Johner Institute

Best Practice Software Development

With Michael Nauditt, 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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How important automation is for the regulatory processes and thus of course also for the Regulatory Affairs department,

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we've talked about that a few times here in the podcast.

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But as soon as we automate, we also need software and that's exactly what today's topic is.

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How do we get good software, how do you make sure that the software projects are actually successful?

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And I invited Michael Nauditt from the company Moguru.

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Michael, would you like to introduce yourself very briefly?

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Yes, first of all, thank you very much, Christian, for the invitation.

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So briefly about me, Michael Naudit, I am the father of 3 children and founder and managing director of Muguru G.

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H.

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Yes, and so for almost 30 years I have been accompanying and responsible for software projects.

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Today, I work with my team to make product owners successful and to turn teams of programmers into real software development teams.

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And

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I've calculated it.

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So, in the last 30 years I have been jointly responsible for or accompanied project budgets of over 250000000€.

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Well, there is a lot of background experience and my main field of activity was in the financial industry, especially in the first 2 thirds of my career.

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Yes, and today I pass on my knowledge to my team of about 50 people and we at Muguru specialize in demanding web and mobile projects.

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And here we attach great importance to the fact that we then also develop economical software, economically successful software products and not just deliver software.

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In short, as a partner to our customers, we help them to implement best practice in product discovery and software development even more consistently than before.

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And I think that's what distinguishes us from 80% of our competition.

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Yes.

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Now you've already said what these projects are.

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You said it used to be banking, today it's mainly web development, mobile development.

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What kind of condition are these projects in when you come into them and what typical problems do you encounter?

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Yes, as far as the state of the projects is concerned, we are actually confronted with everything you can imagine on a daily basis.

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So from new development on a greenfield site to refactoring,

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Further development or, above all, rescue of projects in trouble.

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Well, nothing is actually unknown to us.

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In fact, we often come into play when our customers, after initial successes in programming, realize at some point, OK, the increasingly complex challenges in software development, you reach your limits.

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So our customers usually find out in the course of the project that deliveries start to be delayed considerably,

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that solutions are flawed or difficult to maintain.

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And above all, that communication in the team starts to snag and, above all, in the direction of the customer.

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Fortunately, this is completely different for you, but we often find that or our customers find that.

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And this is where we come into play and then start to analyze the causes together with our customers and, above all, to eliminate them.

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You have just described to us what the effects of the problems are.

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For example, delays in delivery, high complexity, yes, which may then also lead to technical debts or even to slower delivery.

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You had described that it becomes unpleasant in communication, be it in the team or with the customer.

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And if you look now, what are the causes of what you are tackling

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in order to be able to eliminate these causes and thus also the problems.

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What are these classics among the causes?

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Yes, O.

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K., yes, so of course there are some.

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So first of all, there are difficulties to maintain the source code.

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So I mention structurally underestimated complexity with increasing project size.

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So that means that automated test processes are used in the beginning

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both unit tests and UI tests are somehow, let's say, somewhat neglected and that then leads to the fact that the code becomes difficult to maintain.

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Then there are usually long onboarding processes because the documentation is missing.

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So also documentation, that is always an issue, namely the project documentation, which usually falls behind, although it can be produced very well with simple means and the long onboarding

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can perhaps also be shortened by new colleagues, then there are usually no established ways to organize knowledge transfer in the team.

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It is also often the case that there are quality problems at the release because there are no quality gates in the ongoing project.

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So yes, often the definition of what is finished is also very neglected, so to speak

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and then it is usually only tested at the end and that leads to extreme problems.

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Then, I'll say you can certainly confirm, it's just difficult, let's say, to pass on complex requirements to the development team, so to speak.

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So there are often misleading requirements, but we attack them and try to strengthen and secure this communication.

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Yes, then maybe last but not least,

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we encounter, let's say, technological knowledge islands with our customers.

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Well, there is good programming know-how and people know how to program, but there is often a lack of understanding of the, for the architecture and for the overall picture of the project in the context of the entire software development lifecycle.

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And these are also problems that we encounter there.

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I'll summarize this very briefly, because that's actually almost what typical software standards have actually already said.

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So, the classics run through the entire development life cycle, so to speak.

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So, let's start with what you just said with the topic of requirements that are either not collected or not properly documented, or that are documented in such a way that it is not very helpful for the developers.

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So, that's where it starts, so to speak, then it goes on, then you can go in the direction of architecture, where you say,

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Yes, programming knowledge, i.e. pure development knowledge, is sometimes better than the ability to define system architectures that can then be maintained and that help to meet the requirements in the long term.

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Then you said, then it's on to testing, where automation in particular is neglected, which in turn takes its toll in the long run.

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And overall, you said, there is also a lack of documentation of everything we have just said and the ability to communicate with each other in a structured way.

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Absolutely right, yes, I feel well understood, well understood.

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Well, that's actually what standards also require and what actually shows nicely that they somehow have a purpose and that this ‚I'll run off quickly and program something' might make a quick start possible, but.

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the decisive thing is not to get off quickly, but to reach the finish line quickly and for that you need other things.

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If we go into it right now, how do you manage to make these teams successful now?

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So I guess, of course, by introducing things, forcing them, maybe even like documentation, test automation and so on.

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But we didn't have a team with that yet.

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So it has to work as a team.

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What, how do you go about it, how do you manage to make the

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Such an efficient organization.

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So first of all, when we get into projects, we first have to see, OK, how it looks.

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the vision of the project and what is the status quo.

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So that's where it starts to form the team, because a team consists of more than a group of people, but a team has a common goal and that's where it starts, that the vision of the project was often somehow unclear or not communicated often enough and that's where we usually start and then it starts, O.

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K.,

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ask the developers who are in the project about the problems and find out where they see the weak points.

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So first of all, take the team with us from the beginning.

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And then a large part of our work consists of working on communication, on technical communication, but also on the interpersonal and personal level in the daily meetings.

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to work on team building every day in the team meetings and not only once as you do excellently on your team days, but also to work efficiently and effectively on team building every day through communication.

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Yes, what does that mean in concrete terms?

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So, how do you get a team, how do you enable a team to work efficiently and effectively with each other and also to be formed into a team?

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So there are just a few basic communication techniques that everyone knows or some are of course unknown.

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But first of all, as far as the technical level is concerned, we use intensively, let's say, reformulate the topic, so that you really make sure that you have understood each other correctly on the technical level.

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That's the baseline for now, that's the baseline for now.

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yes, mhm, and then

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it's just that we try to identify and solve conflicts that occur in a team, i.e. interpersonal conflicts.

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That means we also give or encourage, let's say, personal feedback.

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So, if the behavior, so to speak, be it facial expressions, how fast or slow someone speaks or whatever, if that bothers me,

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that we establish a model that enables people to address this.

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And resolving these often small but disruptive conflicts leads to teams really growing closer together.

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That you also develop understanding for each other on a personal level.

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And so you get to the point where you really have a group of people who then become a team and can work together towards a goal.

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Mhm.

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does an organization have to meet certain requirements, i.e. that you have any chance of achieving these goals with the team?

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Well, the prerequisite is, of course, that the customer is first looking for an agile project approach or implementation partner, because they pull these topics, i.e. team building, together et cetera P.

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P., especially in this agile

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software development world and then the people and the customer have to be willing to work with us and also to grow together and learn from each other.

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And then we can actually work well with any company size and industry.

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So you assume a willingness to change, otherwise it wouldn't work.

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That's true, yes.

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Are there also situations where you say that a player has to be taken out of the race?

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As yes, rarely, but it happens.

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So, of course, there is still the classic developer who programs a bit withdrawn.

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Of course, it still exists.

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But it is precisely this, I would say, that we can integrate quite well by appreciating his technical know-how, so to speak, and promoting the exchange of information with his colleagues, let's say, through structure.

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Yes, so classic peer programming sessions with junior developers, code reviews that you hand over responsibility to him, so to speak, and accordingly through this knowledge transfer and the appreciation of his know-how, people just come to open up gradually, so to speak.

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But there are often people who sometimes can't cope with this agile way of working at all and shy away from personal responsibility

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and every now and then, of course, you had to part with one or the other colleague.

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Mhm, you have now reported how you create these conditions so that the projects are successful.

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What kind of roles do you bring to the table?

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Well, I think I've heard a lot about a coach role now.

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What other roles do you bring to the teams to ensure success?

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Yes,

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So basically it's like this, so of course we also do, also take on the overall project responsibility if, if there is no infrastructure at all at the customer to handle such a project.

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So we provide the entire team, we do that, we do it often and with pleasure.

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If we support, then it starts.

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On the one hand, we start with the coaching of the product owner, of course, and this role with the

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customers.

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Often, product owners at the customer are actually people who are very familiar with the technical domain.

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I'll say that they are very good business analysts.

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However, they completely lack software development know-how and all the tools in product discovery are often unknown.

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That's where we come in.

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Then we also take over the classic project management, resources, responsibility and control.

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We bring architects into the project when there are architectural decisions.

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Of course, pure coding is also very much in the foreground.

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We also provide resources for our projects or for your projects, also especially to developers and resources to support your teams.

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And of course also test and operation.

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Here, too, we supply people who have the appropriate know-how.

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and experience.

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So you can actually say, from the entire software life cycle chain, from the definition of the requirements to development, the building of the application, release, operation, operational monitoring, we can do all that.

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Yes, I can confirm that, even just what you said.

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So for us, one of the important points was that our software development or the need for it has grown even faster, as the

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team size that was necessary for this and of course you help us out perfectly, as they also help to close this gap.

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If others are interested in benefiting from your support as well, what is the best way to contact you?

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Of course, I can always be contacted via LinkedIn for example, that would be perhaps the easiest, no.

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Well, I'm very active there, also on the post, as far as the product owners and project roles are concerned.

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I'm very active there.

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Or simply send an e-mail to hilfe@muguru.de with a short contact request.

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We are happy to initiate initial discussions and see how we can help.

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Perfect, Michael.

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Thanks for these insights.

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If I can sum it up like this, do you actually help companies to do the basics?

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So both the technical

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adherence to best practices, as well as adherence to organizational, communicative best practices.

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Can you summarize it like this?

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Yes, that's easier said than done, but that's exactly that, the essence of what we, what we do.

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best practices, consistently apply them and start together with the customer and also empower the customer that in the future independently

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and then continue to do so on their own responsibility.

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Ah, that's also very important.

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Yes, Michael, in this sense, I look forward to further cooperation and thank you from the bottom of my heart for being part of it.

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Thank you, Christian.