

Technology Modernization Board

Meeting Minutes

October 1, 2018

Attendance

PRESENT

- | | |
|---------------------------|------------------------|
| 1. Suzette Kent | Chair |
| 2. Alan Thomas | Permanent Member |
| 3. Matt Hartman | Permanent Member |
| 4. Maria Roat | Term Board Member |
| 5. Rajive Mathur | Term Board Member |
| 6. Charles Worthington | Term Board Member |
| 7. Matt Cutts | Term Board Member |
| 8. Grant Schneider | Alternate Board Member |
| 9. Dr. Erwin Gianchandani | Alternate Board Member |
| 10. Margie Graves | Alternate Board Member |
| 11. Darren Ash | Alternate Board Member |

OTHER ATTENDEES

- | | |
|-----------------------|---|
| 1. Elizabeth Cain | General Services Administration |
| 2. Emma Perron | General Services Administration |
| 3. Jennifer Hanna | General Services Administration |
| 4. Lane Becker | General Services Administration |
| 5. James Johnson | General Services Administration |
| 6. Matthew Cornelius | Office of the Federal Chief Information Officer |
| 7. Ben Skidmore | Office of Management and Budget |
| 8. Zack Proefreidt | General Services Administration |
| 9. Robert Burnett | General Services Administration |
| 10. Allison Brigati | General Services Administration |
| 11. Kaitlyn Schneider | General Services Administration |
| 12. Jenna Semsar | General Services Administration |

Meeting Minutes

1. The Board heard opening remarks from the Chair.
2. The Board reviewed and approved two full project proposals.
3. The Board reviewed and approved meeting minutes from September 10, 2018.
4. The Board adjourned.

Action Items

Voting Decisions

PROJECT DETERMINATIONS

Order	Project Title	Agency	Project Stage	Determination
1	Infrastructure Optimization	USDA	Full Project Proposal	Accept
2	Decoupling Architecture for Flexibility	GSA	Full Project Proposal	Accept

Voting Record

1. USDA: Infrastructure Optimization

Matt Cutts	Accept
Matt Hartman	Accept
Rajive Mathur	Accept
Maria Roat	Accept
Grant Schneider	Accept
Charles Worthington	Accept
Suzette Kent	Accept

2. GSA: Decoupling Architecture for Flexibility

Matt Cutts	Accept
Matt Hartman	Accept
Rajive Mathur	Accept
Maria Roat	Accept
Grant Schneider	Accept
Charles Worthington	Accept
Suzette Kent	Accept

Meeting Deliberations

1. **Welcome and Opening remarks** – Suzette Kent
2. **September 10, 2018 Meeting Minutes Review and Approval** – Suzette Kent
 - Meeting minutes approved as written.
3. **Break for USDA Team Set Up**
4. **USDA Infrastructure Optimization and Cloud Adoption Pitch**
 - Leveraging CoEs (GSA and agency representation through USDA)
5. **Board Q+A with USDA Team**
 - MR: Talking about low- moderate applications, is this a lift and shift?
 - This will be a combination, once they get out of the discovery phase they will have a better idea of what can be lift and shift and what can be reconfigured. This is a multi cloud environment.
 - CW: Where are these applications hosted today?
 - It is a mix; some are within the data centers of their agencies, but some are in Kansas City in the enterprise wide system
 - CW: Who will have access?
 - This is a combination of the cloud services team and the contractors selected
 - MC: Could you talk about some of the specific constraints – is this heavyweight or lightweight?
 - Tree Canopy is a heavy GIS system, it requires the system to respond during both peak and off peak hours
 - MC: Tech Stack they are using now / expect to use
 - This would be based on some of the successes of the COEs in phase I, but awards were made right at the end of FY18 to vendors coming in to support on these exact practices / a CICE pipeline for cloud adoption within the various landing zones / Microsoft Azure; where this funding will be helpful will be to drop it right into task orders with industry executives guiding how the tech stack should look. Phase II of the COEs is about moving the agency forward to get expertise in the tech stack.
 - MC: When writing task orders, are there people who can give advice/
 - Specific cloud providers are already “under the hood,” so there is expertise across the board; when applications get migrated they are going to the best place not just for FY19 but forever
 - AT: When they talk about ATOs in the risks.. isn't that pretty important to the payback schedule?
 - Some of things they have recently done, are working with the FEDRAMP team so they can plan ahead for all the controls and not have to redo them
 - Also running concurrency reviews for their risk management framework; been able to do a lean six sigma on the whole ATO process. Some of these are shared controls which have to be accounted for, but a lot of things are being done in parallel. The whole business process is re-engineering
 - AT: Will funding be used for this reengineering? → No

The following information is deliberative and shall remain confidential.

- If there is a new vendor that hasn't achieved FEDRAMP status but is better, USDA could sponsor that project
- MR: How have they been leveraging the workforce transition
 - Making sure they are training people to prepare for the cloud transition, and letting people know what they are doing today may not be what they do in the future
 - Business Modernization Office is being set up by the COEs at USDA, creating sample training plans, communities of practice, working with key early adopters etc.
- SK: As part of the team of process.. the ability to potentially look at making some of the artifacts around the workforce / workforce impact assessments would maybe be something the Board was interested in seeing to share with other agencies.
- MR: As they migrate to the cloud, is it application by application or broadly enterprise wide?
 - Enterprise-wide, but putting into appropriate buckets. This is being completed in sets not only with missions but with time it will be used (leveraging existing apps)
- CW: Is the schedule 12 months for all 10?
 - Yes
- RM: Would the cut-off / decommission happen the first year?
 - It would start in the first year, some may take about 18 months
- CW: Are these applications stand alone
 - Yes, mostly. They wanted to avoid reliance for this ask.
- MC: Are these "nice to haves," or part of the critical applications
 - In the middle, but leaning towards critical. The application is very important
- EG: Are there any interdependencies within the applications?
 - There are a few within the list of 10; there are 9 mission areas and 20+ agencies, the initial idea was to spread this across all 10 agencies, but to maximize the return on investment, mission areas are more limited with the idea that some commonality would want to be retained within mission areas.
 - DepSec of Agriculture wanted to close 37 data centers, each of these applications help set up for the closure of these data centers in some way
- MR: How much work has been done on the core infrastructure moving to the cloud?
 - Enterprise data centers are already leveraging this through the cloud, making sure they have that data entry vs. multiple areas of entry
- RM: O&M spending constraints; how can they keep this in place to achieve savings?
 - Part of the effort in identifying the right 10 to update, and looking at their current O&M
 - Constrained – at some point in the future, is someone wants to make a change will you say no?
 - In the new environment, this will not be funded through TMF but appropriations
 - O&M is predicated on cloud migrations outside of the original 10. These will be a springboard to additional applications. Major cost savings will come in when the 37 data centers are closed and employees are retrained to support the cloud activities.

The following information is deliberative and shall remain confidential.

- CW: There were some transactional services being migrated to salesforce in another project (farmers.gov)
 - This is a different project, but it is related. They will all be managed by the same team. They have a cloud broker and it all goes through the cloud broker. USDA has a digital service center, but also a platform service which will add efficiencies. Farmers.gov is also hosted in the cloud (salesforce) – front end is drupal and salesforce
- AT: Can they take us through the payback? There is a line about redistributing labor.. how will labor savings pay this back if people are just spread around?
 - A combination; doing different work either IT or within OCIO; there is an overall consolidation effort, but within mission areas people will be application specific vs. mission specific – fewer people doing data center work
- CW: How will they fund the ongoing applications?
 - Leveraging out year funding as well, the savings will be reallocated within USDA. Hosting will be centrally funded within USDA.

6. Break for GSA Team Set Up

7. GSA Database Transformation Pitch

- MR: When looking at milestones, and percentages...the 10-15% that's 3 full years. They will only have this small of a reduction?
 - Yes. This is based on the scope of the funding. Outside the TMF funding they will be doing additional migrations.
- GS: What is the impact to these is no other money materializes. The vendor still has significant leverage with 10-15%.
 - To make a significant impact to the vendor footprint – they are expecting to use the TMF funding as the way they set the agency up to get off the vendor. They would be unlikely to get the space to be able to do this.
 - DS: Once they are done with the 10-15% they can reevaluate whether the outcomes are what they wanted
 - This is being pushed from an enterprise perspective. They looked across the org. for where the impacts are, replatforming and aligning transformations to align.
- MC: Prototypes?
 - Have used AWS in the past (database can move into AWS) – and that works fine. But the risks were changing the code to go into databases. The hooks into the code were rapidly exposed. This was another point – not just a one-to-one move.

The following information is deliberative and shall remain confidential.

- Databases in play outside of the current system were best practices when they were implemented 15 years ago. The government has pivoted away from these capabilities – configuration management has changed. Rather than having a mashed up database expert SMEs can be used.
- MC: The schema conversion tool.. how often are triggers/procedures/straight forward uses impacted?
 - All of the bells and whistles came with the software – which impacts the risks. It is all about putting the agency in a better position.
 - Starting with DB Transformation – risks would be elevated. By starting with infrastructure and modernization, the chance of success is amplified. As capabilities are extracted from the current solution, there are homes for them.
 - Automation or as much automation as possible is now available (vs. manual entry.) Some standardization has been established allowing schema conversion to run across all databases, giving areas that there would be manual conversions needed. Database migration is very simple, it is identifying where app teams are needed and the level of effort. This also allows a timeline of specifics to be set.
- CW: Which application are they most excited to modernize?
 - Did an entire systems inventory to see from a technical perspective, where complexities arose. They names simple and complex applications that could convert. The databases on here are both embedded from a technology and a business perspective. The rent estimate application from PBS impacts a lot of users more-so than other applications listed.
- AT: Are these applications the biggest bang for your buck?
 - Originally – yes. But they really looked at it from the enterprise perspective. This is where they cared about what the business teams had to say in terms of their technical backlog. They will have a big hit on the contract, but will also help set the infrastructure moving forward. Business was not the only criteria.
- AT: How should we think about the 3 perspectives? 2 of the 3 scenarios have a negative net present value.
 - This is only one thread within the larger transformational project. The whole transformation absolutely delivers value, but this is just a small part of the whole project. The impacts of 10-15% does not put them in a better position on

The following information is deliberative and shall remain confidential.

the licensing side. HOWEVER, the value in this project is in the creation of a snowball effect in the transformations.

- The dollars and cents have to make sense, but that is not the only criteria they looked at. It is important to give all 3 scenarios. What is good for government does not always equal a flat bottom line.
- MG: Artificially truncating the continuous value – setting things up for the future kind of drops a line in the sand that doesn't give a true view of ROI, which we have to do.
 - Doing a small part of the project and then pivoting to better outcomes.
 - MG: If we do this the mark, the return comes in exponentially
- CW: Are each of the databases separate?
 - They are all part of one contract.
- CW: The applications on top of them, what type of applications are they?
 - We run the biggest portfolio systems, allow you to estimate rent to predict where the future will go. This is available in every region of the US
 - This is an Oracle database with other software on top of it. The database itself would be transitioned. The applications impacted are all on Oracle.
 - There will be choices made in applications as the project goes on. What the team may find is that some of these applications may be replaced by other, more impactful applications
 - This is a hybrid estimate; if you look at some of the OFCO applications, they are end to end on the proprietary system. If these types of technology were consolidated, what technologies would be chosen to allow operational efficiencies?
- MG: Really talking about taking the middle work and architecting them so they don't get back into the same situation?
- AT: Does the money change though? The money line does not change out to FY29.
 - The financial template is only 3 years out in FY21.
 - Oracle is extremely difficult to negotiate with unless there is a major change
- MC: How much work will be done by feds / contractors?
 - Heavy reliance on contractors, but will be working to train up Federal workforce (funded by DM&E)
 - Buy first, build as a last resort, and extend out to workforce.

The following information is deliberative and shall remain confidential.

- AT: How could this be tied back to the citizen?
 - The government will be more able to adjust to the desires of the citizen and pivot quickly. Currently, it is a very slow change. This extracts the data layer from the database and gives better analytics which allows you in turn to present out to citizens.

8. Board Q+A with GSA IT Team

9. Review and Discussion of Phase II Pitches

USDA:

- MG: Like that they are working to close their data centers as much as possible (a better approach than they originally started with)
- SK: This is the first one we have seen that funds further projects and pays back the TMF at the same time (there are about 20 applications behind this one) which is what we want – continuous reinvestment
- SK: This was one we reverted, there was some concern about how it was different than any previous work – what do we think?
 - CW: Not a lot of depth in the team that was presenting as far as the stack, architecture, etc. (ex. Farmers.gov is on salesforce on drupal)
 - MC: Don't have the technical expertise to do it themselves – have to know what good looks like to make good happen. However there are some good things, it is not much money, they will learn a lot of lessons, opportunities for people to step in learn. BUT, they don't have a great path as they lack technical support
 - CW: The small size of applications and quick timeline is a plus, and would be surprised if they could do this in 12 months. Things didn't like were the talk of centralizing teams for DevOps; don't necessarily trust this team to set up the cloud correctly
- RM: Liked the fact that they were decommissioning – constraining the O&M costs seems like an improper way to create cost savings → something is going to snap in the outyear
- AT: Would give them credit for putting some hard numbers down
- RM: Question... the whole idea of a flywheel effect and moving to the cloud for savings, is something we hear but the numbers don't work. We are asking them to play with those rules. From a Board perspective, do they want to break that myth? It's cheaper in the long term, but not the most painful part – the transition.
 - SK: Agree that the transition is usually most expensive, but the fact that they have a goal to close down the data centers is good.
- SK: A little worried that they were dancing around the workforce question – it's NOT less people when people are being deployed elsewhere.
- MG: Was hoping they would apply these people to acceleration
- SK: There is a goal to create two agencies out of the DC area
- MR: Thinks they will have a lot of lessons learned from the original \$5 million. Bigger question on the stack, if they look enterprise wide... they need to consider their data centers moving forward.
- SK: CoE lead at USDA was here, they have done a full scale application rationalization. They have identified about 45% of the agency that can move to the cloud. A lot of this is lift and shift stuff.

The following information is deliberative and shall remain confidential.

- CW: Wish Darren was here, but it feels like this is a disconnected proposal from Farmers.gov, which is one of the reasons we sent it back.
- CW: If he remembers correctly, they are also in the cloud (the back end is in salesforce)

Thumbs up Thumbs down on USDA:

4 Up – 3 Down

- GS: The fact that it's a small amount of money feels like its an investment in their learning to see what they do. Pragmatically, it seems like they did not have the right team here today. Are there other things we could fund that would be more beneficial?
- MH: Without having seeing any proposals previously, it wasn't clear how it would be successful. Given some of the lack in the cost – without some of the prior knowledge provided by Suzette – wasn't sure the schedule of the dollars
- RM: Should they scale back ?
 - MC: Don't think they have the right team in place, but there is so much appetite from the secretary, White House, etc. They will probably get a lot of experience in figuring out to do the project.
- MR: 10 applications is aggressive, but they would learn a lot and would get stuff done. When considering the infrastructure and architecture – lessons learned will be applied elsewhere. Yes is a yes because this is work that needs to be done.
- SK: When she looks at this, it is four agencies. Is 10 too many applications? Would 5 applications given the concerns be a better investment?
- RM: There is no doubt they are going to learn...or readiness?
- AT: Lets say we give them the money, what could the Board give them as guidance to steer the outcome?
- SK: The investment could just be turned around and applied to contractors. Should we have them come back and share the learning plan, and extensive details in each applications before starting the deploy phase – would that be the guidance they need?
- EG: Likes the approach of having them do two transitions at a time, but the issue of expertise is a little concerning.
- MC: Can the centers of excellence help them get over that hump?
- MR: there is so much free training on these types of workforce transformation.
 - MC: It is in the incentive of the commercial cloud vendors to pull people along and show them how it works
- MG: It would be hard to split out specific applications. This is an issue of platforming. We have to show where the people fit into the equation at some future milestone to see how capabilities are embedded in staff moving forward (where DO the staff go to generate savings?)
- MR: We are not their IRB, so how far in the weeds to we go?
- RM: Once we vote... we own it.
- SK: What if we put a deliverable on them to get through the discovery and design sprints, but there has to be a full workforce plan before giving the funding to go into 12/1. That way we can provisionally say you have the funding, but we didn't hear enough in your proposal about the workforce plan/strategy.
- SK: Francisco seemed uncomfortable, it seemed like the rest of the team probably knew some of the answers

The following information is deliberative and shall remain confidential.

- CW: You can spend a lot of time and money planning for the cloud and setting up the cloud, but then nothing actually happens. Doesn't really want to do a proposal for the planning phase, but that's why he liked this plan.
- MG: We mostly need to be clear about the people part.
- SK: We could put this deliverable back in, and if they don't they will be cut off at \$2M. A month to month breakout could be helpful.
- SK: Is still encouraged by a repayment plan that allows reinvestment.
- CW: The CoEs... what is their role?
 - AT: They helped them come up with this
 - MC: They definitely helped with this proposal
- AT: If they had the cloud adoption lead from GSA give the pitch, it probably would have been a very different pitch.
- SK: The whole concept of the CoEs is to teach an agency to build its own skills. This would be the next phase of the CoE process. CoEs are supposed to go away at about 18 months.
- CW: If they don't get all 10 done, will they still pay us back?
 - BS: They will be paying us back
- MH: Is there a cheaper way to see if the CoEs work?
 - The concept of CoEs is to run independent of this. This is the project they want to run separately from CoEs – USDA is trying to hire cloud skilled workers.
- RM: Seems like there is no confidence in the team, but we want them to succeed? Should we just give them a smaller amount of money.
- SK: We need to park the 5 and parce it out if we want to go in on this project.
- CW: We would have a pretty good feeling in December. There is an option to cut it off after the first phase if it is not successful (LC.)
- SK: Specific details will be added into the contract agreement with them.

GSA:

- SK: A government-wide statement: Knows across the CIO council, the understanding of how we do this and what it actually means (viability, process, value impact etc.) is something that many parties care about in many agencies. GSA is in a particularly bad position with this vendor – but they had done things that would lead us to believe they have a good view on how to do this. Only concern from the Board perspective is not declaring war on the vendor. How we message this is that we are trying to understand how just as GSA is the agency that ensures competition, is that we ensure competition in a space like this. The Board needs to be VERY careful to never use a vendor name.
- GS: A potential 10-15% reduction.. don't see the license costs getting us where we want to be. Conceptually though, this is a good idea of where we need to go, and something we have to do. It may be perceived as us declaring a war on the vendor though. How will this impact TMF in the long run though? (Congressional lobbying)
- CW: Doesn't totally understand the premise of the project, it seems like the work is a lot of re-architecture of applications – which is the same as a lot of other cloud applications. The enterprise licensee is probably a lot in itself. Suddenly you are paying X amount of dollars in perpetuity for these applications. Didn't understand why it was pitched as a database transformation.
- RM: The question about pulling apart the front end, middleware, and back end seemed like a crucial part of this project.

The following information is deliberative and shall remain confidential.

- MG: Seems like middleware with these companies has been hooked in to the totality of these applications. To whatever extent we can create modules would be helpful.
- SK: What the citizen gets out of this... addressing changes more quickly. They sit a long time in the pipeline to get the vendor to do anything for them. Is this because of who pays the most or a resource issue? It can take up to 6-8 months to get attention on an issue. Whether this translates to a citizen impact unclear but this is a citizen facing environment for sure.
- MC: For them to get off the middleware, this is an interesting framing. This is the meat and potatoes of modernizing applications that a lot of people don't look at.
- SK: We would TALK ABOUT THIS as modernizing legacy applications for broader applicability.
- CW: Wishes the pilot had been a decoupling from the database.
 - MC: He mentioned HHS and NASA as being interested (HHS has a better response rate but just as bad pricing. Specific customer issue where the vendor did not react for a long time). NASA has also had issues, but their work was so intricate they couldn't find anyone to do it.

Thumbs vote:

6 Yes – 1 No

- AT: A stipulation of we are going to fund this.. the project was pitched to the IRB and not improved. One of the ways they want to pay this back is through the WCF which was said no to internally. There should be savings, but the bill for services should NOT go up to fund this.
- BS: there was quite a debate at OMB about this, on principle when other agencies come to the TMF, we look at the top line. We want to prioritize repaying the fund through savings.
- LC: They wanted to have contingencies for if they are not able to repay with savings. This team is very conservative with their approach. We don't know what could happen in 2021 if we don't start making plays to get off of the database. An increase to the WCF is a last resort option to repay the TMF.
- AB: IRB did not take it off of the table. In 3 years or 2.5 – this bill is going to go up again.
- SK: We have agreed as a stipulation that IRBs have to be supportive to get support on the project, as well as CFO support.
- AB: The IRB recommendation was to go to the TMF (deferred from the IRB)

10. Vote on USDA infrastructure Optimization and Cloud Adoption Project

11. Vote on GSA Database Transformation Project

12. Next Steps and Confirmation of Action Items

13. Adjourn