

THE FRAUNHOFER-GESELLSCHAFT

EUROPE-UKRAINE COLLABORATION IN AVIATION RESEARCH



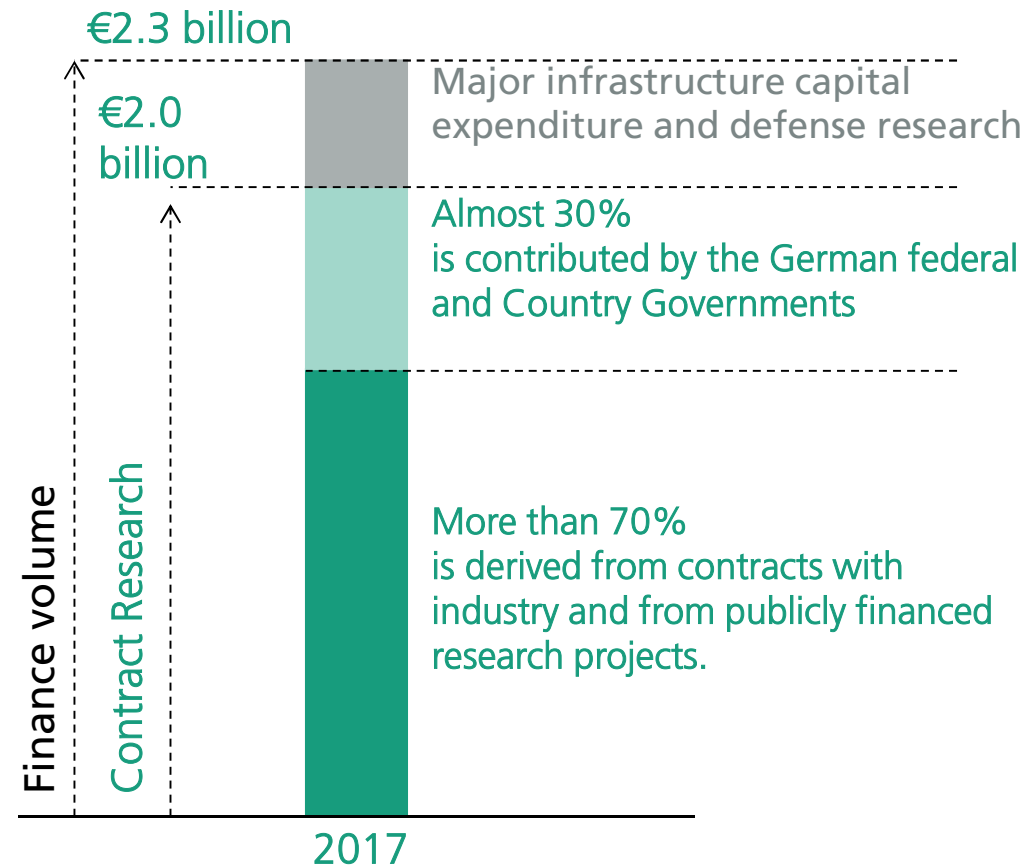
The Fraunhofer-Gesellschaft at a Glance

The Fraunhofer-Gesellschaft undertakes applied research of direct utility to private and public enterprise and of wide benefit to society.


25,300 staff




72 institutes and research units



Fraunhofer fields of research



Fraunhofer Subsidiary's and Center in Europe



Fraunhofer Austria Research

- Production and Logistics Management Division, Vienna
- Visual Computing Division, Graz

Fraunhofer Italia Research

- Fraunhofer Innovation Engineering Center IEC, Bolzano

Fraunhofer Portugal Research

- Fraunhofer Center for Assistive Information and Communication Solutions AICOS, Porto

Fraunhofer Chalmers Centrum

- Fraunhofer Chalmers Research Center for Industrial Mathematics FCC, Gothenburg

Fraunhofer GB Research

- Fraunhofer Centre for Applied Photonics CAP, Glasgow

Joseph von Fraunhofer (1787 – 1826)

Researcher

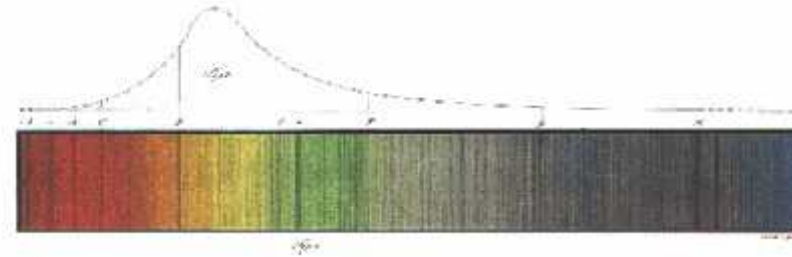
Discovery of the »Fraunhofer lines« in the solar spectrum

Inventor

New methods for processing lenses

Entrepreneur

Director and partner in a glassworks





Joseph von Fraunhofer

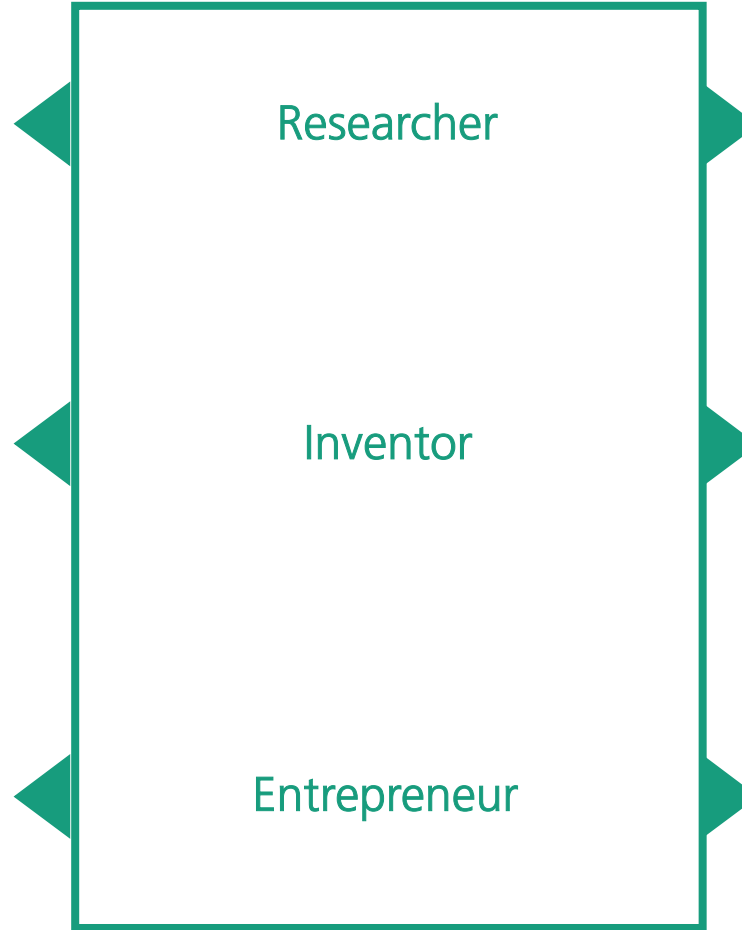


The Fraunhofer-Gesellschaft

Discovery of the »Fraunhofer lines« in the solar spectrum

New methods for processing lenses

Director and partner in a glassworks



Research and development on behalf of industry and state

mp3 music format, white LED, high-resolution thermal camera

Research volume: approx. €2.1 billion annually

THE NUTS AND BOLTS OF COOPERATION

How does Fraunhofer help its customers?

IMPROVING PRODUCTS

Enhanced performance
Cost efficiency

MOVING FROM PRODUCT DEVELOPMENT TO SHORT-RUN PRODUCTION

- Prototypes
- Manufacturing methods
- Short-run batches

MARKET ANALYSIS AND INNOVATION CONSULTING SERVICES

Monitoring of technological trends and market developments
Feasibility studies and return on investment analysis
Information on sources of funding

INCORPORATING NEW TECHNOLOGIES

- Fraunhofer is at the cutting edge of technological developments and understands how to funnel these into products

THE NUTS AND BOLTS OF COOPERATION

How does Fraunhofer help its customers?

ACQUIRING LICENSES

Fraunhofer carries out independent pre-competitive research

Inventions can be commercially exploited under license

CHARACTERIZATION, TESTING AND CERTIFICATION

High-quality equipment for a wide range of tests

Preparation of test reports and certificates

OPTIMIZING EXISTING PROCESSES AND ORGANIZATIONAL STRUCTURES

- Pinpoint the best ways to make improvements
- Motivate people to generate innovative ideas
- Reveal and exploit potential

COOPERATION MODELS

What are the different ways of working with Fraunhofer?

ONE-OFF CONTRACTS

Solve the problem
Launch the innovation in the business or the marketplace

LARGE-SCALE PROJECTS WITH MULTIPLE PARTNERS

→ Cooperation between multiple Fraunhofer institutes, external partners and companies

INTERNATIONAL COOPERATION

→ Exchange of scientists, lecturers and students
→ 2+2 projects (Germany + Ukraine)

STRATEGIC PARTNERSHIPS

Long-term partnerships that evolve from non-contract, pre-competitive research

INNOVATION CLUSTERS

→ Regional partners from research, industry and universities

SPIN-OFFS

→ Fraunhofer researchers branch out on their own, often with the customer taking a stake

ain activities of the European aviation industry

Increasing the efficiency of aircraft production

Shortening process times for final aircraft assembly line

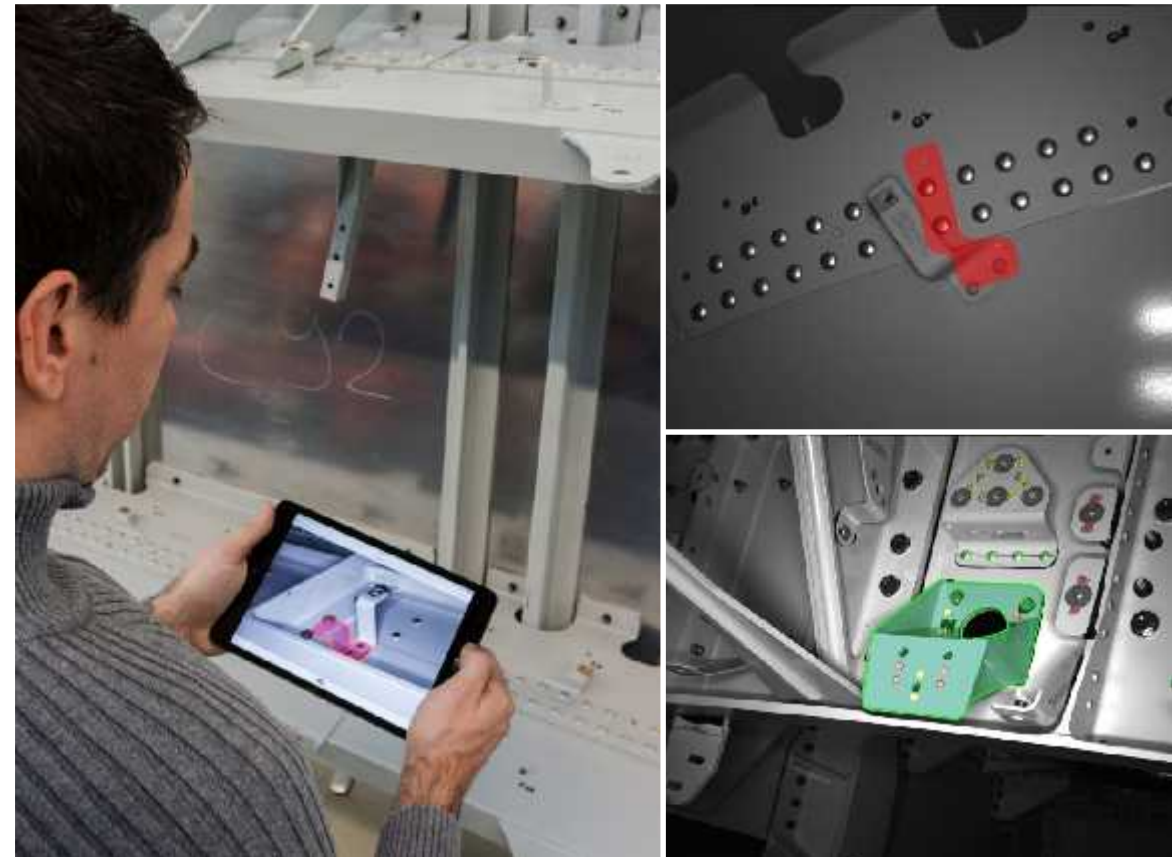
Inline quality inspection and digital documantation of all production steps

Supporting people in performing manual activities with physical and information technology assistance systems

Example for visual assistance systems in assembly

Target position is displayed by means of augmented reality

Easy application of mobile devices for post-processing support



[Sources: Fraunhofer]

Example for optical inspection systems in assembly

Every 3-4 seconds a optical inspection takes place

Archiving the test results in a digital product file

In the case of a required rework, there is direct access to the digital product life record



[Sources: Fraunhofer]

our contact for cooperations in the aviation industry

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