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Transit Asset Management
Workforce Planning and Development Webinar Transcript

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Presented by

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Introduction

Alexandra Galanti: Hello, everyone. This is Lexa. Welcome to the webinar.

We'll be having three presenters today. Before we do that, I will introduce them and give a couple of updates for FTA.

The first thing I want to talk about is the 2020 FTA Roundtable. Registration is now open. It's held in conjunction with TRB's transportation asset management conference this year. Our roundtable will be July 12, 2020.

There is a link to registration on this slide. If you look at the recorded webinar, you will be able to click on the link. Open to public sector employees only.

The other thing I want to mention is we will do a call for presentations. We will seek presenters to self-nominate only for this roundtable, not the separate TRB event.

We are looking for specific projects and tactical presentations, so advanced techniques, applications, practices. This is about exchange and learning. If there's strong lessons learned from your TAM plan, we are also looking for that as well.

We are looking for submissions no later than February 21. If you have questions, you can email TAM roundtable.

We are launching the TAMPLATE, the planning asset planning template. It launched Monday. It is a technical assistance tool that replaces the Excel template. It is designed for any user, but could be helpful for TAM plan sponsors who may use it to collect information from recipients or for individual Tier 2 providers as a modifiable TAM plan.

An important change to this version is you could directly upload the most recent published data directly into your asset inventory within the online web tool. That replaces the Excel template.

Now I will introduce our speakers today. We will talk to Denise Longley, deputy executive officer at LA Metro and Randy Lamm and also Lou Cripps, asset management at Denver Regional Transportation District.

So we'll talk to Lou first and I will introduce a little more about him.

You will see in addition to the slides from the presenters available today -- under the box you see presentation download. All the presentations today, as well as the book from Lou, will be available there.

Last thing I wanted to mention, Lou is the senior manager for asset management at the Denver Regional Transportation District. He will discuss highlights. The building and asset guide he co-wrote is what he will discuss today.

Lou Cripps

Lou Cripps: Thank you. And thanks to the FTA for providing this menu. Thanks for taking time out of your schedules to be here.

I understand webinars can be a little bit of a spectator sport, but let's make it a team effort. I want you to join in using the chat box provided. You can ask us any questions you have. I think we all do learn from questions.

Today's deliverables. Starting off, I don't want to boil the ocean. Workforce development, building a business case, resourcing strategies, delivery plans are all big topics that need further exploration, but today I will limit my focus to these four areas. The asset management fundamentals, what doesn't happen without dedicated resources, what I think maybe some first steps are and what is next.

Along with this presentation as mentioned, there's a guide book you can download. It covers all the subjects and many more, and my hope is we can get feedback on how to make this better.

I know everybody has seen this, everybody knows the difference between managing assets and asset management, but I believe it is important we collectively don't mix these two.

Historically, we are good at managing our assets and this behavior has been rewarded, but it doesn't seem to solve all our problems. Short-term thinking causes bigger problems. So I like to think about asset planning when I think asset management, because planning really helps us bring the future into the present, so we can do something about it now.

The analogy I like to use is this difference between managing assets and asset management is firefighters and fire marshals. We need people who are reactive, who take care of things, who deliver when things go wrong.

Much like a firefighter, when there is an incident, they run to the fire, squirt water on things. They are heroes and we treat them as such, but we also need the fire marshal, who shows up with the clipboard and the pocket protector and they help us make better decisions by saying things like let's not store flammables next to ignition sources.

We are the fire marshals. We are the people who provide the strategies and longer-term plans for good asset stewardship. We're the fire marshals. Consistently working to prevent fires from ever happening.

The challenge most asset management teams face is getting pulled back into this reactive mode. It feels good, we are good at it, we solve many of these challenges, but we need to stay focused to deliver our function, which is asset management. I will talk more about this in a second.

Just like we don't want senior leadership in reactive activities, we need them working on strategic thinking and working in that realm, applying principles, setting clarity on or objectives, not making reactionary decisions. We have don't want them in the weeds.

We need to take a similar perspective with assets. We can't be so far down in the weeds we don't have this bird's eye view. We have people who are experts at managing our assets. Let's be the experts in asset management.

I know everybody here is familiar with the six-box model of the IAM. Most of the time we focus on this lifecycle delivery. We even are getting more into asset information, strategy and planning as those are now in our TAMP, but how our organizations are structured to support this is a bigger question.

Here's some of those questions that I have. Do we have the resources necessary to deliver on our plan? Are we building this technical expertise within our agencies? How can we align the outputs of our asset management system to these organizational targets if no one is responsible to connect all the moving parts?

What have the Feds done to help us out? I think they have done a lot. One of the biggest things is named an accountable executive.

Accountable executive is a single identifiable person who has the ultimate responsibility for carrying out the transit assess management practices and control our direction over the human and capital resources needed to develop and maintain both the agency safety management systems and asset management plans.

Why I read that, it is because we have an accountable executive, but do we have and have we identified the resources to actually do the work.

To improve, there must be action and people with responsibility for their actions. I can't think of after single department or function within our agency sitting around and thinking makes things better.

What does an asset management practitioner do? What are the chances or tell me one thing your agency is great at where you don't have experts. Actual people assigned to deliver on a function. Doesn't expertise require experts? What if we let everybody do their own corporate IT or engineering?

I know we all wear lots of hats, but no agency is great at something without people working to make it happen. How would our routes and schedules look if service planning and scheduling was handled by everyone, as other duties were assigned? Seems obvious that to be consistently good at something, someone needs to be responsible for it and someone should know something about it.

That brings me to what does asset management deliver. What's different when we talk about asset management is many people aren't sure what is happening without it.

When you want to build something, you may hire an engineer. The product they deliver is known. If you hire an engineer, you will get plans and drawings and specifications.

We need to be clear on what doesn't happen without AM experts, or said another way, what will an asset management team deliver. This is just a short list of what I think an asset management team actually delivers to an agency. These things don't happen without people focusing on delivering them.

This brings us to the challenge of asset management. I think Chuck Austin says it best, that asset management practitioners are the bridge between technical, operations, and financial experts.

Someone needs to turn an unconstrained best acquisition maintenance and renewal plan into a viable business case that financial decision-makers will feel confident enough to invest in.

Asset management practitioners effectively mediate conflicting priorities by balancing cost, risk, and performance. If they are effective, both engineers and finance people are happy and the system performs efficiently and effective for operations.

Without asset management practitioners, finance people can tend not to trust ops or engineering, because they seem to overstate their case. Ops and engineering feel they must overstate their case to get enough money to maintain assets. So good asset management can be the grease that allows the gears to work well and aligns our system outputs to our purpose.

This brings us to our five steps. I think these might be the first five steps you could take in building a team. We talked about what asset management is and what it delivers. How do we find people to actually deliver this function? What are the steps to get started?

We have to start with training, we need some idea of what level of resources we may need. Need to understand the range of skills and experience necessary, and then we should talk to one another, learn from each other. There's lots of lessons to be learned. Finally, build a formal business case.

Jumping right into step one, get training. Seems nearly impossible to implement good asset management with no one that knows much about it, but we have to keep in mind a barrier of learning anything is believing you already know it.

When we look at the list, we are saying once we have our own training, we also need training for senior leadership. Why? I think we could agree that asset management, for it to be successful and achieve this culture shift talked about, we need the top-down commitment to change. How we garner that commitment from senior leadership is we need them to understand their role in the stewardship of public assets.

Step two, we talked about the what asset management delivers and the why it is critical. Agencies only have people and assets. Without one or the other, we can't deliver on our purpose of moving people. Dedicated resources, how we intend to deliver. We have an accountable executive, but who is responsible to actually do the work?

We can't just think things better. We need a team or at least dedicated resources with a priority to deliver. Asset management is that grease in the gears, this coordination across the agency isn't easy to accomplish. Someone will need to focus on delivering it. Let's talk about who.

To deliver asset management, we need people with specific knowledge, skills, abilities, combined with practical experience. We need people with general business acumen, mechanical engineering basics, maintenance skills, ability to communicate, and understanding of finance and risk and probabilistic thinking, and we need basic skills like statistics, data visualization.

Not talking about someone that could create a pivot table in Excel. We need technical experts good with analytics. They need knowledge from IT, to infrastructure, to buses.

This blend isn't particularly common. I'm calling it the asset management platypus. It isn't that they don't exist, but there aren't a lot of them out there. Maybe instead of trying to find a platypus who will be able to do everything, but not do anything great, let's build a team.

What do we need in a team? We need this balance of technical and business strategy, good systems thinker. We need to have this, and then what. We built something new, and then what. Who will maintain it? How will we fund it?

All those things require good communication skills, probabilistic and scenario thinking, openness to change and being wrong. Enough leadership skills to get other people to buy into new ways of doing business.

This brings us to step four. I sometimes think about this as the library or book shelf of experts. I am fortunate because I have an in-house knowledge book shelf with RTD's team, but when I need to know something, I have access to a wider library of experts. There are always people who know more than I do, they are domain experts and at the very least, they ask better questions than I do.

We also have other resources. FTA's website has a wealth of information. We have APTA standards groups -- the IM, we have consultants, we can also look to other areas such as utility companies grappling with similar challenges for years. The idea is we learn and share. It is our responsibility as practitioners to be learners.

Step five. We have collected information in the first four steps. Now we can start our business case. Asset management is about planning and options, right? Make the case. Provide options.

I touched on resources on the last slide. Did everyone notice the updated TAM plan guide the FTA put out in '16, they added a section called develop an asset management business case. Our TAM element 8 should, I believe, document our plans that encompass our asset resourcing strategy. That include the asset management resourcing strategy.

So finally, I know this is an FTA webinar, generally we focus on the TAM plan elements, but if we step back and examine what, why and how asset management supports better business practices, we find Dr. Penny Burns already described this. I can't imagine anyone will get through phase 2 and certainly no one would be able to deliver phase 3 without dedicated resources to actually do these things.

Kind of talking about this, we have discussed what it is we are going to deliver that we actually have to deliver it, we need people who are experts to deliver it, and then finally, we are kind of wrapping this back up with these are the things that we are trying to accomplish for our agencies.

There's a guide book. My hope is that people take a look at this and provide feedback so that collectively, we can make a better guidebook for the future. I wish there would have been something that helped us at RTD, so we avoided some mistakes we made. Hopefully, if we collectively learn from one another, we will put together a guidebook that helps others.

Finally, to wrap things up, I want to thank all the people who do the majority of the great work and made this guidebook possible. Ruth Wallsgrove with AMCL and the RT Denver asset management team.

And to the FTA and everyone who is on this call participating today, thank you.

Alexandra Galanti: Thanks, Lou. We appreciate your comments.

Are there any questions for Lou that we have? We will also have opportunities for questions after the full presentations, so feel free to write your questions in the chat box.

So this presentation gave us a review of what asset management is and how to develop a team within your organization. It is good to note this links back to element 8 of the nine elements of TAM, asset inventory and decision tools. Element 8 is resources and people are one of those resources.

Just a note about the guidebook Lou mentioned. This is not an FTA resource. It is a free resource written by one of our public agency presenters on how you could develop your team. You are able to download it here or from the recording and you can also email the presenter to get a copy.

Now we will talk about how you might plan development for your team.

Denise Longley and Randy Lamm at LA Metro will talk about how they are developing their workforce. APTA actually did a write-up about them because LA Metro is doing some cutting-edge things which they will talk about today.

So I will make sure we are switching over. Then Denise and Randy, you can take it away. Sorry. Technical difficulty.

Denise Longley & Randy Lamm

Denise Longley: Good morning and good afternoon to everyone. While we are waiting for our slides to come up, I will introduce myself.

I'm Denise Longley, Deputy Executive Officer of Metro's Enterprise Transit Asset Management Department, and I'm here to present with Randy Lamm, the director of ETAM, on recent efforts to estimate SGR workforce needs and initiatives to develop the future transit workforce in Los Angeles.

Alexandra Galanti: Sorry about that. Take it away, Denise and Randy

Denise Longley: All right, our presentation includes a brief ETAM overview.

Randy will present on the development of the SGR FTE model and describe the inputs, methodology, and results.

I will follow up with efforts to replenish the workforce, such as youth initiatives, Career Academy, transportation schools, WIN LA, and the Rail Vehcile Maintenance Program and Work Force Institute.

The ETAM department was created in 2015 when ETAM was added to the Risk and Safety Department, therefore become Risk, Safety, and Asset Management, which is autonomous from operations, construction, planning, and finance.

ETAM is responsible for maintaining the asset inventory database, conducting condition assessments, making links between the needs and asset inventory, long-range planning and the budget.

ETAM develops the TAM plan and implements the various TAM-related business process change actions, among other things.

I will turn it over to Randy Lamm to present on the full-time equivalent workforce estimation tool.

Randy Lamm: Thank you, Denise. Good morning or good afternoon. Thank you to Lou for the presentation on staffing TAM departments and also to FTA and Volpe.

This presentation is a little different than Lou's. It is about the process we are developing to estimate staffing for actual SGR capital projects, as opposed to staffing a TAM department.

This presentation is a very simplified overview of a very detailed data-intensive process, where we converted our TAM inventory database where we have cash flows for replacement of assets to -- from a cost-based cash flow to FTE-based staffing flow.

The purpose of the TAM FTE estimation model is provide a consistent process for estimating internal and external that is contracted FTE needs for replacing and rehabbing assets. It also helps to increase Metro's maturity, by satisfying one of our TAM plan action plans for workforce capacity planning.

The goal is to understand the steady state that is the average long-term, say ten-year horizon staffing level by skill type needed to address the schedule for delivery of SGR projects.

And some caveats. This presentation is to provide an overview of the process. This is a work in progress. It is still under review and the figures we are presenting are for demonstration purposes only. That is why we are showing the needs as a percentage of the totals.

FTEs can change by department because the workflow -- the work of the projects can shift between departments, between construction or program management versus our operations department, for example.

Why do we need an FTE estimation tool? Well, in our asset management work that we have done so far, we have a pretty good handle, we know how to estimate funding needs for SGR for asset replacement.

We currently have a contained capacity for project delivery, but we don't have a reliable process to estimate the human capital needs for SGR capital projects.

We are striving for funding in $6 billion in SGR needs coming due over the next ten years, facing the challenge of an aging and retiring workforce and currently delivering a massive schedule of major new capacity projects all in time for the 2028 Olympics.

What can an FTE estimation tool do? First, to assist us, we engaged Bob Peskin and John Schwartz from AECOM to help us develop the tool.

The tool replaces dollars with fractional FTEs for each asset in our asset inventory. The tool can help answer the basic questions we have like how many FTEs are needed over time? By department, by job class, by SGR project or asset, and by staffing scenario, whether in-house or external or more typically, a combination of both?

For the process of developing the FTE tool, this is a very simplified overview of the process to develop the model, based on both actual data and assumptions we make to generate our initial estimates.

The development process starts with actual data, such as our asset inventory database, which is a large database consisting of 24,000 records, 400,000-plus assets and then from that, we developed what we call a prototype SGR project list to address the replacement of those assets. Basically, a prototype list of assets coming due in the same location, at the same time, the same type.

Then we have a list of our departments that work on SGR projects, a list of job classifications that typically work on SGR projects, then add our assumptions.

We assume scenarios of who does the work, whether it is done primarily in-house with Metro staff or by contractors for the hard cost, or a combination of Metro and contractors for soft costs.

We have assumptions about hours per FTE. We typically assume 1730 hours per FTE. A work distribution percentage across departments and across job classifications.

Then we develop global parametric FTE factors and apply them across the asset database. We then have initial estimates which are revised, then reported out by department asset category, job class, et cetera.

The procedure for returning the model involves an iterative process of informed judgment. The global initial estimates are developed from industry standards, like means, manuals and consultant experience.

These are supplemented with our actual experience, such as a recent major SGR rehab project where we rebuilt our oldest light rail line. We call this the New Blue, where we shut it down for eight months and rebuilt it. This gave us real-life examples of staffing for SGR projects.

We validate our initial estimates with interviews and we ask if we are in the ballpark. We get our asset owners' opinions on that, realizing there's no perfect information. If we were holding out to get the perfect information, it would take forever to get it.

We follow up with feeding information from validation interviews back into the model for updated refined estimates. The results are reported for consideration by decision-makers.

Now I am going to briefly talk about some of the calculations for developing our FTE factors.

At the top of the slide are two examples of how global parametric factors are developed, and the bottom half explains the staffing scenarios in a little explanation of soft and hard costs.

The top left table illustrates parametric for an engineer FTE factor for a roof replacement project, developed directly from rates for hours per square foot from standard production rates from means manuals and applied to the quantity of roof replacement.

Top right, we illustrate a parametric for an engineer FTE factor for an entire building replacement, where the production rate is derived from the asset replacement cost in hourly labor rate, resulting in labor hours for quantity of asset replacement.

The bottom left table describes two scenarios. First is Metro does all the professional services and construction and installation. Scenario 2 is a combination of Metro and contractors doing the work. Metro typically provides most of the professional services, and contractors can sometimes provide staff augmentation.

This next slide talks -- gives a view into the internals of the model we are showing on the top, by asset group how assumptions are allocated by department and job class. These can change over time as some of the projects might be done by our project management construction department and other times by operations.

Now for some findings. The next three slides show our results as we are still reviewing, describing results in terms of percent of total FTEs.

The upper table shows the peak need are in the early years due to backlog and the average steady state FTE needs is represented as the orange line is a 10% average annual needs of the total needs for the ten-year time period.

Bottom chart shows total needs by job class, with maintenance specialists being the category representing the most jobs with 48% of the need.

Here we are showing needs by major asset category and department. Top table show the largest FTE needs are in rolling stock at 53%, followed by infrastructure, 25% and facilities, 21%.

Bottom table show the largest needs are in operations, followed by program management, procurement and other departments play a smaller role.

And this slide shows how the model can report estimates of FTEs by job class or department. For operations, the greatest need is for maintenance specialists.

Bottom chart illustrates estimates of FTEs for asset replacement projects for the infrastructure category with maintenance specialists, inspectors, analysts, and engineers having the greatest need. These are the average annual FTEs to deliver the project needs over the next ten years.

Finally, based on our current scenarios, Metro staff represents 58% of the needs, and contracted staff represents 42% of the needs to deliver SGR projects over the next ten years. The large spike in the initial year is inclusive of the existing backlog of SGR projects.

Now that we have described our staffing needs, we will discuss initiatives to develop the needed workforce, one of which is a proposal by our CEO, Phil Washington, to establish a manufacturing industrial park in partnership with suppliers to develop the next generation of LA Metro rolling stock with new technology and a local workforce with new electro-mechanical software and manufacturing skills.

I will hand it over to Denise, who will talk about some of the initiatives that Metro is undertaking to develop and pull qualified workers.

Denise Longley: Thanks, Randy. Metro and likely other transit agencies are facing major workforce challenges.

While the needs for skilled an experienced staff is increasing, the current workforce is aging and the institutional knowledge is leaving with the acceleration and wave of retirements Metro is facing and which will continue for the foreseeable future.

At the same time, there are a lot of jobs that need to be filled due to the capacity projects that Metro is planning on implementing. There's a shortage of potential workers who have the needed skills, training and experience. There is a high degree of overlap between the workers needed to build new rails and the workers needed to staff the SGR projects to maintain them.

As an FYI, the programs I will talk about are not overseen by the asset management group. We are presenting them to show some ways Metro is addressing these challenges.

Metro is optimistic these initiatives may also offer potential opportunities to help with addressing and mitigating the homeless epidemic in Los Angeles.

Metro is focusing efforts to get the next generation and young people interested in careers in transportation. The Expose, Educate, Employ initiative includes internships, mentorships, teacher fellowships. This is to expose youth to educational options and experiences that can translate to jobs in the transportation industry.

A major e3 initiative for youth is the Transportation Career Academy Program, known as TCAP, providing seven-week summer internships for junior and senior high school students. TCAP provides interns paid real work experience in a career pathway or specific technical area in transportation, as well as mentorship.

Next is the SEED School of Los Angeles. Metro is partnering in a mixed use project which combines a SEED foundation boarding school with affording housing, a training center, and retail space to provide economic development in south central Los Angeles.

The project will establish a state of the art vocational and college preparatory boarding school for 6th through 12th grade with students recruited from the department of children and family services, the child welfare system and surrounding communities.

The school serves as a potential entry point for the industry and Metro's career pathway program, which begins the path to skilled transportation jobs.

The mixed use development project also includes opportunities for adults with a training center for jobs in transit.

The Workforce Initiative Now in Los Angeles includes career coaching, education, training and support services, for instance, child care, for career pathway opportunities in construction, operations, maintenance, administration and professional services.

Metro also partners with Los Angeles Trade Technical College on the Joint Apprenticeship Committee program to provide advancement opportunities to union members to progress into rail vehicle maintenance specialist jobs. The JAC program includes training in electronics, mechanical systems, communications and diagnostics.

The Transportation Workforce Initiative includes the youth academy for high school students to explore the transportation industry during a five-week summer session.

This concludes our presentation on current actions to understand and respond to Metro's workforce needs.

We now turn it back to Emily. Thank you.

Questions & Answers

Alexandra Galanti: This is Lexa. Thank you for that presentation. That was helpful.

I see three questions kind of in the bottom that I want to go over. I apologize in advance if I crush any names.

First, from Chad Cumberworth, what about for small urban transit authorities? Is the TAM plan just as important for a larger urban transit provider? Let me know if the answer doesn't answer the question and I will ask the presenters to chime in.

If I understand, what you are asking is, is a TAM plan important for smaller providers -- just as important for smaller providers as for large providers. I would say the rule was designed so a smaller provider doesn't have as many burdens on them to create things.

We link this to the eighth element, resources. Out of the nine elements, a smaller provider, one that does not operate rail or has less than 101 vehicles in maximum service, are only

responsible for four elements. So asset inventory, condition assessment, the decision support tool, and investment prioritization.

The presentation today was what we are seeing is like cutting-edge or the future or what is happening now. They have ideas for things you could use at your organization, but they may well be things you are not able to use right now.

In addition, the TAMPLATE will help smaller agencies to create and modify their own TAM plans, which could be a tool to assist smaller agencies to do that. And also focusing on asset management as a business practice that connects various parts together to move things forward in an integrated way.

So it connects asset management, maintenance in terms of what the assets are, finance, kind of what the capital planning looks like, to connect all those parts of your organization.

Now I want to ask the presenters if they would want to chime in.

Presenter #1: I think you answered it.

Presenter #2: Yeah. The only thing I would add is like I mentioned, we just have people and assets. We should have plans for our people and plans for our assets, and to do that, it becomes important for all of us, regardless of our size.

Alexandra Galanti: Okay, great. The next question is can the FTE estimation tool estimate by type of vehicle? I think this was a question for Randy.

Randy Lamm: Yes, it can. We are basically developing small fractional estimates for each asset in our inventory, so we can do that. Our focus initially is to come up with sort of a big picture, steady state long-term staffing needs by various categories, but the core of it, we do have information at the asset level.

Alexandra Galanti: Great. The next question from Juan, how can the FTE tool compensate when funding isn't available at the time of the scheduled project? I think Randy, this is for you.

Randy Lamm: The tool is to provide information for decision-making. It is not -- it doesn't say -- doesn't mandate giving anyone anything. It just identifies the magnitude of the need, just as if -- just as our asset inventory identifies the magnitude of need for dollars, for asset replacement, our FTE tool documents how many FTEs are needed to support those asset replacements. Actually hiring FTEs to address that need or providing funding to support that, that's part of the process, the budget process, the long-range planning process.

Alexandra Galanti: Great. The next question is from Satyen Patel. It also looks like a more general one. Is the FTA's expectation that the formula 53 fund can be used to establish the human resources need to establish agency TAM programs, and are the resources expected to be transferred to operating or due to the nature of TAM, expected to remain on capital?

I would say that is a specific question that we'll follow up with you afterwards and make sure you get an answer. I don't know if that is one I am able to answer here.

Are there any other questions? I see one from Luke Westlund. The question is, the asset management team at RTD has been evolving several years now. Anything you would have done differently? This is a question for you, Lou.

Lou Cripps: Yes. That is something that is covered in the guidebook. We learned a lot.

We started off putting a lot of resources towards what turned out to be duplicated work, understanding the condition of some of our fleet vehicles, and we have since taken a step back from some of those efforts and really focused more on how do we develop better information to build better asset management plans so we can understand what things need to be renewed and what time frame, based on what maintenance interval, based on what future outcome can we actually deliver those things, sort of a deliverability piece, and those things changed how we started and where we are at now.

Not doing a great job here, but in the beginning, we were focused very heavily on going out and doing vehicle inspections and facility inspections, which we still do. But we have since taken a step back and we have been able to improve the information that's collected in the maintenance side of the house, which helps us make better decisions in our asset management plan**.**

Alexandra Galanti: Thanks. I don't see any other questions here. So I want to just close the webinar by saying thanks for attending. I hope you gathered something valuable today.

Presentations will be available for download and the recorded webinar will be posted. You will see that as a follow-up in a delivery notice or a separate email.

I want to thank the presenters, Denise, Randy and Lou, for their time and for sharing their expertise and information.

Thanks again.