

Demand and conquer

New company Inventa finds demand for products yet to be invented and locates the technology to make them work

BY AUSTIN WILLIAMS

How often have you wanted a product to fulfil a simple function only to realise that no such product existed? Teflon-coated metal cladding; a decimalised brick; a shelf with a built-in spirit level; self-sealing vapour control layers; pre-finished tanking for above-ground externals; or just an attractive rooflight? It shouldn't be so difficult, but it seems that there is often a straightforward mismatch between designers' demands and manufacturers' supply.

This dilemma is usually resolved in one of two ways: the designer and manufacturer get together to explore the brief and come up with a fast-track invention or a new manufacturing solution (see, for example, b-consultants' SmartSlab and Heatherwick's Blue Carpet glass tiles), or the architect cuts his losses, uses existing materials and compromises on the design aspiration.

Now a new company, Inventa, has been set up to recognise hidden market potential, flag up the business opportunities and implement real technological innovations. And just when you thought that the construction industry was a hopeless case, Inventa has chosen to focus primarily on the needs of the built environment, albeit in the loosest terms.

Suits you

Based in Hampshire and led predominantly by young power-suited men-about-town (their web photos

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show them in either jackets or open-necked shirts to suit your political persuasion), Inventa is a fascinating intervention in the architectural business world. To a certain extent, it turns common manufacturing processes on their head.

In the romantic version of events, innovation occurs by dedicated souls burning the midnight oil in their garden sheds – people like Brian Bennett and his cure-all skin cream formula, or Trevor Baylis and his wind-up radio. Historically, however, innovation has tended to materialise as a manufactured product through the organic process of scientific advance. Such advance often occurred in spite of itself. Knowledge for knowledge's sake. The very idea of scientific development often found an application after the event.

Take Teflon, for example. Investigations in the 1930s by Roy Plunkett for DuPont into freon freezing agents gave rise to an observable condition that had no predetermined use. Subsequently, the application of this research to manufacture PTFE (polytetrafluoroethylene, aka Teflon) transformed the construction industry, as well as the domestic saucepan market. This advance occurred by accident and it took several more years of trialling and exploration to work out its best application.

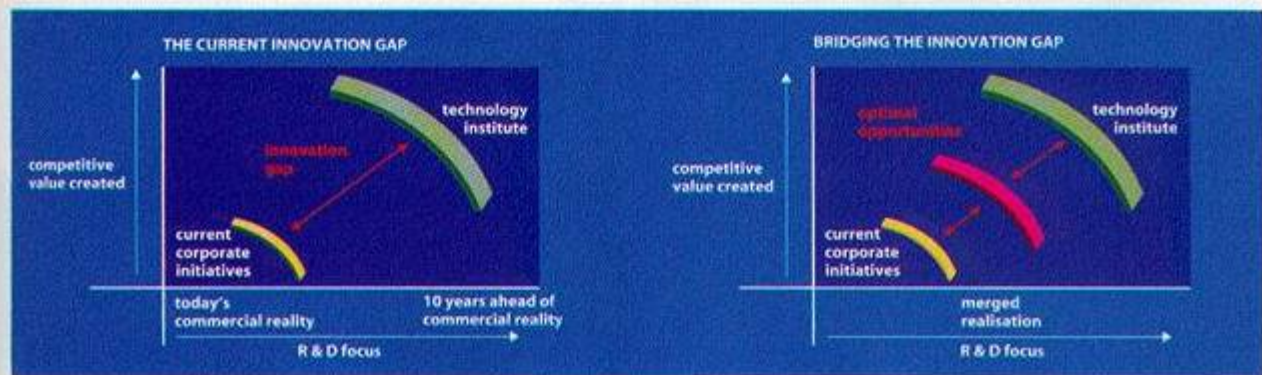
This was an innovation turning itself into a product. Inventa, on the

other hand, has products in mind and is looking for innovations to make them real.

Rather than allowing scientific advance to develop randomly – to discover, accidentally, exciting new advances and pontificate about the possible practical applications for those advances – Inventa recognises that scientists and product manufacturers speak different languages, and that this, it believes, is why so many potential products go to waste. A naïve theory, but a theory at least.

There are, says executive director Gideon Davenport, 'major technological developments out there, with clients crying out for products that make use of those developments, and yet neither side knows how to bring them to market'. So Inventa acts as an agent for technologies that have not yet found a practical placement. To a certain extent it is reclaiming the mantle of Victorian business entrepreneurialism by working with manufacturers to find marketable niches and then finding the technology to fill them (although it is worth pointing out that in the Victorian era they would never have thought about using a third-party agent).

This is the point – Inventa recognises the risk-averse nature of business technology today and, to its credit, is trying to maintain a sense of risk-taking, albeit by minimising the risk to its clients. Instead of waiting for a boffin with a scientific/technological development to scabble around for a practical application, Inventa starts with the manufacturers', suppliers' or designers' needs and works back to find the technology that might fit. While this is good for business and opens up the potential for innovative



solutions, it is sad that there is such a lack of commercial nous in science, and especially in construction science, these days.

Start-up

Set up in 2001, Inventa comprises a four-strong management team with a good pedigree in business development, marketing, innovation and technology marketing. Davenport himself has worked as the lead strategy consultant for the Stanford Research Institute, but suggests that this new venture is the most exciting he has ever been involved with. 'The construction industry needs more and more solutions to meet the technical demands placed on it,' he says, adding that he is centrally placed to help find them.

To this end, Inventa has 'very good' access to a great deal of untapped innovative knowledge. It is supported by relationships with its major European research and development partners, such as QinetiQ and the Fraunhofer Institute, which have allegedly given it access to £60 billion of research information and resources that include up to 30,000 scientists. From PhD papers and research labs to scientific reports to the military, there is a world of technological advances being moot-

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The Elephant and Castle Regeneration Project team has appointed Inventa, along with consulting engineer Brian Dunlop Associates, to advise on the feasibility of establishing a public/private joint venture EESCo (Energy and Environmental Services Company) to provide heating, cooling and power at a local level for Southwark council's £1.5 billion development in south London.

Inventa will identify key technologies and capabilities that the project team can employ, focusing on the design of renewable energy and alternative sources of water supply, the delivery of energy and environmental services to residents and businesses, climate-responsive architecture and urban design, on-site generation of heat and power, and community heating and power infrastructure, as well as potential commercial partners and methods of alternative funding.

Chris Horn, Elephant and Castle urban redevelopment project director, says: 'Inventa has been appointed to bring innovation and thinking to all areas of this project and will look to harness the knowledge of its European technology partners, as well as its extensive commercial network to meet the long-term objectives of this project.'

Development stages

Inventa has identified four stages of involvement:

1. Defining the brief and objectives

The focus here is on the market and application rather than production and materials, to allow maximum flexibility in the later thinking stage. Executive director Kerry Thompson says it is at this stage that Inventa 'identifies opportunities many companies previously did not know existed to technology requirements they thought were unsolvable'.

2. Assessing appropriate technologies

At this point Inventa undertakes briefings with technology partners, such as materials chemists and process specialists, to identify and assess a range of candidate technologies.

3. Agreeing the technical and commercial opportunities

This stage sets out the actions required to achieve full implementation. This might include the need for prototype testing, further R&D, licensing or joint venture considerations.

4. Facilitating the transfer of technology from Inventa partner to industry client

Rather than just getting the information and letting the two sides get on with it, Inventa stays on board to facilitate smooth transition and identify and resolve any unforeseen technical and business issues that arise from commercialisation. This is particularly important because of the language gap between the research and manufacturing worlds.

ed every day. Inventa likes to match up manufacturer demand with this potentially lucrative technological knowledge bank. As it says in the jargon, Inventa 'identifies new advances in technology that companies in the building and construction sector can employ to achieve competitive advantage through product differentiation'.

For example, military scientists are forward-thinkers – unrestrained by normal funding and philosophical (possibly moral) constraints – who are working on hush-hush technologies and research programmes that are 10 to 15 years ahead of any public disclosure, let alone commercial application. Inventa is able to tap into this research bank, say, five years ahead of anybody else, and is therefore able to provide manufacturers with a market lead – in terms of materials, processes, R&D, or simply hypothesis. When approached by a manufacturer with a specific brief requirement – like 'build a better mousetrap' – Inventa can trawl its patents and research programmes to find

ideas that might give a competitive edge to a new mousetrap manufacturer. This is the opposite to an R&D programme coming up with something that it then decides to market to mousetrap manufacturers. Inventa, acting as a catalyst, says it aids both sides.

With the two sides of supply and demand not even recognising that the other exists, it makes you wonder whether applied chemistry might have suffered if Inventa had been around in the 1930s and stitched up a copyrighted deal with Roy Plunkett and a saucepan manufacturer all those years ago.

That said, Inventa does have a wealth of knowledge that it would be foolish to ignore. Its assistance to the construction industry could be great; the range of solutions to an as-yet-unknown list of demands is only as wide or narrow as the clients' imagination. Add to that the fact Inventa has a certain 1980s-style get-up-and-go, and you realise that that in itself is a rare commodity these days.