BRIAN SCHANEN: All right. I think that's it. They've sealed the door. All right. You're stuck, we're stuck together. All right, so welcome everybody. That is loud. Maybe I'll tone it back a bit. Everybody hear me well in the back of the room? All right.

These slides, these commercial slides that we have running, take pictures. They're just meant to let you know what's coming up. Where we're going to be. Answer by our quick bio on everything. So if we need to run these again at the end, if you want to take a picture of the next class or anything that's on here, just let us know. But I think it's time to start with, start with the class. And here we are.

So my name is Brian Schanen. I've been with Autodesk a long time. Since the before time, since 2005. Before that I actually worked at a reseller for seven years. And in my tenure here I've always done data management. Actually I joined Autodesk just to do Vault and product stream at the time. PLM came along, and I turned my sights to that, although I still do love Vault. And who doesn't, right?

But I've been here, and I've been teaching at AU since 2000. I've been doing something. It's always in the realm of data management with maybe a secondary, like Inventor or something like that.

With me is Ms. Michelle Stone. Michelle Stone, I'll let you introduce yourself.

MICHELLE STONE: OK, I haven't been at Autodesk as long as Brian. Actually interviewed for the job at AU 2011 when they launched the PLM product. Actually went on Craigslist looking for another job in PLM, and like why is Autodesk popping up? Came kind of old school, PLM, client servers. So I've been working in the industry since the late '90s, PDM, PLM.

And I said, oh, they're going to this new solution. So I was intrigued, and I talked to them. And well, here, I am. I've been on the product team for about five years now, and I'm really excited to share some of the features in the product that you guys may not know about. I know, I recognize a lot of you guys. You may have been administrators working with the product for a while. So this is a great chance to give you more information.

BRIAN SCHANEN: So the class is called, features you're not using but you should be. And I thought I'd get a catchy title out there. Now we have, if you take a look at the handout, all right. There the

handout. Thank you, Michelle, for the handout, by the way. I was-- we're professional procrastinators, so the handout was, it was uploaded, I think, yesterday or the day before.

Long, lengthy handout. The slides that I uploaded. There's over 100 slides. Now, I know the rule with slides. I know that. If you sat through long presentations. I cut that way down. The good news is, the presentation we have here, I have a lot of stuff removed. But the slides are yours. All right, so if you are an administrator, if you're a prospect, if you're a customer, if you're a reseller, if you're an independent consultant, use these.

And actually, let's go over to-- the whole idea of this class is meant to give you some tidbits. Over the years, as a product manager, as a customer success engineer, and as somebody who is outward facing to customers and to resellers, I pick up on tidbits. In fact, Michelle Stone, part of the street team, has all of these. And so the idea is to take 60 minutes and give you some of these that are in our head. Little known secrets and things inside of the product.

We're not going to get to everything, but when we do have something, we're going to see a nugget. All right, this is a little nugget of information that we're going to drop on you. So when you see a nugget, that means we're probably going to stop on it and talk about what it is.

So I've been working with our internal pre-sales team, and been working on an idea for a long time called workspace theory. So inside a fusion lifecycle, we have these things called workspaces. You can have as many as you want. How many do you need? Well, that depends. You have tabs. Well, which ones do you use? You have fields. How many fields do you put on a page? Hundreds, right? No, no.

So the field theory, tab theory, and workspace theory is just something that I'm working on. So that's what I put up here, I want you to come away from this, if you're not in fusion lifecycle yet, these are good tidbits for when you start to go. If you're already in, this might help you wake up that other workspace. Go and get into that other department. And along the way, Michelle is going to chime in because we both do PLM talk. We both do-- which is a quarterly? Quarterly. Well, it's quarterly. Let's say it's quarterly.

Used to be monthly. We used to have these webinars. So if you go out to the support forum for fusion lifecycle, you can actually see prior webinars. They're recorded on GoToMeeting. Go to webinar. We also have the Virtual Accelerate user group.

So when we get these ideas, we like to get these out. These shouldn't be secrets, okay? You

shouldn't have to wait once a year. So we always have a way of getting out these best practices, and ultimately we want to use fusion lifecycle. That is, that's really my goal is to make sure everybody is using Fusion lifecycle and using these products to the best of its ability.

So let's talk about fields and field theory. So we have fields. These are also known as attributes. If you're new to fusion lifecycle, you might also know this as properties. In Vault we call these i properties. It's just data. All right?

And we have a number of different ways that we can use it. So we've got some best practices built in here. So you can have different types of fields inside of each workspace. But what you can do with the fields varies. OK, and you can get a lot of power out of it so.

Different fields are defined-- no one workspace has every field type. Just like either you want to divide up that type of information. So another thing to remember, when you make a field, it's actually unique to that particular workspace. It's something that's not global. So you don't have to worry like, oh, I used the word description. Can't use again. Now you can actually use it across or use the name over and over again.

So just as a reminder, this isn't really a nugget, just a reminder. We have a number of different property field types. All right. And the field types range from just single-line text, think free text, to integers to floating values to date fields to-- we even have some special field types. So by special mention, pick lists, derived fields, linking pick lists, and I have some examples for you.

We have URL, CSV, are comma separated values, and how you use these. This is where we get into field theory. So here's the first little nugget for you. We have this computed field, so you can drop in a particular field, and we could basically we could do some math.

This could be an iFrame mash up from another system. You might see this if you integrate with an ERP system or another, maybe a homegrown system. So you can actually drop in a little bit of code and build out a field. Give it some space. And it could be something just punches out. As long as you can authenticate to another location, you can bring this type of information in.

We also have validations on those fields. So that's the other little nugget that we want to put on here. Often goes, you know when you go make a field, you make it quick. You give it a name. But this is one of those things, make sure you go back and take a look at the types of

validations that you have.

So you can make it, the easiest one you think is mandatory. But there's some other ones in there for uniqueness and dependency on other fields. And this is where, the whole goal of this, the so what, if you will, is to make sure that people are filling out the right information. Because any time you're making a record and somebody says, well, it doesn't seem to be mandatory. Or you leave that up to them.

You could actually put in some validation. So look at that. It's at the bottom of the page, nicely out of sight for you usually, when you're filling it out. But the idea here with the fields and validation is to make sure you're taking a look at these, so you can go and add some other uniqueness.

You've taught this before right? In the PLM talks?

MICHELLE STONE; Yeah you know, the one that comes up a lot, you know, we've seen dependency. If somebody fills out this one field, then make sure they fill out the next field. Another one I've seen fairly often, minimum length requirements. If you want to make sure people are giving meaty details, you can include that if you've got a field.

Just don't want them type one or two things. So you at least want 50 characters, you know, like an RMA if you have a problem. You can kind make sure that your end users are giving you the right information that you need in there. I think those are ones that are done a lot.

BRIAN SCHANEN: All right. Now, another little-- I thought we'd throw this in. I think most people know this, but if you get into building a matrix out or you're building a workspace out, there's a clone button. So the word clone is used across the product. We can clone a workspace. Technically, when you get a new tenant, that's a clone that we do on the back end of this tenant.

We can also clone fields. And the idea of cloning is you hit the ground running with most of the same basic parameters. You just get to choose a new name. And it's a good way to rifle through. So make sure you're using that. It basically speeds things up a little bit. You know, you just feel like you're working faster.

And yes, when you're building out a matrix, it's especially nice to go and have that same field type. You just rifle right through it. So again, a little bit of a little nugget there for you.

This one. The descriptor. So the descriptor, by the way, every record in the system has a

given name. It's a descriptor. How is this known? So on a lookup or a search or anything else, what is it called. Usually it's the one thing. It's in bold and blue. It's at the top of the page.

But what we find sometimes is people make a descriptor, but what's in the descriptor, they don't make them required. What does that mean? So you do a report. You do something, it's like, well why is this not looked up? And if you're like me, I like things to be in a certain order. So if something is going to be part of a descriptor, make sure people fill it out. Make it a, getting back to the uniqueness. This is one of those things that-- just a best practice. So for the admins in the room, remember this. If you're going to have something in a descriptor, make sure it's a field. This is one of those little tidbits we like to make sure everybody knows.

MICHELLE STONE: Yeah I, think on that one, again, yeah, just making it a good user experience. Because you guys are all in here probably as PLM cheerleaders at your company. So you're going to be deploying this to the rest of your company. And they're going to be relying on that descriptor as that link to go to other parts of the system.

And just a pet peeve of mine, when you put in your test records, and it's just like a dash. Think about what the end user is going to see. I like to tell folks that I'm onboarding. I really like to see field 1 and field 2 to be either required fields or an auto number or something so it's not blank when you're navigating through the system. It just makes a better user experience.

BRIAN SCHANEN: Yeah, nothing looks worse than that one with the dash. Because the fields are all separated by a dash. There's a lower level setting under System Wide Configuration where you can tell it what kind of a separator do you want. And by default, inside of all these tenants, most tenants it's a dash. You don't want to see an empty dash just sitting there, hanging out. Sticks out like a sore thumb.

By the way, up to four different fields can be used as a descriptor. Now watch out for that. Because you can have any field that you want except for paragraph. No paragraphs. Otherwise your descriptor would be like long, long. So you can have-- I really don't see too many people even going beyond three. It's rare that we see that.

Another little tidbit. Not everybody uses or implements it. I think you use it. If you're using the current tenant, it's in there. It's what's known as a derived field. It's the ability to prevent, you go and select a record or select a value, and then other values fill in. It's meant to overcome tedious, monotonous or duplicate data entry. It's a great feature in the product. And not many people maybe even know about like how do you go in and build this and create it.

But it's there. In fact, you can reverse engineer some of the fields out there. I'm thinking, so the approved manufacturers list in items and BOMs, it has an example in there. So derived fields are good. It draws in additional information. You drop down like a customer name, it brings everything else along with it.

Anything?

MICHELLE STONE: That's good.

BRIAN SCHANEN: We don't have a nugget on this one. We have a nugget on this one. All right, the other one in here that's really nice, and this is a little bit of a foreshadowing to what we call in workspace, we'll talk about helper workspaces or reference workspaces. It's what's known as the filtered pick list.

So if you've ever gone out to a site and filled something out and it asks you to pick from this pick list. And then the next set of values is contingent on the prior set. And the next set of values after that is contingent on that. You've just used a filtered pick list. And inside of here, it's exactly what we call it.

Now to set this up, I have actually-- I'm going to probably punch out to Fusion Lifecycle and show this here. So a great example, and this will be something that you can easily go and replicate yourself. I have it set up like a cooking show, so it's actually already done. But zip codes.

So if you're going to fill out somebody's state or province, and then the postal code or the city and then the postal code. You know how that drops down. You don't want to have to choose through all of the postal codes. This is actually a good place where if you can get that type of information, and it could be product information. It could be anything that you have out there in Excel. This is a good candidate to upload and bulk imports.

I'm going to have a seat and show you what I'm talking about. So in this case, I actually created-- there's a whole category here inside of Fusion Lifecycle in this demonstration tenant called reference. Reference. This is where the admins play.

Sometimes you have a workspace just to help out a workspace. And sometimes that workspace helps out another workspace. So more about that a little bit later.

But we have a workspace here called zip codes. Why would you have that? Well, you don't want to have to go out and leave PLM to go and pull this in. But here it is. Here's all the zip codes. And this was actually a nice-- this was a good test to throttle Fusion Lifecycle I did a import of 42,000 records, and that's cool. As a data geek, I just love that kind of stuff. I was just it go, yeah. You know, you can throw as much at it as you want.

But the idea here is, you take a look it's-- zip codes are sort of descending. I think you get the idea. Basically goes all the way from Alaska to the east coast. All right. But what? So what? All right, so what does one of these look like?

So there is a-- there's actually the descriptor that I put on this, in this case, Alaska, Healy, and then there's the postal code. There is a state name. Abbreviation. The city. The zip code. And then, just because it was in the spreadsheet that I was able to get, I brought in nickname. I don't know what I'm going to do with that, but probably something fun a little bit later.

But what did that look like? Well, it started like this. It started as a great big 40,000-record Excel spreadsheet. So what do we do?

Well, you make a workspace, and you bring it in, and you map things over. By the way, we're going to cover importing a little bit later. I have some best practices on how to import. So you have state, abbreviation, city, we're not using that. Latitude, longitude. Just in case anybody wanted to know the city center. And then, of course, the numeric postal code in this case.

So where does that play? Well, if I come over here to the customer's workspace. Again, this is like the cooking show. So let me show you how it works. If I were to say, let's go, and I'm going to say, let's call [INAUDIBLE]. Good. I practiced this once before.

So this is what a filtered pick list manifests itself as. If you've ever thought, you know, in our catalog. I want people, or a product or a workspace, I want people to choose, and then choose on something, and then choose something else, and narrow in.

It works like this. If I were to say, well, we'll go with Michigan. That's my home base. But if I go here, notice it basically narrowed it down a little bit. So there's Novi. Somebody tell the fun fact about Novi. Never mind. Basically, so it narrows it down to the yes, that's really the number six. Yes. It's an embarrassing part of our culture.

So it narrows it down to the four zip codes that are in the-- how was that done? How was that

done? So let me take you to the-- basically I'm going to pop the hood and show the back end of this.

So this is a workspace called customers. But it could be anything. Customers, distributors, manufacturers, vendors, anything where you have some information about it, and then you just, you have, by the way, it's 4375 if anybody's interested.

So how does that manifest itself? So I'm going to take you into Journey as an admin. We can get into the Workspace Manager. So this is a great example of how you can chain workspaces together and how one workspace feeds into another one.

There's a workspace here called zip codes. And that's the one that I had. Pretty straightforward. Pretty easy. You have a number of fields. So single line, single line, everything's single line text. Notice I didn't make single line text, or I didn't make the postal code or the zip code numeric because, you know, North America. We get to take it actually, Canada. Yeah, those crazy Canooks.

So how does that manifest itself over here? Under customers, I'm going to go into the item details. And this is where I started to build out. We've got the name, the logo, the notes. Good stuff. All right, website, revenue, stock ticker, all right.

By the way, stock ticker, that's a good example of where you can go out, punch out, grab that information, and bring it back. What's Autodesk at? I think we almost hit 75, right? Today. Rock on.

All right. So how do we-- so address. So the street is a single line text, but notice the state country is from a filtered pick list. Let me show you this. So the filter pick list, you tell it first of all, it's a data type. You do have to make a pick list based off of a workspace, and all that means is, it's a list that exists and it taps in. It taps into a given workspace and looks at all the values in there, and tell it that it's filtered and tell it which one. So it will actually pick it up.

So based on state name, then the next one down is the city and town, so based off of the previous, it will go down to the city and, of course, the zip codes. So we're essentially going from a macro down to a micro level and searching on that.

So one more piece. I did mention it. We have a system wide what's known as the pick list manager inside a Fusion Lifecycle. And this is within your tenant. These are-- the good news is the product-- when we clone out, when you get a PLM and site, there's a lot-- Sorry, I said

PLM. Fusion Lifecycle site. There's actually a lot of pick lists already in the system.

And these are ones that you can take a look at. These are just static pick lists, and you can add values here. But any one that has a WS in front of it. It's a little bit of a best practice. There's another good nugget for you. Best practice, put that WS prefix. That means that this pick list is going to look into a given workspace, and all values in there are now going to be available as a dropdown.

What does that look like? When I come back here, and I go in and I choose the state, city, zip code, it's going to narrow it down. So again filtered pick lists. You might have used one already. If you're using maybe the original old classification. But if you want to use it, coming up is a very good example.

I actually did not upload this. But I could upload this after the class if anybody wanted to go and--

MICHELLE STONE: Yeah, put a note to do that.

BRIAN SCHANEN: All right, so we'll upload this. It will be under the additional materials. So there's the handout, the presentation, and then we'll add this in as well. All right, so again, it's a good nugget. I wanted to stop on-- Yes?

AUDIENCE: [INAUDIBLE]

BRIAN SCHANEN: Yeah, you can. So the question was, sorry, we should have-- I do have a microphone, since we're recording the class. But yes, you could start, you could enter that, and it will fill in the information. If you knew the exact zip code, it would have filled in like Novi in Michigan.

AUDIENCE: [INAUDIBLE]

BRIAN SCHANEN: Yeah, yeah. All right, cloning field, let's get back to where we were. All right. So what? The so what of this is, you can ensure that people can and do choose properly and choose accordingly to what they need. You can actually guide people in to make sure that they're choosing something that's actually part of a real configuration, part of a real option. That's really the so what.

By the way, I threw on these so-what slides because I like to get to the point. Somebody is

probably thinking so what, right? This is the so what. You get better data entry. You get people filling out the record better. Make sure that they do this. And if that's feeding into a descriptor, well, there's your so what. You have a much better, much more intelligent record that you can use later on. Good. Demonstration we did. How we doing on time?

MICHELLE STONE:
Got to go a little faster.

BRIAN SCHANEN: Little faster? All right. Tab theory. We could probably do a whole class just on this. We could probably do a whole class on the tab. So here's what you need to know. Inside of Fusion Lifecycle we have a number of different tabs. OK? Now, no one workspace gets all the tabs. I know what you're thinking. But inside of here, the idea is to use the right tab in the right workspace. Sometimes you might need to make a secondary workspace. Sometimes you can get a little bit creative with what you do on the Item Details, or maybe the Grid tab or something else like that.

So we have a number of these. We're not going to go verbosely through every single one of these. We don't have the time. But what I do have are some nuggets. So there's a Change Log. If you could appeal and tenant, you log in as the admin. You take this for granted, but there's that last tab over there and it's called Change Log. That's actually a running record. Think versions, but don't think version-- but think it's going to record everything that you do-- edit, save, edit, save, edit, save. Everything is going to be recorded there.

Now that's not something that everybody gets to see, by the way. There's a permission on this. In fact, there's a permission just about on everything, even the fields I was showing you. You can put a permission on the section. But make sure you take a look at this. Go through it. It's a running record of everything that occurred within that one particular item or seal-- record. So take a look if you're using it. Make sure that you are using that.

The other nugget that we have on here often overlooked is the Action Notification. So within PLM, one of the best parts of it is the workflow. Workflow process notification. You get an email. If you're on the list, boom, you get an email. You have something to do. What do you do with the people that you want to let them know, but you don't want them to do anything? It might be long lead. It might be somebody that's on the outside or in orbit around Fusion Life Cycle.

The Action Notification tab. We can pop this on with a permission, let it be seen. And you can

actually put a watch-- basically put a watch state on either a transition or a state. And the nice part about this is they'll get an email, because email still-- right now that's our primary communication mechanism. This has reached the state. There's nothing for you to do. Just want you to know. Show of hands, who here, is anybody using this right now? It's there. It's something that you can just enable, but I think it goes often overlooked. I think it might be on by default on the change request, just to let somebody know like, hey, this got to this point.

AUDIENCE: [INAUDIBLE]

BRIAN SCHANEN: We have a microphone there for you so we could capture the--

AUDIENCE: Does that allow users to sell subscribe to the watch, or does the admin have to assign the watch?

BRIAN SCHANEN: You get the choice. So the admin has to turn it on, but somebody could be-- you could put a person or a group on that, or you could, if you had the permission to-- so yeah, I want to watch this. I want to be notified as this completes. Does it get canceled? Is it on hold? Something like that so-- Question?

AUDIENCE: Is it possible to actually set it up? Would you type the notification that you get? Because right now that's one of the problems that we have is that we get-- if you want one notification, or you get them all?

BRIAN SCHANEN: For workflow?

AUDIENCE: Yeah.

BRIAN SCHANEN: In the action notification, you actually will get-- depending on what you choose-- you get to choose the transition or the state. You get to choose what you want. That's the nice part about this. And if you are getting too many notifications, you may want to take a look at a few things. First, part of your personal profile, you can go in-- you can go into my profile and then see what you can see. If you're getting too many, it might be a configuration. Oh yeah, there's me. So here's the manage electronic notifications. I think I pulled the slide out, but as long as you had asked about notifications, you can tune what you see.

If you really wanted to see everything, you could actually go into something, like subscribe to everything, like every edit, every move. That's a whole lot of information. But if you're having that, chances are we should probably talk after the class and take a look at your workflow

notifications. You might have a couple checks on every state, and you may not want all that. So people are getting spammed, then what do people do? They shut it off. They shut down. They start to ignore it. Great question though.

MICHELLE STONE: And I'll be able to answer more in the next two days, if you want to come up and talk about it. And I left a lot of this in the handout as well. But for the action notifications, the way I employ it-- we use it internally-- to drink your own champagne concept. A lot of times I'll do it similar to if you used your watcher list. If there's certain people that may not be in the workflow but I want them to know when something's been completed, I often just set it on when I hit state, complete.

And you can do it, not just users, but even groups, because sometimes you might want to let a whole group know this happened. They're not involved in the workflow, so they're not getting the workflow notifications, but they do want to know what happened. And then we can also talk about those manage electronic notifications where you might want to subscribe to certain events and get a daily summary.

BRIAN SCHANEN: Good question. All right, the next one. I don't think we have a nugget on this one, but what often goes overlooked, the Affected Items tab. So let's talk about it. Every change that goes to a revision controlled workspace has to have a revisioning workspace. Other way to say it? Items and BOMs, ECOs. All right. On the ECO, we have a tab called Affected Items, also known as Managed Items. You can add fields to this. I think a lot of people say, no, we have to put all these fields on the item details. You can actually put some of those fields that might be unique to a particular row off-- take some fields off of item details, get them here on the Managed Items. It's something that the administrator can do.

So you can actually add other columns in here. And it could be a dropdown. It could be a picklist. It could be a free field. It could be anything else that you want. So you have your static fields, and you're going to have a name, the effectivity, life cycle, that kind of stuff, but you can actually add other fields. In other words, you're building up this list of proposed, affected, or as I sometimes-- infected items. That's why they're going through a change.

So basically you can add other columns to this. Again, I don't know that everybody knows that, so that's another one of those little tidbits that I like to throw in so there's a fun fact in there.

AUDIENCE: Does those attributes [INAUDIBLE] with network space?

BRIAN SCHANEN: Yes.

MICHELLE STONE: Yes.

AUDIENCE: [INAUDIBLE]

BRIAN SCHANEN: That's right. They would live there. In fact, they would live because during that ECO for that amount of time, it's something unique to that change, and then if you went-- and that was revision D, and you want to look at everything, well, why revision D? It would be something that lives right there. So it doesn't have to live on the item because you might not want to have that information there.

The other tab-- and I'm a big fan of this one. As Michelle mentioned, we do use PLM and Fusion Lifecycle internally. We have this site, and we manage a lot of stuff there, all the tenants. Every class that I teach, I actually have a class and have a list of the students. The Relationship tab is a great way to take two workspaces and join them together. This one knows that one; that one knows this one. Basically like a wormhole between them. You go into one, and you can see things in the other one. And you set this up on the back end.

But the Relationship tab, it's another one of those-- not that popular for some reason, but it's there. It's the ability to make sure that from one workspace, you can get to another. Just a very easy, superficial relationship between two. In this case, I have Chris who's in our team. I have a training attendees and training, like classes, that I've done on Fusion Lifecycle. So I can actually go in there as two different workspaces. I can look at a class and see the attendee. I can look at the attendee and see how many classes. So you can do that. If you ever have two workspaces and you just want to join these two, wake up the Relationship tab as a permission. Make sure that they can see one another. Again, something you do on each workspace in the workspace relationships area. And poof, that's it. It's very easy to just go in and set this up.

Tab orders. Another best practice. And this is something we tried to do in the latest tenant that we have. Tab names, make them consistent. Tab orders, make them consistent. Couple of givens. You always have item details at the first. That's the first one. It's on the far left. Change log should be last. But what happens in between if you have grid tab? If you rename workflow and you call it something like process? Do that on every workspace. Your users will appreciate it. You'll have better and quicker adoption.

I know the product, all the workspaces. It does look the same. I get that. But a big best practice-- and one of the reasons we have that nugget up there is just establish some consistency. However you want to document your rollout of Fusion Lifecycle, just have consistent standardization. That's what we're here for anyway, right? Data management and PLM, so best practice. This actually I think came in right from you and the street team. Yeah.

All right, let's talk about tabs. You can turn on every single tab on a given workspace, but no one workspace needs, nor is it logical, to have them on. So just because you can, you probably take a workspace, turn them all on and the permissions, get it out of your system, and take a look at what that looks like. But now it's not pretty. Basically you just have a whole-- all the tabs turn on. No one workspace has workflow and bill of materials and where used and sourcing and suppliers, and, and, and. So again, have a talk with somebody about tabs and what tabs are appropriate. This is all part of tab theory. How many do we need? When do we need it? When do I need a tab? When do I need another workspace? When would a print view or a report suffice?

And so what? The whole so what about tab theory is to make sure you're getting the most out of a given workspace. People ask a lot-- I teach a lot of questions-- should I make a workspace? Should I have another tab? Should we be using a different software? It depends, but the so what here is I want you to get the most out of it. So the handout and the presentation-- the 100 slide presentation I uploaded. I have a few more tidbits.

Getting into workspace theory. This all leads up to you have to understand properties and fields. You have to understand the tabs and the different powers that they have. And then workspace, let's talk about this a little bit. If you're new to the concept and new to Fusion Lifecycle, a workspace is an area where you have like-minded records. We call them items. I'm going to call them records because that's what it is. It's something without a file extension. It's just a collection of data that's unique. Change requests and change orders, items, accident reports, nonconformances-- these are different workspaces. They are limitless. You can have as many as you want. But there is a logical limit, I think, to how many workspaces you'd have inside of any given tenant. But the fact of the matter is, we don't license per workspace, so you can actually have a number of them. You can have workspaces that help out other workspaces that help out other workspaces, as I said before. But the idea here is, just as a definition, workspaces are a collection of objects with common properties across them.

A couple of tidbits. You can make as many different categories and groupings of them as you want. Inside of the default tenant that we stand up, these are grouped by-- the way you see it, they look like they're grouped by department. I look at it as a discipline or a persona. But you can rename these and group these however you want. You could just have one category and list all the workspaces all the way down, if you were so inclined. We generally implement with the department or the team or the discipline, the quality, the supply chain, the engineering. It could be anything else.

And then, of course, we have the reference. So always have-- for those admins in the room, have your own stash. That reference, that's where you keep your stuff-- lists, and just helper workspaces. So it's always a good idea to have that. They are definitely permission-based. Not everybody gets to see all the workspaces. As an admin, when you go in you're going to see everything. When you go and add people to other groups and they're not administrators, they're only going to see what they need. Two different logins will give you two different views. Same tenant, but different views depending on what you want again. I think if you understand that--

Reference workspaces. Talked about this a little bit, but there's a few others that you should know about. Currently in Fusion Lifecycle we have a classification engine that's actually core that's built in-- true classification to help you categorize anything. You initially think items and bill of materials, but it could be suppliers and vendors and manufacturers. It could be what type of change do you want? Change order, change request, change notification.

But we do have an old classification engine in there. It's probably in most of your tenants that you have right now. Even if you have it turned off, it's there and it's dormant. By the way, it's a good example of filtered picklists, if you wanted to go and reverse engineer and see just how are those built, how are they used.

The other ones that are in there, we have approval lists. The approval lists workspace is just simply-- it's a workspace that collects a routing list of the users in your system. And then given a particular routing and a change request or a change order, it will be available as a dropdown. So use these. Use helper workspaces. Don't be afraid to make another workspace that's just a list. It doesn't have to have workflow or revisions. It doesn't have to have any special powers. It could actually just be a list.

The other one that you'll see from time to time-- generators, description generators. We

actually used to have a part number generator, but now we have that taken care of core inside of the system. But you might have a description generator. You might have a template. This project task template right here is something that we have on some generations of sites. And what that allows you to do is, you make a new record and actually automatically fills in all of the tasks, basically automating some process for you.

Helper workspaces and reference workspaces, again, very powerful. Make sure that you're using this and leveraging it if you're-- and if you weren't aware of it before, that might be what's behind-- we have a nice build here.

Workspaces and then apps. Let's talk a little bit about collections of workspaces. Workspace could stand alone, but usually a workspace is there to be part of a process, to be a link in the chain. You can bring together workspaces, so what happens in one workspace might feed into another one. There are a couple of ways that we can do this. It could be through spawning. The linking picklist example with the zip codes and the customer's workspace is another example of it. But the tenant that you have-- if you have Fusion Lifecycle, if you have a trial-- actually has a lot of this built in. So we have the ability to chain together workspaces. In fact, I like to say if a workspace is sitting there all by itself, what's it actually doing? Every workspace should be pulling its own weight inside of the system.

For examples of other workspaces, I think a lot of people know about this, but I'd encourage you to go and take a look at this. If you're an admin, you can go out to the app store-- it's under the Administration menu-- and install one of the apps. It's something that takes a couple of seconds. Go and read about it and just install it. And actually as the admin, you're the only person that sees it initially, so you can actually do a little bit of careful, lightweight sandboxing of a new app.

Now an app could be one workspace. It could be five workspaces. There's no hard and fast rule. The idea of an app in the app store is it's a solution. It's a theme. It's a collection of these. I'd encourage you to take a look at these, maybe throw them in another reference category or another category off of that main menu and play around with some of these. I like to say, install it and make a record in every workspace. There's a lot of information that comes along with this.

By the way, in addition to the workspace, you get roles. You get scripts. You get picklists sometimes. It's basically turnkey. All you need to do is allow it to be seen. And I know that

we've had PLM talks and other webinars on how to do this. I think we have some videos up on our YouTube channel, PLM TV, as well. But if you've not used this before, I'd suggest you go out there and take a look at this.

And so what? So what is all of these workspaces? They're meant to do and solve a particular solution. In these workspaces you can have, as I said before, as many as you want. So don't be afraid to go and create some extra ones, maybe cloak them from most people, test them out, and then roll them out and deploy them.

This is our pre-configured tenant. If you were to go out and get a trial or see somebody do a demo, they're usually using this initially, or some variant of this. Inside of our tenant-- and I showed this in the last class-- we actually have collections right inside of here. We have product development. Product development, we have three workspaces that are working together to get the product out there. It's the first letter in the acronym PLN. It's the product. We have items, tasks, and the product itself.

Then we have the change management. The change management collection starts with me over here in problem reports. Deviation waivers. But the real important ones are change orders, and secondarily the change requests. So think of it as a treasure map of what you have inside of your current system.

And the last one, we have quality management apps down here. The quality management usually includes nonconformances. If you go out to the app store, there's actually another one called inspections that allows you to do regular routine inspections and have a pass-fail-- on fail optionally. It makes a nonconformance, which can make a corrective action. And the story continues there. So how we doing on time?

MICHELLE STONE: Talk a little faster.

BRIAN SCHANEN: Faster? OK. Let's talk about collecting or connecting workspaces. Same graphic. When you connect workspaces, if you want one workspace to know about another one, if you want to join these together, you need to go back into the Workspace Manager. There's a little area down here. Under every workspace you have this called Workspace Relationships. You get to say, this workspace knows about that one, and this workspace knows about that-- you have to explicitly state it. This is one of those areas-- Fusion Lifecycle doesn't assume anything. You have to tell it. You have to say, you can look here and here, but not here. You get to tell it

where it can actually look.

So in this case, we're looking at change orders. So the change order workspace, what can it see? It reads like a sentence. When adding to the project management or relationship or manage items, you can look here. Which means if you don't call it out, if you don't list it, it doesn't know about it. But it's yet another way that we have-- if you go back to that treasure map, how are those arrows defined? This is one of the ways that the arrow is defined. It's just letting it know about it.

If you have a tenant, go in and reverse engineer at C. Go under and look under workspace relationships and go, oh, that's why that appears when I go in the dropdown. And likewise, like I said about tabs, not everything. You don't have to think, I should go in here and make sure every workspace can see every workspace. No. Don't necessarily do that. Take a little bit of a long time, and when you go to a dropdown list or you're going in and adding something, you want to make sure that you set that up properly.

Now if you're going to set up workspace relationships, another good best practice is to make sure that you've turned that tab on. Make sure that you've said it can look there. Just make sure you do the rest of your homework on here. Make sure that you turn the permission on to see that relationships tab or the project management, or anything else in there. So again, another little tidbit. Questions I've had before were like, I thought I did everything right. Make sure. This is part of the security model.

MICHELLE STONE: Yeah, permissions is something that comes up often. If you can't see something-- I see some head-nodding because I'm sure we all know this. First thing, check permissions. Do I have the permissions right? Did I assign that user to see that? Did I turn that tab on? Things like that. So go back and check permissions.

BRIAN SCHANEN: It's a good segue.

MICHELLE STONE: Good segue, right?

BRIAN SCHANEN: Good segue. That is awesome. So some best practices, some nuggets. This is set up probably in everybody's tenant, but you don't have to do this. But what we usually suggest is, depending on the role that you're going to create, you have an R or an RW-- read or read write. You can't sometimes tell by the role exactly what it does, so we'd usually put that in out

of the box, out of the cloud. We usually have that R or RW in there, and that just helps you understand what that particular role is about.

I put this up here. I use this a lot. In fact, I've seen this printed out on people's desks. If you are a user and you want to get to a workspace-- is that rendering out OK? If you're a user, you have to be part of a group. Even if you're a group of one, you have to be part of a group. And then you go in and you're part of a role. That role has permissions. And then, and only then, do you get the keys to the workspace.

This is in the handout. It's in the presentation. It's there. Please be sure that you use this. This helps oftentimes in decrypting, demystifying, and reverse engineering access. It helps in debugging why somebody can't see something in particular. We came up with this right after I think we launched it, because it was hard to describe the model. It's very different than Vault. It's different than other systems that we have out there. So the key takeaway is, you must be part of a group in order to get to a given workspace. And again, tabs are turned on by the permissions. That's how you see tabs.

So what? The so what is, if you are, as Michelle said, if you can't see something, you can't access something, there's not something in your dropdown, first start with the security model. Start with the permission. Make sure that you can even do that. It might not be a bug in the software, it just might be a bug in the configuration.

MICHELLE STONE: We have a question in the back.

BRIAN SCHANEN: Yes.

MICHELLE STONE: [INAUDIBLE]

BRIAN SCHANEN: Yes.

AUDIENCE: With the permission, [INAUDIBLE] can you actually change your permission of certain people, like they would have the permissions on certain [INAUDIBLE] only at the beginning but when you reach a certain milestone, [INAUDIBLE] able able to make the changes?

BRIAN SCHANEN: There are ways to do that, yes. There are ways to do that. So first of all, when a record reaches the end-- the end state-- it's considered locked. But along the way, we have a locked

state in the workflow, so you can do that. But having it conditionally as it go-- there are things that we can get clever with scripting to have that. But usually--

AUDIENCE: But that requires some customized features.

BRIAN SCHANEN: Yeah, and that's the gray area between customization and configuration. But I'd say a blanket answer of yes, we can do that.

So another chart that I like to use, just to show the security model from a high level, can you get into the site? You can get into the site. Can you get into the workspace? Get into tabs? So basically we're getting more granular here. Tabs, sections, sections. I think I hid the slide on that, but on the item details, there could be certain sections that people simply don't see. They might be read-only. They might be cloaked and then completely unavailable altogether. You have that option.

And we actually do have record-level access. If you notice all the way down on a record, we have that view-- who owns it. We have a permission called view records owned by others. If you really want to get granular and have some people see some records by not other records, we can do that. So we have from a high level down to a very granular level, we can control and tune what people see.

So let's talk a little bit about process. The work flow-- and what I want to get to-- the nugget in here. Here it is. We have workflow and the workflow is configurable. Most of the workspaces actually inside of Fusion Lifecycle have workflow on them. Some of the things, though, that I think go unnoticed is we have escalation. If you ever had something of worth that sits inside of a state too long, act. Do something on it. First neg. So we have notifications. We can turn on the daily recur-- what is it?

MICHELLE STONE: Reminders.

BRIAN SCHANEN: Yeah, reminders, that's it. The reminder, and that will actually show up as a little reminder. And then we can say, all right, you've been warned, and now this is going to happen. So we have escalations. And escalation is a way of kicking it either forward, kicking it back, or doing something else with it. It's something that your team covers a lot, right?

MICHELLE STONE: Yeah, this is, again, where we're putting together the content for this. This is one of the areas that I see a lot of customers don't know about and aren't enabling, because out of the box or

out of the cloud, when we deliver it, we don't know your business rules, right? We don't know how long you want something to stay in one place. That's your decision to make, so we just want to encourage you guys that aren't using the reminders or the escalations. It's a really rich feature. You may consider turning that on.

BRIAN SCHANEN: Yeah that's a good one. The next one, digital signatures. Now, be a little careful here, but the idea of digital signatures, all this means is, inside of a sign-off or approval-- and it could be on any state-- usually it's towards the end-- you can force somebody to re-authenticate and type in what their password is, their AutoDesk ID, and you can actually force a comment in there. Now that is the first couple of steps to satisfying some of the compliance fees that are out there. So we can have this in there-- and I'm not going to say we won't go as far as saying this makes it fully FDA compliant. That's actually up to the customer. But it's a first step in making sure that the person is who they are as they go and approve or sign off or put their name in, but it will-- it's also something you could put on every single state or every single transition in here, but you probably don't want to do that. I don't know if you have processes that are that buttoned down. But it's something that you'll see there. On that arrow, that transition, is something you can turn on, and do we do that quite a bit?

MICHELLE STONE: We do. Out of the cloud [INAUDIBLE] you got it turned on on the change order workspace. In the final approval we'll put it in there. But again, look at your business needs, see whether you want to have somebody enable that or not.

BRIAN SCHANEN: I think it's also on the change request and change order. If you cancel an ECR or ECO, you have to put in a reason. You just can't cancel and walk away. You got to say why you're doing it. Of course, you could hit the space bar and that actually counts too.

So so what? So what means we can actually map to the process you need. The tenant that we stand up for you is good. It has a lot of these things out of the box, but you can always add onto it and add those other processes. The other big so what is, most of these-- this is the standard tenant that you get-- all of these have workflow on it. Why? It's PLM. It's Product Lifecycle Management. You have to have process and decision. So the idea here is most of these, except for ones that are on the outside and except for some of the helper workspaces, they all have some kind of workflow. Some are very brief. Some, like the corrective action, very long and drawn out. A lot of people, a lot of different personalities or personas in there.

So a quick word. I think we'll go through life cycles. So let's talk a little bit about life cycles. I get

a question a lot like, well, what's the difference between workflow and life cycle? The idea of a workflow is it's what gets you to one turn of a life cycle, moving something from working to production, production to obsolete, or just basically a rev A to B, or 1 to 2. And the idea here is the workflow drives the life cycle. In fact, if you notice on the ECO, there's a little set of gears on there. You only need to turn it on on this workspace. The idea is when you get there, it does the work that you propose. If you said obsolete this, put this one into play, and rev bump this one, that's where that happens.

By the way, this is how revisions are born, so A,B,C or 1,2,3, it's a combination of-- the revisions are going to show up on the item, and BOM ECO is what drives it, again. No nugget on that, but I do think the so what is here. Remember I showed you this before? We have all this workflow, and there's one workspace right there that has life cycle. That one. In fact, it seems like all of these workspaces exist just to go and tell that item and BOM what to do. Or invert that if you see a revision in the items and bill of material, you can trace it and audit it back to what happened. In the workflow, the workflow has the decision, who did the workflow. Fusion Lifecycle knows that.

So again, good slide. If you're going to use this internally, you're free to have the slide even with the nice little bill that goes on with it. And then this next slide helps to explain it. I use this to explain to sales people. Any sales people in here? First of all, it's colorful and it's moving, but I use this to explain it to sales. Like workflow and life cycle, I don't know. Well, basically your workflow process goes round and round and round, and what does that result in? One. One index. Use a little Geneva gear. That's from Inventor 4 or something like that. That's old school. But that's the idea, and I use this. So if you're trying to explain workflow and life cycle to somebody, again, you have this. Explains exactly what's going On.

So what? So use it for talking to sales people.

All right, spawning. Not as dirty as it sounds. Basically spawning is what-- that's what carries a record and makes another record and makes another record. Spawning we do through scripting. And we will have classes on scripting on Thursday. Actually, we'll intro a little bit tomorrow morning at 8:00, and then we'll have classes on Thursday on scripting. And that's actually going to be taught by a customer, which is the best part.

But basically, it's tied to workflow. The spawning that we have is tied, and what that so what is, I showed this, I think, yeah, in the end the last class. So if you come in with a problem report,

you fill that out, you get it to the end of the workflow, it creates an ECR, a change request. It actually carries some of the data forward so you don't have to fill it out on the change request, and it goes to a change order option only at the end. And what does that do? It life cycles. It rev bumps in the life cycle and item BOM.

Likewise, a quality issue, a nonconformance-- could be an inspection, could be anything that went bad, escalate it up, goes to a kappa, kind of a big deal. And one of the outputs for that is a change request to a change order to items and BOMs. Likewise, it could be something as simple as returned goods or returned merchandise. That could actually come out of-- I have sales force on there, but it could come from anywhere. Again it's kappa, makes a change request, change order. It's spawning. Spawning scripts-- that's what's behind all of this. That's what's actually carrying this forward. So again, this is something that you have inside of your tenant. It's actually on. You can go and explore all of that.

We have seven minutes. I do have a really cool thing to show next. I do a lot of importing. I like it. I don't know why. I just like to go and just shuffle data in. We have a new feature inside of Fusion Lifecycle and it's cloning. Anybody do lots of imports day in and day out? The idea here is to save a pre-mapping or save the mapping of a configuration. It's called import cloning. And for this, I'm going to have-- let's go and make sure I'm still logged in. The idea here is, if you have an import, you can do a-- notice I didn't actually run this one, so it's not completely done. I did an import. I set this up, and I have my mapping.

So PN means number, title, title, description detail. You might have this. The data that you have, depends if it's coming out of another system. And if you have just tons of Excel spreadsheets and you can't change the name, you can set up and preset the mapping. Note that there's nothing actually imported under here, but what this allows you to do is set up a template, if you will, for importing. And I actually have one for flat BOM, for level BOM. And what you do here, so if I want to go-- I can go over here and clone. And when you clone you can choose a file, so I've got a couple of different files here.

What I like to do sometimes is depending on the data, if I'm working with a reseller or a customer and they have a lot of data, let's chop this up into bit-sized chunks. So you can actually take, say, the 100 series or the first hundreds or thousands or ten thousands. As I showed before, I did about 40,000 at a time. And you can actually set that up and clone. What this means is, if it's based off of a prior clone, this comes in and it's already mapped. All ready to go. All we have to do is actually just go in and run it. All of this pre-mapped, so you basically

do like a duplicate dummy clone and just let that be, and now you can just lather, rinse, repeat, over and over and over.

This is a new feature. It came directly from customers. Those kind of customers that they do a lot of imports all day, basically washing over it, great new feature. If you're not using this one and you're an admin or even-- this has worked for power users start to use this. It's a huge time saver not having to go and remap everything.

Any questions on-- actually we'll take questions at the end. Anybody using that one yet? Oh yes, of course Joe, I'm sure. But anyway, that's new. When I saw that, I'm like, finally, because I think I asked for that in 2012, but we won't talk about that. Oh, I'm--

MICHELLE STONE: Well, that's a good indication for you guys. If you do put your ideas on the ideas community, they do come true.

BRIAN SCHANEN: So wishes and dreams do come true?

MICHELLE STONE: They do come true. So again, I encourage you. I know a lot of you guys. When I work with you one on one, I let you know about the forums and the ideas. So again, put it out there if you have things that make the experience better. Let us know.

BRIAN SCHANEN: All right, so this next section-- you know what? I think I'm actually-- I'm OK that we're not going to cover everything here, because there's a class right after this on one of my favorite topics, and it's reporting. All the class is is a whole hour of reporting. So I'm not going to do-- I think Tyler you're going to do some of this anyway, but I'm just going to give a teaser for it.

I wanted to show some runtime filtering. We have search and we have report, and we have this nice gray area, a little tidbit that I like to throw out, and it's what's known as runtime, so you can actually run a report. And think of it as like a saved search query. You put in something, you ask for a name or a customer or a date or anything like that, and it will run the report based off of that that you want to run it on, and Tyler you're going to show this one? Coming up? All right, so I won't show. I have a nice little link to it.

Other little tidbits-- and this is something-- I think it was two years before I noticed this one. So when you run an HTML report, that little magnifying glass on there takes you right to the record. I've been trying to show everybody. Probably everyone knows that, but if you have a report and you have a little magnifying glass, it will actually take you in a new tab to that record inside of Fusion Lifecycle. That's great. Sometimes it's like, oh, that's nice. But now you can

actually go to the record that you're looking for.

And then the last one, along with-- I think another groundbreaking feature that we have now is the ability to move the ownership of a report to somebody else. This is nice if somebody takes a different job or gets hit by the proverbial bus or something like that. So if they were the owner of a report, an admin could say now you own it. And the reason this is nice is you might need to go in and modify reports that you run as you add fields, as you add other data. You might want to modify them. So if they were under somebody before, it used to be that you had to just go in and find out what that name and password was and then-- so again.

With two minutes left, I want to give a really quick commercial for what's coming up next. After this, we have a report. Mr. Tyler Beck is in the back of the room. We have a class on reporting. That's something that's definitely worth seeing. That's called What Gets Measured Gets Managed. Tomorrow morning we have Fusion Lifecycle Admin 101, where we're going to deep-dive on some of the topics that I showed here. But it's really just an administrative, pop the hood, here's how things are done, and we're going to show you a little bit more demo. This was meant to be high level. And then on Thursday-- and I think we have a new name for that class-- so on Thursday, 8:00 AM, same time. So this is basically just for administrators.

But we also have another track called case studies. Actually we didn't do any of these yet, so Wednesday, Thursday we have some other classes. If you're interested in more workflow and you want to park on workflow, this last one down here, Smart Workflow, it's all going to be about scripting and what you can do to expand process, workflow and decisions, and decision trees and matrices inside of Fusion Lifecycle. And then we have-- we've done one of these already this morning where we have the future of Fusion Lifecycle.

We are at this turning point. We have a modern UI. We have cloud PDM, which you may have heard about it. So you can see cloud PDM tomorrow in a lecture, and then right after it, go and get your hands on it with a hands-on lab, and there are, last time I looked, still seats open. We're going to take you through how to manage Inventor and SolidWorks assemblies with Fusion Lifecycle cloud PDM, making revisions, rev bumping. So if you want to see how that's done, come and do this.

And then we also have a free trial. But learn how it's done, then get your hands on the free trial. It's pretty cool. So the free trial, if you just actually go to Fusion Lifecycle, dot com, dot net? OK, so you can go out there. It's in the upper right hand corner. You can't miss it. I

encourage you, get your hands on this. And then if you are a customer, if you're a Fusion Lifecycle customer, get on the super secret club called Beta. We're basically going to be showing what's coming up next. Away from the normal support forum, there's the Beta, and you can see what's coming up, what's next. We want to hear from you. The way the product currently is is because of feedback and everything from Beta, so I encourage anybody who is a customer to sign up for that.

And that's-- am I at zero?

MICHELLE STONE: On time.

BRIAN SCHANEN: All right, thank you.