

Case Studies

GEO-METRIK - On the right track for 18 years

The Taiwan High Speed Rail requires only 90 minutes for the 345 kilometer trip from the capital Taipei to the island's industrial centre in the south. Companies from all over the world have contributed to the fastest railway line on the globe, which currently also constitutes the single largest railway structure. GEO-METRIK from Halle in Germany was part of this endeavour. For the super fast Shinkansen train to safely reach its destination on an earthquake-proof and elevated track-system, the tracks have to be positioned spot-on, with a tolerance of less than a millimetre. GEO-METRIK's surveyors had been commissioned with the task of measuring and aligning 123 high-speed points in the vicinity of train stations, plus roughly 75 kilometers of adjacent track.

"The track-system was placed in a trough and after assembly, it was secured with liquid concrete", chairman Bernd Paul explains. In technical jargon, such a concrete bed is called a "slab track", as opposed to ballast tracks. In order to ensure the exact position and height of the tracks, the team used a special measurement procedure, which had been developed in-house.

Between January 2004 and September 2005, 20 of GEO-METRIK's own staff and 20 more staff from project-partners went on-site, to Taiwan, and some of them even stayed there for several months. Hans-Jürgen Prochnow, chairman of the supervisory board, is full of praise for the efficient project management: "Taiwan had to be staffed on the fly, with people who knew the English language and who were able to travel immediately." Continual slight earthquakes posed more difficulties than the heat or typhoons: such tremors could ruin a whole day's work.

The Taiwan project, with a volume of 6.5 million euros, has been the biggest foreign assignment in the company's history, so far. Being an international showcase project, it has aroused the attention of other foreign customers, such as China. The current chairmen Bernd Paul and Thomas Henze joined forces with several other associates and founded GEO-METRIK Vermessungs-GmbH in April 1991, when they were both at the age of 30. Back then, they would have never dreamt of such a remarkable "metamorphosis", evolving from regional surveyors to specialists of worldwide renown. "As surveyors, we just as well could have gone into civil service. But we were young, creative and extremely energetic - and we wanted to make a difference", Thomas Henze explains their desire to be self-employed. "And we didn't have the slightest idea what else this would entail", Bernd Paul adds.

They started up their company with five subsidiaries, but without any capital resources, they took on 280 employees from the formerly state-owned "Staatsbetrieb für Kartografie und Geodäsie", they had Trabants in their fleet of company cars and they used an old barrack as their headquarters, to begin with. "The market situation was favourable, at the time. The whole of East-Germany had to be re-surveyed. And, we found some very good business partners." One of these partners was the Bürgschaftsbank, which had also just been established and who granted GEO-METRIK one of their first start-up bonds "But only after we had passed a two hour long exam", Paul remembers, with a smile.

Since the beginning of the 90s, surveying technology has developed in quantum leaps: Digital equipment, computerized analysis and satellite positioning have surpassed triangulation. Traditional surveyors with a theodolite have been replaced by high-tech specialists with mobile surveying gear on their back and a laptop-PC at the front, which will allow them to transmit all data gathered directly to a database in the office. A substantial part of the total investment sum of eight million euros was spent on such state-of-the-art technology.

Compared to other surveying agencies, GEO-METRIK is an enterprise of considerable size. This has proven to be an advantage, since the experts from Halle are able to handle even larger-scale projects.



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So, very quickly, they were commissioned for several representative projects, and only one year later, they set up their first foreign base in Poprad, Slovakia. Today, they operate additional offices in the Czech Republic, in Russia, Vietnam, China and Australia, and supply surveying services to a customer base of roughly 6000 clients, world-wide. 15 German subsidiaries contribute to civil works related to railways, roads and waterways, they survey underground gas or water distribution systems or even rise into the sky, to take digital arial photographs of real estate. The subsidiary companies have focussed on the very special needs of their respective customers. "But since all of us have learnt the same basic trade, we can quickly assemble large teams and pool our efforts into a single construction site, should the need arise.", Thomas Henze explains.

High availability, and the ability to assemble large teams on demand, is an important market advantage. Henze: "When the railway track for the German ICE was built, between Cologne and Frankfurt, no other company managed to dispatch 75 engineers plus cars and technical equipment." This degree of flexibility was transferred to the company's structure, in 2003. GEO-METRIK turned into a stock company and former subsidiaries have now become independent GmbHs (private limited companies), with the freedom to decide autonomously. GEO-METRIK's core business is supplemented by BIANCON Gesellschaft für Biotopanalyse (a company specialising in surveying biotopes), and since 2005 by SipeQ, a service provider specialising in geographical data. The survey agency has also founded its own leasing company for cars, which made sense because of the corporation's extensive needs for mobility.

A total of 200 permanent employees – 40 percent are engineering staff, the average age is 40 years – have generated a turnover of roughly 150 million euros, over the last 14 years. Though surveying typically only amounts to 1.5 percent of the overall cost of a project, it is this service which finally decides whether or not a structure is built upright and exactly on the required location.

The board is not expecting the domestic market "to significantly contribute to incoming orders", in the short term. Paul points at the transportation infrastructure. "This is why we need to acquire business abroad."

In 2005, GEO-METRIK INTERNATIONAL was founded. With this step, the company has finally come of age, alleviating the need for maintaining start-up bonds. Another investment made three years back, by the Mittelständische Beteiligungsgesellschaft, is intended to be redeemed in 2006. "However, without this sort of initial aid, the company would have never come off ", Paul und Henze believe.

The old barrack returned with glory and proceeded to play a major part at the company's 10th anniversary – an occasion honoured by the visit of Hans-Dietrich Genscher, amongst others. A television crew from Halle had shot a crime thriller in the style of the German television series "Polizeiruf". At the end of the film, "Polizeiruf" commissioner Schneider (aka Winkler) gives the following orders: "Don't detain – buy!". Which was an allusion at the planned restructuring into a public company.