



LEAF

# **LEAF Workshop**

**March 2022**

Environmental Sustainability Team

# LEAF

- The [Laboratory Efficiency Assessment Framework](http://www.sustainability.manchester.ac.uk/get-involved/staff/leaf/) is an innovative sustainable Lab Certification tool designed by UCL that facilitates and drives improvements in laboratory efficiency.
- Users complete a set of criteria to sequentially achieve a Bronze, Silver or Gold standard, and in the process see their carbon and financial savings as they progress.
- Users fill out the online tool typically over a one-year period. Applications are then submitted, and labs are assessed to validate.

<http://www.sustainability.manchester.ac.uk/get-involved/staff/leaf/>



# Timescales

- The online tool is always open.
- The LEAF certification year runs from January to December each year, including audit and approval time.
- You can submit your assessment via the online tool anytime until the **first week of November within a calendar year** for review and certification that year.
- All criteria completed are retained in the online system and will roll over to the next assessment year
- Re-certification could be sought on a yearly, two-yearly or three-yearly basis depending upon the needs of the lab.



# Categories

- Waste
- People
- Purchasing
- Equipment
- IT
- Sample & Chemical Management
- Research Quality
- Teaching Criteria
- Ventilation
- Water



# Calculators

- LEAF seeks to produce comparable data on efficiency and sustainability, through the use of in-tool calculators.
- Allows quantifiable baselines, targets, and measures to be developed (CO<sub>2</sub>/£).
- Focus on the calculators that relate to areas where you expect to make an impact, as opposed to trying to complete them all.

Calculator Name ↕	Step 01 - Baseline Calculator	Step 02 - Savings Calculator
Waste	<a href="#">View/Edit Calculator</a>	<a href="#">View/Edit Calculator</a>
Biosafety Cabinets	<a href="#">View/Edit Calculator</a>	<a href="#">View/Edit Calculator</a>
Fume Cupboards	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
ULT Freezers	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
-20C Freezers	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
Refrigerators	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
IT	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
Water	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>
Equipment	<a href="#">Start Calculator</a>	<a href="#">Start Calculator</a>

# Completing LEAF

- Complete **baseline calculators** when you begin the programme, these are important in quantifying your progress over the year. Approximate baseline measures are OK.
- Decide as a team which award level you will aim to achieve – Bronze, Silver or Gold.
- All actions must be completed within each level to achieve that award i.e. Gold = ALL Bronze, Silver and Gold actions.
- Supporting resources tab: useful tips, links, case studies, articles.
- If you think any actions don't apply to your team/lab explain why.
- Complete **savings calculators** at the end of your study to measure progress.
- Review and submit when ready (*on or before first week in November for certification that calendar year*).

# Open Initiatives

## Open Initiative

**How it works:** Open Initiatives is a place where you can record all the good practice implemented which may not get captured by calculators. We suggest recording instances for e.g. where you saved in procurement due to sustainable considerations. Further examples include watersavings, time saving exercise, fewer consumables, or examples of how good practice benefitted your laboratory. Please provide context for any quantified figures (e.g. litres of water saved per year). *Below are examples in red, delete as you progress.*

(please provide brief descriptions for each)

<u>Initiative</u>	<u>Comments</u>	<u>Quantifiable Benefit</u>
<i>One ULT Freezer purchased</i>	<i>It was chosen by the energy dept. and performs well</i>	<i>We may have saved 650 on the purchase</i>
<i>We purchased 2 efficient safety cabinets</i>	<i>They were cheapest, and performed the task we need</i>	<i>Users enjoy them more, and we saved maybe 400 on purchase costs due to selection support</i>
<i>Purchased a recirculating chiller</i>	<i>Attached to stop pouring water through to cool all the time.</i>	<i>Saves we estimate 12 m<sup>3</sup> of water per year.</i>
<i>Repaired 2 centrifuges</i>	<i>2 centrifuges were about to be purchased, but instead we had 2 old units repaired.</i>	<i>We estimate we saved 7,000 quid this year.</i>

- Record good practice that doesn't get captured elsewhere in the tool.
- Suggestions shared to develop future iterations of LEAF.

# Audit & Award

UCL



Awarded To  
**CCAPPE Lab**  
2021

In recognition of the actions undertaken  
to improve sustainability practices as part of the  
Laboratory Efficiency Assessment Framework (LEAF)

Angela Payne and Max Vidotto  
The University of Manchester Environmental Sustainability Team  
University of Manchester

- Following submission, your assessment will come through to the Environmental Sustainability (ES) Team.
- The assessment will be reviewed and a lab audit arranged to confirm relevant practices are in place.
- You will receive an email notifying you of the outcome.
- If your award is approved a LEAF Award Logo will appear within the online tool and you will be able to download your Award Certificate from there.
- It is now possible to 'assign a user to audit' a lab so that peer reviews can take place. Lab users can audit each others labs and provide feedback which then comes back to the ES Team for final sign off.



# New Criteria: Gold Proposals

- Brand New Criteria: The lab has a system in place to ensure staff actively consider using existing data, prior to generating new data. For teaching spaces, this may include having students assess existing data.
- Gold Criteria Revamp:
  - *Currently reads:* (34) There has been a recorded reduction of total waste produced, and/or an increase in recycling rates.
  - *Could read:* The lab has implemented some form of reuse, which otherwise did not exist. This can be in the form of reusing glassware, plasticware, or any other means which did not previously exist.

# Autumn 2022 updates

- Ask for Life Cycle Assessments from suppliers in the Bronze Criteria on Purchasing, rather than just considering energy consumption.
- Aim to add in several more frameworks by the end of 2022 (tbc)
  - Animal Facilities
  - Workshops
  - Clinical / Diagnostic Laboratories
  - Sports Labs
  - Fly Labs
  - IT... tbc

# Useful Resources

- [Sustainable Labs Teams Channel](#) provides a collaboration space for documents, information, and ideas.
- 6R – UoM initiative developed by School of Biological Sciences to reduce single-use plastics in the lab. [6R Starter kit for labs](#).
- Faculty of Science & Engineering Better World Funding - bid for up to £3000 for projects that 'make a difference' and support the University's social responsibility agenda. Contact FSE Social Responsibility Team for further details.
- The [LEAN](#) network promotes sustainability in labs through an online forum and shared resources. It is free to join and there are a range of [resources](#) already on the website which could support you in your LEAF submission.
- [Sustainable UCL LEAF Resources](#): posters, sustainable lab induction, consumables guide etc.

