**Annex 1:
Members of the Talent Management Working Group, Research Field Matter**

**Head of working group:**

* Katja Frerks, DESY
* Jennifer Schevardo, HZB (until her retirement from HZB in July 2022)

|  |  |  |
| --- | --- | --- |
| **Centre**  | **Name**  | **Position** |
| **DESY** | Katja Frerks | Leader Human Resources Development |
| **FZJ** | Timm Hondrich | Corporate Development |
| **GSI** | Ulrike Lüttge | Leader HR Development Group  |
| **Hereon** | Iris Ulrich | Leader programme planning and controlling, authorised officer |
| **HZB** | Jennifer Schevardo | Leader of HR Development (until 07/2022) |
| Britta Höpfner | Staff division Matter and Accelerator Infrastructures (as from 07 / 2022) |
| **HZDR** | Franziska Hübner | [Human Resources Department](https://v2.desy.de/index_eng.html) |
| Nadine Möhring-Lotsch | Head of [Human Resources Department](https://v2.desy.de/index_eng.html) |
| **KIT** | Andreas Kopmann | Leader of KIT programme „Matter and Technologies“ |
| **HGF-GS** | Mona Florian | Assistant of Talent Management Helmholtz Head Office (until 04/2022) |
| **DESY/Research Field Matter** | Harald Buddeweg | Directorate’s Office, Helmholtz and Research Field Matter Affairs |

**Annex 2:
Review: General and specific Talent Management services in the Research Field Matter**

**Target group: all employees**

Offers listed here are also offered to the specific target groups further below

|  |  |  |
| --- | --- | --- |
| **Employee** **life cycle** | **General offers**  |  |
| **Attraction** | Collective agreement with its benefits   | FZJ, HZB HZDRGSI DESY Her KIT |
| Branding process (brand) in recruitment  | FZJ DESY |
| Participation in specialist fairs | FZJ HZDR DESY Her KIT |
| **Recruitment** | Advertising via social media (Facebook, Instagram LinkedIn)  | FZJ DESY HerGSI  |
| Training: diversity-sensible recruiting  | HZB DESY |
| Gender equity, specific job advertisements  | FZJ HZBGSI DESY |
| Dual career services  | FZJGSI DESY KIT |
| **Onboarding** | Welcome Office  | HZDRGSI DESY Her KIT |
| Welcome Days in English and German | FZJGSI DESY |
| Onboarding process in the planning stage  | HZDR |
| Onboarding website (all employee groups, especially international)  | FZJHZBGSI DESY |
| Onboarding guidelines, initial training plan, feedback guidelines, probation period | FZJGSI |
| **Task planning** | Binding offer for an annual evaluation meeting | FZJ HZDRGSI DESY KIT |
| **Development** | In-house training programme  | FZJ HZB HZDRGSI DESY Her |
| Participation in the leadership academy of the Helmholtz Association  | FZJHZB HZDRGSI DESY Her |
| Participation in HIDA courses, tendering open positions | FZJ Her |
| Communication training for women | FZJ |
| Certificate programme on university and science administration (HoW) | KIT |
| Certificate programme cross-cultural competences  | KIT |
| Support of employees who qualify themselves with further training / university studies  | FZJHZBDESY GSI  |
| **Controlling** | Report personnel controlling regarding structured, differentiated personnel key figures | FZJ HZDRGSI DESY |
| **Succession** **planning** | Succession planning with structured institute talks and personnel overview | HZDR |
| **Offboarding** | Offboarding process in the planning stage  | FZJ |

**Target group: trainees**

|  |  |  |
| --- | --- | --- |
| **Employee life cycle** | **Trainees** |  |
| **Attraction** | Participation in vocational training fair   | FZJ, HZB HZDRDESY KIT |
| School attendance with application training  | FZJHZB DESY |
| MINT Day for girls  | FZJ HZB HZDR DESY |
| Participation in Future Day  | GSIDESY |
| **Onboarding /****Recruitment** | Job requirements profile according to job description (more than 20 job descriptions, most of them relevant for Research Field Matter) | FZJ |
| „Trial Afternoon“ prior to training | GSIDESY |
| FirstSteps@gsi at the beginning of training | GSI |
| **Task planning** | Guidelines for trainees  | HZB GSI DESY |
| Welcome days and welcome excursion  | FZJ DESY Her |
| **Development****controlling** | Specific training for trainees for self-presentation / protection from sexual harassment, etc.  | HZDR DESY KIT |
| Feedback guidelines | GSI  |
| Design of Instagram channel | KIT |
| Vocational training ambassadors (IHK Chamber of Industry and Commerce)  | KIT |
| **Succession** **planning** | Follow-up employment for trainees  | FZJ HZDR GSI DESY |
| **Offboarding** | Ceremony for successful examinees  | FZJ HZDR GSI KIT |

**Target group: students**

|  |  |  |
| --- | --- | --- |
| **Employee life cycle** | **Students** |  |
| **Attraction** | Summer Schools  | FZJ, HZB HZDRDESY GSI |
| MINToring of IAI (Mentoring programme for female master‘s students in STEM fields) | KIT |
| **Onboarding recruitment** | Virtual event for future engineers  | FZJ DESY |
| Events with universities and universities of applied sciences  | FZJ HZDR DESY |
| Dual technology / IT studies  | FZJ HZDR GSI DESY |
| **Task planning** | Guidelines for dual students  | GSI |
| **Development****controlling** | Tutor programme for student tutors  | KIT |
| **Succession** **planning** |  |  |
| **Offboarding** |  |  |

**Target groups: PhDs / Postdocs**

|  |  |  |
| --- | --- | --- |
| **Employee** **life cycle** | **Offers** |  |
| **Attraction /** **Recruitment** | Specialist recruiting fairs  | FZJ, HZB HZDRGSI DESY Her KIT |
| Tasso Springer Fellowship to promote junior researchers in the field of neutron scattering | FZJ |
| Marie Sklodowska-Curie COFUND project „[GNeuS](https://cordis.europa.eu/project/id/101034266)“ to promote postdocs, field of neutron scattering (with TUM) | FZJ Her |
| Karlsruhe House of Young Scientists (KHYS) | KIT |
| Young Investigator Group Preparation Program (YIG Prep Pro) | KIT |
| GET\_INvolved Programme (students and junior researchers) | GSI |
| **Onboarding** | Welcome interviews (postdocs)  | HZBHZDR DESY  |
| Welcome interviews and welcome week (PhD’s) | FZJHZBFZJ DESY  |
| Onboarding interviews junior research group leaders (NWGL) |  HZB |
| **Task planning** | Progress reports (PhD)  | FZJ HZB |
| Qualification plans (postdocs) |  |
| Development interviews postdocs with PI’s | FZJ HZBHZDR |
| Annual interviews NWGL | FZJ |
| **Development** | Career counselling  | FZJ HZB HZDR DESY  |
| Mentoring programme for female PhD‘s / postdocs in natural sciences: dynaMENT  | DESY ( |
| Own mentoring programme for women | FZJ |
| Cooperation with „Mentoring Hessen“ for women in natural sciences and technology | GSI |
| Marie Sklodowska-Curie Training Networks (e.g. HIDDeN) | KIT |
| Inhouse trainings (targeted at specific groups) | FZJ HZB HZDR DESY KIT  |
| Networking offers | FZJ HZB HZDR DESY KIT  |
| Graduate schools | FZJ GSI DESY HerKIT  |
| Research schools  | HZB |
| Career Center for postdocs | FZJ HZB HZDR DESY KIT  |
| KIT junior researchers’ group | KIT |
| Virtual Career Day for postdocs (first-time in 2022) | FZJ GSI HZDR DESY KIT  |
| Tenure track professorships | FZJ? HZB GSI KIT DESY |
| Counselling, mentoring and networking offers for NWGL | FZJ |
| Advanced training offer in the Young Investigator Network (YIN) | KIT |
| Advanced training programme to extend key competences (Keys2competence) / certificate programme for university didactics | KIT |
| Advanced Teaching Competencies (ATC)  | KIT |
| Specialist advanced training, training field technology and environment  | KIT |
| Enhancement of gender competences / sensitisation for unconscious bias | FZJ KIT |
| **Controlling / Succession** **planning** | Reporting on selected key figures | FZJ HZB GSI DESY |
| PhD students portal | FZJ HZB DESY |
| PhD: central mentoring process regarding project progression | FZJ HZB |
| **Offboarding** | Exit talks  | HZB HZDR KIT |
| Alumni / alumnae work „HZDR TrAIN“  | HZDR |
| Offboarding interviews NWGL | HZB |
| Farewell ceremony for PhD’s in Graduate School | FZJ DESY |

**Target group: scientific employees**

|  |  |  |
| --- | --- | --- |
| **Employee life cycle** | **Offers** |  |
| **Attraction /** **Recruitment** | International fairs | FZJ, HZB HZDRGSI DESY Her KIT |
| Helmholtz recruiting programmes | FZJ, HZB HZDRGSI DESY Her KIT |
| **Onboarding** |  |  |
| **Task planning** |  |  |
| **Development** | Training covering: |  |
| * unconscious bias
 | HZB DESY |
| * lateral leadership
 | FZJHZB DESY |
| * intercultural cooperation
 | FZJHZB DESY |
| * working in German environment
 | FZJHZB |
| Mixed groups for collegial consultation | FZJ Her DESY |
| Certificate programme for university didactics | KIT |
| X-Ment | KIT |
| Advanced training: systemic moderation in scientific context | KIT |
| YIG Prep Pro | KIT |
| Coordinated programmes – gender themes | KIT |
| Network for women scientists (WiKIT) | KIT |
| Cooperation with „Mentoring Hessen“ for women in natural sciences and technology  | GSI |
| Exclusive advanced training programme for department leaders (completed) | Her |
| Onboarding and development measures for PhD supervisors | FZJ |
| **Controlling** |  |  |
| **Succession** **planning** |  |  |
| **Offboarding** |  |  |

**Target groups: administration & management / engineers/ technically qualified personnel**

|  |  |  |  |
| --- | --- | --- | --- |
| **Employee life cycle** | **Offers for administration and management** | **Offers for engineers** | **Offers for technically qualified personnel** |
| **Attraction /** **Recruitment** | New offer for trainees in administration (vocational training with bachelor degree) HZDR DESY |  |  |
| **Onboarding** |   |  |  |
| **Task planning** |  |  |  |
| **Development** | Certificate programme university and science administration (HoW) KIT | Training: lateral leadershipHZBSupport of employees who qualify themselves with further training / university studies HZB GSI DESY  | Master craftsman training HZB GSI |
| **Controlling** |  |  |  |
| **Succession** **planning** |  |  | Offboarding evaluation Certified technicians until 2030 DESY |
| **Offboarding** |  |  |  |

**Target groups: Infrastructure / IT**

|  |  |  |
| --- | --- | --- |
| **Employee life cycle** | **Infrastructure offers** | **IT offers** |
| **Attraction /** **Recruitment** |  | Coding workshop for girlsDESYMachine Learning Summer School & Hackathon HZB  |
| **Onboarding** |   |  |
| **Task planning** |  |  |
| **Development** |  |  |
| **Controlling** |  |  |
| **Succession** **planning** |  |  |
| **Offboarding** |  |  |

**Assessment of activities**

There are a **variety of broad offerings for all employees** (e.g., Onboarding, Welcome days, Annual appraisal interviews or Education):

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Target groups** | **Attraction** | **Recruiting** | **Onboarding** | **Task** **planning** | **Development** | **Controlling** | **Succession planning** | **Offboarding** |
| **All** **Employees** |  |  |  |  |  |  |  |  |  |

**Specific** talent management or personnel development measures**:** **Focus on the following target groups** (often individual measures in centres):

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Target groups** | **Attraction** | **Recruiting** | **Onboarding** | **Task** **planning** | **Development** | **Controlling** | **Succession planning** | **Offboarding** |
| **Trainees****/ students** |  |  |  |  |  |  |  |  |  |  |  |
| **PhD + postdocs** |  |  |  |  |  |  |  |  |  |  |  |
| **Scientific** **employees** |  |  |  |  |  |  |  |  |  |  |  |

**Specific** talent management or personnel development measures**: Only for individual projects** for the following target groups:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Target groups** | **Attraction** | **Recruiting** | **Onboarding** | **Task** **planning** | **Development** | **Controlling** | **Succession planning** | **Offboarding** |
| **Administration & management** |  |  |  |  |  |  |  |  |
| **Engineers** |  |  |  |  |  |  |  |  |  |
| **Technically qualified personnel** |  |  |  |  |  |  |  |  |  |  |  |
| **Infrastructure(e.g. facility management)** |  |  |  |  |  |  |  |  |
| **IT** |  |  |  |  |  |  |  |  |  |

**Caption:**

|  |  |
| --- | --- |
| Activities for the target group / career phase | Research field specific activities for the target group / career phase |

**Annex 3: Overview of dual study paths and vocational training with the focus on technology and IT at 6 centres with great relevance for the Research Field Matter**

As of: 8 March 2023

Centres: FZJ, DESY, HZB, GSI, HZDR; KIT

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of dual study path** | **Offer at the following centres (number of places)** | **Cooperation with university of applied sciences / university** | **Comments** |
| Bachelor of engineering: **Physics engineering and physics laboratory technicians**  | FZJ (1-3 per year) | FH Aachen / IHK (Chamber of Commerce and Industry) | If required, fluctuations possible. Dual graduation specialist worker and bachelor |
| Bachelor of science: **Applied mathematics and und computer science and und mathematical-technical software developer**  | FZJ (about 25-30 per year) | FH Aachen/ IHK | If required, fluctuations possible. Dual graduation specialist worker and bachelor. Integrative training of 3-5 dual students of other enterprises |
| Bachelor of engineering: **Mechanical engineering and industrial mechanic** | FZJ (0-2 per year) | FH Aachen / IHK / vocational college and other enterprises | If required, fluctuations possible.; training within the network of other enterprises; Graduation specialist worker + bachelor |
| Bachelor of engineering: **Construction and manufacturing** | HZB (1 every 2 years) | Berlin School of Economics and Law |  |
| Bachelor of science: **Machine engineering** | DESY (2-3 per year) | HAW Hamburg |  |
| KIT (11) | DHBW Karlsruhe / Mannheim | DHBW = Baden-Wuerttemberg Cooperative State University |
| Bachelor of science: **Electrical engineering and information technology (KoSE)** | GSI (1) | Hochschule Darmstadt |  |
| Bachelor of science: **Electrical engineering**  | DESY (2-3 per year) | HAW Hamburg |  |
| Bachelor of science: **Integrated engineering** | KIT (2) | DHBW Mannheim |  |
| Bachelor of science: **Computer science** | DESY (2 per year) | FH Wedel university of applied sciences |  |
| HZB (4 per year) | Berlin School of Economics and Law |  |
| GSI (2) | Hochschule Darmstadt | Fields of study: embedded systems (KESS) / computer science (KoSI) |
| Bachelor of science: **Business informatics** | GSI (1) | Hochschule Worms |  |
| Bachelor: **Industrial engineering** | KIT (6) | DHBW Karlsruhe |  |
| Bachelor of arts: **International logistics management** | GSI (1) | Hochschule Worms |  |
| Bachelor of science: **Safety, nuclear waste disposal radiation protection** | GSI (1) | DHBW Karlsruhe | Currently not used |
| Bachelor of science: **Occupational safety**  | GSI (1) | DHBW Karlsruhe | Currently not used |
| Bachelor of science: **Radiation technology** | HZDR (1) |  |  |
| Bachelor of science: **Laboratory and process engineering, radiation technology study course**  | HZB (1 every two years) | Baden-Wuerttemberg Cooperative State University; vocational academy Riesa |  |
| Bachelor of science: **Industrial safety -radiation protection** | KIT (3) | DHBW Karlsruhe |  |
| Bachelor of science: **Industrial safety – environment protection** | KIT (2) | DHBW Karlsruhe |  |
| Bachelor of engineering: **Civil engineering, underground construction** | KIT (1) | DHBW Mosbach |  |
| Bachelor of science: **computer science, applied computer science** | KIT (3) | DHBW Karlsruhe |  |
| Bachelor of science: **computer science, information technology** | KIT (1) | DHBW Karlsruhe |  |
| Bachelor of engineering: **Mechatronics** | KIT (7) | DHBW Karlsruhe |  |
| Bachelor of science: **Applied chemistry chemistry laboratory assistant** | FZJ (1-4 per year) | FH Aachen/ IHK | If required, fluctuations possible. Dual graduation specialist worker and bachelor |
| Bachelor of science: **Chemical technology, chemical and biological engineering** | KIT (8) | DHBW Mannheim |  |

|  |  |  |
| --- | --- | --- |
| **Skilled occupation** | **Offer of centres** (annual number of places) | **Comments** |
| Installation mechanic for sanitary, heating and climate control systems | FZJ (about 1 every three years) | IHK, if required |
| GSI (3) | IHK |
| Biology laboratory assistant | KIT (12) |  |
| Chemistry laboratory assistant | KIT (9) |  |
| Electronics technician for operations technology | DESY (2) |  |
| FZJ (2-6) | IHK, if required, strong fluctuation. Very bad application situation, little inclination for training in the institutes. |
| GSI (6) | IHK |
| Electronics technician for devices and systems | HZDR (1) | IHK |
| FZJ (1-4) | IHK; if required, strong fluctuation. Very bad application situation, little inclination for training in the institutes, substitution by IT specialists, as more and more work is carried out with microcontrollers instead of discrete electronics.  |
| DESY (5-7) | Hamburg and Zeuthen |
| GSI (6) | IHK |
| KIT (20) |  |
| Electronics technician for automation technology | HZDR (2) | IHK |
| Electronics technician (four fields of specialization) | HZB (1 every two years) | IHK, training centre ABB Ausbildungszentrum Berlin gGmbH / secondary school centre OSZ TIEM, practical training abroad |
| Specialist for wastewater technology | KIT (1) |  |
| IT specialist | HZB (2 per year) | IHK, training alliance of Berlin der Berliner federal agencies / secondary school centre OSZIMT, entrepreneur’s skills certificate, Cisco CCNA certificate, Cisco CCNP certificate, telc language certificate, practical training abroad |
| IT specialist, field of study system integration | FZJ (4-7) | IHK, also new field of study application development; additional field in the planning: data and process analysis |
| GSI (3) | IHK |
| KIT (6) |  |
| Metal technology specialist, field of study: machining technology | FZJ (only if required) | IHK, generally if there is bad performance in the course of a three-year occupation or for sectors which need only a low qualification, e.g. semi-finished stock  |
| Precision machinist | HZB (2 every 2 years) | Chamber of trade (HWK), OSZ secondary school centre for machine and manufacturing technology, practical training abroad |
| Glass apparatus maker | FZJ (1 every 3-5 years) | IHK, if required |
| Wood mechanic | KIT (1) |  |
| Industrial mechanic / precision engineering | DESY (6-7) | Hamburg und Zeuthen |
| FZJ (10-12) | IHK |
| GSI (9) |  |
| KIT (33) |  |
| Construction mechanic / metal | DESY (2) |  |
| GSI (4) | IHK |
| Automotive mechatronic technician | FZJ (1 every three years) | HWK, if required |
| Mechatronic technician | DESY (3-4) |  |
| HZB (1 every 2 years) | IHK, ABB Ausbildungszentrum Berlin gGmbH / OSZ TIEM, practical training abroad |
| Mechatronics technician for refrigeration  | FZJ (1 every three years) | IHK, if required |
| Physics laboratory assistant | FZJ (ca. 10) | IHK |
| HZDR (1) | Sächsische Bildungsgesellschaft (Saxon educational society) |
| KIT (3) |  |
| Technical product designer | DESY (3-4) |  |
| HZDR (2) | IHK |
| KIT (12) |  |
| Technical systems planner, field of studies: supply and equipment technology | FZJ (1 every two years) |  |
| Machining technician | KIT (1) |  |

**Annex 4**: **Proposals for measures to recruit, retain and develop technically qualified personnel**

The measures shown here are not final but represent a collection of ideas from the working group.

The participating centres are essentially responsible for the implementation; however, if required, the Helmholtz Association could take over the responsibility for some central measures.

As already described in the draft paper; it is reasonable to implement the measures in a comprehensive way depending on the orientation of the research field of the centres. Moreover, the centres need internal personnel resources for the implementation, which should be raised in combination with the measures.

The colour coding shows how the costs are estimated:

|  |  |  |
| --- | --- | --- |
| **favourable** | **mean** | **expensive** |

|  |
| --- |
| **Target groups: trainees, trainers, technically qualified personnel and (technical / scientific) leaders** |
| **Measure** | **Outreach** | **Aims** | **Extent of costs** |
| **Reciprocal visits** (on a daily basis) to centres to become familiar with their research & tasks & fields of application | * Trainers (incl. trainees)
* Leaders
* Technical groups
* Participating centres
 | * (Better) networking
* Exchange of experiences
* Base to retain experienced personnel
 | * Business trip(s) with overnight stay
 |
| **Exchange programme** (between centres, for one or several weeks), to obtain a deeper insight into the fields of work  | * Participants
* Trainers
* (Technical) groups
* Centres
* LEAPS
 | * Training for all tools / software solutions, etc.
* Reciprocal counselling / exchange of expertise
 | * Presence combined with virtual follow-up meeting
* Business trip(s) + overnight costs: one or several weeks
 |
| **Qualification offers**(e.g. meetings, workshop series, etc.); if required, also through the **Helmholtz Association, Berlin**  | * Technical personnel
* Centre
* Helmholtz Association
* Chambers of trade
 | * Quality assurance
* Innovation / learn about new technologies / teach methods
* Adaption of changing occupational profiles (upskilling)
* Qualification for training
 | * Costs for meetings (preferably central) / block seminars / trainings, etc.
* Presence or virtual formats conceivable, depending on themes
 |
| **Summer schools** for trainees including dual students on specialist subjects | * Training
* (Technical) groups
* Participating centres
 | * Extension / broadening of training contents
* Promote networking
* Get to know other centres
 | * Cost absorption for trainings
* Business trip(s) + costs for overnight stay: for several days or one week
 |
| **Award presentation:** honouring exceptional training results* in the centre
* comprehensive, if required, in the **Helmholtz Association, Berlin**
 | * Awarded employees
* Centre
* Helmholtz Association
* PR if required / media work beyond Helmholtz
 | * Create appreciation & motivation
* Training becomes more attractive in the centres
* Recruitment of trainers
 | * Business trip with overnight stay, framework programme if required
* Coupled with awarding of trainees
 |
| Offer of **qualification positions** after training as a state-certified technician or other **extra-occupational further training** | * Technical personnel
* Leaders
* Groups
* Centres
 | * Develop new career paths
* Create career perspectives and development in the centre
* Reduce recruiting efforts
 | * Full time equivalents for further training of three years
* Pro-rata exemption
 |
| **Structured succession planning**: qualification to fill vacancies due to retirement | * Technical personnel
* Leaders
* Groups
* Participating centres
 | * Internal talent management
* Reduce recruiting efforts
* „Retain“ the „best ones“ also from training
 | * Finance hold-up time from training to job opening
 |
| Mutual **pool of positions** for the labour market of the centres | * Recruiting
* Trainers
* Participating centres
 | * Retain trainees and qualified employees or expertise within the Helmholtz Association
 | * Setup and operation of an online platform
* Regular Information / reminder in the centre
 |
| **Marketing campaign:** advertisement of best training | * Trainers
* Schools
* Centres
 | * Recruit trainees
* Raise awareness of the centres for technical training
* Cooperation with schools
* Common use of individual information materials
 | * Creation of information material (e.g. advertising films as well)
* Branding if required in training context
 |
| **Information campaign:** labour market situation, wishes of trainees | * Trainers / stakeholders
* Scientists
* Centres
 | * Raising awareness for labour market situation, e.g. linked with internal events in the centres
* Raise awareness for training professions among scientists
 | * Production of transparencies and information material
 |