

# Human Resources Strategy for Researchers (HRS4R) – Summary of the internal analysis and objectives

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# 1 Fraunhofer – an overview

We invent the future! As the largest organization for applied research in Europe, the Fraunhofer-Gesellschaft is committed to meeting society's needs. These serve as a basis for its areas of research: health care, security, communication, mobility, energy and the environment. The work Fraunhofer is doing in these areas will have a major impact on people's future lives. In short: the future is the driving force for Fraunhofer – with the future in mind, our employees work creatively, shape technology, improve procedures, design products and forge new paths. At the same time, we have to continually develop and improve their ability to perform and achieve. Fraunhofer creates optimum framework and working conditions for this very purpose.

International markets present many challenges. Fraunhofer rises to these challenges and asserts its position as a leading European organization for applied research. To ensure that its efforts here continue to be successful, it is important to

- further develop the Fraunhofer brand and increase its internal and external appeal, particularly in an international context as well;
- cultivate a holistic understanding of management at all levels;
- promote a culture of performance and innovation that every employee helps shape.

The actions of the Fraunhofer-Gesellschaft and its currently 69 institutes, which are not separate legal entities, are based on the principle of »as decentralized as possible, as centralized as needed.« This mindset is also echoed in the holistic approach of human resources management at Fraunhofer, with different keys leading to success. The strategies of the Fraunhofer-Gesellschaft and its institutes must complement one another, but it is also necessary to understand their mutual requirements.

Fraunhofer employs 24,458 people in total (as at December 31, 2016). Of this figure, 9371 work as scientists, of whom 1882 are women. 901 of the scientists are foreign nationals (as at December 31, 2016). The number of students working at Fraunhofer totals 6654.

In 2015, the total business volume amounted to € 2115 million, of which € 1783 million related to business operations and € 332 million to capital expenditures (incl. major infrastructure). Fraunhofer finances around two thirds of its operating budget by performing research and development tasks for industry and the public sector. In addition, Fraunhofer receives institutional support from the federal and state governments which, as basic funding that may be used autonomously, also enables capital expenditures on equipment and technical building installations in addition to specific pre-competitive research.

## 2 Strategic orientation: Integrated Human Resources Management

»Integrated Human Resources Management« creates a basis for values-centered human resources work at Fraunhofer. This means structuring a framework which is geared toward various life phases – from top-level qualification, professional development and active career planning through to needs-based working-time models. To this end, the Fraunhofer-Gesellschaft continually adjusts the strategic orientation, instruments and measures within its integrated human resources management to meet current and future requirements.

No two institutes of the Fraunhofer-Gesellschaft are alike. Yet they all have one guiding principle – one could also say an umbrella strategy. This is expressed in the mission of the Fraunhofer-Gesellschaft, which is a part of the Fraunhofer guiding principles:

»Applied research is the foundation of our organization. We partner with companies to transform original ideas into innovations that benefit society and strengthen both the German and the European economy.«

Our employees shape the future – in ambitious positions at Fraunhofer or in other areas of science and business. Fraunhofer therefore places great importance on their personal and professional development. The umbrella strategy sets common overall objectives such as sustainable development, collaborations with outstanding partners from science and industry, or diversity. From these objectives, the Executive Board derives strategic initiatives that determine the organization's direction.

**Fraunhofer has carved out 12 action areas and identified the strategic relevance of each:**

- **Management**
- **Compensation**
- **Short-term contracts**
- **Organizational development**
- **Recruitment measures**
- **Internationalization**
- **Diversity**
- **Health management**
- **Career**
- **HR support**
- **Training**
- **Alumni**

In combination and in synergy with one another, these form the focal areas of what is known as »Integrated Human Resources Management.« Through the targeted application of the instruments and measures developed in integrated human resources management, progress is made toward achieving the common overall objectives and thus to the success of the Fraunhofer-Gesellschaft. At the same time, the overall strategy and the action areas inform and influence one another.

In summary, Integrated Human Resources Management pursues two objectives – one related to each employee, and the other related to involvement in organizational development. Regarding the first, each employee should experience human resources work as »integrated« – from their initial contact as a job applicant until they join the alumni network, and continuing long after their employment has ended. This is promoted through strong networking at various personnel levels, be it through dedicated networks (e.g. HR development coordinators) or centrally organized events such as the Forum Personal or HR Practice.

As for the second, the whole of HR management is involved in organizational development. It specifically supports the common overall objectives and the strategic initiatives derived from them.

To date, the 12 action areas listed above, along with their instruments, measures and programs have been implemented at Fraunhofer in their combination and in synergy with one another to varying degrees – and will thus pose a challenge in the coming years. They form the impact framework; in other words, the framework for the Fraunhofer Human Resources Strategy for Researchers.

Moreover, within Fraunhofer's Human Resources Strategy for Researchers, the following topics in particular are considered **relevant for the next four years**:

- **Developing a common understanding of management** at Fraunhofer institutes and **increasing the effectiveness of management**
- **Ensuring equal employment opportunities** as an aspect of shaping and promoting diversity
- **Addressing internationalization**, and
- **Establishing scientific integrity and ethics in research.**

## 3 Internal analysis and objectives for the »Human Resources Strategy for Researchers«

### 3.1 Process and methodology

On October 2, 2013, the Fraunhofer-Gesellschaft signed the European Charter for Researchers and The Code of Conduct for the Recruitment of Researchers, published as a recommendation by the EU Commission on March 11, 2005. The recommendations had been implemented for many years at Fraunhofer. By **signing the charter**, the Executive Board of the Fraunhofer-Gesellschaft has now also made this clearly visible to the wider world<sup>1</sup>.

The management of the Fraunhofer-Gesellschaft and its 69 institutes requires a systematic and effective approach with clear communication and coordination processes. The customary approach in this context was also applied to develop the Fraunhofer Human Resources Strategy for Researchers (HRS4R) and is described as follows:

The **initiative** comes from an Executive Board function and if appropriate, a project group is set up. The contents are **coordinated** and aligned with other Executive Board functions. These are then **discussed** and debated with representatives of certain target groups – (also) at Fraunhofer institutes. Including participants from Fraunhofer-specific development programs has proven valuable in this connection. In the case of HRS4R, the group representing junior scientists (**Young Research Class**) and the group representing leading scientists at top level (**Vintage Class**) were involved.

#### **Overview of the process steps relating to the Fraunhofer Human Resources Strategy for Researchers:**

##### **3.1.1 Initiative of the HRS4R project group in the Executive Board Division Human Resources, Legal Affairs and IP Management:**

The Executive Vice President Human Resources, Legal Affairs and IP Management, the scientific adviser of the Executive Vice President Human Resources, Legal Affairs and IP Management and the Human Resources Director agreed to develop a Human Resources Strategy for Researchers and apply for the logo HR Excellence in Research. A HRS4R working group was then set up consisting of the Human Resources Director, the head of the HR Support department, the team leader of International HR & Labor Law, a talent manager from the HR Development department, the scientific adviser of the Executive Vice President Human Resources, Legal Affairs and IP Management and a legal practitioner from International HR & Labor Law. As part of an initial analysis, all 40 recommendations of the Charter for Researchers and The Code of Conduct for the Recruitment of Researchers were examined to determine the extent to which Fraunhofer is already implementing these recommendations or is legally obligated to follow the recommendations. Strengths and weaknesses were then identified regarding the implementa-

<sup>1</sup> [https://euraxess.ec.europa.eu/sites/default/files/cc-declarations/fraunhofer\\_gesellschaft.pdf](https://euraxess.ec.europa.eu/sites/default/files/cc-declarations/fraunhofer_gesellschaft.pdf)

tion of the Charter for Researchers and The Code of Conduct for the Recruitment of Researchers.

In 2015, an employee survey was carried out. Employee surveys at Fraunhofer focus on framework conditions of day-to-day work and work processes. The results of the employee survey have been incorporated into the internal analysis.

### **3.1.2 Coordination and alignment with other Executive Board functions:**

The following five working meetings were attended by representatives from Corporate Policy and Research (Executive Board function), from the fields of labor law and law, finance, occupational safety and health, government grants and EU projects, international business development, European research area and I&C management, the data protection officer and the IT safety coordinator. The HR Director included both the Central Works Council and the Director of International Activities and Research Programs in the discussion. The in-depth discussion resulted in a clarification of the strengths and weaknesses («gap analysis») and in developing a new plan of action («action plan»).

### **3.1.3 Discussion and content-related debate with representatives of junior scientists and leading scientists at top level**

Both junior scientists (Young Research Class) and representatives of leading scientists at top level (Vintage Class) discussed the internal analysis and the objectives in detail and made suggestions. These were taken up and considered by the HRS4R working group. Through the inclusion of these two groups it was ensured that a representative cross-section of all scientific employees of the Fraunhofer-Gesellschaft from junior scientist through to scientific management level were actively involved in the preparation of the internal analysis and the objectives, as well as the objectives for the Human Resources Strategy for Researchers.

### **3.1.4 Pooling the results and decision-making**

The results and feedback from various stakeholders were taken up by the HRS4R working group at the end of September 2016 and integrated into the action plan. Furthermore, indicators were defined for the implementation of the targets and the timetable issued.

On October 17, 2016, the Executive Board of the Fraunhofer-Gesellschaft approved the internal analysis and adopted the objectives for the Human Resources Strategy for Researchers.

## 3.2 Overview of the improvement potential

The HRS4R working group identified strengths and weaknesses related to the implementation of the »Charter for Researchers and The Code of Conduct for the Recruitment of Researchers«. These are described below:

### 3.2.1 Research freedom (principle no. 1): Scientific integrity

The Fraunhofer-Gesellschaft carries out freely chosen research projects, tasks assigned by the federal and state governments and contract research. In its research, Fraunhofer adheres to the principles of good scientific practice and promotes scientific integrity by assuming full responsibility for the integrity and quality of its research. Fraunhofer is aware of the responsibility involved with research freedom and the risks of research, and thus supports the responsible handling of research (see 3.2.2). As an applied research institution, the principles of scientific integrity are how the Fraunhofer-Gesellschaft sees its work and are the subject of an internal requirement. In addition, they are internally anchored in the Fraunhofer Code of Conduct and in the Declarations of the Fraunhofer-Gesellschaft on Collaboration with Third Parties and are based on the recommendations of the Scientific Self-Regulation Commission by the member institutes of the DFG – The German Research Foundation.

Scientific integrity describes the fundamental ethical attitude and the responsibility of scientists for the integrity and quality of their scientific research work. This culture is an indispensable prerequisite for the global cooperative gaining and exchange of knowledge on the one hand, and the recognition of science in industry and society on the other. The rules and standards of good scientific practice must be conveyed to junior scientists during their training and observed and applied by them afterwards in all phases of scientific work. At the same time, the respective managers must, through example, demonstrate their inherent scientific integrity. To ensure good scientific practice, there is an ombudsman at every Fraunhofer institute. His or her tasks are to provide advice and mediate in case of any conflicts of interest and assist in resolving conflicts and help to convey scientific integrity at the Fraunhofer institute.

#### Action (see action plan in the annex for details):

- **Training** the (newly recruited) scientists
- Conducting a regular exchange of **good practice** examples at meetings of the ombudspersons
- Introducing **written mentoring agreements** between the doctoral students and the direct mentor

### 3.2.2 Ethical principles (principle no. 2): Ethics in research

The Fraunhofer-Gesellschaft is aware of its responsibility in dealing with research freedom and research risks. For this reason, it also supports the initiative of the DFG, the German Research Foundation, and Leopoldina, the German



National Academy of Sciences, dedicated to »Scientific freedom and scientific responsibility – Recommendations on handling security-relevant research.« For instance, it is involved in financing the office of the Joint Committee on the Handling of Security-Relevant Research. In addition, the Fraunhofer-Gesellschaft promotes internal and external dialogue on the responsible handling of research that goes beyond legal requirements. Within research projects, the Fraunhofer-Gesellschaft seeks out advice and rulings from external ethics committees, and thus uses existing structures to support responsible research. The ethical responsibility of each individual is addressed in the internal Fraunhofer Code of Conduct.

The Code of Conduct not only gives employees a basic orientation for action but also clearly instructs them to ensure that ethical issues are handled responsibly in the course of their work. The Fraunhofer-Gesellschaft is actively involved in political and social debate on areas of research in which Fraunhofer works or to which Fraunhofer scientists can contribute their expertise.

Furthermore, there is an internal Guide on Handling Ethical Issues that provides guidance for scientists on the procedures and basic principles that they need to observe. Employees of the Fraunhofer-Gesellschaft can also contact an internal ethics advisory unit in confidence with their particular concerns, which will provide advice on any ethical issue by telephone or by email.

Under the leadership of the Fraunhofer Institute for Systems and Innovation Research ISI, the EU project Joining Efforts for Responsible Research and Innovation, or »JERRI« for short, was launched in June 2016. Together with TNO, a Netherlands organization for applied scientific research, Fraunhofer is working on anchoring responsible research in all its dimensions. The aim of the project is to initiate transformation of the organizations in various pilot activities and to generate learning effects for further applied research organizations in Europe on this basis. Within the JERRI project, the existing activities and the need for action was analyzed in 2016/17. The qualification, active sensitization and advising of scientists were seen as the main areas of action.

#### **Action (see action plan in the annex for details):**

- Firmly establishing the **internal ethics advisory unit** for the particular concerns of employees after the end of the pilot phase
- Developing a **qualification module** and piloting it in the area of »ethical scientific responsibility« (within the framework of the JERRI project)
- Developing a concept for and piloting of an **ethics screening system** in internal pre-competitive research (within the framework of the EU JERRI project)

#### **3.2.3 Gender Balance (principle no. 27): Equal employment opportunities**

With regard to diversity management, Fraunhofer is also focusing on the action area of »equal career opportunities« and »combining career and family.« This is intended to achieve a gender parity at all levels. Attracting more women to applied research, developing them for executive positions and appointing them to these positions are goals that

we are working toward with a broad-based development concept, and the rising proportion of female scientists at various levels shows that our efforts are having an effect. We also actively support the balancing of work and private life: 87 percent of our employees stated in our 2015 employee survey that they can combine their work well with their private life. Flexible working hours and flexible workplaces – in the areas where it is possible – played a significant role in making this happen. Wide use is made of the internal »Action program to combine career and family« to increase the number of preschool places for employees' children or parent-child offices.

**Action (see action plan in the annex for details):**

- **Increasing the number of women scientists employed at all career levels** and with connections to universities and colleges by recruiting and developing female scientists
- **HR development programs** (step forward, TALENTA) as well as individual, specific measures (e.g. qualification for higher appointments)
- **Raising awareness among and supporting managers** with tools, guidelines, HR development measures, and expansion of the existing internal development program

**3.2.4 Value of mobility (principle no. 29): Internationalization**

In view of the increasing internationalization of the Fraunhofer-Gesellschaft, human resources work was put through its paces as part of an international HR project in 2014-2015. The aim was to identify challenges arising in the context of increasing internationalization, to name, analyze and prioritize action areas for international human resources work, and to implement the instruments and measures developed on this basis throughout Fraunhofer as needed. The main results of the project included the publication of a brochure entitled »Welcome to Fraunhofer«; checklists for HR employees for hiring foreign employees and training for this purpose at central HR events; updated standard contracts from HR in English; and an increase in the training opportunities provided for languages and intercultural training. In mid-2016, the International HR & Labor Law team was set up with the aim of firmly establishing the results of the international HR project at Fraunhofer and ensuring a consistently high level of quality in international HR work. Specific measures are intended to support international mobility and thus contribute to furthering the careers of employees.

**Action (see action plan in the annex for details):**

- Preparing a qualified overview of **international mobility programs**
- Supporting the recruitment and onboarding of foreign nationals by providing **information, forms and documents in English**

### 3.2.5 Supervision (principle no. 40): Developing an understanding of management and increasing the effectiveness of management

To ensure that researchers are supervised by people who have adequate expertise to oversee research work and have sufficient time, knowledge, experience, expertise and motivation to provide the necessary support to junior researchers, Fraunhofer has developed a management model and management instruments to support and train managers. These take account of the special requirements of a scientific organization for applied research and management in a culture of innovation. What is needed for the management and supervision of junior scientists today thus already clearly exceeds mere professional supervision. Among other things, professional supervision is ensured by the clear organizational assignment of junior scientists to a manager, an involvement and the exchange of expertise in research projects and feedback in regular performance reviews.

In the coming years, the task will be to clarify how management is understood in 69 Fraunhofer institutes and to improve the effectiveness of management / management performance in view of the development of junior scientists on the one hand and the scientific and economic development of the institutes on the other. To this end, the range of advisory services and training available to the institutes and the managers will be expanded with the following focal points.

#### Action (see action plan in the annex for details):

- **Expanding the advisory services provided by institutes** on the following key topics:
  - Developing an **institute-specific understanding of management** based on the Fraunhofer management model (e.g. in the form of management guidelines),
  - Implementing **transparent, systematic career and development paths** for junior scientists (e.g. introduction of specialist careers)
  - Developing **transparent criteria** to assess the performance of junior scientists
- **Expanding the range of training** available for the development of management skills

## 3.3 Specific goals

See action plan in the annex