

Transforming Cultures: A New Approach to Assessing and Improving Technical Programs

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Our previous article in February 2004 CROSS TALK, "The Human Dynamics of IT Teams," focused on the personal dynamics of systems development teams, and factors contributing to the effectiveness and success of these teams. This follow-up article takes the next step, providing a unique methodology for assessing program dynamics, and for formulating action plans for targeted change. Our goal is to describe the different elements contributing to culture – a key area of attention required to meet Department of Defense transformation efforts in the years ahead.

A major theme is emerging from today's Department of Defense (DoD) transformation efforts: cultural change. As the DoD moves towards netcentricity, bringing *power to the edge*, there is shared recognition that successful transformation requires fundamental changes in DoD culture. How will we accomplish this change? It has been a common question at conferences and forums across the DoD, and the answer has been consistent: "Changing culture – that is the hard part."

Transforming cultures is difficult because culture emerges from the myriad of elements and forces, problems and

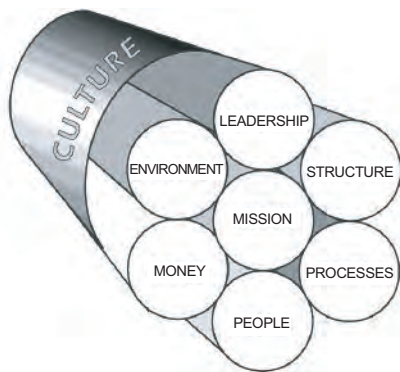
choices that individuals, teams, and organizations face every day. Culture changes slowly, incrementally – and often painfully – one person and action at a time. Deliberate culture change comes only when the individuals who make up systems and teams look at their daily work from different perspectives, open up to the possibility of new choices, and see the intricate interrelationship of elements and forces that make up human systems.

Over the past few years, we have refined a practical model for breaking down and assessing these diverse elements comprising culture. Called the *Wrapped Cable Model*¹, it is a comprehensive and scaleable tool for diagnosing and interpreting the challenges that exist within technical organizations, programs, and teams. The Wrapped Cable Model pulls together eight interdependent parts, each playing a critical role (see Figure 1). If a fray exists in any part of the model, the entire cable – and the entire organization – suffers.

structure ultimately carries its own mission as well – a specific statement supporting the larger whole. The mission is a unifying statement that defines and focuses the group's work and driving purpose. In an ideal setting, the mission presents a clear and unifying purpose, and is understood, respected, and acted upon by all team members.

Often, however, the mission is not adequately articulated, or related to the goals people are actually working toward. When a mission fails to provide focus or unification, or is too vague or rigid, the organization can fall out of balance and problems can arise. For example, large programs often involve diverse stakeholder organizations with differing perspectives of what the mission really is. One may concentrate on delivering a system that offers the lowest life-cycle cost; another may concentrate on allowing the future substitution of innovative technology. Mission clarity and the right incentives are critical to program success – and only come when the program team overtly acknowledges and focuses attention to these differences. Mission clarity can also help address the dual problems of scope and requirements creep; using the mission as a central tool in trade-off analysis allows a team to carefully evaluate its options, even amidst the complexity of technical decision making.

Figure 1: *Wrapped Cable Model Elements*



- Mission: Unifying statement defining the organization's work and driving purpose.
- Leadership: Responsible for bringing the mission to fruition, setting both tone and direction.
- Structure: How formal power is distributed and labor is divided.
- Processes: How work is organized to accomplish the mission.
- People: How relationships are managed, and how human capital is leveraged for greatest effectiveness.
- Money: Funding issues often signal deeper concerns, and lead to conflict between the mission and constraints.
- Environment: The collective set of needs, expectations, and constraints set by the external environment.
- Culture: The set of commonly held rules, expectations, and consequences that ultimately identify who we are.

Assessing Programs Using the Wrapped Cable Model

Let us start by outlining the eight elements of the Wrapped Cable Model, with examples from DoD programs. As with any useful model, it is flexible, designed to focus on the most critical elements of a group's culture, and the relationship each has to others. The model is not designed – nor is this article presented – to be the definitive statement on leadership, organizational structure, mission, culture, or change. It is, however, a useful tool for stepping out of and reflecting on the systems within which we work.

Mission

A central element of every organization and program, the mission is strategically placed at the center of the Wrapped Cable Model. While the DoD may share the overall mission of defending our country, each organization and team within that

Leadership

Leadership is ultimately responsible for bringing the mission to fruition and is, therefore, critical to organizational and team effectiveness. We define leadership as the intentional use of power with individuals or groups toward some desired end. As such, anyone who exercises his or her power to effect change is a leader. At any level, leaders set the tone and direction of the program or organization. For meaningful change to take place in any situation, leadership must be exercised at all levels; even those without organizational

authority need to exercise the power they have, be it relational, intellectual, tactical, etc., for missions to be fulfilled and for change to take root.

For the DoD, the regular reassignment of military leaders represents a unique formal leadership challenge. While civilian leaders provide needed stability during these transitions, uncertainty and readjustment inevitably accompany these changes. Will the new leader be more externally focused with stakeholders, or more internally focused on team process? When tradeoffs between scope, time, and cost are required, what will happen? All leaders bring their own unique experiences and interpersonal style. Effective leaders understand their impact and act to support both the mission and the needs of the people involved. In addition to the formal leadership of any system, however, we must also pay attention to the power exercised by all players regardless of their level, title, or tenure within the project or organization.

Structure

The structure of an organization illustrates how formal power is distributed and labor is divided. Structure is closely linked with leadership because examining it often reflects the alignment or gaps between authority, responsibility, and accountability. Such gaps can lead to miscommunication and inefficiencies, ultimately detracting from the group's ability to meet its mission. Power distribution is not always reflected in the stated organizational structure, impacting both cohesiveness and effectiveness.

Many change efforts acknowledge the need for personal empowerment of individuals and work teams, but unfortunately go on to implement structures that maintain the status quo of hierarchical, top-down flows of power and authority. For example, this frequently impacts programs with integrated product team (IPT) structures. Often, IPTs are directed to make technical decisions, but lack the authority to implement them. Structure is often an issue with respect to stakeholder management as well. While there may be an IPT responsible for user requirements, there may be few structures for communicating this information to others, resulting in miscommunication and challenges during implementation.

Processes

The process element examines how work, people, and communication are organized and acted upon to accomplish the stated mission. Are teams used to accomplishing

Wrapped Cable Model Questions

Here is a starting point:

- What is the mission of your organization or program? How does it link to the overall DoD mission? How does the work you do right now support that mission?
- How are incentives aligned with the mission?
- How does your mission differ and/or is the same as other parts of the program?
- What does success look like? How do you know you are successful?
- To whom do you look for leadership? Who has the power to get things done?
- Who do you have on the speed dial of your phone? Why?
- Where is your organization chart? How does it relate to the real connections between people?
- How do you use your work breakdown structure? Where is the critical path?
- When do you encounter conflict? How is it handled when you do?
- What could make you more efficient?
- How do you know where your role/organization/scope starts and ends?
- How is morale? If asked six months ago, would the answer be different?
- Who is your key customer? Who is the true end user?
- How are customer/user relationships created, maintained, and ended?
- How do users differ from beneficiaries? How is the difference reflected in your stakeholder management processes?
- What metaphor, image, or picture would you use to describe your program/organization?
- What stories do people tell to new employees? To each other?

the mission? What is the strategy used? What is the role of technology in the group's efforts? A new system must be accompanied by appropriate policies and procedures – the processes that make the technology useable and ultimately accepted by stakeholders, including the users. Processes that fulfill the mission efficiently and at a high level of quality are working well, while processes that produce insufficient, inferior, or untimely products are not.

One way to assess process effectiveness is to ask team members about the program's critical path and how they contribute to it. How does what they are working on support the broader goals? Process can pose a special challenge, for example, for distributed teams facing the dual challenge of completing their own work and communicating those results to others. While policies and procedures are an important tool for managing processes, there are many other pieces to this puzzle as well.

People

Stakeholder management, interpersonal relationships, role clarity, and human resource concerns are the heart of the people dimension. How is human capital leveraged for the greatest organizational effectiveness? Organizations are human systems, and human systems function best when there is an established set of standards to recruit, train, and develop people. Also critical to the people component of the model is a group's reward system. Change, if not success in general, depends on people feel-

ing both accountable and empowered to act, to decide, to suggest – at times even to risk failure. Unfortunately, people often find themselves in systems that talk up accountability and risk, but reward only success. A group's reward structure tells a lot about what a culture truly values. When the people in an organization are unrecognized, unrewarded, or underdeveloped, this strand of the model is failing and the organization suffers as a result.

Stakeholder management is a particularly vital aspect of the people element. Too often, programs objectify stakeholders into a single collection of interests without acknowledging the variable levels of influence, power, and need. Failing to overtly delineate the differences between primary users, secondary users, beneficiaries, and their customers can cause unanticipated problems during deployment.

Money

Funding usually represents a defining constraint, and can be a source of significant stress and conflict. Such conflicts can be serious and immediate, as financial needs often demand attention before other issues. What many fail to acknowledge, however, is that funding issues often signal deeper concerns related to stakeholder communication, mission clarity, and requirements creep.

Unfortunately, funding problems often spark a crisis mentality, aggravating stress and reducing the team's ability to consider both strategic and tactical options. When money is compromised, it is time to con-

sider other directions. Sometimes, budget allocations can be changed, but when they cannot, taking a break to reconvene a strategic planning process may prevent a downward spiral from which the program cannot recover. Therefore, addressing connected issues in mission, leadership, and structure – all the other elements of the model – impacts the stress and limitations of financial concerns.

Environment

An organization’s environment is the collective set of needs, expectations, and constraints determined by external factors (e.g., political scrutiny, operational setting, and technological change). If a program is effectively interacting with its environment, then program boundaries are clear, external dependencies are recognized, and information flows both inside and outside the program.

Interoperability is a common environmental need. With increasing emphasis on systems of systems and interoperability, the ability to *talk* to one another is often critical. Despite this need, programs are often relatively autonomous, with program managers acting with independent authority. While this benefits the program itself, it can lead to difficulties in other areas, particularly for program executive officers and enterprise-level chief information officers (CIOs). These are environmental complexities that are revealed and addressed in a Wrapped Cable Model assessment.

Culture

Culture emerges from all the other

Wrapped Cable Model elements and results in a set of commonly held rules, values, expectations, and consequences that shape and reflect the spirit and nature of the program or organization. Culture, on one level, is the sum of the elements that comprise it – leadership, structure, processes, people, and money – all acting in the environment toward a mission. At this same time, however, culture is a dynamic all its own, a synergy greater than the sum of its parts. So while the elements of a system act on culture, culture defines and acts on these elements as well. This model suggests that if you change any element of the cable, culture will also change, but as the model also shows us, the pressure of the culture keeps internal forces in the model tightly in place and static. Cultural change is hard.

Often, compelling pictures of culture comes from the images people give of their teams. On a recent program assessment, one team we interviewed consistently used images of forest fires to describe their operations; another team generally reported images of hectic family get-togethers and reunions. Not surprisingly, morale differed dramatically between these teams. The striking point, however, is that both teams were part of the same program operating in different locations, providing a unique insight into the tremendous complexity and colliding sub-cultures of large, distributed programs.

Intervention Based on the Wrapped Cable Model

So far, we have defined the model ele-

ments and illustrated their impact in organizations and programs. We have come to regularly use the model as part of a broader assessment and development methodology with programs and teams seeking both to solve immediate problems and to facilitate long-term cultural change. Given this, our next step is to use the Wrapped Cable Model assessment results to design and implement development activities. The Organization Intervention Matrix (Table 1) shows how we have mapped some of the common DoD challenges introduced in the preceding section against the model elements. The last column then outlines approaches we took to address these issues once detected.

The following bullets describe selected solutions/approaches we have delivered in more depth. In each case, the development activity is designed specifically to target the issues revealed through the Wrapped Cable Model assessment.

- **Strategic planning and problem solving.** Structured as one- or two-day workshops with leadership or delivery teams, these sessions are used to identify how the organization’s strengths can be used to overcome weaknesses, leverage opportunities, and mitigate risks – leading to specific action plans for individual and team implementation. Teams can often use this forum to identify better ways to communicate their strengths, both within and beyond the organization.
- **Team development workshops.** These workshops are designed to provide leaders and teams an awareness of their personal styles and how these styles both contribute to and inhibit team success. Personality style instruments can be helpful to this end; the decision of which instrument to use, if any, is based on assessment feedback. Participants then use resulting insights to develop both personal and team action plans for resolving program challenges, and strategizing how best to rally around and contribute to the shared mission.
- **Team training workshops.** These sessions provide struggling teams with targeted skills training or development. This includes interpersonal and relationship management skills training in active listening, communication, conflict management, negotiation, meeting management, and/or group facilitation – driven again by assessment results.
- **Leadership development training and coaching.** Whether a group training or a one-on-one interaction

Table 1: *Organization Intervention Matrix*

Challenge	Mission	Leadership	Structure	Processes	People	Money	Environment	Culture	Solution or Approach
Scope/Requirements Creep	●	○	○	○	○	●	○	●	Strategic planning, problem solving, and mission realignment.
Inadequate Stakeholder Management		○		○	○			●	Leadership and group training, including communication and feedback to end users, sponsors, stakeholder groups, and oversight teams.
Integrated Product Team Management		○	●	○	●			●	Organizational structure analysis and team facilitation, development, and/or skills training.
Interoperability Issues	○	○	●	○	○	○	○	●	Strategic planning, organizational structure analysis, workgroup facilitation, and team skills training.
Leadership Transitions		●	○	○	●			●	Leadership training and coaching, group training, goal refinement, and leader introduction events.
Distributed Team Management	○	●	●	○	○	○		●	Leadership training and coaching, structure analysis, team development, and skills training.
Technical Innovation – Difficulty and Risk	●	●	○	●	○	●	○	●	Strategic planning and problem solving, leadership development and coaching, risk communication.

● Signifies points of primary connection or concern ○ Signifies points of secondary connection or concern

	Information Technology Policy Team	System Development Team	Technical Team
Expressed Problem	CIO concerned that his team was responsible for a wide range of initiatives yet was failing to communicate activities within those in related areas – even though the team works in the same office.	System team in requirements phase encountered diverse and conflicting needs from different organizational leaders – with no clear lead <i>system owner</i> .	Technical team implementing a mandated system encountered user resistance. The technical team was confused by this resistance given the technology improvements offered by the new system.
Assessment Finding	<ul style="list-style-type: none"> M and L: Staff was unclear about mission and leader's expectations. S: Silos lead to focus on individual performance, inhibiting cross communication. Pr and P: Few formal team meetings or functions and a lack of skill or training on how to interact with and communicate with each other. E: Customers confused by inconsistent communication from CIO team. <p>The team was missing efficiencies that could be gained by sharing information, and the office was sending mixed messages to customers. Team reported a lack of clarity in expectations and little interaction with one another.</p>	<ul style="list-style-type: none"> M and L: Leaders and subordinates did not agree on scope, focus, and nuances of the mission and goals – and who should have accountability for elements of the project. S: Ambiguity of project ownership reflected in organizational chart. Pr and P: Group had no skill training and had no process to clarify or communicate their confusion. <p>Interview results and project artifacts signaled a lack of agreement on program mission and scope from the most senior levels of the organization on down.</p>	<ul style="list-style-type: none"> Pr: Processes were not in place to teach and ensure user-centered customer service. P: Team members needed communication, listening, customer service skills, and incentives that rewarded team members for using those skills effectively. E: End users complained about poor, rude, and unhelpful customer service. <p>Technical implementation team and Help Desk personnel needed better interpersonal skills for empathizing and supporting user groups learning the new technology.</p>
Development Goals	<ol style="list-style-type: none"> Shift emphasis from individual delivery to a more collaborative, team-based work approach. Develop and implement a strategic plan to identify better information sharing processes and pathways. Take a <i>time out</i> from focused delivery to spend time together as a team. 	<ol style="list-style-type: none"> Clarify central mission and evaluation criteria for system. Identify a clear system owner with authority and accountability for decisions. Reach consensus about key system capabilities, decision criteria, and program rules to baseline requirements. 	<ol style="list-style-type: none"> Enhance team's ability to listen and empathize with user concerns, and influence user acceptance of the new mandated tool. Provide technical team with new techniques for responding to user concerns.
Program Approach	<p>Strategic planning/team building designed and delivered that did the following:</p> <ul style="list-style-type: none"> Facilitated the group's membership in strategic problem solving, focusing on information sharing and establishing communication pathways and needed outreach activities to other groups and projects. Administered and gave interactive feedback on a personality style tool that gave team members insight into the benefits and liabilities of their respective communication styles – these both complement and struggle with each other on the team level. Drove all members to write and share an action plan that committed them to specific next steps. 	<p>Facilitated session designed and delivered to take group through a process to do the following:</p> <ul style="list-style-type: none"> Brainstormed mission and evaluation criteria. Ranked these options. Interactively and non-threateningly explored priorities, motives, and incentives of each group. Creatively problem-solved these options into a consensus on mission that suited the roles and structural limits of the organization. Concluded with all members writing and sharing an action plan that committed them to specific next steps. 	<p>Personality-style training designed and delivered to the group that resulted in the following:</p> <ul style="list-style-type: none"> Yielded insight into the learning, teaching, and communication styles of each team member. Enabled group to anticipate the styles of user groups and how best to connect to these customers and address their concerns. <p>Technical team then practiced active listening skills and brainstormed reasons for user resistance, generating <i>sell points</i> for working with users.</p> <p>Facilitated all team members to write and share an action plan that committed them to next steps.</p>

Note: In the row titled Assessment Finding above, M=Mission, L=Leadership, S=Structure, Pr=Processes, P=People, and E=Environment. Culture is included in the subtext of every element.

Table 2: *Assessment and Development Case Studies*

between a program leader and a coach, these efforts are designed to help leaders mobilize their powers more effectively to move the program team clos-

er to its mission and goals. Our team has used the assessment and development approaches described above with a variety of technical organizations

and programs, ranging from senior CIO/policy organizations, to program management offices, to systems development teams. The matrix in Table 2 pro-

vides three examples of this work with reference to the strands of the model most relevant to the situation.

Conclusion

Changing people and organizations is hard. Whether you are working with a large system or a small team, the challenge of truly developing it – changing it – is great. Everything is interconnected, so movement anywhere will bring about some change somewhere else, but is it the change you wanted? At the same time, the culture of a system – just like the casing of a wrapped cable – is such that there is often more pressure within not to change regardless of your efforts. With such dynamic forces facing you, where do you begin? What do you do? The Wrapped Cable Model is not offered as an answer to all of these questions, but it is certainly a starting point and a set of organizing principles and questions that start the change and development process.

Transforming DoD culture requires first identifying and then developing the critical links between team dynamics, leadership effectiveness, and program performance. We believe that the greatest success stories in changing cultures come from enhanced individual self-awareness and action planning, giving individuals the power and responsibility to create positive and actionable change. This article has described a method for starting this process, providing a way to break down cultural transformation into the daily choices that create true and lasting change. ♦

Notes

1. The Wrapped Cable Model is the intellectual property of OKA in Fairfax, VA. The model was deployed in this team dynamics study, and is the underpinning model of the case studies herein. For more information on the Wrapped Cable Model or any other

element of this study or article, contact the authors.

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