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Important message to institutions:

Site Visits: All HRS4R in-house audits planned for 2020 Q4 will be conducted remotely with the consent of the host institution. Should your institution be at renewal stage, once you submit your self-assessment online via the e-tool, the EC will be in contact with you to set a date for the remote visit together with a panel of independent experts. Should the institution prefer a classic on-site visist, the audit will be postponed to early spring 2021. Meanwhile, institutions involved in the process can continue using the HR Excellence in research award.

Internal Review

Case number: 2020IT565925
Name Organisation under review: Politecnico di Torino
Organisation's contact details: Corso Duca degli Abruzzi, Torino
Submission date to the European Commission: 18/12/2020

1. Organisational Information

*Please provide an update of the key figures for your organisation. Figures marked * are compulsory.*

STAFF & STUDENTS	FTE
Total researchers = staff, fellowship holders, bursary holders, PhD. students either full-time or part-time involved in research *	2232
Of whom are international (i.e. foreign nationality) *	275
Of whom are externally funded (i.e. for whom the organisation is host organisation) *	0
Of whom are women *	663
Of whom are stage R3 or R4 = Researchers with a large degree of autonomy, typically holding the status of Principal Investigator or Professor. *	744
Of whom are stage R2 = in most organisations corresponding with postdoctoral level *	717
Of whom are stage R1 = in most organisations corresponding with doctoral level *	771

STAFF & STUDENTS	FTE	How do you know?
Total number of students (if relevant) *	32516	
Total number of staff (including management, administrative, teaching and research staff) *	3126	

RESEARCH FUNDING (figures for most recent fiscal year)	€
Total annual organisational budget	248882844
Annual organisational direct government funding (designated for research)	140971733
Annual competitive government-sourced funding (designated for research, obtained in competition with other organisations – including EU funding)	29657044
Annual funding from private, non-government sources, designated for research	17885344

ORGANISATIONAL PROFILE (a very brief description of your organisation, max. 100 words)

The **Politecnico di Torino (PoliTO)** was founded in 1906 and it is now internationally ranked among the most important universities in Europe for engineering and architecture studies, with 35,000 students (out of which 16% are international students coming from over 100 different countries). POLITO is part of several **European interuniversity networks** (e.g.: CESAER, CLUSTER, EUA, T.I.M.E) and its international education network features over 500 bilateral and double-degree agreements. POLITO has a great experience in participating to **national and international projects** (it is ranked 3rd among Italian universities for H2020 funded projects, despite the lower number of researchers) and each year draws up about 800 contracts with industries and other organizations. Politecnico di Torino has always recognized the fundamental importance of its role in the activities related to technology transfer and knowledge sharing and actively supported the development of Piemonte and Italy over the years by cooperating with the different stakeholders. PoliTO implements **OTM-R policies** and procedures to increase the quality of its human resources and invest on highly quality services to improve its working environment.

2. Strengths and weaknesses of the current practice

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Please review the strengths and weaknesses under the 4 thematic areas of the Charter and Code, as provided by your organisation in the initial assessment phase. When doing so, you should do not only look back, but also consider new priorities, strategic decisions, etc. which may further influence the action plan. Please also provide a brief commentary in the "Remarks" column if major changes have occurred versus the initial plan.

Note: Click on the name of each of the four thematic headings of the Charter & Code to open the editor and provide your answers in the Internal Review for Interim Assessment dedicated section.

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How do you know?

Ethical and professional aspects*

Strengths and Weaknesses (Initial Phase)

Strengths and Weaknesses (Interim Assessment)

Strengths and Weaknesses (Award Renewal, max 500 words) *

See "General introduction for the 4 thematic areas of the Charter and Code" in the Remarks section below.

The results of the HRS4R survey show a high level of satisfaction with respect to the thematic area "Ethical and professional aspects" (see the report 'Gap Analysis 2018' at http://www.researchers.polito.it/en/hr_excellence_in_research). The researchers of PoliTO ranked the following six principles pertaining to the thematic area "Ethical and professional aspects" among the top ten most implemented principles of the Charter&Code: Non-discrimination, Research freedom, Good practice in research, Ethical principles, Dissemination, exploitation of results and Accountability.

Considering the actions implemented in the previous Action Plan, below is a summary of the **main STRENGHTS AND ACHIEVEMENTS**:

- **Research freedom**: since 2013 PoliTo has implemented at least **seven new initiatives** (two of them during the initial Action Plan 2013-2015 and five during the second Action Plan 2015-2018): **1)** the Project "ERC@POLITO" launched in December 2013 to offer dedicated support to excellent researchers who apply for an ERC Grant at Politecnico; the outcomes of the Project are very positive with a participation to the calls that is three times higher than the average of the Seventh Framework Programme, and, most importantly, with a number or funded proposals that is four times higher than in FP7; **2)** "Research Talent" Call for proposals ("La ricerca dei talenti") published in April 2015 to fund highly innovative and interdisciplinary research projects submitted by young researchers in the early stage or consolidation stage of their research career; **3)** "Starting Grant" Project launched in February 2016 to support newly appointed associate or full professors coming from outside Politecnico; **4)** "Joint projects to support research collaborations with excellent international organizations" Call for proposals published in July 2016 to support research collaborations with prestigious international organizations through the exchange of PhD candidates; **5)** "Create a network around your research idea" Call for proposals ("Metti in rete la tua idea di ricerca"), published in December 2016 to fund collaborative research projects submitted by professors and researches of the Politecnico di Torino in the early stage or the consolidation stage of their own research career, together with two partners, one located in Italy and one from another EU Member States of the European Union, of which one must be from the academic sector and one from the non-academic sector; **6)** since 2017 PoliTo provides grants for basic research for all tenured faculty members; **7)** since 2017 PoliTo promotes starting grants for tenure-track assistant faculty members. Initiatives 6) and 7) provide resources for curiosity-driven initiatives

How do you know?

and aim to ensure the independence of researchers. In addition to these 7 initiatives, dedicated staff within the Fund Raising Division of the Research Support Department supports the attraction of curiosity-driven research grants from regional, national and international funding sources.

Moreover, the Research Support Department carries out a strong information and dissemination activity in order to guarantee transparency and equal access to funding to all researchers. In particular, since 2017 a weekly newsletter is sent to all researchers for promoting open calls for proposals and news relating to research funding. The same Department also organizes regular information sessions dedicated to specific funding opportunities open to all internal researchers.

Despite having fewer researchers than many other universities, PoliTO is among the best Italian universities to attract funding under the Horizon 2020 Framework Programme. The new action plan confirms the support to basic research through grants and services for participation in funding programmes.

- **Professional responsibility**: PoliTO implemented several actions, such as: a MOC on Research integrity that is available to all researchers; software for detection of plagiarism; trainings on RRI-Responsible Research and Innovation; training courses are available for all POLITO staff on issues such as health and safety, anti-corruption and transparency. Moreover, in 2018 the Rector appointed a Rector's Advisor for Research Integrity with the aim of preparing a programmatic manifesto of the internationally recognized fundamental principles that our University embraces in conducting its research.

- **Dissemination, exploitation of results**: Since 2013, great effort has been made to ensure that the results of research are disseminated and exploited. Politecnico has invested and created an organizational structure that has enabled increasingly effective **technology transfer activities**. The steps were: in 2015 the establishment of the institutional role of the Vice Rector for Technology Transfer, not provided for until then; in 2016 the creation of the TRIN Department (Technology Transfer and Relations with Industry), the establishment of the Interdepartmental Laboratory for Technology Transfer that acts as an operational liaison with the inventors and the creation of the Entrepreneurship and Innovation Center (EIC) which is focused on research issues linked to entrepreneurship and innovation.

From 2016 to 2018 the TRIN Department launched and managed the "Proof of Concept" Call for Proposal with the aim of supporting young researchers of Politecnico in carrying out all the necessary activities to transfer a patented or patent-pending solution to an industrial reality and finally contribute to reduce the gap between university research and industry. Moreover, several training courses for researchers have been organised to increase the knowledge on IPR's topics.

Through dedicated staff, the Research Support Department has strengthened the support and training on how to write a plan for the exploitation and dissemination on results and created a **Handbook on Communication and Dissemination in Horizon 2020**. Regarding **Open Access** and Open Science, several trainings and events were organized. In 2018 the Rector appointed for the first time a Rector's Advisor for Open Science and in December the Governing Bodies approved the "Politecnico di Torino Policy on Open Access to Scientific Publications". In 2018 an inter-departmental working group was created to raise awareness about open science and open access: the working group involves staff of the Library and Museum Department, of the Research Support Department and of the Quality and Evaluation Division. The Strategic Plan POLITO4IMPACT 2018-2024 strongly encourages and promotes open access to research results in order to bring our University's policies closer to the level of international best practices.

The results of the HRS4R survey (2018) show that the researchers of PoliTO ranked the following two principles pertaining to the thematic area "Ethical and professional aspects" (Public engagement and Professional Attitude) among the ten principles of the European Charter that have been implemented at lower degree by PoliTO. Although it should be noted that the score obtained by these two principles is still positive and higher than 2.8 out of 4.

Following the analysis of the results of the survey and considering the priorities set out in the Strategic Plan POLITO4IMPACT, the Focus Group and the Steering Board have agreed that there are other principles not fully implemented at the moment for which actions should be taken as a priority. The two above-mentioned groups have identified the following **ELEMENTS FOR DEVELOPMENT**:

- **Professional Attitude**: strategies and rules of the University should be communicated to new employees and PhD students. 'On boarding' service and welcome initiatives should be improved.

- **Public Engagement**: there is a lack of awareness and support for public engagement and the institutional website needs to be revised to become a communication tool for the general public.

- **Ethical principles**: Since 2012 Politecnico has adopted the Code of Ethical Conduct of the University Community. Although the awareness on the Code was raised thanks to several actions implemented in the previous Action Plans, it is now urgent to create an Ethics Committee for Research to provide opinions and recommendations on how to deal with ethical issues in research.

- **Research Freedom**: Support for curiosity-driven research continues to be a priority in the new Strategic Plan POLITO4IMPACT. Funding and support should be confirmed and strengthened.

- **Professional Responsibility**: awareness on research integrity principles should be raised through the adoption of a programmatic manifesto of the internationally recognized fundamental principles that our University embraces in conducting its research and a regulation to manage research misconduct.

- **Non Discrimination**: according to the results of the survey, the principle is implemented. Nevertheless, actions to increase awareness in order to counteract unconscious gender bias in the recruiting process are encouraged.

Remarks (max 500 words)

General introduction for the 4 thematic areas of the Charter and Code

Since the initial gap analysis in 2013, Politecnico di Torino has promoted several actions that led to significant progress and achievements regarding the four pillars of the Charter and Code. The detailed description of the implemented actions of the initial Action Plan (November 2013-November 2015) is available in Annex 2 of the Internal Review for Interim Assessment that is published in the HRS4R E-Tool. The detailed description of the implemented actions of the revised Action Plan (November 2015-December 2018) is available at the following link https://www.researchers.polito.it/hr_excellence_in_research. All actions were implemented and the results led to a greater awareness and understanding of the value of the principles and, consequently, to new actions for further improvements. A quick overview of the main

results is available in the timeline at the link https://www.researchers.polito.it/en/hr_excellence_in_research/timeline. As a result of the HRS4R process, in December 2015 the Opportunities for Researchers website was created where also information on the on-going HRS4R process is available (https://www.researchers.polito.it/en).

Strengths and weaknesses have been identified through the following steps: in Autumn 2018, a HRS4R survey aimed at assessing the perception of the scientific community of Politecnico (R1-R4 researchers) concerning the implementation of the principles of the Charter and Code was carried out. Then, the results were analysed by the Focus Group of Researchers and the Steering Board and finally the elements to be improved were identified, in line with the priorities set out in the Strategic Plan POLITO4IMPACT (2018-2024). In addition, the main achievements of the previous Action Plans have been listed as well.

NOTE TO SECTIONS 1 AND 2 OF THE INTERNAL REVIEW

The information contained in section 1. '*Organisational Information*' of the Internal Review relates to 31 December 2018. Updated data and information will be provided during the site visit or earlier if requested.

As the analysis provided in section 2. *Strengths and weaknesses of the current practice* is related to the actions carried out until December 2018, we upload as additional document the file "*HRS4R Action Plan 2019-2021 – Interim Report Implemented activities*", which provides the detailed description of the activities of the 2019-2021 Action Plan, already carried out in the period January 2019 – July 2020. This document is the outcome of the annual monitoring meeting of the Administrative Working Group with the Focus Group of Researchers that was held on 15 July 2020.

On the occasion of the site visit, PoliTO will provide a further update on the state of the art of the implementation of the Action Plan 2019-2021.

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 Recruitment and selection* ⌄

Strengths and Weaknesses (Initial Phase)

Strengths and Weaknesses (Interim Assessment)

Strengths and Weaknesses (Award Renewal, max 500 words) *

The results of the HRS4R survey (2018) show that the researchers of PoliTO ranked the following two principles pertaining to the thematic area "Recruitment and selection" (Recruitment (1) and Selection) among the top ten most implemented principles of the Charter&Code.

Among the **STRENGTHS**, it is worth mentioning that PoliTO has introduced an **on-line tool for the submission of applications for all research positions**, greatly facilitating the whole recruitment process and the work of all stakeholders involved. Applications for PhD programmes are submitted online via the dedicated procedure 'Apply' at http://apply.polito.it/index_en.html. All other researchers' applications are managed through a unique website: www.careers.polito.it.

All positions are advertised widely and transparently through different channels (institutional website, national website-CINECA, Official Journal and EURAXESS) in line with national law provisions. Competition notices are published in Italian and in English.

In order to increase the low percentage of international professors, the previous Action Plans included the implementation of several initiatives focused on **promoting PoliTO as employer at an international level** to attract researchers from abroad (e.g. Call for Visiting Professors, Call for proposals for internationalization of research, Starting Grant for newly appointed professors coming from external institutions, Call for proposals for Joint Projects to support research collaborations with international organisations, Leaflet and dedicated support for international researchers applying for a MSCA Individual Fellowship at PoliTO, Online procedure to submit and collect expression of interest to cover position for external Professors, new web site "Opportunities for Researchers"). Moreover, two newly created webpages (https://careers.polito.it/home.aspx and http://www.researchers.polito.it/en/careers) provide more information and visibility to open transparent and merit-based recruitment (OTM-R), selection procedures and the description of the different steps of the career at Italian universities.

The details of the implemented actions are available at http://www.researchers.polito.it/en/hr_excellence_in_research, together with the **OTM-R checklist**. All actions were implemented and further developments are foreseen in the future.

According to the results of the survey, the researchers of PoliTO ranked the following two principles (Judging Merit and Transparency) among the ten principles of the European Charter that have been implemented at lower degree by PoliTO. Although it should be noted that the score obtained by these two principles is still **positive** and higher than 2.5 out of 4.

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Following the analysis of the results of the survey and considering the priorities set out in the Strategic Plan POLITO4IMPACT, the Focus Group and the Steering Board have agreed that there are other principles not fully implemented at the moment for which actions should be taken as a priority. The following **ELEMENTS FOR DEVELOPMENT** have been identified:

- **Transparency/Stability and permanence of employment**: it was pointed out that more information on recruitment policies and plans should be provided to researchers that have temporary contracts.

- **Judging merit**: the new action plan should include actions aimed at preventing unconscious bias during the selection process.

- **Recruitment (2)**: The increasing of the number of international academic staff takes time and dedicated actions.

As pointed out in the **OTM-R checklist**, there are few **additional aspects that are not fully implemented and deserve further actions**. They are mainly related to: providing more visibility of information concerning recruitment procedures also in English; attracting underrepresented group; supporting career development of R1 and R2 researchers.

Remarks (max 500 words)

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Working conditions*

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Strengths and Weaknesses (Initial Phase)

Strengths and Weaknesses (Interim Assessment)

Strengths and Weaknesses (Award Renewal, max 500 words) *

The results of the HRS4R survey show that the principles which are judged to be the most adequate to the European Charter are those related to: Gender Balance (however with some differences between women and men responses as explained in the Gap Analysis document), Intellectual Property Rights and Participation in Decision-Making Bodies.

Considering the actions implemented in the previous Action Plan, below is a summary of the main **STRENGHTS AND ACHIEVEMENTS**:

- **Gender balance**: With the aim of designing and implementing a Gender Equality Plan, PoliTO was part of the international consortium that submitted the Horizon 2020 proposal entitled "ENGINE- Promoting Gender Equality and gender analysis in Engineering and Architecture in the European Research Area" (SwafS-03-2016-2017- Support to research organisations to implement gender equality plans). Unfortunately, the proposal was not selected for funding, despite the high score; nevertheless sharing information and best practices with the members of the consortium provided useful information for the preparation of the University Gender Equality Plan. On October 2017, the Academic Senate and the Board of Governors approved the introduction in the Board of Governors of "gender quotas". In 2018, the new Rector Prof. Guido Saracco appointed a Vice Rector for Quality, Welfare and Equal Opportunities, along with a Rector's Advisor for Gender Equality and Diversity. The new Strategic Plan POLITO4IMPACT (2018-2024) has a strong focus on gender equality with ambitious objectives. In the same year, PoliWo (Politecnico for Women), a discussion group and mailing list for teaching and research staff on diversity and gender issues, was launched and POLITO joined the national working group on Gender Equality Report.

- **Career development/Access to career advice**: the increase of the number of actions dedicated to support the career development of researchers, especially young researchers, is one of the results of the HRS4R process. Of particular importance in this respect are the following initiatives: (1) in July 2015 the project "Empowerment for Employability" was adopted by the Board of Governors. The project is aimed at increasing the potential of work placement of researchers, PhD students and postdocs of Politecnico. (2) in 2017 and in 2018 the Doctoral School launched the initiative "Chi ri-cerca trova!" (*Whoever re-searches finds*) addressed to Ph.D candidates in their last year to increase their employability. (3) the number of training courses in transferable skills on issues such as IPR, Open Access, fundraising, communication, career development has increased both for R2-R4 researchers and for R1 (PhD candidates).

- **Teaching**: On Autumn 2016, the Quality Committee approved the implementation of a training course on "Teaching the teachers" addressed to all RTD. In 2018 the training course was extended also to permanent staff.

  - **Complains/Appeals**: On December 2018, the Academic Senate appointed the Vice Rector for Quality, Welfare and Equal Opportunities as the Researcher Ombudsman of Politecnico di Torino. In line with the provisions of the Charter, the Researcher Ombudsman will be in charge of intervening informally to deal with complaints/appeals of researchers, including those concerning conflicts between early-stage researchers and their supervisors.

  - **Research Environment:** considering the importance of enhancing interdisciplinary collaborations among PoliTO different technological and scientific fields, since 2016 PoliTO established 13 Interdepartmental Centers, with dedicated funding (https://www.polito.it/ricerca/centri/index.php?lang=en). This initiative allows researchers belonging to different Departments to collaborate together improving the internal cooperation and boosting interdisciplinary research. Moreover, since 2016 PoliTO has invested around 40M€ in open access research infrastructures. Ten new open access research infrastructures are currently under construction (CARS-HEV@PoliTo - Centre for Automotive Research and Sustainable mobility-Hybrid/Electric powertrain and Vehicle Laboratory; CCL - CO2 Circle Lab; DynLab4JMat - Laboratorio per l'Integrità Strutturale di Giunzioni e Materiali Sottoposti a Carichi Dinamici; FIP - Tecnologie Fotoniche per l'Industria 4.0 in Piemonte; HPC4AI - Centro di Competenza Calcolo ad Alte Prestazioni e Intelligenza Artificiale Torino; IAM@Polito - Integrated Additive Manufacturing@Politecnico di Torino; PAsTISs - PArco per le Tecnologie Innovative per la Salute; PiqueT - Piemonte Quantum Enabling Technology; SAX - Strumentazioni avanzate per sistemi complessi; TEST-eDrive - Infrastruttura di test di e-DRIVE per applicazioni automobilistiche ed aerospaziali) and actions to improve their visibility and access are already planned.

According to the results of the HRS4R survey, the researchers of PoliTO ranked the following five principles (Career Development, Access to career advice, Stability and permanence of employment, Recognition of the profession and Teaching) among the ten principles of the European Charter that have been implemented at lower degree by PoliTO. Although it should be noted that the score obtained by these five principles is still **positive** and higher than 2.45 out of 4.

Following the analysis of the results of the survey and considering the priorities set out in the Strategic Plan POLITO4IMPACT, the Focus Group and the Steering Board have agreed that there are other principles not fully implemented at the moment for which actions should be taken as a priority. The following **ELEMENTS FOR DEVELOPMENT** have been identified:

- **Gender balance:** To reduce the existing gender gap, PoliTO should prepare a Gender Balance Report and adopt a Gender Equality Plan.

- **Research environments:** Communication actions should be implemented to promote the open access research infrastructures to attract researchers and funding from outside PoliTO. Actions to further improve the health and safety of workers/students and raise awareness on health and safety issues in the workplace should be implemented.

- **Teaching:** teaching should be adequately recognised and remunerated to Temporary researchers type B

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- **Complains/Appeals:** considering that the rate of 'no answer' is particularly high for this principle in the survey (47%), internal communication should be strengthened on the already existing procedures. As soon as the Researcher Ombudsman guidelines are adopted, a communication campaign should be launched and a web page created.

  - **Recognition of the profession:** even though in the Italian system doctoral candidates are students, their contribution to the research conducted at PoliTO is fundamental. Therefore, it is important that new actions are implemented to improve their sense of belonging to the scientific community and their knowledge about the University as a whole and about research strategies

  - **Career Development, Access to career advice:** in the survey, the average scores for these principles are the least positive and the rate of 'no answer' is particularly high. New services to support career development of researchers should be implemented. **Linked to the Professional Attitude principle**, 'On boarding' services and welcome initiatives should be improved to provide guidance and support to newly recruited R1-R4 researchers. **Linked to the Stability and permanence of employment principle**, more information on recruitment policies and plans should be provided to researchers that have temporary contracts.

Remarks (max 500 words)

      Training and development*   ⌄

Strengths and Weaknesses (Initial Phase)

Strengths and Weaknesses (Interim Assessment)

Strengths and Weaknesses (Award Renewal, max 500 words) *

The results of the HRS4R survey carried out in Autumn 2018 show that the average score given to the principles of the thematic area "Training and development" is the most positive (see the report 'Gap Analysis 2018' at http://www.researchers.polito.it/en/hr_excellence_in_research). The researchers of PoliTO ranked the following three principles pertaining to the thematic area "Training and development" among the top ten most implemented principles of the Charter&Code: (Relation with supervisor, Supervision, Access to research and training and continuing professional development).

Below is a summary of the main **STRENGHTS AND ACHIEVEMENTS**:

- **Supervision**: Between the end of 2017 and Spring 2018 a group of PhD supervisors attended a two full-days training about the role and responsibilities of PhD supervisors. After the training, they set up a working group and created an "expectation questionnaire" aimed at fostering discussion between the PhD candidate and the supervisor about expectations. Based on the outcomes of the discussion, both the PhD candidate and the supervisor complete a Declaration of Intent. All PhD Co-ordinators have been invited to use these tools in AY 2018/19 as a pilot. In 2016 the Guidelines for Good Practices "PhD and other research degree programs supervision" were presented to the Board of the Doctoral School. The Academic Board of the Doctorate School assigns an academic tutor to each PhD candidate and ensures to limit the number of PhD candidates for each tutor. The Academic Board is also responsible for evaluating that the tutor is sufficiently expert in a subject and committed to his/her supervisor duties.

- **Access to research and training and continuing professional development**: access to training opportunities is guaranteed to all researchers and the strengthening and updating of their skills are common practices at the University. As a result of the HRS4R process, the number of transferable and transversal skills training courses organised internally for researchers has improved considerably and the catalogue of training opportunities is regularly updated at https://www.researchers.polito.it/en/funds_training/training_offered_by_politecnico.

Following the analysis of the results of the HRS4R survey and considering the priorities set out in the Strategic Plan POLITO4IMPACT, the Focus Group and the Steering Board have identified the following **ELEMENTS FOR DEVELOPMENT**:

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Relation with supervisor: as already accomplished for PhD supervision, tools to support research fellows and their supervisors to better
share the planning and monitoring of the career path should be created too. Continuity should be given to the PhD supervision
workshops and disseminate the tools for improving interaction between supervisors and PhD candidates.

Remarks (max 500 words)

Have any of the priorities for the short- and medium term changed? (max 500 words)

Brief history of the HRS4R implementation process at the PoliTO

In November 2013 the European Commission awarded the HR Excellence in Research Award to the Politecnico di Torino. The initial Action Plan
covered the period from November 2013 to November 2015. The comments expressed by the assessors were very positive.

In December 2015, PoliTo submitted the second Action Plan, covering the period from November 2015 to November 2017, together with the self-
assessment report. In January 2016 PoliTo received a very positive feedback. In the beginning of 2018, in agreement with the European
Commission, Politecnico made the transition from the old to the new strengthened procedure and updated the 2-year action plan with an additional
third year covering also 2018. On February 6th 2018, the Board of Governors approved the revised Action Plan with the activities to be
implemented in 2018, together with the Interim Report related to the activities carried out during the period November 2015 – November 2017.

Politecnico di Torino now submits a new Action Plan covering the period from January 2019 to December 2021. Although the Action Plan was
formally approved in July 2019, some actions had already started in the previous months, as they were the development of previous actions or new
actions already formally approved.

The Strategic Plan POLITO4IMPACT 2018-2024 and the new HRS4R Action Plan

The delay in submitting the internal review and the revised action plan is due to **institutional changes**: in March 2018 a new Rector was appointed
and he immediately initiated the process to develop the Strategic Plan POLITO4IMPACT that will guide the actions of the whole Politecnico
community until the end of his mandate, in 2024. The **Strategic Plan POLITO4IMPACT 2018-2024** (http://www.pianostrategico.polito.it/en/) was
approved by the Governing Bodies in November 2018. The revision of the HRS4R Action Plan was part of the Strategic Plan POLITO4IMPACT
development process, during which the commitment to the implementation of the European Charter for Researchers principles was explicitly
confirmed. The implementation of the Charter and Code is a condition to guarantee a free research environment in which equal opportunities of
work activities and career growth can be offered to all the actors involved, promoting their talents and merit. Considering the long-term strategy, the
first semester of 2019 was dedicated to planning priority actions of the first three-year period 2019-2021 of POLITO4IMPACT to be included in the

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HRS4R Action Plan. On July 17, 2019, the new strategy for the implementation of the principles of the European Charter for Researchers for the period 2019-2021 was approved by the Academic Senate, upon favourable opinion of the Board of Governors. On February 21, 2020, the Governing bodies approved the Action Plan of the overall POLITO4IMPACT Strategic Plan, which confirms as a priority the actions contained in the HRS4R Action Plan. Following the COVID-19 outbreak, the Governing bodies discussed possible changes that may affect the Action Plan and in July 2020 they confirmed the HRS4R actions, although delays may occur. The description of the activities that were implemented from January 2019 to July 2020 is available to assessor in the file "*HRS4R Action Plan 2019-2021 – Interim Report Implemented activities*", which is uploaded as extra document with the internal review. An overview of the main results of the actions is available in the Timeline at the link https://www.researchers.polito.it/en/hr_excellence_in_research/timeline.

The need to deal with the emergency caused by the current pandemic could cause delays in the timing of implementation of actions. Nevertheless, the monitoring of the progress of actions and possible obstacles is carried out regularly.

Have any of the circumstances in which your organisation operates, changed and as such have had an impact on your HR strategy? (max 500 words)

Despite the delay in requesting the renewal of the award for the reasons explained above, the internal HRS4R process of implementing the principles of the Charter and Code has never suffered any setbacks and **excellent results** have been achieved.

Looking at the progress made since 2013 in the implementation of the HRS4R, we believe that the **positive comments** expressed by the assessors in 2013 and in 2016 were well-founded and encouraged PoliTo to achieve further progresses.

In addition to the high number of results achieved by implementing the previous Action Plans, PoliTo experienced other **benefits** from having adhered to the HRS4R process, such as: (i) it brought to the forefront of institutional decision-making processes and strategic planning essential policies on human resources, which would risk remaining marginal; (ii) it constituted a framework within which to develop in an organic way new actions and services oriented to HR development; (iii) it favoured the interaction between Departments of the Central Administration allowing the sharing of information on existing activities, identifying overlaps and common needs, and therefore integrating and optimizing processes and business flows; (iv) it favoured the interaction between administrative personnel of the different Administration Departments and researchers at different career stages, allowing to define new actions and evaluate the effectiveness of those implemented; (v) it promoted the growth of skills in the Administration Departments involved in HRS4R, in terms of developing innovative strategies and services to support research, its enhancement, the attraction of scholars from abroad and the career development of researchers; (vi) it promoted a critical analysis of recruitment processes according to Open, Transparent and Merit-based principles.

Since 2017 Ms **Chiara Biglia**, the **HRS4R Project Manager**, is the coordinator of the national working group of the Italian universities that have already received the HR Excellence in Research Award. The aim of the group is to share good practices and to bring a united voice at national and international level to support the implementation of the principles of the Charter&Code. The PM is also the co-author of the CESAER (Conference of European Schools for Advanced Engineering Education and Research) white paper "Sharing Experiences with the Human Resources Strategy for Researchers".

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Are any strategic decisions under way that may influence the action plan? (max 500 words)

The **strong Institutional commitment** to the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers is a major success factor for PoliTo HRS4R process. The whole process has always been led and supervised by an Institution's high-level representative: the Deputy Rector chaired the Steering Board and the Researchers' Focus Group from 2013 to 2018. In March 2018 a new Rector was elected and he appointed a Vice-Rector for Quality, Welfare and Equal Opportunities that is also in charge for the HRS4R. It is the first time ever that PoliTo has a Vice-rector in charge for Welfare and Equal Opportunities. The Rector's Team strongly supports the HRS4R, that is embedded in the Institutional strategies.

3. Actions

Please consult the list of all actions you have submitted as part of your HR strategy. Please add to the overview the current status of these actions as well as the status of the indicators. If any actions have been altered or omitted, please provide a commentary for each action. You can also add new objectives.

Note: Choose one or more of the principles automatically retrieved from the GAP Analysis with their implementation ratings.

Proposed ACTIONS

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Proposed ACTIONS
How do you know?

Action 1

To design and implement actions for promoting curiosity-driven research

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
1. Research freedom	December 2017	Research Support Department	Launch of at least 3 new actions for promoting curiosity-driven research

Current Status	Remarks
COMPLETED	Activities completed: 5 new actions for promoting curiosity driven research were launched in 2015-2018 (more details are available in the "Report on implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research). The action will continue and will be further developed in Action Plan 2019-2021 with a focus on supporting fundraising for research (Actions 1, 2, 3, 4 Action Plan 2019-2021)

Action 2

To adopt the software for detection of plagiarism and to periodically monitor the requests

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS　　　　　　　　　　　　　　　　　　　　　How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
3. Professional responsibility	December 2018	Student Affairs Department; Information Technology Department; Library and Museum Department	- Adoption of guidelines for the use of the software - At least 50 MoS and 50 PhD thesis tested

Current Status	Remarks
COMPLETED	Activities completed: Software for detection of plagiarism adopted ; Guidelines for the use of Compilatio and Turnitin software available ; No. of thesis tested through the software: 3758 Master Thesis (2017-2018) and 1616 Phd thesis (2017-2018). More details are available in the "Interim Report on the Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Proposed ACTIONS

How do you know?

Action 3

To provide specific support and training on RRI

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
3. Professional responsibility	December 2018	Research Support Department; Communication, Events & External Relations Division	At least 5 new specific support and training initiatives launched on RRI

Current Status	Remarks
COMPLETED	Activities completed: in 2016: 5 training/workshop/workshop sessions ; in 2017: 5 training/workshop/workshop sessions; in 2018: 2 training sessions and 1 MOC. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Proposed ACTIONS

How do you know?

Action 4

To provide support and training for the management of intellectual property, tutoring services and strategic consultancy in the field of spin-off firms and the evaluation of the commercial potential of the research outcomes

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results	December 2018	Technology Transfer and Industrial Liaison Department	To increase the number of training events and meetings compared to the period 2013-2015

Current Status	Remarks
COMPLETED	Activities completed: n° 32 educational and training events organized (in the period 2013-2015: 19) ; n° 196 meeting be to be on patents carried out (in the period 2013-2015: 85) ; n° 35 meeting be to be on spin-off carried out (in the period 2013-2015: 7). More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Action 9)

Proposed ACTIONS

How do you know?

Action 5

To provide specific support and training on how to write a Plan for the Exploitation and Dissemination of Results

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results	december 2018	Research Support Department	Handbook on dissemination strategy in Horizon 2020 projects

Current Status	Remarks
COMPLETED	Activity completed: delivery of the "Communication and Dissemination in Horizon 2020" (October 2020) Before 2015: N° 0 of initiatives aiming to support the Plan for Dissemination and Exploitation of Results writing ; N° 0 dedicated persons in the Research Support Department to promote research After 2015: N° 7 organized trainings aiming to support the Plan for Dissemination and Exploitation of Results writing; N°40 supported proposals as regards to the Plan for Dissemination and Exploitation of Results; N° 2 dedicated persons in the Research Support Department to promote research. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Action 6

To provide to researchers and administrative staff specific support and training on Open Access with particular focus on open access requirements in research funding programmes

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results	december 2017	Library and Museum Department	An increase of at least 10% in the number of open access papers deposited and in the number of downloads of open access papers compared with the previous period

Current Status	Remarks
COMPLETED	Activities completed: - Numbers of papers deposited OA (January 2013 – October 2015): 2.906 - Numbers of papers deposited OA (November 2015 -November 2017): 3.510 - Numbers of downloads of open access papers (January 2013 – October 2015): 418.167 - Numbers of downloads of open access papers (November 2015 - November 2017): 664.477 In 2018 for the first time a Rector's Advisor for Open Science, prof. Federica Cappelluti, was appointed in order to enhance Open Access at Politecnico di Torino and Politecnico di Torino has now a Policy on Open Access to Scientific Publications. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (action 8)

Proposed ACTIONS

How do you know?

Action 7

To define of a Plan for collecting and promoting communication of research activities and of research results through multiple channels (SUA-RD, media, website, University social network, EU channels, events ...)

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
9. Public engagement	December 2017	Research Support Department; Communication, Events & External Relations Division	Increase in the number of initiatives aimed at communicating the research conducted by the Politecnico di Torino

Current Status	Remarks
COMPLETED	The plan for promoting communication of research activities and research results through multiple channels is defined in the "Promoting research and research environment" project (approved by the Board of Governors of Politecnico di Torino on July 27, 2016) is used to monitor and collect information about communication initiatives. Details regarding the number of initiatives aimed at communicating the research are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Actions 11, 12, 13, 14, 15)

Proposed ACTIONS

How do you know?

Action 8

To provide support and training on effective communication of science to non-specialist audiences

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
9. Public engagement	December 2017	Communication, Events & External Relations Division ; Students Affairs Department	Support and training offered on a continuous basis

Current Status	Remarks
COMPLETED	More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Action 13)

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Proposed ACTIONS　　　　　　　　　　　　　　　　　　　　　　　How do you know?

Action 9

To coordinate and strengthen the participation of the University in public engagement initiatives

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
9. Public engagement	December 2017	Communication, Events & External Relations Service	Increase in the number of public engagement initiatives

Current Status	Remarks
COMPLETED	Number of public engagement initiatives: +10%. As regards the quality, we have to underline that we have bigger audience and we focused on more qualified and engaged audiences (seminars, workshop and labs with our researchers are often offered parallel to exhibit in the Politecnico di Torino's stand and to poster sessions). Moreover, when we select in a proper way people from the Departments focusing on specific topics, we always find an enthusiastic feedback, and this is one of the most important goals to be reached. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Actions 14, 15)

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Proposed ACTIONS

How do you know?

Action 10

To create a comprehensive guide to OTM-R practices already existing at POLITO with regard to all research position

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code)	December 2018	Human Resources and Organisation Department	Creation of a ccomprehensive guide to OTM-R practices and to create a new web page related to OTM-R practices

Current Status	Remarks
COMPLETED	Activities completed: - OTM-R checklist completed - Creation of a comprehensive guide to OTM-R practices already existing at POLITO with regard to all research position - Creation of a section of the institutional website related to open positions and OTM-R practices (www.careers.polito.it) More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Action 18)

Action 11

To design and implement new actions and initiatives to promote Politecnico di Torino as host institution of qualified international researchers

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code)	December 2017	International affairs Department ; Research Support Department ; Communication, Events & External Relations Division ; Human Resources and Organisation Department	At least 4 new actions/initiatives designed and implemented

Current Status	Remarks
COMPLETED	Activities completed: more than 4 new initiatives for promoting Politecnico di Torino as host institution of qualified international researchers launched in 2015-2018 (More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .) The action will continue and will be further developed in Action Plan 2019-2021(Actions 1, 19)

Action 12

Proposed ACTIONS   How do you know?

Action 12

To define a plan of actions to support career development of female researchers

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
27. Gender balance	December 2017	Equality, Non-Discrimination and Anti-Harassment Committee; Research Support Department	- Participation in the call for proposals under the Horizon 2020 Programme/topic: SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans - At least 2 new actions to support career development of female researchers

Current Status	Remarks

Proposed ACTIONS

How do you know?

Current Status	Remarks
EXTENDED	Several actions have been developed to promote gender equality More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . Moreover: - March 2018: the new Rector Prof. Guido Saracco (2018-2024) chose a gender balanced Team of Vice Rectors and Delegates (50/50) - March 2018: for the first time, appointment of a Vice Rector for Quality, Welfare and Equal Opportunities - March 2018: appointment of a Rector's advisor for Equal Opportunities - The new Strategic Plan POLITO4IMPACT (2018-2024) has a strong focus on gender equality. The action will continue and will be further developed in Action Plan 2019-2021 (Action 20)

Action 13

Based on the outcomes of the pilot project "Empowerment for Employability", further actions and initiatives will be designed

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
28. Career development 30. Access to career advice 39. Access to research training and continuous development	December 2017	Student Affairs Department - Job Placement Office ; Research Support Department	At least 2 initiatives to support career developments of researchers

Current Status	Remarks

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Proposed ACTIONS

How do you know?

	Current Status	Remarks
	COMPLETED	Based on the outcomes of the pilot project "Empowerment for Employability": - the project "Empowerment for Employability" organizes each year one session for research fellows and temporary researchers, - implementation of the new Project "Chi ri-cerca trova!" (Whoever re-searches finds) for PhD candidates, - organization of new training courses on self-evaluation of researchers' skills and training needs and providing tools to plan objectives, identify progress and effectively communicate their skills to different stakeholders. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Actions 8,17,25)

Proposed ACTIONS

How do you know?

Action 14

Improve support service for the author in the negotiating stage with the publisher and periodic update of templates of new contractual formulas

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
31. Intellectual Property Rights	December 2017	Library and Museum Department	Periodic monitoring of support offered to researchers (Number of publisher contacted; number of transactions with authors)

Current Status	Remarks
COMPLETED	The revision and update of "publishers' policies" section in the Politecnico's website is now carried on as a routine activity together with the frequent transactions with the authors. The training courses about copyright issues will be included as a section of the courses on Open Access, focused on the fulfillment of Horizon 2020 requirements, scheduled in Action 6. Details regarding the number of Number of publishers contacted and the number of transactions with authors by email over the years are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Proposed ACTIONS

How do you know?

Action 15

To extend courses on 'teaching the teachers', 'communicating in the classroom' both to permanent research staff and to temporary research staff

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
33. Teaching	December 2018	Student Affairs Department ; Quality Assurance Division ; Research Support Department	Monitoring of delivered courses

Current Status	Remarks
COMPLETED	Activities completed: - Training courses on Teaching the teachers: 2 editions - Workshops for PhD supervisors: 2 - On line courses for PhD candidates to develop communication skills including how to prepare a lesson/presentation and to interact with the classroom More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Proposed ACTIONS

How do you know?

Action 16

To appoint a University Researcher Ombudsman

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
34. Complains/ appeals	December 2018	Legal Affairs Division	Appointment of a University Researcher Ombudsman

Current Status	Remarks
EXTENDED	On 18th December 2018 the Academic Senate decided that the Vice Rector for Quality, Welfare and Equal Opportunities will have the role of Researcher Ombudsman. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Action 7)

Action 17

To create an anonymous on-line questionnaire on the adequacy of the supervisor based on the guidelines for supervisors and to decide periodical distribution to PhD and research fellows

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

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Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
37. Supervision and managerial duties	December 2017	Quality and Evaluation Department; Research Support Department ; Human Resources and Organisation Department ; Students Affairs Department - Doctoral School ; Information Technology Department	Analysis of the results of the questionnaire

Current Status	Remarks
COMPLETED	Creation and distribution of an updated version of the questionnaire to PhD candidates and of the questionnaire to research fellows and analysis of results. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research .

Proposed ACTIONS

How do you know?

Action 18

To adopt guidelines to regulate the relationship between the PhD candidate and the supervisor and guidelines to regulate the relationship between the temporary researcher and the scientific responsible

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
40. Supervision	December 2017	Student Affairs Department / Doctoral School ; Human Resources and Organisation Department ; Research Support Department	Approval of guidelines to regulate the relationship between the PhD candidate and the supervisor and guidelines to regulate the relationship between the temporary researcher and the scientific responsible

Current Status	Remarks
EXTENDED	Guidelines for Good Practices "PhD and other research degree programs supervision" presented to the Board of the Doctoral School. More details are available in the "Report on Implemented activites 2015-2018" at: https://www.researchers.polito.it/en/hr_excellence_in_research . The action will continue and will be further developed in Action Plan 2019-2021 (Actions 26, 27)

Proposed ACTIONS　　　　　　　　　　　　　　　　　　　How do you know?

Action 19

ACTION 1 (Action Plan 2019-2021): Implement an action plan to strengthen participation in individual competitive calls for curiosity-driven research, also through attracting candidates from the outside

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
1. Research freedom 13. Recruitment (Code)	December 2021	Research Support Department ; Human Resources and Organization Department ; International Affairs Department	2 new actions implemented to support participation in individual curiosity-driven calls for proposals and the attraction of scholars from abroad 10% more proposals from candidates from outside the University for Marie Curie and ERC calls than the average for the period 2014-2018

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

How do you know?

Proposed ACTIONS

Action 20

ACTION 2 (Action Plan 2019-2021): Creation of a
PoliTO Hub in Brussels

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
1. Research freedom	December 2021	Research Support Department	- Start of the activities of an office of the Politecnico di Torino in Brussels - Definition of an Action Plan for each year with actions aimed at increasing fund raising for research

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 21

ACTION 3 (Action Plan 2019-2021): Define new tools to improve the transposition and diffusion in the academic community of the opportunities offered by research funding, also through a greater personalization of the information that will be made possible by the new research database

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
1. Research freedom	June 2021	Research Support Department ; Communication, Events & External Relations Division ; Research Scientific Departments	Implementation of 2 new initiatives aimed at improving information and access to research funding opportunities

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 22

ACTION 4 (Action Plan 2019-2021): Implementation of training courses to increase fund raising skills for research, also involving PhD students and research fellows

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
1. Research freedom	December 2021	Research Support Department ; Students Affairs Department	Implementation of 1 training course per year on fund raising that also involves PhD students and research fellows

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS　　　　　　　　　　　　　　　　　　　　　　　How do you know?

Action 23

ACTION 5 (Action Plan 2019-2020) Approval and implementation of a model for the governance of ethical research issues at PoliTO

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
2. Ethical principles	December 2020	Research Support Department	Implementation of a governance model for ethical research issues

Current Status	Remarks
IN PROGRESS	University Regulation Governing the Research Ethics Committees adopted on 30th June 2020. The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 24

ACTION 6 (Action Plan 2019-2020): Approval of clear procedures for handling cases of violations of the principles of research integrity

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
3. Professional responsibility 34. Complains/ appeals	December 2020	Research Support Department; Institutional Support Division; Legal Affairs Division	Approval by the governing bodies of clear procedures for handling cases of violations of the principles of research integrity

Current Status	Remarks
COMPLETED	Adoption of the Regulation Governing Research Integrity at Politecnico di Torino for handling cases of violations on 30th June 2020. Creation of a dedicated webpage at: https://www.polito.it/ricerca/integrita/index.php?lang=en . The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 25

ACTION 7 (Action Plan 2019-2020): Implementation of the role of the Researchers' Ombudsman

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
34. Complains/ appeals	September 2019	Research Support Department; Legal Affairs Division	Definition and implementation of the operational aspects and start of the activity of the Ombudsman

Current Status	Remarks
COMPLETED	Appointment of the Researchers' Ombudsman by Rectoral Decree n.956/2019. Publication of the operating guidelines on a dedicated webpage at: https://www.polito.it/ricerca/garante/?lang=en. The details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 26

ACTION 8 (Action Plan 2019-2021): To create an 'on-boarding' path that welcomes newly recruited researchers and introduces them to how the University is structured, its mission, objectives, governing bodies, rules governing the university community, services and opportunities.

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
4. Professional attitude 28. Career development 30. Access to career advice	December 2021	Research Support Department ; HR and Organization Department ; Communication, Events & External Relations Division ; International Affairs Department ; Purchasing Department ; Research Departments	On-boarding path for newly recruited researchers

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 27

ACTION 9 (Action Plan 2019-2020): Awareness-raising actions on IPR, also involving research fellows and PhD candidates

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results 31. Intellectual Property Rights	December 2021	Technology Transfer and Industrial Liaison Department	Implementation of at least 1 training per year on IPR that also involves research fellows and PhD candidates

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 28

ACTION 10 (Action Plan 2019-2021): Promoting a progressive diffusion of the principles of Open Science

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results	December 2020	Library and Museum Department ; Research Support Department ; Planning, Development, Quality and Life ; IT Department	Implementation of at least 2 new activities to promote the awareness of Open Science

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 29

ACTION 11 (Action Plan 2019-2021): Create a University Database on research that allows for the quick, effective and transparent mapping of the University's competencies

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results 9. Public engagement	december 2021	Research Support Department ; Planning, Development, Quality and Life ; IT Department ; Research Department	Availability of the new University Research Database

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on Action Plan 2019-2021- Implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 30

ACTION 12 (Action Plan 2019-2021): Promoting PoliTO research on the University website

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results 9. Public engagement	December 2021	Communication, Events & External Relations Division ; Research Support Department	At least 3 new pages dedicated to research activities in the new University website

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 31

ACTION 13 (Action Plan 2019-2021): Improving researchers' skills in research dissemination and communication

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

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How do you know?

Proposed ACTIONS

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
8. Dissemination, exploitation of results 9. Public engagement	December 2021	Research Support Department ; Communication, Events & External Relations Division	Implementation of at least 1 training event per year for researchers on research dissemination and communication skills

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

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Proposed ACTIONS

How do you know?

Action 32

ACTION 14 (Action Plan 2019-2021): To create a serie of polytechnical events

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
9. Public engagement	December 2021	Communication, Events & External Relations Division ;	- Implementation of at least 1 flagship event per year - Participation in at least 3 events of our city

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 33

ACTION 15 (Action Plan 2019-2021): Implement an action plan aimed at increasing awareness and support for public engagement, also through participation in the national network APEnet

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
9. Public engagement	December 2020	Research Support Department ; Communication, Events & External Relations Division ; Planning, Development, Quality and Life	Implementation of at least 2 initiatives aimed at increasing awareness and support for public engagement

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS   How do you know?

Action 34

ACTION 16 (Action Plan 2019-2021): Implementation of initiatives against unconscious bias in selection process

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
10. Non discrimination 16. Judging merit (Code)	December 2019	HR and Organization Department ; Planning, Development, Quality and Life ; IT Department	Before the start of the selection process, the evaluation committees will be asked to watch a video on Recruitment Bias in Research Institutes [e.g. 8-minute video, which is used by EC evaluation panels: https://www.youtube.com/watch?v=g978T58gELo]

Current Status	Remarks
EXTENDED	Further initiatives against uncounsciuos bias in selection processes are currently under construction. The details of the activities are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 35

ACTION 17 (Action Plan 2019-2021): Provide that at the level of each Research Department, information is also given to those who have a temporary position with regard to the planning of human resources for research

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

An official EU website

How do you know?

Proposed ACTIONS

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code) 15. Transparency (Code) 25. Stability and permanence of employment 28. Career development	December 2021	Research Departments Human Resources and Organization Department	At least 1 meeting/year in each Research Department in which also those who have a temporary position for research activities are informed about the plans of human resources for research

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on Action Plan 2019-2021- Implemented activities January 2019 - July 2020".

Action 36

ACTION 18 (Action Plan 2019-2021): Creation of the new Careers section of the website in Italian and English

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

An official EU website
Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code)	March 2020	Human Resources and Organization Department ; IT Department ; Communication, Events & External Relations Division ; Planning, Development, Quality and Life ; Research Support Department ; Students Affairs Department	Launch of the new section of the Careers website in Italian and English containing all the information needed to apply for a position at the Politecnico and the description of the working conditions and environment

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 37

ACTION 19 (Action Plan 2019-2921): Increase the attraction of candidates from abroad

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code)	December 2020	International Affairs Department ; HR and Organization Department	Revision of the Visiting Professors announcement and translation of the main regulations in English

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details of the activities are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 38

ACTION 20 (Action Plan 2019-2021): Planning and implementation of a Gender Equality Plan

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS   How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
13. Recruitment (Code) 27. Gender balance	December 2021	Planning, Development, Quality and Life Department	- Start periodic monitoring of gender balance data at University and Department level. - Approval of a Gender Equality Plan that includes initiatives at University level and departmental level.

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 39

ACTION 21 (Action Plan 2019-2021): Increase the number of doctoral candidates and the amount of the doctoral fellowships in line with the European average. Support the development of applied research in collaboration with companies to increase post-doctoral

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
22. Recognition of the profession	December 2021	Student Affairs Department; Human Resources and Organization Department	Increase in the amount of the doctoral fellowships compared to 2019 amount Increase in the number of doctoral fellowships funded by companies and PhD apprenticeships

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 40

ACTION 22 (Action Plan 2019-2021): Strenghtening doctoral candidates' sense of belonging at the scientific community

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
22. Recognition of the profession	December 2020	Student Affairs Department ; Same Departments involved in Action 8 (on-boarding)	Start on-bording path in coordination with Action 8

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS   How do you know?

Action 41

ACTION 23 (Action Plan 2019-2021): Promoting the University's open-access research infrastructures to attract researchers and funding from outside the University

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
23. Research environment	December 2020	Research Support Department ; Communication, Events & External Relations Division ; IT Department	Organisation of at least 5 initiatives to promote RI

Current Status	Remarks
COMPLETED	The target has been reached but the action will continue with further initiatives. Details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 42

ACTION 24 (Action Plan 2019-2021): Implementation of actions aimed at strengthening the health and safety of workers and students and raising awareness on health and safety issues in the workplace

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
7. Good practice in research 23. Research environment	December 2021	Health and Safety Division ; Estates Facilities and Logistic Department ; Planning, Development, Quality and Life ; IT Department	- Plan of building interventions aimed at strengthening the health and safety of workers - To develop an e-learning course for new workers and students on health and safety at work

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 43

ACTION 25 (Action Plan 2019-2021): Creating services to support the professional development of researchers

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
28. Career development 30. Access to career advice	December 2021	Research Support Department ; Student Affairs Department	Start of new development support services for researchers

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Proposed ACTIONS

How do you know?

Action 44

ACTION 26 (Action Plan 2019-2021): Creation of a Career Development Plan model to be agreed between the research fellows and the senior scientific responsible

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
36. Relation with supervisors	June 2020	Human Resources and Organization Department ; Research Support Department	Availability of the Career Development Plan model

Current Status	Remarks
IN PROGRESS	This action has been postponed due to Covid 19 outbreak. The action is ongoing and the details are available in the "Interim Report on implemented activities January 2019 - July 2020".

Action 45

ACTION 27 (Action Plan 2019-2021): Strengthen the tools to support a good relationship between supervisor and doctoral candidate through training actions aimed at supervisors, especially young supervisors, and new tools

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)

Proposed ACTIONS

How do you know?

GAP Principle(s)	Timing (at least by year's quarter/semester)	Responsible Unit	Indicator(s) / Target(s)
40. Supervision	December 2021	Student Affairs Department ; Research Support Department	At least 1 training per year offered to supervisors Availability of working tools to support a good relationship between supervisor and doctoral candidate

Current Status	Remarks
IN PROGRESS	The action is ongoing and the details are available in the "Interim Report on Action Plan 2019-2021- Implemented activities January 2019 - July 2020".

Unselected principles:

5. Contractual and legal obligations   6. Accountability   11. Evaluation/ appraisal systems   12. Recruitment   14. Selection (Code)

17. Variations in the chronological order of CVs (Code)   18. Recognition of mobility experience (Code)   19. Recognition of qualifications (Code)

20. Seniority (Code)   21. Postdoctoral appointments (Code)   24. Working conditions   26. Funding and salaries   29. Value of mobility

32. Co-authorship   35. Participation in decision-making bodies   38. Continuing Professional Development

The extended version of the reviewed HR Strategy for your organisation for the next 3 years, including the OTM-R policy must be published on your organisation's website.

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Please provide the link to the dedicated webpage(s) on your organisation's web site *:

URL *:
https://www.researchers.polito.it/en/hr_excellence_in_research AND https://careers.polito.it/home.aspx?culture_language=en-US

If your organisation has already filled in the OTM-R checklist in the Initial Phase, please also indicate how your organisation is working towards / has developed an Open, Transparent and Merit-Based Recruitment Policy. Although there may be some overlap with a range of actions listed above in the action plan (as emerged from the Gap Analysis), please provide a short commentary demonstrating the progress of the implementation versus the initial phase.

Comments on the implementation of the OTM-R principles (Initial Phase)

Comments on the implementation of the OTM-R principles (Internal Review for Interim Assessment)

Comments on the implementation of the OTM-R principles (Internal Review for Award Renewal)

The Politecnico di Torino obtained the HR Excellence award (2013) before the stricter procedure for Open, Transparent, Merit-based Recruitment (OTM-R) took effect (2015). Therefore, we are now submitting also the OTM-R checklist that has been duly filled out and is published at https://www.researchers.polito.it/en/hr_excellence_in_research. The national Law 240/2010 promotes an OTM-R system. The underlying principles of OTM-R policy of the Politecnico di Torino are already elaborated in existing regulations and strategic documents and are already being applied. Article 1 of all the Politecnico's regulations relating to the recruitment procedures for researchers already contains a reference to compliance with the European Charter for Researchers. Since most of the regulations are in Italian, efforts are being directed towards translating them in English.

As a results of the HRS4R process, a description of the research positions foreseen by the national system is now available at https://www.researchers.polito.it/en/careers/working_in_research_at_politecnico_di_torino. Guidelines related to recruitment and selection procedures are available online at the following link: https://careers.polito.it/. The guidelines summarize the regulatory framework related to recruitment and selection processes for all available positions: full and associate professors, fixed-term researchers and research fellows. All regulations related to recruitment procedures and practices are published, in Italian, at the following link: https://www.polito.it/ateneo/documenti/?id_documento_padre=123892.

Information related to selection and admission to PhD programmes are available online, both in Italian and in English, at the following link: http://dottorato.polito.it/en/admission.

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According to the outcomes of the OTM-R checklist, there are some aspects that are not fully implemented and deserve further actions that have been included in the 2019-2021 Action Plan:

Visibility of information concerning recruitment procedures: the objective of **Action 18** of the 2019-2021 Action Plan is that the Career section of the website will be more visible and improved with more information, in Italian and in English, on OTM-R procedures

Number of international research staff: In order to increase the number of international research staff, actions to further increase the attraction of candidates from abroad are planned in the 2019-2021 Action Plan (see **Actions 1, 13, 19** of the 2019-2021 Action Plan).

Attract underrepresented groups: The objective of **Action 20** of the 2019-2021 Action Plan is to contribute to the reduction of the gender gap between candidates competing for academic positions.

Additional guidelines for selection committee: Action 16 will ensure that before the start of the selection process, the evaluation committees will be asked to watch a video on Recruitment Bias in Research Institutes.

Information on professional development opportunities and career development prospects: The Action Plan 2019-2021 includes actions to provide support for career development planning for PhD candidates and research fellows (**Actions 26 and 27**).

Please be aware that your OTM-R policy should be 'embedded' into the institutional HR strategy at the award renewal phase. The extended version of the reviewed HR strategy including the OTM-R policy and actions should be published on your organisation's website.

4. Implementation

General overview of the implementation process: (max. 1000 words)

HRS4R ORGANIZATIONAL STRUCTURE

A solid internal organizational structure has been designed since 2013 to ensure institutional support for the initiative as well as the involvement of representatives of all stakeholders (researchers and administrative staff), with an efficient coordination of activities. This organizational structure is presented in the diagram at: https://www.researchers.polito.it/en/hr_excellence_in_research/human_resources_strategy_for_researchers_hrs4r

The **Steering Board** leads and supervises the HRS4R process, ensuring the alignment with Institution's overarching strategies. Once a year, after the meeting of the Focus Group for Researchers with the Administrative Working Group (see below), it is informed about the status of the implementation of the Action Plan and provides guidance if critical points arise. The Chair of the Steering Board is Prof. Claudia De Giorgi, Vice-Rector for Quality, Welfare and Equal Opportunities. Prof. De Giorgi is also the chair of the Focus Group of Researchers (see below), thus ensuring that the point of view of R1-R4 researchers is made known to the University management and properly taken into account. Given the close link between the HRS4R 2019-2021 Action Plan and the Action Plan of the POLITO4IMPACT 2018-2024 Strategic Plan, their coordination and alignment is ensured by the Director-General, who is a member of both the **Control Board** (Cabina di Regia) of the POLITO4IMPACT Strategic Plan and the HRS4R Steering Board.

The **Focus Group of Researchers** was established in 2012 at the start of the HRS4R process at the Politecnico. The names and positions of the Focus Group members are available at https://www.researchers.polito.it/en/hr_excellence_in_research/human_resources_strategy_for_researchers_hrs4r and its composition is periodically renewed through a call for expression of interest addressed to the scientific community (R1-R4) in order to ensure a comprehensive representation of the researcher community. The composition guarantees gender balance, representation of the different scientific cultures (all 11 Departments are represented) and of all categories of staff carrying out research (R1: PhD candidates; R2: research fellows, Temporary Researchers type A and type B; R3: university researchers and Associate Professors; R4: Full Professors). The Focus Group is chaired by Prof. Claudia De Giorgi. It contributes to the Gap Analysis and preparation of the revised Action Plan (for details, see the process for the 2019-2021 Action Plan described below). During the implementation phase, once a year the Administrative Working Group meets the Focus Group to present the state of the art of the Action Plan and receive inputs for further improvements.

The **Administrative Working Group** is responsible for the implementation of the Action Plan. It is made of representatives from the Management Departments of the Central Administration involved in the gap analysis and in the implementation of the Action Plan. In 2013 and in 2018, the WG carried out the gap analysis on legislation and practices in use for each principle. For each action, a working group and a leader are identified and a Monitoring Plan is in place with a calendar for regular meetings and discussions with the Focus Group and the Steering Board.

The **Project Manager (PM)** is Ms. Chiara Biglia. She is the Head of the Excellent Science and Researchers Mobility Office of PoliTO. She is a lead assessor for the European Commission for the HRS4R process and she coordinates the national working group of the 12 Italian universities holding the Award 'HR Excellence in Research'. She leads the HRS4R Administrative Working Group and supports Prof. De Giorgi in the day-to-day implementation of the HRS4R process. Measurement of the progress and quality control are performed by PM and Professor De Giorgi, in compliance with the HRS4R Guidelines and PoliTO Quality Control Assurance System, according to the list of indicators set for each action. PM acts as contact person for the European Commission-RTD CHARTER Team. PM leads the Project Management Team where a dedicated staff unit (Ms. Elisa Pasquini) is in charge of assuring accurate daily management.

PREPARATION OF THE INTERNAL REVIEW

In June 2018 Prof. Claudia De Giorgi, Vice Rector for Quality, Welfare and Equal Opportunities and new coordinator of the HRS4R process, presented to the new Rector, Vice Rectors and delegates the path and results achieved so far by the Politecnico in the frame of the HRS4R and the roadmap for the renewal of the HR Excellence in Research Award. On that occasion, the new University leaders reconfirmed their willingness to continue along this path and integrate even more the HRS4R into the University's general strategies, starting with the POLITO4IMPACT 2018-2024 Strategic Plan (see details in the section below regarding *alignment of organisational policies with the HRS4R*). The organizational structure was reconfirmed and the steps to perform a new gap analysis and design the 2019-2021 Action Plan of the HRS4R were identified.

In June and July 2018, Prof. De Giorgi organized two meetings with the Administrative Working Group to monitor the implementation of the actions of the 2015-2018 Action Plan and presented the report with the status of the actions to the members of the Steering Board.

In September 2018, the Academic Senate approved the steps to perform **a new gap analysis** and design the 2019-2021 Action Plan of the HRS4R. Although the submission of the gap analysis addressing the forty principles is not required to institutions that, as PoliTO did in 2013, have already provided it in the initial phase, the University decided to analyze again the state of implementation of each of the forty principles. There are

many reasons for this choice: (i) to analyze what changes have occurred in the practices in use and in the perception of researchers with respect to the implementation of the forty principles; (ii) to verify if, in the light of the new context and needs, there are principles that are no longer considered fully implemented as they were five years ago; (iii) to give researchers the opportunity to express their views on aspects of working conditions and environment that are usually little explored; (iv) to let researchers know that the University considers the areas covered by the European Charter & Code a priority and that their contribution is valued; (v) to provide the new Rector elected in March 2018 and the Government Team with a better knowledge of the research environment and working conditions: this information is useful for the definition and implementation of the Strategic Plan POLITO4IMPACT 2018-2024.

METHODOLOGY USED TO CARRY OUT THE GAP ANALYSIS AND ESTABLISH THE ACTION PLAN

From a methodological point of view, the HRS4R process has been widely participated since the very beginning. The internal Gap Analysis and the Action Plan are prepared following a **participatory process** involving all internal stakeholders.

The Gap Analysis was conducted in 2018 and the Action Plan 2019-2021 was established through the following steps:

- **consultation of all researchers** through a survey to assess the perception of the scientific community of PoliTO concerning the implementation of the principles of the Charter and Code. The HRS4R survey was available from 27 September 2018 to 21 October 2018 to all R1-R4 researchers;

- **appointment of the renewed Focus Group of Researchers** to analyze the results of the survey and provide suggestions for future actions. The Focus Group analyzed the outcomes of the survey individually and then collectively during two *ad hoc* meetings held on 9 and 12 November 2018;

- **appointment of an Administrative Working Group** to analyse the policies and practices in use for each principle. The WG carried out the update of the initial gap analysis between September and November 2018 (see "Annex 3 – Gap Analysis 2018: Regulatory constraints and opportunities / University policy on the subject and current practices" to the document "Gap Analysis_2018" at the link https://www.researchers.polito.it/en/hr_excellence_in_research);

- **presentation of the results** of the gap analysis and the proposals for action **to the Steering Board** (the meeting was held on 7 December 2018).

The 2019-2021 Action Plan was presented and discussed on 5 July 2019 in a joint meeting between the Focus Group and the Steering Board.

Based on the results of the gap analysis and in accordance with the POLITO4IMPACT 2018-2024 Strategic Plan, on 17 July 2019 **the new 2019-2021 Action Plan** was approved by the Academic Senate, upon favorable opinion of the Board of Governors.

This internal review report is based on the results of the previous Action Plans and on the outcomes of the process that led to the 2019-2021 Action Plan. The report was prepared by the PM together with the Vice Rector for Quality, Welfare and Equal Opportunities, the Steering Board and the Rector's Advisor for International Accreditations.

Make sure you also cover all the aspects highlighted in the checklist, which you will need to describe in detail:　　　　How do you know?

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Note: Click on each question of the checklist to open the editor.

How will the implementation committee and/or steering group regularly oversee progress?* ⌄

Detailed description and duly justification (max. 500 words)

> The internal organizational structure has been designed to ensure institutional support for the initiative and regular monitoring of the implemented activities. For details please see 'General overview of the implementation process' provided above.

How do you intend to involve the research community, your main stakeholders, in the implementation process?* ⌄

Detailed description and duly justification (max. 500 words)

> The researcher community is strongly involved in the implementation process. As described above, in 2018 researchers at large were consulted by way of a survey and are regularly updated on the results of the actions through the weekly magazine "Poliflash" and the *Opportunities for Researchers* web site. Training courses in transferable skills and action outcomes are presented as part of the HRS4R and the "HR Excellence in Research" logo is used. Since 2012, a Focus Group of researchers has been established and its composition is periodically renewed through of call for expression of interests. The Focus Group is involved in all the phases of the HRS4R process: gap analysis, action plan, implementation and revision.

How did you proceed with the alignment of organisational policies with the HRS4R? Make sure the HRS4R is recognized in the organisation's research strategy, as the overarching HR policy.

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Detailed description and duly justification (max. 500 words)

The POLITO4IMPACT 2018-2024 Strategic Plan (http://www.pianostrategico.polito.it/en/) was approved by the Governing Bodies in November 2018. The **revision of the HRS4R Action Plan was part of the process of developing this Strategic Plan**, during which the commitment to implement the principles of the European Charter for Researchers was explicitly confirmed (see pages 42 and 55 of the POLITO4IMPACT Strategic Plan). The implementation of the Charter and the Code is a condition for ensuring a free research environment in which equal opportunities for professional development can be offered to all actors involved, promoting their talents and merit. Article 1 of all the Politecnico's regulations on recruitment procedures for researchers contains a reference to compliance with the Charter and the Code. As already mentioned, the implementation process of the POLITO4IMPACT Strategic Plan is closely linked to that of HRS4R: in the Action Plan of the POLITO4IMPACT Strategic Plan, actions linked to HRS4R 2019-2021 Action Plan have a **"special flag"**, which means that their implementation is a priority.

How will you ensure that the proposed actions are implemented?*

Detailed description and duly justification (max. 500 words)

Actions are linked to the University's priorities set out in the POLITO4IMPACT Strategic Plan 2018-2024. The HRS4R Administrative Working Group is responsible for the implementation of the actions and a Monitoring Plan is in place with a calendar for regular meetings and discussions with the Focus Group and reporting to the Steering Board. For each action, a working team and a leader are identified. As for the 2019-2021 Action Plan, the Working Group meets once a year, in July.

Compared to previous Action Plans, the HRS4R process also benefits from the close link with the actions of the University's Strategic Plan and its monitoring process. Coordination is ensured by the Director General, who is a member of both the HRS4R Steering Board and the Control Board (Cabina di Regia) of the POLITO4IMPACT Strategic Plan.

How will you monitor progress (timeline)?*

How do you know?

Detailed description and duly justification (max. 500 words)

The implementation of the actions is **constantly monitored through a dedicated organizational structure** (see 'General overview of the implementation process' provided above). Monitoring is ensured by the PMO, which supervises the Administrative Group's activities and reports to the Steering Group in case of critical points.

The dates of the meetings are registered in the **on-line timeline** created to keep track and give evidence of the main milestones and results achieved in the frame of the HRS4R process at PoliTO (http://www.researchers.polito.it/en/hr_excellence_in_research/timeline). Minutes of the meetings are available at the Project Management Office that is in the Excellent Science and Researchers Mobility Office of the Research Support Department.

The monitoring plan and the **identification of indicators** for each action enables to verify the activities' progress. Based on a common template, the following elements are analysed for each monitoring period: (i) carried out activities: completed and in progress activities; (ii) next activities: next period deadlines; activities to be started; (iii) critical points: possible critical points which need the involvement of the Steering Board; risk assessment; encountered problems that affect the work plan. Moreover indicators for each action have been identified and verified during the whole period.

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How will you measure progress (indicators) in view of the next assessment?*
								⌄

Detailed description and duly justification (max. 500 words)

As regards to the current Action Plan 2019-2021, all the actions have been planned and combined with precise timing, indicators and targets.

The progress will be measure on the basis of the following indicators:

- **Achievement of the intermediate milestones and targets for each action**. Monitoring is ensured through : i) A team Leader, who also participate to Administrative Working Group, for each action with identified team members; ii) Regular monitoring of the process made by the project management office.

- **Consultation of the management bodies and representative groups.** Organization of the annual meeting of the Administrative working group with the Focus Group of Researchers and report to the Steering Board.

- **Alignment with the POLITO4IMPACT Strategic Plan.** Ensuring that the yearly planning of the action of the strategic plan confirms the priority given to the action of the HRS4R Action Plan. In November of each year, the Steering Committee of the Strategic Plan approves the Action Plan for the next year and ensures that the HRS4R actions are included.

Additional remarks/comments about the proposed implementation process: (max. 1000 words)

The HRS4R process has been carried out continuously over the years, through a solid organisational structure involving a broad representation of the different components of the university community. This facilitates **preparation for the external review** as the spirit and benefits of participating in HRS4R have become increasingly evident and shared over the years. Since the appointment of the Vice Rector for Quality, Welfare and Equal Opportunities as institutional coordinator of HRS4R, the process has been further aligned also with the University's quality assurance system.

In preparation for the external review, on 26 November 2020 the Project Manager presented to the **Quality Assurance Committee** the steps of the award renewal phase and the Internal review report.

In agreement with the Vice Rector for Quality, Welfare and Equal Opportunities, Ms Chiara Biglia as project manager of the HRS4R process will be the person that will liaise with the team of experts identified by the EC for all the practical arrangements. Ms. Elisa Pasquini will support the organization of the visit too.

The **preparation steps** include the following activities:

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- A communication plan to inform to the university community about the site visit: site visit dates, why the HRS4R International external experts are coming to the organization, what your organization expects to get out of the experience, and what individual researchers and groups can expect during the site visit. Specific communication activities will be planned to address different target groups: the whole community, the institutional leaders, the researchers and staff that will participate in face-to-face interviews. The PMO together with the Communication Division will be responsible for this task;

- Meetings with the Steering Board, the Focus Group of Researchers and the Administrative working Group to prepare for face-to-face interviews with the experts;

- Design of the half-hour presentation to the experts for the opening meeting of the site visit

- All practical arrangements to be agreed with the EC experts. Because we expect the site visit to be conducted remotely in the second half of January-beginning of February, the IT Department of PoliTO will provide the technical support to ensure the smooth running of the virtual meetings.

The date of the site visit will be finalized and agreed with the EC experts, making sure that senior leaders are available.

Because the internal review report describes the activities carried out up to December 2018, **updated information are going to be provided** to the assessors: i.e. updated key figures and the detailed description of the state of the art of the implementation of the 2019-2021 Action Plan.

The Politecnico di Torino is looking forward to the visit as an opportunity to illustrate its commitment to the HRS4R process and its achievements over the years and to receive feedback from external experts, including suggestions for change and improvement.