Technician Commitment

Evaluating Impact through Self-Assessment & Future Action Planning

Organisation: MRC Laboratory of Molecular Biology

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To provide some context, please provide a brief profile of your organisation (up to 250 words):

The MRC Laboratory of Molecular Biology (LMB) is a research institute funded by UKRI. We are dedicated to understanding important biological processes at the molecular level – with a goal of using this knowledge to tackle major problems in human health and disease.

The LMB is one of the birthplaces of modern molecular biology. Many techniques were pioneered at the laboratory, including DNA sequencing, methods for determining the three-dimensional structure of proteins and the development of monoclonal antibodies. Over the years, the work of LMB scientists has attracted 12 Nobel prizes, dozens of Royal Society awards and numerous other scientific honours.

The organisation is made up of four research divisions: Protein and Nucleic Acid Chemistry (PNAC), Cell Biology, Structural Studies and Neurobiology, plus an Operations Group which includes support services. There are 13 scientific facilities and these are embedded within the divisions (Figure 1). The main LMB building also hosts the Cambridge University Molecular Immunity Unit. The laboratory is overseen by the Executive Committee, which includes the Director, Dr Jan Löwe, Deputy Director, Chief Operating Officer, and heads of each division.

Our main building is located on the Cambridge Biomedical Campus, Cambridge, with two specialised facilities occupying their own separate buildings. The NMR facility is also located on the Cambridge Biomedical Campus, and the Ares animal facility is located at the Babraham Research Campus 5 miles to the south of the city.

Approximately 800 people work at LMB, comprising of around 450 scientists, 100 students, at least 150 technicians and 100 non-scientific staff.

Please tell us how your organisation defines its technicians:

The LMB aims to be inclusive in our definition of technicians. A technician can occupy many different job titles and any band. Essentially, any person using technical skills and expertise,

managing, or teaching others, or supporting the research in some way at the LMB would be considered a technician.

As a starting point, all scientific facility staff and support services were included in a techspecialists@ mailing list. The availability of this list was also advertised internally and anyone who wants to is allowed to subscribe (or unsubscribe) at any time.

The role of technician may make up all or just part of a person's job, and people may identify as a technician at different times in their career. Some roles, such as technical specialists and/or research assistants working within research groups are less easy to define. We therefore encourage self-definition and an 'open to all' policy. The LMB also has an active graduate student association (GSA) and postdoc association (PAL) who organise events and take up issues specific to these groups. It is important to emphasise that there should not be barriers between them, and some staff may find commonalities between more than one group.

How many technicians are there in your organisation? Please provide some information on where they are based and/or how they are structured (in terms of subject/discipline/department):

There are currently approximately 150 technicians signed up to our techspecialists@ mailing list. Most are working either within a scientific facility, or within one of the support services. Some technicians work directly within research groups.
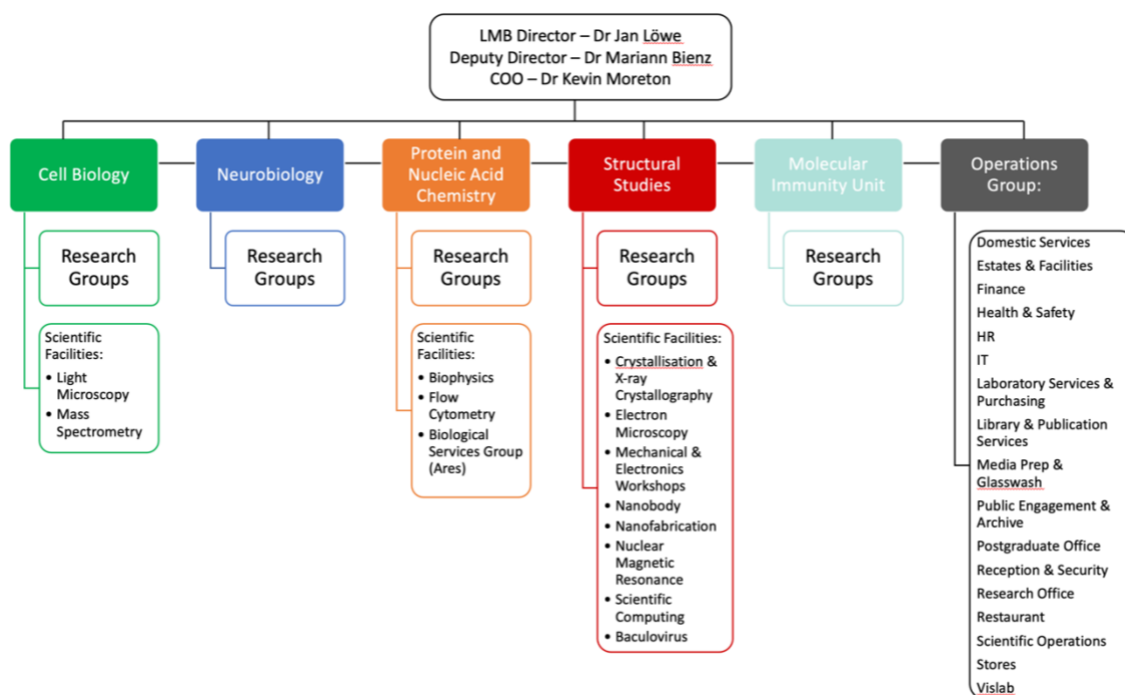

Figure 1: Diagram outlining the organisational structure at the LMB.

As shown in Figure 1, scientific facilities are embedded within one of the four research divisions. Typically, scientific facilities are small groups of up to 6 staff managed by a facility head. However, Ares, our animal facility, is an exception employing around 70 technical staff.

Support services fall under the management of the Operations Group. Approximately 130 people are employed in this group in total. Within this, around 50 people identify as technicians and these people are most frequently located within Estates and Facilities, Health and Safety, IT and Media Prep and Glasswash.

Please provide details of initiatives/programmes/activities that were already in place for the technical community within your organisation prior to becoming a signatory of the Technician Commitment:

We have had some involvement with activities for technicians through our partner institutes, Mary Lyon Centre (MLC) at MRC Harwell, and MRC London Institute of Medical Sciences (LMS), for example inter-institute symposia for technical staff and technical leaders, and an early introduction into professional registration. Our animal facility also has a strong training and development programme, with IAT professional qualifications available for animal technicians. A small number of apprenticeship students also work within the lab.

Since UKRI became a signatory in January 2021 we have been actively working towards developing our technical community and the offerings available. As such we have completed the following:

- September 2021: Webinar to discuss the UKRI action plan (Ellen Meek and Nik Ogryzko), demonstrate the impact (Burcu Bronner-Anar, Welcome Trust Sanger Institute) and celebrate our first successful professional registration applicants (Jo Chesham, LMB). Attended by 60 staff.
- Technician Commitment Committee (TCC) formed from those who were interested in supporting the initiative following the webinar. The TCC now drives forward initiatives, liaises with senior management and reports annually to the LMB Executive Committee.
- Set up a techspecialists@ mailing list and dedicated intranet pages for technical staff.
- Ran a survey in January 2022 to gain insight into the current views of technicians. The results that have already been acted upon are:
  - Started a newsletter to be published every 6 months in order to increase both awareness of the Technician Commitment and visibility of technical staff.
  - Presented our plans and our case for the LMB to become a signatory in our own right to the Executive Committee.
  - Instigated the Eileen Southgate staff prize. This was awarded for the first time in October 2022. https://www2.mrc-lmb.cam.ac.uk/achievements/eileen-southgate-prize/
  - Set up mechanisms for support and to enable professional registration with the Science Council and the Engineering Council, requiring a change in professional memberships policy.
  - Alongside MLC at MRC Harwell and MRC LMS, hosted a technician symposium in September 2022, enabling technicians to showcase their careers through presentations, networking and posters. 60 attendees. https://www2.mrc-lmb.cam.ac.uk/inter-institute-technician-symposium-celebrates-technical-specialists/

The Technician Commitment aims to ensure visibility, recognition, career development and sustainability for technical staff across higher education and research. Please tell us of any initiatives your organisation has put in place to address these themes since becoming a signatory of the Technician Commitment:

Since our signatory announcement in November 2022, https://www2.mrc-lmb.cam.ac.uk/lmb-becomes-signatory-of-the-technician-commitment/ we have been working on the following initiatives:

- Continued to work with RITG partners on projects such as the RITS symposium and RITA awards.
- 'Operation Cake', comprising two consultation events to hear directly from LMB technicians what they would like to see in our action plan (see below).
- Four technicians successfully applied to take part in the Herschel Programme this year.
- Encouraging a wider representation of technical staff on our TCC by inviting members from more varied technical roles.
- An ongoing series of YouTube videos showcasing our Scientific Facilities and the people working within them, the latest of which can be found here: https://www.youtube.com/watch?v=M4QOGMfY-NU
- Increased visibility through planned specific Technician Commitment activities at our open day to be held on 1st July 2023.

Please provide a 24-month action plan, detailing future plans to ensure your organisations addresses the themes of the Technician Commitment and details of how impact will be evidenced: (this may be detailed here or attached to this document as an appendix):

Based on feedback from the LMB technical community, and the timescales and resources available, actions 1-7 are high priority.

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
1	Describe career pathways for technically skilled roles.	Career Dev, sustainability	Consultation with HR and facilities to outline the skills, knowledge and competencies necessary at each career stage so that staff can identify how to develop themselves and progress their careers either within or outside the LMB. Technical career pathways are often unique so 'career story' examples can be given as well as more generic pathways.	TCC, HR, Facility Heads	Technicians are able to identify the next steps to take in order to reach the next milestone on their chosen career path.	Increase from 16% of LMB technicians agreeing that there is a career pathway available to them at the LMB to 50% based on survey feedback. A career pathway relevant to each facility is published on the intranet.
2	Create a guidance policy detailing the minimum number of career and professional development sessions technicians should aim to attend per year.	Career Dev	Consult with HR, consider possible training courses specific to technicians. Explore opportunities for education funding for technicians. Guidance for managers on training and career development for technical staff. Policy to cover specifics of professional development, including training courses, meetings, conferences and networking events.	TCC, HR training lead	Metrics on technical staff attending professional development opportunities and how funding is being used.	Increase in technicians attending conferences from 44% to 70% Obtain baseline data for technicians attending training and aim to increase this by 20%
3	Increase uptake of professional registration through the Science Council and Engineering Council.	Career Dev Recognition	Use case studies, raise awareness of career benefits, hold seminars and working groups for peer support.	TCC, HR, external partners – Science Council and Engineering Council	Record memberships over time.	Aim for 15 new memberships and 5 new professional registrations within the two-year action plan period.

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
4	Assess current technical contributions made to published/presented work through authorship and acknowledgements at the LMB by conducting an evidence-based research project and using these data to guide future direction.	Recognition Career Dev	Highlight technical input into LMB publications, for example on the intranet or through the TC newsletter or external news stories. Encourage technicians to maintain their own records of publications and acknowledgements. In year one, acquire unbiased data/metrics on the acknowledgement given to LMB technical staff and facilities in publications and identify papers where technical staff are named authors on publications. Survey technical staff as well as the GSA and PAL about their acknowledgment/authorship experiences. Identify good and bad examples of technical contribution acknowledgement. Collate acknowledgement and authorship guidelines and/or policies in other institutes across the UK and internationally as a point of reference and assess impact of these where possible. Present analysis to Executive Committee for discussion on direction that will be taken in year two. In year two, work towards targeted improvements to technical authorship and recognition as indicated by the data, to enable consistent and fair recognition of technical contributions.	TCC, Library, Executive Committee	Monitor technical authorship and acknowledgement in publications	1) Two articles in the TC newsletter relating to publication and technical input. 2) One external news story highlighting direct technical input into a recent publication. 3) In year 2 work closely with the Executive Committee to provide solutions that ensure technical contributions to research are appropriately recognised by authorship and acknowledgement.
5	Increase and create opportunities for technicians to promote their work. For example, give talks or present posters.	Visibility Career Dev	Continue to work with partner groups such as RITG and UKRI institutes to hold regular MRC symposia and webinars. Enable technicians to present work at existing seminars and symposia. Regular encouragement to take up opportunities by advertising, discussion with managers and highlighting successes.	TCC and external partners	Record number of LMB technicians participating in events.	Record number of technicians requesting to promote their work/give a talk. This will create a baseline which we will aim to increase over the period of the action plan.

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
			Promote other opportunities that arise, such as the Herschel Programme.			
6	Organise the first of an annual Technician Commitment week to focus on career development and networking.	Recognition Visibility Career Dev	Event to include lunchtime talks with visiting speakers for managing careers, networking and professional registration and a lunchtime poster session with prizes and a barbeque.	TCC plus volunteer technicians	Event survey feedback. Metrics on number of participants e.g. how many are from facilities/individual labs/Operations/Ares.	News story to increase both internal and external visibility. Recognition of work through poster competition. Aim for 80% highly satisfied with career talks and other events. Increase participation by 20% compared to 2022 symposium.
7	Increase visibility of technicians on the LMB's external website, social media channels and within the buildings.	Visibility	Dedicated pages on external website for the Technician Commitment, technical roles and facilities. Technicians feature regularly in external news stories. Visual displays, for example in the atrium, updated to include technicians and their roles.	TCC, VisLab, News and Public Engagement	Web page completed. News stories counted and metrics analysed.	Increase feeling of visibility for technicians from 30% to 60% based on survey feedback.
8	Make video highlighting the diverse roles of LMB technicians, upload to YouTube, the intranet and external LMB website and promote via social media channels.	Visibility	Work with Vislab and technical community	TCC, VisLab, technicians, Public Engagement	Metrics on Youtube. Viewed page clicks on intranet and/or external site. Metrics on how many technical staff volunteer to participate in video.	Increase feeling of visibility for technicians from 30% to 60%

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
9	Continue to publish regular newsletter.	Visibility, plus focus on other areas	Email embedded newsletter using mailchimp in order to gather metrics. This will primarily enable visibility, but, depending on focus, can enable other pillars too.	TCC	Count reader metrics. Record and respond to feedback comments to TCC in order to improve and better serve technical community.	Newsletter 1 was read by appoximately 21% of the LMB. Aim to increase this to 50% over the action plan period.
10	Encourage technician participation in public outreach activities, for example LMB Open Day 2023 or Microscopes for Schools	Visibility	Ensure inclusivity of language used in order to open up staff participation. Work with managers to allow time for technicians to participate.	News and Public Engagement, TCC, VisLab	Gather metrics on technician participation in order to assess participation.	Technicians are well represented in these events, Baseline data is required, then aim to increase participation by 10%.
11	Continue to put technicians forward for both internal (Eileen Southgate Prize) and external prizes.	Recognition	Use email, internal advertising screens and newsletters to increase promotion of internal and external prizes. Encourage peer nominations by publishing guidance and advice for nominators. Promote winners through newsletter.	TCC	Monitor nomination numbers and record winners to ensure that advertising is effective. Metrics on nominations: how many technical "groups" are represented in each category (facilities/Operations/individual labs/Ares) and also how many nominations reflect senior versus junior band posts.	Aim to increase nominations for external awards by 10%
12	Promote the technician exchange programme between LMB, LMS and Mary Lyon Centre.	Career Dev	Work with partners at LMS and Harwell to promote the scheme. Use previous exchanges to create news stories and further promote exchanges. Use the scheme both as a means of both training and the crossover of ideas between institutes.	TCC, Facility heads. TC leads at Mary Lyon Centre and LMS.	Post-exchange evaluation feedback from participants to improve the scheme.	Aim for one exchange in first year and at least two in the second year.

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
13	Consider apprenticeship roles as a more diverse form of recruitment.	Career Dev, Sustainability	Promote the possibility of apprenticeship roles when technical roles become vacant. Increase knowledge exchange between facilities experienced in training apprentices and those considering it.	TCC, HR, Facility Heads	Managers are aware of apprenticeships as a possible role.	Dependent on staff vacancies.
14	Embed the Technician Commitment into the PDR (Performance Development Review) process.	Career Dev	Ensure that line managers are aware of the TC and the opportunities and benefits are discussed as part of the PDR process. Specific guidelines for technicians and managers, linked to Action 2.	HR, TCC	Technicians are able to utilise the PDR process to consider whether there are aspects of the action plan that they could make use of in the coming year. For example, training, professional registration.	Specific feedback via TC survey to determine extent of uptake and positive impact on technicians' training and development needs.
15	Background research into the demographics of the LMB technician population. This will give insight into identity and enable greater understanding and long-term planning.	Sustainability	Work with HR and EDI specialist to analyse data on age, gender, BAME, exit interview data. Compare to national data.	TCC, HR	Greater understanding of the LMB technician population achieved, enabling more targeted future plans. Metrics on demographics of LMB technicians compared to other MRC sites or UK institutes.	This will feed into future actions and influence our 3 year action plan.
16	Encourage technical work experience placements.	Sustainability	Promote within the LMB technical community. For example, meet with managers or write an article in the newsletter. Ensure that technicians are aware of work experience schemes and are supported to host students through training or peer support.	News and Public Engagement, TCC, Facility Heads	Gather metrics on how many technical staff host students. Gather metrics on how many technical staff apply to programs such as In2ScienceUK or Nuffield Research Placements.	Obtain a baseline and then aim to increase this by 10% each year.

Ref.	Action	Area	How	Who	Evaluation Method	Success Measures
17	Build a supportive community of technicians in order to improve internal knowledge exchange.	Sustainability	Mix of social and more formal events open to all technicians. These could be a pizza working lunch or tea and cake, for example.	TCC	Track events and feedback from these. Aim to hold 2 events per year. Gather metrics on participation.	Aim for 20 participants at the first event. Specifically aim to include Ares staff due to geographical separation.
18	Repeat survey and 'Operation Cake' in order to assess impact of the action plan.	Assess Impact	TCC to organise in order to gain timely feedback.	TCC	Compare data to 2022 survey and first Operation Cake.	Increase in survey participation from 28% to 40%. Specific improvements in survey metrics as detailed above. Operation Cake II to provide further detailed feedback and ideas for our second action plan.

Please evidence how the 'technician voice' was present in the development and formation of the institutional action plan:

The survey undertaken in January 2022 was informative but limited in that only a 28% response rate was achieved. In order for technicians to have the opportunity to give their views on our action plan, the TCC organised two informal consultation events dubbed 'Operation Cake', one in our main building canteen and one in the Ares tea room.

Figure 2: Photos from Operation Cake. Left, LMB canteen, and right, Ares tea room including post it note feedback.
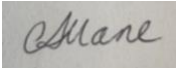
Technicians were able to read a draft version of the action plan and discuss this, or any other issues relevant for technicians, with members of the TCC. Further responses were also invited after the event. Technicians were invited to summarise their thoughts on post it notes. Over 80 notes were collected from the two events.

Several interesting themes were noted from the responses. Overwhelmingly, LMB technicians are keen to develop their careers by taking on additional training and development opportunities. The lack of career pathways was identified in our 2022 survey, but the proactive ethos of our technicians was not. It is therefore critical that our action plan reflects this by focusing on training and development opportunities.
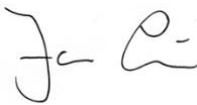
Another theme that emerged was the variety of different technical roles at LMB and the different needs that people in these roles have. Some groups, such as Ares staff, were more focussed on visibility and improving interaction with research staff whereas others were more interested in developing their technical skills and career progression. The TCC have reflected on the diversity of its make-up and have invited new membership in order to better reflect LMB technicians as a whole. This will enable our action plan to be relevant to all technical staff at the LMB.

Lastly, visibility and recognition were also key themes for our technicians. There was particular support for raising profiles through giving talks and presenting posters, and increasing the opportunities available to do this.

Please confirm that your Technician Commitment status and action plan is published on your organisation's website and provide the relevant URL here:

Signed……………………………………………………………..Alison Lane, Technician Commitment

Nominated Institutional Lead Date: 19th July 2023

Signed……………………………………………….. Jan Löwe LMB Director, Technician Commitment Signatory

Date: 19th July 2023

Appendix A: Examples of activities and initiatives to address the themes of the Technician Commitment

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Technician Commitment

Please note that this is not an exhaustive list, it intends to demonstrate example activities to support institutions in action planning.

Theme	Example Activities
Visibility Ensure that technicians within the organisation are identifiable and that the contribution of technicians is visible within and beyond the institution	□ Organisations can identify how many technicians they employ □ Technician roles have clear job descriptions □ A consistent policy that where technicians have contributed to research outputs and grants, they are named as authors □ Technicians to feature in organisation prospectuses and marketing materials □ Technicians to sit on decision making committees where appropriate □ Technicians visible in costing mechanisms for research grants □ A mechanism for celebrating technician achievements across the organisation □ Organisation strategy documents to include technicians where appropriate □ A vibrant 'Technician Network'
Recognition Support technicians to gain recognition through professional registration	□ Organisation communicates the opportunity to become professionally registered to technical staff (Science Council, Engineering Council, BCS). Conferment of the organisational level Science Council Employer Champion award in recognition of the support given to technical staff to gain professional registration and engage in continued professional development □ Recognition and support of the teaching aspect of many technician roles through the accreditation of teaching practice through the Higher Education Academy □ Internal award schemes recognise the contribution of technical staff □ Nominations to external award schemes that recognise the contribution of technical staff
Career Development Enable career progression opportunities for technicians through the provision of clear, documented career pathways	□ Technician specific professional career paths/frameworks which clearly document progression opportunities □ Professional development opportunities, signposted to technicians and aligned to career pathways □ A dedicated webpage showcasing case studies of technician careers □ Expansion of technician specific job families in recognition of high level technical specialisms
Sustainability Ensure the future sustainability of technical skills across the organisation and that technical expertise is fully utilised	□ Appropriate succession planning for technical roles including the analysis of technician profiles to ensure future sustainability of skills within the organisation □ Secondment/placement programmes for technical staff to develop new skills □ A technician trainee/apprenticeship programme □ Utilisation of the Apprenticeship Levy to train and upskill existing staff