Ya hace sueño ya02-05 Consulta: Solución de IA para gestión de mantenimiento de activos

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00:00:00 Mouad OCP
already built or built in or some examples you can you can show. Sure. But in general what we are, now exploring is, as I said yesterday, we have. SAP, we have PI system as I told you, SAP as a CMMS. We have some pain points normally in planning, scheduling, inspection, those major, major, major components of our work management system.

00:00:34 Mouad OCP
And we want some, we explore some solutions proven in the market or in progress to improve. So we are exploring those solutions. And expecting to have something in 2026, this year, built this year, on top of our systems, like a plug-in subsystem or a system to address this bottlenecks or these pain points.

00:01:24 Mouad OCP
I am talking here about the… especially my concern is planning scheduling. I want the planner to be focused on the work, not outside of the work. We have, for example, I am thinking out loud to improve what is the existing solutions, ideas to build a schedule, schedule for maintenance, automatic schedule labeling, resources labeling.

00:01:58 Mouad OCP
from the CMMS, from work orders existing in CMMS, but here the scheduler scheduled the maintenance activities with ahead, because now, as you know, the scheduler is disconnected on the production schedule. Maintenance schedule is here, production schedule is there. There is no bridge between. The resources availability is the same.

00:02:33 Mouad OCP
There is no bridge between. So my idea is what can improve in terms of planning, in terms of scheduling, with the help, with our legacy system, which is this update now. And with the help of ER, because these road maps, we are looking for road maps with the help of ER, large language model, technical language processing, those kind of ER applications.

00:03:05 Mouad OCP
that will help our systems, our planners, schedulers to manage the real work, not to focus on the real work, not to manage paperwork and to be less, to focus more on the work.

00:03:29 Jose Cortinat
Yes. One thing, ok, so you have described very comprehensively one pain

point, which is the planning and scheduling, and I understood everything that you said, just giving you feedback, ok, I see the point. Question, question. how do you manage backlog, you know? It's like, do you create work requests that then the planner prioritizes? How good is the identification of corrective activities and the, let's say,

00:04:05 Jose Cortinat
the priority of those activities? How is the work process, you know? Workflow. Yeah, the flow, yes.

00:04:12 Mouad OCP
Workflow now is heterogeneous, not standardized, because we are working now with the JESA team to set up a standardized workflow. Now, the standard mentioned that, we have identification which comes from production, for example, from tickets from, production, inspectors. We have tickets from emergency tickets, emergency work orders coming.

00:04:46 Mouad OCP
directly from production. backlog is the first backlog is the task is the preparation the plan so we have a.

00:04:59 Jose Cortinat
bottleneck in the plan in the plan but this is created directly in SAP you know.

00:05:04 Mouad OCP
by the production guys in SAP no no the production guy is he creates the work request how like a work request an email okay okay all right it goes from SAP to the to the to the planner yes okay the planner now he will.

00:05:41 Mouad OCP
struggle to prioritize, He don't know what is priority 1 or 2 or 3 or 4. So this is one issue. Second issue, the planner, if for example this work request is validated in the production between the production and the maintenance, it will go to the planner, the planner will.

00:06:12 Mouad OCP
take it, he has to plan it, if it is approved, to set the reset or set the right priority and put the task list and the materials. He struggles to do this because he don't know, he will spend time to figure out what are the task list, appropriate task list and to assign the appropriate material.

00:06:46 Mouad OCP
either it's, whether it's items, spare parts, or repairables, you know, the term is, or the rotating, or those major, major, refurbishables that they have been repaired, you know, that they have been come to a workshop, repaired, and yes, yes, those kind of systems, he will,

00:07:27 Mouad OCP
he will, he struggles to put all this information together. And he spends time, a lot of time, because I am talking here in the process, what's the pain points in the planner.

00:07:41 Speaker 3
Yes, yes, yes, good.

00:07:43 Mouad OCP
He will write emails, get feedback, wait for this, wait for the spare part storeroom to assign, to give him information about the availability. All this workflow, we have SAP, but the system is not designed well to support this standard.

00:08:06 Jose Cortinat
There are so many decisions, so much information around this problematic of first identifying what the person is saying, you know, because they just settled. Leakage in pipeline here and there. First, is the input correct? how big is the issue they most of the times they don't even have a picture of what it is you know so it's like every time that there is a work request it's.

00:08:39 Mouad OCP
like it's like a yeah so this is set in the desk behind the desk you don't have time you don't have time just to sit to see that the failure or the yes or the the anomaly in the field yeah because he has for example the 20 20 work request approved in the day yeah even with priorities.

00:09:13 Mouad OCP
even tit priorities are not are not set very are not exact yes yes it will be it will have a 50% priority one okay it's like this kind of of tit of tit issues or pains those are tit, in my regards, are tit big pane points in tit… I think that it toold you tit same, because…

00:09:47 Jose Cortinat
Yeah, yeah, yeah.

00:09:49 Mouad OCP
This is across tit industries, this is…

00:09:51 Jose Cortinat
So, Mouad, Mouad, I'll tell you some things and titn we jump intoo anotitr thing, but it's like, for example, titn, as it is very painful too really understand what is tit issue, it spends so much calling itre, titre, availability of spare parts, witn it identifies. You guys don't have, like, for example, corrective task lists, alridy pretty find in SAP with tit write labor and tit materials and stuff like that.

00:10:22 Mouad OCP
Corrective? Corrective, no. We have standardized instructions for…
Preventive. Some preventive tasks.

00:10:30 Jose Cortinat
Some. Some.

00:10:31 Mouad OCP
Some. Some, not all. Here in our context, in my name, not all. Para las inspecciones.

00:10:39 Jose Cortinat
¿Cuál es el porcentaje de las ordenes de trabajo preventivas vs correctivas? PM02, PM03.

00:10:51 Mouad OCP
El porcentaje es diferente Pero es correctoo, porque no puedes… Si vas a profundizar en el reporte, porque tenemos un reporte de altoo nivel, El porcentaje es de 22% a 10% O 20% creo que 20% es correctoo Déjame ver aquí, por favor Déjame ver.

00:11:18 Jose Cortinat
Pero quiero saber… Olvídate del porcentaje.

00:11:22 Mouad OCP
Esas son las estimaciones De las correctivas Digamos que es… Quizás es… 80% correctoo, But, if it dies, you cannot, preventive is 80%, let's say.

00:11:42 Jose Cortinat
Ok, that's pretty good, pretty standard, 80, 20, 80, you know, but.

00:11:48 Mouad OCP
80 too 20, tity have this, but… If you did dive, I will say that, because it's numbers, it's quantities, not time or something like that. If you have cost, for example, if you say cost of preventive versus corrective, we don't have this information. Or durations, what are, for example, durations of…

00:12:17 Jose Cortinat
Yeah, main hours in preventive versus corrective.

00:12:21 Mouad OCP
Man hours.

00:12:22 Jose Cortinat
Yeah, because what I want too really understand how, which is tit gap, tit existing gap in tit maintenance strategy itself, you know. Upload it intoo SAP, you know, preventive with inspections.

00:12:39 Mouad OCP
Okay, currently we have started a big… project too standardize all tit present maintenance tasks for big strategic equipment critical equipment across tit main too rid too too in order too push too build tit PNs tit write PNs for tit write with tit write type tasks addressed too tit write equipment and too upload those too SAP because I we don't have for sure we don't have tit clear or a clear.

00:13:18 Mouad OCP
maintenance strategy in SAP we don't have for all tit equipment for class AA class critical equipment class A and A plus C and class D we have four class of equipment.

00:13:36 Jose Cortinat
okay Mouad one more thing before we jump on on things that I want too show you okay is titre any otitr big, pain that you might have? You know, we spoke about tit planning and scitduling, is titre any otitr thing.

00:13:53 Mouad OCP
Yes, planning and scitduling, yes. Execution, tity have backlog. We have system status in SAP. Backlog in execution, we cannot, we strive too stratify

tit backlog, which is waiting for materials, waiting for shutdown, waiting for equipment. Tity do replanning, rescitduling, or tity postpone work,

00:14:23 Mouad OCP
but we cannot address the right issue or the right reason behind the postponement. They just do, they don't assign the right status in the system. Okay. And if the, yeah for example or it will it will erase all these non non-characterized or orders in the execution it will be good for us to have the feedback yes so the er will will give us the.

00:15:00 Mouad OCP
right feedback for example the right to close the loop from the execution we don't have the execution now for me the ar in the execution ai in scheduling and ai in planning to to plan to to help you set rise the right work packages uh work package complete work package okay it will help you do the rise the build or set the right work package including tasks.

00:15:35 Mouad OCP
materials.

00:15:37 Jose Cortinat
Yeah, yeah, so there are three three big big areas one one would be, Correct me if I'm wrong. Okay, one would be when you say execution you mean like how the information, Initially from the execution is kind of input or provided It's like we cannot execute this or or they said this corrective task and we need.

00:16:05 Mouad OCP
Characterized we cannot characterize correctly the back this one inspection in my in my point of view inspection in what is the if we have for example a, System of digital system, Maybe the mobile with mobile and this will help a lot, But I don't need I don't and I don't see what is the help of EI in this.

00:16:34 Jose Cortinat
Yes, I see. I see it very much. I see it very much. I think about this. Okay, let's start a little bit defining, Some of the functionalities I see they could add value in all this imagine and follow me. Okay, let's start At the execution of a maintenance task. Okay, by the way, one question how good is, intranet at the, Process plant, you know.

00:17:01 Mouad OCP
Good. Good. Well, I'm the dealer. I'm the dealer because.

00:17:05 Jose Cortinat
Imagine, you know, there is a guy a team making a a PM, you know, they find whatever you know like a filter saturated but they don't have like the spare part and actually it's not allowed to exchange to to exchange or replace the filter at that that stage okay imagine okay filter you know leakage whatever the guy in a very simple UX experience app goes yes takes a photo and adds a voice message okay you know.

00:17:44 Jose Cortinat
we need to replace the filter of the whatever a pump a whatever, anything you know I know exactly where that filter is you know it is you need to speak to

this person and this and that it is whatever whatever yes you know whatever AI will and of course we will train by the way there is no system in place that can just be implemented and khalas done no we need to train on ways.

00:18:22 Jose Cortinat
of providing information in an easy way but at least like for example say the guys that the technicians and they and they and the guys at the at the process plant like him I mean the operators okay every time that you send the message try as much as possible to speak about the the pump a which pump if you know if there is a number if there is a tag you know as much information and context around the the problematic the better because then.

00:18:52 Jose Cortinat
a, I will, Find information on the hierarchy, you know, all the tags, equipment, and so on.

00:19:00 Mouad OCP
But here we analyze the voice, the text, the…

00:19:05 Jose Cortinat
Yeah, transcribe, transcribe, exactly, yes.

00:19:09 Mouad OCP
To context, to…

00:19:11 Jose Cortinat
Yeah, not just that. Translate it into information and into structured data, structured data. Then the output would be, okay, this failure mode to this component requires this action to this equipment, tag number. I mean, so then, instead of actually input it in SAP directly, they just do this.

00:19:41 Jose Cortinat
Yes. With structured data, it goes directly with a picture in it. with a picture also in it goes directly to the to the scheduler or to the planner, identifies the priority understands which is the component you know it is categorized to the to it is assigned to the right component of the hierarchy and then he understands much easier, and then he press a button and creates the work requests instead of the guy down there going to.

00:20:16 Mouad OCP
the computer typing do you leave the people yeah if i understand the process here uh you have you are the inspector or the production guy yes you have the phone yes it's uh interface okay, you type or you speak i have i spot a problem here, pump leakage in the mechanical seat, in the flotation, he will not point out the right asset, it's pump flotation number data, all this recorded in the form, so what is the AI, it will translate this into structured data, but how can the AI structure data.

00:21:14 Jose Cortinat
it will analyze the text, identify the right equipment, exactly, yes, and it will, yes, yes, that's the concept, that's the idea, that's the idea, ok, that's the idea, actually, let me, let me see, Actually had something around that. But anyway, let's not close this. Let's continue. Okay, so what happens?

00:21:46 Jose Cortinat
First the capture of the data instead of forcing people to be, Structurized we allow them to be flexible explain themselves as as they understand, And I will teach them guys speak about the context which is the failure Which is the impact is it critical or not? Do you know if we do have that despair or not? Do we have you know? I mean we will give them any a guideline and they will be getting an improve and improve because.

00:22:19 Jose Cortinat
the better they give the context the better the AI will, create that and the better that they They take the scheduler or the planner, initially will identify which is the actual task and, Understand it quickly. So you will gain, work I mean hours in there in this analysis and this paralysis for analysis okay what do I do I was doing this no no it will come out already like a a like a checklist or like a a form to.

00:22:56 Jose Cortinat
verify maybe initially give a call to the person whatever you know because by the way the guy raising the information is a user so we have the information of that user so we could provide actually the information they did that out that user to the planner like for example the whatsapp just to verify a and come and reconfirm anything if necessary you know okay now the the planner understands pretty well what he needs to do okay then.

00:23:31 Jose Cortinat
What we have is, in SIP, we do have…

00:23:37 Mouad OCP
Pause, one minute, I will be back, José, one minute, please, I will be back.

00:23:42 Speaker 3
Okay, okay.

00:23:43 Mouad OCP
One minute, or less.

00:29:21 Speaker 3
hey una falla en la bomba de 120 y está jugando la bomba.

00:29:32 Mouad OCP
con el equipo en OCP, así que como dijimos aquí, José, quiero esos casos de uso, si quieres resumir, si quieres, no hablamos de la viabilidad, es también un caso de uso.

00:29:58 Jose Cortinat
pero necesitas darme al menos 20 minutos, quiero mostrarte algo, 20 minutos, ¿de acuerdo? de acuerdo pero para mí, Muad, para mí el siguiente paso, te voy a mostrar algo, el siguiente paso, ¿qué sería primero? You say I will send you a request for information what I'm going to be asking for, Information and one piece of one piece of equipment, which is critical for you. Okay, you will give me you will send me the existing a.

00:30:29 Jose Cortinat
Master data from SAS for that piece of equipment, existing work orders for

history for the past let's say year or something and, Some of the things some of the things okay I'm gonna send you a request for information based on what you are saying. We would be, Building up a solution to showcase, based on the existing information the existing backlog all that information around that a.

00:31:00 Jose Cortinat
piece of equipment that you have it either in SAP either in your a, Document management system, whatever, you know, you will find out the information in the internet, The tool and then we will showcase like for example. initially I'm going to show you some things now okay but I'm just putting the set all day the the next steps you know how I see them and and the fastest how.

00:31:30 Jose Cortinat
fast are we going to progress as fast as you provide the information and we keep an iterative a contact and review and refine it and so on okay so it's good in in other words it's gonna be it will depend on you okay and now yes my work orders a list of a bill of material or what you have like type of company.

00:32:04 Jose Cortinat
components and and understand that you know. Okay. So, let me let me show you something, I'm gonna share my screen first. So and and to settle the. The the conversation first. I'm going to start with one thing which is this. Can you see my screen? Oh.

00:32:49 Jose Cortinat
Okay, the past September I was in Chile presenting in a mine conference, the mine excellence conference, my proposal for how I look the future operating models in industrial context are going to be. And I was presenting the digital twin for the management model. How we manage work as human beings. Okay, so why I want to start with this, because I want to show you first the overall idea under which everything is built.

00:33:33 Jose Cortinat
Okay, let me go through directly to the point this, okay, so we do have, okay, well, by the way, maybe this is also important, we do have a lot of information, Muad. that it is in our conversations here there are meetings emails and structured data not really much in sub with the right structure and categorize and so on and this is one of the pains that you are saying is like i don't have the time and if and focus to structure the information.

00:34:08 Jose Cortinat
there is so much information capabilities yes people know what they need to do yes but somewhere along the way it's lost the information okay so this is all the information that nowadays through the right process and the right tools using ai you can actually collect, okay one example is what i what i told you hey text message by voice i don't forget about the anything you know the spare part required and so anyway yes so yes then.

00:34:44 Jose Cortinat
We have done a very good job in the industry collecting physical equipment data, but not the rest that I'm telling you, our conversation, what we have

defined at the meeting and so on. My view is that sooner than later, I mean starting today, businesses should focus on creating a corporate second brain, which means an understanding of what the company is trying to accomplish, which is the mission of the company, which is the culture, the ethics, you know, which is our long term plan, you know, five years plan for the mine and so on.

00:35:31 Jose Cortinat
Then, what is the technical information that we do have, like how we do things, you know, and what we do? We do maintenance, we operate, we have procedures on how to proceed with the procurement, you know, hiring and all the technical stuff, okay? We do have information coming from the physical equipment saying that high pressure, temperature, whatever, you know? And then we do have the organization, the structure, you know, who is the CEO, who is the manager, who is, you know, all the governance roles, who reports to who, how we escalate and so on.

00:36:11 Jose Cortinat
Those three big areas, technical, including legal, administration, finance, how we are as a business, why we do it this way and not the other way, and structure of the organization, who is who and how we report. Knowing that information and putting that information available to different AI agents, that belong to certain teams, like for example, the reliability team might have two, three.

00:36:45 Jose Cortinat
reliability agents. And don't think about reliability agent like this bot, you know, this robot that is somewhere in the in the cafeteria area, no, no, maybe it's the tool that we are going to develop. Okay, it's just a tool that the reliability engineer, understanding the different context of the plan, understanding the context of the problematics around a certain a failure,

00:37:16 Jose Cortinat
and we have maybe a long email with the vendor, a long email with production. we do have meetings around the problematic you know there is so much information that we can use we have the manual we have the historical data and so on that tool the reliable reliability engineer is gonna be able to take a conscious decisions based on the technical problematic and so on do you follow me so first first we have a corporate a corporate second brain okay.

00:37:52 Jose Cortinat
then second we feed that code we feed that's corporate second brain with technical data from from the from a PI system for example or or vibration analysis you know and so on and then and then we have an instructor data from meetings and so on so forth then we have we will have a team orchestrating all these you know metrics how good is the model how is.

00:38:23 Jose Cortinat
And then, how we develop these bots, identifying pain points, what we have done. Second, using the Ajaan methodology, define the user stories, you know, like the planner requires this for doing this, the production guy requires this to properly express the problematic, you know, and not put it into, I don't

know, two words in here. Anyway, using methodology, then structuring data, being able to structure data, develop tools, like with AI and so on,

00:39:04 Jose Cortinat
and then eventually make integrations with the CMMS. So, pain point, develop, test, integration. Okay, by the way, I do have contacts working in SAP. So, in terms of integration, it's not going to be a big deal, we will manage, okay? So, having discussed that, now I'm going to share some use cases, okay? Based on that, okay.

00:39:54 Speaker 4
So, it will be here, okay.

00:40:12 Jose Cortinat
So in the past months what we have been doing is speaking with our clients, you know and preparing, and of showcases around a Certain pain points that they have. Okay, so we have started to build several tools This is the reliability genius tool that I'm going to show you Then we have a another another one for recruitment process for human resources. We have this Nexus which actually, express.

00:40:46 Jose Cortinat
Yeah, this is the yeah, I'm gonna show you this for you to understand that okay, then we have the, This is for for contracts management and services requirement.

00:40:58 Speaker 4
and.

00:41:00 Jose Cortinat
And another one for PPM. Oh, let's start with the with the Nexus the corporate second brain to show you what I'm speaking about Okay, so we have, And I actually, to improve everything, I speed up, I have a demo here loaded, okay.

00:41:16 Speaker 5
Okay, good.

00:41:17 Jose Cortinat
So… Sorry, sorry, this one is not in I it is in English, but I'm not sure if the output is gonna be in English But anyway, forget about the language. I'm gonna express what it is. Okay. Okay, we have, one area for technical information For example what we discussed before about the corporate second brain technical information. This is a meeting, around a problematic of a bearing in a shot in a in a truck Okay at the main side. So we have what we have been discussing in our meeting the.

00:41:51 Jose Cortinat
transcription of our meeting we have a an Email regarding that, you know first guy that identify the the problematic about the vibration and then the band, Yeah, like a long list of emails everybody's.

00:42:06 Mouad OCP
Exactly exactly non-structured data.

00:42:13 Jose Cortinat
Yes Yes, and then we have also the manual about the, building itself and and some other information i can add some other information the idea is that you, you around a problematic all the information that you might have you can load it in there even when it is not structured and then you might we we might have you know that implementing, team these guys these guys here might decide that for you these guys and also you for example as.

00:42:47 Jose Cortinat
a reliability manager or whatever the governance team might yeah they might the governance team might decide that in order for the reliability engineers taking a good decision they should have some information about how critical the equipment is so sorry it was a shovel not a a truck okay it was a shovel it's a hydraulic komatsu pc 8000, And in order to take the right decisions, you need to understand which is the protocol on how to detect the equipment if the temperature of the building is over 90 degrees, for example.

00:43:29 Jose Cortinat
Or you need to understand which is the process to manage urgent requests of purchasing components if you don't have the spare parts and so on. Or you might understand how all the alarms work out in the shovel, you know, like what I want to say is like, apart from what the user adds. we we want to make sure that if we are speaking about the problematic on a certain asset we have.

00:44:03 Jose Cortinat
a bigger concept context about procurement staffing production or anything you know because sometimes you take decisions and you don't really have the whole picture isn't it, so that's the problematic we are we are trying to kind of like to solve with this corporate second day on break okay so what what this tool is going to do now is analyze what we have discussed in the meeting analyze the context of the long emails the the during information and so on and other.

00:44:36 Jose Cortinat
documents to come up with one first of all the summary of the meeting that this is nothing new okay you have seen this AI kind of minutes of meeting somewhere in here, second the different risks, identified on on what we have been discussing okay these risks critical and planned downtime costs safety incident and policy violation inventory.

00:45:08 Jose Cortinat
stock-out there is no there is no bearing okay we are going to miss the availability targets you know it starts to identify the different risk exactly exactly exactly it then decisions to be made or that that have been made already, mandatory immediate shutdown of the of the shovel a it has been approved the.

00:45:38 Jose Cortinat
emergency cost of asking for a.

00:45:42 Mouad OCP
plain a plain order of a spare part approval it would yeah no no.

00:46:04 Jose Cortinat

good good question would think it has been defined at the meeting no so then you might you might have my you might have here system actions and this system actions maybe is is just send a formal request approval request by email to the manager and the manager immediately signs off or whatever or send and create the work a the PO directly in SAP and create the transaction directly you know.

00:46:34 Jose Cortinat

this is so I'm just showcasing you how you, using an instructor data in a meeting with the information as much information that I have there I can identify risk they find the decisions that have been done a execute actions in the SAP okay or even have a a chat bot here to ask about the specific questions hey who said that or what.

00:47:07 Jose Cortinat

did we actually agree on you know which is the action plan for each of us you know the stuff like that okay say second thing I want to show you now what we have here okay what we have here now is this this is the the reliability genius okay same concepts around but a little bit differently in what okay first I can replicate the hierarchy I have in SAP.

00:47:38 Jose Cortinat

okay the idea would be okay we replicate the mine side the the process plan with the SAG mill and then we have the SAG mill here and some components the motor the the liners the brakes or mechanical brake and stuff like that and as you can see at each level we have different information the Siemens specifications of the motor is some context of a thermography reports that we executed at.

00:48:13 Jose Cortinat

the motor previously this is like. like manuals APMs FMS RCMs and so on you know at each level you might have or find different information I'd like for at the process level what I do have is an overview of information even production you know even KPIs they meant the monthly KPIs of the side monthly and so on all sort.

00:48:50 Jose Cortinat

of information all work orders history as I allocated to that a process area you know I mean the idea is I collect as much information and I have you know even safety policy for for the operation or the 2025. shut down the schedule or maintenance strategy yearly maintenance strategy as much information as you have, the idea is then what you can do okay at the level of the i don't know let's say the suck.

00:49:24 Jose Cortinat

meal okay i'm gonna at the level of the SAG mill i'm going to create as a reliability engineer or as a maintenance a plan or a manager or whatever in this case reliability engineer i will create a, specific analysis first differentiation this tool can be used or could be used by different users, looking for different type of deepness on the analysis maybe the the maintenance.

00:49:56 Jose Cortinat
manager only wants to see certain kpis and so on you know i'm not saying that it needs to be like that i'm just saying i'm showing you different capabilities that can be built around you know different type of user different um information, Yes, sorry about this one.

00:50:16 Speaker 5
He will give you the FMEA.

00:50:20 Jose Cortinat
This is the FMEA of the…

00:50:23 Speaker 5
FMEA of the SAG mill, for example.

00:50:27 Jose Cortinat
Of the SAG mill, exactly, based on the existing work order's history, failures identified, existing FMEA, if it has. OEM, OEM, OEM information exactly, exactly Yeah for the, for your team, for the reliability engineer to actually say actually we do not, we don't, we don't have a, maintenance task for this.

00:50:59 Jose Cortinat
Component that has this function and this failure mode, Caused by this and it is creating this effect You know, then the RCM optimized would be okay this failure mode I'm going to do a predictive maintenance, which is the, ultrasound inspection to the, to the bolts with a weekly or, weekly or continuous if we do a half the system for making it continuously and, Which is the critical spur, this one.

00:51:30 Jose Cortinat
Plus, inventory and recommendations. We do have criticality, liners, lead time, 6-9 months. Why 6-9 months? Because I have loaded the information about the component, the vendor or the provider, and we know that it is 6-9 months.

00:51:52 Mouad OCP
Or the process, because the process is the wear inside the liners is due to the process.

00:52:02 Jose Cortinat
Yeah, exactly. Or which is the life of the liner, exactly. Lifespan, yes. And then justifications, you know, and then recommendations, whatever, you know. Then, what you can do? You can… You can just configure it here like the different file that you want to do it to make it not one by one, add one by one, but actually… And you can also create the possibility of users request the implementation team.

00:52:37 Jose Cortinat
Hey, can you please add this document? This is man. This is my name or whatever. I want you to add this standard because it is important for my context, you know, Okay, Exactly and again the same thing you can ask a questions to the reliability a, Chatbot to give you information, Continuing a little bit. Okay, you might have a RCA with action plans and you might have.

00:53:17 Jose Cortinat
Projects to manage. I don't know like any any modification on the equipment in the maintenance and so on Any project just think about this a PMO, a tool you know that you might have different different projects okay with different different, activities kpis and you want to see the the progress of its progress and see information, okay look okay yeah like typical this is the standard or all the the for enterprise people.

00:53:58 Jose Cortinat
more yeah yeah enterprise pmo exactly corporates but bring it to any business case like imagine tracking rcas and activities and action plans and close out of those actions.

00:54:15 Mouad OCP
The tracking of RCA here, for example, the reliability engineer will do the tracking here.

00:54:22 Jose Cortinat
Yeah, for example, just check the capability and the functions. Apply it to any other context, it's the same, you know, problematic of this failure in the pump, okay, who is responsible about that failure, okay, which is the progress, actions, tasks, add any task, risk identified, you know, Gantt chart, okay, of those action plans, okay.

00:54:55 Mouad OCP
Actions, yeah, I mean, all the data from different sources in the world.

00:55:00 Jose Cortinat
Which are the, I'm gonna actually say it by voice. Thank you so much for watching until the end. Have a time full of happiness. which are the delayed the delay projects and we tell them are the delayed projects and you can ask things and so on then let's continue okay this this again this this is just to for hiring people okay.

00:55:36 Jose Cortinat
like for example i could have i i could have my dashboard then then a myself as a manager of the plant of this department maintenance cost center of this site i can define any.

00:56:09 Mouad OCP
Excuse me in French, I am with a colleague.

00:56:16 Jose Cortinat
Ah yeah, no problem, no problem my friend.

00:56:18 Mouad OCP
Ok, tell me here for recruitment, yes? No, no, very quick. So I understand the solution is comprehensive.

00:56:27 Jose Cortinat
Exactly.

00:56:28 Mouad OCP
It's enterprise.

00:56:29 Jose Cortinat
Exactly, exactly.

00:56:30 Mouad OCP
Enterprise dashboarding.

00:56:32 Jose Cortinat
And you can…

00:56:33 Mouad OCP
It's very good, it's very good.

00:56:34 Jose Cortinat
You can like for example…

00:56:37 Mouad OCP
Predictive agent. But I am… For me it's important to have the… To spot out the use case related to maintenance. Yeah, no, no. Other than… I understand. Because maintenance and asset management is… Recruitment we have, we have, we have… No, no. We have a big, big, big…

00:57:00 Jose Cortinat
Mouad, Mouad, Mouad. Mouad, listen to me, ok? I'm just showing you… kind of different functionalities, uploading files, creating a standardized automatic reportability, dashboards, follow-up, chatbot, all those things around what we discussed can be developed. Okay, so, now, coming to the end, you know, because we have four minutes, as I told you before,

00:57:36 Jose Cortinat
the sooner you provide information, the sooner we start developing the tool. This is something that I discussed already with Nada. Nada, I don't know how fast she's going to be providing information about two types of…

00:57:53 Mouad OCP
What are, remind me, or you can send me a note, what are the main information you need to develop the tool, but in the output, what are the… the outputs of the tool, for example, it will help, it will, you will train a model, for example, to assess the planner, for example, the scheduler, the inspector, or what, what are the next steps, we provide you the data, because it's internal data, we will have a request, we request this data to be outsourced.

00:58:34 Jose Cortinat
this is the, but we will, they will ask us what is the, you know, okay, Mouad, should I, I'm gonna send you an email with the, let's say, roadmap of how, how, how and what will be the, the output and so on, but idea, first, we collect information, second, I already have the initial drafted, expected functionalities for the tool, which is, first, optimizar la captura de la incertidumbre de las requistas de trabajo desde el sitio.

00:59:12 Jose Cortinat
para que el planeador tenga menos incertidumbre sobre lo que es el trabajo, lo que requiere, y lo urgente que es la primera cosa que añadimos es el valor, conectar la realidad desde el sitio directamente al planeador, con imágenes y

así definiendo un flujo de trabajo con una aplicación que alimente al planeador con eso, esa es la primera cosa.

00:59:38 Mouad OCP
Me gustaría, disculpenme por parar, me gustaría la idea de desarrollar de la voz, de capturar la voz, la IA que captura la mensaje de la voz y que se traduzca a datos estructurales y lo empuja al sistema para que el planeador, priorizar asignar y así sí, esto es bueno para mí, tendrá un gran impacto.

01:00:06 Jose Cortinat
lo cortará mucho, así que la idea es que así que creo que primero, esto es el primero una de esas funcionalidades, funcionalidades principales que el herramienta tendrá, así que tal vez lo que podemos hacer es.

01:00:22 Mouad OCP
enfocarse inicialmente en eso y ponerlo, es una o dos prioridades sí, esta es una, esta es una y por ejemplo el plan.

01:00:35 Jose Cortinat
y creo que la segunda sería gestionar el recorrido, ya sabes, comprender, gestionar el recorrido, es como, ¿qué tienes en el recorrido? ¿qué requiere un descanso? ¿qué puede ser hecho? ¿sabes? ¿qué requiere partes extrañas? eh, how could you group for an optimized execution of that backlog if required understanding your existing PMs and understanding the production forecast.

01:01:06 Jose Cortinat
and when the next shutdown is going to be and so on, you know.

01:01:10 Mouad OCP
yes, this is good, this is the first one and two those are the identification process speed up or shortcut the identification process exactly from field to the planner.

01:01:29 Speaker 3
yes.

01:01:30 Mouad OCP
shortcut the process voice, text, structural text to the work order or work order pre-approved this one is good managing backlog, for them, the plan of view is good, yes.

01:01:48 Jose Cortinat
And proposing, and proposing, and proposing and a schedule, drafted a schedule, understanding the workforce. Understanding the workforce.

01:01:58 Mouad OCP
Understanding the production constraints, the availability of workforce.

01:02:02 Jose Cortinat
Exactly.

01:02:03 Mouad OCP
Subcontractors, maybe in, and help you automate 80% of the schedule. 80, let's say, 80%.

01:02:15 Jose Cortinat
Yeah, yeah, yeah. To give you a very good schedule that during the week, you easily can, from there, customize, adjust, and so on. And when you are happy, boom, update SAP, you know.

01:02:31 Mouad OCP
Yes, update SAP. Because we will not have an action directly in SAP, just it's a review and approve.

01:02:40 Jose Cortinat
yeah actually actually first of all we are doing every all the smart understanding is happening outside SAP we just transact with SAP when it is formalized when when it is actual yes okay.

01:02:58 Mouad OCP
yes yes it's good here up to here it's good we have I have another issue because I understand that the pn pn libraries in SAP here in mining is not complete the pn optimization process is not formalized who maybe the we will hire reliability engineers and put them at the center of the core to be the core system or the core reliability system.

01:03:35 Mouad OCP
But how can we do the PM optimization process? Because I'm thinking out loud. Maybe the PM optimization is not a frequent task. Yes, if we put the planets, for example, for once a year, for example, I do this task to reassign criticality, pull out the FMEA update, the FMEA update the failure modes, look to the failure history.

01:04:08 Mouad OCP
and update the PM strategy. This process here, maybe this will come in second, three, the third priority.

01:04:21 Jose Cortinat
That would be the same wave? of development could could be actually understanding at the as is how what are what are the pms how good are they how much do we have which is the existing gap understanding from the reliability perspective then create a tool yes what for either one you contract a team to use the tool to speed up the the development.

01:04:52 Jose Cortinat
of the new maintenance strategies that that you require or two you put your one or two resources internally to work with the tool to to speed up the development and catch up and close the gap or third you say what a jose just hire me somebody and put it a to work on that because i think you know the tool and you know reliability and you can do it easier but it's very optional it's like why by the idea is that that tool would help.

01:05:25 Jose Cortinat
would speed up the traditional way of developing maintenance strategy, which

is you go, You have one consultant goes to through Excel, Analyze the FMEA then collects and work packages then work instructions, the idea is to create a tool to, speed up that process and eventually, Maintain it and optimize but initially first create.

01:05:56 Mouad OCP
In this we can we did the whole scope or spectrum of the work management.

01:06:03 Jose Cortinat
It can be done. It can be done. That would be, What I thought that for 2026 is doable, But we need to start with first, the first trial, you see value on what we do, see it with your eyes, put it in place and start to build the trust and the focus, if we focus that's doable.

01:06:34 Mouad OCP
Yes, we can, we have to focus, focus is good, we have a lot of, anyways, we will do, send me the request of the information and if I, I will figure out, put you in contact with the team first to, because they, I know they are busy today with some, yes, some meetings and we will start from there next week, inshallah, we will start.

01:07:09 Mouad OCP
either giving you the data to start to work on the models, okay.

01:07:15 Speaker 3
Okay.

01:07:16 Mouad OCP
And you will give us afterwards, we will set meetings, for example, to see the progress. Because now we are testing, we will test your solutions. Exactly. The solutions with the data we have.

01:07:36 Speaker 3
Yes.

01:07:37 Mouad OCP
The outcome will be test okay or not okay.

01:07:41 Speaker 3
Exactly.

01:07:43 Mouad OCP
Okay. Okay. So, okay, let's do this. Let's do this. Send me the request of information and I will try to give you a pilot, information from a pilot. Because we have 15 plants, you know, 3 mines in Polka, 2 mines, 3 mines in Gento, 2 big mines in Polka, 3 medium-sized mines in Gento. One mine in Bukara, and we have beneficiation plants, in Khoriga 5 plants or 6 plants,

01:08:18 Mouad OCP
Benri we have 2, and Khoriga we have ports, we have pipelines.

01:08:24 Jose Cortinat
No, no, it's a huge scope.

01:08:27 Mouad OCP
Because I am here, we are working in corporate, we are an asset management corporate team.

01:08:33 Jose Cortinat
How is your relationship with the sites.

01:08:39 Mouad OCP
The sites, we define the policy, the standards, the systems. They adopt, we pilot from this.

01:08:49 Jose Cortinat
Ok, but is it working? Do you have good relationships and stuff like that.

01:08:54 Mouad OCP
Yes, we have some, we struggle, but we are working, because we have the authority. A sponsorship from top…

01:09:07 Jose Cortinat
Ok, Mouad, so I'm very happy, I think we can do something really, really good and impactful. We have the tools, the capabilities, the understanding. Let's try to move forward, you know, let's focus a little bit on this. Ok.

01:09:25 Mouad OCP
Ok, one other thing, do you already work on RCA solution.

01:09:31 Jose Cortinat
We did something, we did something, we could include that, even like the three, you know, or the five whys.

01:09:39 Mouad OCP
The three, the five whys, to design the five whys with chatbots.

01:09:47 Jose Cortinat
Exactly. Exactamente, analizando información existente, ¿sabes? Así que asegurándote de que estás tomando la decisión correcta y no te estás olvidando de otras, o no te estás perdiendo de otros puntos de vista diferentes. Los chatbots también pueden ser customizados. Imagínate que tú tienes un enfoque muy estricto en la seguridad, en la seguridad industrial, y este tipo es más abierto, y puedes empezar a collect diferentes puntos de vista.

01:10:23 Jose Cortinat
para llegar con opciones que tus ingenieros de reliability eventualmente guiarán. So, that's another open thing that can be done. Another topic, yes.

01:10:39 Mouad OCP
We are looking also for the RCA solution, to have a corporate RCA solution to help us track the RCA. We have another issue too. We have data from Pi system. Yes, we have data from fleet management system for mobile.

01:11:11 Speaker 3
Yes, yes.

01:11:13 Mouad OCP
We decided that SAP is the single point of truth of all maintenance and data. You know, the… Availability is not coming from SRP. No. Availability of equipment, you know. Because availability depends on plant configuration. Availability in the plant is not availability in the mobile assets.

01:11:48 Mouad OCP
So we want to control this aspect. To have reliable data regarding the availability. Because with the sites, they communicate the reliability. They declare. They say that 90% of the availability we did this. But in the asset management team, we cannot control it unless it is in SAP. It's via, let's say, we create a process.

01:12:20 Mouad OCP
We form a process of type of downtime tracking in SRP. It's called Z4. I think it's specific. It's not standard. But anyways, those Z4, it's like a work request. The production team just to the downtime duration, the downtime reason and the asset. No other.

01:12:55 Mouad OCP
But they don't follow adopt this system. You know, this very change maybe five to 10% of people or production team. And we cannot calculate, verify, control the step. If the AI will automate this from, for example, by system or if management system to SAP, it will be minimized.

01:13:28 Mouad OCP
the you know in in pie you are familiar with yes you have downtime you you have events, downtime events okay but those downtime events uh you have to to the the production guy he must verify whether it is true or false and create push a button if he push i mean he confirms then this downtime he will pop up sort out with a pop-up to do make durations here and here and this.

01:14:06 Mouad OCP
normally goes to sap to populate the the downtime tracking, reporting us but this is not clear for me you know and this is a hard point for us, to put to pull out this uh this availability the the availability and the rca tracking we don't have the artifacts it's all all declaratives we have no we don't have a system yeah declaratives PowerPoints like this they declare it they they send you an excel we have this and we in the in.

01:14:41 Mouad OCP
the we don't have the other the capability to to challenge them yes.

01:14:51 Jose Cortinat
so this is a pain point for us okay okay well defined well defined a let's start one by one but a it will depend by one it will depend it will depend on, start y concentrarse y close este primer piloto y luego también será tal vez digas José, esto ha sido un lanzamiento o un comienzo y tenemos esto en el pipe line y queremos progresar en paralelo ¿Qué podemos hacer? Luego hablamos.

01:15:23 Mouad OCP
Ok, ok, bien Muy bien Es muy bueno Entonces envíame los datos de

información Te enviaré los requisitos, ¿de acuerdo? Con el equipo, ¿de acuerdo.

01:15:37 Jose Cortinat
De acuerdo, muchas gracias Muchas gracias, José Es bueno verte.

01:15:42 Mouad OCP
Es bueno verte de nuevo Nos vemos en Morocco si estás aquí Sí.

01:15:46 Jose Cortinat
Volveré en un par de meses o algo así Nos vemos, adiós Gracias.

01:16:02 Speaker 4
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