

Some Thoughts after the Inaugural Meeting of the International Forum on Sustainable Options in Uranium Production - 9022

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And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong
Though each was partly in the right,
And all were in the wrong!²

ABSTRACT

This paper examines the discussions at the inaugural meeting International Forum on Sustainable Options in Uranium Production and suggests that to be successful, IFSOUP should be organized as a network of disparate entities whose activities are related to a broad range of effects, including not only the actual mining, processing and regulation of uranium, but also social, cultural, economic, political, informational, educational, and other factors. The endeavor called IFSOUP is made up of those entities that are cooperating (consciously or deliberately) in some particular context and those whose behavior is expected to aid those actors who have chosen to cooperate.

INTRODUCTION

The inaugural meeting of the International Forum on Sustainable Options in Uranium Production was held in Phoenix, Arizona on Tuesday, February 26, 2008 as a separate forum during WM2008. Among those in attendance were representatives from the uranium industry, industry associations, international agencies, regulatory community, educational institutions, and nongovernmental organizations.

According to an early e-mail, IFSOUP was described as “a think-tank oriented consensus-building entity which brings together industry, regulators, and NGOs to discuss relevant issues on environmental and socio-economic aspects of uranium production; and disseminates, by means of panels, workshops and other means, good production practices. It will also serve as a vehicle to lead industry, regulatory bodies and NGOs to find consensus on mechanisms to assure the sustainability of uranium production—with a view to preventing new legacy sites.” UxC’s Industry Calendar stated that “IFSOUP is expected to foster discussion and development of safe, environmentally protective, sustainable uranium production

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² *The Blind Men And The Elephant*, John Godfrey Saxe (1816-1887), <http://the-jazzman.com/elephants/blind.htm>. The story of the blind men and an elephant appears to have originated in South Asia, but its original source is debated. It has been attributed to the Sufis, Jainists, Buddhists, or Hindus, and has been used by all those groups. This version is attributed to Saxe. In various versions of the tale, a group of blind men touch an elephant to learn what it is like. Each one touches a different part, but only one part, such as the side or the tusk. They then compare notes on what they felt, and learn they are in complete disagreement. The story is used to indicate that reality may be viewed differently depending upon one’s perspective, suggesting that what seems an absolute truth may be relative due to the deceptive nature of half-truths.

practices. With this focus, IFSOUP complements other initiatives aimed at improving environmental performance of uranium production centres.”

The summary of the inaugural IFSOUP meeting distributed to the attendees after the meeting enumerated the following organizational objectives:

- Serving as an international forum to discuss and exchange experience on the development and implementation of sustainable uranium mining and processing (i.e., recovery) operations;
- Forming a network of experts (solution holders), in different areas, so that they can be readily accessed whenever needed by those in need of advice (problem holders)
- Facilitating technology transfer for the adoption of sustainable uranium recovery operations
- Promoting stakeholder participation in the planning and development of sustainable uranium mining operations
- Providing assistance to companies and institutions that are committed to the implementation of sustainable mining operations
- Providing a multi-sector, living forum for workshops, panels in special topics and short courses in specific issues – and holding such gatherings within a variety of venues, and cooperating meetings and conferences.
- Being globally driven – and actively engaging/involving both so-called “developed” as well as “emerging” countries.
- Aiming to aid junior operators and state-owned enterprises, regulators and other stakeholders, to gain experience of established operators, with the goal of improving global industry performance among all of these operators.
- Endeavoring to cooperate with [the International Atomic Energy Agency] in its various initiatives providing the flexibility or near-real time solution delivery; while integrating a Life Cycle approach to diminish the need of extensive remediation at the end of operations.³

While the many of participants of the inaugural meeting were in general agreement that IFSOUP was an endeavor worth continuing others felt that dialogues such as IFSOUP should be organized by the key players, *i.e.*, government and industry representatives.

I do not agree with the latter premise but I’m not at all concerned here about the differences of opinion about the future of IFSOUP. Nor am I interested in why these differences exist. My interests in writing this after action report are to present my ideas as to what IFSOUP is (and by implication, what it is not) and how it should operate. Let me first start by sharing my observations as to what IFSOUP is not and what it can’t do.

WHAT IFSOUP IS NOT AND WHAT IT CAN’T DO

It appears to me as though the author(s) of the summary of the inaugural meeting took great pains to avoid attaching a label on IFSOUP that could be construed to give it any degree of corporeality—to my way of thinking, this was a good decision. IFSOUP is not an association. It is not a think tank nor is it an organization. At least in theory, collectives such as these have unity of command and often, a unity of purpose. Moreover, these corporeal collectives impliedly have sufficient gravity to take independent action to achieve certain outcomes. My sense is this notion is at odds with the perceptions of the IFSOUP purposes held by all of the participants of the inaugural IFSOUP meeting. Put less politely, no one was looking to have another “boss.”

³ Michelle Rehmann, International Forum on Sustainable Options for Uranium Production (IFSOU): Summary of the kick-off meeting during the WM2008 Symposium, March 7, 2008.

If IFSOUP is incorporeal and without sufficient gravity to undertake independent action then it cannot do the research and analyses that are the stock in trade of think tanks because it has neither researchers nor analysts. It cannot coordinate because it can have no coordinators. Nor can it provide assistance to companies and institutions because it can have no technical assistance providers. And for similar reasons, it cannot aid operators, state-owned enterprises, regulators, and other stakeholders. So is IFSOUP like Gertrude Stein's Oakland—there's no there there?

To the contrary, I suggest that there's a lot of there in IFSOUP. The trick is to ignore the organizational aspects of IFSOUP and emphasize its end-state goal, *i.e.*, the sustainable production of uranium. Then I think it will be easier to focus on how it can facilitate the synchronization of the full range of capabilities and instruments of national and corporate power, of moral suasion, and science in direct and nuanced ways to achieve that goal.

AN EXAMPLE OF WHAT IFSOUP CAN DO

IFSOU is not a think tank. But it can cause think tank-like activities such as symposia, policy research and analysis, and the creation of new knowledge to occur. It is not a provider of technical assistance, but it can cause technical assistance to be provided. It can't do most of what was originally posited as its objectives—but again, it can cause those things to occur.

I think the International Institute for Indigenous Resource Management's April 28, 2008 Planning Workshop: Towards A Tribal Definition of "Sustainable" Uranium Production is a good illustration of what IFSOUP can do and how it should go about carrying out its business.

The planning workshop came out of discussions at the Institute's Third Annual Tribal Energy Policy Roundtable held in Denver on March 18-19, 2008. Caitlin Rood of Tetra Tech mentioned that the National Mining Association and Nuclear Regulatory Commission were convening a workshop on uranium recovery in April and suggested that the NMA/NRC meeting would benefit from tribal participation. The tribal and tribal organization workshop participants agreed and asked the Institute to make their participation in the NMA/NRC workshop a reality.

Tetra Tech and the Institute brought their respective networks into play and within three weeks, the workshop planning, logistics, and financing was in place and on April 28, representatives from the Navajo Nation, Spokane Indian Tribe, Pueblo of Laguna, Acoma Pueblo, and Oglala Sioux Tribe, Tetra Tech, Black Range Minerals, Uranium Resources, and Uranium Energy Corporation participated in a highly successful workshop.

The kind of agile, network-centric approach is the embodiment of information age concepts and must be a key characteristic of IFSOUP activities.

HOW IFSOUP SHOULD DO WHAT IT CAN DO

IFSOU and Network-Centricity

Studies have shown that networking enables organizations to undertake a different and broader range of missions than non-networked forces, by improving both efficiency and effectiveness of operations. Network-centric approaches use computers and communications to link people through information flows that depend on the interoperability of systems used by all network members.

It requires collaboration and sharing of information to ensure that all appropriate assets can be quickly brought to bear on a situation or project. Objectives of network-centric approaches include the following:

1. Self-synchronization, or doing what needs to be done without command and control organizational structures;
2. Improved understanding of project or program objectives;
3. Improved understanding of the project or program status at all nodes of the network,; and,
4. Increased ability to tap into the collective knowledge of all networked organizations and institutions to improve effectiveness.⁴

IFSOU as an Endeavor^{5,6}

We went to Washington, to demand justice for our people. And they took us to see the President. The President looked us in the eye, shook our hands, and said, “Always remember to endeavor to persevere.” We thought about it for a long time, “Endeavor to persevere.” And when we had thought about it long enough, we declared war on the Union.

Chief Dan George as Lone Watie in the film, The Outlaw Josey Wales

As I used it here, an endeavor involves a large number of disparate entities whose activities are related to a broad range of effects, including not only the actual mining, processing and regulation of uranium, but also social, cultural, economic, political, informational, educational, and other factors.⁷ The endeavor is made up of those entities that are cooperating (consciously or deliberately) in some particular context and those whose behavior is expected to aid those actors who have chosen to cooperate. This approach implies that actors within the endeavor may have a variety of different relationships with one another and may be working toward somewhat different goals or purposes. Indeed, their ability to work in concert may depend on the fact that their goals and objectives, while far from identical, are not mutually exclusive. The term *endeavor* also extends to include relationships with entities whose actions only incidentally support the goals of the endeavor. Such actors are less reliable partners than those who have chosen to work together, but they may nevertheless play useful roles under circumstances where their independently derived behaviors help create the conditions necessary for the success of the endeavor.

One crucial distinction between endeavors and other types of collectives is the set of dependencies and interdependencies involved in an endeavor. Endeavors are formed because no single actor within the collective is capable of achieving its relevant goals without appropriate activities and behaviors by others. Historically, this is why nations have formed alliances or coalitions during warfare.

⁴ See, Clay Wilson, *Network Centric Warfare: Background and Oversight Issues for Congress*, Congressional Research Service, Washington, DC, (June 2, 2004), <<http://www.fas.org/man/crs/RL32411.pdf>> (last viewed November 29, 2006).

⁵ This section relies heavily upon the work of Richard E. Hayes for the Department of Defense Command and Control Research Program and to a lesser extent upon the author’s work on agile institutions. See especially “It’s an Endeavor, Not a Force”, Richard E. Hayes, *The International C2 Journal*, Vol. 1, No 1, Spring 2007, Arlington, Virginia.

⁶ Mervyn L. Tano, “Developing Agile Tribal Leaders and Agile Tribal Institutions to Adaptively Manage and Mitigate the Impacts of Climate Change in Indian Country,” International Institute for Indigenous Resource Management, 2006, Denver, Colorado, <http://www.iiirm.org/publications/Articles%20Reports%20Papers/Societal%20Impacts%20of%20Science%20and%20Technology/Agile%20Leaders-1.pdf>.

⁷ “Power to the Edge: Command and Control in the Information Age, David S. Alberts and Richard E. Hayes, DoD Command and Control Research Program, 2003, Arlington, Virginia.

Another distinction between endeavors and other types of collectives is that the actors involved in an endeavor do not have a single leader or commander. If those entities share an effective “boss” they belong to an organization, not an endeavor. Endeavors do not always (or often) have the luxuries of clear chains of command or a completely shared purpose. Instead, they are made up of independent (sometimes sovereign) entities that have come together because they perceive potential benefits from cooperating. Even when a putative leader exists, their differing traditions, organizational and national cultures, goal structures, priorities, and processes ensure that the leader engages much more in developing shared understanding of the problem, encouraging appropriate collaboration, and creating a milieu that fosters self-synchronization rather than providing direct guidance, direction, or orders. Hence, there is no “commander” in an endeavor.

IFSOU as a Network of Edge Organizations

Power to the edge is about changing the way individuals, organizations, and systems relate to one another and work. *Power to the edge* involves the empowerment of individuals at the edge of an organization (where the organization interacts with its operating environment to have an impact or effect on that environment). Empowerment involves expanding access to information and the elimination of unnecessary constraints. For example, empowerment involves providing access to available information and expertise and the elimination of procedural constraints. Moving power to the edge implies adoption of an *edge organization*, with greatly enhanced peer-to-peer interactions.⁸

But the challenge for IFSOU is to overcome the current organizational paradigm in which the potential benefits of edge effects are designed out, not in. Most of us live and work in sealed-off boxes: a company, a university, a profession. We work within communities, not between them. Stuck inside organizations that perpetuate divisions and differences between domains and that isolate knowledge from the contexts in which it is to be used, we become less competent at tackling the sort of complex and multidimensional social questions that sustainable production of uranium is.

IFSOU needs to do what Kevin Gavaghan, who set up Britain’s first Internet bank, FirstDirect, says—that wherever possible, we need to reuse and recombine actors, ideas, and organizations. The capacity to think across boundaries, to spot opportunities at the juncture of two or more industries, and to draw relevant analogies from seemingly unrelated industries is as valuable as deep experience of a single sector. IFSOU should be a forum where edge people, edge ideas, and edge organizations are brought together to create new combinations of knowledge, resources, and capabilities—many or most of which may already exist. IFSOU should help connect actors from different economic and knowledge domains. Putting old knowledge into a new context creates new knowledge.⁹

IFSOU AND AGILITY

The term “agile” was first used in the business context in the 1990s to describe manufacturing organizations that could adapt quickly to changing customer needs. The term “nimble” is sometimes used as a synonym for agile. It conjures up the correct image—the ability to move rapidly, but sure-footedly. Note that effectiveness (mission accomplishment) is an implicit assumption. As such, effectiveness is measured on a separate dimension from agility. Similarly, speed is not an end in itself, but a means to an end. Speed can make a response more effective or even make it possible for an organization to respond at

⁸ Power to the Edge, p. 5

⁹ Thackara, John, *In the Bubble: Designing in a Complex World*, MIT Press, Cambridge, MA, 2005, p.216.

all. But speed only enables effectiveness; it does not guarantee it. Hence, moving quickly, but not intelligently (in ways that improve the likelihood of success) would not constitute agility.¹⁰

This discussion of the attributes of agility derives primarily from David S. Alberts and Richard E. Hayes, *Power to the Edge: Command and Control in the Information Age*.¹¹ Agile leaders and institutions possess and demonstrate a synergistic combination of the following six attributes, the key dimensions of agility:

1. Robustness: the ability to maintain effectiveness across a range of tasks, situations, and conditions;
2. Resilience: the ability to recover from or adjust to misfortune, damage, or a destabilizing perturbation in the environment;
3. Responsiveness: the ability to react to a change in the environment in a timely manner;
4. Flexibility: the ability to employ multiple ways to succeed and the capacity to move seamlessly between them;
5. Innovation: the ability to do new things and the ability to do old things in new ways; and
6. Adaptation: the ability to change work processes and the ability to change the organization.

While these attributes of agility are analytically distinct and often must be measured in different domains and contexts, in practice they are often interdependent. Moreover, when one of these attributes is lacking, the others are much more difficult to achieve. When they are all present, however, the likelihood of success increases greatly.

CONCLUDING THOUGHTS

Connectivity and how we accomplish it will be key to IFSOUP's success. Historically, progress in connectivity has shrunk the globe in space, in time, and in the effort required to support interactions among people, companies, and ideas. Each leap of connectivity has contributed to a shrinkage in cycle time as well as an increase in the rate at which ideas spread. In typical hierarchical-centric operations, situational awareness steadily deteriorates. It is reestablished periodically through staff meetings, briefings, and reports, but it only then deteriorates again. Network-centric operations create a higher and more timely awareness, and allow it to be maintained throughout the entire life-cycle of a project or program. Although advances in information and other technologies enable network-centric approaches, this is not just a matter of introducing new technology. What is called for is the co-evolution of that technology with operational concepts, doctrine, training, and organization.¹²

Some of those operational concepts, doctrine, training and organization include:

- Assuring access to information through a well networked and interoperable IFSOUP entities.
- Decrease our own information collection and analysis needs by increasing our ability to access and analyze information collected from IFSOUP entities.
- Routinely analyze information and translate knowledge into the levels required for common understanding and situational awareness across the network.

¹⁰ David S. Alberts and Richard E. Hayes, *Power to the Edge: Command and Control in the Information Age*, U.S. Department of Defense, Command and Control Research Program, Washington, (2003), p. 125.

¹¹ *Ibid.*

¹² Vice Admiral Arthur K. Cebrowski, U.S. Navy, and John J. Garstka, *Network-Centric Warfare: Its Origin and Future*, *Proceedings*, U.S. Naval Institute, Annapolis, MD, (January 1998), <<http://www.usni.org/Proceedings/Articles98/PROcebrovski.htm>> (last viewed November 29, 2006).

- Build a collaborative network of networks, populated and refreshed with quality data, both raw and processed, to enable IFSOUP entities to build a shared awareness relevant to their needs.
- Information users must also become information suppliers, responsible for posting information without delay.
- High-quality shared awareness requires trusted, secure and assured networks and information.
- Rapidly adapt when important developments occur and eliminate the bureaucratic, hierarchical character of typical command and control operations.

Network-centric approaches provide the best means by which IFSOUP can attain the requisite degree of agility. But as Dr. Daniel Wildcat of the Haskell Indian Nations University stated, “We’ve got to remember that network approaches are not just about building nodes, and interconnectivity, doctrine, protocols, and sensors. It’s really about having a common purpose, about taking responsibility, and about building a community.”¹³

¹³ Author’s notes of Haskell climate change meeting, December 8, 2006