

# Chapter 7

## Facilitating GMA Workshops

### 7.1 Four Necessary Requirements

This is what I have learned during the past 15 years: There are four *necessary requirements* for carrying out GMA workshops for the purpose of creating (meaningful) morphological inference models concerning wicked problems:

1. Sound knowledge and experience of morphological modelling methods: i.e. theory, procedures, techniques, pitfalls etc.
2. Extensive knowledge and practical experience in small group facilitation and facilitation methods.
3. An appropriate working group of relevant Subject Matter Specialists (SMS)-cum-Stakeholders.
4. Dedicated, *flexible* GMA software.

Since I contend that all of these requirements are *necessary*, it would seem pointless to attempt to rank them. However, in my experience, the *least important* of these four necessary requirements is the *software*.

Given the most wonderful software in the world (presently MA/Carma™), a person lacking one or more of the first three requirements will risk making a complete disaster out of the GMA process. On the other hand, given the first three requirements, a competent morphologist/facilitator can pull off an acceptable GMA workshop – at least in the sense of *framing* a complex problem area – without dedicated software.

(What one cannot do without proper software is to produce interactive inference models that will allow the client/user to literally “play with their problem”: i.e. look at it from different stakeholder perspectives, ask it “what-if” questions, change its initial conditions and link it to changing developments and environments.)

The *least appreciated* aspect of these requirements is the *facilitation of a SMS/Stakeholder group*. Certainly one can create morphological models “solo”: This has been done for decades and is referred to as “attribute listing”. It can be carried out using Excel sheets or any other spread sheet program. It is most usually done when one already knows (more or less) what a problem consists of

“parametrically”, and one wishes to explore or speculate on how these parameters are entangled. Do it. More power to it!

However, attempting to do a “solo” or “back-office” morphology, when dealing with really *wicked problems*, completely misses the point. GMA is a method for collective concept exploration, group creativity and the development of collective understanding of a complex problem area. Through dialogue and an exchange of ideas, it is intended both to bring forth tacit knowledge from SMS/stakeholder groups, and to foster the creation of new concepts and contexts.

There is plenty of evidence that facilitated group interaction consistently surpasses individual capacity in the area of concept exploration and creativity for “open ended” problems. (see e.g. Blinder & Morgan, 2005).

## 7.2 The Facilitation Thing

Michael Wilkinson (2004) calls it the *Fundamental Secret of Facilitation* (and then goes on to point out that it is not a secret at all; it is just not taken seriously enough). I think that is better called the *Fundamental Principle of Facilitation*. To paraphrase:

*In dealing with complex societal problems, far more effective results will be achieved when these problems are framed, and solutions created and understood, by the people who are actually impacted by the problems – i.e. its various stakeholders.*

As we have seen, *wicked problems* are about stakeholder positions. And where stakeholder “buy-in” and a collective understanding of issues and positions are important, then *facilitation* becomes very important.

The art and science of facilitation began to emerge as a *discipline in its own right* only in the late 1960s. As such, it is still sometimes confused with the roles of *consultants* and *trainer-educators*. Check out the following definitions:

“Facilitation is the process of enabling groups to work cooperatively and effectively. . . . In particular . . . where people of diverse backgrounds, interests and capabilities work together.” From *Information and Design*<sup>1</sup>

[Facilitation is] “. . . the use of a *neutral* to help a group of people conduct productive discussions about complex or potentially controversial issues. The focus of the facilitator’s role is to help people communicate effectively with each other.” From the U.S. *Environmental Protection Agency*<sup>2</sup> (emphasis added).

“A facilitator is someone who helps a group of people understand their common objectives and assists them to plan to achieve them *without taking a particular position in the discussion*.” From *Wikipedia*<sup>3</sup> (emphasis added).

This is not the place for a detailed exposition of the discipline of facilitation. There is a flora of books and articles on the subject, and plenty of material on the

<sup>1</sup><http://www.infodesign.com.au/ftp/Facilitation.pdf>

<sup>2</sup><http://www.epa.gov/ne/enforcement/adr/glossary.html>

<sup>3</sup><http://en.wikipedia.org/wiki/Facilitator>

Internet. There is an International Association of Facilitators (IAF) as well as a European branch of that organisation, providing training material, discussion forums and other resources.

While there is a number of more or less standard procedures and “things to do” both prior to a facilitated meeting, during the meeting and after the meeting, there is also a number of important (and well-recognized) “dos” and “don'ts” for the facilitation process *in general*, which I have taken from the facilitation literature, especially inspired by Hogen (2002, 2003).

I learned these the hard way. Like most people my age, I started my facilitation career long before I even knew what *facilitation* was, and I started by making every mistake in the book. While these “dos” and “don'ts” may seem fairly clear cut, it is very easy to screw up when you start your facilitation career. (I exaggerate some of these “rules” a bit, in order to make a point. As in every discipline, you can sometimes break the rules, but only when you are experienced enough to know *when* and *how* to break them.)

### 7.3 Some Dos and Don'ts for New Facilitators

- As a facilitator, you are concerned with *form* and *process*; you *never argue content!* You are neither a SMS nor a stakeholder. If you are, then you have no business facilitating the group. (As far as content is concerned, you are like Manuel in *Faulty Towers: you know nothing!*).
- Be totally impartial. Never take sides or choose favourites. If you do, you're dead meat.
- Keep everything above-board. No hidden agendas.
- Engage; never manipulate.
- Acknowledge all inputs (ideas); it is not your job to assess them.
- Ask the group for help when you need it. Don't fake it! Admit mistakes and never become defensive.
- Get everyone to participate. (This will not be a problem if you choose the group correctly.)
- Encourage diversity; do not expect or demand (“first order”) consensus. Promote “second order” consensus (see Glossary: Consensus).
- Get the participants away from addressing you, and get them talking to one another. (It is natural for group participants – at least initially – to address and talk content with *you*, as though you are the “group leader”. It's a delicate matter, but you have to put a stop to it.)
- Don't be a *prima donna*. This isn't about you. Make yourself inconspicuous when the group is discussing matters. (I usually have a number of chairs placed out around the room, where I can sit down and temporarily disappear.)
- Encourage having fun – when appropriate. If you are not having fun, then you shouldn't be in this business (because you are certainly not going to get rich).

## 7.4 Facilitating WPs with GMA

Facilitating GMA workshops for the collective framing of WPs has some special features – some of which are quite nightmarish at the beginning of one’s GMA-facilitation career:

As a rule, facilitators seldom know very much, or even anything, about the subject matter which they are facilitating. This is how it should be: “*thou shalt not be too knowledgeable* about the subject you are facilitating”. However, in working with WPs another problem arises: although real, grounded knowledge is often elusive, there is plenty of personal opinion and emotion surrounding the problem complex. You are going to have to deal with this.

Furthermore, the SMS group you are facilitating is often not sure of, or agreed upon, *what the actual problem is that they are supposed to be exploring*. Certainly, each participant is knowledgeable about certain aspects of the problem complex (that is why you and the client have chosen them), but nobody knows what the total problem space looks like, since – in almost all the cases I have worked with – this problem space has never been properly *formulated* (morphed) before. This is the point of Rittel’s first criterion for WP:s.

Also, the participants come from different areas of the (as yet *amorphous*) problem area, represent different aspects of the problem complex, and often represent opposing stakeholder positions. They literally come from different “tribes”: they don’t have the same backgrounds; they don’t speak the same language; and they don’t have the same priorities.

Since no one is sure about what the actual problem (ultimately) entails, it is nigh on impossible to tell the client, or the SMS group, how much time and effort (e.g. the number of group workshop days) it will take to form and explore the problem space, synthesise a solution space, and formulate alternatives. But the client almost always wants to know this in advance.

The whole enterprise can be laden with uncertainty, angst and denial. What client wants to hear that they are sitting in the middle of a colossal mess and don’t know what to do about it? Who wants to hear that they have “problems” that have no (traditional or *tame*) “solutions”?

These challenges can be overcome if the GMA endeavour is *framed properly for the client at the outset*. For this purpose, I am simply going to list three sets of “guidelines” that I follow for organising and carrying out facilitated GMA workshops. These are:

- **General guidelines concerning the GMA process** (*presented to the prospective client*).
- **Guidelines for selecting the SMS (Subject Matter Specialist) workshop participants** (*presented to the client*).
- **Facilitation guidelines and workshop ground rules** (*a contract that I explicitly present to and discuss with the SMS workshop group at the beginning of the workshop*).

## 7.5 General Guidelines Concerning the GMA Process Presented to the Prospective Client

1. **The establishment of the “Principal client contact”.** This contact person is usually the “buyer” of the GMA workshops but, in any event, has a vested interest in the success of the workshops for competent decision support. S/he is the main contact person with whom to collaborate in the total modelling-cycle process.
2. **Give 1–2 h presentation of GMA as a scenario & strategy modelling technique,** preferably to group of people supporting the principle contact person as well as potential workshop participants.
3. **Meeting with the *Principal client contact*** in order to discuss the number of planned workshops days, dates, venue, “focus question(s)” and (crucially) group composition. The discussions must concern *at least* the following:
  - A preliminary, generic “focus question” for each modelling context is to be formulated of the form:
  - “What are the most important factors (parameters/variables) concerning . . . [*the client’s problem area*]. . . and how are these factors related to each other (how are they *entangled*)”.
  - The ideal number of workshop participants is 6–7.
  - The venue should be a meeting room for at least 15–20 people, i.e. at least twice as many as the number of participants in the workshop. The meeting room must be properly furnished and prepared.
  - No “observers” are allowed to be present during the group GMA working sessions.
  - GMA workshops are carried out in sequences of 2-day sessions. If several workshops are to be carried out, these must have an agreed time-lap between them (days or weeks) in order that the process is allowed to mature.
4. **Group selection and composition is carried out collaboratively by the principal facilitator and the client** (see following Sect. 7.6).
5. **Distribution of focus question:** A week before the first workshop is to take place, the “focus question(s)” along with a suitable article on GMA, is sent out to the members of the SMS working group. They are encouraged to think about the focus question(s) concerning the most important factors (variables) in the problem area. They are also told that they need not otherwise prepare for the workshops.
6. **Beginning the first workshop day:** GMA as a method is presented in detail to the SMS group with examples/case studies close (but not too close) to the current problem area. The preliminary focus question is brought up and discussed, and the group is asked if they are satisfied with it, or if they want to adjust it.

7. **Analysis phase – Development of the initial *Morphological Field*:** Using only a white board (no computer at first), the facilitator works with the group to identify the most important dimensions/parameters/variables in the problem complex. As each parameter comes up on the white board, one or two examples of its value range (conditions) are given, in order to help clarify the meaning of the parameter.

This first phase of the MA process is the most important one, and often the most demanding one, since there can be uncertainty – or complete disparity – about what the most important parameters are, and how they are to be expressed. The process of “giving form/shaping” the initial morphological field is iterative and can take a full workshop day or more, depending on the size and nature of the problem complex. This initial field represents the total “problem space” and can contain hundreds of thousands of configurations, i.e. formal solutions. (This is the most demanding part of the GMA process for the *facilitator*. It can take years of experience to learn to be comfortable with this process.)

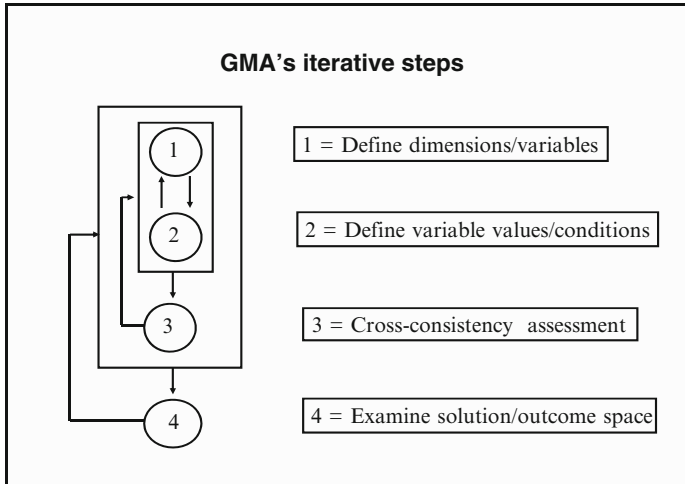
8. **Synthesis phase – Cross-Consistency Assessment (CCA):** The next step in the analysis-synthesis process is to reduce the total set of (formally) possible configurations in a “problem space” to a smaller set of internally consistent configurations representing a “solution space”. If the morphological field contains less than c. 100,000 possible configurations, this process can be carried out within the 2-day workshop process.

If the morphological field contains considerably more than c. 100,000 configurations, the CCA process may need more time, or it can be done indirectly, by defining a number of configurations (scenarios, strategies, systems or structures) in the morphological field, and checking each of these for internal consistency.

9. **Examine the *structure and coherence* of the morphological model.** When a prototype morphological model is completed and compiled, it must be examined carefully to establish its nature and properties – how it coheres and behaves. There are six steps to this examination (the details of which are available to clients and GMA workshop partners):

- Model coverage/model linkage
- Model coherence
- Parameter Activity Check (PAC)
- Identification of multiple boundary values
- Identification of driver and multi-driver structure
- Time-line analysis

10. **Define ranges of scenarios, strategies or other configurations.** Any number of configurations representing scenarios, strategies, system structures or stakeholder positions can be generated and defined within the model and related to one another. The model allows the user to define configurations using initial inputs, desired outputs, and with clustered variations.



**Fig. 7.1** GMA's iterative steps

The models belong to the client, who is supplied with dedicated software in order to run and maintain them. Six months “service” of the model is included in the workshop package.

The iterative process of developing a morphological model (see Fig. 7.1).

## **7.6 Guidelines for Selecting the SMS (Subject Matter Specialist) Workshop Participants**

1. The ideal group size for morphological modelling is 6–7 subject matter specialist (SMS)/stakeholder participants. *No “observers” are allowed.* The group work is facilitated by 1–2 experienced GMA facilitators.
2. In choosing participants, identify the principal, general areas of competence that are needed for the mapping of the problem space. Avoid duplicate competencies and avoid competencies that are too specific or specialised (these can be brought in if and when needed).
3. All participants should be motivated. People who are “ordered” to participate, but do not really want to be there, will not contribute in an effective way.
4. Besides being experienced in their respective areas of competence, workshop participants should be intellectually curious and enjoy working with new methods, thinking out of the box and exploring new ideas *collaboratively*.
5. If possible, participants should come from different (relevant) areas within the organisation, or from different organisations, which *represent different aspects of the problem area and/or different stakeholder positions.*

6. Provided that the right competencies can be found, one should also strive for a good mix of gender and age. You don't want just a "bunch of old boys" sitting around the table.
7. Avoid people who represent high, strong leadership positions *if their presence* might inhibit other participants' free thinking and free discussion. No "big bosses". (In our defence sector work we regularly banned the participation of Generals.)
8. Avoid participants who think that they already "know all answers". GMA is not *initially* concerned with "*finding solutions*", but to define *the total problem space of all possible solutions*.
9. All workshop participants are expected to show respect for and support the integrity of the working group as a whole. Facilitation is built on *confidence* and being able to "speak one's mind" openly.

## 7.7 Facilitation Guidelines and Workshop Ground Rules

(This is a *contract* that I explicitly present to and discuss with the SMS workshop group at the beginning of the workshop).

1. The facilitator is responsible for competently and correctly facilitating the *method and the process* and will not allow conditions to be imposed that would undermine the correct application of the method or the quality of the work.
2. The facilitator is not (and should not be) a subject matter specialist (SMS) or a stakeholder in the area relating to the workshop, or the results of the workshop.
3. The facilitator does not intrude upon the content or the *subject matter* of the workshop. The facilitator may ask questions of clarification concerning the concepts being used in the modelling process (sometime called "Socratic questions").
4. The subject matter specialists (SMS) *are responsible* for the content and subject matter relating to the workshop.
5. The facilitator will endeavour to bring all of the participants into the modelling process and discussions, and strive to bring all relevant issues "to the table".
6. There is no *voting* for allowing concepts to be discussed or brought into the model. Hidden agendas are discouraged and the censorship of ideas is disallowed. There are minority rights.
7. "Rules of Engagement" are discussed at the beginning of the workshop. A decision will be made on how to treat the process, the models and all other information generated by the workshop. Is this:
  - (a) Open information?
  - (b) Treated with the so-called Chatham house rule?
  - (c) Not secret, but not for distribution?
  - (d) Secret?