

FRAUNHOFER IKTS IN FIGURES

FRAUNHOFER IKTS IN PROFILE

Budget and income

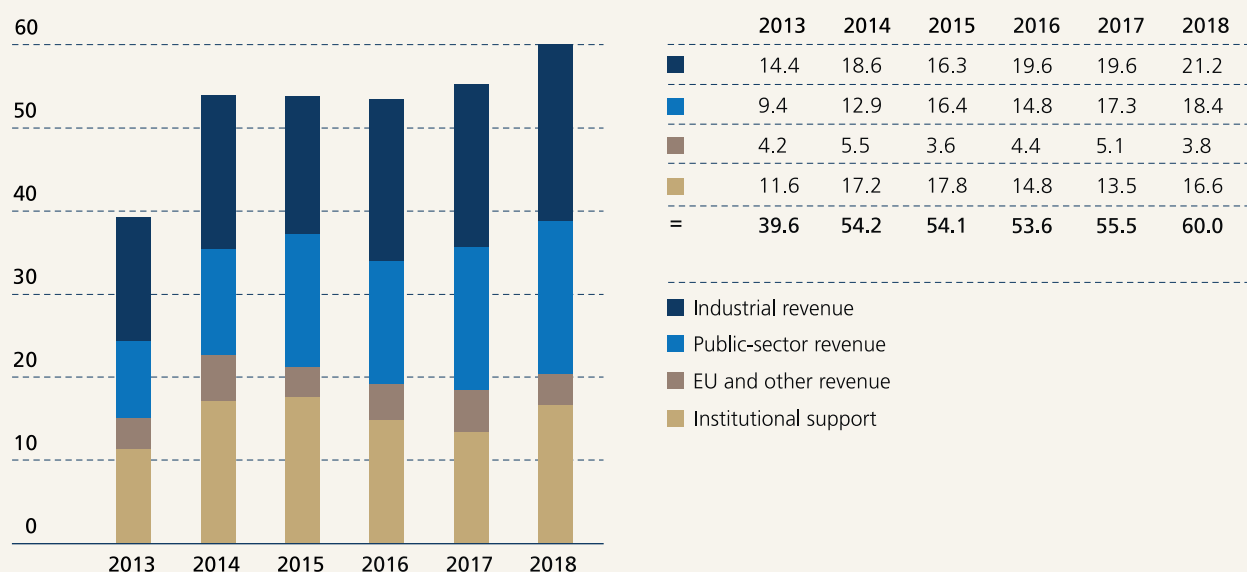
With 60 million euros, the total budget of 2018 exceeds the previous year's level by 5 million euros. 5.7 million euros were invested in reinforcing and modernizing our equipment; 3.9 million euros alone was used for strategic investments at the Dresden-Winterbergstrasse site. Material expenditure increased by only 0.2 million euros; it now stands at 19.5 million euros. By consistently optimizing the infrastructure, we were able to maintain costs for energy and water at their respective previous year's levels. Personnel expenditure increased by 3.3 million euros.

All in all, the external income increased to 43.4 million euros, of which 21.2 million euros stem directly from the private sector. Projects to the value of 8.7 million euros were commissioned from abroad; of these, 2.5 million euros are attributable to

projects with EU funding. The bulk of the projects came from the US and the EU, with a share of close to 25 % each, while China and India also played a significant role.

In a very positive development, the funding of IKTS projects by German federal states has increased by 15 % all in all, with funds coming from the Free States of Thuringia and Saxony. In the meantime, maintenance work at the complex of buildings in Maria-Reiche-Strasse has commenced. A major share of investment in the buildings in 2018 focused on updating the fire safety infrastructure. In 2019, we will see further significant costs when implementing the site concept. Smaller construction projects at Winterbergstrasse in Dresden focused on extending lab areas for structural and functional ceramics research. In total, 2018 saw construction measures carried out at the three sites for 1 million euros, in addition to the budget mentioned above.

Revenue (in million euros) of Fraunhofer IKTS for the budget years 2013–2018





The successful efforts to strengthen the network of IKTS continue. The Fraunhofer Project Center for Energy Storage and Systems in Braunschweig, the new research group in Cottbus, and our participation in the Fraunhofer Center in Portugal form the basis for intensifying our activities with regard to collaborative projects. Required administrative restructuring, however, increases the associated organizational expenses. New procurement directives (German regulation for awarding contracts below the EU threshold – UVgO) and the disparate cost accounting methods of the various funding bodies are a growing challenge. The disparities lead to insecurity when it comes to determining billable costs and financial planning. At the same time, reduced funding rates for Fraunhofer are an additional strain when it comes to developing strategic research topics.

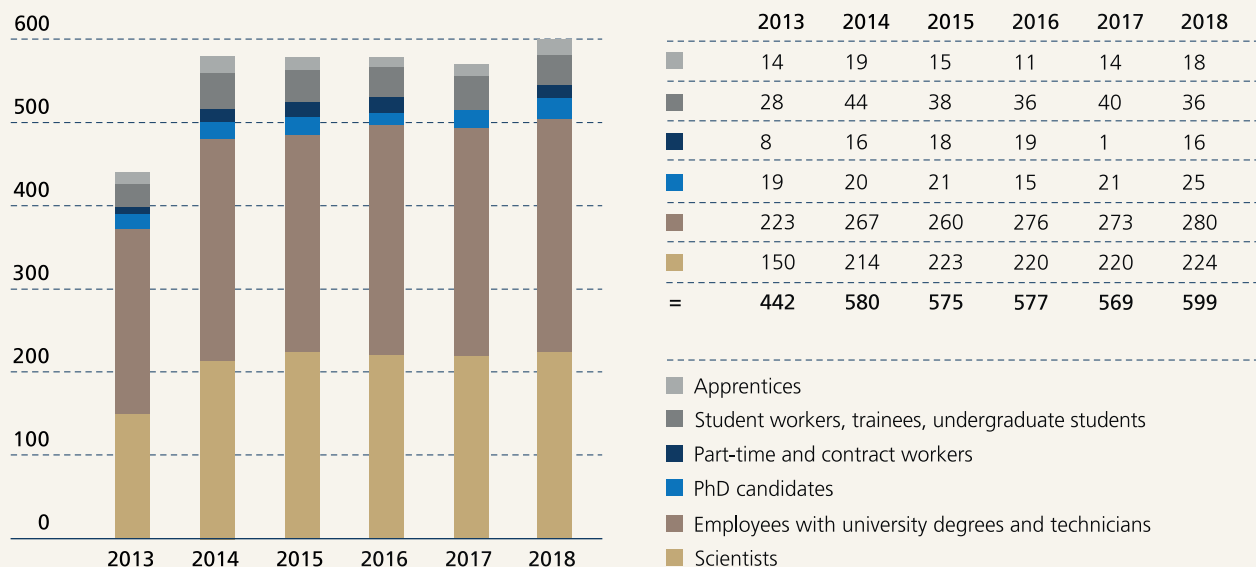
Human resources development

A total of 700 staff members work at the three sites. Owing largely to the strong growth of the Energy business division, we employ almost 30 more full-time equivalents than in 2017. The number of PhD students has increased again, this time by four. It now stands at 25. Nowadays many employees opt for part-time work to be able to put aside enough time for their families or other important matters. Therefore, for better comparability, the different groups are represented as full-time equivalents. Beside 224 scientists, 280 staff members have roles in technical areas. The share of female employees is

1 *Management of IKTS, f.i.t.r.: Prof. Ingolf Voigt, Dr. Christian Wunderlich, Prof. Alexander Michaelis, Dr. Michael Zins and Prof. Michael Stelter.*

Personnel developments at Fraunhofer IKTS

Number of employees 2013–2018, full-time equivalents, personnel structure on December 31 of each year



38 %; or 27 % when looking just at the scientific positions. It is our declared goal to recruit and promote female management talents.

The number of apprentices has increased by four positions and is now at 18. Also, further training to become a trainer provides employees with attractive opportunities for personal development. In 2018, IKTS has made great strides in systematically planning career opportunities and periods of employment. Human resources development planning is coming to the fore – and not just for our PhD students. Prospects of a specialist career are created in other areas as well. Personal career goals are supported while an open and transparent HR strategy is pursued at the same time. Revised salary options and further training opportunities will be important tools to recruit staff over the coming years.

The support program for refugees was used with success to prepare for university education in Germany or find employment in the technical field. We are very pleased with the broad support the program has received.

The lookout for 2019 is very good overall. Dedicated resources have been allocated to the planned recruitment of new staff.

Extending the research base

Within the classic field of activity of IKTS, the area of additive manufacturing has been broadened as part of our strategy. However, many projects will not be completed before 2019. Special attention is given to new technologies while looking at the economic aspect and the ability of processes to accommodate the production of multiple components. New test methods are being integrated. This will enable us to take on more projects focused on oxide and non-oxide materials, and hardmetal materials. Supported by the Federal State of Thuringia, the Hermsdorf site will receive a synthesis plant for nanopowders,

which will open up new possibilities in materials development – from structural ceramics to battery development. The construction of the Powder Synthesis and Extrusion Pilot Center, which will begin with a ground-breaking ceremony in April 2019, will provide ideal conditions for this focus at the Hermsdorf site. Sintering technology capacities in Dresden will be expanded. Unfortunately, current projects are delayed as suppliers are working to capacity. The area of maritime research will be further expanded. Efforts at the Dresden-Klotzsche site focus successfully on the development of novel sensor technology for the monitoring of wind energy converters. At the Dresden-Winterbergstrasse site, new technologies for the production of materials for deep-sea applications are implemented in conjunction with the required manufacturing processes. In Hermsdorf, a test facility for external pressure trials is currently under construction. The topic is being further developed in collaboration with our Fraunhofer sister institutes. The construction work in Braunschweig previously scheduled for 2018 has been postponed to 2019. Energy and environmental technology remains a key topic.