Institution: Manchester Metropolitan University

1. Context and mission

Manchester Metropolitan is a large, post-1992 institution with 38,000 students including 1,000 Post-graduate Research students (PGRs), 1,600 academic and 2,000 professional services staff. Half of our students are the first in their families to study at university and the majority come from the Northwest so we play an important role in widening participation, social mobility and the local economy. Our mission is to make higher education accessible to all those with the passion and ability to benefit from it, and to discover and disseminate knowledge that improves people’s lives.

Manchester Metropolitan has seen tremendously exciting and unprecedented growth in its research activities and we are proud to report that we are a radically different institution to the one described in our REF 2014 submission. Specifically, the number of staff returned has more than doubled, the number of outputs has risen, metric-based measures of quality have improved significantly, doctoral conferments have risen and the value of external awards has almost tripled.

This progress comes from the appointment of a new senior leadership team with significant experience in the Russell Group and adoption of a new and ambitious Research and Knowledge Exchange (RKE) strategy that focusses on high-quality and impactful research conducted through a network of 14 University Centres for Research and Knowledge Exchange (UCRKE), shown in Figure 1:

![Figure 1: University Centres for Research and Knowledge Exchange](image)

Although the University is not a member of a mission group, we are a highly collaborative institution and make a strong contribution to the global research ecosystem - with 78 members
Institutional level environment template (REF5a)

| of peer review colleges/funding panels (including all UK research councils) and six REF panel members. |
| A high proportion (46%) of our outputs are co-authored with international partners and 43% of income comes from work with business and industry; we are consistently in the top five for Knowledge Transfer Partnerships (KTPs) and helped to draft the Knowledge Exchange Concordat. |
| We engage in collaborative research with the other Greater Manchester HEIs and are active in research-focused organizations, such as Health Innovation Manchester and Manchester Science Partnership (a major provider of science incubation facilities). We are members of the AHRC-funded Northwest Consortium Doctoral Training Partnership (DTP), the ESRC-funded White Rose DTP and a Marie-Sklodowska-Curie Doctoral Training Academy in Biosciences. We helped to draft the Science and Innovation Audit for Greater Manchester and East Cheshire, Greater Manchester’s Industrial Strategy |
| The University is led by Vice Chancellor, Malcolm Press, supported by Deputy Vice Chancellor and Provost, Stephen Decent and Chief Operating Officer, Karen Moore. There are three thematic Pro-Vice-Chancellors (RKE, Education and International). We have five faculties (Arts and Humanities, Business and Law, Education, Health, Psychology and Social Care, and Science and Engineering) and a professional services division, which includes a newly-expanded ‘full-service’ RKE Directorate led by Justine Daniels. |
| Leadership for the RKE Strategy and UCRKE performance is provided by the PVC RKE, Richard Greene, who chairs the RKE, Research Ethics and Governance, and Research Degrees Committees. These committees report to the University’s Board of Governors via the University Executive Group and Academic Board. |

2. Research and Knowledge Exchange Strategy

The RKE Strategy was approved in early 2017 and describes our desire to have a beneficial impact on society, culture, the environment and the economy. It presents research and knowledge exchange as a continuum and emphasizes the links between excellent research and excellent teaching. It created the UCRKEs and a new RKE Directorate to support their activities.

University Centres for Research and Knowledge Exchange (UCRKE)

UCRKEs provide an intellectual home for academic colleagues as well as research staff and all PGR students. They are the primary vehicle through which we have increased the quality, volume and impact of our research.

Achievement of strategic goals

Inspiring leadership, excellent support and investment into UCRKEs have transformed our research environment, culture and performance, specifically:

- The number of staff in our REF return has grown by 117% from 339 in 2014 to 736 in 2021.
- Outputs published annually have increased by 100% from 684 in 2014 to 1372 in 2020.
- Field-weighted citation impact of outputs has increased from 1.15 in 2014 to 1.54 in 2020 (source: Scopus).
- Outputs amongst the top 10% cited in the world (field-weighted) have increased from 94 in 2014 to 217 in 2020 (source: Scopus).
- Outputs in the top 10% of journals (field-weighed and source-normalised) have increased from 91 in 2014 to 341 in 2020 (source: Scopus).
- Research income has doubled from £25m in REF 2014 to £53m in REF 2021.
- Annual research income has increased by 140% from £4m in 2013/14 to £9.7m in 2019/20.
- Annual research awards have increased by 134% from £6.4m in 2013/14 to £15m in 2019/20.
- We are consistently ranked in the top five for KTPs. The majority are rated as ‘outstanding’.
- In 2019 our youth studies KTP won the THE Award for best knowledge transfer initiative.
In 2019 we won the Queen’s Anniversary Prize for research in poetry. In 2020 we won Best KTP of the Year for an engineering project. Doctoral conferment rose from 392 in REF 2014 to 683 in REF 2021. We are members of three national doctoral partnerships. We are in the top quartile nationally for the quality of PhD supervision.

Enabling Impact
Driven by our passion for research impact, we established an impact and engagement team of four staff to work with UCRKEs. They support the delivery of award-winning public engagement and have access to the Impact Generator Fund (up to £10,000) and Just-in-time (JIT) funding of £1,000 for smaller activities.

We have one of the best KTP support teams in the UK. We have secured 69 KTPs worth over £8.45m since 2013. Our KTP with the Greater Manchester Youth Justice Partnership won a Times Higher Award for Knowledge Exchange initiative of the year. In 2020, we were KTP of the Year in the annual awards.

Our experience as a founding partner in the Beacons for Public Engagement initiative continues to underpin the ethos of our engagement activities. We are a signatory to the NCCPE Manifesto for Public Engagement. Our commitment to the Concordat for Engaging the Public and the UK Research and Innovation (UKRI) 2019 ‘Vision for Public Engagement’ was praised in a recent UKRI audit. We are also members of the UN’s Academic Impact Network.

In 2019, we received the Queen’s Anniversary Prize for the impact of poetry. We were shortlisted for Times Higher awards for the impact of history projects in 2014 and 2020, and in 2018 for a project on the engagement of young people struggling with ‘internal voices’. Microbiologist Joanna Verran won the American Association for the Advancement of Science award for Public Engagement in 2019.

Internal funding is available for partnerships with communities. Examples of success include an AHRC EDI Fellowship (2020), UKRI award for Place Based Partnerships in Public Engagement (2019), AHRC skills funding for Creating Our Future Histories, and hub status for the ESRC Festival of Social Science. £50,000 per annum is invested into RAH! a flagship public engagement initiative in arts and humanities disciplines running since 2015.

Training for staff and PGRs is focused around Vitae’s ‘Engaging Researcher’ course. We participate in BSA’s Media Fellowship scheme offering placements worth £5,000. Staff who deliver training are members of NCCPE’s Public Engagement Academy and PEP network.

In 2017, we established MetroPolis, a research-led think tank to amplify policy-related impact. Besides training and resources, MetroPolis offers Policy Fellowships created with our Chancellor Lord Mandelson. The Chancellor’s Fellowships provide resources for academics to spend time in partner organisations so that research is translated into policy impact. Fellowships have taken place with the UN, the UK Government, Greater Manchester Combined Authority, the Northern Powerhouse Partnership and NHS Trusts. We are members of the Universities Policy Engagement Network.

Research Integrity
We take research integrity and ethics extremely seriously. The Research Ethics and Governance Committee, chaired by the PVC RKE, reports to the Academic Board. Membership comprises Faculty Heads of Research Ethics and Governance, the Designated Individual for the Human Tissue Authority and representatives from professional services.

Heads of Research Ethics and Governance have clear responsibilities, time allowance and administrative support. They chair faculty ethics committees, conduct ethical reviews and undertake annual audits. The PVC RKE also chairs the Health and Safety Committee, which ensures that the needs of potentially dangerous areas of research are considered appropriately.
We have invested circa £1m in staff, systems and training to ensure that all researchers, including PGRs and undergraduates, are aware of their professional and legal responsibilities. Our online system, EthOS, has enabled the review and approval of 14,243 applications.

We comply with the Concordat for Research Integrity by providing a publically-accessible annual statement, clear contact points and information on processes for investigating allegations of research misconduct.

**Open access**
Our Open Access policy complies with REF requirements and enables researchers to follow the Green or Gold routes. Our institutional repository ‘e-space’ includes 15,989 items with more than two million downloads.

We spend around £120,000 per year on APCs and have discounted APCs with publishers, including the Royal Society of Chemistry and IEEE. We are a member of the Open Library of Humanities Library Partnership subsidy scheme.

The University is active in national open access agendas. DVC Stephen Decent is chair of the Universities UK strategy group negotiating agreements with major academic publishers.

Staff regularly share their research through social media, blogs and twitter accounts. Since 2014, 168 staff have written 329 articles for *The Conversation* read by over ten million people.

**Open research data**
The University’s Research Data Management policy complies with the Concordat on Open Research Data. It aligns with expectations of funders and provides clarity on the responsibilities of researchers. We have invested £500,000 into high quality data storage facilities and staff deposit their datasets into e-space with support from an RKE Digital Archivist and librarians.

We are committed to the responsible use of metrics and have signed up to DORA. Our colleagues have served on the influential LIS-Bibliometrics committee and we have hosted national events related to responsible metrics.

**Interdisciplinary research**
To promote interdisciplinary research our UCRKEs have porous boundaries and we bring their memberships together in a monthly forum. We have also established interdisciplinary networks in Ageing and Dementia, Place, Substance Use, Childhood and Youth, Artificial Intelligence, Critical Medical Humanities and Biosocial Digital Education.

3. People

**3.1 Staffing Strategy**
We have more than doubled the number of staff in REF 2021 compared with REF 2014. Our staffing strategy has driven this change and has the following elements:
- Alignment of workload and resources to UCRKEs to make our environment intellectually and financially sustainable, and ultimately more attractive to research focused colleagues.
- Prioritization of research capability in new appointments.
- Streamlining processes for recruiting research leaders.
- Supporting staff at all stages of their research careers and incentivising high performance.
- A flexible working environment with an emphasis on equality, diversity and inclusion.

We are a signatory to the Concordat for Career Development of Researchers and have held the EU HR Excellence in Research award for 8 years.

**New appointments**
We have appointed 335.8 FTE new staff with a significant responsibility for research since 2014 – including 98.8 FTE new professors (with a growing number from research ‘intensives’ including
Institutional level environment template (REF5a)

Manchester, Sheffield, Lancaster, Glasgow and Birmingham) appointed through the new streamlined process.

The combination of new appointments and the development of existing staff has resulted in a balanced contract profile throughout our submission:

<table>
<thead>
<tr>
<th>Professor</th>
<th>Principal Lecturer and Reader</th>
<th>Senior Lecturer</th>
<th>Lecturer, Research Fellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>16%</td>
<td>46%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*Staff contract level profile (Table 1)*

Early Career Researchers account for 15% of submitted staff, indicating a sustainable pipeline of talent and 3% are on fixed-term contracts.

**Research workload arrangements**

Full research members of UCRKEs are allocated a minimum of 20% of their workload for research time (reviewed annually). Staff who are developing their own independent research careers are categorised as ‘associate members’ (see Code of Practice) and their allocation is based on personal development plans.

The University has recently reorganised teaching into timetabled blocks, which brings pedagogical benefits and helps researchers who need periods of uninterrupted research time; this is particularly helpful in some disciplines.

**Reward and progression**

We have introduced two Academic Career Pathways – *Education, Pedagogy and Citizenship*, and *Research, Education and Citizenship*.

We have open and inclusive annual promotion rounds in which information sessions are provided by PVCs’ RKE and Education, as well as FHRKE, to ensure that colleagues are informed of the criteria. Additional information workshops are organised for BAME and/or female colleagues. Equality and diversity considerations are included in the promotions process through the confidential declaration of individual circumstances.

Colleagues can also apply for increments to reward excellent research and impact activities and professors have an annual pay review.

**Flexible working**

Our policies facilitate part-time working, compressed hours, job-sharing, homeworking, career breaks and remote working. Timetabling arrangements support colleagues with caring responsibilities, while meetings and the majority of research seminars take place during normal working hours.

UCRKE membership is reviewed annually with a confidential process for the disclosure of equality-related issues, leading to the adjustment of expectations. ECRs have reduced expectations of research outputs and we make similar adjustments for staff with caring responsibilities, those with chronic disabilities and those returning to work after sickness or family-related absence. All staff have access to the Lifeworks portal for counselling, confidential advice and support for personal issues.

Part-time and fixed-term staff have the same access to PDRs, internal funding and professional development opportunities as full-time staff.

**Staff development and support for ECRs**

The RKE Strategy states that, “we want the University to be the best place to start and develop a research career” and, in line with our commitment to the Concordat for Career Development of Researchers, “provide a suite of development opportunities for staff at all career stages".
Institutional schemes include RKE Future Leaders that aligns to the Vitae Researcher Development Framework (RDF) (50 graduates since 2014) and Good to Great, which supports more experienced colleagues, with interventions such as coaching, sabbaticals, exchanges, equipment and training. So far, 20 colleagues have entered the scheme and several have been promoted to reader and professor.

In faculties, there are schemes such as Developing Research Excellence (DRE) in our Business School, which has helped colleagues ‘graduate’ to full UCRKE membership and has supported 75 ECRs since 2014. All UCRKE provide seed funding and research mentoring for ECRs.

Our sabbatical programme has helped increase the volume and quality of monographs in Humanities and Social Sciences. Currently over 100 staff are supported to study for a PhD.

3.2 Research Students
We have expanded our Graduate School and embedded it within the RKE Directorate; it has three main objectives:

1. To develop creative, professional, open, independent leaders with strong ethical values.
2. To prepare PGR students to contribute to society, culture, the environment and the economy.
3. To attract a diverse range of high-quality PGR students.

Recruitment of doctoral students
In this submission, we report a large increase in doctoral conferments (with 683 compared to 392 in REF 2014). On the census date, we had 1,069 active PGR students and have averaged 816 PGR students per year since 2013/14. 82% of PGRs are from Home/EU (68% from the UK) and 18% are from overseas. 47% of PGRs are part-time. We recruit PGRs from 83 different countries. We are in the top quartile of UK universities for the quality of our PGR experience for overseas students (PRES 2019).

PGR equality
Female students account for 52% of PGRs and 13% of PGRs have a disability (compared with a national average of 10%). We have strong processes for making reasonable adjustments, as evidenced by the achievement of national standards (see Equality and Diversity), and our ranking in the top quartile for the quality of PGR experience according to students with a disability (Postgraduate Research Experience Survey (PRES) 2019).

Ethnicity of PGRs

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>70%</td>
</tr>
<tr>
<td>Black</td>
<td>5%</td>
</tr>
<tr>
<td>Chinese</td>
<td>2%</td>
</tr>
<tr>
<td>Asian</td>
<td>9%</td>
</tr>
<tr>
<td>Mixed / Other</td>
<td>12%</td>
</tr>
<tr>
<td>Unknown</td>
<td>2%</td>
</tr>
</tbody>
</table>

We are particularly successful at attracting Black and Asian students from the lowest quintile participation group, with 25% of female and 42% of male Black PGRs, and 14% of female and 23% of male Asian PGRs from quintile 1, compared to 8% of female and 10% of male White PGRs.

We are in the top quartile for the quality of PGR experience for BAME students (PRES 2019).

Age of PGRs

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 30</td>
<td>13%</td>
</tr>
<tr>
<td>30 – 40</td>
<td>35%</td>
</tr>
<tr>
<td>40 – 50</td>
<td>26%</td>
</tr>
<tr>
<td>50+</td>
<td>26%</td>
</tr>
</tbody>
</table>
Our youngest PGR student is 24 and our oldest is 85 years old.

**Studentships from major funders**
The University is a member of two UKRI Doctoral Training Partnerships - the AHRC Northwest Doctoral Consortium and the ESRC White Rose DTA.

<table>
<thead>
<tr>
<th></th>
<th>2017/18</th>
<th>2018/19</th>
<th>2019/20</th>
<th>2020/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Rose ESRC</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Northwest AHRC</td>
<td></td>
<td></td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

The University has also received six funded International PhD Fellowships through the DTA3/COFUND Marie Sklodowska-Curie scheme as part of the University Alliance DTA in Applied Biosciences for Health, Energy and Social Policy, which has contributed more than €400,000 in income.

**Monitoring and support mechanisms**
PRES 2019 showed that our overall satisfaction has increased to 83%. The quality of supervision, progression and research skills are in the top overall quartile nationally. Supervision quality is higher than all our benchmarking groups, and research skills is above the Russell Group benchmark.

All PGRs and supervisors use SkillsForge to automate reminders about official milestones and track training, discussions and actions agreed in formal reviews. Milestones ensure that progression requirements are understood and provide formal opportunities to address concerns. Detailed progress reviews are undertaken by independent panels.

Principal Supervisors complete mandatory training and there are compulsory workshops for all supervisors. The University Teaching Academy provides a 15-credit module for staff who are new to supervising.

**PGR Skills and Career Development**
The Graduate School provides training for PGRs mapped onto the Vitae RDF. Activities include workshops, events such as Three Minute Thesis and Images of Research, online training and support for teaching. PGRs can attend events run by the North-West universities network and DTPs in the region, and can access opportunities through the Brilliant Club.

All PGRs join a UCRKE, which provides access to high-level research skills, training, mentorship, ECR conferences and events, access to equipment, support for careers, funding to attend conferences and opportunities to celebrate achievements. Financial support for conferences, field work and language learning, is also available from The Graduate School.

PGRs can access careers and employability resources including My Career Hub, which provides over 5,000 resources including interactive assessments and tests, an interview simulator, online courses, industry reports and careers advice.

**Study leave**
There is a policy on Maternity, Paternity and Adoption leave for funded PGR students. Internally-funded students are entitled to funding in line with UKRI students of up to 52 weeks of maternity, adoption or shared parental leave, with the first 26 weeks of each pregnancy paid at full stipend rate, and 13 weeks paid at a level commensurate with employee entitlements to statutory maternity. Partners are entitled to ten days paternity leave on full stipend.

3.3 Equality and diversity

The equality and diversity details of our submitted staff versus the total eligible population, the average in the sector and our REF 2014 submission are included in Table 2:
Institutional level environment template (REF5a)

<table>
<thead>
<tr>
<th>Protected characteristic</th>
<th>% of submitted staff in Manchester Metropolitan (REF 2021)</th>
<th>% of staff in overall eligible population in Manchester Metropolitan (REF 2021)</th>
<th>% average staff in wider sector (Source: Advance HE Equality Data 2019)</th>
<th>% of submitted staff in Manchester Metropolitan (REF 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>47%</td>
<td>52%</td>
<td>46%</td>
<td>44%</td>
</tr>
<tr>
<td>Male</td>
<td>53%</td>
<td>48%</td>
<td>54%</td>
<td>56%</td>
</tr>
<tr>
<td>Disability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Declared disability</td>
<td>5%</td>
<td>6%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>84%</td>
<td>84%</td>
<td>84%</td>
<td>86%</td>
</tr>
<tr>
<td>Total BAME</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Black</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Chinese</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>Asian</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>-</td>
</tr>
<tr>
<td>Mixed</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Other / Unknown</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

Equality and diversity characteristics of staff (Table 2)

Gender
The gender balance of this submission is considerably better than in REF 2014. This is because of greater emphasis on equality in recruitment and promotion, flexible working policies, processes for the declaration of individual circumstances as part of UCRKE membership and researcher support mechanisms that have a strong uptake from female staff (RKE Future Leaders and Good to Great).

We were awarded Institutional Athena SWAN Bronze in 2018. For 2019, our gender pay gap was almost 10% more equitable than the rest of the sector: 6.3% (mean) and 5.7% (median) against 15.1% (mean) and 14.8% (median).

Disability
We are returning a higher percentage of disabled staff than the sector average. In 2017, we became the first university to achieve ‘Gold’ status in Business Disability Forum’s (BDF) Disability Standard, one of only five organisations nationally. We have been a member of BDF since 2000 and they describe us as a ‘sector-leading disability-smart organisation’. In 2019, we were awarded the highest level of the Government’s voluntary Disability Confident Scheme.

Ethnicity
Our Professorate is diverse. 13% of our professors identify as BAME compared with 10% across the sector and 7% of our female professors identify as BAME compared with 2% nationally. We currently employ nine out of only 440 female professors who identify as BAME nationally and three female professors out of 25 nationally who identify as black (9% of the total population).

The University became a Race Equality Charter member in 2019.

Sexuality
We have participated in the Stonewall WEI continuously since 2016. In 2019, we were second in the English education sector on Stonewall’s Workplace Equality Index (WEI) and 22nd in the...
Application of our REF 2021 Code of Practice (CoP)
Our CoP was developed following extensive and very constructive discussions at open events; staff committees and in meetings with the University and College Union (UCU). It received enthusiastic approval from the University’s Executive; the Academic Board and our Diversity and Equal Opportunities Committee. As an important part of our commitment to Equality and Diversity, those involved in REF decisions were required to complete equality and diversity training.

All colleagues have had an opportunity to declare individual circumstances and 68 have decided to do so, leading to output expectations being adjusted where appropriate. We considered EDAP’s advice before concluding that the effects of individual circumstances could be managed without the need for any UoA output reductions.

After using our CoP to determine which colleagues had SRR, we ran an independent appeals process in which four staff appealed and two cases were upheld.

Output selections were based on the processes set out in our CoP. We will report on the equality impacts of output selections in our REF 2021 EIA but evidence suggests that the outputs were selected fairly.

4. Income, infrastructure and facilities

4.1 Institutional strategy for research income
Our strategy is to invest in high-quality and impactful research across UCRKEs and to provide the best possible professional services support. We encourage strong relationships with funders and have 78 staff on peer review colleges and panels including representation on all UKRI research councils.

UCRKEs are supported in income generation activities by significant investment and professional services support in the form of dedicated Research Development Managers. UCRKEs receive substantial investment (from QR) in the form of an annual operating budget (£20,000) and have access to the Strategic Opportunities Fund (SOF), which has invested £11.5m into new posts, infrastructure and PGR studentships since 2016.

A further £200,000 per annum is invested into Research Accelerator Grants to help ECRs generate preliminary data for external funding applications. Since 2014, we have funded 63 such projects leading to awards from NIHR, AHRC and Leverhulme. We also fund exchange visits such as Research Fellowships and International Collaboration Funding awards. There are funds for impact and public engagement, business engagement and match-funding of up to £40,000 for partnerships aligned with strategic agenda, such as the Industrial Strategy.

Global Challenges Research Funding supports partnership development aligned to the UN Sustainable Development Goals. Since 2017, £700k has been invested in projects in the Ngorongoro Crater Conservation Area Authority in Tanzania and research into the discrimination and social isolation of Dalit Law students in India.

Annual HEIF funding of £1.2m supports the integration of research, innovation and knowledge exchange

The importance of income generation is incentivized through research workload allocations, an annual promotions scheme, and celebration and networking events with senior colleagues.

Awards and Income
Since 2014, we have generated 1,401 RKE awards with a combined value of £105m (with notable awards from AHRC, ESRC, EPSRC, NIHR, MRC and NERC).

The value of research awards has risen significantly to a total £68.3m with reportable research income of £53.284m (compared to £25.785m in REF 2014). In 2013/14, we reported £4m and this has risen steadily to £9.7m in 2019/20.

The diversity of income sources is included below:

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>BEIS Research Councils</th>
<th>UK Charities, Open Competition &amp; Other</th>
<th>UK Govt, Industry &amp; other UK Sources</th>
<th>European Union</th>
<th>Non-EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Income</td>
<td>26%</td>
<td>13%</td>
<td>43%</td>
<td>16%</td>
<td>2%</td>
</tr>
</tbody>
</table>

We are particularly good at capturing income related to ‘applied’ research from business and industry. KTPs account for £7m of income during the assessment period.

### 4.2 Infrastructure and facilities supporting research and enabling impact

The RKE strategy created an exciting ‘RKE ecosystem’ of the very best in processes, facilities and attitudes to support our work.

**Leadership, management and governance**

The PVC RKE is responsible for RKE Strategy and chairs the RKE Committee (RKEC), the Research Ethics and Governance Committee (REGC), the Research Degrees Committee (RDC) and the UCRKE Forum, as well as many ad hoc research development and coordination groups.

Faculty Heads of RKE (FHRKE) ensure alignment between the RKE Strategy and faculty priorities, and provide leadership for the Directors of UCRKE. They are members of their Faculty Executive Groups and chair their Faculty RKEC. FHRKE report jointly to a Faculty PVC and PVC RKE and are members of RKEC and the University Leadership Forum. FHRKE work closely with Heads of Research Ethics and Governance, and with Heads of Research Degrees.

The Directors of UCRKEs are responsible for the delivery of UCRKE strategic plans and work closely with the PVC RKE, FHRKE, and RKE Directorate. They attend the UCRKE Forum and the University Leadership Forum.

Faculty Heads of Research Ethics and Governance are responsible for ethics applications, chair Faculty Research Ethics and Governance Committees and attend REGC.

Faculty Heads of Research Degrees (FHRD) are responsible for the PGR experience, chair their Faculty Research Degrees Committee and are members of the University RDC.

**The Research and Knowledge Exchange Directorate**

The RKE Directorate has been expanded and extensively modernized. It is formed of departments for research development and delivery, research environment and impact, business engagement and The Graduate School, and includes the following task-orientated teams:

- A research development team that has supported a large growth of applications and awards.
- A delivery team to ensure compliance with funder requirements and contractual obligations.
- A systems team that manages research systems and provides management reports.
- A researcher development team to uphold our commitment to the Concordat for the Career Development of Researchers.
- Research ethics and governance managers ensure compliance with the Concordat for Research Integrity, conduct HRA reviews and oversee obligations to the HTA.
- Impact and engagement managers support the design, delivery, communication and
embedding of impact and public engagement.

- A business development team that develops commercial income, runs our award-winning KTP programme and manages the ‘Innospace’ SME Incubator.
- The Graduate School that provides leadership of PGR activities and ensures that academic and regulatory requirements are met.
- An RKE marketing and communications team.

**Research Information Systems**

Staff have access to an extensive portfolio of research management systems:

- Worktribe - online workflow for external funding applications.
- EthOS – ‘end-to-end’ management of the ethical approval process.
- Symplectic Elements (SE) – management of academic outputs, open access compliance and academic web profiles.
- ‘e-space’ – sharing of outputs/data whilst meeting open access requirements.
- SkillsForge - recording and monitoring the progress of PGRs.
- SciVal and InCites - publishing, citation and partnership strategies.
- Researchfish - funder outcomes reporting.
- The Research Data Storage platform.

**Library Services**

UCRKEs have a subject librarian and access to 349 electronic databases including: BioMedCentral, CORE, PubMed, Scopus, Web of Science and Science Direct.

Library staff assist with systematic reviews and advise on publishing and copyright. Research Librarians support open access and research data management, provide training to UCRKEs and administer APCs

The ‘Special Collections’ resources of the Library supports research, especially in art and design, and includes the North West Film Archive, artists’ books, 20th century posters, The Manchester School of Art Collection, The Schmoller Collection of Decorated Papers, the Children’s Book Collection and the Manchester Society of Architects Library.

**Technical expertise**

The University employs 250 technicians who are responsible for specialist research spaces including workshops, studios and laboratories, and assist in the production of research data. The University values the contribution that our technicians make to research and is proud to be a signatory to the Technician Commitment – for which the PVC RKE is the institution’s lead.

**Research Estate**

Since 2014, we have invested over £300m into buildings that have boosted research capacity:

- The award-winning £139m Brooks Building (Education, Allied Health and Social Work) includes physiotherapy labs with facilities for sports injuries and neurological conditions.
- The award-winning Arts and Humanities Building (English, History, Sociology, Art and Design) houses a 180-seat theatre and the UK’s fourth Poetry Library.
- PrintCity (that supports 3D additive and digital manufacturing) and the Manchester Fuel Cell Innovation Centre have received a combined investment of £65m.
- The School for Digital Arts is nearing completion (supports digital research in art, design and media with technology and computing), as is Manchester Metropolitan Institute of Sport (with facilities for musculoskeletal science including an imaging suite with an MRI scanner, a bone density analysis suite, an environmental chamber and a muscle function room).
- A major project to expand the faculty of Science and Engineering is under way.