On the leading edge of software development

Here is proof that it's better to work together than try to reinvent the wheel. PES is thrilled to bring you this perfect example of such a collaboration between two companies. The end result saved time and costs, which are now a big plus for the end users.

Andre Louis Ferdinand

Ken Isobe Falk

on his left read 'Andre Louis Ferdinand, Sr. Engineer, UAS inspection Services, Natural Power'. His task, as head of software development, is making sure that Natural Power's flight software is robust and user-friendly – that hasn't been easy lately.

For the past year, Andre has been working with different solutions - exploring options, trying to find the best tool for his team and their clients. They all feel clunky to him – slow, unable to handle the kind of calculations that Natural Power needs, expensive. None of what he tried, has left him impressed. It's just not cutting it.

He observes the slight movement of the tree branches outside. His thoughts are interrupted by the familiar sound of an Outlook notification; team meeting in 5. Andre smiles as he gathers his notes – he has an idea to pitch.

'Working with Scopito has enabled us to offer a seamlessly integrated service which provides our clients with the flexibility they need. This collaboration has provided an efficient and low-cost solution that enables us to provide even greater value to our clients,' affirmed Pieter D'haen International Director, Natural Power.

It's nearing the end of August twenty-nineteen. The Texas sun is baking outside. Andre's office is in the shade of a tall Elm tree and so it's nice and cool. The business cards

Computer: Inspection overview in Scopito.
Tablet: PDF report of results

Custom development

Andre had known the Scopito platform for a while, and he liked it: 'I'm a coder, and I liked the portal. How clean it looks; how efficient data can be absorbed. It's just good code.'

But Scopito, like the other solutions Natural Power had tried, was unable to complete the calculations needed for their turbine inspections. However, he was sure that adding these functionalities to the platform, would make it the ideal tool for his team. They were already capturing the data; they just needed code translating it to valuable insights.

Andre had worked with Ken Isobe Falk, CEO and founder at Scopito before, and decided to reach out to him with the intent of co-development.

The task:

• Fault locations on blade presented visually

• Size of faults measured in millimeters

• Faults annotated by Artificial Intelligence

Meanwhile, in Denmark.

'When I heard from Andre, I was excited. We have worked together before, and I know Natural Power does amazing work within the industry. They had all this useful data in their images, and I was sure, we could do something great with that,' said Ken Falk, CEO & founder, Scopito.

Previously, Scopito had focused development-efforts on features for Transmission & Distribution and were glad to add to their wind-capabilities. The

development team at Scopito started work on the new feature primo October, and by the time the chilly December weather had swept through Texas, Andre was watching the leaves fall with a smile on his face.

Exactly as envisioned.

The finished product ended up exactly as Andre envisioned. It was built directly in Scopito's current solution, taking advantage of the existing features. Fault location was visualized on a live turbine diagram and updated in real time. Once annotated, the size of faults and distance from the hub, was shown in the annotation details, and all of it was available in reports.

Natural Power had gone from hardly working with Scopito software internally, to the solution being the primary for everything they fly in-house today.

'We're expecting massive growth for Scopito in 2020, and I believe that this collaboration will be a stepping stone into the wind market for us.'

'The vast majority of our customers love Scopito. We have a few, that have stored their data elsewhere for years, and are happy with that arrangement. We respect that and will always work to find the best solutions for them. But for new customers, we always suggest that they give Scopito a try,' explained Andre Louis Ferdinand.

Besides providing a custom platform for data management, the collaboration is helping Natural Power in their pursuits for new clients.

'We have some exciting prospects for this coming season, and it has been a great advantage to have Scopito on client calls, showcasing the solution. It was really a big selling point,' added Andre.

Andre also emphasizes, that many Natural Power customers find comfort, in the fact that data is kept with a third party; it gives them a sense of security knowing, that their data is still accessible in the location and format they are used to, even if they opt-out of their commitment to Natural Power.

As for a return on their investment, Natural Power is expecting it to be realised. As Andre explains, by adding this feature to Scopito, we were able to offer it to clients far quicker than if we had developed a custom portal in-house.

In-house development versus outsourcing

The team at Natural Power had discussed developing a solution in-house prior to reaching out to Scopito. However, to them, the choice to go with Scopito was an easy one.

'Developing a similar solution in-house would take longer and be more expensive. And, at the end of it all, there is no certainty that we would end up with anything nearly as good as Scopito,' clarified Andre.

Choosing to outsource development was beneficial to Natural Power in more ways than one. Besides being faster than developing themselves, it meant that they could harness the current functionalities and speed of Scopito software. And, perhaps the most important reason why this model was chosen; it meant that they could resource share with other Scopito customers. It allowed Natural Power to keep expenses low, because the feature will also be available to other Scopito customers.

'I believe that this feature has really added to the quality of the product that we offer for wind-inspections. It is always great for us, when customers reach out hoping to collaborate. I see it as a win/win; they're getting what is essentially custom-development at a low price, and we're able to improve our product-offering with features based on real-world knowledge and experience,' confirmed Ken Isobe Falk.

A six-week feedback loop

Between project start and delivery, lay six weeks of component-deliveries and feedback. In Andre's opinion, this way of working, made the development process as smooth and efficient as the end-result.

'When you work with the team at Scopito, they are clearly great. They can implement changes quickly and understand what they are doing. We had good conversations; they were able to answer my questions properly, because they actually wrote everything. I was really impressed with the quality of Scopito's team,' André said.

Communication was mainly between Ken and Andre. Ken's background in developing mission-critical software, made him a level conversation-partner for Andre, and the key link between Scopito development and Andre's team.

Thomas Messell, Scopito's lead frontend developer and person responsible for visualizing the data, describes the process as follows:

'Working to make Natural Power's vision come to life has been an interesting challenge. Learning about the needs of people who use this software every day and trying to marry those with the look and feel of our platform, in a way that would be logical for all clients to use, was certainly a challenge. I think we ended up with something truly unique in the market.'

The lead backend developer at Scopito, Henrik Thorsgaard, enjoyed working with the complex mathematical calculations needed to determine fault size and distance from hub, based on the available metadata. He describes the biggest challenge as the process of adapting the feature for different datasets captured in different ways, to make it available to all Scopito's clients.

What does the future for Natural Power and Scopito look like?

'It has been great collaborating on making what we envisioned become a reality.

I believe we will do more together in the near future; Natural Power is looking into features that the industry will likely need within a few years, like temporal view. We are very interested in working with Scopito on those,' affirmed Andre.

Natural power also has plans, to start using Scopito for more inspection types like renewables-related infrastructure.

'We're expecting massive growth for Scopito in 2020, and I believe that this collaboration will be a stepping stone into the wind market for us. We have gained an established partner that we can learn from, and I'm sure we will develop many significant features together in the future.'

www.scopito.com

Natural power

Natural Power is an independent consultancy and service provider that supports a global client base in the effective delivery of a wide range of renewable projects including onshore wind, solar, renewable heat, energy storage and offshore technologies. It has a global reach, employing more than 400 staff across 11 international offices. Its experience extends across all phases of the project lifecycle from feasibility, through construction to operations and throughout all stages of the transaction cycle. Its expert in-house inspection team designs, delivers and reports on inspection campaigns across the globe.

Scopito

With headquarters in Denmark and New York, Scopito provides cloud-based visual data management solutions for customers all around the globe. The company was founded in 2014 and has since grown to become one of the most widely used software solutions in the market of UAV inspections.

The team at Scopito has an agile focus, and considers themselves market-leaders in performance, usability and artificial intelligence. Scopito offers solutions for DSP's as well as enterprise-level clients.