Johner Institute

Telematics infrastructure – out of the time loop?

With Nick Seidel, Prof. Dr. Christian Johner

Transcript

00:00:05 Speaker 1

Medical Device Insights, a podcast by the Johner Institute for medical device manufacturers, authorities and notified bodies.

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Most of you know the Johner Institute more as a company that helps medical device manufacturers get through all this regulatory madness.

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But now more and more

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As hospital information systems and other clinical and medical information systems become medical devices, this is also increasingly approaching topics such as telematics infrastructure.

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And that's exactly why I invited someone today who knows his way around this area, namely Nick Seidel.

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I met Nick as part of the master's program I.T.

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in healthcare, which he completed last year, and he now supports our students in

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also during his studies as a mentor and especially when it comes to topics such as telematics and interoperability, because that is also what he usually does in his professional, in his professional work.

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But Nick, I think you'd rather tell that yourself and more precisely what you are and what you do.

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Gladly.

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Hello Christian, my name is Nick Seide.

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I live and work in the greater Munich area.

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I am currently employed as a project manager and specialist for e-helpers and interoperability at one of the largest service providers in Germany.

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My tasks are simply roughly speaking, I take care of process improvement and system integration in the healthcare sector in order to create holistic interoperability.

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My professional career is not only in the healthcare sector, I have worked in various companies and company divisions from small to medium-sized companies to very large international corporations,

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can already look back on a total of more than 20 years of professional experience and project experience in the field of I.

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look back.

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In addition to myself, I am also self-employed and a consultant for E.

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and project management and have the nice task of accompanying students as a mentor, among other things.

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In general, my motivation for the whole job is always that I want to help people instead of promoting understanding and building knowledge.

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Yes, you're through it, just right.

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I don't think we're giving away too much when we say that the healthcare provider is a hospital chain,

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so that you can sort it out a bit, from which area you now come or from which area your experiences are fed.

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Yes, I would say, let's jump right in, telematics infrastructure, so what is it for you, what counts for you.

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First of all, I count all the hardware components that we have as telematics.

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On the one hand, we have the central data centers, where the data is stored, and we have these connectors with the service providers,

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these two components form the so-called data highway in the network, as they always say about the telematics infrastructure.

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But we also have a software component with us, which in turn is the access systems and the access software on the individual connectors.

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Then there are the front ends, which are currently being anchored in all the medical practice systems and clinical information systems, where the service providers, i.e. the staff, can let an interaction take place.

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And the third point, which is not yet so well known, is all the apps provided by the health insurance companies.

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Where the patient is

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of the telematics infrastructure.

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For me, however, this also includes the ideas and visions that you actually wanted to realize with the whole system, where you actually wanted to improve or treat or optimize patient care.

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Very important, this also includes the human being, who interacts together within the processes, especially with the service provider, and thus makes this ecosystem possible in the first place.

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Unfortunately, I don‘t know what

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currently still missing in the system telematics infrastructure is the patient.

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The patient has not been taken along much, yes the person or the customer of the system should actually be the focus, but he usually does not know to this day that such a system exists at all or that this ecosystem was created for him.

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There are even the polls last year, where they say so

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approximately, if I remember correctly, 65% of all citizens in Germany would like to have an electronic patient record, but only 3% now even know the term telematics infrastructure and these are probably all doctors or computer scientists who have anything to do with the field at all.

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You‘ve already taken a first critical look at it and you‘ve already hinted at what is expected from it.

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But let‘s dive in again for a moment, so if everything were to come true now, yes what is promised, what

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do you think, what would that do for us as a society, as a health care system?

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We only need to go abroad to the E.

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So our neighboring countries, such as Denmark, Sweden, France, Austria just as an example, they have actually had something like this for a long time.

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We are really lagging behind.

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There, the idea of a lifelong file of the citizen, where his medical data is located, is already more deeply

anchored in society.

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And I'm convinced that if we had something like that,

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on the basis of the data of the patient, whom we do not currently know, and thus prevention would really be applicable preventively in the medical understanding.

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So in the best case, this brings us more effective treatment and more targeted care for the patient anyway, because you can make decisions faster because they are based on more data.

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Yes, so these connections in the medical history,

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now a specialist department only sees a small glance and several specialist departments can actually depict a history.

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That's still missing a bit.

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For me, however, this also includes the fact that the system could be used to create new points of integration, such as I.

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treatments.

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Yes, we haven't even discussed what else could be done with data if even more data were to enter the telematics infrastructure.

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All this will only become apparent in the next few years.

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So

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all in all, when someone asks me, I always say, this is really a great vision to provide needed data at the right time in the right place for the right person to carry out a treatment.

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Mhm, yes, and so what I've heard now, such a better treatment, a better prevention, because for once all the data is there, yes and it's not squeezed into silos, which I do in the hospital or with the private practice and on the other hand, because you said we can then adapt it to new,

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once they are there, then link them in new ways and thus make them usable.

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K., that makes perfect sense.

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I don't know about you.

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I have been at these relevant trade fairs for many, many years.

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Yes, for example is the DMEA and before that it was called ITEC and it used to be called Conhit.

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Well, I've been around for 1015 years and I've sometimes had the feeling that I'm trapped in such a time warp.

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Somehow it was always the same terms and buzzwords and lectures.

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Well, I also mentioned some,

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They've already made a parody out of it.

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So, what I want to say is that there are certain doubts as to whether anything is happening at all or whether we are still trapped in this time warp.

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Now you are someone who works directly in the hospital, i.e. works on site.

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What of all this has already reached you or you, of this telematics infrastructure?

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Ah, there, yes, I can tell you a nice anecdote.

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Well, I once heard about such a symposium in Berlin,

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someone said, yes, we are all complaining and complaining about the Berlin airport, yes, it is taking far too long, millions have been sunk and no one knows where what is, yes.

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But the fact is, since it's finished, everyone wants to fly over it or land there.

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And it's the same with the telematics infrastructure.

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Unfortunately, what has now arrived in the hospitals are only the connectors for the time being.

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So in other words, we have created the endpoints for the network and thus unfortunately also caused very, very much trouble with the hospital I.T.

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departments, because the

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Thing not easy to integrate, yes.

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Background, there is just a very high level of frustration, because the things actually came to the hospital by threatening Pinalen and not because you said, yay, we are grateful that we can integrate it now.

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It's also a difficult time right now, so the hospitals have more to do with fighting the pandemic than we say we'll just set up a technology testing center.

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You can understand and maybe the politicians were a bit wrong about how to do it.

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What has not arrived for me even more, however, is unfortunately in rethinking the processes in everyday hospital life.

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So we still have very strong or I am involved in discussions where you have to talk to those involved in the clinic that the process has to be adapted.

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So how will a doctor find out in the future that you have data from the patient in the telematics infrastructure, yes.

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This is not tangible for those who can't really deal with it yet and say,

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we have to check first whether we have data before we maybe just initiate a new investigation now.

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And that is a complete upheaval in this process idea and there is really still a lot missing.

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So also persuasion and also ideas on how to better implement this in a hospital.

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So what I hear is, it's not just a technical problem.

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So you just said that there are a lot of technical hurdles, you have to try things out that may not be running so smoothly yet, you have to integrate them into existing ones.

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Yes, technology infrastructures, but on top of that the topic.

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Yes, not only can we leave it as it is now, but we have to adapt the processes so that we can benefit from this data at all.

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Well, I think that's absolutely understandable to me.

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If you take a look at individual components, i.e. the topic of Tim and Kim and electronic health or medical records, what is in a normal hospital

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of which already in one sentence.

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So what has struck, to put it this way, is a KIM service, yes, i.e. an e-mail procedure for exchanging data that is not understandable for I.T. employees.

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But that's where I say, we really get drive, we really see how people go along with it, because simply

say, it's cool, I can write e-mail, I'm used to, yes, data partly by drag and drop, address book is specified, which I call

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I feel very good that there really is a uniform address system for service providers in Germany.

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You select it and say, send data there and you get a confirmation of receipt if you want.

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So that's what also takes doctors and people in the practices, as well as in the clinic.

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But unfortunately nothing more.

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So you're not talking about a larger data exchange and whatever, but just there's a document, my discharge letter, I'll send it out and that's it.

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And I don't have to somehow send an unsecured e-mail or even sluggish in WhatsApp

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to give something to a colleague.

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These are actually real low-hanging fruits and the technologies that are now being used for this purpose are, to put it positively, the established e-mail technologies.

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Something would not be quite so positively expressed, it is nothing new now and one might ask oneself why it took so long.

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Oh yes, maybe that will be included in the next point.

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What do you think has happened in the past

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thus hinders the introduction of this telematics infrastructure.

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In other words, why did it take us 1015 years to be proud that we can send e-mails, except for the infrastructure.

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Do you draw any sticking points and if so, have they been solved or do we still have some that we should continue to work on?

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So for my understanding,

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I think it was a mistake to pay less attention to the practicability and feasibility of the people who have to apply it, who have to implement it, who have to integrate it.

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So the politicians made a specification and assumed that it would fit and work that way.

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That was not the case.

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For me, this means, from the point of view of the patient for whom it was made, that usability was never thought about.

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So how can he manage his own data

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from a doctor‘s point of view, it was never really thought about how the whole thing could be integrated into my everyday treatment in a practical way.

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These are mistakes, they have now arisen, they are now being discussed and we will certainly need some time to smooth them out again, but I think that was one of the mistakes.

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And the second from my perspective, this, I would say, as a mistake in design, as I understood it, they simply asked experts from the Federal Office for Security and Information Technology, how could you imagine such a

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Imagine a file system for health data and they were free to let off steam, they just came up with a system, as I said, we‘re talking about over a decade ago, when it was thought up, yes.

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The result was this badly said high-tech network for nerds, yes, but not what would be an effective treatment network, where you say, you can quickly retrieve data, you can quickly extract usability.

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It was simply not developed from this point of view.

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but it has turned.

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There has been a lot of rethinking in the last year, and the whole industry is taking a positive view of this.

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So if I summarize all this now, then one of the main reasons is the same reason why all the other I.

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Projects or many other I.

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Projects outside this industry go wrong, namely a lack of involvement of those involved, especially the users.

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Yes, there is such a huge report, including this Standish Report, which has identified this as the main cause of the error.

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Did I reproduce that correctly?

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I agree with you, Christian.

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I, I'm also from my perspective, I'm a fan of people saying, especially I.

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Systems or I.

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Innovations should mature on the market and not be thought up somewhere and simply thrown onto

the market.

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So, if you can compare it that way, you could have said that you develop it with the market and the whole government apparatus only intervenes there if it really

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is necessary and regulates it.

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Of course, this is about health data, you have to look at it from a different perspective, but just I.

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Setting guidelines that now date back over a decade may not always have been the best way to do it in the current time.

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Yes, and perhaps more existing standards that exist in the health care system could have been observed worldwide and not pushed through the will to find something new for Germany, which might now

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not in the sense of intervariity also in the whole E.

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Accordingly.

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Mhm, yes, so because fire alone is not a location per se in the sense that if I put fire on it, then everyone can talk to everyone.

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You have already hinted at what should have been done better.

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So 1 was just this involvement of the participants.

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What else do you see as conducive to achieving these goals?

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Or maybe asked another way, what else do you wish for so that this

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project, this initiative, becomes a great success as quickly as possible and achieves exactly the goals you mentioned earlier.

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Mhm, so for the telematics infrastructure, maybe as a vision, I would now like to see people really become independent of the current hardware connectors.

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I see this as a big hurdle to do the integration, because for me it's hardware that is too inflexible.

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We had now noticed this Java gap over the turn of the year, yes,

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that's actually not a bug, that was a feature and only the whole world got it so wrong and suddenly it's a huge scandal.

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What if you have such a hardware connector, it has to be certified and approved, I can't say, I've discovered something that is currently 56 years old or software or firmware anchored and now I'm going to patch it quickly.

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It's just not that fast, it's a very, very long process and I see myself that I would favor a software connector where you can adapt quickly, react quickly to a market.

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This is also all in the planning,

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this has already been recognized by Gematik, there is now a white paper, which is called Telematics Infrastructure 2.0, these concepts are already in it, that has been recognized, which is why the whole industry has also received very positively that we want to change something in this regard.

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Then I would still like to see a better integrability for the current status, because that's what we're confronted with right now, yes, so these access connectors in a clinical I.

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Integrating the network is just something different from

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easy to set up in a small doctor's office.

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Well, I discussed it with colleagues who were faced with the challenge that they tried to integrate these connectors into these data center racks, they knew that, but then all the card readers had to be added and suddenly there were no sockets in 2030 in one fell swoop, because every card reader would need its own power supply.

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That's just equipment, it's not primarily intended by data center operations, that's also, you didn't have it quite under control, to recognize it beforehand.

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there, there is now, this is this hardware component, which has always led to such displeasure among my colleagues.

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And then you, you have to create better access points or integrability for the treatment processes for this whole ecosystem.

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That's not far yet, the process is ongoing.

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I explained that earlier.

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So how, how is someone supposed to know that there is data in the telematics infrastructure, if, for example, the patient

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I used to integrate systems for emergency rooms, where it was just common practice that the majority of patients were unresponsive.

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That means you can't ask, do you already have data in the electronic patient record?

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How should the doctor act, because he then behaves wrongly, because he treats without looking at the file or does he say, I don't have the time for it and treat first.

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So that's still an ongoing process and of course it will be dealt with first.

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Nevertheless, I would also like to see a better understanding of interoperability as a whole.

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So, you have to look at them on several levels and as I always say, just a syntax without semantics just doesn't make sense in the application.

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There are several levels, they have to be coordinated with each other and everyone who participates in this system has to have the same understanding of all levels of interoperability.

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Yes, these are, these are some wishes that are there.

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If I can perhaps summarize this again, we ultimately need it to go in the direction of a more iterative incremental approach.

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We have to be able to react faster.

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This means that it has to be set up on the process side, but it also affects the products.

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So, a very static hardware can be counterproductive.

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You also said that ultimately usability, not only from the point of view of the end users, i.e. the service providers, or the doctors, for example, and patients, but also from the point of view of the hospital I.T.

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I think this, this metaphor is almost about the sockets, is an example of this.

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And interestingly, despite everything, although it is so much the focus, there is also the topic of interoperability.

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The legislator, and I think we can already conclude with this, has given us a whole lot of new paragraphs that affect the manufacturers of all these systems, obliging them to be more and more interoperable.

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And that is exactly where the circle closes again, namely also with the

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Listen to this podcast here mostly come from the medical device world and simply have to be clear that we have very, very many requirements from the Social Code that also affect interoperability, so that exactly the wish you have just expressed can ultimately be fulfilled.

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And yes, Nic, you have a supplementary point.

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Exactly, so with all the criticism, so I really have

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the pleasure that I can currently participate in this Easy Consortium and that's what, that's new especially in this area, also for medical device manufacturers when it comes to interfaces.

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Gematik is currently organizing workshops where these Feyer interfaces are defined together.

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There are service providers, there is industry, there are the trade associations.

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It is being discussed how to create interfaces on the basis of Feyer that serve the entire healthcare system.

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and that's really a totally new experience, that's really very, very good and then again my praise to everyone involved in these things, I think that's really, that's the right development that we need, that we discuss together what's good for the entire system, i.e. the entire health care system and not just one person says, I imagine how it could be and that might become a law and then everyone will have to live with it.

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Yes, I think that will get us out of this time loop again, so things are moving forward.

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Nick, I have very, very many thanks for all listeners who

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who themselves are also faced with the challenge of developing or being allowed to develop systems or having to develop them, and in doing so also have to take care of these regulatory requirements that must guarantee interoperability.

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If you have any questions, please contact us, Jonah Institute or Nick, we would put them in touch with each other because, as he just said, together we have the right people to talk to each other.

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Users, operators, healthcare providers and legislators together have the opportunity to bring our healthcare system into the 21st century.

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century.

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Nicca, thank you very much for your time.

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Christian, thank you very much for the invitation.