HARVARD Kennedy School
JOHN F. KENNEDY SCHOOL OF GOVERNMENT

The Challenge of Building (Real) State Capability

Faculty Research Working Paper Series

Matt Andrews
Harvard Kennedy School

Lant Pritchett
Harvard Kennedy School

Michael Woolcock
Harvard Kennedy School

December 2015

RWP15-074

Visit the **HKS Faculty Research Working Paper Series** at:
https://research.hks.harvard.edu/publications/workingpapers/Index.aspx

The views expressed in the **HKS Faculty Research Working Paper Series** are those of the author(s) and do not necessarily reflect those of the John F. Kennedy School of Government or of Harvard University. Faculty Research Working Papers have not undergone formal review and approval. Such papers are included in this series to elicit feedback and to encourage debate on important public policy challenges. Copyright belongs to the author(s). Papers may be downloaded for personal use only.

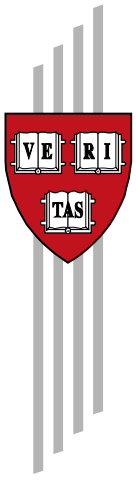
www.hks.harvard.edu

The Challenge of Building (Real) State Capability

Matt Andrews, Lant Pritchett
and Michael Woolcock

CID Working Paper No. 306
December 2015

© Copyright 2015 Andrews, Matt; Pritchett, Lant;
Woolcock, Michael; and the President and Fellows of
Harvard College



Working Papers

Center for International Development
at Harvard University

The Challenge of Building (Real) State Capability

Matt Andrews, Lant Pritchett and Michael Woolcock

Harvard Kennedy School

Abstract

Efforts to build state capability often take the form of commonly used, highly designed and engineered best practice solutions that have worked in many other places and that we suspect (and hope) will work again in many contexts. Such interventions do sometimes work, especially when the treatment actually addresses problems that fester in the context. Where the contextual problems are different, however, the treatment is just isomorphic mimicry—it looks good but will not be a solution to problems that actually matter. Development organizations often cannot see this, however, and offer the same solution again and again—hoping for a different outcome but imposing a capability trap on the policy context, where a new diagnosis and prescription is actually needed. In some countries the treatment has an even worse impact, fostering premature load bearing—where the context cannot actually handle what is prescribed. How can development experts identify in advance where they will have such negative impacts, and how can they identify in advance where they need to do development differently? This paper addresses such questions, and introduces an approach to building state capability in the latter contexts (called 1804 contexts), called problem driven iterative adaptation.

When Aspirin Does Not Work

There is an old story of a doctor who prescribed aspirin to her patients every time they complained of head pain. The treatment led to positive results with many patients, where pain medication was the appropriate solution. It helped some patients avoid heart attacks and strokes as well, often as an unseen (and unforeseen) side effect. It did not work for all the doctor's patients, however. Some returned with continuing head pain, which did not go away after even repeated and extensive aspirin treatment. These patients typically suffered from other ailments that needed different, more complex, treatments—aimed, for instance, at cleaning sinuses, reducing stress, and even removing tumors. The doctor failed many of these patients because of her limited approach and inability to adapt diagnoses and treatment. Her failure was more direct with patients whose bodies did not have the capacity to handle the aspirin treatment (and suffered from severe bleeding disorders, asthma, and liver and kidney disease). These patients experienced complications after receiving the aspirin treatments, which sometimes bought on life threatening medical problems and even death.

This simple story helps to summarize our views on why many development interventions have limited impacts, and especially why efforts to build state capability have regularly had muted effects (Pritchett and Woolcock 2004; Pritchett et al. 2010). These efforts often take the form of commonly used, highly designed and engineered best practice solutions (like aspirin) that have worked in many other places and that we suspect (and hope) will work again in many contexts. Modern internal audit is an example. This is a relatively recent management tool (codified only in 1979) that bolsters an organization's ability to manage risk and ensure accountability, both of which ostensibly foster greater capability. It emerged as a useful practice

in mostly Anglo-Saxon countries and is now a staple of state capacity building initiatives around the globe (Andrews 2011, 2012, 2013).

Such interventions do sometimes work, especially when the treatment actually addresses problems that fester in the context. Where the contextual problems are different, however, the treatment is just isomorphic mimicry—it looks good but will not be a solution to problems that actually matter. Many internal audit reforms have been just this, with governments introducing new laws and audit requirements that are not acted upon. Development organizations often cannot see this, however, and offer the same solution again and again—hoping for a different outcome but imposing a capability trap on the policy context, where a new diagnosis and prescription is actually needed (Andrews et el., 2012; Pritchett and Woolcock, 2004). In some countries the treatment has an even worse impact, fostering premature load bearing—where the context cannot handle what is prescribed. Just like the patients who bleed after aspirin, countries in this situation find that external solutions overwhelm their limited capabilities, compromise the possibility and legitimacy of institutional reform and policy implementation, and undermine efforts to build confidence and capability in the context. We see this in some countries even with something as apparently innocuous as internal audit, where governments that try to use the tool sometimes find it to be extremely disruptive and alien in their extant management systems.

Given that you were interested in reading a paper titled ‘Building (Real) State Capability’, we assume that you are also asking what can be done to improve the impact of efforts to build state capability (especially focused on real implementation), and if there are approaches to doing development that can be applied when aspirin does not work. This paper offers an introduction to thinking about this approach, which we call Problem Driven Iterative Adaptation (PDIA) (Andrews et al. 2012). The paper builds up to a discussion of this approach

and its core principles, taking you through a bit of our own journey towards identifying PDIA, and showing why we think it is an appropriate tool for building state capability, and when it is most relevant. We start with a simple classroom exercise to do this, focused on designing a strategy to travel from east to west in the United States of America in 2015 and 1804. The exercise may seem a little removed from your development experience, but it leads into a discussion of the different challenges in building state capability in developing countries—and the importance of having different strategies to face up to these different challenges. One of these strategies is PDIA, which we see as appropriate in addressing complex challenges that are common when trying to build state capability. We conclude by asking you to reflect on which of your challenges fall into this category, and where you can start applying the PDIA principles.

Building capability to go west

We take many of the development professionals we work with through a simple exercise when introducing Problem Driven Iterative Adaptation (PDIA) as a new strategy for building state capability. It is designed to illustrate why different approaches are needed when building state capability in developing countries, and to introduce PDIA as a particularly useful approach.

The 2015 challenge

We start by asking professionals to create a plan that will get them, as quickly as possible, by car, from St Louis to Los Angeles in the United States in 2015. They are given a road map and a table showing distances between cities. You might want to try it out, using Figure 1 and Table 1 to assist. Do not hesitate to draw on the map, showing the precise details of your journey—roads you will drive on, distances, times, and so forth. Think of it as your strategy to build 2015 capability to travel west.

Figure 1. How would you get from St. Louis to Los Angeles in 2015?



Source: Google Maps

Table 1. Distances of various cities from St. Louis

City	Grand Junction CO	Denver, CO	Dallas, TX	Albuquerque NM	Wichita KS	Reno NV
Distance	1103	858	633	1041	443	1849
City	Oklahoma City OK	Los Angeles CA	Las Vegas NV	Kanas City, MO	San Diego CA	Phoenix AZ
Distance	496	1840	1606	253	1858	1504

Ultimately, all the professionals we work with manage to produce a solution in quite a short time period. Interestingly, they typically identify one of two routes, going through Denver to the North or Albuquerque to the South. These, apparently, are the 'best practice' options in this case (being the shortest and most direct). Perhaps you identified the same routes?

We then ask what the professionals assumed when coming up with the solution. The list is always long, and includes things like the following: 'we assumed the map was real'; 'we assumed the distances shown were for the routes on the maps'; 'we assumed the roads really exist'; 'we assumed there would be rest rooms and gas stations en route'; and 'we assumed there would be police officers providing order (and not holding us up to extort bribes)'. We ask them why they are comfortable making so many assumptions. The answer is usually something like, 'These assumptions are safe to make because we are dealing with the United States, where we know such things are really true'. They also note that the assumptions were possible because they had firm start and end points. Some will also reflect on the fact that they have followed the same kind of map before and this experience lends credibility to the assumptions ('Maps in the United States are dependable, so we expect this to be dependable too.').

We conclude this part of the exercise by asking what kind of capability they need to complete the journey, whether it is a risky journey, and what kind of leadership will be required to make it happen. The answers are again quick and common: 'a pair of individuals with driving licenses, a cellphone and some kind of mapping software can easily complete this, with no real risk'. We ask how many people in the room have the requisite capabilities, and just about every hand goes up. This demonstrates how accessible the journey is, requiring common capabilities, and proceeding relatively risk-free along a best practice route that we know exists. The leadership discussion is short-lived as a result: 'You just need someone to oversee the drivers,

and make sure they follow the route as it has been identified.' A single individual can do this if they are given authority over the drivers, with basic oversight capabilities, facing very little risk of failure and very little resistance from the drivers.

We summarize this discussion by asking those we work with to break down the key elements of the strategy they propose to get from St. Louis to Los Angeles in 2015 ("how would you build the capability to do this?"). They do so by answering four questions: What drives action? How is action identified and carried out? What authority or leadership is required? and, Who needs to be involved? Table 2 shows the common responses to each question. These show, essentially, that action will be driven by a pre-defined solution, which is identified with reference to existing knowledge and experience, planned out in detail and implemented as planned. This requires only one authorizer or leader (given the narrowness or specificity of the task) and the person authorizing or leading such work simply needs to ensure she can ensure full compliance with the plan, involving very few individuals in the process (ensuring they have appropriate skills, but facing few other personnel problems—like having to motivate their engagement or incentivize them to take on extra risk).

Table 2. A strategy to Go West in 2015

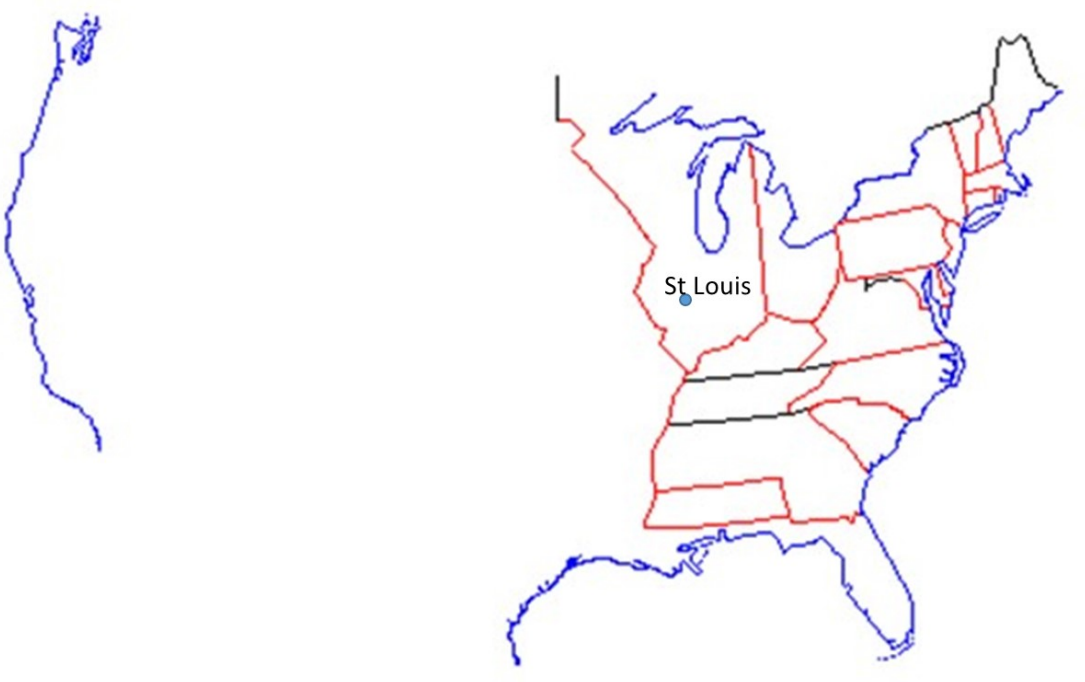
What drives action?	A clearly identified and pre-defined solution
How is action identified, carried out?	Reference existing knowledge and experience, plot exact course out in a plan, implement as designed
What authority or leadership is required?	A single authorizer ensuring compliance with the plan, with no other demands or tensions
Who needs to be involved?	A small group of appropriately qualified individuals

Source: Authors' work, based on Andrews (2015)

The 1804 challenge

Then we turn the tables a bit, and give the professionals we work with a map of the United States in 1804, before the west had been fully explored. St Louis was one of the western-most cities at the time, and there was no fixed or commonly shared knowledge about where the west coast was or what lay between St Louis and that coastline. With a (nearly) blank map in front of them, we ask the professionals to imagine they are in St Louis in 1804 and then work out a strategy to find the west coast. You may want to take the challenge yourself, with the map provided in Figure 2. It actually shows more than you would have known in 1804 (given that we have added a west coast boundary into the figure, but no one actually knew where this coastline was at the time). Think of it as your strategy to build 1804 capability to travel west.

Figure 2. How would you get to the west coast from St. Louis in 1804?



Hopefully that was not too tough a task! It is for many of those we work with, incidentally. Some of them try to retrofit the 2015 strategy into the 1804 context: 'take the same route up to Denver, and then down to Los Angeles.' We remind them that Denver and Los Angeles do not exist, and the route from St. Louis is also not yet in place. This clarity is often greeted with frustrated and confused questions: 'how do we determine a solution without roads, or a map?'; 'surely someone knows where the west coast is and can direct us there?'; 'you must have some more information to share?'

Once the participating professionals realize that the unknowns are all intended—and that they were really unknown to the adventurers of the time—some of them immediately declare the task impossible: 'if we don't know where we are going, how can we identify a strategy to get there?'; 'how do we identify a route if there is no route to choose from?'; 'if no one knows anything, why are we even trying to go the west coast?' Others say that a strategy must be possible—after all someone did find his way to the west coast—but that any strategy is heavily dependent on luck. The most common suggestion by such participants is the simple, fatalistic strategy: 'identify where west is on your compass and walk…hoping everything turns out OK!'

We acknowledge that luck must play a part in any initiative involving fundamental uncertainty and weak (or nonexistent) knowledge and information. At the same time, we ask if a strategy could have more detail to it than 'face west, walk, and hope for the best.' In essence, we ask if any process could be set in place to maximize one's luck in such an expedition (or even create luck as one moves west).

Faced with this challenge, participants tend to start thinking a bit more laterally, and offer interesting ideas about potential strategies for action. Most participants begin by noting that a

team is needed to do this work, for instance, comprising a broad set of agents with different skills and playing different functional roles. The list of necessary functions they offer usually includes a doctor, cook, soldier, and builder. We often add a few roles to this list, including a cartographer (to map the route, so that everyone can go back afterwards), a local guide (to help the team navigate routes that have not yet been codified but can be traversed if one has the tacit knowledge of their existence, gained through hands-on experience), and an authorized spokesperson representing whoever is sending the team (to negotiate with other political representatives en route and ensure the journey is continuously supported).

Typically, some of the professionals we work with will reflect on the need for regular changes in the team's composition. They argue that one cannot know up front exactly what skills are required, or who will fall away during the journey, or when a new guide is needed: So the team needs to have a way of adding and changing its membership given emerging challenges. This observation usually gets the whole class thinking about more general limits to pre-planning the journey: One cannot pre-define the exact composition of the team or the exact path to take. Some participants will comment that this kind of task warrants a step-by-step approach, where the team progresses in a set direction for a few days, determined at times by a 'best guess' method—using whatever knowledge or experience is available and then deciding which direction to take. The team would map the territory as it progresses and then stop and set up camp, reflect on progress, send injured members back, access reinforcements (to join via the same route), and think about what the next step could be (given lessons learned along the path, and any unexpected opportunities and difficulties encountered). They may be surprised by how open their chosen path is and walk for days before having to stop, or they may encounter

unknown challenges (like rivers) that require stopping soon and maybe even turning back or changing direction dramatically.

Some of those we work with note that the journey will probably comprise a number of these steps, which we would call experimental iterations. The steps would combine into a new path leading from a known starting point to an aspirational destination that emerges as one progresses (given that it is unknown at the start). Some point out that the team would probably need more steps like this on longer journeys. They note, as well, that the steps would tend to be shorter and require more variation when passing through demanding and surprising terrain (like mountains or rivers, where the team would need to try multiple potential routes of passage, return to a base camp to discuss which worked and why, and then decide on which one to take).

We reflect on this idea in depth, noting how different it is to the strategy identified as appropriate to go west in 2015. Going west in 2015 simply requires a few individuals using common technical skills to follow a well-established and reliable best-practice map. Going west in 1804 requires having a multi-skilled group that moves step-by-step into the unknown, learning and adapting in a continuous manner, and making the map as it goes along.

Professionals we work with note that the 1804 expedition is undoubtedly more risky and demanding than the 2015 challenge. As a result, they point out that we should expect the journey to test the resolve of authorizers (funding and supporting the journey) and team members in a way that the 2015 journey will not. Anticipating this, we typically ask what they would do to keep the journey funded and supported and to ensure the group members do not mutiny or leave somewhere along the path. Some participants suggest using monetary incentives to incentivize everyone involved, but others indicate that this will probably be very expensive (given the high

level of uncertainty and risk involved in the exercise) and may not be effective in getting participants to do really risky things. Some suggest that these incentives may even lead to strikes along the journey, where some group members demand more money to take specific 'next steps'.

Another common idea many participants offer is to inspire the authorizers and group members by emphasizing the importance of the work, and particularly how the work will reduce threats and problems faced by them and their families, friends and neighbors. Most agree that authorizers and group members will remain engaged if they see their journey in this significant manner, as addressing a problem they care about and need to see solved. They note that this approach will require creating and maintaining a motivating narrative about the problem being solved, and providing ongoing feedback along the route about how the problem is actually being solved (to the authorizers and group members, to keep them motivated). Participants note that this motivation will be needed at repeated points in the journey, and would need to target many diverse groups of authorizers and team members. There would be many agents acting as authorizers, for instance, including those providing initial funding and those allowing the team to pass through new territory, or to access new resources. These different authorizers would all need to be motivated differently, as would team members from different backgrounds and with different personal and professional interests. This kind of motivation is not needed if one is driving from St. Louis to Los Angeles in 2015, given that the journey is not risky and demands very little of both authorizers and implementers (who are also individuals rather than groups).

We draw this discussion to a close by asking those we work with to identify the strategic elements emerging from discussion, given the same questions posed in respect of Table 6.2. Table 3 summarizes the common answers, which suggest, for instance, that the action needs to be driven by a highly motivating problem that is felt and owned by those involved. Action

cannot be pre-defined but must rather emerge through experimental iterations where teams take an step, learn, adapt and take another step. Multiple authorizers will be needed to manage risks of the project and support experimentation. Finally, the work will require engagement and effort from multi-agent groups (or teams) with many different functional responsibilities and talents (not just a few appropriately skilled individuals).

Table 3. A strategy to Go West in 1804

What drives action?	A motivating problem that is felt by those involved
How is action identified, carried out?	Through experimental iterations where teams take an action step, learn, adapt and take another step
What authority or leadership is required?	Multiple authorizers managing risks of the project (by motivating teams, and more) and supporting experimentation
Who needs to be involved?	Multi-agent groups (or teams) with many different functional responsibilities and talents

Source: Authors' work, based on Andrews (2015)

We posit that this approach was actually adopted by the 1804 Lewis and Clark expedition in the United States, which found a trade route to the United States' west coast under the primary authorization of President Thomas Jefferson (but with additional authorization from various Native American leaders along the way).[1] This expedition focused on a multi-faceted problem, centered on the need to establish an all-water trade route to the Pacific. This trade-related problem was highly motivational in Congress, which needed to authorize funding for the journey even before it began. It was an urgent problem, which Congress felt quite significantly, given

[1] The best resources to reference for those unfamiliar with this initiative are at the PBS website, in an active section where one can learn about the 'Journey into the Unknown'. This is what motivated the exercise. See http://www.pbs.org/lewisandclark/into/index.html

that some newly created mid west communities needed expanded trade opportunities—and there was a sense that other nations were looking for the same routes. The expedition involved much more than the two men after whom it is remembered as well. There was an entire corps of people, with varied backgrounds and responsibilities. Their numbers were also expanded as the journey unfolded, with local guides proving vital (especially Sacagawea, the native American renowned for assisting the expedition). The team also iterated significantly as they moved along, using maps that existed to guide the initial steps but adding to these as they progressed, continually learning and adapting their path. Records show that they split into multiple smaller teams when faced with unexpected challenges (like rivers and mountains), for example, to gain lessons about the possibilities and limits of different routes along the way.

From going west to building state capability

We commonly conclude with two interesting observations from the go west exercise:

- First, there are different capability building challenges in the world. One (the 2015 challenge) involves doing things we know, using knowledge that has already been acquired, with very few unknowns about the context and very few risks. Chapter 2 calls this a logistical challenge (while others might call it a simple or complicated challenge (Glouberman and Zimmerman 2004)).[2] A second (the 1804 challenge) involves doing things we do not know, given a lack of knowledge about what to do, with many unknowns about the context, many different interests, and many interactions that

[2] Where a simple challenge is one that we know how to address and can address without specialized or expensive resources—like following a map in a cross-country journey, which anyone with a common driving license can do– whereas a complicated task is also something we know how to do, but which requires some specialized resources—like building a rocket to go into space, which requires hiring the right (expensive) people to use a known technology in a precise manner.

heighten risk. This is like the wicked hard challenges we discussed in Chapter 2, or what some call complex challenges (Glouberman and Zimmerman 2004; Snyder 2013).

- Second, different strategies are needed to address the different challenges (Andrews 2011, 2012, 2013). The relevant strategy to address a simple 2015 challenge is itself simple: identify a solution, plan its implementation, and implement it as planned, with strong oversight and the right people. The appropriate strategy to address a more complex 1804 strategy is also more complex: identify motivational problems, allow solutions to emerge from experimental iteration, ensuring continued and expanding authorization for work by teams of agents with highly varied skill sets and functional roles.

Whereas these observations arise from a basic exercise, we find much food for thought when reflecting on the challenge of building state capability in development. These manifest in two questions: (i) Do efforts to build state capability involve 2015 or 1804 challenges, or a blend of both?; and (ii) Do 2015 or 1804 strategies work better when trying to build real state capability (that fosters implementation)?

Is building state capability a 2015 or 1804 challenge?

We believe that all challenges tend to have both 1804 and 2015 dimensions. We have found empirical evidence supporting this argument as well, in a case survey study of 30 public sector reform initiatives that are considered successful enough to be included in Princeton University's Innovations for Successful Society (ISS) case database (Andrews 2015). We constructed the sample to be representative of a significant slice of the state building initiatives in development. The initiatives it includes range from efforts aimed at improving tax collection agencies to strengthening municipal management, providing better local government services, improving

central government policymaking, and beyond. These are common reforms in countries across the world, and reflect successful efforts to build capabilities considered important in many contexts. As such, we felt that a study of the challenges involved in these initiatives would provide a useful perspective on the nature of state building challenges in general.

We tried to code each case to see whether they resembled 2015 logistical or 1804 wicked hard challenges. This involved assessing the degree to which each case exhibited the characteristics listed in Chapter 2; being transaction intensive (or not), discretionary (or not), a service (or an obligation), and based on introducing a known technology (or not). The coding proved extremely difficult, however, in that each case had numerous dimensions that all exhibited different characteristics. Building a new tax agency involves some logistical challenges, for instance (like passing a new tax law that creates the agency) and many wicked hard challenges (like building the capability to actually collect taxes from itinerant but wealthy citizens). Similarly, establishing a high-level policy unit is partly logistical (identifying a location and a legal basis for operation) and partly wicked hard (determining what policies to examine, and how to build support for new policy ideas).

The study found that every single case involved a blend of challenges, some resembling going west in 2015 (being logistical) and others resembling going west in 1804 (being wicked hard, or complex). This validates our view that all efforts to build state capability involve various types of challenge, such that one never finds a pure logistical or wicked hard challenge. Interestingly (and importantly), however, we found that twenty-five of the thirty cases were dominated by wicked hard dimensions (that were transaction intensive, discretionary, involving obligations, with no known solution). This means that the challenge of building state capability is

likely always a blended challenge but has common, and commonly dominant 1804 dimensions that need to be addressed for real impact.

This finding resonates with our own experience in building state capability, where it is difficult to find any policy, program or project that does not involve a mixed set of challenges. We also find that most initiatives are dominated by wicked hard 1804 challenges, which commonly manifest in the downstream activities of the initiative (after 2015 logistical challenges have been addressed). For instance, education projects commonly include some school building initiatives, which are largely logistical (and hence 2015 in nature) but also include efforts to improve teacher and student performance in the schools that have been built (which resemble 1804 challenges). Internal audit reforms pose logistical challenges (in passing new laws and introducing circulars) that are often completed well before the many wicked hard 1804 challenges emerge (building buy-in to the idea of internal audit, establishing units across government to perform the audits, and ensuring managers use the audits once done). Many health sector projects focus on building capabilities to procure pharmaceuticals centrally (which is largely a logistical, 2015 challenge) and then focus on getting the pharmaceuticals distributed across provinces and districts, dispensed at health posts, and used as required by doctors and patients (all of which involve many 1804 challenges).

What strategies lead to success in building state capability?

Given the dominance of 1804 challenges in building state capability, we should expect that 1804 strategies are more prevalent in successful efforts to build such capability. This is indeed what we found when our coders examined the ISS cases (Andrews 2015), but with some caveats. The coders were asked to register a score between 1 and 5 reflecting whether (i) the effort was driven by a known solution or a problem and (ii) if action was pre-determined in a plan or emerged

through experimental iteration (contrasting ideas in the 2015 and 1804 strategies, as shown in Table 2 and Table 3). They were also asked to assess whether leadership and authorization was provided by one agent or multiple agents, and if the initiative involved a small homogenous team or a varied, multi-agent group (also probing differences in Table 2 and Table 3). Table 4 show their results.

Table 4. PDIA as the strategy required for 1804 state capability building challenges

	A 2015 strategy (Solution and Leader Driven Change, SLDC)	An 1804 strategy (Problem Driven Iterative Adaptation, PDIA)
What drives action?	A clearly identified and pre-defined solution **Average score: 2.4 out of 5**	A motivating problem that is felt by those involved **Average score: 4.2 out of 5**
How is action identified, carried out?	Reference existing knowledge, plot exact course out in a plan, implement as designed **Average score: 2.3 out of 5**	Through experimental iterations where teams take an action step, learn, adapt and take another step **Average score: 3.4 out of 5**
What authority or leadership is required?	A single authorizer ensuring compliance with the plan, with no other demands or tensions	Multiple authorizers managing risks of the project (by motivating teams, and more) and supporting experimentation **Multiple leaders in all cases; average number of leaders: 19**
Who needs to be involved?	A small group of appropriately qualified individuals	Multi-agent groups (or teams) with different functional responsibilities **Evident in all cases**

Interestingly, all of the cases received points for having both types of strategy in place, suggesting a blended approach to building state capability. However, as Table 6.4 indicates, evidence also shows that the successful initiatives exhibited more of an 1804 strategy than a 2015 one. These cases were more commonly motivated by problems than solutions, for instance (as reflected in average scores of 4.2 and 2.4 on these dimensions). Similarly, successes emerged more regularly from a process of experimentation and learning than through a predesigned, planned out process (manifest in scores of 3.4 and 2.3 on these dimensions). Finally, most successes involved multiple leaders (or authorizers) and broad groups of agents, with only a few led by individuals working in small groups of agents.

In reflecting on these results, we found that different strategies were introduced to address different challenges in most of the cases, which is why we saw a blend of strategies being adopted. An initiative that focused on reorganizing Indonesia's Ministry of Finance adopted a solution-driven 2015 strategy to develop standard operating procedures (SOPs), for instance (where the minister worked with a small team to define these procedures and ensure they were made available to the 64,000 employees) (ISS 2012). A more 1804, problem driven process was employed to ensure these procedures were accepted and used in the organization, however (where multiple teams were created to experiment with the procedures, gathering constant feedback on what worked and why, adapting procedures based on this feedback, and working gradually to a final product). We noticed further that the 1804 strategies were more emphasized in the cases because they were crucial in ensuring success in the initiatives. Indonesia's problem driven, experimental 1804 strategy made the difference between having SOPs and having an organization that ran according to SOPs, for instance.

This evidence points to the fact that strategies must be mixed in efforts to build state capability, but also that 1804 strategies are crucial in these efforts. This makes sense, given that the challenge of building state capability blends both 1804 and 2015 dimensions, but with dominant 1804 dimensions. One cannot address these complex challenges with a simple 2015 strategy (at least not on its own), but must rather embrace the realities of complexity with an equally complex 1804 strategy. In reflecting on this kind of strategy, one is reminded of Albert O. Hirschman's writing on implementation in development (Hirschman 1967, 35) and the importance of thinking about development projects as journeys: "The term "implementation" understates the complexity of the task of carrying out projects that are affected by a high degree of initial ignorance and uncertainty. Here "project implementation" may often mean in fact a long voyage of discovery in the most varied domains."

PDIA and your challenges

You will notice that Table 4 provides acronyms for the 2015 and 1804 strategies that tend to emerge from our class discussions (and were shown in Table 2 And Table 3). The first, SLDC, stands for Solution and Leader Driven Change. This is where an intervention emerges from a fixed solution, is implemented through a well developed and disciplined plan, and led by a highly authorized individual working with a small group of experts. The second, PDIA, stands for Problem Driven Iterative Adaptation. PDIA is the approach that we find most relevant in addressing complex, wicked hard challenges commonly involved in building state capability. PDIA is a process strategy that does not rely on blueprints and known solutions as the key to building state capability. In contrast, PDIA combines four key principles of engagement into a way of thinking about and doing development work in the face of complexity: (i) Focus on specific *problems* in particular local contexts, as nominated and prioritized by local actors; (ii)

Foster active, ongoing *experimental iterations* with new ideas, gathering lessons from these iterations to turn ideas into solutions; (iii) Establish an 'authorizing environment' for decision-making that encourages experimentation and 'positive deviance'; and (iv) Engage broad sets of agents to ensure that reforms are viable, legitimate and relevant—that is, politically supportable and practically implementable. You will probably recognize these as the key dimensions of an 1804 strategy, required to address complex challenges with many unknowns and risks. As Table 4 shows, these principles also feature prominently when examining successful efforts to build state capability in development.

We will explain each of these principles in detail in coming working papers—and describe how they foster an effective way of building state capability in the face of complex challenges. We are mindful that you are probably familiar with these principles, however, which are not altogether new to development. This is because PDIA draws on and synthesizes the ideas of others, and should thus be seen as building on a foundation of past work. We draw, for instance, on work about 'learning organizations' (Senge 2006), 'projects as policy experiments' (Rondinelli 1993), 'adaptive versus technical problems' (Heifetz 1994), 'positive deviance' (Marsh et al 2004), institutional 'monocropping' versus 'deliberation' (Evans 2004), 'experimentation' (Mukand and Rodrik 2005), 'good-enough governance' (Grindle 2004), 'democracy as problem solving' (Briggs 2008),'problem driven political economy' (Fritz et al. 2009), 'the science of muddling through' (Lindblom 1959, 1979), the 'sabotage of harms' (Sparrow 2008), 'second-best institutions' (Rodrik 2008), 'interim institutions' (Adler, Sage and Woolcock 2009), 'good intentions' versus real results (Easterly 2002), 'mulltiagent leadership' (Andrews et al. 2010), 'rapid results' (Matta and Morgan 2011), 'upside down governance' (Institute for Development Studies 2010), challenges of 'governing the commons' (Ostrom 1990,

2008; McCay 2002), 'just-enough governance' (Levy and Fukuyama 2010), 'best fit' strategies (Booth 2011), 'principled incrementalism' (Knaus 2011), 'radical institutional change' (Greenwod and Hinings 1996) and 'experiential learning' (Pritchett, Samji and Hammer 2012), among others.

PDIA also draws on many existing implementation modalities, given that others have developed practical methods to act on ideas that underpin the four principles. Examples include design thinking, rapid results implementation modalities, agile policymaking, the use of problem trees and Ishikawa or fishbone diagrams in problem analysis, problem driven political economy diagnostics, double-loop learning methods, and more. Some of these approaches (and others) are evident in the successful interventions we studied as part of our 30 case ISS sample. Many of these foundational ideas and implementation methods have not been widely adopted in development, however, or operationalized for routine use in efforts to build state capability. Most such policies, programs and projects adopt 2015 strategies exclusively (or as the dominant strategy) by pre-specifying solutions, locking implementation plans in place through rigid logical framework mechanisms, and relying on the authorization and work of individual reform champions. This bias towards 2015 strategies leads, in many cases, to gaps in state capability—where governments have the capabilities associated with 2015 challenges but lack the capabilities involved in getting 1804 challenges done (Andrews 2011, 2012). We see examples of this all over the world, and in different areas of development:

- A new court house in the Solomon Islands was effectively built (as a 2015 challenge, according to a 2015 strategy), but it did not foster increased access to justice (a predominantly 1804 challenge, demanding an 1804 strategy).

- A financial management information system was introduced to better control expenditures in Malawi (a 2015 challenge, adopted through a 2015 strategy), but money still flowed into the wrong places, given underlying political and social challenges (which are 1804 in nature, and will only be effectively addressed through an 1804 strategy).
- Brazil's Fundescola reforms introduced new management tools in the country's education sector (largely a logistical, 2015 challenge that was achieved through 2015 strategies), but these tools have often gone un-used in the poorer schools of the northwest, given capacity constraints, political complexities, and other challenges (which are all 1804 in nature and need to be addressed using 1804 strategies).

We believe that the PDIA principles combine into a useful 1804 strategy that can help close these kinds of gaps in building state capability. We believe, further, that PDIA can be applied in various ways, using a wide range of implementation options and modalities. PDIA is therefore not a single program or 'solution' in itself, but requires a lot of engagement from you—the potential facilitator, policy entrepreneur or reform catalyst—in determining what tools to use, who to engage with, and what to focus on. We will ask you to engage in this manner in coming chapters, chewing on the ideas we offer for all four principles and trying out some tools we commonly use to bring these principles to life. In order to do this, it would be useful for you to think about the challenges you are currently facing—and particularly about challenges where PDIA would be most relevant. These are the 1804 challenges in building state capability, where you do not know what to do, face real uncertainty and weak information, and need to work hard in motivating broad groups of agents. Chances are these are the challenges you are struggling

with the most, where you see low achievement and are most concerned about gaps in state capability. Take a minute to identify these challenges in Table 5.

Table 6.5. What do my challenges look like?

My challenges	The 2015 challenges	The 1804 challenges

References

Andrews, M. (2011). Which Organizational Attributes Are Amenable to External Reform? An Empirical Study of African Public Financial Management. *International Public Management Journal* 14(2), 131–156.

Andrews, M. (2012). The Logical Limits of Best Practice Administrative Reform in Developing Countries. *Public Administration and Development* 32(2), 137–197.

Andrews, M. (2013). *The Limits of Institutional Reform in Development*. New York: Cambridge.

Andrews, M. (2015). Explaining Positive Deviance in Public Sector Reforms in Developing Countries. *World Development* 74(C), 197-208.

Andrews, M., McConnell, J., and Wescott, A. (2010). *Development as Leadership Led Change*. Washington, DC: World Bank.

Andrews, M., Pritchett, L., and Woolcock, M. (2012). Escaping Capability Traps through Problem Driven Iterative Adaptation (PDIA). *Center for International Development Working Paper 239.* Cambridge, MA.: Center for International Development.

Barnett, W., and Carroll, G. (1995). Modeling Internal Organizational Change. *Annual Review of Sociology* 21, 217–236.

Booth, D. (2011). Aid Effectiveness: Bringing Country Ownership (and Politics) Back In. *Overseas Development Institute Working Paper 336.* London: ODI.

Chang, H. J. (2003). Kicking Away the Ladder: Infant Industry Promotion in Historical Perspective 1. *Oxford Development Studies* 31(1), 21–32.

Easterly, W. (2002). *The Cartel of Good Intentions: The Problem of Bureaucracy in Foreign Aid.* Washington, DC: Center for Global Development.

Evans, P. (2004). Development as Institutional Change: The Pitfalls of Monocropping and the Potentials of Deliberation. *Studies in Comparative International Development* 38(4), 30–52.

Fritz, V., Kaiser, K., and Levy, B. (2009). *Problem Driven Governance and Political Economy Analysis*. Washington, DC: World Bank.

Glouberman, S., and Zimmerman, B. (2004), "Complicated and complex systems: What would successful reform of Medicare look like?", Romanow Papers: Changing Healthcare in Canada, Vol. 2, 31 Forest, P. G., G. P. Marchildon, and T. McIntosh (eds.), University of Toronto Press.

Greenwood, R., and Hinnings, C. R. (1996). Understanding Radical Organisational Change: Bringing Together the Old and New Institutionalism. *Academy of Management Review* 21, 1022–1054.

Hong, K. K., and Kim, Y. G. (2002). The Critical Success Factors for ERP Implementation: An Organizational Fit Perspective. *Information and Management* 40, 25–40.

Lindblom, C. (1959). The Science of "Muddling Through." *Public Administration Review* 19, 79–88.

Lindblom, C. (1979). Still Muddling, Not Yet Through. *Public Administration Review* 39, 517–526.

Matta, N., and Morgan, P. (2011). Local Empowerment through Rapid Results. *Stanford Social Innovation Review* (Summer), 51–55.

McCay, B. J. (2002). Emergence of Institutions for the Commons: Contexts, Situations, and Events. In E. Ostrom (Ed.). *The Drama of the Commons.* Washington, DC: National Research Council, 361–399.

Ostrom, E. (1990). *Governing the Commons.* Cambridge: Cambridge University Press.

Ostrom, E. (2008). Design Principles of Robust Property-Rights Institutions: What Have We Learned? In K. G. Ingram and Y.-H. Hong (Eds.). *Property Rights and Land Policies*. Cambridge, MA: Lincoln Institute of Land Policy, 25–51

Pritchett, L., and Woolcock, M. (2004). Solutions When the Solution Is the Problem: Arraying the Disarray in Development. *World Development* 32(2), 191–212.

Pritchett, L., Woolcock, M., and Andrews, M. (2010). *Capability Traps? The Mechanisms of Persistent Implementation Failure – Working Paper 234*. Washington, DC: Center for Global Development.

Rodrik, D. (2007). *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth.* Princeton: Princeton University Press.

Rose, R. (2003). What's Wrong with Best Practice Policies – And Why Relevant Practices Are Better. *On Target? Government by Measurement*. London: House of Commons Public Administration Select Committee HC 62-II, 2003, 307–317.

Snyder, S. (2013), The Simple, the Complicated, and the Complex: Educational Reform Through the Lens of Complexity Theory, *OECD Education Working Papers*, No. 96, OECD Publishing.

Stewart, R. (2010). Afghanistan: What Could Work? *New York Review of Books*, January 14, 2010. http://www.nybooks.com/articles/archives/2010/jan/14/afghanistan-what-could-work/?pagination=false.