign-up
				sheets at each table and invited to continue
				the discussion at next workshop The
				participants are given a quick debrief of the
				overall workshop process, and have a
				chance to share any reflections on the

				session, before the workshop is brought to a close.
1:00pm	8:10 pm	n/a	Close session	Session finished.
1:00 pm				Lunch (daytime session)
1:30 pm	8.30pm	10-20	Debrief	The <i>debriefer</i> leads the facilitation team
		mins		through a debriefing of the group model
				building exercise.

Scripts

Group model building sessions typically consist of a sequence of small group activities or "scripts". ² These scripts describe the essential components of an exercise along with the inputs from other exercises needed to do the script and the outputs produced from the script. There are scripts for working directly with participants ("online" scripts) as well as scripts for the facilitation team before and after a group model building session ("offline" scripts). Additional information about scripts can be found in the latest version of *Scriptapedia*, available on request from the Social System Design Lab at Washington University in St. Louis and in:

² Andersen, D. F., & Richardson, G. P. (1997). Scripts for group model building. *System Dynamics Review*, *13*(2), 107-129.

Hovmand, P. S., Andersen, D. F., Rouwette, E., Richardson, G. P., Rux, K., & Calhoun, A. (2012). Group model building "scripts" as a collaborative tool. *Systems Research and Behavioral Science*, *29*, 179-193.

Introduction to GMB Session

ntroduction to (JMB Session		
Description	This script is used to introduce people and set the stage for a GMB session.		
Context	At the very beginning of a GMB session as participants are starting to get settled and the team wants to begin the session		
Purpose	To introduce the GMB session, team members, participants, and stage the activities for the GMB session		
Primary Nature	Convergent		
of group task	Facilitator		
Time Materials	Preparation: None Session: 10-20 minutes, depending on number of participants and complexity of session being reviewed Follow-up: None 1. Agenda of session for participants		
Inputs	None		
Outputs	None		
Roles	• Meeting opener with status among the participants who can start the session		
People in the room	Modeling teamParticipants		
Steps Evaluation criteria	 The opener announces the start of the session. Welcome the participants and thank them for attending. If the session is taking place in unfamiliar room, inform participants of the location of restrooms, exits, etc. The opener begins the introductions: Introduce yourself, and then say that there are more members of the modeling team in the room, and before we get to the participants, we want to let you know who we are. Each team member introduces themself and describes their role. The facilitator then asks participants to introduce themselves, their organization, and how they are connected to this group today. The facilitator then describes the plan for the modeling session, when breaks will be, and asks if all participants are ready to begin. 		
Author(s)	Unknown		
History	Originally documented by Timothy Hower (<u>thower@wustl.edu</u>), Krista Rux (<u>krux@wustl.edu</u>) and Peter Hovmand (<u>phovmand@wustl.edu</u>) for the Federal Reserve Bank Project, September 21, 2011.		
Revisions	None		
References	None		

Graphs over Time

araphs over 11	
Description	Participants produce sketches of key variables over time, which are clustered by the modeling team
Context	At the beginning of a group model building workshop when the group has not develop a dynamic perspective of the problem or the variables involved
Purpose	To frame the problem from a dynamic perspective and elicit variables that could be used to decide on the reference mode for the project
Primary nature of group task	Divergent
Time	Preparation: 10 minutes Session: 45-60 minutes Follow-up: none
Materials	 Stacks of A5 white paper with axis drawn on them Large blank wall/white board Fat markers Blu tac Phone or other method to take a picture of the graphs
Inputs	None
Outputs	Candidate variables for the dynamic model or causal map
Roles	 Facilitator to work with the group with some experience with SD Wall builder to cluster graphs and talk about themes with little or no experience in SD Recorder to document the session and photograph the clustered graphs Modeler to take notes on variables described during session.
People in the room	ParticipantsAll members of the core modeling team
Steps	 Based on group size, decide whether to break participants into subgroups. In smaller groups N<10, allow individuals to work and present independently. In larger groups N>10, divide participants into groups of roughly N/10. Ask the subgroups to sit together. The wall builder hands out sheets of white paper to each participant or group. The facilitator gives an example of how to draw a behavior over time graph, carefully labeling X-axis "Time" with start time, end time, and now indicated with a vertical dashed line. The Y axis is labeled with a variable name. The facilitator then sketches the behavior. The facilitator then asks participants to draw one variable over time per piece of paper. The participants should be given the option of including hoped for behavior, expected behavior, and feared behavior on the same graph.

	 The facilitator and wall builder walk around and help participants with the task if they need it. Allow 15 minutes or until the group runs out of steam to complete the task. Reconvene as large group. A: If N<10, the facilitator takes one graph at a time from each participant, holds it up in front of entire group and asks him/her to talk about it. Ask for participants to share the "best stuff" first. Clarify timescale, variable names, etc. B: If N>10, instruct subgroups to share their graphs with each other and choose the ones they think are most important. The facilitator then goes to each subgroup and holds the first graph they have selected up in front of entire group. The subgroup spokesperson talks about the graph. Ask subgroups to share the "best stuff" first. Clarify timescale, variable names, etc. The facilitator then hands the graph to the wall builder. The facilitator repeats steps 6 and 7 with each participant or subgroup, taking one graph at a time until all graphs are shown or time has run out. Finish by asking if any participant has something else that really ought to be shown. During steps 7-8, each graph is posted on the wall. The wall builder tries to cluster the graphs meaningfully on the fly, based on themes and variables. The facilitator asks the wall builder to explain the clusters of graphs on the wall. The wall builder tries to summarize dynamics that help to characterize the problem that emerges from the participants' graphs. The facilitator enables the participants to talk about the clusters and the characterization of the problem they imply.
Evaluation criteria	 Interesting, self-sustaining group discussion after clusters described by the wall builder Meaningful clusters are possible to see Graphs tend to converge to a clear dynamic problem Some key dynamic variables emerge from reflecting on the graphs and clusters Modeling team can begin to see key stocks and perhaps important feedback loops Members of the group appear to have better understandings of the issues of interest to other members
Authors	George P. Richardson and David F. Andersen
History	Originally documented by George Richardson, David Andersen, Peter Hovmand, Timothy Hower and Annaliese Calhoun in February 2010
Revisions	Tailored to the March 5, 2014 GMB demonstration session for S65-5050 course
References	Andersen, D. F., & Richardson, G. P. (1997). Scripts for group model building. System Dynamics Review, 13(2), 107-129.

Connection Circles Exercise Script

connection circle	es Exercise Script
Description	Connection circles help groups visualize important variables and connections between them.
<u> </u>	
Context	Social systems have many variables and connections relating them.
	Seeing all the connections is challenging and we can quickly feel
	overwhelmed by the complexity of a system. To address this limitation,
	we need visual tools that can help us see and talk about the connections
	in a system.
Purpose	• To make explicit important variables and connections between
	variables
	Eliciting important variables
	Eliciting linkages
Primary nature of	• Divergent: Groups may come up with different connections between
group task	variables by generating a variety of variables and interpretations
Time	Preparation : 5 minutes (setting up STICKE projector)
	Session: 40 minutes
	Follow up : 15 minutes, depending on exercise output
Materials	Overhead data projector & screen
Materials	 Computers running the same version of STICKE, connected to
	projector and connected to a network with a common access to a
	shared folder
	Recorder's materials (could be computer based, or handwritten)
	Portable printer, cables, paper
T .	Flash drive for model transfer between Modelers
Inputs	• Variables from prior work (in this case, from the Graphs over time
	script) typed in Vensim on the side of a large circle.
Outputs	Connection Circle
Roles	Modeler with some experience in STICKE
	• <i>Facilitator</i> with experience facilitating groups and some experience
	with building models in STICKE
	 Recorder trained to take recorder notes during a meeting
	• <i>Reflector</i> trained to take notes about the process, dynamics, and
	insights during the session
People in room	Participants
	Modeling team
Steps	1. The <i>facilitator</i> is at the front of the room. The <i>modeler</i> is sitting
-	with a laptop connected to the data projector at the side of the
	room. The <i>recorder</i> and <i>reflector</i> are seated on the periphery of
	the participant group where all members are audible.
	2. The <i>facilitator</i> introduces the exercise:
	• The goal of our exercise is to identify the variables and
	connections between variables that are important in the
	system affecting childhood obesity in Portland, Victoria.
	• A connection circle is a visual tool that can help us see the
	connections in a system.
	3. The <i>modeler</i> projects the "Blank" connection circle with variables
	arranged in a cluster on one side of the screen. The <i>facilitator</i>
	introduce the variables as those from the Graphs Over Time
	activity, noting that these variable meanings may be further
	negotiated as the session proceeds and also that participants are
	free to add variables that are not on the screen, but are important
	to understanding the system.

	 4. The <i>facilitator</i> opens the exercise by stating: We are going to proceed in round-robin fashion around the group. Please pick two variables from this list or of your own choosing, then describe how the first influences the second. The <i>modeler</i> creates a STICKE drawing of what the <i>facilitator</i> is describing, simultaneously, for the participants to see. The facilitator uses language of both direction and polarity.
	 5. The <i>facilitator</i> then prompts the group by asking: What are some connections that you can see between any two variables on the screen? Once a participant nominates connection between two or more variables the community facilitator needs to be sure the variable definitions and nature of the causal connection is clear. Consider prompting the participant to share how they are thinking about the variables.
	6. The <i>facilitator</i> alternate eliciting linkages and variables from participants.
	 7. As participants nominate linkages, <i>modeler</i> selects the variables from the side and draws the linkage on the screen. As the number of variables chosen grows, <i>modeler 1</i> should arrange them in a circle, being aware of positioning the variables such that they are not always physically adjacent. Once one complete round or approximately ten connections are made, the <i>facilitator</i> says: We have a good start and a number of connections, so we don't need to continue to go around in order. Feel free to continue to suggest connections about these or additional variables that you think are important. 8. The <i>facilitator</i> provides a 5 minute warning to the group as the session approaches a close. The <i>facilitator</i> indicates when there is approximately one minute left to clicit any final input.
Evaluation criteria	 approximately one minute left to elicit any final input. Each participant engages in discussing linkages and variables A connection circle with multiple feedback loops is created Participants recognize there is a complex system surrounding childhood obesity. Destrict and the process.
Author(a)	Participants enthusiastic about modeling process
Author(s) History of Script	Unknown Utilized in Rise Sisters Rise project July 2011
Revisions	May 22, 2012 Revised by Alison Kraus and Peter Hovmand for Washington University TREC 4 GMB session Modified in June 2012 by the TREC4 Core Modeling Team
References	None
Notes	None

Debriefing Script

Debriefing Script	
Description	This script is used to organize the Team's debriefing session after a GMB session.
Context	May be used after each GMB session.
Purpose(s)	• Capturing salient aspects of the GMB session to accelerate learning and improvement.
Nature of group task	• Evaluative : activity designed to evaluate and choose between options and ideas
Time	Preparation: None Session: 30 minutes Follow up: None
Materials needed to complete script	Chairs in a circle
Inputs	• Final, detailed version of the script from GMB session being debriefed
Outputs	List of actions necessary to implement improvements
Modeling team roles required and expertise needed	• Debriefer who has good group process skills and has not been involved in a major role during the actual session
Who is in the room?	All Modeling Team members who participated in session under review
Steps	 Assemble the Modeling Team, announce the start of the debrief session. Debriefer reviews the process the team will use to conduct the review. Begin with a check-in to see how people are doing. This is important regardless of whether the session went well or badly. Ask the following questions: How are you feeling about how this GMB session went? Overall, did we accomplish what the session was designed to do? What went well during this session? Specifically, what did we do that contributed to the creation of value for the participants? (each member of the GMB session team should offer a specific example of something that went well) From your perspective, what would have led to even more value creation for participants? Were there any rough parts for you? (All should have the opportunity to answer, but not all need to comment) What did you learn from this session? (all answer) What specific, actionable steps can we take to solidify this learning and improve the way we work?

Evaluation	Stronger, more cohesive team after the debrief
criteria	List of ways to improve the process.
Author(s)	Timothy Hower (thower@wustl.edu) and Peter Hovmand
	(phovmand@wustl.edu), April 6, 2010
History of Script	Original Script based on current practice and author's work.
Revisions	Revised May 11, 2012 by Alison Kraus, for TREC4 GMB sessions
	Revised March 1, 2012 for Systems Thinking in Schools GMB Sessions
References	None

Community Feedback on GMB Model (Rapid Session)

Context	After a causal-loop diagram or stock-flow map has been developed
	To give participants time to familiarize themselves with model or diagram
Purpose	that has been revised offline since the last workshop.
	(Rapid Session version not intended for work which will lead to further
	revision of the map)
Primary nature of	Divergent
group task	
Time	Preparation : Very large representation(s) of a current version of the
TIM	model/diagram (printed or drawn) taped/affixed to walls or windows
	Session: 30 minutes
	Follow up: 60 minutes (post session) to incorporate participant feedback
	into model.
Materials	• Very large poster-size representation of model/diagram (printed or drawn)
	 High quality sticky notes (high-stick)
	• Several dark felt tip pens (one for each participant)
Inputs	Causal loop diagram or stock and flow diagram currently being developed
	in GMB project
Outputs	Causal-loop diagram or stock-flow map with stakeholders' anonymous
-	comments on post-its (good = green; concern = red; neutral = blue)
	attached at the relevant place on the diagram/model; digital photographs of
	map/model with post-it comments
Roles	• Facilitator to introduce the representation to the large group and
	introduce the guidelines for the activity
People needed in	Participants
the room	
Steps	1. Based on group size, decide on how many small groups and
	representations are required to have made before the script begins.
	An ideal group size is approximately 3 participants per large
	representation.
	2. The facilitator at the front of the room explains the overall purpose
	of the exercise (to gain feedback from the larger community on an
	interim model, having already provided a brief overview of
	question/focusing problem, process-to-date, and the model to the large group). Previously, the participants have been given the
	information required to have a useful interaction with the
	representation (i.e., descriptions/examples of polarity,
	directionality, feedback loops, etc.). Any of this information is
	also displayed for participants throughout the activity.
	3. The <i>facilitator</i> then sets up what the participants will be doing in
	the activity, inviting them to use sticky notes to provide different
	types of feedback on parts of the current version of the model.
	Comments may be positive (things they like/agree with/see as high
	value, green post-it), negative (things that are erroneous/need
	adjustment/missing from the model, red post-it) or general
	comments (new thoughts/things to investigate further/other, blue
	post-it). Participants write a brief comment explaining their
	like/concern/comment using felt tip pens on the sticky notes and
	place them on the part of the model the note pertains to.
	4. At the same time – the facilitator invites participants to add any
	new causal linkages to the model which they identify throughout

	the task of reviewing the model.
	5. The facilitator gives 30 minutes to the group to write and display their comments. Any available facilitators can act as "floaters" to respond to participants' questions.
	6. Participants spend time with the representation, making and placing comments. With 5 minutes to spare, the facilitator asks the participants to write and place their remaining comments and questions.
	7. <i>The facilitator</i> thanks participants for their participation, and runs through a quick debrief of the exercise based on some seed questions
	 a. What did you feel were some good aspects of the model – what did you place ticked sticky notes on? b. What did you feel were some areas that needed to be changed – what did you place crossed sticky notes on? c. Were there any general comments to share? d. Were there any variables that you felt needed to be added or changed in the model? e. Were there any new connections identified on the model? 8. The facilitator thanks the large group for their participation and
	hands over to the facilitator of the next session.9. The diagrams with participants' comments are retained for use in the following model development.
Evaluation criteria	Feedback received from the community on the current version of the model Participants feeling they have made a contribution to current and future steps towards a shared understanding of a problem
Author(s)	Jill Kuhlberg & Don Greer & Laura Black
History	Adapted for use with an interim CLD in GSC Portland Childhood Obesity GMB Community Session: July 17, 2014
Revisions	
References	
Notes	

Live Model Update

Live woder Opdate	
Description	Participants are involved in a round-table discussion of the current version of the
	model, and updates are made in real-time
Context	For the purpose of updating a model from a prior workshop, in the current
	workshop, to reflect new understandings generated during the session
Purpose	• To create a revised CLD
Primary nature of group task	• Convergent
Time	Preparation: nil
	Session: 30-40 minutes
Materials	STICKE Project of existing model version
	Projector and screen
Inputs from other	Previous CLD file to be updated
scripts	• Participants comments attached to hard-copy version of the CLD from previous
•	activity (Community feedback on model)
Outputs from this	Revised CLD to be developed further offline
script	
Modeling team	Facilitator to lead the discussion around what needs to be
roles	added/changed/removed from the CLD
	• Modeler with experience in STICKE to update the model in real time
	• Note takers to capture the discussion
People in the room	Participants
	• Facilitation team
Steps	1. <i>The Facilitator</i> opens the session by reflecting that participants have just spent
-	a block of time getting to know the most recent version of the CLD, and
	commenting on it, providing reactions to what is good in the model, what is
	interesting about the model, and what needs improvement.
	2. <i>The Facilitator</i> instructs participants that they will now have a chance to have
	some of those changes made in real-time, to begin the process of revising the
	map for the next session.
	3. <i>The Facilitator</i> outlines the task as being a round-robin type discussion,
	whereby the small groups who worked together on the model feedback task
	will have a chance to suggest their most important change to the model,
	whether it be an addition of new material, removal of old material, or alteration
	of existing material. Although groups will take it in turns to describe their
	desired changes to the model, discussion of the changes is encouraged between
	groups if other participants have something to add to the discussion. Note

	takers capture the discussion as best they can throughout the session.
	4. As <i>the facilitator</i> is eliciting new information from groups, and guiding the discussion in the room, <i>the modeler</i> captures the changes in STICKE, which is being projected on the screen in real time.
	5. (OPTIONAL) – if the <i>modelling team</i> have any "dead buffalos" or variables which require specific attention, 5-10 minutes may be reserved to specifically query the participants on these points, if they do not naturally arise throughout the course of the activity.
	6. With 5 minutes to go, <i>the facilitator</i> alerts the room that we are almost out of time, and that we can take two or three quick last-minute changes before the model is taken away to be revised for the next workshop,
Evaluation criteria	Participants see their input incorporated into the model
	Participants retain ownership of an evolving model
	• New data is obtained which can be used to further progress the model
Author(s)	Written by Josh Hayward and Steven Allender (Deakin University, WHOCC for Obesity Prevention)
History	Designed for the GenR8 Change and Vic Pol workshops (May-June 2015)
Revisions	Nil
References	Nil.

Context	After a model has been developed.
Purpose	To identify potential actions in response to the model
Primary nature of	Divergent
group task	
Time	Preparation : 5 minutes: Very large representation(s) of a current version
	of the model/diagram (printed or drawn) taped/affixed to walls or windows
	Session: 30 minutes
	Follow up: Nil
Materials	
Materials	• Very large poster-size representation of model/diagram (printed or drawn)
	• A3 slips of coloured paper
	• Several dark felt tip pens (consider having one for each participant)
T 4	Blue Tac (if large representations are hung on the wall)
Inputs	Causal loop diagram or stock and flow diagram currently being developed
	in GMB project
Outputs	Causal-loop diagram or stock-flow map with stakeholders' action ideas on
	post-its attached at the relevant place on the diagram/model; digital
	photographs of map/model with post-it comments
Roles	• Facilitator to introduce the representation to the large group and
	introduce the guidelines for the activity
	• Group facilitator(s) to manage small group discussions and questions
	• Recorders to document the small and large group discussions
People needed in	Participants
the room	
Steps	1. Ask groups to take some time to identify as many actions as they can that would impact the model from the previous exercise.
	 Participants are given the following instructions, in conjunction with a slide, highlighting the Meadows (1999) leverage points. We would now like you to take some time, and use the diagram to help identify as many possible actions to improve this system as you can.
	You can develop interventions that might impact variables directly – for example you might find a way to decrease (example variable). This might be an ineffective way to intervene, however, as it only addresses one symptom of the problem. As we can see there are a number of other variables which are connected to this one, and if they are not addressed as part of the intervention, our success may be limited as we have ignored several of the causes of this variable.
	You might develop ideas that impact on a connection – for example, you might come up with a way to create a new link between two variables which were previously disconnected (give example).

	 You can also consider interventions which strengthen a connection for example, a particular action might strengthen the connection between (give example) Finally, you can consider interventions which would impact either the rules that the system is governed by, or the goals that the system is trying to achieve – for example, organizational policies could restrict or alter the behaviour of particular variables we have identified in the system, or we may intervene to change the goals that the system as a whole is working towards. These can be the most difficult action ideas to come up with – but they can also be the most effective. When considering these action ideas, please write a short, one sentence description of the action idea on your slip of A5 paper. If you can, have a look at the large map in front of you, and see if
	you can create a small sketch on your A5 page of how your action idea would "fit into" the CLD.
Evaluation criteria	The exercise leads to a rich list of potential actions, which have been identified by the community participants. Participants are energized by the process of offering their potential solutions. The group has developed some understanding of how to place intervention ideas within the causal map.
Author(s)	Unknown
History	
Revisions	
References	Meadows, D. 1999. Leverage points: places to intervene in a system.
	Hartland VT: The sustainability institute.
Notes	

Prioritisation of Action Ideas

	 Each group of three will explain their top two priority action ideas in a round-robin fashion. If an idea has been covered by another group of three, the following group will "skip" the idea, and present the next idea from their top 5.
	9. After sharing their top two ideas per group of 3, the table decides which three ideas represent the most feasible, and impactful, ideas for the table as a group of 9.
	10. After participants have reached the end of the available time, the room facilitator will reconvene the room as a whole, and explain that the final round of prioritization is about to begin.
	11. The room facilitator gives each table the chance to share one action idea at a time, in a round robin fashion, until each table has shared their top 2-3 ideas.
	12. As the table's ideas are being shared, the A5 action idea slips are being collected from the tables, and stuck to the wall in their relevant theme
	 Next to each theme, participants are given the chance to "sign up" to working groups on butcher paper attached to the theme.
Evaluation criteria	The exercise leads to a prioritised list of potential actions, which have been identified by the community participants. Participants have engaged with each other, and collaboratively discussed action ideas.
Author(s)	Unknown
History	
Revisions	
References	Meadows, D. 1999. Leverage points: places to intervene in a system.
	Hartland VT: The sustainability institute.
Notes	