



[Sebastian Steinhauer, VP UX Engineering] Good morning UI5con! I hope you all had a phenomenal first day at UI5con yesterday. I certainly had a blast meeting so many people from my Twitter stream in person! And there were so many exciting sessions – today you are in for a real treat – 7 exciting talks and 2 workshops.





When we were invited to open the second day of UI5con our first idea was to dedicate a big part of the presentation to the SAP Fiori elements value proposition – I am sure you recall: [SLIDE 2] Developer Productivity, UX Consistency, and Enterprise Readiness, and spend the rest of the time on the flexible programming model, because it certainly is one of Katja's favorite topics to talk about.

[Katja Zoch, VP UX Engineering] It certainly is – but first things first. I am also thrilled to see you here at UI5con. It is so great to see you all back online and some brave souls even here in the Audimax in ROT.



Now of course I wanted to talk about the FPM (flexible programming model) [SLIDE 3] because it demos so well and makes so much sense to talk about. But yesterday Tobias and Ashley already gave a pretty awesome presentation on how the FPM can be used to build SAP Fiori elements applications with SAP Fiori tools and later today Holger (and Marius) will be presenting another exciting session on how UNIORG is relying on building blocks to build production apps. So, there will be no FPM explorer in this session – unfortunately.



And when it comes to the value proposition – I think you all know that with SAP Fiori elements you can reduce the total cost of ownership of SAP Fiori apps.

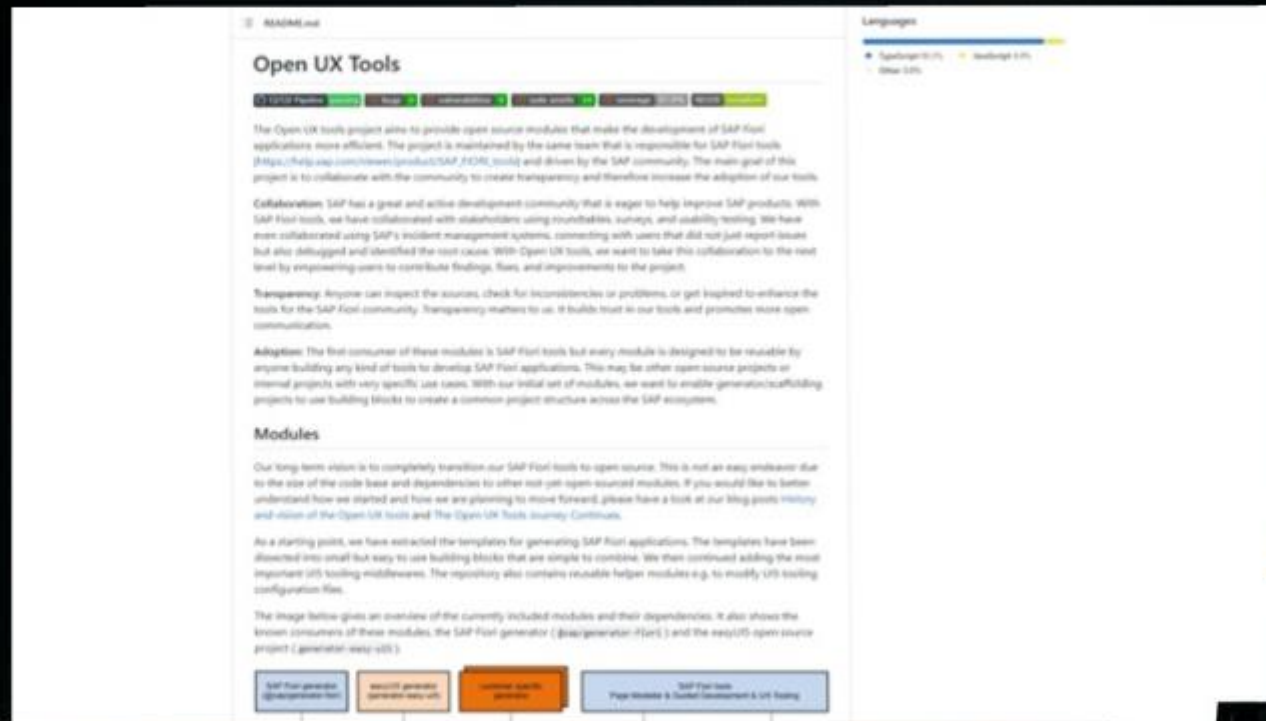
So as you see – we had to shift gears - but you have some good news to talk about today – right? I remember you on this very stage a year ago talking about the importance of open source and how we are pushing SAP Fiori tools to be an open source solution... how are we doing on this?

Oh yes! Let me show you what we have.

In our open UX tools repo you can see the modules we have already released and a number of modules that are at the foundation of SAP Fiori tools – you can see the project templates here – and we already received contributions from the community. Thank you Volker and Lukas. But you are all invited to contribute to the effort.

In yesterday's session, Ashley and Tobias actually used the open source generator logic. They combined it with the community-owned easyUI5 generator. I was impressed to see it.

We also have a well known company contributor but due to company policy they are not allowed to commit directly to the open source repo – so if for whatever reason you don't feel comfortable to contribute publicly feel free to reach out and we can make it work. But, where are we taking the open source topic from here?



The screenshot shows the README for 'Open UX Tools'. At the top, it says 'README.md'. Below that is the title 'Open UX Tools'. There is a progress bar with several colored segments. The text describes the project's goals, collaboration efforts, transparency, and adoption. It also lists modules and provides a diagram of the project structure.

Open UX Tools

The Open UX tools project aims to provide open source modules that make the development of SAP Fiori applications more efficient. The project is maintained by the same team that is responsible for SAP Fiori tools (https://help.sap.com/viewer/product/SAP_FIORI_tools) and driven by the SAP community. The main goal of this project is to collaborate with the community to create transparency and therefore increase the adoption of our tools.

Collaboration: SAP has a great and active development community that is eager to help improve SAP products. With SAP Fiori tools, we have collaborated with stakeholders using roundtables, surveys, and usability testing. We have even collaborated using SAP's incident management systems, connecting with users that did not just report issues but also debugged and identified the root cause. With Open UX tools, we want to take this collaboration to the next level by empowering users to contribute findings, fixes, and improvements to the project.

Transparency: Anyone can inspect the sources, check for inconsistencies or problems, or get inspired to enhance the tools for the SAP Fiori community. Transparency matters to us: it builds trust in our tools and promotes more open communication.

Adoption: The first consumer of these modules is SAP Fiori tools but every module is designed to be reusable by anyone building any kind of tools to develop SAP Fiori applications. This may be other open source projects or internal projects with very specific use cases. With our initial set of modules, we want to enable generator/ scaffolding projects to use building blocks to create a common project structure across the SAP ecosystem.

Modules

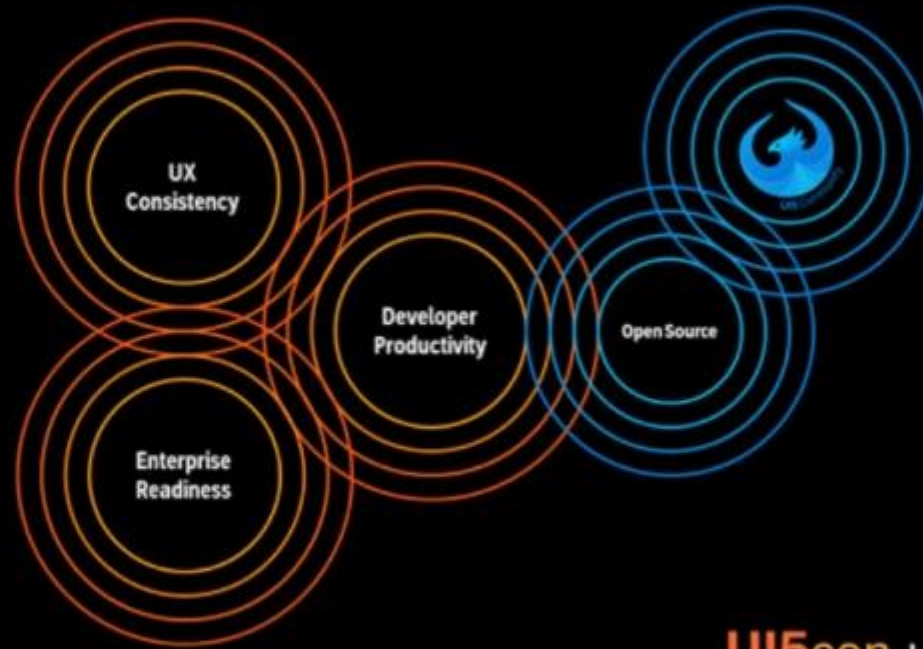
Our long-term vision is to completely transition our SAP Fiori tools to open source. This is not an easy endeavor due to the size of the code base and dependencies to other not-yet-open-sourced modules. If you would like to better understand how we started and how we are planning to move forward, please have a look at our [blog posts history](#) and [vision](#) of the Open UX tools and [The Open UX Tools Journey Continues](#).

As a starting point, we have extracted the templates for generating SAP Fiori applications. The templates have been dissected into small but easy to use building blocks that are simple to combine. We then continued adding the most important UI5 tooling middlewares. The repository also contains reusable helper modules e.g. to modify UI5 tooling configuration files.

The image below gives an overview of the currently included modules and their dependencies. It also shows the known consumers of these modules: the SAP Fiori generator (`@sap/generator-fiori`) and the `easyUI5` open source project (`generator-easy-ui5`).

Project Structure Diagram:

- SAP Fiori generator** (`@sap/generator-fiori`)
- easyUI5 generator** (`generator-easy-ui5`)
- Common reusable generators**
- SAP Fiori tools** (Page Templates & SAPUI5 Development & UI5 Tooling)



As you can see, there is a lot of detail in the readme file on github – but in short we are holding the course – we will be making more and more of SAP Fiori tools open source over the coming weeks and months – and we are excited that we just released the first extension as an open source project. It is only the first full extension published –there will be more to come. And we are releasing our own tools publicly too – like our OData mock server. It was launched as a fallback for a teched keynote – and has since taken a core role in our internal SAP Fiori elements test-runs.

Now – of course an open source project can only be as successful as the community behind it – so we would love to see the UI5 community actively contribute to make SAP Fiori tools better and truly community owned. Because these are the tools we build to make access to UI5 and SAP Fiori elements easier for everyone in the community.



Oh – that is a great keyword – ease of use. One of the big areas of investment in the last year for us was our investment in tools that lower the burden of entry to our tools and frameworks. We call them low-code tools – but realistically they help you no matter how much code your project contains.
Let me set this up.

Our Demo scenario is straight forward – its 2022 – and yet again everyone is concerned about bottom line performance. So we want to take an exiting app – in this case from the travel management tutorial and tweak it so can identify supplier – in this case travel agencies - we might want to negotiate discounts with.

This is a CAP backend and this year I have decided to skip the app generation in VSC – I think people have seen me answer those questions to get an SAP Fiori elements app enough over the last few years. So, I used the generator to create the app upfront and of course the app has all the SAP Fiori elements characteristics you would expect.

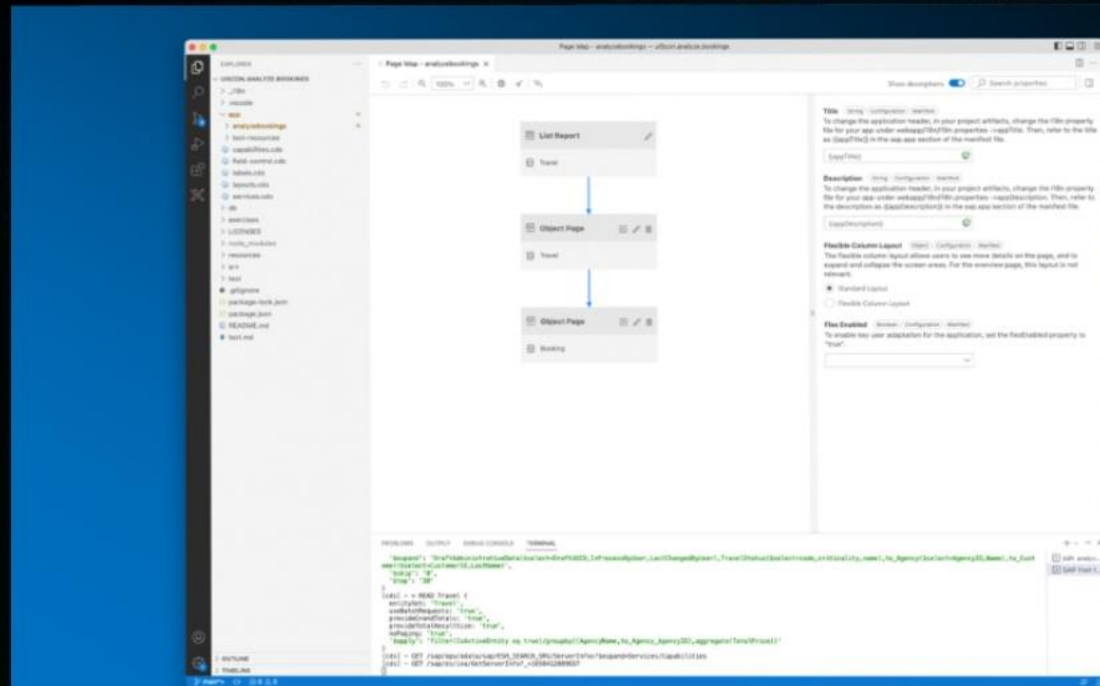
We have a list report and you can navigate straight to the object page. Here you see all the details of the trip. But for today let's focus on the list report. As you can see it doesn't show any information on the travel agency which made the arrangement.

So I can switch straight into my VSCode with SAP Fiori tools installed and from here I can open the page map. I am interested in the list report and I can select my table to add a contact column for the agency.

Right now you can see cds-watch going slightly crazy in the terminal – a clear sign that I did some changes that affect the app. So let's take a look – if I flip over to my git-perspective I can see the changes... and in this case the new column has been added.

If I switch over to the app you can see that the column is already there.

Sweet – that was fast... but I bet you will need to serious annotation know-how to make it show contact details.



It is super simple- all I need to do is select my contact column and then define how to populate the fields. I can select which phone number and which email address to show and just like that..cds-watch is doing its things again..

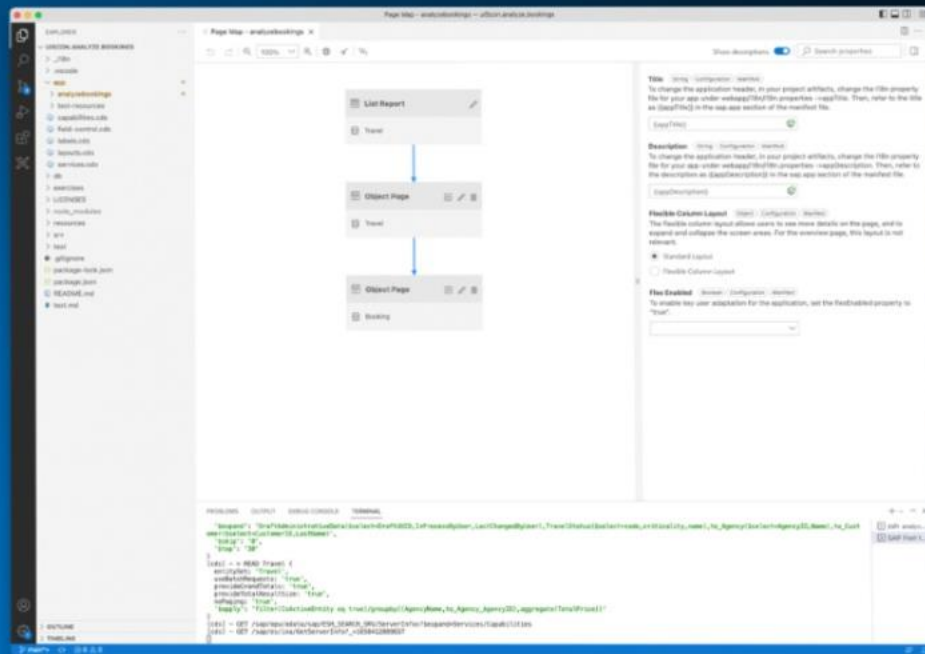
And here in the git-perspective we can see the changes that are applied if we are interested. But more importantly in the app we now have a beautiful contact card that pops up for the agent.

That pretty good – but this is a really long list of agencies to call.. how can I break this down? In SAP Fiori elements for OData V2, I would have used this opportunity to point out that you probably should have created an Analytical List Page instead of a simple list report.

Yeah – but this is an OData V4 service and in SAP Fiori elements for OData V4, I can easily add a chart to a List report – let me show you how simple this is. Again I can just configure it right here in my page-map and I can simply add the chart. I just select the entries I care about and you can see cds-watch again doing its magic.

In case you are interested these are the manifest changes and annotations that are actually written to the service.

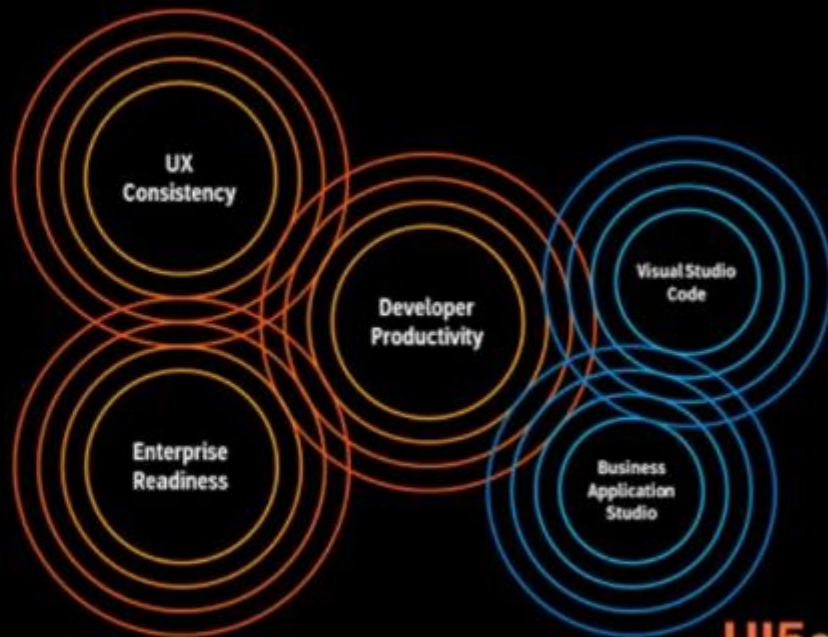
By default a ListReport shows the default presentation variant and with this change, the ListReport page visualizes both, the chart annotation as well as the presentation variant that in our case points to the LineItem annotation.





With all the investment in SAP Fiori tools, we feel like we have made enormous progress to shifting away from the classic WebIDE. Earlier this year, the default UI technology for S/4HANA development changed from SAP Fiori elements for OData V2 to SAP Fiori elements for OData V4. And later this summer, the SAP S/4HANA development environment will change to Business Application Studio. Just last month, we saw for the very first time the number of S/4HANA developers in SAP Business Application Studio exceed the number of WebIDE users.

Now of course this doesn't mean that we are dropping support for SAP Fiori elements for OData V2 – it is and will continue to be at the core of 1000s of productively used apps – so there is no need to migrate your existing apps. For new apps I would recommend you try the OData V4 floorplans whenever you can.



Now when it comes to BAS – here you need to take away that SAP stopped selling new WebIDE licenses, and focused on releasing new innovations to Business Application Studio! So, as SAP, we highly recommend our WebIDE customers to plan the migration to SAP Business Application Studio. Of course, SAP Fiori tools will remain available for use in VSCode and SAP Business Application Studio.

Katja – your first demo was in VSCode – do you want to do the next one in Business Application Studio?

Not only will I use SAP Business Application Studio, but I will also use a “Steampunk” backend system.

For those of you who haven’t kept up to date with SAP product nicknames during the pandemic – “Steampunk” is our ABAP on SAP Business Technology Platform.

Sebastian – you watched the keynote remotely these last few years, so you should be able to run the generator too... right?

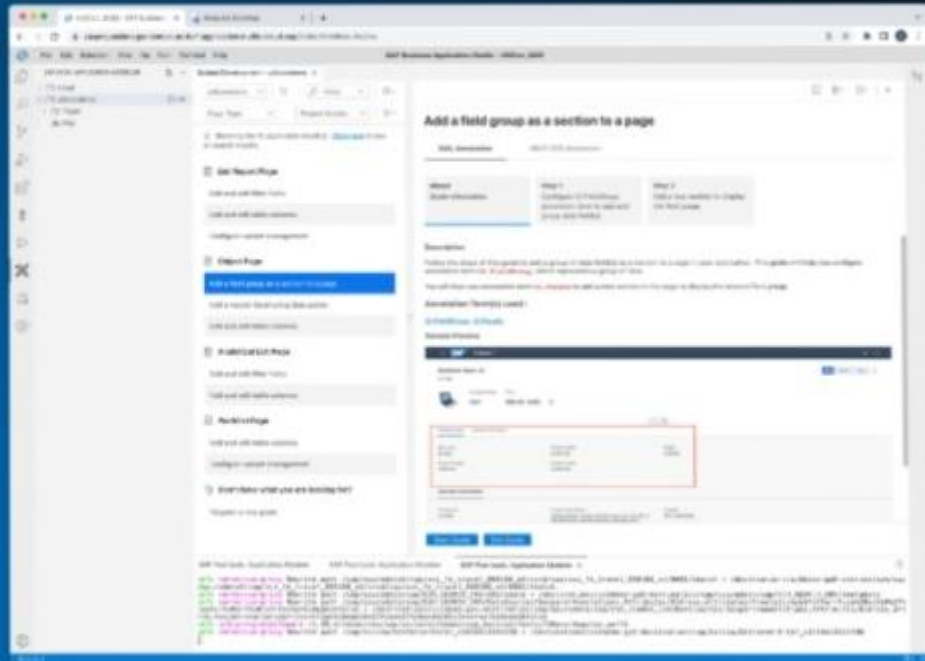
I am afraid of touching a MAC – I might like it.

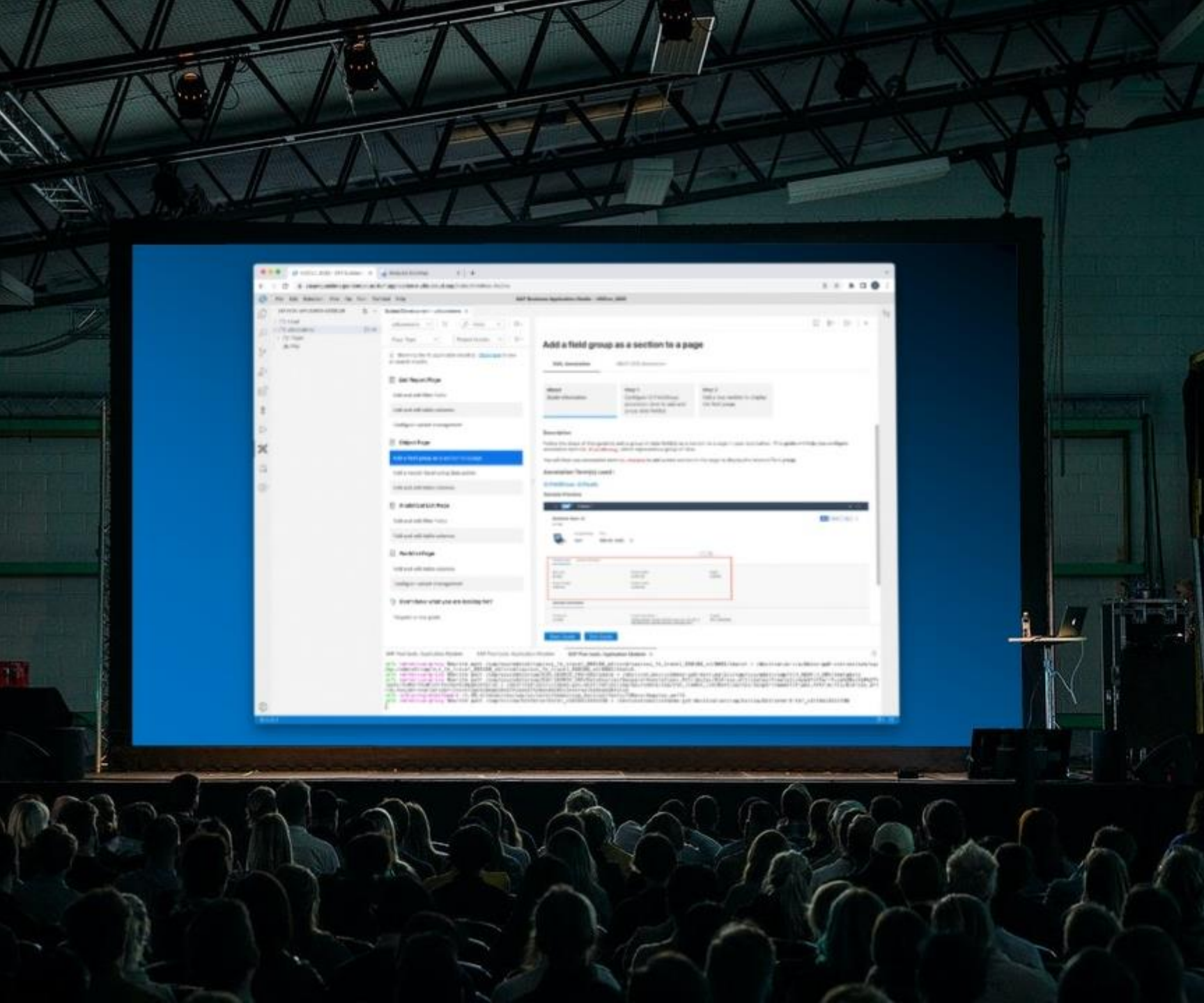
Alright, here we have SAP Business Application Studio, so let me generate an app ... I am generating an SAP Fiori App and in SAP Business Application Studio I can rely on preconfigured cloud foundry destinations. In this case I use the one names ui5con, OH..great I think I broke it..

Not an issue – just trigger guided answers and follow the prompts like in an adventure game. It allows to access the SAP support guided answers you are all familiar with in VSCode or SAP Business Application Studio. And it has taken Sebastian here.

After some back and forth, it has guided me to the health check – and as you can clearly see from the red icons something is not right. Apparently, there is something wrong with the CF connection ... and the entire fix is described right here on the screen. So I can pop over to by CF/BTP cockpit, and just add the missing parameter to the connection and let me try again.

We want a Fiori app, based on a travel service, with travels as the main entry and a navigation path to bookings. We need to name our App “Analyze Bookings” and I hit generate...





Now that Sebastian has created the app – let us show you what these new Guides can actually do. The scenario is pretty simple. Our fictitious company only wants employees to travel to customer meetings – so they are asked to provide information about the customer they are visiting – but that information is not yet shown in the app. But before we do this lets active auto-loading of data to the app.

I can open guided development and select the Guide Enable table to auto load data – I can quickly turn the property to enabled. And hit insert snippet. And the code changes are applied automatically. But that is a simple guide.

I can also add a field group to the screen – to do that I can launch this guide ... and select the fields I am interested in.

Let me hit insert snippet and off we go.

I promised you that we are using a Steampunk system for this demo. Now we just created local annotations, if you prefer to keep your annotations with your service, Guided Development will also provide you snippets you can re-use in ABAP. However, here we are not able to offer out of the box apply capabilities.

Now that we have talked about creating apps in SBAS or VSCode, we have talked about the different backends, and how to resolve issues. But we have not talked about how we surface content to the actual end-user

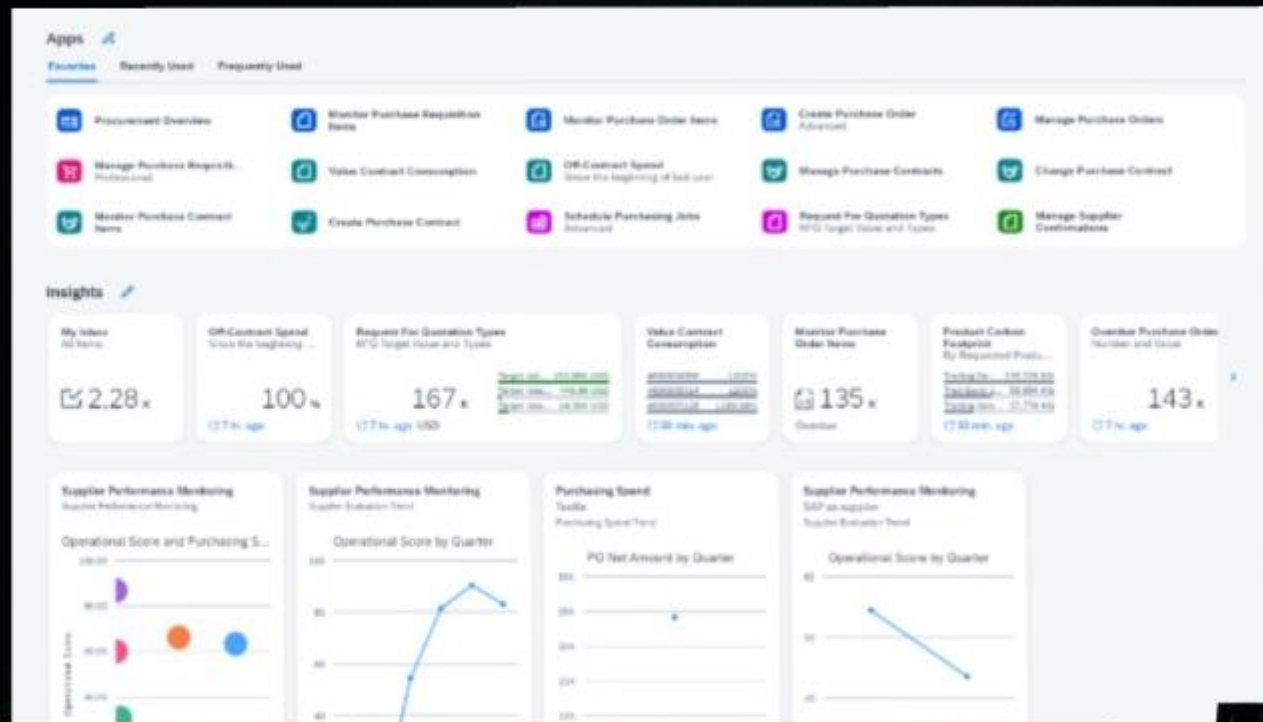
Oh yes – there are changes happening to the Fiori launchpad in S/4HANA Cloud. In S/4HANA Cloud 2208, we will include a beautiful new *My Home* tab. Here we surface app shortcuts, cards, pages and space and we have an insights section. The insights section re-uses the card content that was previously defined for the Overview Pages.

In this case, we are dynamically generating UI5 integration cards which we render in the insight section. To do this we are using UI5 integration cards directly the homepage.

I see you smile – so I know there is more to come... what else do you have for us today?

On all SAP Fiori elements apps, we will be supporting “share in MS Teams” – so you can easily send a deep link to any application page straight to MS Teams.

This is awesome – I love how our customers and everyone in the UI5 community can get to benefit from the investments that happened in the past on the OVP to populate the new *My Home*. As for the MS Teams integration – there we are still looking for co-innovation partners. Because we have so many more ideas – stay tuned for more on that in the future.





In general, this is what SAP Fiori elements stands for – developer productivity, a consistent UX and enterprise features being supported out of the box.

Have great day here at UI5con!