

Family Businesses

The Wallenbergs: where money meets Swedish science

One of the most powerful families in Europe offers a model for avoiding disputes

RICHARD MILNE

Call it flower power for the 21st century. Inside a university in central Sweden, Magnus Berggren demonstrates how he placed an electronic circuit inside a rose. Using only organic material, the professor managed to make electronic wires inside the flower's stem and even added logic gates that could turn the current on and off.

Prof Berggren, head of the laboratory of organic electronics at Linköping university, says the development could lead to plants and trees being turned into solar energy producers with batteries stored in the stem. Another application could be to delay flowering so that roses and tulips reach shops and homes fresh. Yet the discovery almost didn't happen. Many experts were sceptical, with one Swedish biologist describing it as "a stupid idea", but Prof Berggren received funding to support his organic bioelectronics research from the Wallenberg family. The family's main philanthropic vehicle, the Knut and Alice Wallenberg foundation (KAW), which celebrates its 100th anniversary this year, is the second-biggest backer of basic scientific research in Europe, having distributed SKr24bn or \$2.7bn in its lifetime.

The foundation hands out grants that allow scientists to investigate whatever they want without the obligation to produce results – a rarity



The foundation set up by Knut and Alice Wallenberg, centre, funds research into circuitry in plants (top left), cancer-detecting nanotechnology, drones and tissue polarity in plants – Magnus Berggren/Wallenberg Foundation

in research these days. "Most money is tied to something in terms of milestones. [So] you don't always have the money to do the brave stuff," says Prof Berggren.

As much as the foundation has done for science in Europe, and specifically in Sweden where it has made the Scandinavian country of 10m people a research powerhouse, it is also the secret ingredient in what is arguably Europe's most powerful business family.

It is the foundation – and not the family – that owns stakes in companies such as Ericsson, Electrolux and Nasdaq. It is this that the Wallenbergs credit with giving them such longevity and avoiding the

squabbles that have hampered other dynasties. "It would not have been possible to get to the fifth generation without it being a foundation," says Peter Wallenberg Jr, 57, the chairman of KAW.

Peeling back the layers

On a crisp winter morning in Norrköping, 100 miles from Stockholm, Mr Wallenberg is on his annual visit to see what the foundation's money has bought. Inside a small meeting room in the basement of the town's visualisation centre, Anders Ynnerman is showing off a touchscreen table.

With quick swipes, the professor in scientific visualisation is able to take the coffin of an Egyptian mummy called Neswau and peel back the layers to show successively the inner coffin, cartonnage, wrapping and finally the body. The technology even discovered the imprint of an amulet on the body, which, using 3D scanning, was made into an image and printed. It is on sale in the gift shop.

The technology, backed in part by the foundation, is used both in the CSI television series and real life to perform virtual autopsies. Bodies are put in a CT scanner and pathologists

can then take away the skin, fat or muscles to investigate the cause of death.

Prof Ynnerman goes on to show other techniques he has developed for what he calls "the immersive visualisation of big data". He shows a Siemens gas turbine that can be stripped away and twisted so that maintenance engineers can see, and be trained on, individual components. Buildings can be dropped into an interactive map to show how traffic flows change due to their positioning. And lifelike objects – such as drones or Ikea furniture – can be placed into pictures or films with extremely realistic lighting. Thirty-five of his students are working in Hollywood on effects.

"The foundation's support has been instrumental in building things. They have appreciation for the whole process from basic research to bringing it to the people," says Prof Ynnerman, who has also attracted funding from Nasa. Goran Sandberg, executive director of the foundation, says of the professor: "In order to keep a guy like that in Sweden you need to give him resources."

The KAW foundation gave

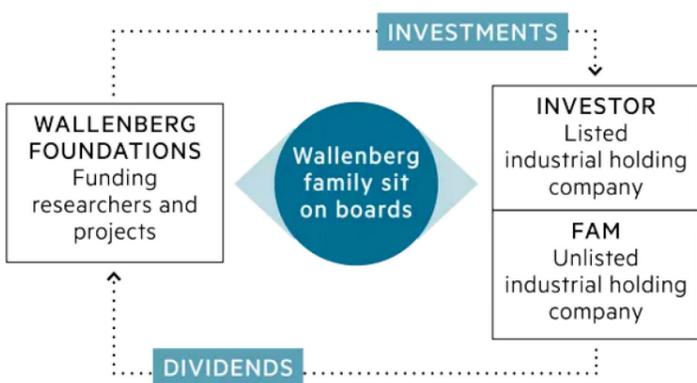
The Wallenberg foundations

- Knut and Alice Wallenberg Foundation** (created 1917)
Research in medicine, technology and natural sciences
- Marianne and Marcus Wallenberg Foundation** (1963)
Social science and clinical medicine
- Marcus and Amalia Wallenberg Foundation** (1960)
Humanities with a focus on learning and the younger generation
- Jacob Wallenberg Foundation** (1960)
To promote trade and industry and activities that are charitable, artistic, athletic or beneficial to health
- Foundation for Jurisprudential Research**
(1995, based on earlier organisation founded 1947)
- Dr Tech Marcus Wallenberg Foundation for Education in International Industrial Entrepreneurship** (1982)
- Berit Wallenberg Foundation** (1955)
Art history and archaeology
- Marcus Wallenberg Foundation for International Scientific Collaboration** (1976)
- Peter Wallenberg Foundation** (1996)
Teaching or education related to economics and technology
- The Foundation for Economic History Research within Banking and Enterprise** (1994)
- Ruth and Richard Julin Foundation** (1969)
Non-profit private healthcare institutions

out about SKr1.8bn last year, equivalent to the entire amount it distributed from its inception in 1917 to 1991. Alice and Knut, who at the time was also Sweden's foreign minister, had built up a fortune in stakes in Swedish companies but they had no children. So they put their investments – a relatively small endowment of SKr20m that would now be valued at around SKr570m or \$64m – in a foundation with the aim of promoting scientific research and education that is landsgagneligt, a concept meaning "beneficial to Sweden". The endowment has now grown to SKr90bn (\$10bn).

The family, descended through one of Knut's brothers, have largely run the foundation and many of the companies since then, but without any ownership stake. Most of the public focus has been on how they run the companies in which they hold large stakes, which include the multinational

The structure



Source: Wallenberg.com

Family affairs: Scandinavia leads the way in foundation-building

Many of the biggest companies in Scandinavia from Ikea, to AP MollerMaersk are controlled by foundations.

Created by company founders to ensure independence they are also used to avoid potential family disputes after their death. Ingvar Kamprad, 90, the founder of Ikea, for instance set up twin foundations in the Netherlands and Liechtenstein to control the flat-pack furniture empire in order to give it “eternal life”. His three sons play roles in the empire but not crucial ones and the foundations’ purpose cannot be changed.

Adherents of foundations argue that they provide stability and protection from acquisition. But critics say that, without the sanction of a possible takeover, foundation-run companies can lack discipline.

Throughout Scandinavia, foundations are having to adapt. For instance, the family shareholders behind Maersk have played a larger role in recent months as part of the conglomerate’s break-up plans.

“Being a foundation can insulate you from a lot of stuff,” says one company adviser. “But they’ve realised that being inactive just isn’t a choice — business conditions are changing so fast these days.”

At Lego, Jorgen Vig Knudstorp, the former chief executive, credits family and foundation ownership as critical to the toymaker’s recent revival as the most profitable group in its industry. He is now working to co-ordinate better, relations between the family, foundation and company as well as improve governance in the group.



Knut Wallenberg and his wife Alice who started the foundation in 1917. He was the chairman of the Enskilda Bank, Stockholm © Wallenberg Foundation

the foundation and the companies is the family — largely represented in the fifth generation by the cousins Jacob, Marcus and Peter. They sit on company boards trying to generate more dividends from the businesses to fund the foundations.

“Poker tells CEOs: ‘the better you do, the more money we give to science,’” says Mr Sandberg. About four-fifths of the money is given to research with the remainder reinvested.

A general adage on family businesses says that the first generation builds it, the second generation spends it and the third generation squanders it. Research by the Family Firm Institute suggests that only three per cent of family businesses make it to the fourth generation. There are countless examples of where it has gone wrong. The Porsche and Piëch families that control carmaker Volkswagen have, for example, squabbled for decades among themselves, something company insiders blame for the weak governance behind the emissions scandal and previous bribery problems.

But for the Wallenbergs, who despite their power do not feature in lists of the richest Swedes, having a foundation avoids disputes over ownership

and allows a few members of each generation to play the crucial roles.

Steen Thomsen, a professor at Copenhagen Business School and expert on the foundation-owned group, says the Wallenbergs operate one of the biggest such empires, measured by revenues, in the world. He argues that in business no one ownership model works best, saying “it is good to have a multitude of arrangements from the long term of foundations to others like private equity or hedge funds”.

Prof Thomsen says that the Wallenbergs do many things right including having a range of companies and a competence over how to run businesses developed over a long period. “With them, it’s not just about the next five years; they’ve been owning these companies for so long they feel all the repercussions through time,” he adds.

Foundation ownership is common in Scandinavia but it is far from universally accepted. Marcus Wallenberg has said: “Frankly, some of the other family companies cannot understand. [They say] ‘Why are you doing this? You have no stake in the game?’” Fredrik Lundberg, a leading Swedish industrialist, prefers a structure in which he and his daughters own their stakes directly. “You get more flexibility in the future, and you also work for the wealth of your family,” he says.

The Wallenbergs, however, remain convinced. “We work our butts off in the financial part but we do it for another reason and that is the development of Sweden. It is



Jacob, Marcus and Peter Wallenberg

how we have been brought up,” says Peter Wallenberg Jr, who has begun preparing the sixth generation for their responsibilities.

The foundation has been involved in many big education projects from the building of the Stockholm School of Economics and various museums and institutes to cutting-edge equipment such as a synchrotron radiation facility and supercomputers.

It is commemorating its centenary by building five public theatres with suspended domes in Sweden. Spectators in the one planned for Norrköping will be transported, in real time and 3D, from the International Space Station through the galaxies and into the outer reaches of the universe. “It’s better to look forward rather than back when you turn 100,” says Mr Wallenberg of the project.

Need to adapt

A similar spirit is behind the foundation’s largest grant: SKr1.3bn over a decade for research into autonomous systems and software development. The project brings together not just researchers and universities but also companies, both inside and outside the Wallenberg sphere.

The aim is to recruit 150 PhD students, making it Sweden’s largest graduate school, with research into areas ranging from automated mining to autonomous ships.

“There was a lot of research in universities, and a lot in companies. This is bringing it together,” Mr Wallenberg says. Left unsaid is the idea that many of the Wallenberg

companies, centred on traditional industry, could be put out of business if they fail to adapt to new technology.

A senior Swedish banker outside the Wallenberg sphere says: “The foundation work of theirs is hard to criticise. But there are always questions about the competence of each generation. You maybe gain experience by keeping it in the family but do you gain more competence? I doubt it.”

The foundation, however, is also seeing opportunities. Mr Sandberg, who admits that in pure money terms it is hard to compete with the likes of Stanford and Harvard, says that after the UK vote to leave the EU and the election of Donald Trump as US president “people are coming to us”.

Back at the Linköping laboratory teams of scientists are working on a variety of projects. One presents paper labels that incorporate sensors that can be used, for instance, to show Médecins Sans Frontières if vaccines have become unusable due to high or low temperatures in transit. Prof Berggren shows off small ion pumps that could be implanted in the heads of epilepsy sufferers to deliver neurotransmitters to stop seizures within milliseconds. Another group demonstrates paper that can conduct and store electricity.

For Sweden, trying to support not just leading researchers but some of Europe’s biggest industrial groups, the Wallenberg money is vital. Says Mr Sandberg: “If you can get the best minds to Sweden it will have the most tremendous effect on society.”



AP Moller-Maersk, Lego and Carlsberg are all controlled by foundations © FT montage

ABB, SEB bank, carmaker Saab. The listed companies in which the foundation has large stakes have combined revenues of \$130bn. But much less attention has been placed on the foundation, which has tended, even in Sweden, to operate in the shadows.

Peter Wallenberg Jr, nicknamed “Poker”, describes the family setup as a “closed circuit”. Controlling both