Retaining Agility When You Work in a Waterfall [1, 2]

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ABSTRACT

Federal agencies undertake projects (however named) large and small on a daily basis, but often feel constrained by exceedingly rigid frameworks, such as in the Federal Acquisition Regulation (FAR), the unpredictability of the appropriations process, shifting strategic priorities, and bureaucratic internal processes. These limitations can handicap the ability of programs to adapt to fast-changing realities, something which is exacerbated in an international environment. This paper illustrates how USDA/FAS has built an operating environment in which it employs a full suite of tools to react quickly to emerging opportunities, respond to unanticipated needs, and adapt to an ever-changing global context – all while staying true to the laws, bureaucracy and rigidity that defines the federal space.

INTRODUCTION

The federal government, an organization not known for its agility, has increasingly promoted the use of project management practices within its portfolio of activities. At the same time, government bureaucracy does not acknowledge project management as a standalone technical proficiency, instead classifying project management as a supplemental knowledge area under existing technical umbrellas. This has a variety of impacts – mostly negative – on mission success and PM integration into agency operations.

The USDA Foreign Agricultural Service (FAS) has embraced project management for decades, in volatile environments with unpredictable funding and variable political commitment. FAS has developed a culture of project management practices without worrying about whether they are "standard" across the government, and as a result, has been able to advance its mission by utilizing the full legal framework of the federal

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enterprise. The resources and practices to do so are mostly available to any federal agency that has the will and patience to build such a culture, however, bureaucratic resistance cannot be underestimated. For that reason, the costs and benefits of this approach need to be fully understood in order for agencies to determine whether it is useful or appropriate to attempt to build such an environment.

WHO IS FAS?

The Foreign Agricultural Service is an agency of the United States Department of Agriculture, responsible (inter alia) for acting as a liaison between the U.S. agriculture sector and foreign markets, collecting global market data, and providing technical assistance to foreign states.[3] As with any government agency, it has been reformulated many times over the last century, but its more or less current incarnation dates to 1993, with the merger of several previously separate units.

This history is important, in that each of those units brought with them their own independently-developed processes, procedures, history, and culture – of which they were fiercely protective against harmonization. The legacy of this merger left a cultural cleft in the agency, in which the successor units of the predecessor organizations operated largely independently of each other – no more clearly illustrated than that the two were, as late as 2020, physically located in different parts of USDA's enormous headquarters complex.

These offices are responsible for implementing three broad portfolios of programming, with an aggregate annual budget of over $700 million,[4] authorization pulling from 5 different parts of the U.S. Code,[5] and categorized into somewhere over two dozen programs – the precise number dependent on how one counts a "program."[6]

Without burdening the reader with excruciating details, these programs (broadly speaking) support agricultural trade, improve food security, and make agricultural markets operate more efficiently. Each program has its own specific legal mandate; some are more focused on improving scientific capacity, others on nutrition and education, others on trade barriers. As a collective, however, they work together to support the world's most efficient agricultural system to feed the world.

Despite the potential for programmatic synergies, only in the last decade or so was any sustained effort made to create a consistent identity across the agency, through

[3] 5 USC § 5693
[4] as of FY2020; for several reasons, FAS' total annual budget is ambiguous until after the fact
[5] Includes Chapters 41, 64, and 87 of Title 7; Chapter 15 of Title 15; and Chapter 22 of Title 22
[6] The Government Performance Modernization Act of 2010 required, inter alia, that this be standardized and catalogued across the government. As of this writing, there is no indication that this effort has made any material progress.

structured practices such as promoting an agency networking group for junior staff, and by changing personnel policies to enable staff to rotate through different offices – something previously possible only at some difficulty, and which often came at substantial cost to an employee's career. This recognizes that a successful enterprise encourages regular small-scale interactions (or "networking") across the organization.[7]

This notwithstanding, even today each portfolio largely maintains its own processes, policies, and even distinct IT systems, to perform analogous functions. This decentralization may seem inefficient; indeed, the agency periodically establishes task forces or committees charged with determining the extent to which comparable processes might be consolidated or made consistent across these offices. However, in practice, the circulation of personnel, combined with a strong sense of purpose, enables staff to operate in any of these environments, in a manner that best achieves the objectives of each program.[8]

FAS' efforts towards integration have illustrated that there is no inherent reason why different objectives should be pursued in a uniform way for the sake of conformity. This, fundamentally, is what makes project management in FAS unique in the federal landscape: Pursuing each individual component of the agency's mission in the way best suited for that component results in a stronger and more resilient totality.

THE STEREOTYPE OF GOVERNMENT

The federal government is not known for being nimble. When the government was confronted with an increasing need for professionalization of project management as a standalone discipline, it responded with the development of a supplemental (or collateral) project management certification, firmly under the aegis of acquisition and procurement.[9] Similarly, notwithstanding an (admittedly ambiguous) legislative directive to do so, the federal Office of Personnel Management has not created a dedicated career track for project management, arguing instead that it a subsidiary function of other technical competencies.

That the federal mindset would equate project management with acquisition – a notoriously rigid and inflexible instrument in the federal toolbox – is not especially surprising. Acquisition has become the default answer to a great many questions in the federal operating sphere, and contractors are increasingly used to fulfill virtually all federal functions, excepting those few deemed "inherently governmental."

[7] For a discussion of this phenomenon, see Axelrod (1984), 158
[8] see Epstein (2019)
[9] Known as the FAC-P/PM, it is administered by the same office responsible for other contracting and acquisition certifications.

To be sure, there are certain benefits with taking this approach. First and foremost, it is inherently standardized – any federal employee can "plug and play" and be familiar with the policies and procedures. It also has the benefit of the Federal Acquisition Regulation,[10] which despite its rigidity is widely familiar to the government and non-federal organizations alike and accompanied by a great deal of settled case law that accounts for a wide variety of scenarios that might arise during the course of implementation.

The challenge, however, with using acquisition in this way is that federal acquisition, especially at a large scale, requires a well-defined scope and a substantial lead time. To be sure, there are many contexts in which this is not problematic. If an agency needs to procure new computers for its staff, for example, it should encounter no difficulty using an acquisition tool to do so.

FAS, however, has a great deal of programming that is responsive and iterative in nature, i.e. for which even in ideal conditions, the final outcome of each effort is not necessarily predictable, and for which subsequent stages must be adjusted based on that outcome. The lengthy lead times and firm scopes that can easily be used to procure goods, are ill-equipped to accommodate this reality – even before considering the environmental risk factors of political shifts, coups, and other strategic elements that can shift rapidly and without warning.

In short, the government mandates that project management be conducted in a 'waterfall' environment – with meticulous planning aforethought, and execution thereafter following a firm path. Yet the world in which FAS programs operate is not so predictable and requires the agency to maintain a tremendous amount of agility in every regard – any day could bring a shift to where it operates, what it does there, who it interfaces with, and what it seeks to achieve.

WHO ARE PROJECT MANAGERS?

Although the term "agile" has a specific meaning within project management, agile project management is not quite so agile as the name would imply. To be certain, it represents an approach which, by virtue of its short iterative internal cycles, is better suited than traditional ('waterfall') project management in the environments where FAS operates, but still rests on an implied clear understanding of what the outcome will be.

Bearing in mind the government viewpoint of project management as an acquisition function – and notwithstanding that the majority of this paper argues against that very designation – it is worth noting that the FAR itself encourages agencies to be innovative in policies, procedures, strategies, and practices, when such innovation is in the government's interest and not expressly prohibited.[11]

[10] Title 48 of the Code of Federal Regulations (48 CFR)
[11] 48 CFR 1.102-4(e)

To that end, FAS embraces its different portfolios – while standardization may be useful in some regards, standardization for the sake of standardization is in nobody's interest. Each project manager wields a suite of tools, instruments, and vehicles, that allow them to best achieve the objectives of their program(s). This represents a break from generic government practice: Project managers are assigned to projects based on anticipated workload, with the clear understanding that workload is not proportional to dollar value, and then afforded autonomy to implement their projects.

FAS project managers are generalists – assigned to personnel series 0301 or 0343;[12] outsiders are often surprised to learn that many have little to no background in agriculture; rather, their expertise is in foreign affairs, law, communications, or history. Although many have accrued some agricultural experience – for example, through the Peace Corps – this is not, in and of itself, necessary for a project manager to succeed.[13] FAS understands that the project management skillset is one in which PMs are generally not the ones implementing activities day-to-day.

To this end, FAS uses a broad range of hiring authorities, mixing and matching depending on anticipated short- and long-term needs; a given project team often includes a mixture of staff hired as ordinary civil servants, those on term appointments, and some in the excepted service. FAS has maintained for many decades a special excepted service appointment authority for "positions of a project nature involved in international technical assistance activities."[14] While this is unique to FAS and requires OPM approval to establish, agencies with a variable project management footprint may wish to pursue a similar authority.

FAS does not, however, outsource its project management. Unlike many contemporary federal project organizations, which consist of a mix of federal employees and contractors, there are no contractors within FAS' project management staff. To be sure, many of the larger overseas projects – which operate as autonomous, independently coherent entities – maintain contracted staff; these however are not integrated with FAS. Project management is a core function, and core functions should not be outsourced.[15]

WHAT EVEN IS SCOPE?

Project managers work collaboratively with other cooperating partners – which, depending on the particular project, could include any combination of federal agencies, non-governmental organizations, international bodies, foreign governments, and the

[12] In federal HR lingo, series 0301 represents "Miscellaneous Administration and Program" while series 0343 represents "Management and Program Analysis"
[13] see Stretton (2013); and Hauschildt, Keim, and Medcof (2000)
[14] 5 CFR 213.3213
[15] see Lankford and Parsa (1999)

private sector – to guide projects throughout their implementation, and adjust as needed. This represents the most challenging aspect of operation in a federal environment: a precise scope is often impossible to write *ab initio*, because operating conditions may not be fully known or understood; and yet many agencies insist upon doing so, only for every adjustment to be complex and costly.

In contrast, by defining scope as progress towards an outcome, rather than a specific output, and working cooperatively with the concerned parties, FAS is able to guide projects through implementation; in many cases, even significant adjustments do not require a formal change action. This has the added benefit of enabling opportunistic extensions of activities when openings unexpectedly appear.

Similarly, FAS understands that, when the goal often requires action by foreign governments, any schedule is going to be a "best guess." As such, although all activities begin with a defined period of performance, extensions are neither frowned upon nor discouraged; when a deadline cannot be met, the PM will determine whether the best course of action is to downscope, extend, or both – many of these deadlines aren't really important in terms of programmatic outcomes.

Although this goes against the premise of "SMART" goal-setting, in that outcomes are general rather than specific, and time-boundedness is ambiguous, the progress made can be measured, and otherwise follows those principles to a large extent. Competitive projects are funded based in no small part on whether the progress anticipated is plausible and relevant to the larger mission.

For this reason, "firm fixed" pricing is rarely used, other than for small, discrete activities within larger umbrellas. While this may make sense in the "flexible scope" context described above, this is antithetical to standard approaches to contracting. In addition, FAS generally avoids firms with "loaded rates," instead working with entities whose costs are more broadly representative. This adds a degree of complication to financial oversight, but generates an overall cost savings through transparency. For example, the GSA CALC gives the average rate for a consultant economist at $149/hour; in contrast, FAS pays closer to half that, even for a highly-experienced senior economist, and itemizes other related expenses that may be incurred along the way.

While now a standard practice in the agency, this was initially established in response to the variety of statutory and regulatory limitations that exist on FAS' many funding streams; several are subject to cost limitations, especially related to consultant personnel; in some cases, "maximum payable rates" – which cannot be waived – may be as low as $69/hour. Many commercial firms would balk at such a figure; however, itemization of expenses, despite a minor administrative cost to the agency, results in this being viable for non-federal implementers, as well as resulting in a cost savings to the agency in virtually all cases.

The other side of the "cost" coin – pun not intended – is quality. FAS' experience is that there is no correlation between cost and quality. Some initiatives have been extraordinarily expensive, yet achieved nothing; others have been budgetary rounding errors, yet still resonate years later. The nature of these programs is such that quality is often binary: either an objective was advanced, or it wasn't; either that advance is sustainable, or it isn't. It is recognized from inception that it is improbable for a single project to achieve "mission accomplished," and expectations are scaled accordingly.

In short, these four key elements – scope, schedule, cost, and quality – are deliberately flexible, recognizing that the number and scale of exogenous influences create a sufficiently ambiguous environment that a firm scope and fixed schedule would all but guarantee failure. Rather than expecting reality to conform to expectations, FAS matches expectations to the fog of reality. This requires a more hands-on approach, but also enables a higher degree of success.

TAKING RISKS

The past year has highlighted, to an extent never anticipated, the scale of risk that comes with operating in an international arena. The coronavirus pandemic has had direct impact on food security,[16] and a variety of reactionary policy actions that, in some cases, undid years of progress made by previous FAS programming. While disappointing, operating in an international environment, by necessity, requires certain risks, and FAS has built an internal culture to accommodate that.

The government standard for risk management is to avoid risks where possible, whatever the cost, and transfer them where avoidance is impossible. While this avoids the uncomfortable publicity of a negative outcome – as FAS has experienced first-hand, for example, in Senator James Lankford's 2015 edition of *Federal Fumbles*[17] – this approach comes with significant and under-appreciated costs that ultimately hinder mission success.

Risk avoidance means that government programs only operate on solid ground. In some contexts, this is well-advised, especially if lives are on the line. FAS programming does not have such high stakes; although global food security is important, a single failed project in FAS' portfolio will not result in death or destruction. In practice, avoiding risks to this extent requires years of meticulous and detailed study. Conducting such study reduces, if not eliminates, the ability of the agency to be responsive to opportunities that arise – to say nothing of incurring the risk that circumstances may change before the study is actionable.

[16] Baquedano, Zereyesus, Christensen, and Valdes (2021)
[17] Lankford (2015), 66-67

Opportunism sometimes sounds uncouth, but in the context of FAS programs, it is an essential ingredient for efficiency and impact. The sheer volume of issues that FAS programming seeks to address is staggering; even with the hundreds of millions of dollars in financial resources referenced previously, priority triage is routine. There are only so many resources, and they must be devoted to those places where they can be expected to have the greatest impact.

To that end, if an opportunity – or a crisis – arises, it is in many cases more important to act swiftly than perfectly. In 2018, for example, concern about retaliatory tariffs affecting the U.S. agriculture industry required a robust response to prevent lasting damage to the sector; in response, FAS quickly stood up a new program valued at over $100 million. The program attracted criticism from all directions, with arguments that it was too big, too small, too targeted, not targeted enough, and so on. Yet undertaking meticulous study of the market environment to carefully craft a perfect program, would have taken years – by which point, the beneficiaries would no longer benefit.

When the government can't avoid a risk, it prefers to transfer the risk to its contractors. This is an "easy" solution but comes at tremendous cost – the government often (somewhat infamously) pays dearly for this risk transfer, sometimes orders of magnitude above real costs, as contractors must take the same risk mitigation strategies that the government is avoiding.

FAS accepts that risks are real and cannot always be avoided. For example, earlier in 2021, Burma (Myanmar) experienced a coup d'état. This freezes (and, in most cases, terminates) non-humanitarian U.S. Government programming in the country. By definition, individual coups cannot be predicted; but they will occur.[18] Similar circumstances may occur with other types of conflicts, or even natural disasters. In FAS' case, other relevant risks include agricultural trade agreements to which the U.S. is not party, and occasional underhandedness at ports. If these risks realize, projects will not achieve their goals. That is accepted as a risk of operating in the international environment: After all, any project that is never initiated, also won't achieve its goals.

FAS' other consideration in risk management is to have backup plans, if the primary path is cut off. This includes severability in activities – so if a single activity or implementer is unexpectedly cut off, the remainder can continue – and a focus on different aspects of a long-term need. These backup plans need not be formally written *ab initio*, but simply having that concept available can salvage an unenviable situation and create something out of nothing.

[18] Belkin and Schofer (2003)

STAKEHOLDERS AND COMMUNICATION

Preparing a list of stakeholders can fill any government PM with dread – virtually everybody is a stakeholder, every one of them holding different stakes, promoting different interests, and expressing an unshakeable insistence that they are more knowledgeable (or at least more important) than the others.

It will come as no surprise, then, that many federal employees instinctively recoil when they hear the word "interagency." It evokes the image of lengthy meetings filled with clichés and pre-prepared talking points. As a consequence, there is often an innate hesitation to communicate beyond a given PM's immediate silo, lest any activity be drowned in such a morass.

That stereotype is not wholly inaccurate, but can be overcome by empowering and encouraging PMs and other front-line staff to build working relationships with their counterparts. While executives can continue to hold their regularly-scheduled quarterly meetings, working-level staff with strong peer-to-peer connections can put those executives on the same page before that meeting even starts – and, in turn, garner their support by giving them something to show that they're cooperating… even if they didn't know about it before reading the pre-meeting brief.

FAS has the particular benefit of having a comparatively well-defined set of stakeholders for most of its programs; as such, many formal and semi-formal associations and groups exist, containing mixes of federal and non-federal entities, through which such matters can be discussed. While each suite of programs has a different set of stakeholders, PMs need not start *ex nihilo* when establishing who the stakeholders are for their projects.

This approach is no less important internally to the agency. FAS, like many large organizations, struggles to manage internal communication. The most effective PMs are those who, just as with the 'interagency,' maintain their own peer-to-peer networks across different offices. While this cannot overcome all obstacles, it can reduce inefficiencies, and more crucially, prevent a late-emerging veto-holder from emerging after considerable effort has been expended.

An important lesson FAS instills in its PMs, particularly when contending with internal stakeholders, is that nobody speaks for everybody. This is often forgotten in stakeholder management: No matter who a particular individual 'represents,' there is invariably a chorus of nuanced and differing feelings within that organization. It may be time-consuming to account for all, but they are ignored at a project's peril.

The most successful PMs are in regular contact with stakeholders. Formal updates – i.e. quarterly meetings – may serve as calibration mechanisms, but no stakeholder wants to be surprised in such a forum. By building and maintaining these strong working relationships across units, PMs are able to generate broader support for their projects, and better alignment among programming within the agency and beyond.

One of FAS' innovations in internal project management is understanding that generalist PMs may not necessarily be versed in the highly specific lingo of all the various offices they may interact with. This lingo could be technical (for example, "SPS/TBTs"), contextual (for example, "Farm to Fork"), or bureaucratic (for example, "General Ledger 4802"). To overcome this barrier, FAS has designated liaisons – or translators, as it were – to facilitate communication between units where misunderstandings regularly occur.

CONCLUSION: CAN THIS BE REPLICATED?

Perhaps another federal agency reading this description of FAS' project management practices and wondering if they could replicate this within their own organization. Anyone attempting to answer this question briefly would be wise to mumble. However, if one is to embark on such an endeavor, this assessment can offer a few pieces of advice.

First, this cannot be attained through a one-off training or series of webinars. Building this "can-do" organizational culture, in which PMs are empowered with authority and tools to do their jobs, takes years – if not decades. Such a culture requires sustained buy-in at all levels of the organization, from senior executives to the greenest junior professional. This requires not only training, but ongoing support that encourages PMs to use independent judgement and manage their resources most efficiently.[19]

Second, don't underestimate the resistance. Governments are notorious for rewarding a "paper-pusher" culture, in which it is deemed more important to have the correct forms (each, of course, bearing an OMB control number) properly completed and in the designated sequence, than to achieve the mission. FAS is not immune to this tendency; the agency often finds itself in a tug-of-war regarding whether to prioritize the paperwork or the mission.

This is not to say that legalities and details are unimportant; certainly, no one in the agency, nor any of the stakeholders, has any desire to be non-compliant, nor to land in Senator Lankford's annual report of wasteful spending. However, agencies have a great deal of discretion – often more than they realize – as regards implementation. With an appropriate (non-zero) level of risk tolerance, and instilling a culture of working cooperatively, rather than adversarially, with non-federal partners, greater impacts are possible program-wide, even if some individual projects fall short.

Third, it must be emphasized that while many of the operating authorities FAS uses are available to any civilian federal agency, there are several which are limited to subsets of

[19] see Brinkerhoff (2006)

the Department of Agriculture, or to FAS specifically. To have additional authorities extended, whether by legislation or by regulation (as applicable), is not a trivial undertaking; agencies may find that more cumbersome processes are still less complex than seeking out these authorities.

Finally, it is important for any organization, especially in the public sphere, to understand that their mission and priorities can change, due to global circumstances, new political mandates, or any number of other factors. However, PMs are often hesitant to establish backup plans, lest they create the appearance that there is a lack of confidence in the principal plan. Management must have the sustained commitment to this practice to encourage and reward resilient thinking, rather than overconfidence.

In short, many of these lessons can be adopted, in whole or in part, to improve project management practices at federal agencies, and to an extent, throughout the public sector. Doing so, however, is not a matter of flipping a switch – cultural change is a lengthy process, requiring sustained commitment across administrations. It can be done, however, and FAS is an example of that.

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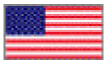

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