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magazine

THE CHANGING FACE OF EA

**Combining EA
with Business Analysis**

**Embrace Agile
or Risk Falling Behind**

**The Change Management Process
and Enterprise Architecture**

**An Excerpt: Let It Simmer:
Making Project, Portfolio and
Program Management Practices
Stick in a Skeptical Organization**



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EA in the Middle

BY GEORGE S. PARAS



Despite the efforts of many EA advocates, there is still a recurring debate and lack of consensus across the wider IT and business communities on the scope and role of EA. Even among those who accept that EA has value, many see it mainly as a self-contained and constrained practice primarily supporting solution delivery. Luckily, perhaps driven by awareness generated through forays into business architecture, subsets of the IT/business community are beginning to embrace the wider and more strategic “enterprise” perspectives of EA.

Those subsets, when they begin to question the implications that are raised through enterprise-wide EA, now challenge the notion that EA is a stand-alone island relegated to delivery. They recognize that EA should be connected “up” to strategy through business context, “down” to all of the asset and project communities, and “across” to many other internal processes and practices. EA can justifiably be described as being “in the middle” of almost everything. It informs, guides, and influences decisions across a broad spectrum of other very important internal disciplines.

- EA informs, guides, and
- influences decisions
- across a broad
- spectrum of other very
- important internal
- disciplines.

Over the last few months, we have received several article submissions that describe the connections between EA and some of these other enterprise practices and processes. For this issue, our contributing authors examine EA and Business Analysis, Agile, Change Management, and Project, Portfolio

and Program Management. We are pleased to be able to share these ideas with you and we hope you find them useful. And as always, thanks for being an A&G reader! **A&G**

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COMBINING EA WITH BUSINESS ANALYSIS

By Dr. Michelle Supper



IT has revolutionized the business world. Initially, an organization's software is carefully selected, well-ordered, and fit for purpose, but as the years go by, the organization's application holdings grow organically. Inevitably, its application landscapes become increasingly fragmented, outdated, and opaque. At the same time, its business processes evolve, often without due consideration to the underlying IT, resulting in a misalignment between the application and business architecture layers, the consequences of which can be enormous.

Organizations with complex application landscapes find it extremely difficult to invest effectively in their IT. Beyond the challenge of confirming what they've got, there is the additional complication of understanding the co-dependencies that exist. For example, they may be dependent upon certain core applications and afraid to update them in case they stop working. By contrast, a well-understood and ordered application landscape, aligned with the business architecture, provides senior management with a holistic view of their organization. This insight enables them to make more effective decisions and ensure that money is not wasted on applications that are no longer required.

If the business architecture of an organization is already known, then it is possible to provide a basic insight

into an organization's application portfolio by creating several co-dependent deliverables from the TOGAF specification. This approach is light-weight and scalable; it can be used for organizations of any size, and it is extensible, since further artifacts may be created to describe the technology infrastructure and data layers if a deeper, more detailed view is required.

The Application Portfolio Catalogue is the starting point for any portfolio management or rationalization task; this is a complete list of applications, their cost, co-dependencies, number of users, the names of the person responsible for each, etc. The catalogue allows patterns, inconsistencies, and knowledge gaps to be identified. Finding a gap can be vitally important; decision makers may be unaware that they are missing key information. Completing the catalogue allows you to fill the gaps and provide a firm baseline for further analysis.

Using the data in the Application Portfolio Catalogue, the Application Interaction Matrix, Interface Catalogue, and Application Communication Diagram can be developed to help the organization understand how the applications connect and interact. These will highlight the standalone applications that are not

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connected to any other. In certain environments, the defense industry, for example, certain applications will not be networked for security reasons. However, if the organization does not have such concerns, a plethora of standalone applications might indicate the presence of outdated and inefficient working methods. In such cases, the rationalization can be used as a driver for business transformation, triggering the organization to invest further in architecture development.

The next step is to align the business and IT within the organization. An Application User Location Diagram will show the organization's systems administrator where the installations need to be so that the correct people can use the software. An Application/Organization Matrix and an Application/Business Function Matrix will help the organization to understand which parts of its enterprise use which applications.

These matrices will also reveal instances of duplication, in which multiple applications are doing the same job, and redundancy, in which an application is still present but no longer used. Duplications often arise through poor communication; the organization's staff might have purchased applications without realizing that either they or someone in a different department already had the required function. Redundancies occur when a business process has changed, but the IT or

finance team hasn't been informed. The IT team continues to maintain an application that is no longer used, and the finance team continues to pay for the associated maintenance and licences, resulting in significant cost inefficiencies. Acting to remove the duplicate and redundant applications not only reduces the complexity across the entire IT portfolio, but the potential cost savings can be enormous.

Having fully understood the application landscape, we can assess the security, technical, and functional risk. To do this, one looks at the system software. That is the standard software and operating systems (for example, Acrobat Reader, Windows Server, etc.) upon which the organization's applications depend.

If the organization intends to use a particular application until the end of 2017, but the system software that it needs runs out of support before that, then there's a problem. Depending on the software, this could make maintenance difficult, raise exposure to security threats, or increase the risk of system failure.

By developing an Application Roadmap, such as in figure 1, the applications can be plotted on a timeline to show their projected useful life. Including dates for the system software associated with each of the applications will highlight the potential technical risks. Using the roadmap, the organization can put an effective plan in place to upgrade/update the systems as needed within the necessary time frame.

In April 2014, Microsoft ended extended support for Windows XP. Since the UK Government had not anticipated this, it was forced to pay Microsoft £5.5 million to continue to provide support for an extra 12 months in order to mitigate the security risk this posed. This huge cost, which added no value or functionality, could have been avoided if an Application Roadmap and transition strategy were in place.

Marrying enterprise architecture with business analysis techniques can be extremely powerful; especially for the business executives and senior management team who will ultimately be the people responsible for making the decisions. Quite often, nontechnical people find it hard to understand architecture

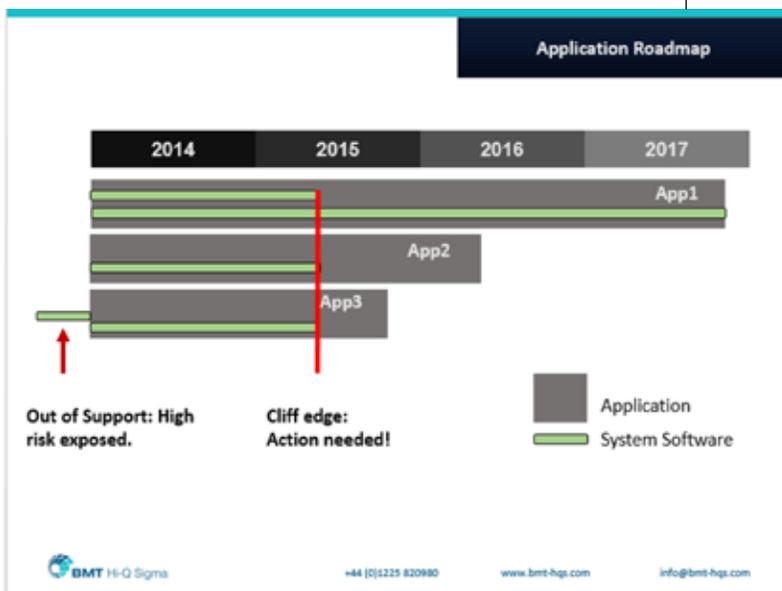


Figure 1: Application Roadmap

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views. Although the enterprise architecture allows you to do a deep analysis of the application portfolio, the two business analysis grids shown in figures 2 and 3 allow you to extend that analysis and communicate the findings in a digestible format, where the message is clear and easily understood.

First, determine the strategic relevance of your applications to your organization and distribute them into the appropriate parts of the grid detailed in figure 2.

An application is considered “strategic” if, should it stop working, the whole organization would be affected. A “factory” application would impact only part of the organization if it were to break down. “Support” applications have very low business value; you should determine whether or not the organization really needs them, and if it does, if they could be outsourced. “Turnaround” applications and technologies are those that you don’t currently have, but need to consider, as they are likely impact the organization in the future. Cloud technologies are one such example.

The Application Portfolio Optimization Grid in figure 3 indicates the health of the applications. In an ideal world, all the applications will be healthy—low risk and a good business and technical fit. However, if the business processes have changed, some of the applications might no longer be appropriate. These require “functional reengineering” to adapt them to the new way of working. If the application still fits perfectly well with what you’re doing but it might need to be updated or upgraded to bring it back into health again, then it will



Figure 2: Strategic Relevance and Impact Grid



Figure 3: Application Portfolio Optimization Grid

require “technical reengineering.”

“Retirement candidates” include redundant and duplicate applications. These require a specific decommissioning strategy; they should not simply be switched off, as they may contain data that needs to either be archived or moved to a different application. The key benefit of this grid is that it helps business executives to prioritize the appropriate actions required to bring the applications into “healthy” or “retirement.”

Regardless of size or operating sector, organizations that rely on IT can benefit from this combined approach. The enterprise architecture provides a clear view of the application landscape and identifies the associated business, technical, strategic, and operational risks, while the business analysis techniques determine the health and strategic relevance of the applications. Together, these provide business executives with the objective information they need to make effective decisions when managing and investing in their IT infrastructure. **A&G**

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EMBRACE AGILE or Risk Falling Behind

By Allen Brown

Alvin Toffler first predicted that the rate of technological change and progress was accelerating faster than people are ready for, or can handle, in his 1970 bestseller, *Future Shock*. Future shock, he argues, causes disorientation, not only for those caught up in it, but also a sort of paralysis for those confronted with too many choices. In a worst-case scenario, it means alienation and breakdown to social order as a result of information overload.

THE RATE OF CHANGE IS STAGGERING

His predictions were amazingly accurate for the time. Fast forward to 2015 and we are in an era where we can barely keep up with the constant technological changes we're faced with on a daily basis. Not only is the laptop or phone you buy today practically out of date by the time you get it home, but we are bombarded with social media, e-mail, and text messages delivering an overwhelming level of information on a daily basis.

Technological change isn't only affecting our daily lives but our workplaces as well. Organizations find it increasingly difficult to keep up—and it's

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not just the IT team, but management too. The advent of the cloud, bring your own device (BYOD), big data, and the Internet of Things has accelerated information overload. This puts intense pressure on lines of business to respond quickly to market drivers, data-driven imperatives, and internal demands.

ORGANIZATIONS FEEL ILL-PREPARED

As a result, organizations are forced to change—whether they are ready or not. According to Toffler, the only way to combat future shock is to constantly adapt. An inability to adapt is likened to a new kind of illiteracy with Toffler explaining “the illiterate of the 21st century are not those who cannot read and write but those who cannot learn, unlearn, and relearn.”

This is scarily similar to what is happening to organizations that are not in a position to handle or adapt to rapid change. Just 52 percent of organizations feel they are equipped to deal with the convergence of new

technologies, and 27 percent say they are ill-prepared, according to research. Prepared or not, the tide of convergence is coming whether companies like it or not. To survive, companies must learn to architect themselves in the moment.

AGILE CAN HELP

Agile software development has emerged as one of the ways IT developers have adapted to the requirements of constant change. Characterized by iterative, incremental, and rapid development that evolves through collaboration, products go to market quickly. They are then tested and adapted accordingly with upgrades on a constant loop.

An agile approach allows for individuals and interactions to take precedence over processes and tools, moving from negotiation to collaboration, and for teams to

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respond to change rather than stick to rigid plans. Ultimately, it allows teams to shift their focus away from internal concerns to prioritize the needs of the customer.

Much can be learned from an agile approach. Below is a list of a few abstracts from the twelve principals of Agile Development—applied to enterprise architecture with deletions in parenthesis and additions in italics:

- Our highest priority is to satisfy the customer through early and continuous delivery of (valuable software) *valuable architecture guidance to the enterprise*.
- Welcome changing requirements, even late in development. Agile processes change for the customer's competitive advantage.
- Business people and (developers) *architects* must work together (daily) throughout the project.
- Simplicity—the art of maximizing the amount of work not done—is essential
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

CHANGE REQUIRES A CULTURE SHIFT

As Toffler predicted, the rate of business change is moving so fast that if you take too much time to do anything, the organization is likely to lose out. Business schools have even taken a page from IT by teaching the principles of agile development to graduate students. As Toffler noted, “If you don't have a strategy, you're part of someone else's strategy.”

To combat future shock, adaptability must be at the core of every organization's strategy. Those who want to thrive will use it more quickly, but this requires a significant culture shift for many companies. Business and IT must work together to facilitate changes that will help both parties.

Enterprise architects and IT leaders can help lead the charge for change by helping the C-suite understand how to apply agile principles. Architecting things as you go can be difficult—most of us aren't used to that level of flexibility. But agility does not preclude planning or forethought—rather, it is part of the process and action plan rather than a precursor to action. While many organizations are in for a large dose of future shock, adaptation and business transformation is necessary if they don't want to be left behind. **A&G**

ALLEN BROWN is president of the Association of Enterprise Architects.

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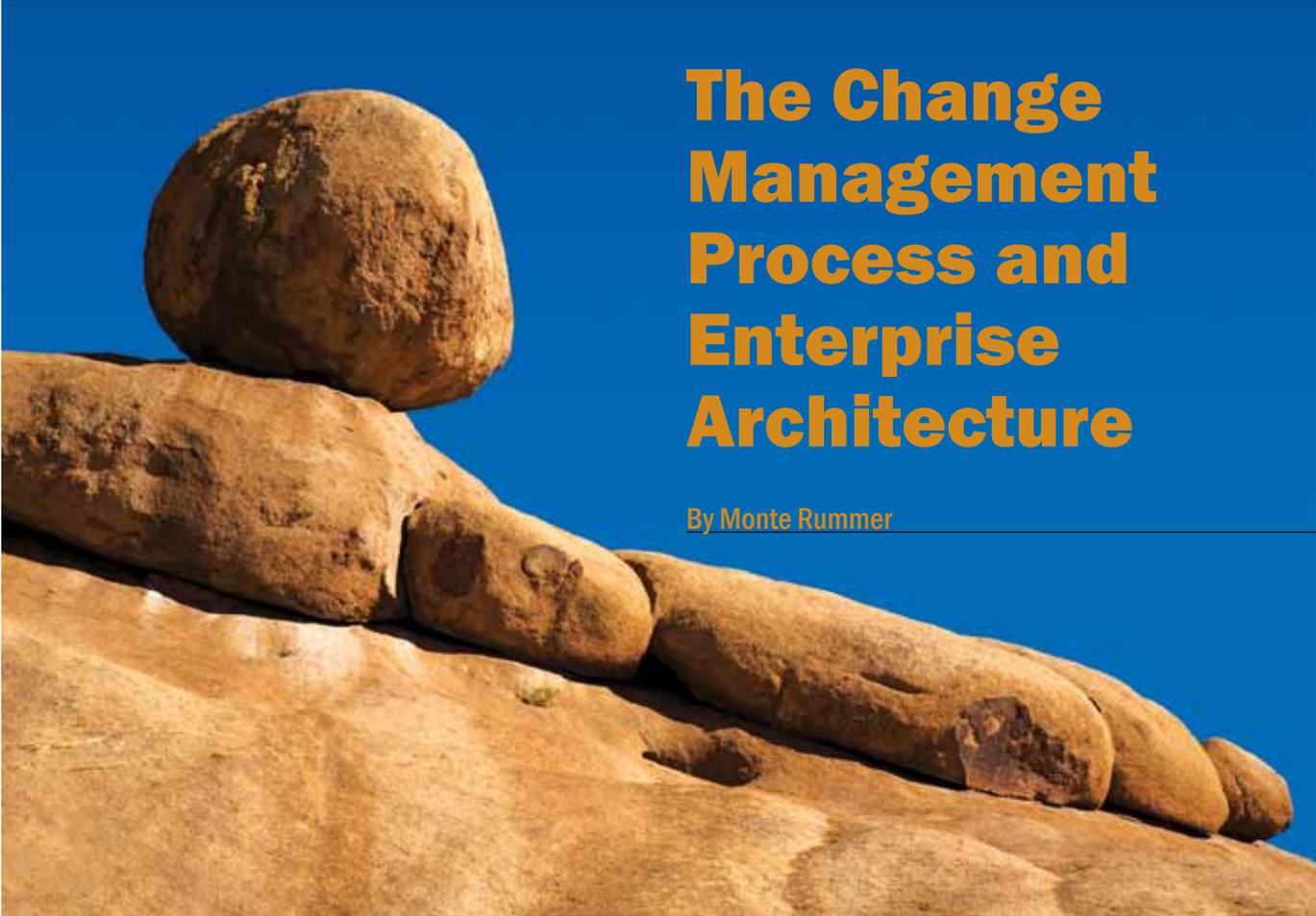
Gartner Enterprise Architecture Summit

May 11–12, 2016
National Harbor, MD
<http://www.gartner.com/events/na/enterprise-architecture>

Gartner Enterprise Architecture Summit

June 15–16, 2016
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The Change Management Process and Enterprise Architecture

By Monte Rummer

“An object that is at rest will stay at rest unless an external force acts upon it” (Wikipedia, 2015). This is Isaac Newton’s first law of motion. In the IT world, we can make the generalization that if you have a service that is working as designed, it will continue to provide that service unless it is changed in some way. This working configuration or baseline is very important because it provides a frame of reference from a known configuration that is operating as designed. According to the IT Process Institute, 80 percent of unplanned outages are due to poorly planned changes. Part of the main reason for these failures is poor or missing change management processes; however, there could also be missing an enterprise architecture process or linkages to both the EAF and ITIL.

IT organizations struggle with change management processes and usually the reason for its ineffectiveness escapes them. IT leaders must take a broader view of what the change process is really trying to accomplish and, more so, how does it link to other processes.

The change review board/meeting is not a time to

reject a change because of questions around design, testing, dependencies, etc. That’s not to say that a change shouldn’t be stopped at that point if a red flag is raised. The point is that there are EA and governance processes that should precede the change process, and these processes should catch those items. We can summarize the change management process as more of a scheduling and control function and not a design review exercise. By the time a change request is created, an effort has moved to the implementation phase. The design has been completed, testing done, and implementation plan ready. So the change process becomes more of a scheduling exercise to ensure that all changes are coordinated, proper communications are being done, and the change requests are documented properly.

We’ll start with the early idea of the linkages between the change process with other processes. ITIL does a terrific job providing a framework for operational processes. What it does not do is cover the activities

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that should happen before an event or project hits the ITIL process. Organizations that are very mature and effective link an enterprise architecture framework with the ITIL processes. This provides the ability to standardize and govern strategies and designs, then move them to implementation using ITIL.

Where does governance fall into these processes then? The true activities should happen during the enterprise architecture processes and between the EA process and ITIL processes. And these different points of governance, POG, have different objectives. This is starting to sound complicated, and the answer is: it can be. The point here to be taken is that the bigger picture should always be in sight. As long as we understand what we are trying to accomplish and at what points they should occur, things get simpler and more effective. Let's look at the bigger picture.

Think of the two ideas: create and operationalize. Most of what we do falls into this simple concept. We want to create something new then we want to make it available to our consumers. What should we use to create new solutions or services? An enterprise architecture framework. How do we safely implement what we have created? Our ITIL processes. So let's go a few levels lower in this model.

The enterprise architecture framework provides us with a method of translating business goals and objectives into IT goals and objectives. And it helps build an IT strategy, which is important because this is one of the first objects that drives our governance process. As a new project is spawned, a governance body ensures that it is related to the IT strategy, and the current run-and-maintain objectives should review it. I mention run and maintain because most of the time when talking about IT strategies, people only address new capabilities and not how to maintain what is already in place. So this is the first point of governance, the first gate if you will: is the IT strategy fit and also financially fit?

From this point, all IT groups should be notified that there is a new effort that is being started. I say all because there are different and complicated ways of determining whom to involve but the easiest is to involve all groups at first. This is an important point in the process. Many efforts and changes fail because not all groups that should have been involved were actually engaged.



The theme should be to make a list of what your processes are trying to accomplish, then whiteboard the entire IT process from beginning to end, link different processes together, and indicate at what points you want to accomplish the process objectives you identified.

Imagine if we put a new application or service in place but didn't work with the storage group around backups or DR from the beginning. Or, what if the network group wasn't consulted about the increase of traffic? When the change is ready to be implemented, it is already on the path to failure. This particular case happens quite often in IT organizations that do not have a good architectural process that links all IT groups together.

Once the design actually starts, there should be an initial design review. This is a good time to provide to all the other lines of service the requirements and potential solutions. The requirements are good for all groups to review since they are all viewing the problem from a different angle. It's the perfect time to solidify the requirements and to start ruling in or out high-level solutions. Now starts to enter IT standards. IT standards play just as much of a role in the EA process as strategy and financial. So from now moving forward, the governance body must assess the project for fit of the IT strategy, financial, and IT standards.

As the design progresses, there can be more reviews until the final review. The final review should be a point

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where all IT organizations have a vote to move the solution to implementation or not. This is the final time that the design should be halted and either rejected or sent back for rework. Hopefully, if the IT groups are working together as they should, items that would halt the implementation should have been identified long before the final approval. Once the final approval has been given, it enters the ITIL processes.

The ITIL processes will ensure that all of the items are in place to create or change a service and to place it into operation. We could use the Service Strategy and Service Design parts of ITIL if needed. It can go right to Service creation and the change management process to implement depending on the type and magnitude of the change. If the processes have been followed as discussed earlier, the change management review activity becomes a coordination exercise. No one should be surprised by the change or have objections to the design by now. Governance activities here include adherence to the CM process rather than design reviews.

The above flow was just an example and can have endless variations. But the theme should be to make a list of what your processes are trying to accomplish, then whiteboard the entire IT process from beginning to end, link different processes together, and indicate at what points you want to accomplish the process objectives you identified. **A&G**

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LET IT SIMMER

Making Project, Portfolio and Program Management Practices Stick in a Skeptical Organization

Editor's Note: What follows is Chapter 2 of Let It Simmer: Making Project, Portfolio and Program Management Practices Stick in a Skeptical Organization by Dr. Douglas Brown.

It is hard enough to make sense of things when you are in the middle of the action. Harder yet is to perceive the reality behind events that do not conform to your worldview. It is far too tempting to attribute people who do things contrary to your values as “evil,” or at least as unprofessional behavior. The problem with that approach is that it makes it difficult to find points of potential constructive cooperation.

Most project and program managers bring a certain professional and ethical point of view to their work. The Defense Acquisition University maintains statistics on the Meyers-Briggs profiles of the program managers who come there for training. Meyers-Briggs defines four general attributes of personal behavior (extrovert-introvert; thinking-feeling; sensing-perceiving; intuiting-judging). The permutation of those factors yields 16 possible different preference sets. When I attended in 2010, the track

record was an astounding 87 percent match on just one of these 16 possibilities! That particular set of tendencies (ISTJ) values facts over opinions, logic over feelings, and following the rules over exploring alternatives.

What that means is that governance professionals have a remarkably common view of how things should be—one that is quite different from the wide range of attitudes shared by the other 93 percent—and because of the “judging” focus, they tend to view those others as slackers, rebels, trouble-makers, or simply incompetent twits.

Combining this observation of widely-divergent views of reality with David Snowden’s Cynefin theory¹ explains what happens next. (See figure 1.)

The model shows four basic conditions that may exist in an organization. When the condition is known, the appropriate response is fairly clear.

There is also what I would call a non-condition, “disorder,” in which it is not clear to anyone what the

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A&G

situation really is. Under that circumstance, people revert to their natural tendencies.

Here’s where Snowden’s work takes on supreme relevance: the boundary between obvious and chaotic is catastrophic: applying an obvious solution to a situation that is actually chaotic will quickly drive that system to complete breakdown, and vice versa.

You can find a more detailed analysis of the applicability of Cynefin to the process-averse organization on the book’s website.³

The essentials of that analysis are:

- Organizations exist precisely to turn their core business activities into “obvious” situations.
- Process-averse organizations have failed in efforts to routinize their activities. It devolves into “disorder”: nobody knows what they should do, so they do whatever comes naturally.
- Driven individuals (the ones we used to call “type A”) are all about taking action. Any action will do. Their world has no concept of cause and effect;

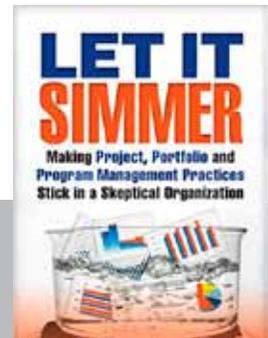
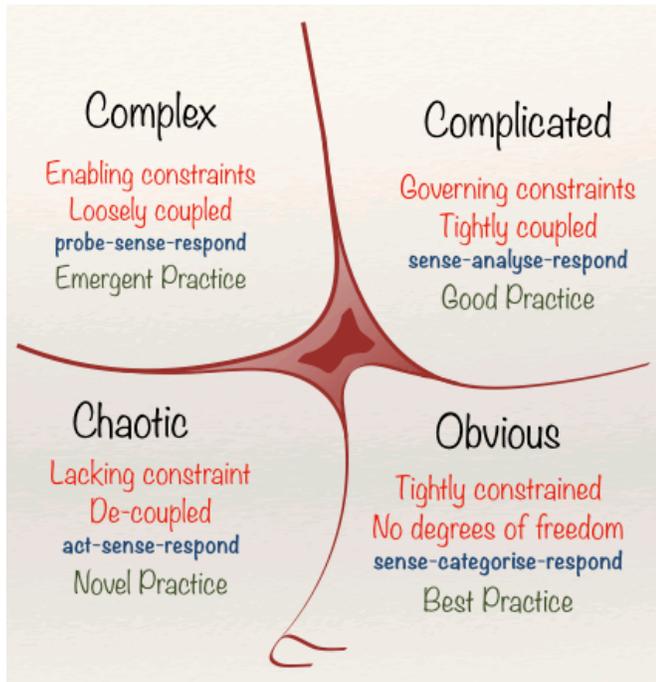
every day is a never-ending series of emergencies. Every event requires a new invention and discovery process. A “chaotic” response to non-chaotic situations eventually causes chaos to emerge.

- Less-driven individuals in these organizations see the disorder and simply lie low, waiting for the storm to pass, hoping for someone to tell them what to do.

Enter the project manager, armed with a set of professional practices that provide the canned response to any situation—a perfect “obvious” response. Since the business processes fell apart, the organization is now acting in a chaotic manner. Again, trying to apply obvious solutions (best practices) will fail miserably in a situation where processes have been thrown out of the window.

In our situation, we do pretty much know what the problem is. What we do not know is how to get the organization to swallow the medicine. That’s the Complex quadrant, in which we push a little here, push a little there, see what is working, and move to capitalize on successes. Now that I have the Simmer system worked out, it gives you a road map to help reduce the number of false starts, but it is certainly the way in which the Simmer system evolved. **A&G**

Figure 1: David Snowden’s Cynefin theory²



DR. DOUGLAS BROWN helps organizations kick the habit of underperforming processes and failing projects. A former Army officer, he holds a doctorate in public policy and has 20+ years of managing and consulting with private-sector and government organizations. His book *Let It Simmer: Making Project, Portfolio and Program Management Practices Stick in a Skeptical Organization* is available from Amazon, or via the simmer-system.com website.

1. <https://en.wikipedia.org/wiki/Cynefin>
2. <https://en.wikipedia.org/wiki/Cynefin>
3. <http://www.simmer-system.com>