Individuals Who Build Solutions Across Boundaries for Environmental Remediation & Nuclear Waste Disposal - 16204

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ASTRACT

This paper profiles individuals who shifted from developing solutions primarily from *within* one organization to *across* multiple organizations for decisions requiring input from multiple parties. These individuals are engineers and scientists who work as government employees or government contractors.

This paper contains six areas of discussion:

- 1. Why individuals build solutions across organizational boundaries,
- 2. The results they achieve,
- 3. Supporting skills and personal characteristics,
- 4. Means to build solutions across boundaries,
- 5. How they enlist others to participate, and
- 6. The importance of a catalyst.

This paper is based on three sources of information. The primary source are interviews with nine engineers and scientists with direct experience building solutions across organizational boundaries in the fields of environmental remediation or nuclear energy/waste management and disposal. The second source are selected research studies. The third source is the author's experience both as a government employee and a consultant.

The author's hope is that this paper will strengthen people's desire and ability to engage multiple parties in decisions requiring their input.

INTRODUCTION

The development of environmental remediation and nuclear waste management and disposal solutions often requires the input of multiple parties. In some instances, multiple parties have applied a partnering approach to build effective communications, cooperative working relationships, and a collaborative approach to developing solutions (1, 2, 3).

The use of a decision-development framework (4, 5) is yet another approach whereby a government agency can work with its stakeholders to develop criteria to feed into environmental remediation or nuclear waste management/disposal solutions.

Such approaches involve a shift from working primarily at the organizational level to leading the development of solutions across multiple organizations. See Table 1 (6).

TABLE I. A Required Shift in Leadership Approaches

From Organizational Leadership	To Public Leadership	
Hierarchical	Non-hierarchical and inter-organizational	
Evokes followership	Evokes collaboration and concerted action	
Takes charge; seizes the rings of an organization	Provides the necessary catalyst or spark for action	

TABLE I. A Required Shift in Leadership Approaches

From Organizational Leadership	To Public Leadership
Takes responsibility for moving followers in certain directions	Takes responsibility for convening stakeholders and facilitates agreements for collective action
Heroic; provides the right answers	Facilitative; asks the right questions
Has a stake in a particular solution or strategy	Has a stake in getting to agreed-upon outcomes, but encourages divergent ways to reach them

This paper profiles individuals who made this shift from organizational to public leadership. These individuals developed the capacity to "hold the differences" (7) between objectives and values of more than one organization. They either initiated or were part of one or more high-performing, cross-organizational teams that successful developed the agreement of multiple parties for environmental remediation or nuclear waste disposal solutions.

METHODS

Nine individuals were interviewed for this paper. All of them are engineers or scientists employed by the U.S. government, a government contractor, or academia. At the time when they developed or participated in one or more cross-organizational efforts they were working either in the field of environmental remediation or nuclear energy/waste management and disposal.

These individuals were interviewed by the author during the period from August through October 2015. Interviews consisted of the following five questions:

- Why did you build across organizational boundaries?
- What results did you achieve, i.e., what difference did you make?
- How did you enlist others to participate, or how were you enlisted?
- If you had <u>not</u> been a catalyst, what do you think would have happened?
- Is there anything else you would like to add?

Each person interviewed had his or her own story to tell. Excerpts from the interviews (non-attributed) appear throughout the paper in italicized print.

DESCRIPTION

Listed below are six discussion areas.

First Discussion Area - Why Individuals Build Solutions Across Organizational Boundaries

The interview data contained three themes.

Theme 1 - It Is Mandated

"Several government agencies were in conflict and were engaged in very high level discussions at regional and headquarter levels. Our regional administrator finally said, 'You're going to have to work together at the local level and figure this out.' A person at our headquarters suggested a facilitated approach to build cross-agency consensus. Although it wasn't my idea, I believed in the process. I could see we could develop solutions if the seven government agencies could learn to trust

one another. I am by nature a trusting person, so I wasn't suspicious that someone could pull the rug out from underneath us."

"The agencies involved were all compelled by those at much more senior levels to participate. The leaders recognized this approach was the only option."

"Initially I didn't reach out. I was enlisted because I had the right technical expertise. Usually people are brought into the process because of what they bring to the table. If I had not been willing to work in this manner, I would have been replaced. The particular project had to succeed, and this was the only way."

Theme 2 - It Makes Sense

"It was kind of a unique time in which the governor's approach was not based on the traditional ways the State had operated in the past. The governor did not want us to leave the Administration with the experience of 'we could have, we would have, we should have.' We were expected to 'imagineer' solutions one might not otherwise come across doing the job the way one's predecessor had."

"We had an opportunity in that we were new to our role. We recognized there was a lot of conflict resulting from the traditional way of doing business. We (headquarters) would issue written guidance and directives to the field office. At times, these expectations were not met. I also knew the field's expertise was not always recognized at headquarters. This caused a lot of conflict. My goal was to be a catalyst to decrease the level of conflict and increase communication and understanding."

"It was the only way we were going to get to solutions supported by a number of different organizations, each driven by different outcomes. I believe that we now live in a connected society, and if you don't work in a cross-coordination way, you are going to make yourself obsolete. You need to think in terms of how you can get people to help you. If you don't, you need to plan on becoming obsolete."

"I was enlisted by observing success. Our organizational negotiations had come to a standstill. There was a lack of transparency and trust. We saw a great model where another team was achieving results that we were not, and this model inspired us."

Theme 3 - A Consensus Solution Among Parties is Necessary

"We needed to reach agreement on human health and ecological risk assessment levels for contaminated media on a large tract of land being transferred from one government agency to another. For this to happen, seven different agencies needed to reach consensus."

"The regulated and the regulatory agencies were experiencing a protracted conflict. We needed to come to agreement on an overall approach. In addition, there was contention between the government and residents of the local community. Similar projects in the past were not done to the regulatory agency or community's satisfaction. There had been no joint planning. I was in a bit of a conundrum because the state regulator wanted every single constituent sampled or remediated. My agency's position was that we wanted to make the area safe for as little money as possible. My role, as I saw it, was to get both our agency and the regulatory agency to the middle ground and address community concern about their safety."

"I had a goal in mind, and I knew that neither I nor my organization could achieve it on our own. I saw a lot of people within my organization try to do it only their way, and that didn't work. I figured

we had to go beyond solving problems based on our own perspectives. I could not force the other agencies to implement my solution any more than they could force me to implement theirs."

Similar themes are mirrored in a study done from researchers who used a questionnaire to query federal Senior Executive Service (SES) personnel as to why they collaborate across organizational boundaries. See Table II (8).

Table II. Why Collaborate?

Explicit mandates from a boss, formal agency policy, or legislation		
Implicit mandates by organization culture or personal values		
A desire to improve outcomes		
An effort to improve the problem-solving process		
A goal of building better relationships and credibility		

Second Discussion Area - The Results They Achieve

Individuals build solutions across organizational boundaries for a variety of reasons: an explicit mandate, it makes sense, or consensus solution is necessary. And when they *do* build solutions across multiple parties, what result do they achieve?

On this question, the responses of those interviewed contained five themes.

Theme 1 - Consensus Solutions Are Developed

"Headquarters, the field office, and the operating contractor came together and developed a comprehensive plan to implement headquarters' guidance and directives. Our joint plan wasn't just a piece of paper. It meant something. There was buy-in from all parties because together we had developed it."

"We got seven government agencies to agree on human health and ecological risk assessment levels for a site being transferred from one government agency to another. I don't think this has happened before or since. We achieved consensus agreement acceptable to the agency transferring the land, the agency receiving the land, the public, and several other regulatory agencies. The solution was not only cost effective. It also came in on time and under budget. I'm still amazed by all of this."

"We went from having a Record of Decision that nobody (the public, the regulatory agencies, or the implementing agency) liked to having a document that all these and additional government agencies fully supported."

"Through joint planning with the regulatory agency and more direct, in-person engagement with the community, we developed a joint information structure to keep the public engaged as to what we were doing, why we were doing it, and what were the potential impacts to them. There was standing room only at the public meetings. Initially, there were some very vocal naysayers saying, 'We've been here before and heard this song and dance routine before.' Through a careful approach to interpersonal communications, we were able to reach the people that really needed to be reached. Once we were able to satisfy these people, other community members came along as well. The federal and state agencies came to a position of trust and cooperation, and our agency was able to rebuild trust with the local community. That was this project's most critical component."

Theme 2 - Performance is Enhanced

"I was able to access information, ideas, approaches, and values I would not have had if I worked only with people who had the same values as I did. This allowed me to achieve more impactful solutions that had broader acceptance, were easier to implement, and that became part of an enduring solution."

"As a team we were able to prioritize what was most important and transition into an efficient, highperforming group of civil servants and contractors. We made more progress in less time, saved money, and worked under less stress."

"I learned many years ago you should be able to solve any problem within three 'touch points' (a phone call, an email, a text). It gives you something tangible to work for. It's networking with a cause. In doing cross-organizational work, people become educated and really understand why something is important, so you get a higher rate of influence and therefore a better program. Also, when bureaucracy comes to a grinding halt, you know the people to get things done."

Theme 3 - Litigation is Avoided

"We eliminated the adversarial relationship and didn't end up in court as have similar projects."

Theme 4 - Respect is Gained

"We gained respect for other agencies' perspectives and insights into their goals and motivations."

"As a result of our interactions, the credibility of both our field office and operating contractor was enhanced."

"I now have an extensive network of people whom I trust and who trust me. I can call on them anytime about anything. We have ownership of each other's situations. I now know that people want to help. Initially, I didn't realize that. Now, I know."

Theme 5 - Skills and Abilities Are Enhanced

"It made a big impact on me personally and professionally. I learned how to communicate across lines I didn't even know existed. Later, when I moved into political office, I realized the effectiveness of being able to say what I mean such that another person can actually hear it. And I learned how to hear the underlying message of what people say without getting distracted by how they say it."

"When I stopped looking at people as adversaries, I began to learn from them, not just technical solutions but behavioral styles and ways to manage conflict. This evolved into somewhat of a mentoring-type relationship where I learned from emulating the behaviors of those who once were my adversaries. This made possible my rise to high levels within my organization, and I am next in line to be president of a national organization."

"As I began to work in teams with people from a variety of different organizations, I recognized that whether I liked these people or not, I needed to identify with and work with them. And I grew to recognize they could teach me things I didn't know. I now believe most people want to help other people, and it's useful to foster these relationships."

"Working across organizational boundaries is one of the nicer things I reflect back on. Personally, I just feel good about the whole thing. It's fortunate the way things worked out. I was ready for an experience of personal growth and development even though I may not have been consciously aware of it. It was a good fit for me. It was a good fit for our organization. It was intellectually as well as professionally stimulating."

Third Discussion Area - Supporting Skills and Personal Characteristics

Typical results achieved by building solutions across multiple organizations include: consensus is achieve, performance is enhanced, litigation is avoided, respect is gained, and one's skills and abilities careers are enhanced. What exactly are key supporting skills and personal characteristics that make it more likely that individuals are successful building solutions across boundaries.

In the study of the SES mentioned earlier, when these executives were asked to describe the skills of a successful collaborator, they mentioned five primary areas. Figure 1 (8, 9) illustrates these five areas as well as the relative importance of each as described by these executives.

Figure 1. Skill Set of the Successful Collaborator

Interpersonal skills, according to these executives, are the most important skill set of the successful collaborator. Figure 2 (8, 9) depicts what they defined as interpersonal skills.

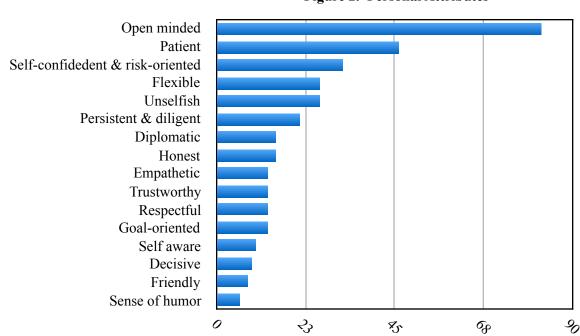


Figure 2. Personal Attributes

Being open (to new ways of looking at things, to others' perspectives, to helping others) ranks first, nearly twice as high as being patient, the second most frequently cited personal attribute.

"My tendency early in my career was to collaborate with people who were competent and who shared my philosophies and my same type of work. I learned I had a very narrow look at the world and at solving problems. Working within an organization that promoted building across boundaries gave me an opportunity to create a very diverse group, a more enriching way to work. Because of this, I had access to solutions, perspectives, and values I never would have understood had I stayed in the mind-set I was earlier in my career. I have learned to reach out and collaborate with people quite different from me."

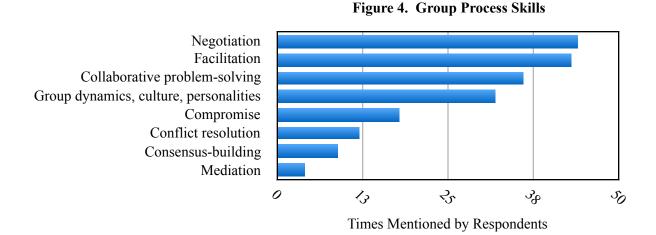
"Everybody has a rule book they have to follow. At the same time, everyone has a level of discretion as to when they take a strong stance or position or when they allow a bit of latitude that's within the rules. With a little bit of give and take, it's a little bit less stressful. If you just read your own rule book, you miss that."

Interpersonal skills, according to these executives, are the second most important skill set of the successful collaborator. See Figure 3 (8,9).

Effective communication
Excellent listener
Works well with people

7
Times Mentioned by Respondents

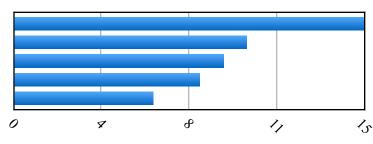
Group process skills were the third most frequently reported. See Figure 4 (8, 9).



Strategic leadership, "a person's ability to create a vision" (8), was the fourth most frequently cited skill set of a successful collaborator. See Figure 5 (8, 9).

Figure 5. Strategic Leadership

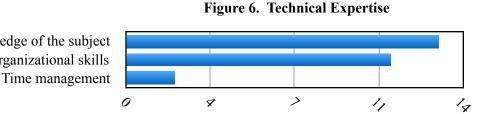
Big picture thinking
Strategic thinking
Facilitative leadership
Creative approaches to problem-solving
Sharing leadership, power, goals, credit



Times Mentioned by Respondents

Least cited was technical expertise. See Figure 6 (8, 9).

Technical knowledge of the subject Project management & organizational skills



Times Mentioned by Respondents

Fourth Discussion Area - Means to Build Solutions Across Boundaries

Fundamentally, these individuals possess a broader context of their role. They conceive that that they have three important roles:

- 1. To help satisfy the different types of interests,
- 2. To cultivate teamwork between multiple parties, and
- 3. To enlist professional support as needed.

These are not mutually exclusive. For example, cultivating teamwork between multiple parties helps ensure the different interests are satisfied. Enlisting professional support, for example the services of a team building consultant, helps cultivate teamwork. The fulfillment of each role supports fulfillment of the other two.

Their Role - Satisfying Different Types of Interests

A useful social science theory to help people understand what alleviates conflict is Moore's Triangle of Satisfaction (10). Moore expresses that for parties of different values and backgrounds to move beyond conflict toward agreement, three interests must be satisfied: substantive interests, process interests, and emotional interests.

Substantive interests are "what" is being addressed. In issues regarding environmental remediation and nuclear waste disposal, the science or the technologies being considered are the substantive interests.

Generally, most scientists and engineers focus on substantive interests. These are the most tangible of all three types of interests.

Process interests are "how" substantive interests are being addressed and who is involved ... "how fair the process is, how inclusive the process is, how transparent the process is, who is involved in the negotiation or decision-making process" (11). Process interests are less tangible and often more difficult to comprehend than substantive interests.

"It's easy for anyone in government to put together a plan, and it's easy to fund that plan. However, this doesn't mean people will buy into the plan. Normally headquarters would issue written guidance to the field office which would have been nominally bought into in the field. The face-to-face communication, I realized, was really important, and I had to make that happen. Because we sat down and worked with the field office and operating contractor face-to-face — because in this manner we jointly developed the plan — we achieved buy-in on the path, and that led to a greater success than anyone would have imagined. In the end was we had proof of our success when the program passed an audit with very high scores."

Emotional interests are not "what" is being addressed or "how" it is being addressed but what people experience emotionally ... "wanting to 'win,' to save face, wanting to be heard, issues of status or self-worth, quality of the relationship, wanting an apology or wanting revenge, feeling satisfied" (11). Emotional interests are the least tangible. They are often illogical. And they typically cannot be satisfied through a logical analysis.

"Especially in a contentious environment, people generally are reserved. They don't want to give their opponent any opportunity to see a weakness or gain an advantage. In order to get past that, you have to put your cards on the table first. Our facilitator led us through a few exercises to help us develop trust. I shared something personal, very revealing. I reached out my hand first with the implication that I hoped the other party would reach out its hand as well. This helped break down the barriers and change the frame of reference."

"It can be scary. The group I came into was very cliquish. So I knew everything I said was being judged. People were trying to figure me out and where I was coming from. But I discovered if you keep asking people's opinions, if you ask really probing questions, if you care about people's answers, if you show people you care about the team and what it is accomplishing, you can't help but do a good job. You can't help but gain their cooperation."

Their Role - Cultivating Teamwork Between Multiple Parties

"We followed a process which developed a working group into a highly functioning team. This gave each party a voice and a freedom to innovate. Through this process, we built mutual trust which inspired everyone. I don't think I saw anybody fall off the team. Everyone stayed in, worked at it, and probably worked at it more deeply than they would have otherwise."

"I think there are times when one could wonder, 'Why am I doing this?' For example, 'Why do we need communication protocols, or why do we need to spend time delineating lines of responsibilities when everyone already knows these? Why are we taking the time to do this? Is this really going to be worth it?' These thoughts would go through my mind. Even though these are all resource and time intensive, it all paid off in the end. We would not have gotten the results if we had not gone through the process of learning to think and operate as a team."

The means to develop high-performing cross- or multi-agency teams is beyond the scope of this paper. More detailed information is available elsewhere, and Table III lists seven technical papers written by the author for conference proceedings.

TABLE III. Information on How to Build Solutions Across Organizational Bound-

Conference Proceedings Papers	Cultivation of Teamwork	Satisfaction of Interests	Case Study Examples
What Does the Public Really Want When Engaging with the Nuclear Industry? (12)		X	
Four Pillars of Successful Cross-Agency Partnering for Environmental Remediation (2)	X		X
A New Mindset in Terms of How the Nuclear Industry Engages the General Public (13)		X	
Elements of a Strong and Healthy Interagency Partnership (14)	X		
Thinking Tools for Successful Collaborative Initiatives (15)	X	X	
A Dialogue-Centric Approach to Environmental-Remediation Decision-Making (1)	X	X	X
Collaborative Decision-Making Between Federal and State Agencies Yields Cost Savings of Approximately \$274 Million (3)	X		X

Their Role - Enlisting Professional Support as Needed

Engineers, scientists, and administrators of environmental remediation and nuclear waste programs are trained to deal primarily with science or technology (substantive interests), not process or emotional interests or the art and science of team development. As a result, to help them fulfill these roles they often enlist the support of a professional qualified to meet these needs.

"As a scientist, earlier in my career I learned <u>not</u> to value the soft skills (facilitation, mediation). I initially resisted learning them. I said I didn't have the time. But I was kind of told to learn these skills. I was pulled into training to learn how to work with the public. Later on I learned to recognize these are extraordinarily important skills. Working with people who value and implement these things exponentially increases the portfolio I have in moving forward."

"I had a really good facilitator make it clear that we all were trying to accomplish the same thing. Each organization was asked to identify what they wanted to accomplish, and when we all posted and reviewed this information, it became obvious we all were trying to solve the same things. Seeing it in black and white made an impact for me. This was my aha moment. Having a good facilitator helped me understand this wasn't personal and that together our agencies could focus on the problem, not the personality. We could build on all the brain power."

"I think everyone should go through an experience like our group did. These opportunities are passed up by so many people because they are time consuming, painful, uncomfortable, and with a high risk of failure. I was told I had to do it, and I did. In business, a lot of people and books talk

about working this way, but most don't know how. You need a facilitator to help you through it. And until you've been helped through it, it's a real challenge. If everyone could have this kind of experience, we would have a whole cadre of people looking at the ways in which people work in a different way."

Fifth Discussion Area - How They Enlist Others to Participate

"All my personal and professional successes are a result of what others brought into it. It's not possible to be fantastic alone. It's not even possible to be really good alone."

Building solutions with those of other agencies and organizations requires a commitment to do so, a structure through which the parties can build decisions, and a lot of patience. For twenty years this paper's author, first as a federal government employee and then as an organizational development specialist, has enlisted hundreds of people to participate in building solutions across boundaries.

As a federal government employee, the author was the manager of several engineers and scientists who managed environmental remediation programs for the U.S. Navy. On all but one project, the parties (the U.S. Navy and the environmental regulatory agencies) followed traditional methods of primarily developing solutions within the agency then submitting these in written form to the other parties.

This author used the following protocol to enlist the regulatory agencies to take what was then an uncommon approach to developing decisions on environmental remediation programs.

- The author would request a meeting with the regulatory agency individual who had the decision-making authority to initiate changes to how the agency would work with the Navy (lead agency).
- The author would meet with this person, discuss how the current "arm's length" approach was not optimal for either agency, and explore the possibility of initiating a more inclusive, transparent approach. The author would discuss where this approach was being used and the results that were being obtained. A discussion would take place as to what would be in the best interests of each in taking such an approach.
- If the regulatory official expressed interest, the suggestion would be made to "try it out" to see how it could work for this particular program.

Those interviewed for this paper had their own stories to tell. Their response to the question, "How did you enlist others to participate?" produced five themes.

Theme 1 - Lead by Example

"I had to get my supervisors (not collaborator types) to come along on this journey. Everyone was so accustomed to being in an adversarial environment. In doing so, the project was never moving forward. I did not ask for permission. I just said, "We're going to do things differently."

"One weekend I and a few others went door to door to meeting the public, shaking hands, introducing ourselves saying, 'We are going to fix this situation.' We were invited into many homes. Because I had met so many of the people directly affected and had become the face of the project, my word was on the line. I had heard the stories held by the community, and I wanted to help them build resolution."

"We physically would travel to the other party's location to meet in person. Usually the field office and operating contractor travel to headquarters, but in this case headquarters several times went to the field office and operating contractor and made a substantial commitment to meeting their person

nel, getting to know them, and getting to know where they worked. It helped not only us, but it inspired them to see we were willing to make that commitment."

"I encouraged different programs to increase information sharing. I encouraged others folks to have decision-making authority, and I encouraged them to move out of their comfort zone in terms of meeting with the public and groups they weren't accustomed to meeting."

"I think I am the first person to show up and not need to be perfect all the time. This, in turn, helps other people be willing to try something new and different."

"I may not necessarily inspire others; I enable others. I enable people around me to approach a problem differently, I can create an environment or act in such a way that people around me feel safe approaching a problem differently, seeing things in a different light, broadening their perspective. Once they do this, their own passion inspires them."

Theme 2 - Communicate the "Why"

"If you're starting with a clean slate of paper, it's really important to think about the "why" — why anyone would give time to this cause, especially when it's not seemingly obvious. Once you can answer the "why," then it's possible to reach out and engage others and ask for their involvement."

Theme 3 - Help People Visualize the End State

"Some people get wrapped up in details. But I am always seeing the end in mind. You have to get people in organizations at the beginning to see the end state."

"I tended to enlist others by making a video that portrayed ongoing partnering at various sites, hoping it would influence various places to adopt a similar approach."

Theme 4 - Seek Small Wins

"It's important to have successes, even a few little successes, early in the process. Everybody wants to be a winner."

Theme 5 - Receive a Boost from Senior Management

"Our senior management came into one of our initial meetings between headquarters, field office and operating contractor personnel and clarified how important it was that we all succeed. I certainly had not heard that type of charge before. It got the initiative off on the right step."

Sixth Discussion Area - The Importance of a Catalyst

William Wallace: "We've got to try. We can't do this alone. Joining the nobles is the only hope for our people. You know what happens if we don't take that chance?"

Hamish: "What?"
William Wallace: "Nothing."
(dialogue from the movie "Braveheart")

What happens when individuals do not reach out and build solutions across organizational boundaries for decisions requiring input from multiple parties? Why is a catalyst (for this approach) important?

In response to the question, "If you had <u>not</u> been a catalyst, what do you think would have happened?" the responses of those interviewed fell into five categories:

Category 1 - The Desired Outcomes Would Not be Produced

"I think our program would have been exactly the same as it had been in the past. There would have been infighting between agencies. It would have been expensive to implement the environmental remediation. It would have taken much longer. And it would not have achieved the long-term solution."

"If I had not believed in the process and was an obstructionist, it would have been difficult. It would have been protracted and drawn out."

"I think, quite candidly, some opportunities would have been missed. Our administration did not want us to leave our time heading up the agency saying, 'we could have, we would have, or we should have."

"The community depended upon our ability to work through this. Without the proper process, I don't know if we would have gotten to a Record of Decision, and the property could not have been reused which in turn would have stunted or delayed economic opportunities for the local community. Peoples' livelihoods depended upon it."

Category 2 - Decisions Would Be Made by Those Far Removed from the Actual Work

"If we hadn't taken this approach, there would have been posturing, positioning, and a power play. Somebody would have been forced to accept something less than optimal, from a high level down." "I believe our field office and operating contractor would have complied with the requirements, but it would have occurred at a greater cost."

Category 3 - Unresolved Issues Could Lead to Litigation

"We could potentially be in court, in litigation. The issues would still be unresolved. The citizens would be frustrated with us. At this point, professionally I would probably have been disillusioned."

Category 4 - Skills Useful to Enhancing One's Career Are Not Developed

"I think at least one member of our team would have quit their job because they were so stressed out. This person had reached a point where everything in dealing with the other side was characterized by conflict, and this was very frustrating. I think working more as a team than as individuals gave this person the ability to say things they needed to say and hear things she needed to hear. It allowed us all to speak to one another with greater confidence and transparency."

"I wouldn't have gotten to the place I am in my career. The passion to move things forward comes naturally to me. If I could not have moved things forward, I would have been horribly frustrated. If I blocked myself by living in a silo, I would be really cynical. As it is, I'm just a little bit cynical." "If I had not been a catalyst, I would not have learned from these people in other organizations. I would not have been where I am now professionally."

"Anyone at any point can say or do something that changes another person's complete direction. I think everyone at some point is a catalyst."

Category 5 - The Personal Friendships Would Not Develop

"I'm not sure the camaraderie would have been established. The personal, lasting friendships would not exist."

CONCLUSION

Today's hero in environmental remediation and nuclear waste disposal is not the individual who has the right answer. Rather, it is the individual who shifts from developing solutions primarily from *within* his or her organization to *across* multiple organizations. Today's hero is the individual that will take responsibility for convening stakeholders, for building a team approach, and for developing agreements that are holistic, effective and sustainable.

The shift from organizational leadership to cross-organizational or public leadership is a topic worth discussing and exploring. Also worth discussing is the type of training to support the development of skills and personal characteristics needed for this type of leadership.

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