

# 01-28 Nada - Jose - Brainstorming an AI Maintenance Solution and Partnership Model

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**00:00:05 Jose Cortinat**

So which projects are you working on nowadays? Like how many projects do you have active.

**00:00:15 Nada**

I'm working with mining. See what we have mined. It's the end of the project. We have to go deeper. We have the deployment phase. We are going to train new people. And we have to deploy soon. And I work with Ester Eze. Who mines new plants that are going to be built in the region of Bimbirik. I work on that.

**00:00:46 Nada**

These are the two main projects I have. Innovex is just...

**00:00:53 Jose Cortinat**

What's going on with Innovex? because it seems like they are paralyzed you know like they are paralyzed they don't know what they want.

**00:02:34 Jose Cortinat**

how's it going I mean are you eating healthy do you control yourself. you're a super woman okay cheering you, Very good, Nada, continue like this.

**00:03:10 Speaker 3**

Okay.

**00:03:20 Jose Cortinat**

It's hard for me to kind of control my diet, Because I I travel a lot like you do. Yeah, so it's a little bit complicated to.

**00:03:52 Speaker 3**

Hmm. You know, basically when I go to Khringov, it's not a good deal. Most of them don't have the choice.

**00:04:30 Nada**

They eat at the hotel. In the hotel, it's like, even though when you take vegetables, it's greasy. A lot of oil. I think what pains me is that the world cannot take part of it.

**00:05:01 Jose Cortinat**

If you are on the road or on the subway, Look, yeah, that's in my to-do list, has been in the backlog, archived, you know, I didn't really manage last year to practice sports, do exercise and so on, but it's one of the activities I want to

acquire, you know, as an habit, I didn't manage, 2026, still there, just starting, but didn't do anything, but I think that the best would be one of those,

**00:05:38 Jose Cortinat**

YouTube or apps to work out like 10-15 minutes, you know, 30 seconds doing this, but you do it or not, yeah, you can do it at your room, wherever you are, but not consistently. yeah that's what i i asked god to give me the energy and focus to be consistent of that it's important for our body and our mental health and everything you know i know i know all the theory around it i just cannot you know execute it.

**00:06:18 Nada**

after work i go work but these days it was raining and getting dirty, it's big big difference okay.

**00:06:47 Jose Cortinat**

so speaking about this possibility of developing, reliability, maintenance, or maintenance strategy management software that actually has, let's say, AI agents that support your decision-making on frequency adjustment, better technique, maybe even suggesting the grouping of activities, those work packages to be executed, and so on.

**00:07:23 Jose Cortinat**

What, from your point of view, which are the main capacity or the functionalities that you think that should have, like the core, you know, I mean, when we spoke about this yesterday, what came to your mind, like, wow, it would be great if, completing the sentence? It would be great if...

**00:07:47 Nada**

based on documentation in the circle there i have fmea and i have possible strategies and pms. but also i do the same to another equipment similar features i have this oh this can apply too to this equipment like oh by the way you know you can do the same you see what i mean yeah or you have discrepancies this equipment you have this yeah and they are the same you have.

**00:08:24 Nada**

the same components because this is our vision of knowing those like putting two and three together and saying we could optimize here in optimization and this is how we're doing things and the more i bring data more intelligent more data more it gives insight on how to optimize my yeah.

**00:08:56 Nada**

I was thinking why not, I was thinking about starting an initiative and you can have the funding, you see.

**00:09:07 Jose Cortinat**

Come with me, I'm on your back. Look, when we spoke yesterday, we could be partners. You know, you say, we could be partners, we could make a partnership. Depends on the people. When I heard partnership, it's like, okay, come on. describe me partnership without saying partnership because it's like what do you mean and some people.

**00:09:38 Jose Cortinat**

end up saying no i mean you can sell my services and if you get a sold anything maybe, i can also sell your services you know this happened to me like three months ago you know in a congress yeah we could be partners this okay tell me what what i want to say is that some people speak about partnership they don't even know what to offer. and what they really want is only take advantage of of you and being honest but.

**00:10:18 Jose Cortinat**

with you i think we we would honestly find the right way you know something, that is good for your development and the group something that is good for my business and development of my company internationally so come with that you know and in the past i was working with a with a kind of like asset management solution digital solution to manage maintenance strategies work packaging yeah and they are costly and i have suffered as a as a user and key user.

**00:10:58 Jose Cortinat**

you know of those malfunctions built a i.t guys that they don't really know the business you know like okay guys change this dude never listen because they don't really understand the business you know now with my understanding of reliability and so on and with the capabilities that i have here with my team i i see, we can do that so think about the business like model how can we fund it in a way from my end.

**00:11:31 Jose Cortinat**

what i can do is based on what you said about what if it came across different sources of information that i already have in excel where do you have them in excel pdfs and stuff like that right what about if i can cross excel equipment hierarchy maybe you could collect for example two sets of a piece of equipment that you our almost sure but they have discrepancies and we do the.

**00:12:02 Jose Cortinat**

testing you know you know i mean we do have a i don't know a mill here or a crusher or we have a conveyor we have a truck that i'm 100 sure i had an idea yeah you have this and you have like.

**00:12:19 Nada**

opening hours, the budget of hours that the plant has to shut down, and you have the PM, and you say, oh, look, this PM can't do it, because you don't have this within the budget, how can you prioritize, and you give prioritization of the actions that could make the most...

**00:12:54 Nada**

Sometimes we have things that our not done, and they our in the... Backlit there, or... It's either they don't get the chance to do it, or either it's not necessary, and we didn't start it.

**00:13:12 Jose Cortinat**

Yeah, so...

**00:13:13 Nada**

So this is a huge optimization to say, okay, within the frame of what I have, what I have in the budget. Yes, because you could change everything and condition it to your prediction, Yes. So you can use it or maybe you can do it online, Listen, just talk about it Now it's kind of a thing that we have to ask.

**00:13:45 Nada**

No algorithm they really our Yes We have no efficiency like does it work, does it not work, We just have the full picture where Okay, I'm losing this point This is the efficiency score that I gave it because of this and this and that Based on performance, based on how much budget I have from allowed stoppage And for this I would say okay what can I tweak to make better my At the end of the line what I need.

**00:14:18 Nada**

better availability, better offer to the customers, better investment to the customers.

**00:14:24 Jose Cortinat**

What do you think about how to identify the efficiency of a maintenance? What data can we cross to say that this maintenance is made to keep reliability high? You know, we do FMEA, so we know that from the FMEA we did this PM because it is FMEA. Yes, because of those failure modes to those components. Okay, so I will trust the failure mode after executing the equipment.

**00:14:58 Nada**

But this can be because measures were not done right.

**00:15:02 Jose Cortinat**

It can be introduced a wrong maintenance and you don't have a maintenance strategy. Right. So we need to prevent the wrong maintenance. that's not the strategy you know those our procedures and training yeah i know.

**00:15:19 Nada**

so how to make sure that it's not maybe you could like eliminate this. like what we can do is we have and then you have a card to the failure check that the meetings were done right and you can check it. like you can check it prove that it was introduced a the person yeah so okay you train people bring.

**00:15:57 Nada**

the right do the actions that you need to do and track again okay.

**00:16:13 Jose Cortinat**

regarding the failure mode, because I have seen this, I have not seen this implemented right anywhere, which is. work order request, okay? It's like, okay, a maintenance technician or a. operator detects a failure in the pump or whatever, you know, and they open like a work order request. I don't know how is the work management in here, but somebody needs to say, hey, there is.

**00:16:47 Jose Cortinat**

noise here or something. Even, either you our like passing, making a route or

something, and you find out that there is a failure, or maybe while doing maintenance, or there is a huge stoppage. But what I want to say is that how to ensure that whatever is raised as a work order request you know we need maintenance is assigned to the right component to the right failure mode you know what i mean is it working in here now nowadays you.

**00:17:22 Jose Cortinat**

know because that's another you know it gives more a variability on our we actually monitoring the right failure mode the right component it is the maintenance corrective maintenance has been assigned to those components like we need to try something our cms what's the name we do is that we do have an algorithm that has a vibration analysis here exactly okay from the.

**00:17:57 Nada**

vibration analysis i can say okay it's 90 percent information we could like from this get failure, it's validated a this it's not something written a someone from a report you need this data you have to validate it because it's not the same thing yeah you can track the occurrences unless you don't track the occurrence but track the not the occurrence of the failure.

**00:18:28 Nada**

mode but let's say the outage of the equipment yeah no 100 and i suggest to start that the.

**00:18:38 Jose Cortinat**

starting point the tool yeah for this kind of a problem that we our trying to solve which is like, tracking occurrence of failure modes and prevent them from happening or understand which is that, rca is like is a strategy it is a 80 percent. probable that the maintenance is being executed wrong if the material you know is not in good.

**00:19:11 Jose Cortinat**

condition not the right fit for purpose whatever but i'm sure that there is a middle point of, where the the ai and the tool can suggest at least give you guidance you know what i'm seeing something weird here you know check that you're not gonna be like 100 you know not automated but at least it's giving you like this a super power of having ai agents supporting your decision making you know so to be clear now if you can find.

**00:19:52 Jose Cortinat**

two sets of the same piece of equipment same family same whatever that just aspects that there is a difference in the kind of like a strategy, As much information you can collect from, let's say, PMs, from the work orders from the last two years, corrective, preventive, and so on, usage of materials, any other sort of failure modes or RCAs being executed,

**00:20:24 Jose Cortinat**

or from the SCADA, any stoppage of the piece of equipment, the whole, and the start, any costs related or budgets related to that, the maintenance strategy itself, if you have labor assigned to each specific task and the work instructions, the documents that people bring to the site, okay, inspect this because of that, acceptable limits. Like, the whole thing that you know, we

know. As much information you can collect from two pieces of equipment the same, we can start from there.

**00:21:03 Jose Cortinat**

Then what we do, I will start suggesting or creating a prototype of a tool that does that, crossing information. Okay? And this is like the nailing it. If you actually, well, manuals and so on, and data sheets, but if you actually have any historical data in English regarding problems that you remember happening on those, welcome.

**00:21:36 Jose Cortinat**

Because then we close the loop of that contextual, simulating how we are working at the industry, getting like the supervisor raising the problem, and then following with the vendor, and then this and that. Do you remember we spoke last time from there? you can build up or something probably you need to leave right you need to leave to training.

**00:22:09 Jose Cortinat**

so now is that the ball is with you okay yeah the ball is with you no it's okay i'm okay.

**00:22:16 Nada**

collecting data and so on go back to go to emin because emin is the guy who has access today, and get the data and then we could move from there but it's pretty exciting yes and sometimes like linking the dots if i have a problem for example i am a meetings manager.

**00:22:57 Nada**

I have objectives of hours of storage per year in my budget. How do I manage it? How do I make sure that what I put in my meetings is efficient and that they are doable? If they are not doable in the timeframe, I have to negotiate for more and justify it and see how to do that depending on my budget. And this is really important. Think about it. It's like you're giving a tip to business managers to be very efficient when it comes to a real strategy in managing their assets.

**00:23:37 Nada**

Linking the business side with the operations. And this we don't have. Till now we don't have. And just let's move bigger, think bigger. Let's say, what is the estimated gain if I do this? giving them the chance to just check my life, doing this a lot. For example, if I don't do this P.M., okay, this action, my remaining useful life of this.

**00:24:07 Nada**

experience, instead of, for example, five years, is two years.

**00:24:12 Jose Cortinat**

And the risk based on environment, health, production laws, and so on, it's increasing from this percent to 34. Are you willing to take the risk? The guy, when he goes to... Yeah, yeah, exactly. You want to do this? Okay. When it goes to actually kind of like, let's say, negotiate with production because... Exactly. It's like maintenance-driven operation, not production-driven.

**00:24:43 Jose Cortinat**

Okay, you have a window here of eight hours, do whatever you can. I need equipment, no.

**00:24:49 Nada**

And because we don't see the whole picture, how much investments we're going to do this. okay okay sign here that i'm going to have a budget exactly but i raised this exactly because what happened is okay we go with this for the operation but we don't deliver it we say that i need the budget this pump because it was alienated because of the way we were doing things a digital twin with the sp2s and that is going to mimic how operations work on the.

**00:25:29 Nada**

on the equipment and how the fact that i process parameters impact my my equipment, in order for me to have predictions in the future like i said the risk is i'll have to change this part of the department and this is the cost or i i'm happy. this will help the plant managers on this based on business because sometimes the price of this is.

**00:26:05 Nada**

less than the price of the product to be very realistic if they choose to do so they have to do it no way they wasn't having a contingency plan that's the idea the thing that we do not have.

**00:26:20 Speaker 3**

yeah clear and regarding regarding let's say this kind of partnership on how how to how to budget.

**00:26:41 Jose Cortinat**

it this project how do you see it going happening. it's not 100% close but how do you see it like how do you imagine it you know we we have a client with this ocp that is willing to maybe invest or found a fund the purchase of a software let's say or like a like the license or whatever you know how do you see it happening like the actual.

**00:27:19 Jose Cortinat**

development one one thing is like i invest on actually having my people developing and whenever it's at a certain level just deliver it for you, and you get i don't know like a like a person that's of or you are like the representative of that software and you sell it in africa but that's not my favorite you know i i i would like to go develop it with you not like uh have you involved in the in certain decisions you know.

**00:27:52 Jose Cortinat**

but then then how we budget that you know do you have budget probably not for that maybe unless you pitch it but i think who who should pay is also kind of invest early in the development, and then i don't know get a i would say the the cheapest license ever because you actually developed it so how do you see it it's the it's the right complexity.

**00:28:29 Nada**

Because what we have here is something that is by our industry, just for other industries and not very relevant for the way we're doing things. So it makes it

very not cheap, it's very hard. To be very honest with you, I am not autonomous when it comes to like designing and partners in law. You are not?

**00:29:00 Nada**

Yeah. Co-development and so on. And my management, I'm not sure how they see it. So I don't know if I can codevelop with you. What I can do is to see the possibility of, like I said, to start a adventure with you. But I don't know how they manage like external partnerships in this, is it something that we can do or not, that's what I'm wondering.

**00:29:32 Nada**

The safest one for me is to help you develop it, I get to sell it at a price that is interesting, for now.

**00:29:46 Jose Cortinat**

Yeah, I think that's the only way we can develop like 100% sure, you know, it's like...

**00:29:57 Nada**

Yeah, but I am open to share with you, I am open to be involved if you want. Yeah, yeah, yeah. I have no problem with that, because it's something that really talks to me, I really like it.

**00:30:13 Jose Cortinat**

Okay, done. Let's do it like that. Great. Do you think it's a good idea then for me to meet these guys to see what they are doing or not, or training.

**00:30:49 Nada**

Yeah, definitely. The strategy is really interesting.

**00:30:52 Jose Cortinat**

The strategy they have.

**00:30:54 Nada**

Yeah, they have like practical labs, like in automation, welding, they do have like practical stuff. In here? Yeah, in their, where Oman is. And yeah, it's something that OCP has done that is really interesting. And other African countries actually have come to benchmark because it helps the industry in the country.

**00:31:25 Nada**

When OCP started, there were no practical training programs and practical training facilities within Morocco. So, OCP had to train its employees in order to be efficient in Morocco.

**00:31:39 Jose Cortinat**

Yeah, but now these guys are doing that part. And they are doing good.

**00:31:42 Nada**

Actually, these are legacy from OCP. Legacy? Yeah. The CLICS started as Centre Industriel de Compétence CCI. It was called CCI. And then they actually, the organization changed and they became UM6P Techniques. So, at the beginning they were OCP. OCP.

**00:32:07 Jose Cortinat**

Yeah. This university. Everything. collaboration you could have oh understanding for me just understanding that they exist that they can do whatever they can do those programs conversation with the client you know.

**00:32:38 Jose Cortinat**

like to think about that i'm always open open to collaborate you never know you never know what can happen from what you can do what do you think about what do you need my best hiring project managers, for construction and write because i you know of us write spanish guys and so on i met them yesterday.

**00:33:24 Jose Cortinat**

And they need good people But they don't want to invest In what? You know, sorry, they don't want to invest in what? They don't want to pay.

**00:33:38 Nada**

They brought new engineers No, they lack of good people, They don't want to give more new money in order to bring the talents And they've been very, economical when it comes to the people. And people are not satisfied I know new engineers their A few engineers their And they are working at OCP And they asked me if we had other opportunities, So they don't feel like.

**00:34:08 Nada**

they could be retained their, I mean, the political side of things is not that bad.

**00:34:16 Jose Cortinat**

So the package they are willing to pay is not worth it. number write 30 40 less.

**00:35:05 Jose Cortinat**

so I was just one day their but what do you think about the culture because if you know not good.

**00:35:22 Nada**

very traditional doing things but i'm gonna give you an example they have that um not a treadmill but you know the rotary where we do fertilizer yes kind of mill yes normally the mill has to be let's say, maintained in a special specific way and their's only experts that could do it i think.

**00:35:53 Nada**

you know their is a like circle and those circles need to be adjusted in order to have the, equipment online sometimes you have you don't have what they did is they adjusted manually.

**00:36:23 Nada**

They think that they are doing economies, but on the long run, you have very high risk to alter the economy.

**00:36:31 Jose Cortinat**

So the maintenance of the air security is not a good standard.

**00:36:36 Nada**

For example, when it comes to ICM, they do not have the good stuff. They do not have the good solar for PMs. They do not have enough solar data.

Because I went there. I went there before starting with SP2Z, because the same processes there are the same that are going to be in SP2Z. It's the same fertilizer.

**00:36:55 Jose Cortinat**

The same as the one that you are working here nearby? Yeah. Okay.

**00:36:59 Nada**

Nearby, in South Africa.

**00:37:01 Jose Cortinat**

In South Africa, right, yeah, yeah.

**00:37:03 Nada**

The thing is, it's the same licensure. It's fertilizer. What we said, this is our, like, to enhance the process. I don't know if you've seen this, but they, like, have... people will bring in the yeah with it yes because you can like do it through a conveyor exactly.

**00:37:34 Nada**

conveyors yeah because pollution in there we have it's going to you may have yeah so this is our take and we said we did a lot of work and we went they've been running for like one two years no pms no equipment no documentation nothing this is the basis how can you run the plants if you have.

**00:38:06 Nada**

no criticality analysis you have no strategy you have nothing at all and they have no cms, they were just thinking about having yeah and they are not ready operationally.

**00:38:22 Jose Cortinat**

how many plants they have operating only one that's why i think you know it's a company that this is growing too much too much and they are like at the development and construction phase 100% focused on that and they are not thinking about operationally that's why i went there to speak to them you know and actually i saw everything that you are telling me it's like okay no these guys they are not ready to receive i don't know two three four ten plants i don't.

**00:38:54 Jose Cortinat**

know how much how many they are coming you know but the question is regarding the yes they are corrective in that in that way but culturally organizationally do you do you think that they apart from the salaries there is not good atmosphere working atmosphere in there.

**00:39:21 Nada**

You know, we had trouble to get there, so like, very defensive, very, and we got to visit the plants, and we've seen what they've done with FMEAs, but they use FMEAs for problem solving, not for failure modes. They do know what they have as problems, but they have no clear actions about how to do it, and I think we don't have the basics of the framework that are going to make this succeed.

**00:39:52 Nada**

We need to be structured, you know, change the mindset, and maybe from the top have an idea about how to make things easier, because it's a small plant, it's not much.

**00:40:05 Jose Cortinat**

It can be easily handled. However, they're struggling. But they are having problems. Yeah, I wonder if they're struggling. Okay, let's go?