**Increase Bearing Uptime with Operator Training and PMs**

**Dallen Davenport**

Well, we will get started. Thank you, everybody, who has come today and joined us for this, exciting presentation together here between Redlist Software and Artha WearTech, we're, looking forward to sharing insights that, Really, we really hope you'll be able to take away today and implement and consider for your different operations, and so we're. Very excited to kick this off on the subject of increasing bearing uptime with operator training and PMs. So really, around the theme of, you know, how we collect, analyze, and take action with our operators and in the different technologies available to us, and just by way of kinda introduction, some agenda items here, we'll kick off introducing the panelists whom we have today as well as talk about some, interesting market insights, have a discussion around that.

**Dallen Davenport**

Additionally, we'll hop into talking more in-depth about what this, you know, the subject of today, how that is, something that you can understand how Red List contributes to industrial manufacturing and mining world, for this need that's out there and then really dive into additional aspects of the data management, framework and how this helps drive not only the entire team's success, but also our operators and overall asset reliability, and we're so grateful today as well to have Rich Fitzharris with us today. How are you, Rich?

**Rich FitzHarris**

Doing great, Dallen. Doing great. Happy to be here, man.

**Dallen Davenport**

Yeah. I would love to introduce you today. If you feel free to take, a minute to share with us a little bit about you.

**Rich FitzHarris**

Absolutely. Thank you, Dallen. I'm Rich Fitzharris. I'm a global director for strategic relationships right now with Artha WearTech, and I bring about 20 years of background to the picture, on data, data assets, and asset integrity, in you all around data, in and out of the SAP space. My background is in engineering with an MBA, and I've worked in Africa for a number of years, working with a lot of global players, so I understand the difficulty of having a large, company, that has a lot of IT, but at the field level, how do you get the data from the field up the chain for actionable reporting. So coming together today, we'll be talking about that around bearings and condition monitoring and how critical it is. So I'm just excited about being here with the team and look forward to discussions.

**Dallen Davenport**

Thank you. Awesome. Thank you so much, Rich, and for those of you who have not met me or know who I am, I am Dallen Davenport. I am the marketing director here at Redlist Software and have, had over the last decade lots and lots of, great experiences working with. Professionals such as yourselves who have joined today, reliability teams, boots on the ground, really seeing, you know, what makes an operation tick and looking forward to sharing some examples today, stories, things that really tie into this subject that is, very critical and important, especially at this time. So thank you so much, and so as we talk about, you know, who's at the table between Rich and me, Redlist and Artha Solutions?

**Dallen Davenport**

Redlist really plays a key role in the collection of data, helping teams be aligned to drive increased asset reliability through mobile applications as well as, web applications and really making it so that decisions are really driven much more successfully through the data but more easily captured through solutions that we can talk about a little more today, and Rich, if you'd be able to share a little bit too about, we're just The aspect here of why we have Artha at the table.

**Rich FitzHarris**

Absolutely. Absolutely. As Dallen mentioned.

You know, we're the Redlist's strength is getting that GSA, the job shift change, all that field data, with an ease of application using their iPhone or iPads in the field, but then how does that data get connected back up to you to the ERP in the company, and this is what Artha WearTech does. We have prebuilt accelerators. We can work at we're agnostic. We work at SAP, JD Edwards, across this is the landscape you have for IT to easily push that data to your reporting so that you have the right supply chain connects and all the above, and the net result is greater satisfaction and increased safety for your equipment. So this comes back to condition monitoring and predictive maintenance, which is what the webinar's about today, so it all ties together.

**Dallen Davenport**

Yeah. Yeah. Very excited to dive in now a little more, and thank you for that, Rich. Okay. So a few, talking points of some interesting things to point out in the market. Very you know, so from Forbes, we all know that, you know, they do lots of research and study. One study they had some findings was that typical plant maintenance departments operate at an 18 percent downtime. Most hover around 20 to 30 percent inefficiency as far as trying to obviously keep the rest of the plant running, but as we know, there are challenges there. But, just as you kinda think about your own operation or those whom you work with and you know, the downtime that they deal with, maybe you float around those numbers as well.

**Dallen Davenport**

So that was, something that was very interesting to call out as we're talking about asset reliability, and also, next, wanted to also point out some from the personas side of the industry, Major challenges that leaders in the industrial space are facing is this tide of baby boomer generation, the re the number of retirees that are occurring, show studies show that over 10,000. Boom plus boomers reach retirement age every single day, especially in the US, so leaving, you know, about 6,000,000 jobs unfilled each month, and that is a connected issue to this rising workforce to try and figure out how to pass that knowledge and experience successfully to the this younger, group of people who are entering the space off of the manufacturing and mining world and how to make that as easily as possible. Rich, any thoughts on that?

**Rich FitzHarris**

Spot on. You brought up the downtime by 18 percent and the cost of unplanned downtime is even higher. So as we go forward, just know to have that predictive downtime. This is what we're able to bring with Redlist and Artha together you'll be able to forecast better your downtime and keep it to the minimum as possible. So your efficiencies are up, your profits are up, and your safety is at the highest levels as well, and this ties in last, not but at least with the baby boomers. You'll have a lot new a lot of new folks coming to the plants, coming in, they may or not have a lot of experience.

**Rich FitzHarris**

So having that critical, data, available to them, as they start the job on day one is what Redlist and Artha can bring to their day one. So to really help you in your transition as your senior people retire and new people come on, this is a big benefit we can bring to the table as well.

**Dallen Davenport**

Yeah. Perfect. Thank you, and by the way, we dropped the links below on these studies. So you after we after this presentation, we'll we will send this out to you all, and you can go through it and take a deeper dive into it. But, yes, you know, to Rich's point, all of these aspects really do come down to the bottom line of reliability, and one thing to say here too is, in this slide, another interesting thing is with this rising workforce, many companies really consider it to be an expensive and more con time more time-consuming effort to properly train their operators. So this is especially if they don't have that confidence that this newer workforce is gonna be staying in the job for very long, and some of those challenges are that people are looking for jobs more frequently and also may be getting promoted, but the outcome is really that companies, you know, are really just having their outgoing operators, boots on the ground, Training the replacements, which is a good is a good aspect to it, but it's not the root of what should actually be happening, and You know, the unfortunate piece is if you only rely on this outgoing workforce, some in some sense, it turns into this proverbial game of telephone where they're sharing only from their experience, but it may be that everybody's kind of giving getting a different perspective versus having some alignment, and so, Really, the you know, your new trainees aren't getting that training that centered training from the direct source that everybody should be on the same page on when it comes to reliability and safety.

**Dallen Davenport**

Correct. Correct, and so what can be done? This, is really, you know, something that we wanna share, you know, some solutions and ideas to consider, but Kinda to break it down into 3 things is really starting with the leadership, creating an asset management culture, which really means. No matter, you know, what role you are, removing this invisible boundary of who is over asset reliability, and there are some, you know, some strategies and frameworks, especially one that, I'll have a slide on that we've included that talks about operator driven reliability. We've had an excellent, presentation in the past by some of our teammates and content around, making sure that everybody feels the same responsibility to Right. Keep assets reliable, and then implement correct training, coupled with systems that reinforce that training and data that helps you know where to continue to improve, with analysis.

**Dallen Davenport**

Rich, any anything to add to that?

**Rich FitzHarris**

Yeah. It will cover data, and what we mean by data in the next few slides, but, you know, the culture of Safety, the culture of asset management is critical, and Redlist brings a real valuable tool to you, affordably to do this, so it's very exciting.

**Dallen Davenport**

Yep. Yeah, and this is that slide to call out, so feel free to check it out. We have we've left a few resources here on this subject in a much deeper dive, and so I talked a little bit about the Redlist, But as we you know, just to really call out some, some things that to make you aware of, you know, we are a global company over 67 100 users with 55,000,000 plus actions happening and around the data, and as Rich mentioned, we wanna talk about what does that data mean, How you know, what are we doing right now, especially for companies that are just like yours in this industrial space, even all the way up to, like, our tier one energy companies we work with, even for, you know, like, the DARTs, Georgia Pacific’s, and the loss of the world, and so when it when we ask, what does this data mean?

**Dallen Davenport**

Right? What kind of data has Red List helped capture for my team? What am I being empowered to do, and it's really, you know, driving positive impact for things like your preventative maintenance work, your predictive maintenance, You're, you know, collecting data for moving from your paper processes, of writing things on paper down to actual actionable data coming from digital inspections that can trigger work, oil analysis, you know, operational efficiency and seeing how, you know, from the data, how thing how things are going and where to improve, and you know, sensor technology. You know, so many things that when we talk about the data, it's, you know, thinking in terms of collecting that data and seeing the power that your workforce really has to give you a clearer picture in the industry, but making sure that they're also trained properly as well to doing that, and a lot of times, it all comes down to the systems and processes that help people get, especially new rising you know, this rising workforce, jump into the workforce that much faster, get on the same page, and do efficient work, and then obviously, you know, what we'll talk about a little later to is once that data's collected and aggregated, where Artha however, Artha comes in to make sure that that, is even leveraged even further with your additional systems in place.

**Dallen Davenport**

Yep, and so, you know, here on in the Red List platform, we do, you know, have web applications where you over on the left, you can see here you have this dashboard of managing your assets, knowing what's going on with those, tie diving into your reactive, predictive, and preventative maintenance strategies, including things for, you know, lube you know, lubrication routes and sampling and all other metrics you need to capture, and also, you know, including you know, making sure that you have the right safety procedures, that Your teams are trained up properly, that they're compliant, so that you're, having the work be done properly as well, and then obviously, collecting that data, Tracking the labor and then you know, at the bottom here with reports, being able to go back, review how things are going.

**Rich FitzHarris**

Yep, and Dallen, real quick, let me chime in on an example. I was working with one of the largest, 3rd largest oil field service companies in the world and presenting Redlist to them, and they said, you know, Rich, before COVID, we owned all the equipment, and but after COVID, we have a lot of third party carriers coming in with their equipment and our people or their people on the equipment, we have to have a continued, a unified safety HSE policy all the way through. Redlist can help do that. I mean, you wanna make sure that someone's on your location operating a piece of equipment, they're certified, their certificates are current, and everything is current before they touch that piece of equipment. This type of real quick transparency can be delivered immediately to that person through Redlist. So this is I'm just calling it out on how it really unifies that data, that field data so your safety goes up and your Results are better. So yeah. Exactly.

**Dallen Davenport**

Yeah. Thank you. Yep, and You know, to continue on this piece here, there you know, when we're talking about this community that's built around the success of your machinery, you know, your assets. There's you know, there are tools that I mean, we're trying to make sure that not only is that the effort of your operators and those who are working with the machinery that are collecting that data, but through conditional monitoring of your bearings, You know, using technology with especially your sensors, right, and reporting on things like your, you know, temperature levels, vibration analysis, ultrasound analysis, you know, those aspects that really are an extension to the human factor of your team, and that is an aspect here in Redlist that you are able to leverage and have that make sure that you're you know, have that trigger alerts, trigger, you know, notifications to say to let you know, in addition to what your team is doing, on the human side, Having data flow in from your sensor side.

**Rich FitzHarris**

Perfect, and let me give you a call out too real quick. We're working on an example of this with a large cement manufacturer in in Dubai region, and they have a bearings issue, and we were talking about the down outages and having that predictive. Well, using this analysis with red lists by culminating all that data, we mentioned temperature and lubrication, analysis, and all the above, they're able to forecast 3, 6, and 9 months out before a bearing fails, which means you can plan your outage and have a more controlled event, less risk, higher safety, and more uptown Uptime. This is an example of how condition monitoring for bearings is critical and how Redlist can help in that area. A cement manufacturer is a case example. So thank you, Dallen.

**Dallen Davenport**

Yeah, and that's the exciting thing. We really want this So this is real really where things can flip for the better to, turn into something that's more of a, you know, as we've talked about, we use the word predictive maintenance a lot, but it really does help drive that. Okay, and as we talk about, you know, the data the collection of data. Just wanna show a few examples here of how that's done in, you know, in addition to, what we talked about. So here, you know, with our digital forms, it really helps, shortcut the time that it takes to not only collect the data but have that data automatically communicated and fed, to the right people and fed into your dashboards and really ensuring that it's.

**Dallen Davenport**

Direct. So we think about paper and how often that may need to be passed from one person to another and reentered, you know, with data entry. So really make ensuring that that data stays as clean as possible, minimizing the number of touches are there, and having, you know, your productivity even improved to share an example, there was a facility that I worked, with where they. The minute they were able to turn on, you know, completing digital ins you know, digital checklists, they were the minute they submit those reports, People were starting to radio each other and say, hey, I noticed you saw this problem. Let's turn it around, and they were excited because instead of, you know, somebody seeing it and maybe reporting it or putting it on paper that then got looked at a week later, people were able to turn these issues around much faster and start to see a big change in their productivity.

**Dallen Davenport**

Right on, and some examples here, you know, on the lift left list to the left, thank you, is, you know, with these digitized checklists, you may already have on paper and transfer them over, but, you know, this comes down to capturing mach machine metrics. You know, again, maybe if a sensor can't be put somewhere for different reasons, you know, you could still manually capture that in a report on your and you know, PM checklists, maintenance requests, SOPs, lockout tagouts, preoperational inspections, all of these things that an operator really is seeing on an almost daily basis, and instead of just seeing it, being able to have a tool right in there at their fingertips to report and have a much more accurate picture for the team to see what's going on, and I think that's something to call out is the to see it's not just introducing technology for the sake of technology.

**Dallen Davenport**

It's really seeing that. There is, a whole lot more than the operator when they take advantage and harness, collecting this data, the magnitude to the in a positive way is, first of all, they're being heard even more, but that data is getting to the right people at the right time.

**Rich FitzHarris**

Right on.

**Dallen Davenport**

And just in addition to that as well from, you know, capturing that data digitally. Another thing that's key here for lubrication management, especially on your bearings predictive maintenance, is, you know, setting up tools and systems that automate your lube routes or others may call lube rounds and have not only a checklist that says, yes. I went and did it, but having much more quality in the data that that you're working with and validating that data, and what I and to share maybe an example here is, you know, there was a group that that we worked. It was an alumina plant where they had a large team of lubrication technicians, and before, they, you know, weren't always sure where they needed to go apply their grease or change oil, at, you know, along the different lines that they had, and also on top of that, they had a big water, a water damage problem, and so they needed to keep a that was something that meant a lot to them to keep a close eye on, and so Not only were they able to set up automated scheduled routes of where to go exactly, what they need to apply, you know, step by step guidance, but they were able to also each time they performed a task, they were able to report, you know the temperature levels or noise levels of that asset, and also, what are what did the water levels condition water level conditions look like?

**Dallen Davenport**

Capturing visuals and measuring that, and in return, by just paying attention to that, the result was Phenomenal. They were able to actually decrease so many of, the things that were being missed, but. Now they had greater awareness, and we're able to turn that around, and so that that's just another example of turning, you know, a route that you that may, you know, have some doubts of what's getting done to something that's more accurate. An example I really love is I call it you know, like, the Google Maps training. Right? It I don't know. You think about it. How many people really need to be trained on Google or Apple Maps, and it's, it's nobody.

**Dallen Davenport**

Right? It's because you are getting the step-by-step directions on what to do, where to go, and so that's the idea, when it comes to shortening training for your operators is building these systems that help them know, okay. This is the next thing I need to do, and these are the things I need to be looking for and then having that without additional manual data entry feed into your analytics. Any additional thoughts on that, Rich?

**Rich FitzHarris**

Spot on. I think that analogy, keeping it simple, so it's usable in the field, But the key is you'll have all that information in the palm of your hand. So as you have new people coming through your system and training, you'll have all that legacy history with them, and the other part was tying this together with your supply chain, predictive maintenance, you'll be able to forecast your lubrication needs. You'll be able to forecast your parts and supply needs appropriately. So it makes everything work faster, better, and more efficiently by having that field data correctly aligned with your ERP so that everybody's on a single version of the truth, and this is what Redlist and ours can help do with your data and your assets. Spot on. Thank you for that.

**Dallen Davenport**

Thank you, and as mentioned earlier, you know, this and as Rich had just mentioned, this is really something that can be as simple as having these tools right in someone's pocket, right at their fingertips. This is an example of being able to pull up. The schedule of what needs to be done and you know, what are that lubrication to do lubrication tasks it need to be done or those PMs, and just having a, you know, an aligned team board of what the status is on everything as well as, you know, the instructions on where to go next and what to tackle, and obviously, you know, Thing that we all care deeply about is the overall data, and these are a few different examples.

**Dallen Davenport**

We have many more of being able to say, oh, well, I'm already doing the work capturing this information. Let's have it feed into these reports that can be visual, can be modifiable, and give me a true story and picture of how things are going, and that a big piece, though, to make mention of is it really does come down to, the clean systematized approach of building out those PMs, those lubrication rounds, the forms that you're capturing data with, you making sure that, you know, you're setting that up in order to set up your operators for success and all of those who have boots on the ground and have a lot of, insights into what's going on, and so, you know, looking at things like downtime reports.

**Rich FitzHarris**

You know, you could say fluid levels or even.

**Dallen Davenport**

Usage. Maybe that usage might be just simply to know, you know, how many how often, am I topping things off? Is this leaking too much? You know, also to just have a full picture of, you know, which assets are maybe my bad actors and why, and that way, you can do some additional investigating on, you know, seeing if maybe it's just something that's being done wrong on the asset. Maybe it's not the actual asset that's the problem. Maybe it's the product we need to change or you know, the different things that we're doing on the frequency, and so, anyway, these are things that, really can be powerfully put together without having to, you know, in in a lot of cases, Go back into your office and put together the spreadsheet and build these pivot charts.

**Dallen Davenport**

Hopefully, you get it ready by your weekly Thursday meeting every time. You know? It's just Being able to leverage this in an automated fashion and using it for training. This is, what I put at the top of the slide. Using this data to say, hey. This is where we're improving, or this is where we need to, you know, make some additional training happen and start to, you know, round out those rough edges. Yep.

**Rich FitzHarris**

Yep. I think this is.

**Dallen Davenport**

Very good. Yeah. Just a quick Yeah. The case study here is, you know, talk it. You know? We have several of them on our website, but this one just talks about how really talking about this workforce, and this challenge with retention, you know, being able to strengthen your training, strengthen your systems to really, you know, really retain you’re the right people that you have in place, and so with a couple of those things mentioned, Rich, would love to hear some of your thoughts on those.

**Rich FitzHarris**

Absolutely. Absolutely. You know, you could have actionable data guys, and we'll get in my slides here shortly. We're coming up on time. But, how that is integrated with your mothership and how you can take those dashboards and have proactive maintenance, proactive supply chain ordering, proactive parts and service needs for your asset is critical, and so we want you to capture all the appropriate data in the field and then be able to use it, and this is what the kind of the alliance, the collaboration between Red List and Arthur Word Tech can bring you easily. He mentioned the Google Maps. We wanna make it as simple as Google Maps is for you as well.

**Rich FitzHarris**

So next slide. Great. Who we are real quick. Just background on us. Artha, we're tech over 250 successful projects. We're global. We're over 10 years in the field as we said earlier on, and we're endorsed in working with large players like AWS, Azure, SAP, Schaeffler, and others, and we're based here in America as well as internationally. So you can pull from our use cases worldwide, and a lot of large players have assets all around the world. Our portfolio is information management, business advisory, data management, you said full life cycle implementation of your ERP analytics, which you saw from and, and support maintenance. We're here to help with the SLAs and help support everything all the way through.

**Rich FitzHarris**

So we can really support your back office and make sure uptime is uptime. That's the goal. Next slide. This is the key point. A lot of folks are talking about it. Today, I can't go over details, but AI. How is AI? How is machine learning and robotics gonna affect my assets? Well, to start first things off, you have to have healthy data. If your data isn't healthy, you can't get AI in anywhere. So one of the things we do is we start the smallest integer like ball bearings. We're starting at the bearings, and with Redlist, we're starting with the asset by asset, accumulating all that good quality data, bringing that up to analytics, which he showed you a couple of dashboards on the analytics, and then we can talk about AI.

**Rich FitzHarris**

So this is the process, and we can help you do that road map. Okay. Next slide. This is an example. I am talking a little faster here, but we don't have much time. This is our accelerator for SAP and other ERPs. You might have JD Edwards and other legacy systems that you need to have your field assets talk to through this landscape that I'm showing you at a high level here. Your assets, your work orders, your reference data, and your IoT sensors can all be fed through Redlist and connected easily. Like, we talked about Google Maps, keeping it simple. Easily up to your ERP, and that's something we'd like to have a conversation with you about. Okay.

**Rich FitzHarris**

Next slide. We'd like to talk to you about the next steps. We're grateful for your time today. We honor your time. We'd like to continue this discussion with your leadership, and I'd like to talk with you about a pilot program to move forward. So I'll turn it back to Dallen. Thank you, Dallen.

**Dallen Davenport**

Yes. Thank you, Rich, and You know, all of these things are exciting. You know, we really are grateful for having you here today with us to introduce, you know, Arthur WearTech, the abilities and capabilities you have there to simplify and accelerate these types of integrations to connect to the overall greater picture of your corporations, and you know, really, we do see that, you know, simplicity is key. We also know, though, that predictability is greatly desired, and so those two things combined are really what we want to Continue pushing and looking forward to having some conversations with you and feel free to connect with us. We've shared our information below, and really appreciate everybody's time. Thank you so much.

**Rich FitzHarris**

Hey, guys. Talk to you soon. All the better.

**Dallen Davenport**

All right. We'll see you. Bye.