Cape of Good Code

A business value metric for software leaders

After 18 years at Siemens, and several other companies before that, Egon Wuchner co-founded Cape of Good Code in 2018 to find a solution that would enable architects, lead engineers and project managers to determine, for example, how much effort they need to spend on feature development and maintenance or how easily they could add new features to their systems. The company has developed DETANGLE® Analysis Suite, a kind of Business Intelligence platform for software engineering. "This innovative analysis tool," says Egon, "allows us to expose code quality, architecture quality, team collaboration patterns and software engineering processes in a single code scan."

From gut feeling to numbers

So how did it all begin? When he was at Siemens, Egon came across the same problem time after time in different domains: despite the abundance of good tools for developers to check their code quality, there was a lack of actual support for architects and managers in making the right decisions about software quality. Egon explains: "A broader view is needed. First of all, they have to know what is the state of their development. Do I mainly spend my effort on developing features? And on which ones most? Why am I doing a lot of maintenance work? It's not only about having a gut feeling but having the numbers to back up why they are not getting features on the road. Should they spend a little more effort or a lot of effort to address this or just postpone addressing these issues? Data is essential to take the right measures and make the right decisions. That's what propelled me and my co-founder Konstantin Sokolov, a consultant at Siemens at the time, to start up the company to solve this situation."

Cape of Good Code was a beneficiary of funding support from the national programme in Bavaria/ Germany to develop its DETANGLE analysis tool together with the stakeholders – the engineering

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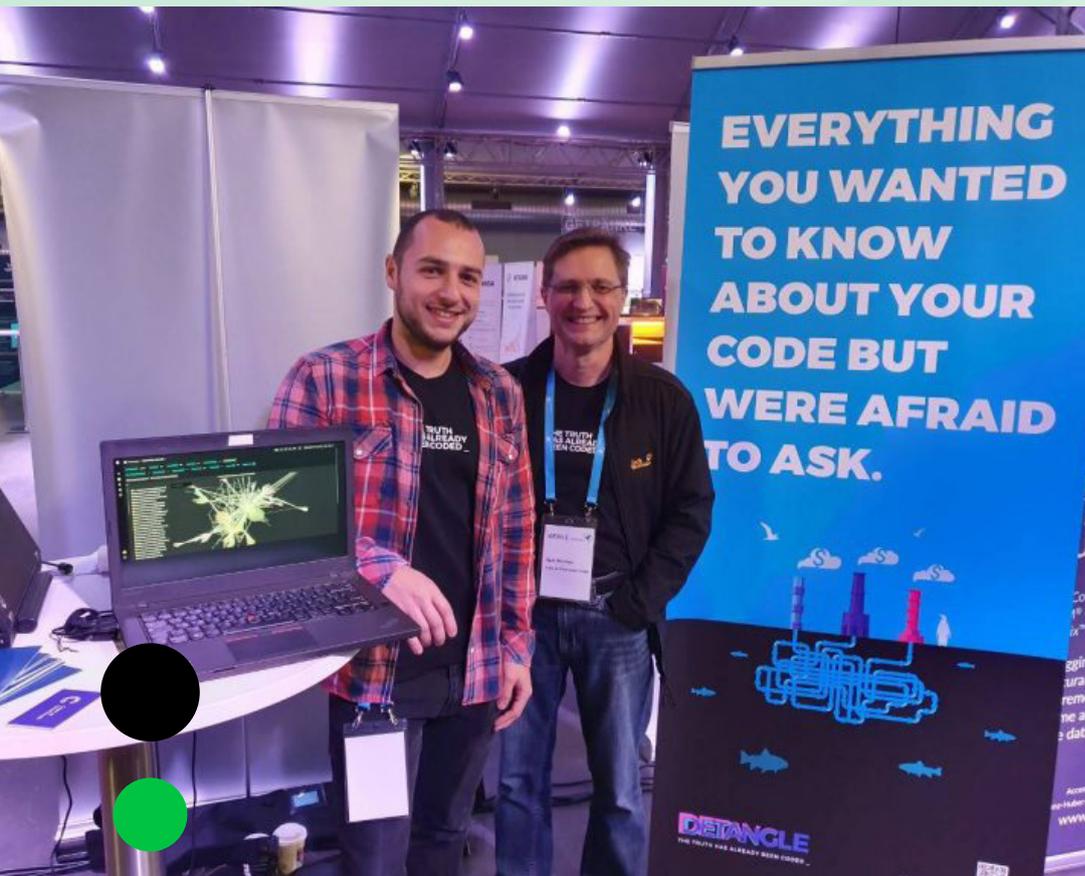
leaders, project managers and software architects. "The funding was all well and good – and essential – but a company stands or falls by its employees," emphasises Egon. "You have to be able to rely not only on their knowledge but also on their social skills. I feel fortunate in having the best people in place. That's not easy. We had to reach out beyond Germany to Türkiye to recruit the right kind of software developers. It gives us a dimension that even goes beyond Europe."

Weighing the pros and cons

The main goal of Cape of Good Code is to support customers in finding the balance between feature development and handling the technical debt of the software. In other words, weighing up the pros and cons, a kind of costs-benefits analysis. Egon: "Knowing whether you're able to extend your system with new features to make it sustainable for the next five or ten years. This is something totally different. It's about the architecture quality. Is it extensible with new features? So this is one of our unique selling points, this feature-based metrics that measures the technical debt of your software system, aka quality issues. And then what could be the underlying reasons, the root causes? Root cause analysis is something that's special to us. I always see our system as business intelligence for software engineering, a way to figure out the right reason,

the right level to focus on with limited effort and knowing which is the most effective course of action. That's our main value proposition. Our next goal will be to integrate run-time data to include performance bottlenecks as KPIs and to measure Feature Usage as a business value metric of features/functions and compare them to their development effort as early as their first deployment."

Business value

That software innovation is a key element for Cape of Good Code goes without saying. "We have to stay ahead of the curve. After all, 'software is eating the world' to quote Marc Andreessen (co-founder of Netscape). We eat our own dog food, actually; we apply our DETANGLE® Analysis Suite in our own development. DETANGLE® integrates different data sources, from requirements engineering to design and implementation like code repositories, the history of the code, even to DevOps processes. In fact, we have to integrate any kind of development methodologies, technical methodologies and technical tools used during software development in order to do the business intelligence for software engineering."

Furthermore, Egon mentions that Cape of Good Code is going even further in the meantime and is starting to apply artificial intelligence with the

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upcoming DETANGLE® Refactoring Assistant complementing the Analysis Suite: "We do not do it for the sake of using artificial intelligence; we always need to figure out the value and the business value of applying it. And that's the general point. You have to figure out the business value behind some digital services that go beyond remote maintenance that has been done for decades, for instance. In the meantime, I have seen several medium-sized companies establishing digital ecosystems platforms to integrate not only their customers, but also partially other industry partners and competitors. Look at Siemens. It wants to become the Industry Metaverse (simulation and digital twins of industry plants). This is the next kind of innovation that's already taking place."

Co-creation
Egon would like to see industry in Europe becoming partners and creating digital platforms and ecosystems, and also sees a more entrepreneurial role for academia. Funding can expedite this. "Funding initiatives can bring academia and industry together to exchange ideas to work on research and development," so Egon proposes "getting industry partners and academia to become business partners, even creating digital platforms and ecosystems together to build, for instance, a multi-mobility management platform, where the billing, routing and journey recommendations are in one place. Technically, it's feasible. The main obstacle is the willingness to share." That willingness to share is what Egon found in ITEA where he first became involved when at Siemens.

Open-minded and collaborative
Christoph Niedermeier, who is still at Siemens, introduced Egon to the ITEA BaaS project led by Franz-Josef Stewing of Materna. "Christoph was the technical coordinator of the consortium. In close collaboration with him I was heavily involved in conceiving, designing and coordinating the effort of many partners in implementing the innovative Building as a Service concepts and software architecture we had in mind," Egon explains. "That's why I have a good memory of that project and it's also how we came to be involved in the ITEA SmartDelta project." SmartDelta aimed to accurately analyse and determine the quality implications of each change and increment to a system. "We actually just joined one year ago. We benefit in many ways from this participation because we cooperate with academia to get some new ideas and product features. We also have a big opportunity there to promote our DETANGLE Shield to the industrial partners, who may be potential customers later on. In fact, our 'new' industrial partners also request new features that we were actually implementing as part of the project, validating and prototyping them, and hopefully getting into the product itself to sell later on. So, it really pays off in terms of knowledge and business networking." This productive experience is likely to spur Egon to do something similar in the future. "Not only was it open-minded and collaborative but it also generated results that the industrial partners can exploit. So, yes, I can definitely say we will participate again in the future."

More information:
https://capeofgoodcode.com