

Quality World

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INTELLIGENT DESIGN

**MEET HUGO SPOWERS, THE BRAINS BEHIND
THE CAR AND BUSINESS MODEL OF THE FUTURE**

In its mission to create a step change in the environmental impact of cars, British start-up Riversimple is tearing up the rule book. Using six key stakeholders it has re-invented the corporate governance structure to balance benefit streams and achieve real sustainability. Dina Patel speaks to founder and chief engineer Hugo Spowers

A CLEAN SLATE FOR BUSINESS

Just as fossil fuels are not sustainable, the same might be said of the current model for doing business. Embarking on a new direction with a blank sheet of paper, Hugo Spowers set out to do things differently when he founded Riversimple in 2001, the company behind a new eco car that could change the motor industry forever. Spowers, who is also chief engineer, has utilised the whole-system design approach after being inspired by a meeting with environmentalist Paul Hawken, through whom he made contact with the environmental advocacy group Rocky Mountain Institute. The approach

encourages companies to optimise at the whole system level to promote efficiency rather than at the level of individual elements of the system.

Following a career in the motor racing industry, Spowers spent 15 years not only developing his sustainable car, but also creating a new governance structure unique to his business. And he says that only now, after all that work, is he able to truly comprehend the depth of Einstein's assertion that no problem can be solved from the same consciousness that created it.

Every aspect of the car (aptly named 'Rasa', from the Latin phrase 'tabula »

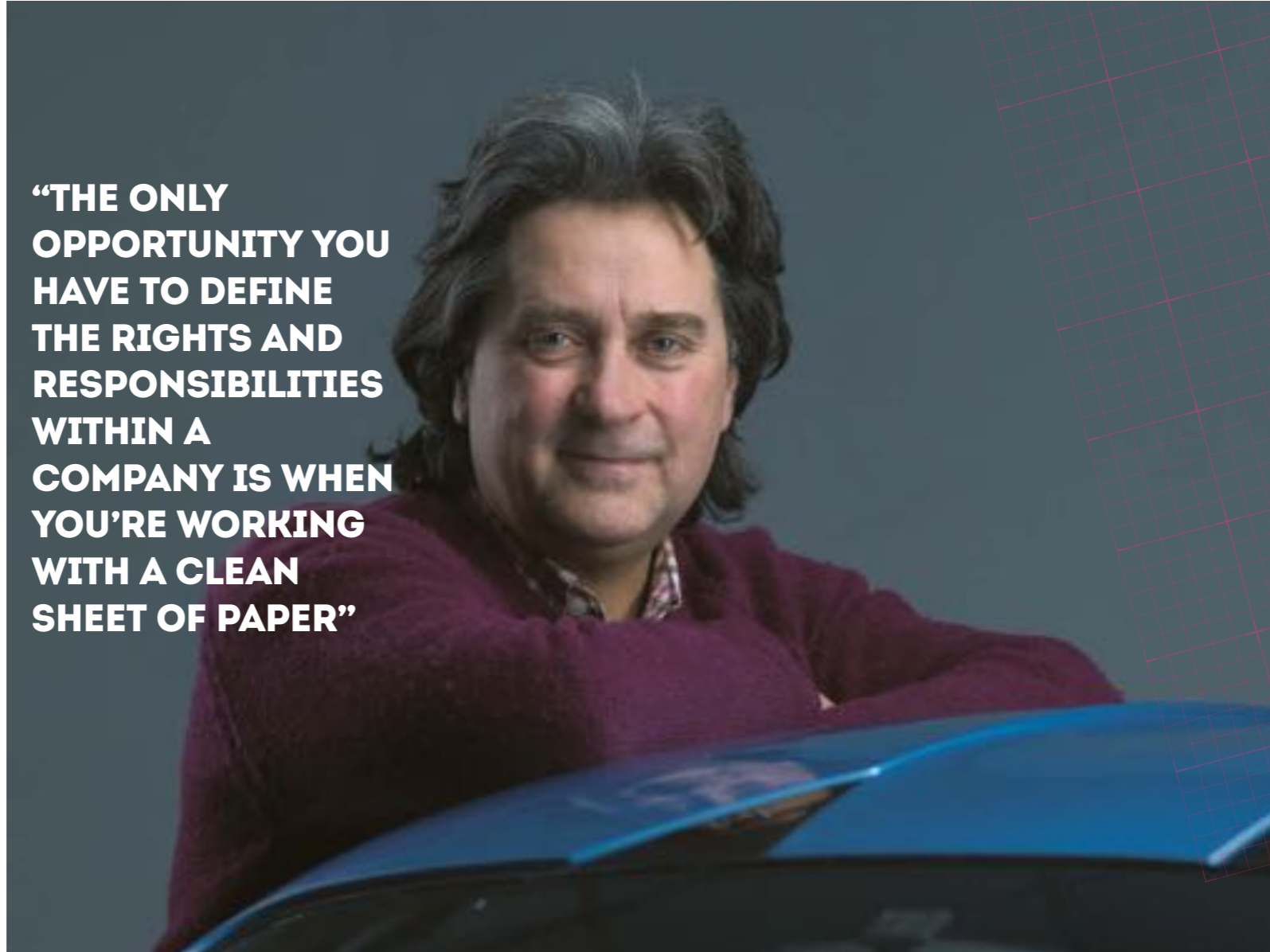


Photography:
Ryan Cowan

rasa' meaning 'clean slate') has been created to redefine how the public uses transport in an age of increasing population and diminishing natural resources. Rather than squeezing a fuel cell into a conventional car, the Riversimple team has designed a highly sustainable car around the characteristics of the hydrogen fuel cell. In a similar manner, Riversimple has established a unique corporate governance structure around its purpose: 'To pursue, systematically, the elimination of the environmental impact of personal transport'.

Spowers created a structure whereby, in addition to the company's operating board, Riversimple has allocated six external 'custodian representatives' to speak on behalf of six stakeholder groups: the Environment, the Users, the Neighbours, the Staff, the Investors and the Commercial Partners. As Spowers tells *QW* from the company's base in Llandrindod Wells, Wales: "If you want to deliver sustainable outcomes, you have got to design the business to deliver them."

“THE ONLY OPPORTUNITY YOU HAVE TO DEFINE THE RIGHTS AND RESPONSIBILITIES WITHIN A COMPANY IS WHEN YOU'RE WORKING WITH A CLEAN SHEET OF PAPER”



CLOSING ALL LOOPS

Rather than adapting a business model that was shaped by 20th Century constraints, Spowers says it is important to develop, from scratch, business models and products that address the primary 21st Century limitations such as resource depletion, climate change and energy security.

The whole-system design approach ensures all loops are closed and waste streams provide all material inputs. For example, Riversimple is working to align the interests of manufacturers and suppliers. Instead of buying fuel cells, Riversimple is developing contracts under which it pays for the kilowatt hours that a fuel cell provides. The manufacturer and supplier then have a shared interest in the longevity of the fuel cell.

As a result of this model, the owner of the car is the manufacturer, with title for some components remaining with the suppliers, and all parties have a direct interest in designing an efficient and reliable car that will still have value once the customer has returned it. The Riversimple business model, whereby customers pay for the mobility they want rather than the product that delivers it, also helps the company pursue its goal to be 100 per cent sustainable. The Riversimple model is to sell mobility as a service, providing a car under a performance contract, with monthly payments covering all costs, including maintenance, insurance and fuel. When the contract expires, the car returns to Riversimple to be used by the next customer.

BUILD A NEW MODEL

While studying for an MBA in 1999 at Cranfield University, Spowers began to think about the rights and responsibilities that come with money and explored corporate governance when writing his thesis. In 2001, he attended the first annual conference of the Chaordic Commons in the US. Dee Hock, the founder and former CEO of Visa, developed the concept of a 'chaordic' system, a portmanteau combining 'chaos' and 'order'.

The chaordic concept of organisational design is modelled on how adaptive complex systems really work, particularly the ecosystem. The system encourages organisations to take clear strategic sustainable steps that benefit the community. Some businesses have adopted the model

to distribute responsibility equally throughout the company. Riversimple has clearly been influenced by the chaordic system, which encourages businesses to operate through a network of equals rather than hierarchies of authority. Spowers says: "My feeling after engaging with academics is that corporate governance is getting a lot of attention these days but it is generally about making existing governance less bad and doesn't have the mandate to address structural flaws.

"I've been told a number of times over the years, 'Why don't you just go and build your cars and worry about your fancy ideas later?' The problem is that the only opportunity you have to define the rights and responsibilities within a company is

THE SIX CUSTODIANS



Investor
Christopher Neale, finance consultant



Staff
Dr. Stafford Lloyd, systems and sustainability engineer, Riversimple



Environment
Peter Lang, environmental consultant and researcher



Commercial partners
Stewart Dow, product and market development manager, The BOC Group



Customers
Andrew Davis, CEO, Environmental Transport Association



Community
Peter Davies, consultant, Project Development Partnership

when you're working with a clean sheet of paper. You can't retrofit our governance structure into an existing company because that would mean shareholders would have to give up rights."

All of the six custodian representatives at Riversimple are

kept on an equal footing. Checks and balances have been built into the system through the appointment of a steward who is responsible for auditing and monitoring governance and ensuring the six benefit streams remain balanced. In addition to the custodian representatives and the steward, there is the traditional operating board whose job it is to pursue the purpose of the company, with the same autonomy and agility as any normal board, while balancing and protecting the six benefit streams. The steward and the board work together to monitor each other's activities.

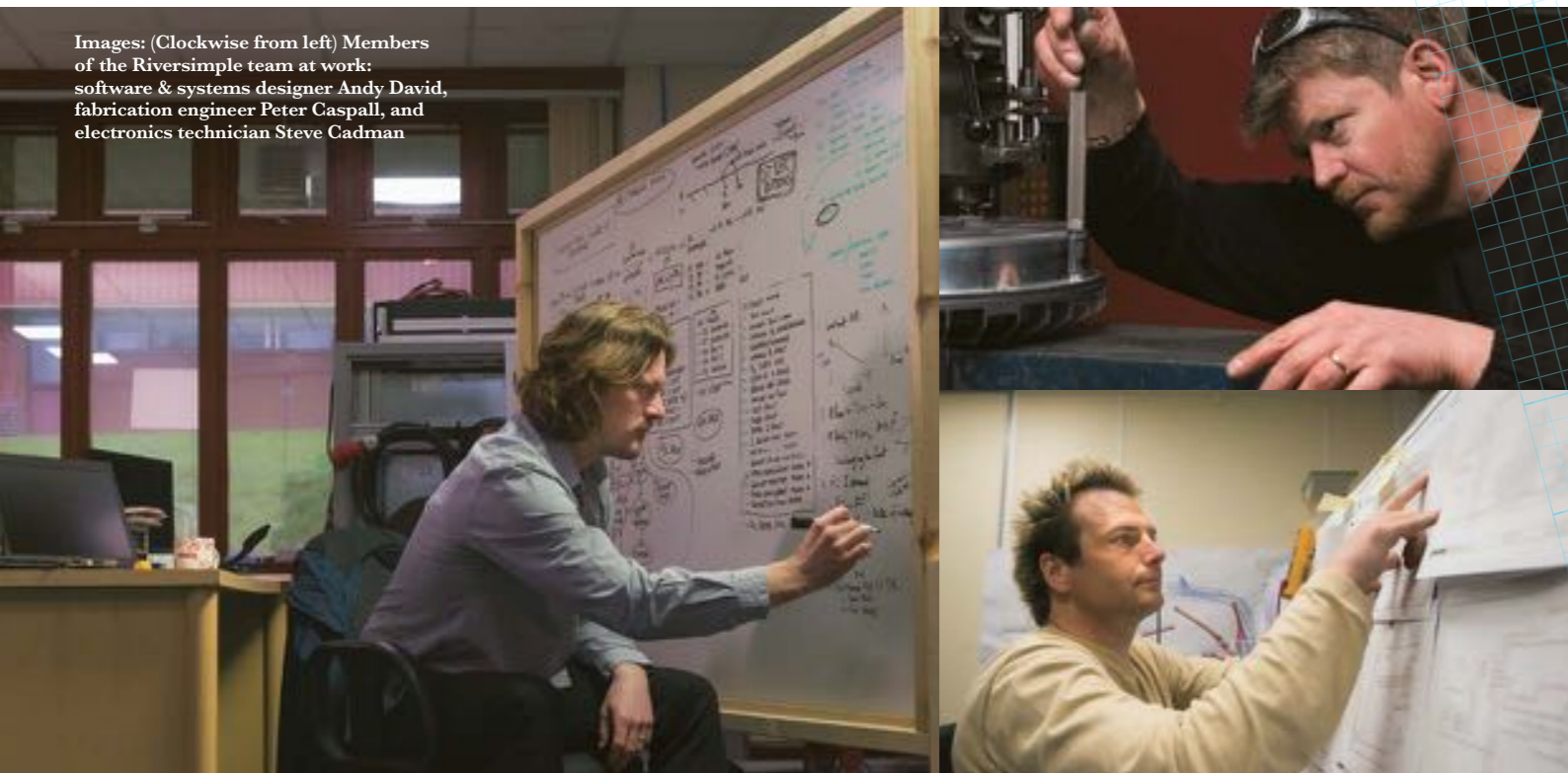
“IT IS ABOUT ALIGNING THE INTERESTS OF ALL ACTORS IN THE COMPLEX SYSTEM THAT IS INDUSTRY, COMMERCE, SOCIETY AND THE PLANET”

Spowers likens the structure to the four principles of a democracy: "You have an independent legislative body, which is the upper house, an independent executive, which is the lower house, an independent judiciary and a free press.

"In our case, the legislative body is the stakeholder group, they are there to represent in microcosm the interests of society. The executive is the operating board and the stewards' board is the independent judiciary. The stewards' board is the route of appeal if any of the stakeholders feel that their benefit stream is not being balanced and protected.

"Stewards investigate appeals and report back to the shareholders. The shareholders ultimately direct the executive to change direction >>>

Images: (Clockwise from left) Members of the Riversimple team at work: software & systems designer Andy David, fabrication engineer Peter Caspall, and electronics technician Steve Cadman



if need be. The fourth pillar is a free press, which in Riversimple's case refers to transparency - a 'need not to know' principle, in that anyone in the company can know anything, as long as there is no reason why they should not know it."

Spowers argues the separation of powers is vital for maintaining an appropriate balance in the short and long term between the six stakeholder groups and eliminating conflicts of interest to ensure better quality of decisions. Quoting US architect Richard Buckminster Fuller, Spowers says: "You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

STEP CHANGE

Spowers believes UK manufacturing could benefit from implementing this governance structure, where all stakeholders really do have a stake. "We absolutely feel it's better for business," Spowers says. "It's better

for the environment, better for policy makers and better for investors. So I absolutely believe it's of generic value. People have talked about multi-stakeholder governance before but it just isn't happening and in fact we've only found one organisation that was set up to balance two stakeholder groups - the interests of the investors and the interests of the suppliers in developing countries. That was a true 'twin stakeholder' governance model but it's very rare and we haven't come across anything like ours."

Spowers says the company has appointed people who are long-term supporters of the business. The environment custodian represents the interests of the non-human world, the commercial

"IF YOU WANT SUSTAINABLE OUTCOMES YOU HAVE GOT TO DESIGN THE BUSINESS TO DELIVER THEM"

partners' custodian represents the suppliers and infrastructure providers, and the community custodian speaks for the bodies that are impacted by the activities of the business but have no direct commercial relationship.

"At this stage, we want people who are not 'yes men' and are prepared to speak their minds, but are sufficiently engaged with the whole project that they understand the concept of give and take as we refine the process. So our environmental representative, Green Party member Peter Lang, is not afraid to object when he doesn't like something. He has completely bought into our purpose," Spowers says.

The community custodian representative is Peter Davies, who up until February 2015 was the Sustainable Futures Commissioner for Wales. Davies played a lead role in the development of the Wellbeing of Future Generations (Wales) Act, particularly through leading the national conversation on 'The Wales We Want' campaign.

Riversimple conducts bi-monthly calls with the six custodian representatives, which are led by the steward. The calls involve updates on the business and questions from the custodians about any concerns. As the company expands, the role of the steward will become much busier, particularly as Riversimple implements regular audits for the six benefit streams.

Riversimple is very open about its technology and standards and hopes to encourage others to follow or improve upon what they have achieved. Spowers says the company would be delighted if anybody else wants to adopt its governance structure: "We want to prove that this model can be successful and we're not trying to persuade people to adopt this for altruistic reasons - we think it's just better business. Similarly, we're not targeting the eco community with our car. We want people to take our car because they want it. We think it's very efficient and that's a good thing but it also looks good (it's designed by one of the designers who worked on the Fiat 500, Chris Reitz), it's cool, it's techy and it is a more convenient way of acquiring the 'usership' of a car."

LESS BAD ISN'T GOOD ENOUGH

The end goal for Riversimple is the elimination of the environmental impact of personal transport. Spowers says he knows elimination is an ambitious goal but a goal of reducing environmental impact is not enough. "Being 'less unsustainable' is still not sustainable and 'less bad governance' still isn't good governance," Spowers argues. The next step in moving towards this goal is to raise capital through crowdfunding and to build more hand-built cars like the existing Rasa for a UK trial involving 20 cars. In parallel with this plan, Riversimple is undergoing further



RASA

Rasa is not only powered by the hydrogen fuel cell, but it also captures kinetic energy as electricity when the car brakes, and is built with lightweight but strong composite materials. It weighs less than half as much as a conventional car and it's no accident that many members on the Riversimple team have worked in Formula 1. You can find out more about the car at riversimple.com

development work to open a production facility by the end of 2018. The cars made at the production facilities will look exactly the same as those that have been built by hand, but will cost much less to make.

The Riversimple model is one that promotes a quality management approach as the bedrock of the organisation. If the business and product succeeds, it will demonstrate the value of such an approach. "I don't want to suggest that what I have to say constitutes a comprehensive recipe for a sustainable business,"

Spowers says. "There are gaps in our understanding. This is unknown territory so by definition there are some unknowns. If there is one unifying theme though, it is about aligning the interests of all actors in the complex system that is industry, commerce, society and the planet."

The innovative approach and strategy will form a crucial learning point and continue as an aspiration for leaders in quality and business, but is the manufacturing industry ready for a systems change and a shift to true sustainability? ■

Follow it

Follow the journey of Riversimple as we report on its development over the coming year. Updates will appear in **My CQI** and the **Knowledge** email, alongside other great case studies and technical content designed to improve your understanding of governance, assurance and improvement.