The Open Source Way
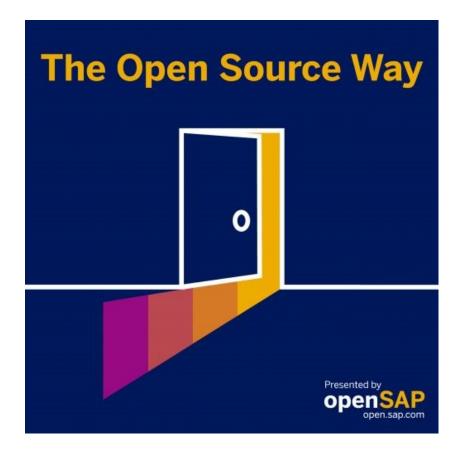
Episode 19: Mercedes-Benz FOSS – Open Source in the Automotive Industry

Transcript

Karsten: Welcome to the Open Source Way. This is our podcast series, SAP's podcast series about the difference that open source can be, and in each episode, we will talk with experts about open source and about why they do it the open-source way. I'm your host Karsten Hohage, and in this episode, I'm going to talk to Wolfgang Gehring and Christian Wege, and, unfortunately, not Constantin Hoferer, about free and open source software at Mercedes-Benz. Welcome and nice to have you here, Wolfgang and Christian.

Wolfgang: Hi, thanks for having us. Hi, Karsten.

Christian: Thanks for having us, yeah. It is a pleasure to be here with you today.

Karsten: Great. Hi, Wolfgang, I, Christian. About you, a little bit that you told me: inspired by the Inner Source movement about, I think five years ago, you, Dr. Wolfgang Gehring, turned into an ambassador for Inner Source and open source, and you've been spreading ideas within Mercedes-Benz and its I.T. subsidiary, the, I think it's still called Daimler TSS, we have to be a little careful here about naming, as it has rather recently changed from Mercedes. You're a software engineer by trade, and the goal is to enable Mercedes-Benz to become a true open source company. Christian has a background in informatics, leading the IT team of the Mercedes-Benz open source, the FOSS Center of Competence it is called. Before this, he worked on FOSS topics at Mercedes-Benz for, I think, over 10 years and has been one of the initiators to propose open source as a strategic initiative. He also strives to make the voice of the developer heard in the creation of open source governance processes and to establish generally open source within Mercedes-Benz. Last but not least, we should mention Constantin Hofer who helped prepare this episode but cannot be here today as his voice is currently on vacation. He represents the legal aspect, so I hope we can stay fully compliant without him, but I'm pretty sure about that. And he's also part of the Mercedes-Benz Centre of Competence for open source software. Let's maybe turn to the thing I just briefly mentioned: You used to be Daimler, you're now Mercedes-Benz again. Is that right?

Christian: That's correct, yes, we used to be Daimler AG, now Mercedes-Benz Group, so that's the company's new name.

Karsten: Okay, so I'm fine if I say Mercedes-Benz, or can I cut it short to Mercedes, or how do we like that?

Christian: Mercedes-Benz is nice; the brand of all of the cars that we that we sell. So, …

Wolfgang: Yeah, I should add that Daimler TSS will be renamed April 1st to Mercedes-Benz Tech Innovation. So, I guess at the time of recording, we're still Daimler TSS, but by the time it airs we are going to be Mercedes-Benz Tech Innovation.

Karsten: Okay. You're serious about renaming that, although it's on April 1st, right?

Wolfgang: Yes.

Karsten: Good one. No, I was saying that because the date of the Mercedes-Benz renaming is also notable because that was not January 1st, it was not February 1st, but instead it was January 31st. And that has a meaning. Can you share that again?

Christian: Yeah. A while ago, that is when the patent Carl Benz was granted, which is one of the cornerstones of our success here as a car maker. And so, we were pretty proud that we could choose that date that really fit pretty nicely. And so that's the reason why we chose that date.

Karsten: Okay, great, so that is a date well known in company history, or at least it has another meaning in company history as well. Okay, cool. Let's get to the open source topic. Mercedes-Benz and SAP both, and also quite a few other companies, are part of the Catena-X project. We did talk about that in an episode a couple of months ago, no, actually last month. But maybe as a recap for our listeners, what is it exactly that you do that we all do in Catena-X?

Christian: Well, Catena-X is an alliance of a couple of companies that work together in the automotive industry, and the goal is here that we build an extensible ecosystem for automotive manufacturers and suppliers, dealers and so on. And the purpose of that whole activity is to form an association so that you have uniform standards for information and data sharing throughout the entire automotive value chain. And to do that, it is a network and the technology for these challenges to do that. And we commonly believe that innovation emerges from working together from such collaborative efforts. And the collaboration is not just big companies, also small and medium sized companies are part of that, as well as the big ones as we are. Well, we are working together in that network. And so, we also connect to other technologies for data infrastructure or data exchange, like Gaia-X. And technology industry outfitters should also be connected to that. And this is one place where Mercedes and SAP come together. And so, it's nice to have that conversation here on open source.

Karsten: All right, I think if one were to put it simply, Gaia-X is the larger initiative of the European Union, right, to standardize certain things and be a little less dependent on the trans-Atlantic relationship in IT and cloud space concerns, right? And Catena-X is basically the offspring that is a more practical approach, mostly focused on the automotive industry. And I think in the last episode we also mentioned or actually focused very much on the Fraunhofer Institute that is also involved in all these approaches, at least in in the back end technologies. There are many players involved, as you've already said. So how does that work in the end? Maybe, Wolfgang.

Wolfgang: Yeah, so traditionally, collaborating on such things as standards between many different companies might have been difficult for various reasons. But doing it the open source way is different because open source ensures transparency in terms of decision taking and also transparency in terms of code. So that way, it might be a big industrial project with big stakeholders, but at the same time, it is a project which is open for contributors of the open source world. So really, all interested players worldwide, and as outlined by Chris, the common belief is that innovation emerges from collaboration. All right. Probably something that is very familiar to all open source enthusiasts.

Karsten: Okay, and basically, the open source world enables that one doesn't need mutual point to point agreements, but that certain things are already defined by the way open source simply works right?

Wolfgang: Yep, exactly.

Karsten: Okay, cool. So, which other contributors are we talking about here? Just some examples.

Wolfgang: Yeah, so the members of Catena-X are not only OEMs like Mercedes-Benz, BMW, Volkswagen, but also other big companies like Bosch, ZF, Siemens and IT providers like yourself, SAP, right? Microsoft and many others, Fraunhofer, you mentioned, and lots of others, actually.

Karsten: And then all those, including us, we develop together in the open source domain. I may have touched on it before, but what do you see as the main advantages of such a collaboration model?

Christian: Well, we see that as a collaboration model where partners can work together in the open, even if they compete in the same market, but for the stuff that you work together, those are commodities. And so, others can have open access to those developed technologies and can even contribute to those innovations. And so, within the networks, every partner can still have its own differentiating features while working together on the stuff that is common. There are other examples in the IT industry, and we within Catena-X want to apply that to the automotive industry. So, the general idea is that everything that's really a commodity is done as open source to make the best use of the scarce resources. And everyone then can add the differentiating features with the resources that are free, and not everyone needs to develop on the commodity stuff.

Karsten: Okay, but then again, these are not brand new open source approaches. We are in that a couple of decades now, but I still do remember how uncomfortable certain people about that at SAP used to be still like 10 15 years ago. In this context: What do you do at Mercedes-Benz to ensure that all your employees are comfortable in that open source world? Or in other words, how do you enable everybody that they can become and stay active in open source?

Wolfgang: Yeah. Maybe I'll take this one. And you were absolutely right Karsten, at first it feels uncomfortable because it is a huge cultural change, right? We included FOSS into our global Mercedes-Benz IT strategy years ago, actually. But the challenge still is how do you go from a "We predominantly develop our own software" approach, which we have done for so many years, to now, "please everybody become active in FOSS!" And so, as a catalyst for this, we have created the Mercedes-Benz FOSS manifesto. Yes, a bit like the Agile Manifesto, if you will, just for open source. So, what it is a set of guidelines and core values, which doesn't only allow our employees to be active in open source and openly communicate this, but actually sends them on a mission to do exactly that. And this FOSS manifesto is now a key pillar in all our FOSS endeavors and hopefully really, really helps to do the cultural change and the transformation to that regard.

Karsten: All right, sounds like one of these very central key documents like, I don't know, the Amazon Web Services manifesto from, I believe it was 2007 or something where Jeff Bezos himself defined how web services are handled at Amazon. Is that something one can take a look at or?

Wolfgang: Yes, sure, I mean, we hope it will reach that status, right? That's sort of the intention and of course, you can look at it because it is open source, right? So yeah, the easiest way is to go to our open source landing page, which is still pretty new, I should add. So don't expect too much content there yet. We are working on it. Yeah. So go to opensource.mercedes-benz.com or google it, of course. And you can find our FOSS manifesto there and you can download it, too. It's under a creative commons zero license, so if you like it, you can use it for your own purposes. Sort of use it as a blueprint. Change it so it fits your needs or whatever you want. I hope you like it and shoot me an email if you have any comments or questions.

Karsten: Okay, cool. And by the way, on the at least on the SAP pages where this podcast is published, we of course also maintain these kinds of links either directly to your manifesto or at least most definitely to the Mercedes-Benz open source site that you just mentioned.

Wolfgang: Oh, yeah. Cool, thanks.

Karsten: Chris, do you have anything to add from your perspective to the manifesto?

Christian: Yes, yes, to the manifesto. Well, it's not the manifesto itself, but it's not just that we ask people to do that. We also want to enable our employees to do that and actively participate in open source. And to that end, we have implemented open source driver's license trainings. It sounds strange, maybe for the open source world, for an automotive company, a driver's license is something very natural. That's how we call them. And it's a series of five online trainings that the colleagues have to complete before they start to work with open source, depending on what they do. So, this ranges from simple use when you build in some open source components into your product or from contributing bugfixes all the way to creating their own projects. And for those different use cases, we have created those trainings.

Karsten: And then you have like virtual checkpoints like do I have to show my driver's license before I can log on to GitHub or something? It sounds like an actual permit.

Wolfgang: So, it is kind of like in the real world, yeah, no license, no highway. It's not checked when you log on to GitHub, it's not like that, but you have to have done the trainings. So, you get a driver's license as a certificate at the end of each training. And that pretty much reflects that you went through the rules set for the FOSS and Inner Source activities at Mercedes-Benz, right? And then depending on how advanced you want to be in open source, you can take the basic training and the next one and the next one. Also, kind of like in real life, you know, you need a driver's license for a passenger vehicle and another one for driving a truck and so forth. If you turn your actual driver's license around it reflects what you can do.

Karsten: Let's not talk about actual driver's licenses, because then we get into, "Well, did you originally have the rose colored one or the gray colored one or directly the credit card one?" because they keep changing around. Speaking of that, from any developers, especially in the open source field, the word you just use their rules may sound a bit dusty at times; is that more or less a compliance training to make sure that people know how to behave out there or how can we see that?

Wolfgang: Well, of course, we want to make sure that our developers know what to consider when facing a FOSS license, for example, but it's definitely not only rules. Our trainings also focus a lot on the cultural aspects of open source and the whole mindset around it. I think it's a pretty good mix, actually.

Christian: Well, we are confident that we really found the sweet spot of being interesting, interactive, and comprehensive, so not just, you know, just governance and rules, but also how that really works. And something that gives us confidence that we really found the right combination is that we were awarded E-Learning Award in 2021 in the category of storytelling, which we are pretty proud of. And this was one of the major successes that we could then show those trainings and get this award.

Karsten: Congratulations!

Wolfgang: Thanks. And for another fun part in further education, we also have established our so-called FOSS Fridays. So, the FOSS Fridays are an internal conference series taking place about once a month, and there we host talks and discussions about all topics open source. And we have internal speakers, and we have external guest speakers, too. So, just in February, SAP's own Sebastian Wolf was one of our esteemed guests and gave a great talk about SAP's open source journey and some really nice, enlightening insights from the development of the Corona-Warn-App. The title of his talk was "Here be Dragons!" It was really interesting. It's so cool and important to have external perspective too, you know, from other FOSS enthusiasts.

Karsten: That's, of course, the same reason why we love that you are here in our podcast today. And Sebastian – I should have mentioned in the beginning –was also part in, well, actually getting us together and preparing for this here. And our regular listeners may know him from several podcasts before because he's kind of very involved in many of SAP open source activities and as part of our open source program office. So, at Mercedes-Benz, everybody learns about open source by doing the driver's license and the FOSS Fridays. Or is there even more that you offer?

Christian: Yeah, thanks, thanks for asking. Well, while those are essential elements, we also strengthen our Inner Source activities, which is the application of open source tools and collaboration methods in the internal before we approach a broader

community. And so that way we announce a collaboration and reuse within the company, at the same time, and get ready for real open source in the external world. We strive to achieve a high level of developer happiness and quality standards in the products and also compliance wise. We feel that Inner Source is a very powerful tool to achieve both things. And we use it to develop and practice contributions to be ready to the open before we do that. One thing that we have where the developers can actually then check themselves if they are ready for the next steps is that we ask them to do self-assessments. So, before they go over the next steps in Inner Source or open source they go with the self-assessments where they need to answer some questions for themselves, and we don't want yet another spreadsheet. We do that inside GitHub as issues. So, we want to be inside the repositories, inside the developer environments where developers work. So, that way we hope that we are getting friction there so that they can focus on the work that they want to do, which is coding and creating great products while at the same time keeping up the high standards.

Karsten: Okay, so no roadblocks in front of GitHub, where somebody asks, "Show me your license and your papers", but rather self-assessment. Sounds very fitting to the topic. Great. One more question. Every once in a while, there are incidents that have to do with open source libraries, services or things that are perceived as part of that world. Like, for example, some Java logging tools that became a topic raised criticism also that big companies like SAP, like Mercedes-Benz, maybe use a lot of open source these days. Just these events, like for a moment, change the perception. What's your take on that?

Wolfgang: Well, I think the critics do have a point, you know, and that is precisely why we ask our developers to, for one, contribute back to the open source projects to use and for two to make available as open source some projects of our own, which could be useful for others, for the community out there. So, we have just started with that. So, we don't have that many yet. But slowly, if you're there and more are coming, you can also see them from our earlier mentioned open source landing page. And also, another important thing: We have started to financially contribute to open source project through a sponsoring program. In our case, we use GitHub sponsors, which we started a bit over a year ago, actually. And so that's in order to say thank you for letting us use their tools, give them some financial recognition which they deserve, and in particular

actually also to promote open source altogether. So, I'm personally quite engaged in that area. I think that is a really good thing. You know, I hope that helps.

Karsten: Yup. Very, very much sounds like a good thing, and I'm generally getting the impression that Mercedes-Benz here is doing its name all honor. I just happened, two days ago, to talk to an international colleague who told me that Mercedes-Benz out there in the world of cars is still THE name for German engineering, like you want to drive that car wherever in the world, because THAT is German engineering, and it kind of sounds like you're in a good way for the new world, at least on the IT side with open source here to me. Final question where you can make a summary, maybe just as great as the one I just did. What are your three key takeaways that you want our listeners to remember from this podcast today?

Christian: Well, our company purpose is first move the world, if I translate open source, I will say everything that's commodity, do it as open source; everything that's business differentiating, do it in Inner Source!

Wolfgang: Yeah, that's good. And so, from my side, Mercedes-Benz wants to be active and be good active FOSS citizens, so not everything is perfect yet, but we are working hard on it every day to get there and bit by bit I think it's all coming together quite nicely so far.

Christian: That's job as OSPO: Bring balance to the force, like we have legal compliance and developer happiness, and both need to be in harmony.

Wolfgang: Yeah.

Karsten: The legal compliance and developer happiness that was now the key takeaway that Constantin would have mentioned if he were here…?

Wolfgang: Yes. Yeah.

Christian: Yeah, yeah. Well, he says his voice is not in harmony at the moment, so I took the liberty to at least bring his final words into that conversation.

Karsten: And the key takeaway, of course, the harmony between legal compliance and legal compliance and developer happiness is much more in harmony than his voice currently is.

Wolfgang: Yes.

Karsten: Okay, thank you. Great takeaways also. Thank you again, Chris, Constantin in absence, and Wolfgang, for being our guest today. It was great to have you here. It's now time for us before my final lines to say bye. So, let's all say bye. Thank you.

Wolfgang: Bye, thanks so much for having us.

Christian: Thank you very much for having us.

Karsten: And thank you all out there for listening to the Open Source Way if you enjoyed this episode, please share it, and don't miss the next one. It's always published every last Wednesday of the month and you can find it on openSAP and in most places where you find your other podcasts like Apple Podcasts, Spotify, etc. Thanks again for listening and bye.