

Mapmaker follows his own path

Entrepreneurship

Jack Dangermond, the head of geographical data company ESRI, has navigated 40 years of change in the tech sector, writes **Maija Palmer**

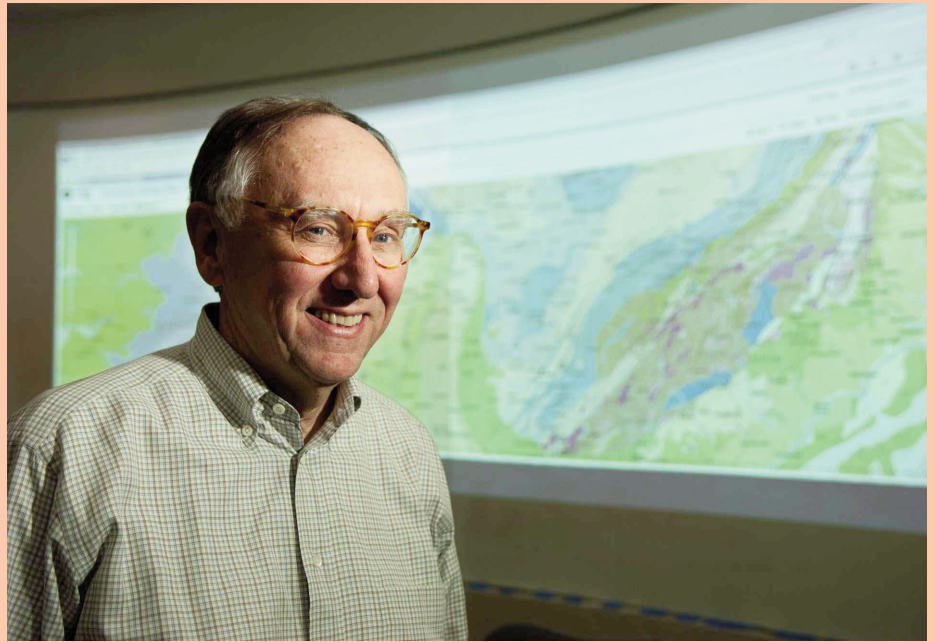
In a technology sector known for young entrepreneurs who splash their cash on fast cars and yachts, Jack Dangermond is a bit of an oddity.

He still drives a beat-up old station wagon, although he has a personal fortune estimated at \$2bn in 2009 and he still runs the privately held company he set up four decades ago. And at 65, he is still chief executive of California-based ESRI (Environmental Systems Research Institute), the world's fifth-largest privately owned technology company. Its geographic information system software enables analysis of complex geographical data for organisations needing to make big, complicated decisions relating to a location. BP, for instance, is using it to track the spread of oil after the Gulf of Mexico disaster.

"My wife is always making fun of me and saying I should buy something better but I just don't like [the idea of spending lots of money on myself]. It seems pretentious and unreal to me," Mr Dangermond says, while biting into a plain bacon sandwich in Borough Market, the trendy farmer's market in London. He is in the UK to receive an award from the Royal Geographical Society for promoting geographical science. He does have an indulgence, however – trees. A keen conservationist, he buys thousands of acres of "junk" land in southern California in order to reforest it.

The son of Dutch immigrants to the US, Mr Dangermond trained as a landscape artist and city planner before a stint as a researcher at Harvard's computer graphics lab led him to develop the mapping tools that became the basis of his business.

ESRI, which Mr Dangermond runs with his wife Laura, who co-owns the



Location, location, location: Jack Dangermond started ESRI to help organisations analyse complex geographical data to to make decisions relating to a location

Ed Carreon

company, has an annual turnover of more than \$1.2bn (€953m, £795m) and more than 300,000 customers, including most of the world's governments.

Customers for ESRI software include organisations trying to rebuild infrastructure in Haiti, the US military, the UK Ordnance Survey and the UK's Metropolitan Police, which uses it to

'We tell stories with maps about global warming, we can design more liveable cities'

map crime statistics in London. Big retailers such as Walgreen's, the US drugstore chain, and coffee chain Starbucks use the software to decide where they should locate stores and what items are most likely to appeal among various local demographics – such as where people are more likely to buy budget nappies and baby formula rather

than expensive hangover remedies. It is even used by diamond prospectors to help analyse anthills, an indicator of gemstone deposits.

"Something like 80 per cent of business decisions have a location element. In fact, it's probably higher than that," says Mr Dangermond. "This is IT that matters, that has the potential to help the world. We tell stories with maps about global warming, biodiversity, we can design more liveable cities, track the spread of epidemics. That makes a difference."

Recently, popular understanding of the value of maps has been boosted by new consumer-focused, internet-based mapping services such as Google Earth or Microsoft's Bing maps. These have spawned a huge number of tools, from celebrity-spotting guides to traffic data and where to buy the cheapest petrol. "We don't really compete with them but it has done our business good because it has helped people know more about geospatial analysis," says Mr Dangermond.

However, ESRI's software is much



Charted waters: BP's oil spill mapped against marine life and other factors

more complex and offers customers a deeper level of analysis than Google's or Microsoft's. It allows multiple layers of data to be overlaid on one map. In the case of the BP oil spill, it can help track the spread of the oil against information about conservation areas, marine life data, currents, weather and other factors.

"Consumer mapping is very cool, but [Google Earth and the Bing maps] are really just about visualisation . . . They are not set up to be data management systems or for real spatial analysis," he says.

While consumer mapping services benefit ESRI by raising awareness generally, attracting a new audience has also forced some changes such as rolling out a version with simplified controls. The company is also putting some of its tools online so that smaller companies and consumers can use them. This includes creating an internet service, Business Analyst Online, where individual queries can be run for as little as \$25. A licence for the software used by big clients can cost about \$40,000. "Large retailers have always been able to get a geographic advantage over smaller ones, but the smaller ones can access some of that as

well. We are getting several thousand pops a day," says Mr Dangermond.

The move online, aimed at reaching a larger audience and making the technology easier to access, is only the latest in 40 years of technology shifts weathered by the company. Mr Dangermond started out in the days of mainframe computers, and ESRI's business model was to sell just a few licences. Mr Dangermond then saw the order of magnitude increase dramatically and repeatedly as minicomputers, Unix workstations and personal computers emerged. The move to put information on the internet will increase user numbers by another such jump, he believes.

Few software companies survive such change. One of ESRI's strengths may be that it spends more than 20 per cent of revenues on research and development, about double what is typically spent by tech companies.

Also, unlike the start-ups sustained by multimillion-dollar venture capital funding rounds, Mr Dangermond has only borrowed once: a \$5,000 loan from his mother near the outset, which was tricky enough. "It was difficult . . . She waited a day before deciding to give it to us," he says, rubbing his eyes under his glasses at

the memory. "I am not that good a manager for me to be comfortable borrowing someone else's money," he adds. "It took us years to do it, building up incrementally, but we built a financially strong company."

Nor has he ever been tempted to sell or list the company on the stock exchange, in spite of repeated approaches by investment bankers. "You have to decide who you are going to serve – stockholders or your customers," he says, adding: "I could have stayed on at university, but I was passionate about getting the technology out to customers."

If those values seem a little homespun and cautious, they may also be coming back into fashion. Initial public offerings are increasingly rare in the tech sector. There were seven technology IPOs in Europe in the first three months of 2010, compared with 33 in the same period in 2006. Funding has also become more difficult. US venture capital funds raised just \$3.6bn in the first quarter of this year, the slowest opening quarter of a year since 1993.

For technology entrepreneurs hoping to build a business that will last, the path mapped out by Mr Dangermond may be an attractive alternative after all.

On the younger generation

After 40 years in business, Jack Dangermond has some words of caution for the next generation of technology entrepreneurs.

- **Look beyond money.**

"They bother me. They are so focused on starting a company and getting rich quick. They are not interested in their lives mattering. It's all about starting a company, getting out and getting the sports car."

- **Customers are king.**

"They don't seem to be interested in serving customers or building up a neat company. There must be people

who do want to do these things but perhaps the role models are not there."

- **Beware venture capital funding.**

"Many of them are already talking about their next funding round before they have established the product. Forget it. There is a whole lifestyle built around venture capital funding but having a lot of money can get you into a lot of trouble. You lose discipline."

- **Few have built lasting companies.**

Microsoft and Google, for example, meet his approval. "But how many successes are there? Not many."