Knowledge Transfer / Retention

Tue, Jul 23, 2024 10:30AM – 12:00PM

Facilitator's: Young Son and David Weber

INTRODUCTION

A PowerPoint provided by CMBG Steering Committee member Kent Freeland and Energy Northwest (EN) procedure GBP-HR-48, Knowledge Transfer and Retention/Workforce Planning and an example of their Job Familiarization Guide was emailed to the attendees prior to the breakout session.

Introductions of the attendees and whether or not they are a mentor, mentee and what they expect from the session.

ENs procedure is based on INPO 06-004, Essential Elements of Knowledge Transfer and Retention.

The procedure addresses three aspects 1) By definition, knowledge transfer retention is the process by which an organization ensures that critical knowledge is preserved, thereby mitigating the risk of loss. 2) The workforce planning piece is the process used to plan and manage staffing levels and 3) The Subject Matter Expert (SME), a person who is the authority in a particular area process, or procedure.

One of the going around the rooms very interesting variation of what you want to get out of this and interesting that somebody said, revolving door. Weber mentioned that he has been mentoring, mainly designers and drafters and some engineers for the past year. Weekly meetings are held and, on some occasions, plant walkdowns of various configurations.

The bad news is that the revolving door piece of retaining employees is a challenge. New employees go through orientation, training and get assigned mentors so the frustrating piece is that an employee may come in the door for two to five years and then bingo they're out the door again. So that's big challenge of not only mentoring a mentee but to retain them personally for a long time.

So that's what I'd like to get out of this. How do you achieve that? Does anybody have a good feel that they have a good process? We'll start with the process. Then we'll go through the planning piece. One planning piece is to have an Excel spreadsheet that identifies all the staff, years of experience and projected retirement date. For example, just taking engineering, but station wide. All the departments have this process and it's a hierarchy by the person with the most years of experience, to least use experience. The spreadsheet would also identify how many years is expected for a mentee to learn from that subject matter based on their expertise and the longevity how long they have worked for. Therefore we can gauge how long it's going to take to train and transfer that job knowledge to whoever you're mentoring.

Below is an extract of a recorded conversation of the breakout session from the attendees using https://Otter.ai application from Yong: Permission to record the conversation was agreed to by all attendees.

04:04
So in Korea, I think you guys have to know about the Korean very weird situation of industry. The nuclear industry, of course, we only have one utility that is owned by the government. And we only have one, engineering company, which I worked for. So, it's like kind of a returning for four decades after the start of nuclear industry of Korea. So, the way we did every single plant nuclear plant in a design for designing for after it's like 1970s So we should have a good process for the retaining knowledge or something. But still my company also have some trouble because for example after is kind of things that we do have axles project for those kinds of things, but those kinds of things are really very depending on what department you work for me I am for the configuration MCM for the piping or physical things. We do have our own forms there. But for if you go to the like system engineer, they do have their own forms, though there's kind of no matching or linking between those kinds of forms and that kind of forms are not really retained or maintained with so called control procedure. So, for me, I kind of very excited that if you check your email, you can see that they've sent you the procedure for about retaining and that they're maintaining the knowledge transfer that they also Colombia has, it's like actual procedures for that kind of things. And maybe if you have those kinds of procedures there, you can have an issue you're free to share it for my company we do not have that kind of procedure.

06:02
So what we do with our procedures is to engage other departments with engineering is that we have interfacing procedures that will allow us to allow them to interact with us to work on all condition reporting processes, but that way once they report an issue or have a condition that they need to address, it then triggers the engineering department and then also triggers them to review their procedures to see how they can align with the engineering process. And that way, once they do that they can set up the documentation in a way where it can be managed to engineering and they can track it to the system called maximum. But they can also follow the process and before the footage goes out any of their projects.

07:04
You're looking at taking advantage of your technology, your software to trigger procedures based on the process that they're in, or the process that is for them for us to get to be notified. Anything we do is start out with a condition for it then it turns into a work order once it goes from there, but that they have to understand the entire process. For the ages up in request a change control to a documentation or upload a new document, you know from a vendor to get something in our repository.

07:45
Yeah, the thing that was interesting is you mentioned you got it you got a subject matter expert that has a mentor and also has to do their job responsibilities. That's a big challenge because hey, this subject matter expert, they're getting bombarded by your engineering choices.

08:05

Your in house staff. It's just I feel for that because I'm trying to do your own work and yet, you know, I say I would meet on a weekly basis but sometimes that gets canceled the meeting gets canceled because of you know hey, I got to review this fast track.

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So, we kind of had where someone was talking about the group, because I have, like I said a 55 year old years of experience. He was part of the building of the plant. He's still there and technology says you'll never retire, which is fine.

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But he has no computer skills. No, not that he's a paper engineer. And I've got to get that information out of him. I mean, it's his office is a repository of just some books from the from the inception of the plant, and he can go to those and pull them out like it's a computer. But, you know, transferring that knowledge from this man who has all of this information to somebody that's walking off the street, they don't really know how to work on paper. I mean, they don't have a computer or phone in front of them. They don't they don't get it you know from the gaming individuals coming in because those are the new engineers, ones that have been on technology since they were three. Yeah, that's interesting.

09:37
Katie KTR I need is to get it from this man who has no interest to be on a computer to these people that don't know how to communicate without one. So that's the gap that I have to ensure we did some good to try to address Thankfully, this doesn't necessarily help if it's not a well defined accredited process. Engineering at the site's accredited training process. qualifications.

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Thankfully, we have a good training department that tracks how many individuals have that qualification, quickly shows where we have very few people qualified in one year.

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Our team took all of those by a discipline camp every, every 18 months or so. We had an MRM looked at those unique qualifications and said, Hey, we only have one person qualified to do this.

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What do we need to do to ensure we have at least to four you know or this guy is getting close to retirement, you know, what do we need to do to make sure that you know that that person is working with someone else to obtain that information?

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Nice situation where you have like this technical expert that is working for binders and paper might be the best thing to pair them up in air so that they understand what's out there and paper and when that guy retires, they can convert that paper Hey, bring up the good thing about qualifications because you could take one to two years to get a clock where you want to put it right to work right into the fire. Keep in mind that a commercial change doesn't require a qualification at all. So, if you're doing it, and we do quite a bit of commercial changes, so you can just put them right into the fire and with one out.

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We also do some what we would call a Ghost Rider where the new person would develop the change, but would not take credit for signing off as being a qualified individual but at least that gets some exposure and gets them to understand how to develop an engineering change package, for example, I guess in line with what you had said, so we have some people, I guess it kind of goes to YouTube, you have a spreadsheet that says how many years of service, the person with the 50 or 60 years of experience might not be the best person to be a mentor. Because we found a lot of those people have a lot of negative things to say about the technology, the advancements right it was great the way we did it back then they're very against change.

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So, finding a way that you said it would be ideal to pair him up with the engineer, but that might not always we've found that then that young engineer is going to leave because they're getting all this negative. Right? If you come here things are constantly going to change. They're going to be shoving things that are throw they're going to make you try to be a mentor as well as do your job.

12:50
So, it's better for those older engineers to try to get the knowledge from them on uneven paper that can then be put into a database versus having them be the mentor. Just be read into that several times. In my experience in the industry as well as the lab, sometimes pairing them up with a young engineer will some engineer right out the door. Definitely to take people into account.

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We actually have a qualification to become a mentor.

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But I like the data pieces that you're bringing into because of the old school people that like papers that have data.

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I'm going to revisit our qualification. Take that back with us to see if we're addressing that piece of I think that's important. Especially now the young generation and we're going to old vintage paper that a lot of our is still paper. I mean we still got we got half and half right. And when you get these young engineers coming into the old school station, it's like they get disappointed.

14:00
I mean, they I'm going do a count. Okay. It's a manual Calc and they got to if they want convert a big calc into electronic format, but that's the frustration piece for the young guy. Yeah. I was going to add I know for us, I mean, we didn't have the negative experience but for a period of time, probably 2014 through 2020. We were the revolving door. It was very frequent. It's about 20 25% of engineers leaving every year.

14:36

It was very difficult to maintain. And one of the things that we start we introduced Canada's webpage we went to page and some of the more seniors we tried to get them to write down. Like, I know at least we had an engineer that was really good about being able to identify some of the old documentation for the plant. You know, Legacy documents. So even if they weren't digitized or if they were not kind of having like, just summarize, because he was the first one to go. They'll want to find that and he was the person that will find it. So we had to kind of document that methodology of how he went through to do that in someone's legs and documents that document that cabin now. He's been retired now for years, but we still have that document and we added to the wiki page. We've done that for a couple of again, just just from different topics that have actually helped us.

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We're similar because for some of some of the things that we've run into, but I've got a more junior engineer that doesn't know how to do something or find somebody to talk to that information, but then ask that junior engineer to put together kind of a job maybe. Then we save that in a place where it turns into a junior engineer to kind of take ownership of that process and become a person to go to and it helps that they tend to be more tech savvy.

16:25
I think the downside of I've seen of it is I mean,all the information is there to go and use that information. But what we found is we got to ask engineers to keep adding stuff. A lot of times it just stays stagnant there and we have to anything like that.

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We'll make a similar wiki page. It's not really necessarily documented. We've had a massive amount of books.

17:07
Kind of a grassroots thing for one of our principal engineers will say we have a weekly meeting on Monday.

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She started as a systems engineering teacher.

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It's worked its way into all alpha levels, systems and design. We buy lunch.

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It's not just our levels of show shows up to and then we get to have a conversation about how to go to your job, not how to you know all the things like we use maximum use ECM How do you go live so simple things that aren't you're not going to have a Qualcomm.

17:50
But we've had a lot of success, and I think it will show benefits long term. Hopefully keep people around because everybody's interacting face to face and getting to know each other recognizing that all everybody's struggling the same spirit but what I don't think we're doing well as part of that is documenting it. So, I think taking what you're saying there and I know our principal engineers keeping a running tally and track. Whenever we put things together he has some stores, putting those in a better location that might

18:28
appreciate when we've done something very similar to what Matt's talking about and I know they kind of started in our Wilmington offices where they would set aside one hour a week and it was an open door policy and people will come in. So we're doing that in Chattanooga as well, where we've got specific topics and like Matt said, it's not necessarily always a technical topic. Sometimes it's going to be our value reports for us, because we're the business side that we're in, but we've also are trying to draw more one on one mentorship, like the one of our best mentors and this is when I was coming in. Like we have a mentor programs like Welcome to the company, you're assigned somebody. They're given a budget that can take you out to eat but it's not necessarily like a technical mentor. It's like it's your work buddy. That's going to help you understand how this is some of the benefits stuff like it's that but like the one guy that was really good at it, he did make it a technical lunch and he was like, we're never going to the restaurant. We're ordering food and you and I are going to sit down and we're going to walk through a change package or we're going to walk through a calculation and that seems to work really well. And so we're trying to reinstitute that because he's been retired for eight years.

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So we're trying to get some of our other mentors to do that.

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Another thing that we did this year that was we got what we call an innovation hub, and it's where anybody can go in and put an idea and they want to do it's reviewed by the executive team, and determined if we want to go try this out, and one of our guys for interns.

20:11
interns, was like Can we just give them a count that's already been done is not going to go to a client is an example like a homework problem. And we had so our interns do that, because I mean, it's hard to get a three month job interview, and you can offer him a job even before they go back to school and sometimes continue to use them while they're in school.

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So that was another thing that we did is assign them coursework that they would go do

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something far as the new engineers that we've received throughout the transition into operation, I've been helping a lot of engineers structure their design folders. And how they can submit the documents in our repository. And each and every one of them. I have them do the exact same way. So that way, no one has something different to look at.

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It's the same that way that way, if they want to go back and look at something, they have a model to look at, and they can follow that process. But if someone's always doing something different, they can't follow that process. So, while I've talked individuals and I showed them how to submit documents show how to fill out documents show how to go to the engineering process, so that way, doesn't be cumbersome for someone else to follow. And that has been happening because now the whole group can assist the other engineers are showing them exactly what they done. And this exact same process and there's nothing you don't have to figure out each procedure later.

22:06
Well, it's more so our procedures are general and our task or how we go about doing things is how we go about doing it. It's like tribal knowledge. So when we share a tribal knowledge, we try to share it in a way where everybody can do the work exact same way and get to accomplish the have a high level products.

22:32
Talks about sustainability. A lot of sustainability is really about getting that tribal knowledge written that doesn't have to be in a procedure. Maybe it can be in a like belts or a wiki or something like that. You know getting that tribal knowledge written down or somebody else experienced it. It sounds like you're driving an experience. You know you're sitting the people down and showing them that's great in a truly sustainable they recommend I was writing it down somewhere that way if God forbid that one guy that knows how to do it gets hit by a turnip truck. It's impossible procedure lies everything you can procedure lies, everything but you could have that guy, at least have kept some notes on how him or her their actual tasks.

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So anybody doing any video recording of mentoring, we actually the civil group at Sequoia has some good examples. They've taken like how to do a pipe stress analysis.

23:44
That's good idea. Take advantage of the technology.

23:49
So when so when I left, I was the gas intrusion program owner. I was the FLEX program owner and I was the SAP subject matter expert when I left I had no backup for anything. So before I left, I got out of my management who is go to info whenever you find the advanced engineering training module and watch it. It won't tell you everything. But it will tell you what not and something I didn't see in the procedure the guy from Colombia, and it wasn't dinars command, she is using those advanced engineering training modules. They're not for things that are in like the tractors, therefore individual programs for if you lose someone like me, you don't want to go and have to pay a contractor to do that job for you to be able to do it in house. So my understanding too well 13 boards and committees are being developed was to make an instant SMP so if you don't know about these and seems like they may have fizzled out because there's an every letter from 2023 looking for 50 utilities to sign up for it and it doesn't look like they have that no 20 people we eliminated our subscription to that. But these advanced engineering training modules or at modules really helped me try to leave a site and not not

24:40
So, if you don't know about these and seems like they may have fizzled out because there's an effort.

NanTel has a lot of training.

25:13
But they have things like controlling happening the middle of the fire protection, ESTP control, heavy loads, flex gas intrusion, all kinds of things that you have a program owner for and it's not your spot your site. It's an overview of how the industry developed these programs. What are the generic letters that led to them? What is it normal program look like? Where you have, you know, the lingo like we do for configuration management, for example. They're really good for me trying to leave and not trying to leave.

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But there are ways to get that knowledge from that person and get it done.

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Other form type process is so simple.

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Just any time at all out of five drawings and that'll be pretty much related. So sometimes that particular activity will be in the person's focus.

26:14
Really one word training doesn't wait to perfect and good knowledge back to the years.

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So that might be now before we talk about digital records and stuff we've come into level three for everything's digital, that so read legacy and perspective. It's great because everything's right now.

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But when you get a new person in there, and you just say, Here's everything, like don't really tell them

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I know I've been very few around their knowledge to the console.

26:59
I know I've been very lucky we're out of college today so I tried to like get a local job aid. It's very simple.

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To think about when you first got into career just feels very overwhelming.

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In your first two years like everything's going to get even harder

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database so I think big and small job aids that are like, going to like the fifth grader but understanding that like, someone is completely cool. To take this thing and produce it.

27:39
We have that some something really similar like that. Like if I'm doing a calculation on my canal, I don't have to tell you how to do the hydrothermal calculation but I have a lot of form of a guide and a template or something that provides instructions for something that I didn't learn in college, right. fill in a form but to make the consistency with a product, we found a lot of benefits.

28:04
Calloway. So, he and I were talking about how to keep people here how to transfer knowledge they had done they have been permitted within their promotional activities to acquire from the mentor. You're not meant to you don't get them. So that's one of them crimes, or procedures. Call them engineering procedures and they got somebody to go to them.

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They acknowledge knowledge over engineer wants to see engineer one monitor as we go from a senior to a to a procedure, help and mentor.

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So laid out very prescribed ways now that procedure on how you voted.

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So your intensive, you given them some and a Have you knew to progress in their career.

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You know, give them a little energy.

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This time they should also so within like four years we want to give them a timestamp they're saying that you got this much time to finish oh god these days.

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You're doing a great and we will not be looked at

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us up first. Do my situation is a little bit unique to companies that they have centralized their program and governance ownership and then we have multiple sites. So we had obviously we got a lot of procedures we got knowledge retention procedures got personal mentors and mentorship, everything and supervisor accountable to risk rank the.

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is a collection of specialists working at this site.

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What is the risk of losing him in terms of the years and what is the uniqueness? Of that role? So that works pretty well in stations in my area. At corporate. We own programs such as pressure boundary design, management, ecc and ag management component.

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My people are all SPV Single Point Vulnerabilities, so we don't have any backup for those right. It's so difficult to convince folks from the site to come to the corporate, believe it or not, from the incentive perspective. So when you're working at site, you do a lot of overtime and make ton of money. And it's very difficult to convince the person who is a designer to experiment parsimonious specialist to move to corporate. So right now, I've got a pressure boundary expert that corporate and she gave me notice but two years ago that she's retiring. So we have so much hard time to convince we got PBS special that site, but there's no incentive for them to make a move to the corporate event posted outside and outside the industry. Also, it's difficult to convince people to come in my point is the incentive is a key aspect for some of these things, right? So it's not ending with procedures or having program for mentorship. The role and position would need to be attractive to maintain continuity, right so right now, my PB expert, who does mainly consultation on registration of this flange or that I don't have anybody to replace her and she's going out of door in 2025. So I really don't know how to be posted. And eternally we didn't get anybody interested in although it's a promotion role. But if you compare versus 400 hours of overtime at site, it's insignificant in terms of promotion, right? And then outside is very, very competitive. So in order to attract somebody with that qualification, we approach the even the precipice and inspection organization we have that TSA at Ontario that does the inspection the inspectors are making good money so they're not interested to move to OPG which is a solid government role but it all comes down to what is it, and it's for me to make this move, so we got to consider that to challenge, very time dependent, serving and listening.

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I mean, just serving and listening at all pieces, a couple of observations that would really rally

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CPAs per se to somebody and go find the information or go find it.

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Was reinforces it's all there so you get the same problem but different scenarios in different situations.

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Question understanding framework, what the business is not trying to drive and we're very industry oriented procedures and new training new all these wretched profitable to do procedure lines, it is day investing. We have that frame. We're looking for various reasonable safety, but approach and thinking so many, whatever.

33:47
Can you think of this as an extended orientation and not call it Training? We're so conditioned to use training. You're really bringing people into orientation because you're bringing in new younger people, but you probably have revolving doors I heard because they're disenchanted and think about the cultural generations wherever the millennials are, next cheese or whatever.

34:12
It's different for a patient has to respond Google at Google and find it. They don't want to go find it. They want to be presented.

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What we don't have is an industry we've never brought together value proposition to say, update your information systems and put your information in there and provide that orientation. Put it in there versus the 30 year person who has his own librarian in his office, and the question of phonies using his own stuff to make design changes or using document control.

34:48
With changing them a framework in the mindset not training per se for your patient. That's that's the method walkthrough and and also the other part of it is really

35:00
so as a top level, it training organization that comes into the company, but there are operational types. Here's how the business operates. Start off with that.

35:00
Bring in an engineer and go do engineering.

35:16
How does my work fit into the bigger picture? What's my value to the overall organization does that work? Because if I screw up so starting at the top is an orientation or framework orientation versus training for any training because guess what? Things change and intentions training. So understanding the bigger picture sometimes is much more valuable for us. We'll walk in coming out of school or so US nuclear industry, what's it all about? So just just a different perspective of what we're conditioned to do on construction, our history of being recommended.

35:57
And I recall back when this whole home was transferred things started my work at making personnel were they different switches are the valve and how you do this and so that's all cool.

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But what they have that happens when spills are in their cabinets, if they're doing something sure killing something and not doing the right thing. So mentoring, how you how do you definitely mentor and say that they understand.

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It's another qualification question is just the different pieces of what's happening here. Step back a little bit. Because David, this is a HR procedure.

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But it doesn't say retention, says knowledge retention, but not personnel retention. Is there an intersection is there a separate strategy within any organization for retaining what would you put in that? Again, if you work with an old paper worker versus a new work, think about the criteria and how they behave when their reward system is now protected for retention so they don't walk out the door two years later. Because they can't find it too hard.

37:13
Recently had as that kind of young going but a few times.

37:19
Generation of constant learning of new technologies and methodologies. wrote up with computers that are advancing very quickly where you have a new technology methodology that's quicker and faster over the years. And then sometimes as they are put in as a new engineer to their facility in particular, they're expected to be that person and be that particular expert forever.

37:45
Yeah, and that's an absolutely different way of thinking all of a sudden, it's more like you feel like it's an end to your career.

37:53
You no longer have a vision of growth of new ways of doing things be successful and progressing. It's it feels more like handcuffs. It feels like you're being stuck.

38:08
So I think in a lot of ways we need change that tribal knowledge structure that experts grim instructor to add more flexible knowledge you're having spent ages. We needed to get people up to speed, we can't expect them to just be interested in being that cost as part of the system.

38:30
We have to have very concise manuals, procedures and provide quality agents or breakup modifications. So we need to get those two base years up to speed as possible as fast as possible. A Creek provides learning opportunities so they feel empowered to learn new things, and also bring in new technologies and help them embrace perhaps new ways of doing things and encourage and support some of those ways because they have good ideas. They're thinking outside the box a grown up and think outside the box in terms of new ways of doing things. And and looking at those things and helping them think that way. How could you make this better? And this is how we've been doing it for 30 years.

39:14
Perhaps that's the best way.

39:18
And another expect just that one person to be there. You've got to provide opportunities for them.

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Instead of moving outside the company, encourage them to move around inside the company or in a new position. They'll still have retain that knowledge that they learned but just now in a good position. You can still ask them questions.

39:37
Now it's happier living in a new position and prepped to make changes there.

39:44
So instead of trying to fight the transition and fight them from actually moving around, actually provide extra a little bit rehearse a little encouragement around from within and outside the company.

39:59
So just wanted to put more about my company's practice example for the traveling knowledge structure. So actually, my company management level papers are not bleep human. So what they did is like you said, you already mentioned that there's a lot of papers that should be are digitalized and everything that only for the research and report or the drawings I think you just turn into the PDF order with the MS word for that is we can actually can, you know, searchable, with the text and put, put the put those into the one huge repository. That is like, more than 20 years. And we teach to the freshmen and juniors who got into.

41:43

First back when I was at the plant, that's something that I kind of learned maybe everyone knows is maybe not so obviously United States and low credits both maintenance and technical training. So at our site, and the maintenance vote, we're qualified to discrete tasks on discrete equipment, how to operate it in what way so they have very specific qualification structures.

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They have technical engineering, have a lot of issues with finding qualified facilities.

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So while I was there, I did some internal benchmarking with maintenance on how they did maintain or was that the same type of things. But it's ultimately go back to your site here and look at what maintenance does how to do that because not everything is foliage based and maintenance. Things but it's all been applicable.

42:36
And then what's what's important, so probably well said something that I wanted to bring up about ABS. So how I understand it and correct me if I'm wrong, is that someone that comes in comes into like a class and those people may go to different positions throughout their first year.

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Elaborate on yeah, there's actually a four year training system training plan.

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Everybody out there, I think what I was talking about slip between centers. I came in all the work I did was in engineering all the people I worked with.

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What I went around telling me is that it looks like you've spent a certain amount of time we get licensing, certain operations, maintenance, working with those people.

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If you don't have an engineering background, what I was going to do is have a choice.

43:43
Once I learned I thought that was a really good investment. That is very good. For me, within the first year might be a year and a half later they actually walk around with operations on rounds and they work with security drills maintenance program that costs money.

44:24
So just one.

44:24
So just one thing to add, I guess kind of what has been said. We talked about the revolving door and how to stop it. I don't know that you can. So I've talked to several young folks have started and, you know, I guess some of the other generation you stayed where you were at you took a job you live there if you didn't want to leave your family that's gone. Right they want to work repo they don't care if they're by their family.

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They have been taught and I've talked to several that if you don't company's fastest way to increase it's not to stay at this.

44:59
So I think it's a difficult thing, but we've got to change our mindset to not How do I stop the revolving door but how do I handle the revolving door? So those are those are two dates in my mind. They're two different topics, knowledge retention others you got to make an environment that's it.

45:20
You're ready for them to walk out to that different generation. Hopefully you'll get some folks that want to be there but if you want to identify new employee, entice new employees to stay long term you have to try to change the environment.

45:37
That's trying to promote the support of telework and its base trying to clean up your workspaces. So it looks like a nice place to come to when they do say, especially during the last two to three years, I mean, at least mobile one and two, I think we've pretty much stopped.

46:06
You don't have that revolving door I don't know about paying for but at least in one of two there's been a big effort the last two, three years. I mean, I can tell you over the last year from the whole organization, I think one person who left the company and it was because of family reasons.

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Other than that has been because they're getting promoted within the company.

46:31
But, but a couple of the things that we've done, I know we have the patent people advisory committee that kind of creates activities for the engineers, kind of get them to socialize and also they they get to provide input on what things are working well that they would like change. And those things get then put in front of engineering leadership and, you know, looking for, you know, I don't know, I can't remember I think that at some point they wanted to upgrade some of the conference rooms the technology that we had for presentations and all that. That's what they ask and they don't we went ahead and did the upgrades to do that.

47:19
So I think that's helped because again, they do vary. Sometimes they go to go to a bar for 2x games or top quarter or whatever. And those are things that they promote. And then I think from our that's more that's between the engineers, but then from the from the leadership aspect.

47:44
At least over the last eight months. I know the director start to win in monthly engineering social, the last Thursday of every month. Go to us for the ball, whatever.

47:57
Get engineers there, he'll pay for everything and engineers get to have friends look for things in common and then they it kind of creates that environment, friendship and it actually creates stronger bonds.

48:12
I think all of that is helping I think the remote work helps. We've still kind of kept that, you know, part part on side part revolt. But they they want that flexibility.

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I mean, I know I've heard when there was times where there was discussions about trying to bring more on site and you can start hearing

48:41
No, it's not going to end up well. So, I'm wearing now an engineering director. They made it clear that we're not changing the way things I think we talked with engineers, I don't make this thing happen. So I think again, there's only been probably the last maybe two three years, but for me, it looks promising because you know, you're not you're not having that revolving door. So those engineers continue to build up on their experience.

49:12
The challenge of the remote work side of the mentoring side or traditionally know about well, that's actually the other question is locations throughout the country. If you allow them to be anywhere they want, versus local with a half and that's on my birthday. A couple days. That's another challenge on how the hiring practices don't add a couple of policies our companies have certainly started companies we don't have people all across the country has three hour timespan difference.

49:52
Responsible for us being Yeah, being a plant. I mean, they live in a certain area because they're all part of VR, and all that but in terms of the mentoring, so we do, we do mentoring teams and all that sort of topics, but they also coordinate on days to go to site. And, you know, go and observe certain tasks in the field and walk downs and you know, you'll hear where other engineers I would like to go and tag along and really the kind of we always try to make sure that we have some amount of issues aside every day.

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We've had very terrible potential to be, what, six months ago.

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So it's sort of I know like, if my two years of work life balance.

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Its inherent problems. Nuclear plants are always in the middle of nowhere for a reason. Nobody wants to continue important they would take a significant nuclear industry I'm not sure.

51:19
To prevent those things like how to get around those two things. There has to be the hero has to decrease the number of Euro distance they had to decrease the team's like they eliminated some positions because we were having issues as long as they're finding people that wanted to live in that area.

51:40
I want to share the very interesting statistic in my company share with you, as I mentioned that my company owned by a government like 100% So the thing is, how about how many papers are leaving in my company less than 2% or 1% average working years is like 55 years. So what they do for us is a few go into my company they miss like company guaranteed your Do you can work like age of retirement like 60 So there's no kind of revolving door in my company. So that kind we can you can feel that. The stability in the work like you mentioned that work life balance so every guarantee is like nine to six working condition and sometimes you can have like choose seven to four if I have a like kit. So this kind of you know, very Asian culture you guys cannot do because of the your policy and your culture but that kind of tenure they give gave me the tenure just got into my company, then they can be a little bit more Royal. And we don't want to leave our family and really kind of very family oriented things. Also it's kind of Asian but maybe you can have some you know, tips from the very low later move people in my company because I think human needs stability for their life. And that this is kind of good sample for you guys.

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I guess OPG in Canada is also a government owned company. It's owned by Ontario province of Ontario.

53:30
But 30 years ago when I joined I loved it because it's a plant in the middle of city. How could you go around so it was like 15 minutes from downtown Toronto. So I loved it. But the time has changed though, because I also teach part time and university which has a nuclear energy program in that region. I talked to young people so they don't mind to travel these days. They they don't really do if I show them the money they go you know, I've got a nuclear engineer graduate, which is a very specialized program. But then somebody in Alberta Oil and gas company they offer them good compensation. They have no no sort of, you know, hesitation of making these kinds of choices. So where I'm going at is the knowledge retention is certainly very important but be able to bring the people in and people retention. I think it's the first step because we don't have people then they forget about the knowledge retention. So one thing that we have difficulty in our area is to attract young people. We did a lot of automation, ecc automation digitization, X Lab, you name it, so that's ton of money, this thing, but it's still we can bring the young people in as much as we love to it patch we were in the United States. We're not lucky to be near city records around Augusta and and then Farley is you know, near the beach hatches in the middle of South Georgia in the middle of me it takes an hour to get there from anywhere, you know. so it's very hard to convince somebody that's just graduating college to come especially if they're not married and they don't have any family there or anything like that to come and stay so a lot of the people that we bring in our, our people that live near their, their parents worked in plant hatch, you know in that they're, they're staying in the community, those are the people that we retain.

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That, you know, I guess you could if you try but you know, think about it. The topic of knowledge management started like 15 years ago or more when obviously the workforce is turning over and there wasn't good recognition.

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Replace all this automation and all the younger generation accelerated technology issues occur real and real time. But what has been the adjustment and either are still evolving. What's been the adjustment of this knowledge management to say, yes, we can do this but that's some things popping. Like Michael said at some time. Retention is a separate topic. But they actually do go together. Because if you have the knowledge, there's nobody that doesn't make any sense the only people who are legible.

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So that notion of what else is actually doing to recognize the situation. across those converge those type of issues.

57:07
Maintain the knowledge.

57:10
the knowledge Observation timeline. I separated from the redaction and summarize summarised really succinctly whispering in my ear. You need to make your place of work not suck.

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Of course it is.

57:30
Of course it is what's the great cheering can be used to enhance your workplace. That's the question. It doesn't just mean clean up his desk.

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He's bringing that environment which you said earlier, that is attractive.

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The more challenging things that our industry has to deal with is convincing people out of just for fun

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as a positive another huge negative. So I tell you, one thing that we've introduced the last maybe three years is we actually send a survey to the engineers and we asked them you know what was scheduled like to work who didn't want to work overtime. If not, we get a mixture of engineers that want to do 612 Six close years I want to do four twelves they can do some four twelves as long as we can do the balance and I think that has made it a lot.

58:29
Some engineers prefer knights prefer days and luckily enough the changes that we gotta do are minimal and essentially been helped you out as we all know, we have to support you.

58:50
Yeah, I mean, I mean, during the online work, I mean when there's like an emergent issue. I mean, they know that they got a support and we just got to make sure that we're looking out for them. I mean, I had until this past week and I had three engineers that had to go to the plant to support this morning I was just texting them like, you know now that it's things are calm, make sure you take time off weekend, they appreciate that the right size.

59:18
The right size response is very important. So it used to be you have a term you're turning around your trip, unplanned. Everybody was just a year, six days. It's just what you're doing. So we don't do that anymore. It's strictly the troubleshooting team. We asked everybody to come on site standard hours just in case something comes up. But you don't do what we used to do similar analogies which is scheduled by for five tans and try to get it two days after some like day somewhere nice.

59:56
Somebody can only want to work nice adult supervision is the last one because all I can do and others that want to stay on days less upset to their family. Something like I meant to do that kind of helped a lot with that because we had an effect, kind of merging.

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The last four managers made it four or five years until they got burned to the ground.

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So the way to solve that was to make an event manager for each CRO team.

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And when you have in your own team, it's on duty manager as the manager for that.

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So instead of having one person run into the ground for years before I can share the look. And then it was really well received. It really helped a lot. It made it a little harder trying to transfer merging items and stuff like that. You have four people that share the love of the role, but that really helped me the next section. So first line supervisors cover a week at a time

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1:00:52
so for people that love Southern nuclear prefer and also how to kill frequent selling.

1:01:18
As COVID introduced the new norm working from home, it can be done. So now they're gravitating to that doesn't lead to investment so we saw two things I think we can retain better recognize I do agree I think you bring up a good point. I think we used to struggle with engineers leaving because they could not see a clear path.

And we have we had a couple of sessions and discussions with the engineers what they were looking for. We actually when we saw that there was a couple of engineers that were interested and there were some that were probably ready to be able to engineer to get here.

1:02:08
Same level.

1:02:10
Not having done supervisory. We actually posted we posted anyone that was interested that met the minimum requirements applied, went through the interview process and from non current candidates promoted like four of them. Make sure that the other five they knew what things they still needed to work on. So I think it made it a lot clearer because before that, it was more of the supervisor build the case and bring it up. So, so sometimes other engineers we're seeing their supervisor was not helping them build face that it's almost like not supported.

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But now being that they apply to the posting and it's a panel interview, and they provide them constructive feedback, you know, I think it helps in that coming just from.

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Have a specialty. So it's it's an automatic 10 years where it was the right timeline.

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So it's nice metal. I think I'm positive about what the Hammersley turns into is concerned about holding on the engineers managers are very important as well. And we're a union engineering.

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So what that has done is shifted pay plans of work for all in now. Your principal holders for your charter level engineers are kind of at the same level as the first line supervisors are allowed. A lot of financially getting that kind of benefits we got to get used to that. So that's another piece to this. The engineers are very important. We need engineers, both managers or managers, typically because they're our best engineers.

1:04:20
And they show promise and they want it to be so that's, that's something that is also a struggle that I can see as we work to make sure the engineers are happy. Can't do it at the expense of what worked best performers.

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And the thing that got us Bridget earlier, from a logic game is questions to a certain timeframe. Needs to be louch Where you want to see your lead should get tough when it's very subjective.

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So this procedure is referred to count described and how much time is in between those two.

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So just to clarify, we do have timeframes for engineering and train to senior. Those are approximately right there. but they're from senior who knows,

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maybe we maybe we have to communicate it but I don't know where it gets really like what the ladder, how was this level.

1:05:44
Our last week.

1:05:44
Our last, we created two more additional higher level positions in engineering. We now have a expert, engineer and chief engineer.

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They're very few and far between but at least it gives some incentive to you know, and there's some criteria in order to be at that level. Like maybe you need to have a PE stamp or something similar.

1:06:20
Traditionally, the app was to engineer the project management side of things to keep the company really wants to do that or was the catalyst for that but they want that progression. So we've got a consultant track that runs kind of parallel that reward those folks aren't necessarily so we just benchmark the industry on salary grade levels, and we found out that our grade levels across the organization is short by like 10% Wow. Because that was we had like four reasons why people would leave and left to meet with HR and say hey, why leave it? What is the job knowledge in the work life balance is big.

1:07:07
Salaries the biggie, we work, we have the deal we across the street from us and they pay a lot of money, the risk and that is the contract. You know, our place it's pretty secure. So you know you got pros and cons but this day and age people want to make money

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they have an agreement for the next three years for 15% with their engineers, so that's good.

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To be completely honest, in terms of speaking with a lot of engineers, they're talking about perhaps going to a different position somewhere else. It's most of the time about salary. If I move around, if I go apply for that job, I get an entry point out here, and I don't want to wait here for 10 years.

1:08:00
And I mean it's a really good point. In fact is if they left for five years got that 20% bonus when they came back to the same company, get a unit or they were I know we've never really done an industry and it's never talked about each area retention bonuses.

1:08:19
I'm not sure if that's really been it's really an HR thing in terms of exploring, but I remember 10 years at my previous company and getting a really fancy opportunity to get a really fancy bowl for 10 years. I was like are you kidding me?

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You're working for this company for 10 years you want to give me this fancy ball.

1:08:42
I could have left some job somewhere else and got $20,000 Extra this fancy little ball. You know it's almost offensive to me. It's like I could have left easily gotten a lot more money for some golf ball. So that is the old practice.

1:09:02
In a new environment. It just doesn't work with people. It's almost offensive and I talked to plenty of new engineers. They got there five years they got a fancy little plaque or whatever they're like whatever.

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Yeah, yeah, that might.

1:09:24
But it really is kind of offensive.

1:09:27
It's like, oh, wow, you're really impressed with my work. You're really happy I'm working for you aren't yet

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expansionary retention bonuses, because they weren't given the operator's license because we had such a group of them.

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And the answer was an entirely different contract.

1:09:51
Physicians and engineers

1:10:01
here's what we were looking at. So have a contract just like the other as a teacher.

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So in light of current inflation increases throughout the country, has anybody done any cost of living adjustments? TV is there there's not

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You know, it's It's sickening when the economy's up like 15% or more, and then you give somebody a little 4% Raise. How can they keep up. That's why they leave to TV, across the board and everybody got their sellers.

1:10:44
their celebrating progression a little faster than the husband.

1:10:53
With your with your Yeah, no, I know, for us at least the last the last two years though the normal cost of life increase has been a little bit higher than normal. But then also, I notice pass December, the VP engineering VP actually added I think it was about four and a half percents for all the all the engineering positions.

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Again, it probably doesn't get you to where you know inflation is but but still.

1:11:32
We were not expecting challenges. I wonder what I've seen in the past, take any better job that manager or that director to recognize I need that person. Then now they will jump through hurdles.

1:11:57
So we shouldn't take one person's brain relentlessly above the critical attention

1:12:12
feel forced by the time to jump ship up the road.

1:12:28
Well, we're up at noon, lunch time for everybody. so network I mean it's good opportunity. to continue conversations and it was a good meeting. I appreciate everybody coming and all your valuable input. Yeah, me too. Thank you.