orical consumption and you want to find out what are the outliers, the exceptions that probably are going to repeat but not on the same period, not on the same materials maybe. Is very highly unpredictable as Bastian was saying.\n\n So the system can identify it, you can see right away that you have a different color. Let me make it bigger just in case."},{"start\_time":1729150991358,"end\_time":1729151182864,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"So it's a different color so automatically it's telling you just by seeing the numbers that this is an exception and then the system can propose as well. So you have an OLAI correction that is be done automatically and it's trying to smooth the value so you see some some value that is making more sense probably is an average something like that. If this is seasonal it will try to accommodate to the high numbers or the low numbers that you have in that period but it's trying to smooth and to give you a more normal number let's say.\n\n Then if you want also you can apply a manual correction but it's always a possibility so So if you say, no, this number is too low, let's put 100, you can just override the number and you can get that number below. That is the final number that you see here. Let me hide this. And you see it there. So this is an important feature that you need to understand. Is always proposing, but the final number is coming from the planner.\n\n It's what you say. You are the owner of the number. The system is going to give you only proposals override. Okay, that's it. Let me go to the presentation and go with the statistical forecast. If you're having any questions, just interrupt me. I'm not sure if I can see when you raise a hand, so just interrupt please. Okay, so the statistical forecast. As we are mentioning, the idea of the statistical forecast is trying to see the historical patterns and replicate that in the future.\n\n So the basic idea is that you will find some repetitive pattern, right? The system automatically, with the many algorithms that it has, will identify it and will extrapolate this behavior to the future. That is basic statistical forecasting. For sure, there is many nuances and differences between the different algorithms, but this is a very easy way to understand what we are doing here so as we were mentioning before we have many things that defines the pattern like the baseline so you are you are consuming in the order of 10 or 100 or thousands I don't know depending on the unit of measure for sure that so that is the base number like the average right but there also can be intermittency so if you are not selling on any period or if you are selling on any period you have continued or intermittent demand, then you have trend.\n\n So if the system captures that historically you are increasing constantly your consumption or otherwise you are decreasing it, you also can capture that by statistical models. And seasonality, as Sebastian was mentioning. If you have in winter for the temperature, maybe you are using more of a chemical or the other way around, it's also going to detect this high consumption or low consumption, depending on the time of the year, because it's going to be a repetitive pattern that we see on the history.\n\n Okay, so that's in a nutshell the statistical forecast."},{"start\_time":1729151183845,"end\_time":1729151214977,"speaker":{"name":"Murugan Kaliaperumal (ADNOC - PE&ICV)"},"words":"Oh, wait a minute, sir. Yeah. In the trend, is there a facility to add a percentage by the user who is planning? Yeah, for sure. So you can give input percentage saying that 5% on increased trend or 10% increase and so that the quantities are accordingly forecasted. Yeah, that's one thing. Second thing in seasonality. Is there any input parameter where user can specify?"},{"start\_time":1729151214997,"end\_time":1729151220001,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Do you have an example?"},{"start\_time":1729151220602,"end\_time":1729151226886,"speaker":{"name":"Murugan Kaliaperumal (ADNOC - PE&ICV)"},"words":"There are some chemicals which might be consumed more during the winter season. Yeah, can you say this?"},{"start\_time":1729151228763,"end\_time":1729151294726,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"I think that we can use some functionalities. Can the user say, okay, here on this specific months, there can be an event. We can highlight that in the past. So in the past, we can say these are the months in which this is happening. In the future, these are the months and this is when you have an item. This is more useful when this pattern, like this high consumption are not happening on the same period.\n\n But are related to the same reason, you know? I don't know. For example, one very good example is Ramadan. This is not affecting for sure. I don't know if this is affecting at all, but Ramadan is not happening on the same month every year. So if you want to specify the dates by the user, great. But if this is happening on December every year, you should expect that the system is going to capture it automatically.\n\n So when it's very regular, the system should be able to capture it. If this is a date that is moving, but it's the same event that is affecting the consumption, then we can specify it by the user."},{"start\_time":1729151295968,"end\_time":1729151300851,"speaker":{"name":"Murugan Kaliaperumal (ADNOC - PE&ICV)"},"words":"So there will be a seasonality input date facility while planning, starting date and end date."},{"start\_time":1729151301952,"end\_time":1729151314469,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Yeah, let's see if it's necessary. I don't know if it is going to be necessary, because I guess that the system should capture it. Not captured automatically by any reason, we can also assess to what you're saying."},{"start\_time":1729151316889,"end\_time":1729151322772,"speaker":{"name":"Murugan Kaliaperumal (ADNOC - PE&ICV)"},"words":"Okay. Abdulla, sorry, Abdulla, I saw you made a request."},{"start\_time":1729151322792,"end\_time":1729151325693,"speaker":{"name":"UNKNOWN\_SPEAKER"},"words":"Abdulla?"},{"start\_time":1729151327073,"end\_time":1729151346698,"speaker":{"name":"Aboobacker M. (ADNOC Gas - PD)"},"words":"Yeah, actually when the forecast calculation, if it's looking only for the history, right, historical demand. Yes. If already a user made any reservation for the future requirement, will it be considered in that demand plan?"},{"start\_time":1729151347898,"end\_time":1729151368776,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Not in the demand plan, probably on supply plan. Then when we have the supply plan, we want to make sure that we are not double counting. So yes, we need to do a kind of forecast consumption to avoid to use the same need twice, you know, because you already have the reservation and we are creating a forecast for So to avoid double continuous supply planning, we need to take care of that."},{"start\_time":1729151369837,"end\_time":1729151374500,"speaker":{"name":"UNKNOWN\_SPEAKER"},"words":"Okay."},{"start\_time":1729151375241,"end\_time":1729151377843,"speaker":{"name":"Aboobacker M. (ADNOC Gas - PD)"},"words":"If there is a reservation, we should not consider any."},{"start\_time":1729151378243,"end\_time":1729151902291,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"For demand plan, yeah. All right, perfect. Let's continue. So on AAP, you have many algorithms that you don't need to understand them. You need to understand what they are able to do, right? You have from very simple algorithms like the simple average, this is just an average, but in many cases is going to be the best forecast. And you have very advanced algorithms like the running boosting decision trees, that is machine learning, automatic exponential smoothing, also machine learning, auto-anima, and so on.\n\n So the idea is that many of them are going to, all of them are going to have different capabilities. Some of them are going to be specific for intermittency. All orders are going to be specific for continuous demand and others are able to capture trend and seasonality and so on. So a first layer of decision, because you are going to run many of them at the same time, that is what you're going to do.\n\n And the system is going to decide what is the best one. This is going not to happen in general, it's going to happen specifically for any material and plant combination. So for every combination, you are going to have maybe a algorithm. The system is going to do for you that optimization of deciding what is the best way to forecast this, what is the best fit algorithm, that is the keyword fit. So that's the basic idea.\n\n The first layer of deciding what is going to be the best forecast is the demand pattern recognition. As Bastian was clearly saying before, if you have intermittent demand then you are not going to spend time trying to use the because it's not going to give you a good number. So you only use automatically a system, the models are able to replicate that behavior. And between the models that are able to replicate that behavior, the system will calculate that error measure, right?\n\n This is part of the machine learning capabilities. And based on the fit to the actuals, to the historical numbers, it's going to decide what is the one that is reproducing better the behavior of that particular combination material plant so then it will decide on that one and will replicate for the future so all that I'm explaining is just for you to have an idea but the system is going to do it automatically you don't need to think anything here it's just something that is happening in the background all right so this is very important because when I tell you the system is very simple.\n\n It's like just two lines and you don't know what is happening behind. It's important to understand that it's a lot happening behind. It's just that we are not taking any decision there. So here you have the actuals. After you do the data cleansing, remember that the system will detect outliers, will propose you, you can override it. Whenever the actuals are cleansed, you can use it for the statistical forecast.\n\n This is a job that we can schedule. Here you have it, statistical forecasting. You have some parameters that you need to fill. Usually on the projects we left all this by default so you don't need to worry on the detail level because that is a definition or the forecast model that is a definition. So you just run it, it's just press a button and run the forecast and whenever this is run you will see the update numbers on this line, forecast usage of materials.\n\n So in this line it will propose you a, sorry for that, the statistical forecast that you can, as we were saying, you can review it. So that is why we are pushing a lot with segmentation, with to understand what are the critical ones for you because I think that you have too many combinations and if you want to review all of them, if you have all the people to review all of them, that's great. But if you don't, then the idea is that you focus on the important ones and in the important ones, you can do whatever, what we were doing before.\n\n Like if you want to write the number, you can do it. As if you were saying, for example, if you want to put a percentage, we can also configure something like that. This is very flexible. This is just an example of what you can do, but you can certainly, you can put like, instead of, for example if we overwrite this is going to happen if you add a delta like the difference like plus 20 this is going to happen this plus this it's a logic that we can put if you want to put a percentage here um just one minute if you want to put a percentage of increases this is going to happen so you will take this number and multiply by one plus this and you get the the number you need.\n\n So all these configurations are very possible. The idea is that we leave the system in the most friendly way for the user to input the numbers. So if you want to increase the trend, as we were saying, because the system doesn't know everything that is going to happen, then you can apply these corrections like percentages and you get right away the numbers that you need. That's the whole idea of the statistical forecast.\n\n It's not really complicated from the user perspective, but behind is many things are happening automatically. All right. Let me know if you have any questions, otherwise I will just jump right into the demo. A special case that we have is a new material interaction. I don't know if here is going to be the same case that we have many new materials or not. But the challenge for this kind of materials is that you don't have history.\n\n The big assumption of the forecast is that we check the history, we find a pattern, we replicate to the future. But what happens if you don't have it, the history in first place? So the common practice on demand planning, if you don't have the history for the new chemical that you are using, is that you need to have reference information, reference chemicals. So these chemicals are maybe in the same context, maybe they are very similar, maybe you are using it on another plant, but the usage is going to be fairly the same.\n\n So you can base your demand, it's going to be an assumption for sure, but assumption is all that you can do when you don't have information, so you need to do it. And what we want to do here is to create like a fictitious history, like a dummy history for the new material. So in the case of this is very simple just to calculate like an average of course you can do a weighted average so you can do more power to the the ones that are more similar but the whole idea is to calculate the average of this and based on this new demand history you can create the forecast so once you calculate this average history let's say then the process is the same you continue the same process forecast then overriding the numbers and so on.\n\n So that once we do that incorporates to the process. What happens when we start having own history? So when we start having maybe some months of history, the problem is that two months still is not going to be enough. When we want to do a statistical forecast, usually we need three years, five years, years. The more we have, the better for the forecast. For sure, two months, unless the demand is pretty much stable and two months are very representative of what is going to happen, it's okay.\n\n But I guess in most of the cases, we need to have more history to be able to create a good statistical forecast. So what is going to happen here is that you will maintain the history that you created. So you have the reference materials, right? You created your history, the fictitious history. And once you start having your own history, you start using that instead of the reference materials, because now you have, of course, you want to use the history of the product, the material, sorry, that you are forecasting.\n\n And then with this made up history, composed history, let's say, you create the focus. Okay, so that's a good idea. Not really complicated. So it's going to be like this. On SAP, of course. Do you have a question?"},{"start\_time":1729151903010,"end\_time":1729151904992,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 3"},"words":"No, no. Do you want me to take this, Hector?"},{"start\_time":1729151905012,"end\_time":1729151906874,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Yeah, yeah. Please go."},{"start\_time":1729151908455,"end\_time":1729151984498,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 3"},"words":"Yeah. So for the new chemical introduction process, it's very similar to the new part that we've seen for proactive and preventative. With a new material introduction, then we need to follow our existing process to create the material in SAP. So once the material has been created in SAP, then we transfer the data to SAP IP. And this is where, because we don't have any consumption history, we assign a reference, if you want to, to generate demand.\n\n This then will create a demand segmentation based on the reference material. Now, since we are saying that most of the demand will come from the end user, we might not need to, and if there aren't any historical consumption, I'm assuming most of the case will be to take whatever input the end user has put in. And then from there we go into the demand plan for Amaro chemicals."},{"start\_time":1729151990822,"end\_time":1729152015201,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"Here I have a question. See there are some trial chemicals which you know the company uses to check whether the new chemical is better than the old one. So when the certain chemical is under trial The one of the demands from the user is the actual chemical which is currently there. The MRP should be stopped. Because it should not order. So is that a possibility here?"},{"start\_time":1729152016742,"end\_time":1729152026947,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 1"},"words":"So question here is based upon the trial, would you immediately stop or you will take time to make let the trial be complete? The results?"},{"start\_time":1729152026967,"end\_time":1729152037159,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"The trial can take up to, you know, even six months. That time the actual the original chemical should not run. Means the MRP should not run for that."},{"start\_time":1729152038200,"end\_time":1729152055888,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Oh yeah, OK. Usually there is. Let me show you the demo because we have that case here. So this is a case that we are replacement and replacing a material by another and I seen that this is what you are saying, right? So maybe."},{"start\_time":1729152055948,"end\_time":1729152060973,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"Sometimes the trial might fail and then it should restart the MRP of the old one. Yeah we can go back."},{"start\_time":1729152060993,"end\_time":1729152075484,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 1"},"words":"I believe this is something we can control through MRP type in the you know there is a available through the new product introduction process there is opportunity for us to forecast the demand on the new product in the meantime while and then let Hector explain it."},{"start\_time":1729152075703,"end\_time":1729152143143,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Yeah so the point is that you have the old material right then let's assume that this is a chemical it's not but let's assume that is one and you have the new one the prior one so you want to do is to base the forecast on the old one because you're replacing it basically so you can define when you're going to do that for example if that is what you have for example in March then you do the forecast of the old material until there after this you're not going to have a forecast so no replenishment should be triggered for this material in the next month it should be triggered for the new material that is receiving the forecast right so you're switching now this material should go to the market run and receive the replenishment until we have a forecast again for the old material until we switch back so that is one scenario that we can consider of course between the in the configuration and we can set up this for whenever you need to do it make sense because this is one of the concerns raised by the you know the process engineering department that you know"},{"start\_time":1729152143163,"end\_time":1729152153680,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"when trial is on it is unnecessarily going and ordering the you know the the other one and it is resulting in a buildup of chemical which is you know not getting used and getting expired."},{"start\_time":1729152155441,"end\_time":1729152161566,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"How common is this behavior? Sorry, how common is this scenario?"},{"start\_time":1729152162126,"end\_time":1729152182054,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"I think it's not so common, but it is resulting in a monetary loss of you know to the company. This is the concern, yeah, They wanted actually this to be even adapted in the current MRP run, but we couldn't do it actually. So I just wanted to make this point here. If it is can be controlled in IVP."},{"start\_time":1729152183094,"end\_time":1729152186015,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Yeah, yeah, for sure. We take it as one of the requirements."},{"start\_time":1729152186035,"end\_time":1729152191736,"speaker":{"name":"Vignesh Perumal (ADNOC Group D&CS)"},"words":"You change the material to no planning for the duration and then you switch it back on Raghavendra."},{"start\_time":1729152192136,"end\_time":1729152202708,"speaker":{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},"words":"Yes, that is one probability, but is it possible that you know you can add a reference material I'm just talking about current ERP system."},{"start\_time":1729152202808,"end\_time":1729152208230,"speaker":{"name":"Vignesh Perumal (ADNOC Group D&CS)"},"words":"I'm not proposing for the new solution. Just if you have some meantime in SAP."},{"start\_time":1729152209551,"end\_time":1729152267545,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 2"},"words":"Just final comment from my part because we're approaching the end of the meeting. Actually, we're past three minutes. You mentioned if the material is active or inactive, deactivated. We usually integrate that and if the material is not active, we don't generate any forecast. We also clean the forecast in every run execution. You clean all the forecast and then you generate a new one for the active materials.\n\n Let's say you have a forecast for an active material, but next month this material gets deactivated. Then you will delete the entire forecast. When you generate again the forecast because this material is not active anymore, then you will generate no forecast for this one and instead you will do it for the new one, which will take the history of the old one. In this way, we avoid purchasing something is not needed anymore.\n\n"},{"start\_time":1729152270325,"end\_time":1729152307169,"speaker":{"name":"1Arunkumar Viswanathan (ADNOC Refining - HQ)"},"words":"We have a continuation of this session planned from 1 PM. We'll take a break now and we'll join back at 1 PM to continue. Also, I'll appreciate if you can bring some of the end-users during that session. So, we can get this confirmation. I think Arun has his hand up. I just have one query. So, in this demand output, I mean the report what you have shown. So, from that report is it possible to see whether that particular item is having a PO or an agreement or approved PR?\n\n"},{"start\_time":1729152310509,"end\_time":1729152342541,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"um like an agreement approved PR um related to the PRs the appropriate PRs maybe something that we can get into a system that is more related to supply planning indeed because it's it's part of the inputs that we can use there uh but maybe for visibility reasons you can also see it and the long-term plan agreement I don't know what kind of information that is on SAP but surely if that is like an attribute I don't know if"},{"start\_time":1729152343201,"end\_time":1729152371942,"speaker":{"name":"Arunkumar Viswanathan (ADNOC Refining - HQ)"},"words":"we can bring it that's where like one hierarchy no my observation what would be the outcome of this report I mean after the review we are giving a monthly planned I mean demand forecast so as an inventory what is the next outcome we have to do I mean what further action we have to do we have a pre-ordering, pre-ordering, pre is divided into three sections, demand, inventory, and supply."},{"start\_time":1729152372383,"end\_time":1729152397451,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 1"},"words":"Right now, we are in demand section, where the objective is to finalize the demand. We have separate sessions where we will talk about how this demand is utilized for inventory optimization. And eventually, based upon inventory optimization, how the supply planning happens, where you actually purchase the model and fulfill the demand. These are three different segments of IBP. And we will go in each segment one by one.\n\n Workshop is only focusing on demand."},{"start\_time":1729152400212,"end\_time":1729152402273,"speaker":{"name":"Arunkumar Viswanathan (ADNOC Refining - HQ)"},"words":"Does that answer your question? OK."},{"start\_time":1729152402353,"end\_time":1729152414358,"speaker":{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 1"},"words":"Alright, then we'll see you at 1 PM and as Kyle requested, if possible, can you please extend the invite to the users as well?"},{"start\_time":1729152417259,"end\_time":1729152417659,"speaker":{"name":"Hector Palacios (ADNOC Group D&CS)"},"words":"Thank you."},{"start\_time":1729152418400,"end\_time":1729152418820,"speaker":{"name":"UNKNOWN\_SPEAKER"},"words":"Thank you."},{"start\_time":1729152429442,"end\_time":1729152429565,"speaker":{"name":"1Arunkumar Viswanathan (ADNOC Refining - HQ)"},"words":"Hmm."}],"speakers":[{"name":"Ameer Ali Muhammed Kizhakkanikath (ADNOC Offshore - MATCATT)"},{"name":"Murugan Kaliaperumal (ADNOC - PE&ICV)"},{"name":"1Ali Mohammed Ahmed (ADNOC Onshore - PD)"},{"name":"Abdulrahman Al Meqbaali (Borouge)"},{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 2"},{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 1"},{"name":"Mohammed Sadique (ADNOC - PE&ICV)"},{"name":"Vignesh Perumal (ADNOC Group D&CS)"},{"name":"Conference Room (MM- SKEC2 - L08) - Speaker 3"},{"name":"Jaganath Doss Thangadurai (ADNOC - PE&ICV)"},{"name":"1Arunkumar Viswanathan (ADNOC Refining - HQ)"},{"name":"Aboobacker M. (ADNOC Gas - PD)"},{"name":"Ahmed Mahmoud Al Hammadi (ADNOC Refining - HQ)"},{"name":"Raghavendra Mithal (ADNOC Refining - HQ)"},{"name":"Ali Mohammed Ahmed (ADNOC Onshore - PD)"},{"name":"Hector Palacios (ADNOC Group D&CS)"},{"name":"Arunkumar Viswanathan (ADNOC Refining - HQ)"},{"name":"UNKNOWN\_SPEAKER"},{"name":"Abdul Lathief Muhammed Kunhi (ADNOC Offshore - IC)"}]}