

## Changan Case Study

Changan Automotive's mission is to 'drive the world' and their world-leading UK R&D Centre has made real advances in capability with the help of Omflow Ltd. Changan is a major global manufacturer committed to creating green, safe, stylish and affordable products. As one of the top 10 most valuable brands in China, in recent years Changan has expanded around the world by providing innovative, user-friendly products.

Omflow's focus is on truly addressing the development needs of international technology businesses that create complex products. Founded in April 2014 by experienced engineer and translator Stephen Powley, the company knows how to navigate the challenges faced by people who build systems in a global environment, but do not write the same language. The benefits of Omflow's multilingual, requirements-led approach include reducing risk and getting things done right, first time, more often. This saves time and increases productivity, which in turn means reduced costs. Products are safer by design, stakeholders are happier and business processes become smoother and more robust.

As a major Chinese automotive manufacturer, top 10 in the world in terms of production volume, Changan knows that to build world-beating cars it needs world-beating processes. A close working relationship with Omflow has developed in this pursuit of excellence. Omflow focused initially on requirements management for powertrain systems at Changan's UK research and development centre. The successful pilot project at this world leader in automotive powertrain technology is now being extended to accommodate a larger user base distributed between China and the UK. The goal is to allow users operating in both Mandarin and English to access and work on the same requirements, designs and technical data using their language of choice.

Requirements-led engineering is designed to help companies that are building complex technical systems to understand the needs behind their products and their systems. Clients like Changan choose Omflow to help them develop processes so they can be confident that problems are avoided before they happen. They also acquire the foundational tools and techniques they need to be able to build the right systems and to build those systems right. By capturing the needs of every stakeholder in a project, Omflow helps clients to understand how to build products that meet everybody's requirements, wherever they are in the world.

Building the right system well is an issue of primary importance across every industry. Nobody wants a recall, and even when the worst does not happen, projects still overrun and get expensive. This is often because people do not have access to good information about what is happening and what other people need. A well-publicised example comes from France in 2014, where a new £12 billion fleet of high-speed trains was built too wide for platforms in the French countryside. Because people had not communicated properly, the trains did not fit in the older stations! The time-consuming station reconstruction programme that followed had a price tag of £50 million.

To help Changan build great systems, Omflow started small. Stephen Powley, Managing Director explains: "To introduce change effectively, people have to understand why you are doing things differently in the first place. Because complex products have a lot of requirements around them, Omflow advocates making incremental changes and allowing time for them to embed. With a small team and a simplified workflow, you can try out ideas quickly and see what fits for the company. What's more, a well-focused pilot project is a fast way to deliver real cost benefits."

After introducing the initial system, Omflow was careful to monitor the experiences of users. Feedback is very powerful for understanding ongoing requirements and is used to chart the best direction for the next stage of development. "When you start a project, it is very easy to have lots of great ideas," Stephen continues. "Strategically, what we do is concentrate on the really important stuff, while making sure all of those great ideas are captured for later."

Solutions introduced at Changan have proven to be genuinely effective, delivering cost benefits, time savings and overall improvements to business performance. Changan has gained the ability to manage requirements in a highly organised and manageable system. This allows them to understand their needs and the impact of changes. They have gained the ability to understand the hidden interactions between requirements and can create extensive documentation quickly and easily. Documentation that would have taken hours and days to produce manually can be now published at the click of a button. Chief Systems Engineer at Changan, Andy Howells, values Omflow's "quality of work, commitment to achieving results and flexibility in managing tasks". He explains that "Omflow are customer-focused in everything they do. I am very pleased that I have Stephen supporting our project. Their experience and knowledge are valuable in ensuring our junior engineers undertake their work to the right quality and standards. The rates are reasonable and allow Changan to manage 'peaks' in work more effectively."

Stephen's advice for companies is to find a way to really understand their products, especially given the ever-increasing commercial pressure to develop them more quickly. The tools and techniques that Omflow uses to understand the requirements of a system can apply equally well to any technical or business system in any sector. Stephen assures us that it does not have to be complicated either: "Sometimes, we just help people to recognise that there is a simpler way that is also better for business. At Changan, just the simple practice of talking about requirements proved valuable. Previously, people had not sat down together regularly to fully explore every project need. A few weeks after training with Omflow, participants remarked happily how many problems they'd started to notice early."

Capability Engineer, Yike Fang, affirms "Omflow's representative has demonstrated strong responsibility and worked hard to cooperate with Changan UK in order to deliver a high-quality project."