

Toward better argument for clearer communication and more effective IA*

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Introduction and Overview

IA is not effective if not well communicated. IA documents are noted for being long and difficult to understand. Tools called Organized Reasoning™ were presented to over 1400 IA practitioners via workshops from IAIA, its western and northern Canada affiliate, the Environment Institute of Australia and New Zealand (EIANZ), and 16 other organizations. The tools focus on arguments: not quarrels, but reasons arranged to lead to conclusions. That is, they help authors organize data to carefully link evidence to specific conclusions. The goal is to make all documents, and especially long and complex assessment reports, more focused and easier for practitioners to create, and shorter and more coherent for readers to follow.

There are steps and tools for building clear arguments. There are separate steps and tools for presenting arguments in writing. This paper outlines the nature of the set of ideas and tools that comprise the package called Organized Reasoning™. We describe steps to share the tools using workshops for professional practitioners. Although the workshops have been very popular and use of some tools is widespread, deep and thorough application has been limited. An example of implementation at a consulting company in Australia shows practical steps of thorough application.

What is Organized Reasoning™ and why it matters.

Organized Reasoning™ (OR) is a process, and a set of tools, for building strong arguments and sharing them in writing. This sense of ‘argument’, appropriate for professionals, does not mean ‘quarrel’ with its connotation of irrational hostility. Our use refers to calm, honest and careful assembly of reasons to support conclusions. In professional work many sequential reasoning steps lead to conclusions, each conclusion often leading to further reasoning. Such complex patterns of reasoning, with multiple conclusions along the way, are needed to assemble a full document or assessment report. Hence argument is central to IA practice.

The terms ‘decision’ and ‘decision making’ are more common in discussions of IA than ‘argument’. However, decisions are the result of a reasoning process. While the end-point, the decision, gets more attention, the reasoning process is argument: the assembling of reasons that lead to conclusions. The decision is the final step of accepting the reasoning that leads to a new idea or an action. Hence argument is crucial to environmental decision making. Sound argument can support better decisions. The tools of OR were assembled to provide practical steps to improved argument and decision making.

Organized Reasoning™ is a compendium of ideas and tools from a variety of sources. There are good ideas about how to prepare and share arguments from the field of

philosophy, from ancient Greece to today's Informal Logic. But philosophy is not the only field that seriously considers human reasoning. Cognitive psychology has made great strides in the last fifty years and has new ideas about how people reason and understand ideas, which are relevant to argument. But the philosophers and psychologists do not share the same literature and do not usually discuss the same topics with the same language. Likewise, there are good ideas about argument and communication in the fields of English Composition, formal debate (called Forensics), Law and Speech Communication. (For examples see Resources section.) But those ideas are not all the same, and are not always known across those different fields. Hence there is no one place to find the best ideas about creating and writing arguments. OR draws together a selection of the most useful tools from multiple fields, and packages them in a way to be useful to technical professionals, and specifically to support the field of Impact Assessment.

The tools are collected into two toolkits, called Argument Structure and Presentation Structure. The tools of Argument Structure help build arguments. The ideas of Structured Presentation show how to present reasoning and final conclusions in effective written documents. Thus, despite what some observers initially think, OR is not (just) a writing program, although participants do learn technical writing skills. Because it does not matter how skilled one is with the written word, one cannot write clearly without having something clear to say. Technical data is not enough. There must be a focus—a point to the use of data and analysis. Arguments which use data to reach specific conclusions generate something clear to share in writing. Organized Reasoning™ is, therefore, both a thinking and a writing program. And the thinking—the steps to build Argument Structure—comes first.

The Goal: Sharing Skills for Better Argument via Sponsored Workshops

Since the specific OR sets of tools were not available anywhere (except the university where author GB taught for 15 years), he created a workshop as the prime means to share them with practitioners. (GB is working on a book, but it is not complete yet.) The workshop comprises a 14-hour package of ideas in a two-day live course or four 3.5-hour online sessions. It has been offered by three organization to their members and others. EIANZ has offered the most workshops, 45 as of May 2023. The Western and Northern Affiliate of IAIA has held 24 workshops and IAIA itself has sponsored 7 training courses. All organizations have had both live training and, since Covid, mostly online courses. Another 30 training sessions have been provided directly to 16 different government and corporate organizations.

Efforts to help Effective Learning

The design and implementation of the training and follow up activities represents our effort to help people move “Toward better argument for clearer communication and more effective IA.”

The training program moves beyond older 'lecture' formats. We adopted more current teaching models which address understanding and building skills. It also recognizes the need to support individuals in their planning and the ultimate use of what they learn. In more technical terms, the instructional model is designed to build 'metacognitive self-regulating practice' in building arguments and communicating them in writing. See contemporary instructional principles in Ambrose et al. (2010), Bransford et al. (2000) and Butler et. al (2017)

The training workshops involve a substantial amount of interaction among participants and practice with ideas and tools. A core set of ideas and practices is provided to participants, with practice and feedback. The workshops provide practice in a directed set of skills that can be implemented at various levels of detail. They provide examples or practice with several steps in the creation of arguments. They work through building arguments, and sharing them in writing, with examples of realistic situations in assessment practice, from baseline studies, to Information Requests and letters rebutting an external counterargument.

Participants also receive a package of materials to help guide their self-directed continuing improvement in future. They receive materials that help them plan an implementation process, monitor their progress over time, and get directed feedback from peers.

Example from Australia: EIANZ supports training

EIANZ offers webinars, local and national conferences and training and certification programs to support environmental practitioners. Since 2019 they have advertised the workshops to members and hosted 45 of them with six more scheduled in the rest of 2023. While the first 19 were live they are now mostly delivered online. By the end of 2023 over 700 professionals will have taken the course. Participants have been approximately 60% consultants, 35% government staff, 3% from industry and 2% from NGOs.

Based on surveys given after each workshop, and less formal feedback, the workshops are very popular. Over 99% of participants would recommend the course to a colleague. The workshop registration system has a constant waitlist. In earlier times attendees mostly heard of the workshop through EIANZ notices; currently the majority hear of it by recommendation from colleagues. So, a workshop mechanism seems to be sharing the ideas steadily and successfully. It is perceived positively by participants.

Although people are happy with the repertoire of skills they've learned, how successful have people been in implementing the tools on the job, after the training? We have less detailed data on those steps but patterns are clear. We know that people adopt the tools differently. Many often use some of the writing tools with emails and other tasks, immediately after the workshop. Some use a variety of the thinking tools alone, or in team work, on various tasks, many of them smaller than assessments. Many don't have the opportunity to use the full repertoire of tools soon after the training. Some people adopt many of the tools through large IA projects.

Example from Australia: JBS&G consultants implements the tools.

JBS&G is an Australian environmental consultancy company. After several staff attended the EIANZ workshops, JBS&G made conscious efforts to use OR as much as possible. They sent further staff (9 in total) to various EIANZ organized workshops and also had GB visit their Adelaide office for direct training of a group of staff. Staff who had attended workshops also coached other staff members in the techniques. The company made a conscious effort to apply the tools and obtained permission to use new approaches from several of their major clients. On the multiyear project that has been completed (assessment of a 200 km energy transmission line), JBS&G used the tools in several phases which assisted in both developing the arguments and influenced the layout and content of the report to the client.

Using whiteboards to arrange early thinking into draft arguments was a useful step to get feedback and clarify the technical thinking within the different topic groups (e.g., soils, water quality). The lead authors for the environmental impact statement developed chapter argument outlines to expose early thinking so that team members, including the peer reviewers, could review and, if necessary, challenge key points, leading to clarification and more thorough analysis. Each topic chapter was then structured to demonstrate the conclusions, the reasoning and the different sources of data (their own field work, other published data, other sources of information) that served as evidence. In addition to their own staff, the argument framework helped guide specialist subconsultants to more focused reports.

The written material was also influenced by the principles of Organized Reasoning. The topic planning, organized by evidence focused on argument, helped organize the written text and kept material more concise and shorter than with previous projects. The conclusions were shared more conspicuously for readers to find. The reasoning that supported them were laid out clearly on the pages directly linked to the main conclusions in each section.

From a more general perspective, the staff liked the processes to build their work using argument tools and felt more confident of their results. The client and the government regulator expressed satisfaction with the clarity of the final product. JBS&G expects to continue with the tools in future and build them more explicitly into their processes and templates.

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