Child Welfare IT Managers’ Webinar Series: Child Welfare Information Technology Systems Managers and Staff

*Improving Quality and Reducing Risk with IV&V and QA*

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**Presenters:**
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- **Rebecca Stilling**, Deputy Director, Project Oversight and Consulting Division at the California Department of Technology
- **Dave Jennings**, Director, Business Development State and Local Government at SLI Global Solutions
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**Coordinator:** Welcome and thank you for standing by. At this time all participant lines will be on a listen-only mode until the question and answer session.

At the time if you would like to ask a question you may press Star 1 on your touch-tone phone. Today’s call is being recorded. If you have any objections you may disconnect at this time.
And now I’d like to turn the call over to Elizabeth Mertinko.

Elizabeth Mertinko: Great, thank you Adrian. Welcome to the Children - to the Child Welfare Information Technology Systems Managers and Staff Webinar Series brought to you on behalf of the Administration for Children and Families Children’s Bureau and presented by ICF International.

Today’s Webinar is entitled Improving Quality and Reducing Risk with IV&D and QA. I’m Elizabeth Mertinko. I’m with ICF and I’m your host and your moderator for today’s Webinar.

For new attendees and for those who may have missed previous Webinars here’s the list of the previously recorded Webinars which are posted to the link identified on the slides.

Please note that in May will be tackling a topic of CMMI and we’re currently working to identify future Webinar topics.

Attendees are encouraged to participate in our Webinar with questions and comments. Currently all of the participant lines are muted but we will open them for the Q&A session at the end of the presentation.

However please know that you can submit questions at any time using the Go to Webinar chat feature and those will be addressed during the Q&A session.

Should we run out of time we also respond to your questions via email or should you have additional questions after the Webinar you may submit those to me at the email address listed on the slide.
Also if you have any topics that you’d like to recommend as potential Webinars or any potential speakers please contact me at the email address listed above.

The division of State systems within the Children’s Bureau continues to provide a series of monthly Webinars supporting information sharing and discussion.

Understanding who is attending the Webinars helps to identify content that’s applicable for everyone participating in the Agency’s Child Welfare information system efforts.

So I’m going to go ahead and open up a poll and I’d like you to - I’d like to ask you to just identify yourself by role so we have some idea of the audience for today’s call.

I’ll give you all just a minute to go ahead and choose one of those categories. There’s about 75% of you who have answered so if the rest of you could just go ahead and identify if you’re participating in a room with a number of staff just choose the category that represents the majority of the people the room.

And with 96% of our audience having identified their role I’m going to go ahead and close this out.

And so it looks like today we have 27% state child welfare information system project managers, 55% state child welfare information system program, policy or technical staff and 18% ACF Children’s Bureau personnel or contract staff.
Let’s meet today’s distinguished presenters. Rebecca Stilling is the Deputy Director of the California Department of Technology’s Project Oversight and Consulting Division approving and overseeing state IT projects.

Prior to her appointment Ms. Stilling was the CIO and Deputy Director of the Technology Services Division of the California Department of Child Support Services.

Dave Jennings is the Director of Business Development State and Local Government for SLI Global Solutions with a focus on providing IV&V and QA support on complex state health and human services IT implementations.

Steve Esposito is the Senior Vice President of the Government Solutions Practice at SLI Global Solutions where he’s responsible for managing the firm’s Independent Verification and Validation, IV&V QA, and testing service offerings.

Robert Tafoya serves as the SLI Global Solutions Director of Operations for the Government Division with expertise in all aspects of the systems development life cycle, systems development methodologies, PMO standards and risk management.

At this point I’d like to go ahead turn things over to Dave Jennings.

Dave Jennings: Well thank you Elizabeth. Good morning or good afternoon depending on where you are.

I was able and delighted to speak to you this audience last year on procurements and writing RFPs. And I’m really delighted that I’ve been asked back.
Today our Webinar objectives are to come together on the understanding of a baseline understanding of what IV&V is and what QA is and what they mean to improve the quality of your ultimate delivered systems.

And very importantly is how we can identify risks as early in the process as possible using these two initiatives of IV&V and QA to prevent the level of rework that’s required later when it’s much more expensive.

So if we have a baseline understanding and we think that’s an important thing to do because we see a lot of IV&V RFPs and statement of works in QA.

And there’s a lot of mixing and matching but there are industry accepted definitions that I think it’s good to know what they are so that when you deviate you know why you’re deviating and what you’re deviating from.

Next is to identify where and when IV&V and QA initiatives can bring the most value and benefit to your project. You know, do you bring them in before a DDI vendor is on in the planning stage? Do you bring him in after? How often do you bring them in? And there’s a lot of variety in that on how people and projects have approached it.

Here’s one that builds on several of the Webinars that you’ve had already this year with Agile.

As many system development projects are looking beyond the traditional Waterfall methodologies into Agile and other iterative SDLCs how can you do IV&V and QA when there’s multiple iterations and when do - what does that mean and what artifacts should you be looking at?
So that does build on your previous and we hope it aligns to them what we tried to - then part - we’re really lucky to have - Rebecca, Becky, Stillings from California on. And she’s going to show how the state of California, a very large state has created internal capacity for IT project oversight.

And finally we’re going to go into share some IV&V QA lessons learned and then so those are the objectives that we have for today.

Elizabeth, would you go to the next slide, please? Okay so here is the agenda. As we said we’re going to get into the definition of QA and IV&V then we’re going to why should you care?

Why would you go through the bother of this? You’ve already got a lot going on with the system development project and the planning and implementation of it. Why would you consider having an additional administrative burden of QA and IV&V?

When are they appropriate, alignment with Waterfall and Agile, lessons learned and the California model?

With that being said let’s go ahead and get started. I’m going to hand it over to Steve Esposito who has spent a lot of time of figuring out the difference between QA and IV&V. Steve take it away.

Steve Esposito: Thanks a lot Dave. I appreciate it. And Dave is right. I mean one of the situations that we find ourselves in both, you know, as vendors and the states is the fact that the terms quality assurance, quality control, IV&V sometimes get used interchangeably.
It was like when I was first getting PM certified and people would use the term, you know, risk and issue interchangeably.

And, you know, once you understand the lexicon and understand the risk of something that might happen in an issue is something that is happening that’s impacting your project, you know, it helps the conversation.

So what I thought I would do is point out what some of these definitions are and really why it’s logical that there is some confusion about which is one and why does it get used in the terms of ours as opposed to following those definitions, those industry definitions that Dave alluded to.

So the first thing we’ll talk about is just, you know, what is quality? And there are a number of organizations, a number of great thinkers that have defined what quality is.

I learned about it as it related to the project Triple Constraint. You’ve got scope, you’ve got cost, you’ve got schedule. And as you adjust each one of those things it has an impact on quality.

And the quality, you know, I think that that definition here is the degree to which a set of inherent characteristics have filled the requirements.

You know, is it - are you getting what it is that you asked for within the constraints of the project?

And in a nutshell if I and, you know, I didn’t make this up but it helps me understand is the quality assurance is really about preventing defects. And quality control is really about detection of defects and correcting them.
So let’s take this just a step further and go to the next slide Elizabeth. So what quality assurance refers to and what I think what helps me think about it and even remember which is which is that quality assurance is really around assessing processes.

Do you have processes and procedures that are clear, are provided to your staff that are trained that are followed and that are continually reviewed to see if they’re giving you the results that you’re looking for?

So I think about it being a process oriented component of assessing quality.

And what the key take away on this one is that it’s not just do you have them but are they effective and are you assessing their effectiveness and having that appropriate feedback loop to say, you know, we took out the quality process end but there’s always opportunities for improvement.

On the next slide we talk about what is quality control. So what quality control is in my way of thinking about it is this is actually the assessment of the product, the output of the processes.

So once you build a component to a system or a deliverable that leads to a system there’s obviously a need to be able to go and assess whether you met your objectives.

And also providing some assurance or some guidance to those that have approval authority to be able to then say yes this meets standard, yes this meets our acceptance criteria and allows the project to move forward.

So that’s all well and good. So now let’s talk about in relationship to independent verification and validation.
I think that there is real reason that there is confusion about what, you know, where QA stops and starts or QA QC starts and stops and where - what is independent verification validation?

Verification in a nutshell the way it’s kind of boiled down is, you know, ensure that the system is built right, making sure that the processes or interim products of a project or achieving or meeting standards or complying with your contract.

The validation is then that assessment of the final product is that did the system that was built to fill the user’s needs so its an assessment of the final product and in many instances it’s actually an actual testing activity to not only say yes it looks like it did the right thing but trying it out in real life and that can be user acceptance testing, pilot testing, you know, mock testing.

So that would be so this is great. Okay now, you know, it sounds like verification and validation are just another version of QA and QC.

And this is really where we in the vendor community, you know, have to make sure we understand what you’re asking for to make sure that we’re, if you’re asking for QA and QC we’re providing you with what you want.

And sometimes it gets a little muddy because some people, some procurements have two concepts, comingled or even at times even reversed.

So let’s what I’d like to do and I think Becky will be really helpful in her part of the presentation of drying a clear line of the way California sees what QA is versus IV&V.
So Elizabeth if we could go to the next slide. What or they’re complementary of oversight services but they’re - they have a very different emphasis.

The emphasis of QA is really to be embedded with a project and to be prospective with the goal of improving quality.

IV&V on the other hand is usually external to the project. They are independent. And because we’ll talk about on the next slide it’s more often than not a periodic approach it’s more retrospective in nature, looking back on what went well, what didn’t go well and using some capabilities to be able to forecast what needs to be done to address any of the shortcomings that came up.

The other thing that we see pretty commonly is that QA focuses on the on the project management lifecycle of a project -- initiation, planning monitoring, control and closing.

Where the systems development life cycle is the focus of the IV&V contract.

As I mentioned the frequency of QA versus IV&V QA is more often than not full-time ongoing and embedded with the team where the IV&V engagements more often than not are periodic, monthly, quarterly, semiannually even annually or a one-time health check.

And this is where that where we see the fact that a QA because it is perspective, because it’s embedded they are more capable of doing error prevention because they’re on-site typically real-time being able to provide that feedback constantly.
Where IV&V is because it’s more of a retrospective approach there is more saying what went wrong, why did it go run and what recommendations can we make sure that it doesn’t happen in the future?

And I guess without beating the dead horse here the QA typically has more of a functional or business orientation where IV&V has that approach around their technology, the systems development lifecycle and the testing activities associated with project compliance with quality.

So let’s go on to the next slide. So given that is the framework for the way we’d like to talk about QA and IV&V in relationship to what states typically need and ask for and what ACF typically needs and asks for is that the skill sets are also somewhat different in relationship to if you’re managing a systems development lifecycle you need more technically oriented folks that understand your systems development lifecycle, understand database, understand conversions, understand how software needs to be built, how security needs to be deployed and how testing needs to be executed and controlled.

Where on the other side of the equation we’re looking more about subject matter expertise how you implement and change to the organization, training, rollout -- those sorts of activities and really having the ability to understand how your changes to your system impacts your policy or your policy impacts the changes to your system.

And the other is the question that we get asked on a pretty fair basis is when or how should I engage IV&V? So let’s flip to the next slide Elizabeth.

So and Dave alluded to this in his introduction. First of all, you know, when is it appropriate to have QA and/or IV&V involved?
Typically you get value from both before that your development vendor is on board. But more often than not we see QA coming on pre-procurement during the RFP development so that your quality assurance and quality metrics are baked into your RFP for these development efforts.

And they participate in the vendor evaluations sometimes helping train staff on how to do it, sometimes creating the actual evaluation criteria and metrics, even occasionally being a nonvoting member of the evaluation committee.

The reporting is because they’re there regularly the reporting is very frequent weekly or monthly at the latest. They’re ongoing and they really focus on that whole process of getting you to a certified system.

When I made my first draft of this RFP was I had a smarty-pants answer in the - when you engage IV&V which is when ACF tells you too which is only part of the answer.

Many states have other rules relating to the size of their projects, the complexity of their project or simply they’ve evaluated the risk profile of the project and either on an ongoing basis.

They have IV&V come in or based on specific risk characteristics of the project IV&V is asked to come in either one time or periodically.

But we recommend that if its QA or in IV&V in particular start no later than when the DDI vendor starts.

There's been a number of occasions where IV&V has been brought in after and there’s some - a large backlog of deliverables to review.
And also typically of deliverables have already been approved. And having IV&V start, you know, giving constructive criticism recommendations for improvement after deliverables have been reviewed causes angst to the development vendor, the QA vendor and often to the state.

The other question that we get asked and the other thing that we see in RFPs on a regular basis is the frequency of IV&V.

And as I mentioned earlier we see it in everything from monthly to annually or semiannually. And when I was talking this over with Dave Jennings he helped me with my - the phrase here the Goldilocks frequency which we think is at least quarterly.

What we say is that IV&V is retrospective but it can’t be historical.

If we only come in or if a vendor only comes in, your IV&V partner only comes in semiannually or annually there’s not a lot of opportunity to be able to assess whether those findings and recommendations are being adhered to and whether they’re being successful.

So Our recommendation is to have IV&V if you don’t want full-time IV&V is to engage IV&V at least on a quarterly basis or identify major milestones or phase gates where you can engage IV&V to say okay have we achieved the goals of this particular phase of the project or major milestone that we said we need to have an approval to go on to the next step.

And then certainly we talked about IV&V having a component of testing. And some states have looked for IV&V to come in strictly for that final V in the
verification and validation step and actually conduct independent testing which it definitely has some benefits.

So what I thought I would do right now is to turn this over to Bob Tafoya and let him speak to you about now that we understand what QA and IV&V is what some of the challenges are and opportunities are with regard to newer systems development life cycles in particular Agile, so Bob take it away.

Robert Tafoya: Thank you Steve. So today I’m going to talk and start with a discussion of the differences and similarities in both Waterfall and Agile development methods that we’ve seen on our projects.

So Waterfall development efforts are usually scheduled driven. They require a considerable effort to develop plans, procedures and other project documentation requirements.

While iterative development is really charged with having working software deployed at the earliest point in the project lifecycle. So Agile has more of a software delivery focus.

Waterfall programs tend to have a deliverable and product focus and Agile does not. Agile has more of a process focus and is motivated by incremental process improvements.

In Waterfall there’s strict adherence to change control policies. And one of the key selling points in Agile is the ability to respond to change quicker than traditional Waterfall methods.
One reason for this is because the planning and development and delivery cycles in Agile are much shorter and occur more often so teams can be redirected quicker and easier.

But there’s a lot of common ground as well. Both have dependencies on process tools and standards. Both strive for a solid testing based outcome and both require rigorous defect management and tracking of requirements or user stories.

Both have processes to deploy software while Waterfall has more defined and perhaps more stable configuration management processes iterative development has the same thing but is often complicated by the fact that you have multiple teams providing code updates more often.

And this requires more of a continuous deployment or release management focus as the goal is to push software production on a continuous and frequent basis.

And they both have a customer and outcome focus. While Agile pushes those interactions to the lower levels of the organization it’s still necessary to meet your customer’s expectations.

Next slide, please.

So in Agile-based projects and working with our state and federal partners one of the things we found was there’s a disconnect that occurs at the beginning of the process were typical design, development and implement DDI RFPs which often prescribe Waterfall methods and deliverables as contract requirements.
When compared to the focus of the Agile manifesto these two seem to have very different goals. And ways to achieve those outcomes are also different in some regards.

Initial advance planning documents, those IAPDs, those documents we fill out to get federal funding for projects and to focus on long-term plans they look for general and detailed designs early in the process and comprehensive documentation.

Agile strives to be flexible with all of the effort of the teams going toward making incremental software improvements.

And it is sometimes difficult for projects to traverse those differences and still be compliant with RFP funding and reporting requirements without creating a lot of extra work.

Next slide, please.

So some of the overarching challenges that we found to be fairly common one is lack of common understanding of the Agile development process. Sometimes there’s limited state experience with Agile and some vendors simply lack mature Agile processes.

One concern is since user stories and priorities are determined within SCRUM teams there can be a propensity to do what is sometimes referred to as cherry picking.

That is selecting user stories that may be less complex or solve a problem that is near and dear to someone on the team but may have a lesser need than the overall picture.
Sometimes those - the individuals making those decisions are not aware of those bigger picture needs or changing priorities.

Sometimes appropriate user or location of Agile is a challenge. Agile is not necessarily the best methodology for all development efforts.

It may not be the right SDLC or even the right approach in some cases. The two areas I see teams really struggle with in this regard our data conversion and system interfaces.

Since the goal in Agile is to deliver working software it is difficult to make meaningful software progress every two weeks for instance in areas that require a lot of discovery and analysis as conversion and system interfaces do.

And oversight groups understand Waterfall and they lean towards more, maybe lean more towards Waterfall orientation although we are certainly seeing improvements in that area as well.

So the key is to find methods in Agile-based project artifacts that provide the information the oversight groups require without putting in additional reporting burden on them.

One of the areas Ms. Stilling will touch on later in this session is what are some of the things these oversight groups look for when we get to the California experience?

Next slide, please.
So in working with states to adjust to Agile we found three main areas of challenges that we needed to focus on.

The first was the project management assessment areas measuring progress to plan, maintaining your scope and staying in contract compliance is different in Waterfall and Agile.

The systems development processes and artifacts assessments when you take the QA approach in Agile you have to look at things differently.

You have to be able to assess outputs and outcomes given limited documentation. We found the need to have common processes and tools among and across our SCRUM teams.

And we found that in order for QA to be effective we had to be able to provide timely and useful recommendations for improvement.

We also found the managing key stakeholders’ expectations were different as well. The projects we seen most successful spent a lot of time orienting and training their teams on their specific Agile approach.

Establish an understanding with your oversight groups and communicate your expectations of the business users and we found those were all areas that really helped deal with some of these oversight challenges.

Next slide, please. So this slide depicts your typical deliverable review process. As you know this process can take several weeks to complete. In Agile deliverables and plans still need to be produced, reviewed and approved for things like project management plans, environment plans and others.
But Agile also requires process based and real-time assessments and improvement processes.

Next slide, please. So this slide depicts a typical Scrum or an Agile development cycle. So in trying to adapt to oversight and project progress reporting needs of the stakeholder groups the first thing we did is we identified the key roles.

We identified which planning artifacts are necessary to consistently measure and report on quality and progress.

We looked at what are the steps in the build process that need to be monitored and then we address the sprint ceremonies and associated meeting processes.

From that we determine the main process activities such as collect requirements and user stories, prioritizing user stories and assigning user stories to sprints.

What we found was the SCRUM teams needed a QA process that was lightweight, provided real-time process improvements without adding that additional administrative burden.

So we determined what to measure then determine how and when those measurements would need to occur. The management teams with oversight assistance developed a series of process guidelines so that all of Agile teams have some common data collection analysis and reporting guidelines.

Next slide, please. So with an understanding of the key roles the Agile process areas and the key activities the team has developed a series of process artifacts to assist the SCRUM teams.
The four main artifacts were Agile process guidelines to provide some level of standardization. We documented the key Agile metrics such as plan versus Agile velocity and user story churn rates.

The QA team created a QA observation process which allowed QA team members to attend scrum meetings and provide input to the team leaders and SCRUM masters in an almost real-time effort.

We put a lot of emphasis and support on the sprint ceremonies and particularly the sprint retrospective which is Agile versions of lessons learned.

So these were some of the challenges and lessons learned that we’ve experienced in working with states on the Agile projects and some of the methods that we’ve seen used to address those challenges.

Next slide, please. So I was asked to talk briefly today about predictive versus analytical quality assurance. And in researching this topic I discovered predicting software outcomes is still a very immature science.

These models that have been created were trying to account for the many variables involved in the testing process and to provide support to the test managers but they were not proven in the real world and were very difficult to understand and deploy. But I did discover some interesting things.

Next slide, please. So Microsoft set out to understand why is it that some programs are more failure prone than others. And to answer it they determine they first needed to know which programs are more failure prone than others. So they conducted to progress projects to try to answer this question.
The first was the Eclipse project where they mapped the defects from the Eclipse bug database which is one of the largest open source projects to source code locations.

They listed the number of pre and post-release defects for every package in the Eclipse database over three releases.

They conducted a second project known as the Metro Zone project which investigated how to make early estimates of software quality to try and predict post-release failures.

And both of these studies were very interesting because only a few studies have tried to address or predict post-release defects. So how does this all relate to analytical QA? Well I believe very directly.

You know, analytical QA is really the process of taking your key performance data, understanding the history of your project, what’s worked well, what has not and it tries to determine where the risks are and where adjustments are needed to improve the outcomes.

Analytical QA uses risk mitigation techniques and forecasting to pick the future. And the goals are similar as well.

Analytical QA strives to measure progress rates over time and to use that information to set expectations. Analytical QA also focuses on isolating the root cause of a problem and then seek its solution.

And much like the Microsoft studies we analyze information that we have to determine the right breath that is what is the right test coverage and the right depth that is how far do we need to go in order to adequately test the system?
So what I found was there were quite a few parallels in what the predictive QA and analytical QA folks were trying to accomplish.

And now I would like to turn over the conversation to Ms. Rebecca Stilling to give you the California perspective. Rebecca?

Rebecca Stilling: Thank you Bob. Good morning everybody. Or it’s morning in California anyway.

I was invited to join this call today because California’s Department of Technology utilizes a statewide approach for IT project oversight which is the QA side of the activities that’s been talked about already this morning and four very large projects.

And we have a very large project right now that we’re working with the California Department of Social Services on now that all relates to you. And that’s the child welfare system upgrade for California.

And it’s a very large project. It’s about $450 million. So it is among our portfolio of 42 projects this year. Our oversight group conducts oversight activities on approximately $4.2 billion worth of IT projects.

And we do it thankfully within the context of state law that gives us the authority to do this work. We establish policies for when the projects will require direct project oversight.

We have policies with respect to project approval and we have authority over project changes. So in the middle of a project if costs are going up or more
time is needed then the project team and the department have to come back through us with their planned changes for our approval.

And ultimately the Department of Technology has the authority to suspend or terminate IT projects. Now that’s very important if things are going awry on IT projects and they cannot be addressed or remediated and they simply need to be stopped.

And we have taken that action in the past few years and some very large projects. And if you want to Google any of that you’ll find the newspapers picked up on those as well.

So it’s a very important emphasis of the legislature and the governor that the very significant investment that takes place on these IT projects in California have appropriate and knowledgeable oversight folks who are involved in the IT projects both on the IV&V side and the QA side.

Next slide, okay. So there are small projects or what we would refer to as smaller projects that departments themselves can do their own oversight activity on.

But for anything that we rate as medium or high complexity my division assigns a oversight manager. And that manager was referenced earlier is embedded on the - with the project team. So they literally live over in that department with the project team during the course of the project.

And the important part about that is that they’re available to see and to participate in meetings and review of work products and review of progress on site and just being available to observe the sort of stresses or progress that projects are making I think in some respects simplifies the reporting aspect for
the department but also lets us see some of the intangible developments that can occur on IT projects and help us head off or address risks that are developing in the project.

But the important part also is the California implemented as a policy is that the oversight resource needs to be involved and directly located with the project but needs to be independent of the project.

They cannot report to the projects director or project manager, executive sponsor. They actually have to report to the department of technology. And in this -in our structure they report to me because our focus and oversight is twofold.

We work very hard to help identify issues, risks or deficiencies in the project management, project delivery aspects.

But and so we want those things to help the project be successful. We are very focused on the state accomplishing its IT goals and succeeding at implementing new systems that enable better support and services for the public and better policy achievement.

But we also are there in the event that cannot be achieved to be an early warning system for the broader state government both the Department of Technology and the Department of Finance, the legislature and the governor’s office and other agency folks.

We’re there to help watch and make sure that the project stays on track and the earliest time possible to address issues and risks so that the project is successful. So that independence is a very important part of it.
Before my division started doing the oversight we already had a policy in place where oversight resource whether it was a contracted resource or some other resource did need to be independent of the project team.

But I think that model is not universal. I think there probably are other places where you can have an oversight role that is reporting to the department. But it gets tricky.

And so we think it’s just better if it’s independent. We don’t have to worry so much about chain of command issues and ego issues and things like that.

Our oversight managers are responsible for oral and written reports. On a monthly basis we do an oral report on the whole project and we also report to the Steering Committees of the executive sponsor depending on the government structure of a project.

If you’re interested in looking at our oversight framework we’ve put a link in here for the California PMM. It is a modified version of PMBOK. It will look very familiar to those of you who are familiar with PMBOK.

We are in the process of updating the California PMM right now because as we’re just talking today Agile methodology has become a more interesting and used methodology for some of our projects.

And so we need to update our California PMM to incorporate a number of the new approaches to monitoring progress and internal controls over Agile projects. So we’re going to be working on that in the near period of time.

So just to let you know how we work with IV&V my division performs the QA role that we’ve already talked about earlier today.
The IV&V role on projects is today performed by third-party contractors. They’re expected to use IEEE standards.

The third-party contractors are today contracted by the departments themselves that are running the project. We’re actually considering under certain circumstances having those IV&V vendors contract through the Department of Technology in the future because we do see some situations where IV&V is asked to soften or modify or forgo some of their observations on a project which we are concerned undermines the integrity of the IV&V process.

So we’re considering making a change to who is allowed to contract for those IV&V services. But IV&V is very important to the success of our major and high criticality projects.

And we find remarkable expertise and knowledge and support from our IV&V vendors that we worked closely with on our IT projects.

The IV&V vendor is capable of doing deep dives into important things. I have an example of a project recently where they were using an Agile methodology and they had, you know, thinking they didn’t really need any documentation at all because they’re going Agile.

Well one of the, you know, one of the goals of the original project was to have a maintainable system in the future.

And so the folks we’re doing a lot of coding but weren’t, you know, keeping track of, you know, an architectural reference model or other kinds of documentation that would ultimately be needed.
So we felt it was necessary to look at the quality of the code and the IV&V vendor was able to do that and was able to confirm that the problem was more with the documentation and not so much with the quality of the code.

So that was reassuring and very helpful. And my IPOC managers would not have that expertise or skill. So we worked closely and felt that we got extra value.

Now one of the things I want to say is that because we, my division has authority under the law for these projects we very often will leverage and bring more emphasis to the IV&V findings if we consider them significant to the overall health or the ultimate success of the project.

And so, you know, these findings may be escalated to our management including myself for further action on a project.

So in many respects we empower IV&V to or embolden them sometimes to be very forthcoming and very clear on the importance of this the following the standards so that the project is ultimately successful.

And then just for future reference if you’re interested our SIM 45 again I put the link in there that has our policy on IT project oversight what we do and how we do it and what’s expected of our projects in supporting or participating in the oversight activity.

Next slide. So in a more general way earlier we talked about the proactive approach that quality assurance brings to the project.
We have articulated this a little bit more directly for our California customers. And so we talk about specifically we look at governance, you know, how is it structured or is it even exist and then how are decisions made on a timely level? And that will be different between Agile and Waterfall methodology.

So the governance program needs to be thought about at the beginning of the project and defined. And we look after the project is underway we look and see is it being followed? Are the governance practices being followed?

Because a lack of governance will ultimately degrade the fulfillment of the original intention of the project and may cause the necessity of rework or lost opportunities.

We’re also looking on a consistent basis at risks and issues. Important question always is: are they even being raised? Is the project field, all the folks working on a project? Do they understand part of the responsibility is to raise risks and issues so that they can be understood and dealt with?

Interfaces is a big focus in California big IT projects because all California big IT projects interface with other systems. And so we spend a good amount of time at examining the approach to planning for and dealing with interface related system questions.

And then data migration and conversion and a lot of the major IT projects today they are upgrading and changing existing systems or adding to existing systems new programmatic goals so data migration and conversion is always a big part of the planning process and execution process. So that’s a focus of our oversight activity as well.
Next slide. They typical areas that I think we’ve already talked about are also part of our oversight activity. We look to see that a schedule is developed and the schedule is maintained and the schedule is followed.

Many, many of our projects go on for at least three years if not five years because they’re large and complex so a schedule is very, very key to the success of the project.

Quality that I think we’ve already talked about quite a bit is, you know, are the, you know, in a situation where deliverables are expected are they of a high quality? Are they thorough? Are they complete?

We look at if not all deliverable items depending on the project we might sample them. And especially we look at the process that the department is following to do their own quality review on their activities.

And then general project management processes and you’ll see in our oversight framework as well as our California PMM a very large emphasis on good project management processes and having qualified project management expertise on every project.

And then of course since so many of our very large projects involve a vendor even for using commercial projects we have integrator – integrator – vendors who work on these projects.

So contract management expertise and processes are important part of our oversight activity.
Next slide, and then the last three are pretty intuitive scope, budget and resources. How is the project originally planning for these, managing these, and then how is it executing these major areas?

We have a special provision in California law that when a project as I said earlier if a project is starting to spend more or is going over time or they’re making a significant change in their scope they need to come to us for our approval.

But in addition to that if those - if the threshold of those changes is 10% or more they also have to go to the legislature through our Department of Finance to get the legislation – legislature’s – approval to change those original planning assumptions.

And very often it’s a question of is a vendor - are the vendor costs going up and of course it’s a question of what changed in scope from the original contract?

So there’s a lot of oversight not just by my department but when it comes to these very major areas of large projects we also have oversight from the legislature as to the decisions that are being made and the progress that is being made on these projects.

Next slide, so one of the things that I wanted to mention is that a lot of times we struggle in our IT project oversight role with other departments is that they view us often as auditors and they think of us as being there to catch them at making mistakes or bad decisions or failing in some way.

And we struggle against that you know, sort of label and that viewpoint because we really do have a lot of expertise from our experience with lots of
other projects and we have -- because we're a central group -- we have the
benefit of centralized tools and experience and visibility into things that a
single department project team just won't have the benefit of because they
don't do it as often as we do. So we really try to not just be there and criticize
them but also to bring added insight and value to what they're doing.

And so I put this case study in here -- and you can read it a little bit more in
your own detail -- but this is an example where a particular department
struggled with a project and wasn't able to complete it -- their original plan --
which was to bring in a system that would allow them to have a centralized
call distribution - a dispatch system. And parks and rec -- as you can imagine -
-officers out in the field who are responsible for responding to issues or
problems out in the parks and recreational areas of California and they needed
a dispatch system.

So they tried to get one and the typical issues started developing and the
project had to be terminated. But what became an interesting experiment was
we were able to see that there was another department that had successfully
implemented a dispatch system and in this case it was a commercial product --
an integrator helped the California Highway Patrol -- implement a dispatch
system. And by working with CHP and their project, we were able to see that
there was a lot of similarity and in fact commonality between the system that
Parks and Rec was trying to obtain and then the system that CHP actually did
successfully implement.

And one of the, you know, challenges that we have as a - sort of an oversight
group is that a lot of state departments think they're special, they think their
requirements are - you know, nobody in the world has their requirements.
They think that they couldn't possibly cooperate with another department
because they'll be, you know, sort of subordinated to that other department.
So initially there was a lot of resistance by Parks and Rec to think of their replacement - their new solution for their business need as being something that they could leverage through the California Highway Patrol. But we worked with them and we helped them understand what it was and through - really through persuasion -- we didn't actually have any specific statues to require that Parks and Rec start using the CHP solution -- but we were able to convince them over time and they did successfully implement that system.

And it's a shared management of that system. Actually CHP handles the maintenance and operation of that product and then Parks and Rec is a client to CHP and this is handled through the IT shop over at CHP. And it's been a remarkable success. And I've had the benefit of going over there and - to both shops and see the new system in production and then talk to the Parks and Rec people about the experience that they had with working with the Highway Patrol.

And now subsequent to that the service they were getting from the Highway Patrol. And it was fantastic. And they were so happy they did it and they said was what they thought were their original unique requirements turned out to be not so important after all. And so they're very happy with the solution.

But I think that came about in large part because the division that I manage was able to see that there was commonality there. And ultimately we hope that our IT projects in California will become even more successful and even more effective and efficient by leveraging information and experience as well as actual solutions among state departments. Okay, I think that's all I had to talk about today.
Elizabeth Mertinko:  Okay. Thank you so much. I just want to take this opportunity to thank Becky and all of our other speakers as well. I think this has been a really informative session and you all certainly covered a whole lot of ground in not a lot of time. So at this point, Adrian, could you go ahead and let people know how they can line up on the phone for questions?

Coordinator:  Yes, thank you. At this time, we'll begin the question and answer session. If you would like to ask a question, you may press star one on your touchtone phone. Please un-mute your phone and record your first and last name clearly when prompted. To withdraw your question press star two. And once again, if you would like to ask a question you may press star one and record your name. One moment for our first question.

Elizabeth Mertinko:  Great. Thank you Adrian. And while we're waiting for folks to line up, I think we did have one question that came in actually in advance of the Webinar, is that correct?

Steve Esposito: Yes, Elizabeth. There was a question that came in beforehand. This is Steve Esposito speaking again. And the question was actually regarding are there any kind of, you know, best practices or RFPs that are out there that are asking for these that are particularly well aligned to QA or IV&V. And, you know, we'd be happy to provide a couple of examples, but one of the things that we are seeing pretty regularly is the use of a federal - originally federally generated base catalogue of IV&V or QA – I suppose – assessment areas.

And that by simply going through this very large catalogue of a couple of hundred evaluation areas, 13 different process areas, states are able to effectively say this is the menu of things I could have somebody help me review and here are the things I want specifically for this.
And because states are more commonly using that menu approach, it's enabling vendor partners to really, you know, get a bead on what is going to be asked for and make sure that – again – there's some commonality – some common understanding – of what things need to be reviewed and what frequency they need to be reviewed with. Most recently we've actually seen Colorado and Oregon use that approach quite effectively.

Elizabeth Mertinko: Excellent. Thank you. Okay, Adrian, do we have other questions on the phone?

Coordinator: At this time there are no questions in queue, but as a reminder, if you would like to ask a question please press star one and record your first and last name when prompted.

Elizabeth Mertinko: Okay. And we do have some that are online. So first up how much effort should an IV&V vendor be expected to put in to understand stakeholder needs rather than have the state define them for you? It's - I started with the hard one.

Steve Esposito: Could you repeat the question?

Elizabeth Mertinko: Of course. So the question is how much effort should an IV&V vendor be expected to put into understanding stakeholder needs rather than having the state define them for you?

Rebecca Stilling: I have an answer to that. This is Becky.

Elizabeth Mertinko: Sure.
Rebecca Stilling: Okay, it's - don't want to step on Steve, but I do it, too. Stakeholders are just huge in a lot of the California IT projects. I'm sure they're huge - they're absolutely huge in the Child Welfare systems, of course. So in what I would say in our model is that we in the oversight area will look at stakeholder considerations. And if - we make - we have our folks that are applying to do a project identify their stakeholder community, but we also do portfolio work with our agencies and with our departments even before a project starts.

So we already have a good understanding of what the scope and character of the stakeholder groups are for the various departments. We may not know them all completely, but we know they exist and we have ways of identifying any weaknesses in the planning of a department for inclusion of stakeholder considerations. So that's kind of the - to me stakeholder involvement and considerations is a big part of the business solution itself. And so I would - I wouldn't ever prevent IV&V from doing something they think is good to do. But on the oversight area – the QA side – we would look at it very carefully as well.

Elizabeth Mertinko: Okay.

Steve Esposito: And I guess – this is Steve dovetailing on to that – is that, you know, the way we've seen – again – the best RFPs come out is requesting a balance of subject matter expertise and technical expertise, even from your IV&V provider. While yes, you know, IV&V we say is technically oriented, you know, the best alternative is to have the IV&V vendor kind of meet you halfway.

And be - you know, an IV&V vendor who's never worked on a SACWIS is probably not your best choice. An IV&V who only works on SACWIS may be overkill, because they haven't seen an array of different technologies being deployed or ways to get, you know, technology or implementation done.
So - and clearly nobody should come to the table thinking they have all the answers to be able to then – say – tell the stakeholders, you know what their expectation should be. So it's not a - maybe the perfect answer, but I'd say that IV&V vendor needs to meet you halfway. The ideal vendors are vendors who understand your technology, who understand your program, and who have some level of experience and can interact effectively, both with technical stakeholders and functional stakeholders.

Elizabeth Mertinko: Great, thank you. Adrian, do we have anyone on the line?

Coordinator: There are currently no questions in queue.

Elizabeth Mertinko: Okay. Remember, it's star one if folks want to answer - if you want to ask questions on the phone or you can also enter them in the chat box on the Go To Webinar. I do have another online questing and it's for both California and for SLI staff. Should a state PMO office develop a standard IV&V methodology that they can recommend to IT projects under development or is it more useful to let an IV&V vendor bring in their own methodology?

Rebecca Stilling: I think – for California – knowing the diversity of projects that we have – I think it would be difficult to have a single, you know, a single methodology for IV&V. And I think we do benefit by the diversity of sort of approaches that IV&V can take. But we try to unify that around I triple E standards so that, you know, the basis for the findings is consistent. The way they get at it is a little bit - to me it's okay that it's diverse. I'm not so sure that a state PMO would need to standardize that, because they're all so different among the states.
Now, if you had commonality in systems like you have social services systems and there are certain architectural standards that perhaps a state is wanting to impose, that might be...

Robert Tafoya: And this is Bob. If I could maybe just add to that, we have seen some state PMO offices issue RFPs that ask for just that. They'd ask that we come in, help - you know, help show them what a good IV&V approach is and then essentially train them and leave them with some of those methods. So I do see some of that coming around in the industry.

Elizabeth Mertinko: Okay.

Steve Esposito: And the other, you know, component is, you know, having worked - I worked for the State of Arizona for 10 years in IT, I was a CIO for the Child Support Agency, you know, there as well as now, you know, years working in the private sector helping states is that IV&V is a pretty different animal. Project management I think is pretty standardized and PMBOK has got some very good guidance and doing what California did to create a boiled down or a state specific extract of that makes a lot of sense.

You know, IV&V is - and the IEEE standards and the sub-standards that are - that compose an IV&V methodology would strike me that would be a lot of work for a state when IV&V isn't routinely deployed. PM is always deployed and the methodology for that makes a lot of sense. IV&V, I guess if I were a state I'd have to look at the cost benefit of saying how much do I want to do this and prescribe what IV&V is doing and maybe -- to Rebecca's point -- constrain the creativity of the development vendor and/or put an undue burden on creating a methodology that you only lose on 30% of your projects – use - on 30% of your projects.
Elizabeth Mertinko: Understood. Okay. Great, thank you. Next question online, what steps should a state take when they think that the QA reports do not adequately reflect serious issues during the DDI project?

Rebecca Stilling: Fire them. Although if you want to fire any of my staff, you have to talk to me first, so - that's important. My gosh, to have a rigorous oversight program is an insurance, you know, an insurance policy for the success of the project. I think – to be more serious about it – I think you may want to look at the root causes of that. Do you have an inadequate resource in your oversight person; that is to say insufficient experience or skills or knowledge?

Or is there something about the culture or the management of the project that is dampening this – the oversight person's ability to succeed? I mean, is – are they being kept out of meetings? Are they not being told about risks and issues? Are they being discouraged from writing an accurate report? I think if you did just fire them, you might be missing, you know, sort of the underlying cause of why you're not getting quality out of that effort.

Elizabeth Mertinko: Someone from SLI, do you have something to add?

Steve Esposito: No, I thought Becky's response was spot on. It's - you know, it's first of all do the - figure out why, you know, they're not meeting your needs and again – like anything – it's a process and the product and the resources doing them. So I would recommend before, you know, wholesale eliminating a QA vendor, is to really look at it.

The other component of it – and we do see this periodically –a is you have IV&V review QA. You know, so they're not just reviewing the product the DDI vendor or the development effort, they're looking at the project as a whole and then – as opposed to somebody saying, "Well, at QA it's bad,
vendor is bad, you know, state participation" and everybody has their own axes to grind so to speak – IV&V can come in and say, "Here's why we think QA is falling short of expectation."

And – as Becky points out, it could be a myriad of things, but at least you've got somebody independent to help you determine whether you've got a bad provider and should we get rid of them or you've just got, you know, maybe an individual who needs to be replaced. So, you know, engaging IV&V is an approach to assessing what the root cause of QA deficiencies is certainly something we've seen and done.

Elizabeth Mertinko: Thank you. Adrian, do we have any questions on the phone at this time?

Coordinator: There are no questions over the phone at this time.

Elizabeth Mertinko: Okay. That was the end of the questions that I have online, so I'm going to go ahead and close things up for us today. First I want to again take an opportunity to thank all of our presenters today. I think this has been a hugely informative session and I know you took a lot of time to prepare in advance as well as the time you spent here with us today. So I want to thank you all again.

I'd like to remind our audience to please be on the lookout for the invitation for our May Webinar which will be at the end of May and will be on the topic of CMMI. If you have any questions at all regarding today's Webinar, if you'd like any more information about our Webinar series or upcoming Webinars or you'd like to volunteer yourself, your state, or another speaker or suggest a topic, please contact me at the e-mail address above.
Finally, I wanted to remind everyone that this Webinar -- like all of our Webinars -- has been recorded and will be made available online at the Division of Social Systems section of the Children's Bureau Web site. And that link appears on this slide. So thank you again to our presenters and thank you for our audience - to our audience this afternoon.

Steve Esposito:  Thank you very much.

Rebecca Stilling:  Thank you.

Robert Tafoya:  Thank you, it's been a privilege.

Coordinator:  Thank you for your participation. This concludes today's conference and you may disconnect at this time.

END