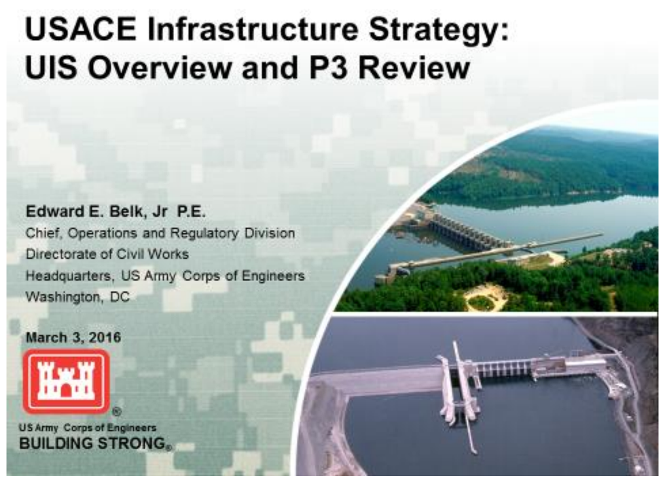
USACE Infrastructure Strategy: UIS Overview and P3 Review

Planning Community of Practice Webinar

March 3, 2016

Presented by Edward Belk, Jr. P.E., Chief, Operations and Regulatory Division, Directorate of Civil Works
Moderated by Camie Knollenberg, Planning Community of Practice (Headquarters)



Camie Knollenberg: Good afternoon or good morning, depending on where you're at. I am happy to be your host today. This is Camie Knollenberg. I am on detail with the Headquarters Planning Committee and Practice. We've got our webinar series today on Alternative Financing. Alternative financing is a key component to our infrastructure strategy and Civil Works Transformation. We've got a very - fiscally constrained federal climate right now, so we're exploring some alternative financing approaches.

Mr. Edward Belk is a member of the Senior Executive Service. He is serving the Corps as the Chief of the Operations and Regulatory Division in the Civil Works Directorate at Headquarters.

We are very pleased to have you with us today to talk about the USACE infrastructure strategy, UIS overview and P3 review. So do you want me to advance the slides for you, sir?

Edward Belk: Okay, so good afternoon - Edward Belk here from headquarters. I've got a team here with me. I would mention Ms. Pauline Thorndike, she's my program manager for Alternative Financing and so if I misspeak, she will clean up at some point in this presentation. I really appreciate your time this afternoon - I appreciate Beverly [Hayes] and Jodie [Creswell] giving me time to visit with you. What I'm going to do is talk about infrastructure.

That's really what this presentation is about - infrastructure investment and in the Planning Community you all are about shaping investment decisions that go to that. So I'll try to weave in a little bit of a planning thread as I walk through this. But it really is about investment and infrastructure and how to do so.

So if you look at our challenges and opportunities, our investment challenges and infrastructure are not unique - obviously to the Corps or even to this country - they're international. It's a global challenge. The world economic forum estimates that by the year 2030, some $60 trillion in additional investment are going to be required internationally.

Not to build out third world countries, not to make everything perfect around the world in the way of infrastructure. The $60 trillion is just maintaining current levels of economic activity at current levels of quality of life.

And so that's a big bill. If you look just in the United States, the United States' share of that - $60 trillion by 2030 is about $7 trillion, and, you know, that's a pretty significant investment.

And they also estimated that probably half or less than half of that $6 to $7 trillion bill for US infrastructure will be fueled and financed with traditional public sector - public infrastructure approaches. And so, we're left with the obvious question - how are we going to close the gap?

And again, that's just the United States. We're just a part of that discussion. If you look at the Corps itself, we currently own just over 3,000 operational assets around the nation. And when I say asset, I'm talking a dam, hydropower project, a lock, large pieces of civil works infrastructure.

And so the replacement value of that Corps infrastructure is about a quarter-trillion dollars and if you look at that infrastructure it was built out primarily - the center mass of that was built out from the 30s to about the late 60s or early 70s. So the vast majority of infrastructure is like me - it's aging infrastructure, and so it takes it a little more investment to continue to sustain performance as that portfolio ages. And you can see the various asset classes that we've got.

And by the way a lot of those investments were the product of the planning process. We went through and identified federal interest - Congress agreed and funded them and so there we've got this - the various types of assets at play around the country.

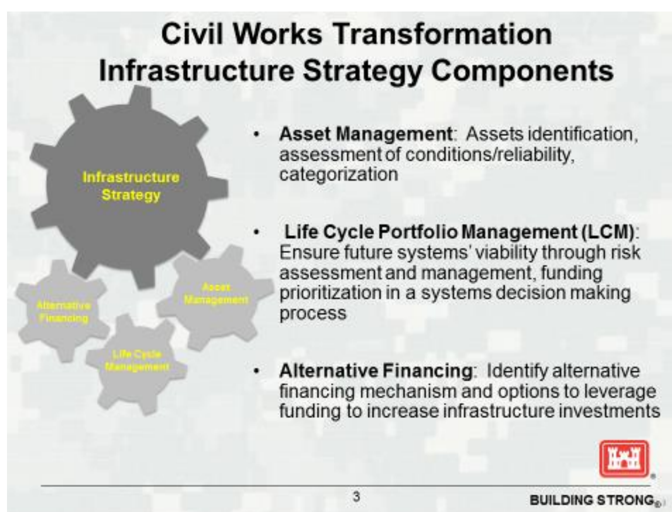
But if you look at, nationally, at the Corps construction backlog, what that really is, is all of the projects that have been processed via reports to the Congress and they have authorized for construction, but have not been funded yet. There's really it's a little over $60 billion in infrastructure that's kind of sitting, waiting construction. If you look at ASCE, the American Society of Civil Engineers, last year in their infrastructure report card, they assigned a grade of D to dams, levees and inland waterways around the nation.

You know D is not where you want to be - I wouldn't think. If my kids came home with a D, it would not be happy news. And so they've described some $140 billion in investment required by the year 2020 just to get up to a C or a B.

So I try not to do math in public but that looks to me to be about $200 billion worth of requirements without even breaking a sweat. That doesn't include hydropower, doesn't include recreation - doesn't include a lot of other mission sets and mission areas that we have. I say all that to describe to you this giant math problem that we have as an agency. Because we've got to service that requirement plus new investments that we make in construction, plus our investigation program.

All of that has to be serviced with a $4.6 billion annual budget - so of that $4.6 billion, maybe in any given year only a couple of billion is available to get after that problem - that gap I just described to you. So that's a hundred years and that's if nothing gets worse. So what do we do about it?

The approach we're taking as an agency is to try to bridge that gap is our infrastructure strategy.

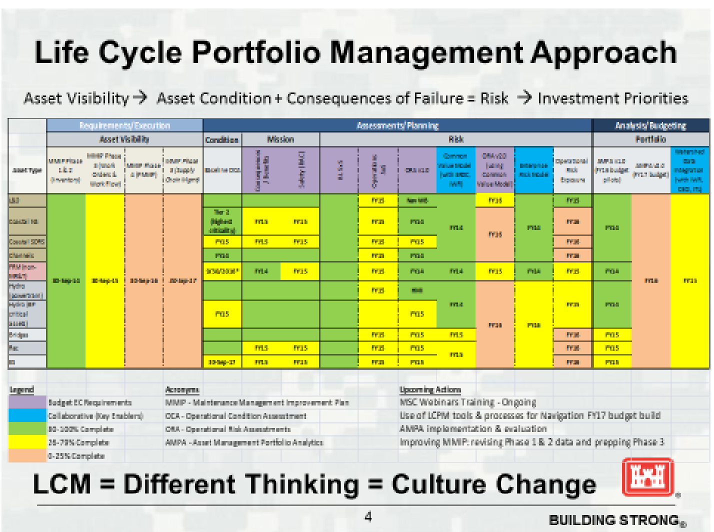


There's three elements here that we're focused on - one is asset management and that's really just a matter of looking across the enterprise and making sure that we know what we have on the books and the condition of that asset and the reliability of that asset - whether it be a lock, a dam, a hydropower plant, a recreation site or what have you. It is visibility and understanding the conditions.

The next thing we are looking at is life cycle portfolio management. I use a lock and dam system to describe the intent, and as planners as you look at, for a watershed type approach, you'll understand this. Life cycle portfolio management is really looking at the lock system. One lock is interesting - it's fun but it's really useless. What matters is the system of locks that will move commerce. And so we have to do a better job of looking at systems rather than fixating on the eaches. And that's hard not to because we're funded on the eaches - we're authorized on the eaches, but we perform at a system level. So we're looking at not just assets by individual projects and individual assets, but those systems and how they work and how priority is shifted when you start looking at a system.

And the final thing is Alternative Financing - how do we look at alternative ways to finance and fuel the requirements that we've got across the portfolio and this presentation will deal a lot with that third piece.

Okay I could drag you through this slide and make your head explode - I will not do that to anybody today. This is a maturity model that we use in the asset management world to understand how we're doing and how we're maturing in our approach to categorizing the condition of our assets and proper management and investment in those assets. There are only three or so things I want you to take away from this impressive slide.

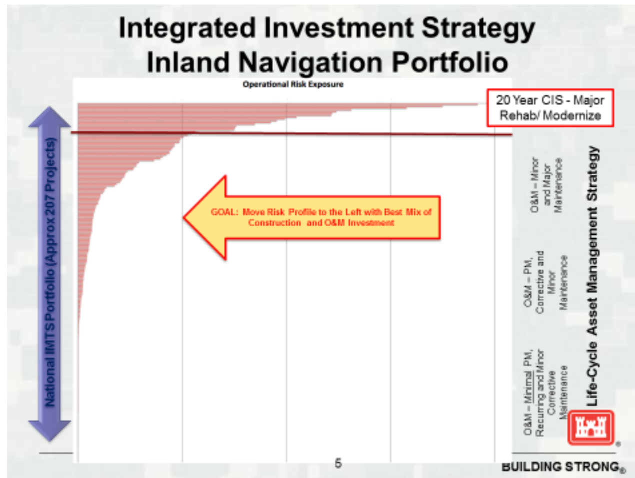


To the left you can see the various asset types that we have as an agency from lock and dams, recreation, the channels, what have you. So the first thing you got to do - know what you've got on hand.

If you go up to the top just where it says Asset Visibility - that's really the next thing I want you to focus on because you can't have any kind of portfolio management or asset management program if you don't have visibility on all your assets - all your locks, your dams, what have you.

And once you do that then you can start assigning and we do - we're assigning asset conditions to all those assets - understand what shape they're in. Once you understand that then you can look at that asset and look at what the consequences of failure of that might be. What will happen if that asset fails or is no longer there? So when you combine the condition with the consequences, those two things together provide a risk quotient for that asset. And that is the secret sauce, because that's how we're now making investment priorities for at least existing assets.

Where do we need to invest precious O & M dollars to sustain - not just individual assets, but systems of assets? So that's an important piece that we're using across the Corps to help us shape investments in a tight fiscal climate. Next slide.

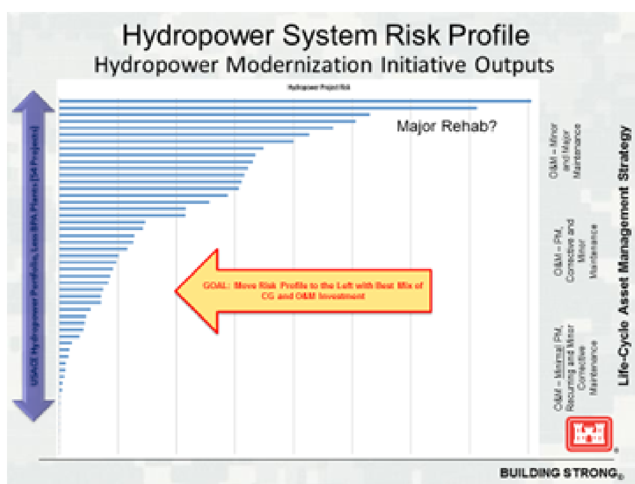


So one of the outputs or outcomes of using this kind of approach is kind of reflected on this slide. This reflects the risk profile of our inland navigation portfolio. All the Locks in our inland navigation system.

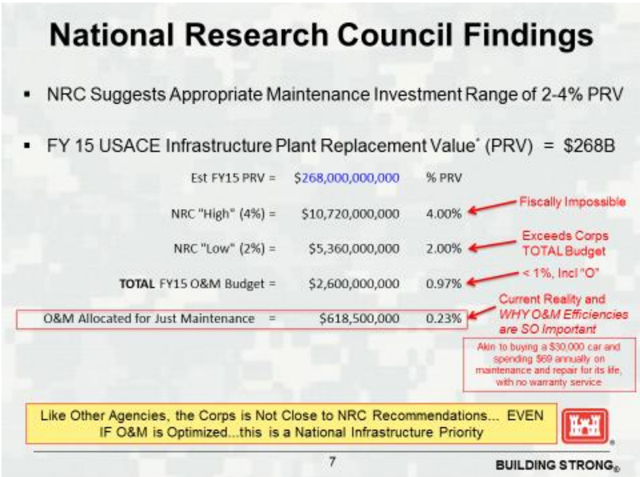
There are some 207 of them - it may be a little hard to see but there are 207 little red lines on this chart and they represent the risk exposure at each of those based on conditions, times, consequences of failure, economic consequences, life-safety consequences.

And so what that does is very quickly you see that those locks in the upper 10% of this slide are where most of our risk currently resides across the system.

And so what we're doing is looking at that. Congress directed in WRRDA '14 that we develop a 20-year capital investment strategy to get after and buy down that risk across the system in coordination with industry, and we've developed that report. It is currently under review at OMB, and it will be looking to invest about $5 billion over the next 20 years - to again surgically, and appropriately, buy-down risks where those dollars will have the most impact.



And this is a similar look at our hydropower portfolio again. We focus our investments both on O&M and rehab on those items that are of the highest risk - we're at the top of the slide - again buy-down portfolio and system risk.



Next slide. And so the National Research Council, a few years ago, established an appropriate maintenance investment range for large transportation and capital investment or capital infrastructure.

They said that you really need to invest about two to four percent of the replacement value of those assets in maintenance in any given year. So, you know, I told you on the first slide that our - we have just over a quarter trillion dollars in assets around the Corps.

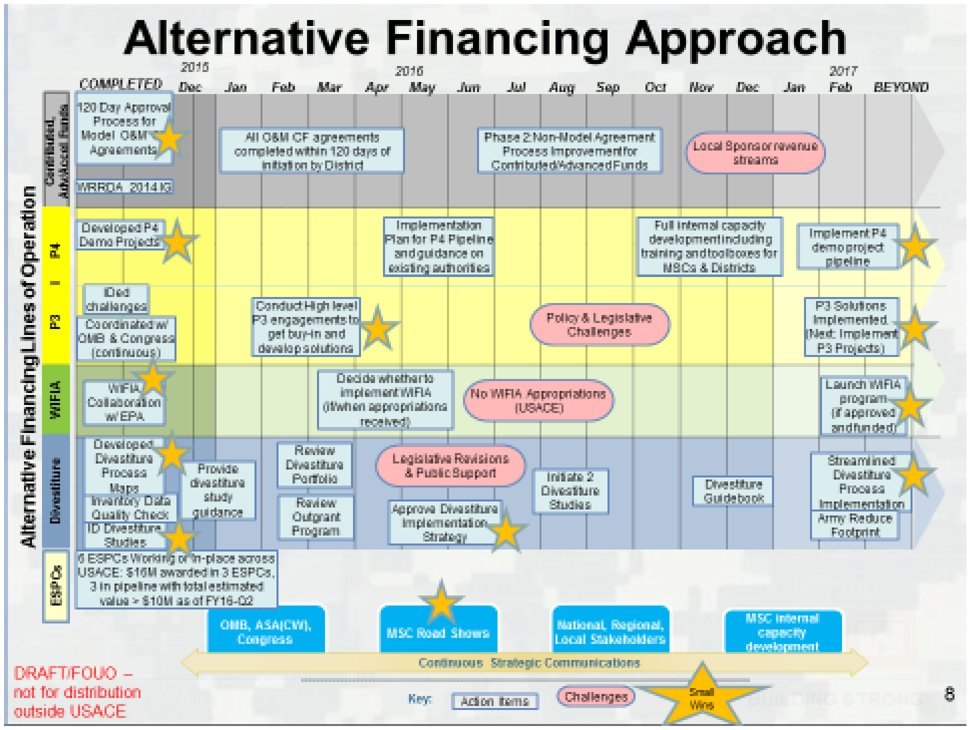
If you look at the total volume of those, and using the National Research Council findings, if we were investing in maintenance, 4% of the value of that portfolio, we would be required to invest $10.7 billion dollars a year. If you go down to the low side of the NRC recommendations, two percent, that's $5.4 billion. We had the highest appropriations history this year - $6 billion. And so it would almost consume all of that if we went to the low end.

So go down to the bottom at the little red box where we actually are - at least in FY15. We're investing about 0.23% of the replacement value each year across our national portfolio. That's sort of like having a $30,000 car and spending about $69 a year on maintenance. My kids might try to get by with that because you got dad taking care of them, but infrastructure won't last long that way. And so it might work a year, but it won't work very long...

So that's a long-term challenge. I'm not describing a challenge that is anybody's fault. Its - our fiscal realities are not going to change - that investment level was not going to increase in the current fiscal world that we're in nationally. As a nation we grapple with what are our priorities.

I'm describing this to you because it means we're going to have to look to ourselves to figure out how to bridge that gap in investments. I mentioned something earlier I want to highlight: Congress afforded $6 billion in investment in the Omnibus this year for the Corps - the highest in history. Anytime any of you interact with partners, stakeholders and members of Congress, say thank you. Make sure that you go out of your way to say thank you. Because Congress did that - not because they love us, although I hope they do. They did that because they see value in our services and in the infrastructure and in the things we provide.

The President's budget for FY16 was $4.7 billion, and so we got almost a 28% bump up to get to $6 billion this year and they provided those additional funds at the expense of something else. They valued our stuff more than the stuff of other agencies, and so that should not be lost on us and we should never forget to say thank you because of that choice they made to invest in what we do and what you do. Next slide.



So what are we doing - we're not sitting around wringing our hands, what we're doing is looking after things we can do to address the problem ourselves.

Alternative Financing is the key part of what we're doing to sort of bridge that gap and I'm just going to highlight a couple of things. We'll spend most of the rest of the time talking about the yellow line, the P3 - P4.

But starting at the top - Contributed Funds. We issued guidance under Mr. Stockton's signature a year ago that established a standard MOU or MOA that we could accept money from partners who wanted to contribute funds for maintenance dredging. Prior to last year, when a sponsor came to us with money and said here's $10 million, please dredge my channel, it was taking us on an average about 330 days to go through the process to take and receive and apply those dollars. So what we've done with a national team, is look at that and now we've mapped out a process and if you use the standard MOA with a dredging partner, we'll turn that around and get to a decision within 120 days.

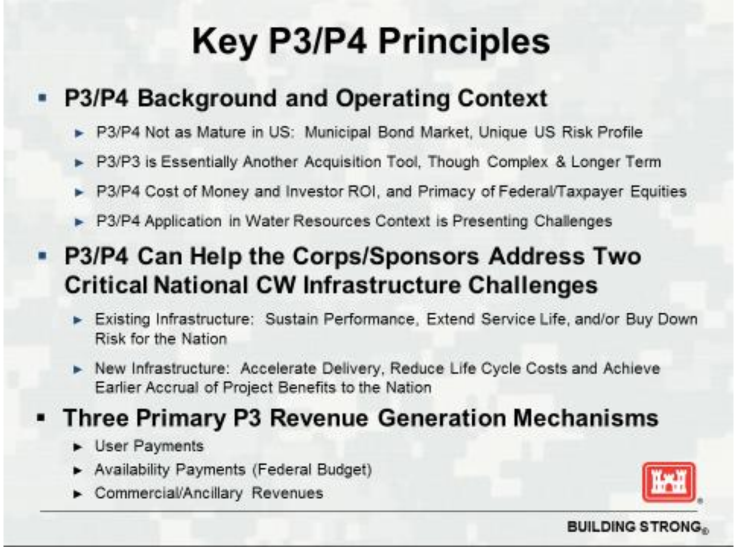
So we've streamlined it. We've already been applying that policy - I think our average right now is around 135 days. We've still got a little room to improve but the point is much better than 330. So if you have sponsors or partners who are looking for maintenance dredging and have funding, please test us out on this.

WIFIA – the Water Infrastructure Finance and Innovation Act - this was authorized in WRRDA '14, and is modeled after similar programs and other agencies, particularly the Water Program in EPA. This authority has not been funded for the Corps, it came with $10 million in appropriation authority but it was not funded in the appropriations bill and so right now our implementation guidance is fairly simple. Once we get funding we will issue more guidance on how to and how we will implement this. I don't want to pump a lot of sunshine here because this is basically a grant program and we fundamentally are project financed. We don't really do grants and so it will take some institutional work to be able to implement a program like this. We are working with EPA on the possibility of leveraging their capacity in this regard because they have a very mature institutional capacity, but will see where Congress goes, if they choose to fund it.

The next area is divestiture, so not only are we looking at how to service an existing infrastructure, how to bring on new infrastructure, but we've got a lot of infrastructure that's in place now that's either exceeded its service life, or is no longer serving an intended purpose. And a lot of that may be - we may be having to invest money in it every year for whatever reason. So we're looking how to take stuff off the books to either transfer it out, or be authorized or do other things to avoid - to lower our exposure financially.

And even if we're not spending money to lower our liability exposure, there could be liabilities attached to that infrastructure, so we have a national team lead by Mr. Bill White out of LRD that's looked at that and we laid some options down and established a process to streamline it. We got questions yesterday in the Approps hearing on requesting what Congress can do to help speed up divestiture or do we need authority - more authority to do divestiture.

So a lot of work going on and the final area is Energy Saving Performance Contracts and - won't spend a lot of time here because we got a whole cottage industry attached to this. There are quarterly briefings and Ms. Darcy and in every one of your districts and regions you have folks who are dealing with this - mainly on the operations side, where we're looking at performance contracts to improve a lot of our assets. Next slide.



So transitioning and pivoting a little bit now to P3 and P4. By the way, P3 is public-private partnerships, P4 is public-public private partnerships. You can add as many Ps as you care to. But I would submit that most of the USACE opportunities will be more in the P4 arena, because most of what we do is with the cost-sharing partners, so we'll have generally two public secretary entities involved, the Corps, and its partner, and then of course the private sector - that's the other P.

A little bit of background that we've learned in our journey over the last 18 months or so, and that's that the P3 market in the US is not as mature as in other countries. And there's a lot of reasons but there's two big reasons for that. One is the municipal bond market in the US has been the weapon of choice to build out infrastructure in this nation since the 70s or there about. And so it's by far the most mature in the world, very robust. That has precluded the need for - or precluded sort of a demand signal for P3s, P4s up to now.

I think what's changed though if you look now, that infrastructure portfolio I described to you is getting older and we're looking at recapitalization decisions. That means that additional investment above - maybe and beyond what the municipal market can support.

The other is the unique US risk profile. And what that really means is if you look at a P3 transaction, that really is a long term contract - 20 to 30 years. And so you have a transaction that would, for us and a sponsor and a private consortium would enter in to do something, either to build something and operate and maintain it, or build it and maintain it, or build it and operate it - it could be anything we want and finance it. But in order to cover that investment, it's going to be a 20 or 30-year timeframe and guess what - our election cycle isn't that long. So over that lifetime that transaction is going to be at risk as new people are elected, new policies are put in place that may frustrate, undermine, or challenge that 20 or 30-year transaction.

We present more risk in that regard, political risk frankly, than maybe in other countries. That doesn't mean it's impossible, it just means another risk that has to be quantified as we look at what a good transaction looks like.

Another point is that P3 - P4 transactions really are just another acquisition tool. We do acquisitions all day, every day in the Corps of Engineers. Very complex acquisitions from design build to early contract involvement in some cases, in my old command in MVD. So this is really another acquisition vehicle but it is very complex and as I've pointed out, very long term. So your crystal ball has to be a little bit better. You have to do due diligence in allocating and understanding risk between both us and the private sector. And it's more difficult, but it's a difference in degree, and not a difference in kind.

So the other is the whole bill, the cost of money. When we first started working this stuff here on the Hill and with OMB a year ago - they were saying you know, Belk, you must be insane. You want to do this deal with a private sector and have to cover the cost to capital, whereas the Corps and the government can borrow money at practically zero percent interest. So how can that be a good business model?

Well the statement by itself is true - the cost to capital has to be covered and it will be higher when you go to private sector under a P3 transaction. But here's the deal, if you look at our delivery model right now, and the way we're funded, a large project - a $2 billion plus project could go on for 15 or 20 years. Every year that construction drags out, that imposes additional risk - and it comes in a lot of varieties.

It can be materials risk, as material costs increase, it could be weather risk, it could be financial - all kind of different things come into play. A P3 transaction - you come in and fully fund that upfront with a private sector funding, execute, but only over five or six years, rather than 15 or 20 years. And the value proposition is that you reduce the risk and the cost growth so much until the cost of capital is not a big driver in the overall context.

The other thing that you do is reallocate risk. Because in a P3 transaction if we're having a partner build and maintain something over the lifetime of that asset, and they're not going to get paid if that asset doesn't function, and they know they're going to have to pay to maintain it, they're going to do things on the front end to lower the cost of maintenance and operation of that infrastructure.

So it reallocates risk and causes different thinking over the life cycle of the asset. So while yes, the cost of money is higher under a P3 because you're dealing with private sector, the value proposition more than offsets that.

And finally, you know, there are P3s in play and around the nation - a lot of them are in the transportation sector. The Commonwealth of Virginia, has used P3 as a tool for highways. But if you look in the transportation sector, it's very cleanly vertically aligned. You have the

Department of Transportation in Washington, D.C. and a transportation department in every state. You've got a transportation department in most, if not all counties and most big cities. So it's all very vertically aligned and on top of that you've got a funding mechanism through gas tax that's very well understood and the risk - the financial risk is very, very modest because it's well understood.

Contrast that to the water sector. You've got the Corps at the federal level, you have EPA, you have other agencies that do water nationally. At the state level, some states don't have any water resources agency or interest. And those that do are uneven, and so it's not consistent. And at the local and county level, it's almost nothing. So that vertical alignment is not there, nor is the financing engine for water resources, because the Corps is project-funded, other agencies may be more programmatically funded. It just creates another layer of complexity that has to be managed.

But if you look at P3, P4 - this is not a solution in search of a problem - I can't overstate that. What we're looking to do is solve one of two problems. For existing infrastructure - we want to sustain performance, to extend service life and buy down risk for that infrastructure. That's the existing stuff now because at the end of the day it is really about performance and meeting the needs of the nation in a fiscally constrained environment. For new infrastructure, it's about accelerating delivery, reducing life cycle costs as a result of accelerating delivery and then achieve earlier accrual of benefits.

So that's the value proposition and the example I give is for my experience in New Orleans, the hurricane system there - post Katrina - we were given $14.6 billion to deliver that system. It was delivered in six years - at least a 100-year level of risk reduction in six years.

If you look at that system prior to that, from 1965 up to Katrina in 2005, 40 years, that system was less than half finished. And so that's a sharp contrast to describe the delivery model and the value of full funding up front.

So I'm not suggesting everything is a Katrina or a hurricane system - what I am suggesting is that if you fully fund new infrastructure up front, it opens the door on innovation, opens the door on innovative acquisition, it opens the door on a lot of possibilities that just aren't present if you're funding something a little dab at a time each year over many years.

This is where I think we could use the planning community's thinking and your expertise and the brilliance of the capacity nationally to help think about the question: Is the P3 tool another option to start delivering those benefits that are the basis of our investment decision earlier? So you really have to peel back some of the mystique away from P3.

There's really only three ways to fuel and finance a P3 transaction.

The first is user payments, where you have a fee or toll or tax. Quite frankly the Corps does not have authority for user payments and any time we do, those monies go back to the Treasury. They are not reinvested in the asset which generated them. This is something that requires some consideration by the Administration and Congress on whether or not they want to give the Corps more authority in that regard. But guess what, our sponsors can impose payments - user payments and taxes that we can't - so there's opportunity there.

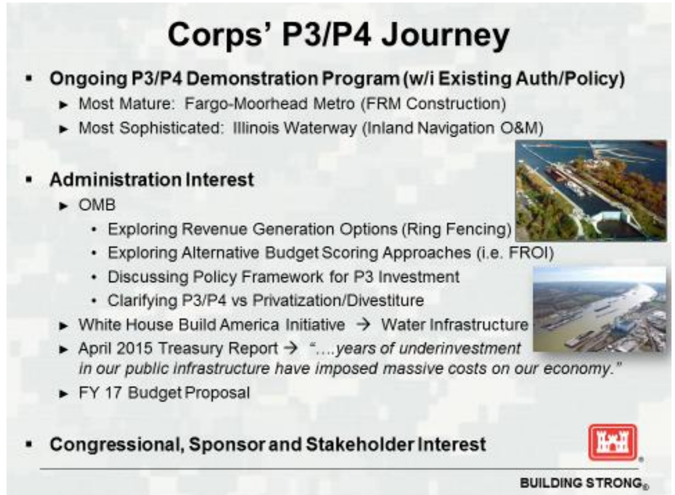
The other is availability payments. What this means simply is - and I'll use a state example in Virginia. They are using a P3 transaction to build, or rebuild some interstates and what the state is saying is that in lieu of what we would ordinarily pay for maintenance, we're going to simply take that and turn that over to this private consortium. And in exchange, they will upgrade the interstate, maintain it at a higher level over a long period of time and return it back to the state in that same condition. So the value proposition works for both agencies, so in lieu of the state spending that money on their own, they're making it available to the private sector.

Now I will tell you both OMB and appropriators have said, forget availability payments for the Corps. I tell you that so you have a dose of reality. The reason that they said that is the administration does not want to encumber future presidents with an ongoing obligation, and clearly the appropriators on the Hill don't want to encumber future Congresses with that same issue. The classic availability payments are really not a good option in the current fiscal environment but there may be other variations that we could work with sponsors that could.

And finally commercial revenues and the easy answer I give them on this is kind of a cheesy one but, you know, if we've got our recreation site, we could sell air rights for billboards, you won't solve the world's problems with those kind of revenues. So here's where the private sector come in - they're genius at extracting asset value and cash flow out of assets. We just don't think that way, at least I don't, but there are ways to generate cash flows from assets that we typically don't think too much about.

Next slide. So we've been on this journey and here's the good news - we actually had a new start for the first P3 project, a Flood Risk Management Project, Fargo Moorhead on the Red River on the North, in Minnesota, North Dakota.

Frankly, that P3 transaction is going to be closed because we've got a sponsor who had a burning platform that Fargo has had major floods in almost year since 1993. And so they're one crisis away from billions of dollars in damage and so they have worked with us and with the



private sector to develop a P3 transaction that they will close in the coming months and we'll have a new start this year for that.

These are done within existing authority - we're not looking or waiting on new authority, although it would be helpful and nice. We do have the existing authority to work these.

The most sophisticated is the Illinois Waterway, where the Illinois Soybean Growers have looked at the eight locks on the Illinois system. Their perception is there is enough risk there because of the age and condition of those assets that they are willing to invest $600 million to buy down risk and improve the liability. When they have a harvest - record harvest of corn or soybeans in that state, they got very tight windows and contracts in place where they have to get that grain to world markets. And so reliability is important, so they're willing to pay to buy down risk and improve the liability of that system.

We've got a lot of work to do - first off to get authority - both for us and a sponsor - also a lot of issues about who pays and how they pay, so a lot of work to be done. The point is there is a problem and on that waterway, at least there's perception of a problem, and they see P3 as a potential avenue to address it.

If you look at the Administration, we've been working extensively with OMB on this whole issue trying to help shape and understood the value proposition. You know, I told you we generate a lot of revenue already across the Corps. We talked about the possibility of retaining some of that revenue to invest back in the asset. Frankly there's not much interest in that at this point because right now those revenues go to offset the budget deficits. So it's hard to make the case right now. But I think as we as a nation come to grips with our infrastructure deficit, overtime that may become a conversation that people are more willing to consider.

Looking at alternatives - scoring approaches for P3-like federal return on investment - rather than just Benefit Cost Ratio (BCR) because it can be - could be that private sector and the sponsor can come in and buy down federal exposure by building stuff faster and provide a federal return on investment rather than just straight up BCR. We've discussed that with OMB, but I don't think they're ready to go down that road at this point.

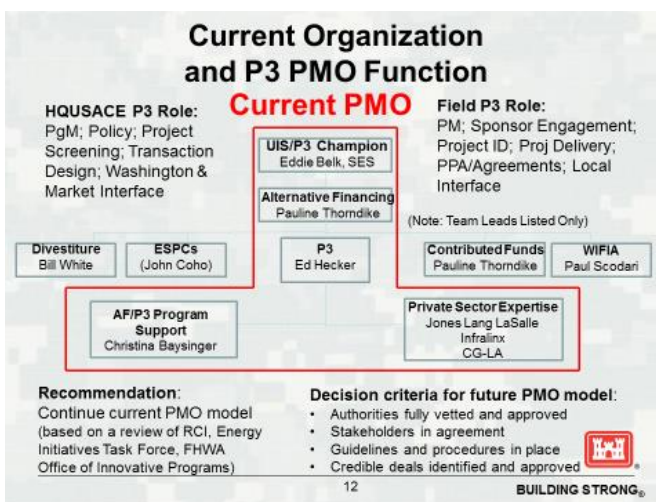
One of the things that we learned early on when we were talking about P3 - P4 with others. What they were saying was "P3/P4", but was in their head was privatization and divestiture, so we've had to spend a lot of time helping people see the difference.

The example that I've been giving is P3, P4 is simply a way to amplify existing federal investments. This is sort of like a marriage. If you look at privatization and divestures, it's kind of like a divorce - you're cutting the cord and going different ways - you may still have some alimony payments - you may have some things you have to do but you're essentially going in different directions. In P3, P4 federal ownership is sustained throughout. The Corps owns that asset on the first day, it owns it on the last day and we can specify the condition that we'll get the asset back.

And the White House is very interested in P3s - they've got a water infrastructure piece to the Build America initiatives that they added last summer and then the Treasury said something very important in a report published last spring. And it was that years of under-investment in our public infrastructure have imposed massive costs on our economy. That is a policy statement. Now that policy statement is not yet translated into a different investment paradigm - it may not. The point I'm making is that as a nation our policymakers are beginning to look at and understand and grapple with the infrastructure investment gap.

We've also been working heavily with the Congress and sponsors. That's one thing I want to highlight - anything we do in the P3 world has to be with a sponsor. There are a lot sponsors that have been very nervous frankly, they thought the Corps is kind of on a crusade to do a P3 at all costs with them standing on the sideline wondering what happened to them.

That's not it at all - they have to be with us - and in fact I would tell you they can say and do things that we the Corps can't do because of limited authorities and so just like a traditional project, the sponsor can really bring some value to this discussion of P3, P4s and what we do. Next slide.

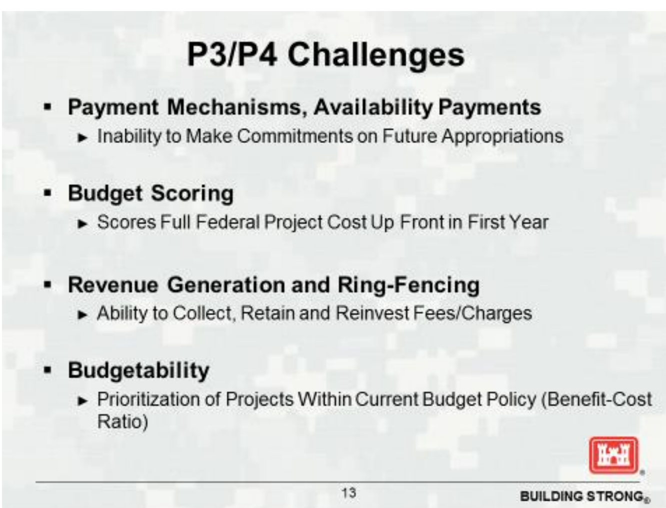


This is sort of the obligatory organizational slide but this shows our program management organization, if you will, for P3. The important part is not the top of the chart - the important part is the lower right that you see - the private sector expertise. We at Headquarters have retained three different experts in this arena that have international experience, they've closed billions of dollars in P3 deals, and they're helping shape a lot of what I've told you so far.

A lot of what I have learned came from interacting with them and came from their work to assist us. They also have very close connections with the markets, they can help us think how we need to approach the market and what a viable P3 would look like.

I show you this because this is at the national level, the technical expertise that we've got to support districts. But we're using PMBP [project management business process] here for P3 - we're saying that districts - you own the relationships, you own the projects. You own the problems and challenges and can identify where there are gaps, where there are needs and once you identify them, you can work that within your district to your region to the headquarters, and if it's a good fit for P3, we can help you screen and whether or not it makes sense, and if it is, you know how to approach it, and so again, PMBP - we would love to have a private sector expertise in every district but we can't afford it - you can't afford it.

But until that time we do have some expertise here and please take advantage of it and you can see the role of headquarters again, we're at the policy level - programmatic level, screening, enterprise at the Washington level with the Hill and the administration and the market. But your roles are very important and it's just the same as any other project - that's sponsor engagement, identification of projects, working the agreements and interfacing locally. Next slide.



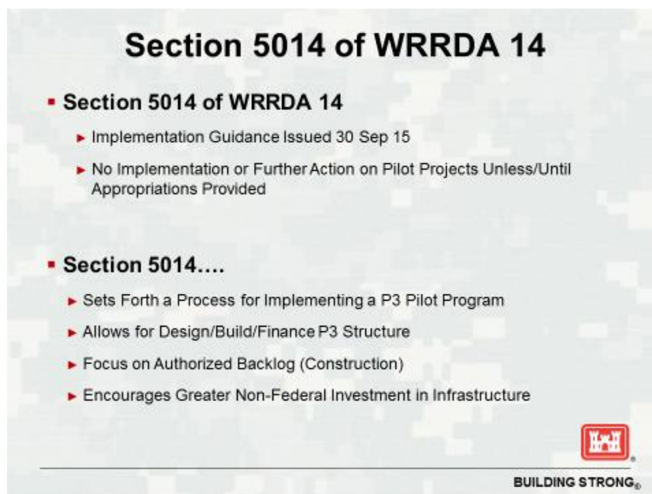
The challenges we've discovered and I've talked most of these - I won't spend much time here. First is payment mechanisms, how to cash flow a P3 transaction. Availability payments are really not a good option right now, at least in the current fiscal environment. So how do you get around that - there are ways to do so.

Budget scoring for P3 transactions. Even though we get full funding up front from the private sector, in order to have the federal piece of that made available, be amplified - it has to be fully scored. So if you got a $2 billion project, even its most of it's going to be funded by the private sector, it still scored as a $2 billion offset in the budget. So it's very hard - it crushes the ability to squeeze large projects in as a result.

I talked about revenue generation, ring fencing, "budgetability" - simply the BCR challenge. If you're not at two and a half BCR at a 7% interest rate, it's just not budget-able and so, I would add one other challenge that's not on the slide, and that's the whole business of economic equity.

There's concern that only the smart and the rich and the famous have the expertise and capacity to dabble in P3 and then there's the rest of us and I'm not sure that's a true statement, but it's a real concern that we have to make sure that we don't miss. Next slide.

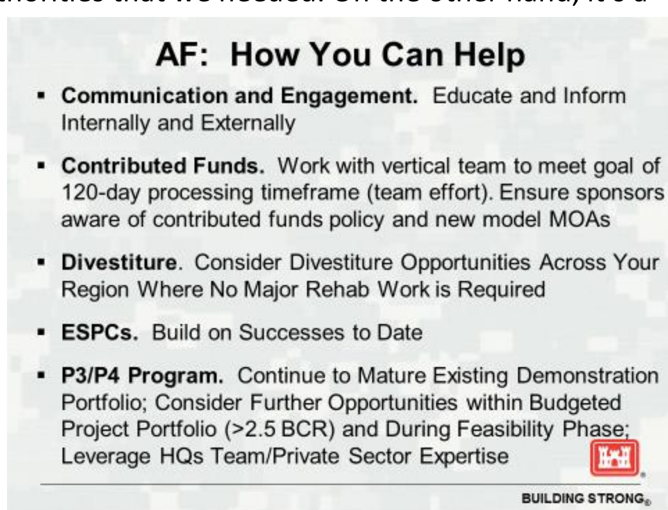
So WRRDA did afford authority. Section 5014 in WRRDA was issued and it basically set forth a process for implementing a P3 pilot program and how those pilots, if funded, would be reimbursed once the project was complete.



But this provision of WRRDA was authorized only to the extent it was funded in appropriation. It has not been funded, so our implementation guidance for this is very simple - it's more to come after we get funding.

But what I really want to convey to our Planning Community is that this is not really something that's necessary to do P3. We have enough existing authorities - it's really just another acquisition vehicle that we use already.

And so 5014 didn't add any new organic authorities that we needed. On the other hand, it's a good thing because it telegraphs the policy intent of Congress and it has sort of established a baseline for having dialogue on how and if this tool can be applied and the water resources. Next slide.



How you can help continue to educate and inform, learn more about this. Consider this as you look at interacting with sponsors. I go back to the day when in Memphis district, we had WRDA ’86 for a new harbor in Helena, Arkansas. I was a young, ignorant engineer on that and we had the first - at the time it was called the Project Cooperation Agreement, a PCA that we had to sign with that sponsor. We didn’t know what one looked like - we had to do a financing plan. But we sort of had discovery learning and figured it out. Fast forward to today, all that’s routinized, all that is very well codified in our processes and our approaches. And I’m submitting that P3 is the same way. We don’t know everything today, but will figure it out with our sponsors as we learn.

Contributed Funds - I’ve talked about that, please use that vehicle if you have a sponsor. And by the way, I said that about PCAs because Planning owns that. You can start thinking - right now what we’re looking at in P3 is existing projects and coming out on the back end trying to figure out if it makes sense to apply a P3 transaction.

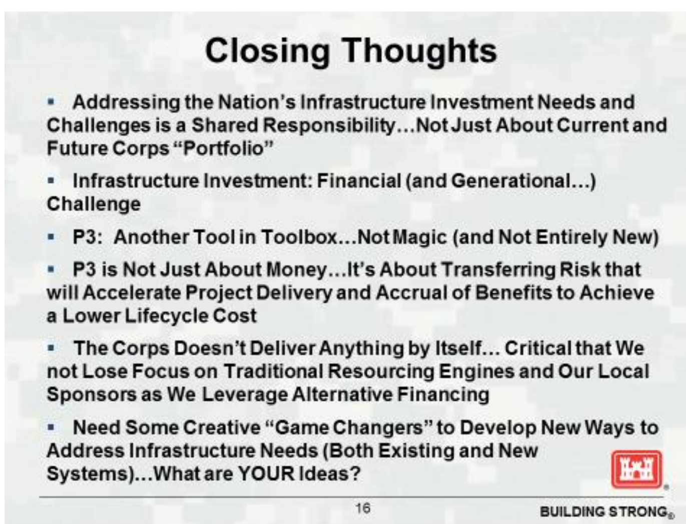
P3s are not for everything - they’re good for maybe 10 or 15% of a portfolio. But they are good for some things, and the real value, I think, will become, as we look and think about this, with the planning process on the front end. Because Canada has a requirement - or at least had one up until two months ago that every investment above 50 million at the provincial level, and above 100 million at the national level had to be screened for whether or not a P3 might be appropriate tool for that. So I’m not suggesting we do that on everything but I am suggesting that in Planning, maybe we can think about whether or not that can be thought through on the front end rather than on the back end, which is where we are right now. Next slide.

So some closing thoughts and then I’ll take some questions. You know, this is really a shared responsibility between us and our partners. I tell you that infrastructure investment is not just a financial challenge; it is a generational challenge.

Because, as I indicated to you, the vast majority of our infrastructure was built out from the 30s through the late 60s, early 70s. Seventy-five percent of this nation was born after 1960.

And so to vast majority of the people in this country, all this infrastructure is an existing condition. They, you know, it sprouted up out of the earth and it’s there and it doesn’t cost anything.

So the only appreciation you have for infrastructure, typically, is the absence of it. The example I give is when I was a kid we go to my grandmother’s house in



Northwest Mississippi, we get on a highway, then we get on a gravel road, then we get on a dirt road, then we get on a pig trail and finally we get to grandma's house - an hour and a half or whatever later. By the time I had kids, we'd get in a car - you're on the interstate - we're there in 30 minutes and my kids never conceived that you don't just get on the interstate and go to grandma's house.

It's even harder in the water sector, because you're driving down a road, you can see when there's a pothole. The water sector you see nothing – it's a silent service. So we have got a challenge to explain and convey why investments are necessary both to recapitalize, but also on the front end for new infrastructure. P3 is just another tool - nothing magic here.

And I say it's not new because back when I was doing that - trying to work with the City of Helena to figure out what a cost share agreement and a financing plan look like, they were all mysteries then. I'd say that that's about where we are with P3s now. So we have the ability to figure this out. It's not about the money, it's about transfer - now that's really important. I can't over-emphasize this. There is no free chicken first off, and it's not just a chase after money. This is about amplifying federal investments, transferring risks to the private sector in a way that makes sense, and then accelerating delivery, lowering the life cycle costs and getting those benefits sooner. There's a value in that - a value proposition. So we're trying to find where that sweet spot is to realize those benefits.

I've already said we don't do anything by our self - we've got a carry our partners with us. We also, by the way, can't forget our traditional resourcing engines - that's why we need to say thank you when Congress makes investments like they made this year. We've got $6 billion reasons to be thankful right now for what Congress chose to do this year.

And then finally just need your help to look at how to apply this tool in a proper way - where to apply it and Headquarters stands ready to assist. I really am excited about talking to the Planning Community because frankly you're going to help us think through this and figure out from a policy and a practical perspective where P3 makes sense - how to consider it on the front end, rather than on trying to craft it on the back end, which is where we are now, which is so hard. How to think about it on the front end and the proper role it may play if any - as we develop investment recommendations for the Administration and the Congress.

Camie Knollenberg: Okay, we do have some questions. The first question that we have was - the O&M budget is less than one percent of infrastructure value, what is the depreciation rate for Corps maintained infrastructure?

Edward Belk: Oh you're killing me. That's a great question - I don't know - I'll find out and get back to you. It's significant because I do have a chart that shows the value of our assets peaked about the 80s. And over time we've been living, drawing down into depreciating the value of those assets faster than we've been investing. So we are eating our seed corn, if you will, as we depreciate those out. So it is a percentage, I just don't know what it is. But it might be helpful to get that slide that shows our capital stock value is decreasing and it has been since the 80s as a result of lack of investments. So it's a good question and I know that it's going down, I just don't know the percentage.

Camie Knollenberg: Okay, fair enough. We will look forward to that answer. The next question we have is: "Not sure but I believe the San Antonio River Authority is an example of P3 from our FRM mission. How can we help create new FRM P3s, generate interest and momentum in a community to pursue such possible future success stories?"

Edward Belk: Well I think it begins with a burning platform and the only reason that Fargo Moorhead -- the only P3 in captivity by the way -- the only reason that it got started is because that community - that region was one Spring away from total devastation. And the cost to rebuild after they lose the flood fight, and they would have lost it eventually, is billions of dollars. And so they simply couldn't wait.

Their BCR was not competitive. There was federal interest and this is a very important - sometimes people get confused on the difference. We have a lot of projects where there is federal interest; the BCR is above one at the market rate, but the secret sauce for budget-ability is above two and a half at seven percent.

So we've got a lot of projects where there is federal interest, but not as many that are able to be included in the budget, and so if the project you describe is in that sweet spot, I think P3 offers an opportunity to move that along, given that you are not likely going to be in the budget.

I think the other sweet spot is going to be those projects that are in the budget and this is where we really are now starting to think a little more about it. If you're already budgeted and authorized, P3 can be a way to rather than build that billion-dollar project, a dollar a year for a billion years, instead, fully fund it upfront, build it in five or six years rather than 15 or 20 years.

There's a value proposition there that maybe a sponsor would want to consider even though they are already in the budget, and so it's really looking at solving a problem. And not every project will be amenable and not every sponsor will be supportive, but I think having the discussion and talking about the art of the possible is very helpful.

I kind of blew through the last slide, I didn't know I had the last slide but what they told me is that I blew through it but we do have a Share Point site, we've got a lot of products to help you with screening, to help you learn how to spell P3 - P4. [The SharePoint site can be viewed at: https://team.usace.army.mil/sites/IWR/PDT/altfin/default.aspx There's also an intranet site with relevant information: https://intranet.usace.army.mil/lrd/CWT/Pages/default.aspx]

And so I would commend that to you as you have discussions with partners on whether or not a P3 tool is worth considering. Good question.

Camie Knollenberg: Okay, thank you. "What return do private partners need to want to participate in PPP - what assurances to reduce uncertainty on that return?"

Edward Belk: Yes, that's a great question. So, first off, there is literally billions of dollars sitting on the sidelines waiting for investment - nationally, internationally in infrastructure.

What we're seeing in the few transactions that I've been involved with - they're big hedge funds, big retirement funds, that have a lot of money that are looking at long term returns, fairly low to moderate risk. And so the interest rates - and there are no single interest rates, but they're very competitive I would say. And so those are the kinds of investors that are looking at P3s and to do infrastructure.

There is a risk profile and that's one of the due diligence that's required when you look at a P3 transaction - to quantify risk for everything - for market risk, for weather, for political risk. All of that stuff is monetized through a Monte Carlo type simulation.

And so the risk register and the risk analysis is very exhaustive and very robust, but that's important because that's how those investors get comfortable in making that investment over the long term.

There are funds that specialize in infrastructure and they offer very competitive rates.

Camie Knollenberg: Thank you. We have an idea from the audience: "has it been considered to develop a marketplace for interested private partners to meet public sector reps and learn about potential PPP projects?"

Edward Belk: I think so - I haven't - somebody has. There are a lot of P3 forums that occur literally every day. We get more requests to come to those things than we can service right now. So there are tons of existing forums that are out there, that probably precludes the necessity of us convening those kinds of things.

But look around in your communities. I would tell you that there are some states that have P3 legislation that are more aggressive and more focused on this than others. So you need to understand kind of where the state that you're thinking about might be with regard to P3, but there are lots of opportunities and lots of forums to interact to learn more and to match market capability against infrastructure needs.

Camie Knollenberg: Thank you. "How does private financing fit in with SMART Planning? It seems that USACE is moving towards single purpose projects. These may be less efficient in the end which would tend not to draw private investment. For example, FRM and ecosystem restoration projects may need more sustainable long term with less O&M, a more desirable investment. Will the private investor get a say in what is built?"

Edward Belk: Well I think that's a part of the negotiations process? I don't know that the private sector will have a say in what's built. We and the sponsor will determine what that is. What the private sector will do is decide whether or not the investment is worthy, whether the risk and the returns are properly balanced. But we and the sponsor own the requirements and what the outcome will be. I would submit that multipurpose is a good thing, because the more purposes you have, the more ways you have to cash flow something, and the more diversity you have in your ability to cover risk.

And so I see the P3 as a tool to amplify the importance of diversity rather than go the other way. I tell you the intent is not to do that - the intent is to do more multipurpose, more diverse projects that we recommend because quite frankly, if you look at what's getting authorized now, it's projects that have more than one little single output associated with them.

So multipurpose is a good thing from where I sit. Now we have an imperfect way to value multipurpose projects in terms of formulation and in terms of investment decisions. I won't sugar coat that but there is still value in multipurpose project formulation.

Camie Knollenberg: Very good, thank you. "What has been the most surprising and unlikely private entity to emerge as a viable partner and under what circumstance did they contribute to solve the problem?"

Edward Belk: Well I didn't do a good job of describing this - we've got about seven or eight P3 demonstration projects around the country that we've working with existing authorities.

We've only got one that's now ready to close - that's the one I already told you about, but I would just say that when you're talking of private sector partner, you're not talking a thing - you're talking a consortium.

You're going to be dealing with financiers, you're going to be dealing with engineers, you're going to be dealing with attorneys, you're going to be dealing with a large suite of interests that are looking at delivering that piece of infrastructure.

And so, you know, the one in Fargo - that group of investors - or that group - that conglomerate did due diligence, working closely with the sponsor in particular, and the Corps.

And so I can't say that I have a big pool of private sector sponsors or private sector partners that I could draw from. I've got a pool of exactly one right now and that's Fargo. But that is a very sophisticated consortium and they do have a lot of interest that represent the private sector piece of this. And by the way, it's new to us - it's not to them, it's routine, they do this all the time and lots of parts of the world and in some parts of this country. It's new to the water sector, and particularly new to the Corps, but it's not new to industry - it's not new to the marketplace.

Camie Knollenberg: Thank you. "Mr. Belk, do you think the Corps can be sustainable without a consistent reinvestment revenue stream to maintain our infrastructure and ecological assets?"

Edward Belk: Well you know what - that's a great question and I think that's the conundrum that we're working with. Frankly, it's not just us. Every federal agency and most federal and private sector folks who do infrastructure are all struggling with the reinvestment challenges we've got. Because, you know, the Corps I grew up in we were worried about maintain - maintain - maintain and now 60 years in and 70 years in - or pick a number, we're looking at recapitalization. So that introduces another large requirement in a very fiscally constrained time. And so how do we get past that and I don't know that we have any perfect clean answers, but I think our approach to the infrastructure strategy is one way to get at it. That's not the only way but that's kind of how we're looking at it with divestiture of all those things I've showed you. Divestiture, trying to streamline our ability to take funds from partners, public-private partnerships - all those things together collectively are our response.

And there are probably others out there that may exist, that all you smart people on the ground can help us see and leverage and take advantage of.

Camie Knollenberg: Okay, thank you. We have one last question; we've got one minute left so that's about perfect. "What will be the role of USACE Engineering and P3 projects?"

Edward Belk: Yes, so it will be wherever we want to be I suppose. One thing I want to point out - P3 is not in lieu of federal investment – it is in addition to government investments. So any P3 transaction is not sort of unplugging the Corps from project delivery.

We're still going to be doing, or can do, engineering and design, and construction, and operation and maintenance but we could not do those in some areas. And Engineering - you're still going to have a role, because federal equities have got to be protected and assured as the private sector does their thing.

So it's going to be a different role - may not be design, maybe its design oversight, maybe its QA, maybe it's some other things, so there's going to be a role, but the other thing I want to emphasize is not everything is going to be P3.

In fact - the minority of things will be P3 - this is not like everything we do is going to suddenly flip to a P3 model because that is just not going to happen and it shouldn't happen, because it's not appropriate for everything. But it is for some things and our role may be different, but it may not, it really depends on the transaction, it depends on the project, and it depends on the needs of that sponsor at that point in time.

Once you've seen one P3, you've seen one P3. So it really will be very tailored to the needs of the project in question, but there's going to be a role for Engineering. There's going to be a role for Operations, there's going to be a role for Planning, for biologists, for the whole PDT are going to be involved in this P3 business - just maybe in a different way than traditionally, but they're still going to be involved.

Camie Knollenberg: Okay, we've reached the top of the hour and on behalf of the Planning Community of Practice, I want to thank you for your presentation and your time. I wanted to let everybody know that the slides and the question and answers will be posted on the Planning Toolbox if you need to refer to them later or you have somebody that was not able to attend.

So thank you very much Mr. Belk.

Edward Belk: Thank you Camie, I appreciate it - thanks everyone for your time this afternoon.