my green lab.

Impact laboratories.

My Green Lab Certification Introduction

The world's most trusted green lab certification

IdiPAZ Instituto de Investigación Hospital Universitario La Paz

April 23rd, Madrid - online

My Green Lab's Mission

My Green Lab's mission is to **build a global culture of sustainability** in science to transform the industry into a global leader on environmental sustainability. Through education, community engagement and market leading certification tools, we are inspiring the scientific community to integrate sustainability into everything they do.

Impact Laboratories Role

3rd party verifier of the world's most trusted green lab certification. 3rd party certification aligns with international best practice and ensures the integrity and rigor of our program as it scales globally.

Program Ecosystem

My Green Lab offers a suite of leading-edge programs to engage everyone from students and researchers, to laboratories, major institutions, and corporations. This is an effort to fundamentally and permanently improve the environmental performance of scientific research.

Did you know?

Labs are among the most **expensive to operate & environmentally intensive** buildings of any kind.

10x

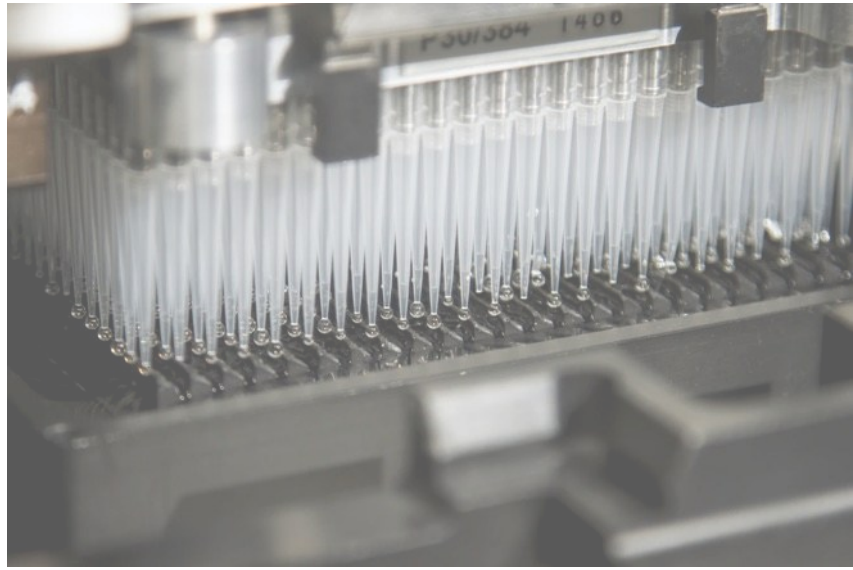
More energy than office spaces

4x

More water than office spaces

5.4 billion

kg of plastic waste each year



A Closer Look at Energy

57% of energy consumption is impacted directly by lab users

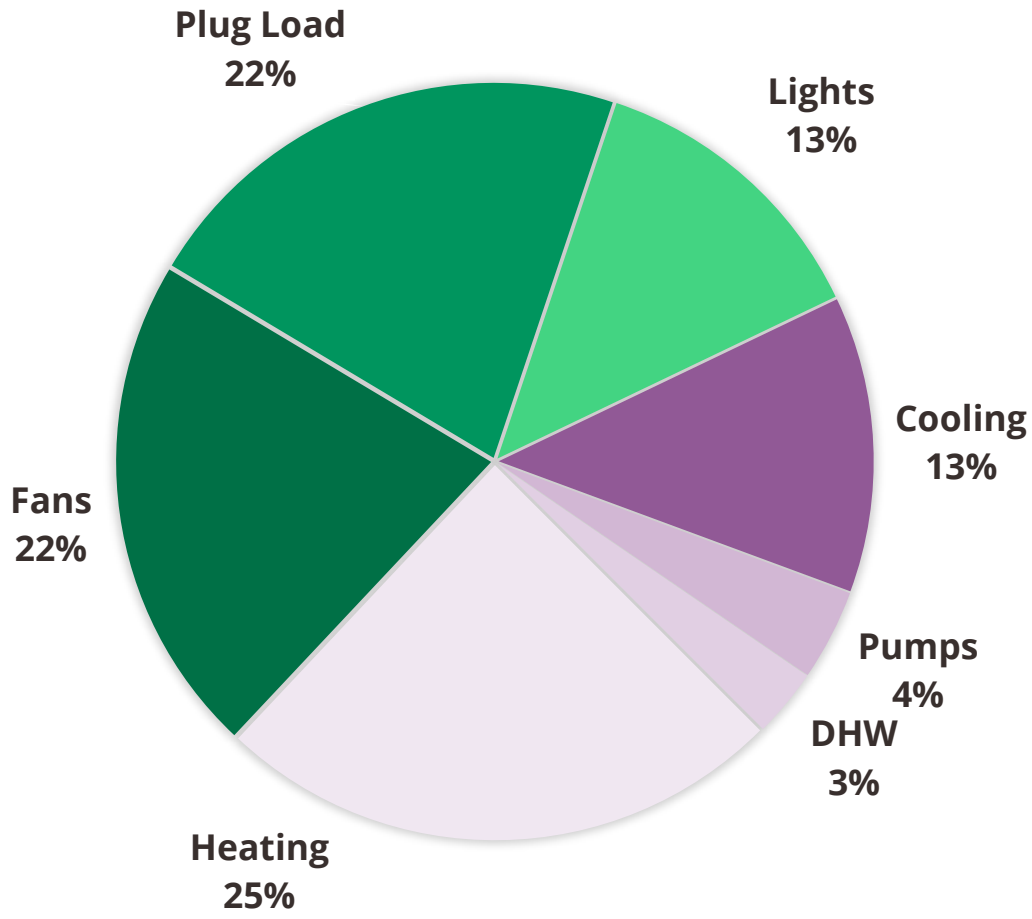


Chart from
Alison Farmer,
kW Engineering

Drying ovens =
Incubators =
TC hoods =
Vacuum pumps =

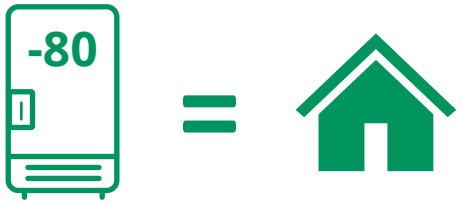
Rethinking Energy

Make sure **lights get turned off** in the lab and support rooms

Identify **equipment to turn off** when it is not in use

Use **outlet timers** to make it easy

Cold Storage Best Practices



- **-80°C freezers** can consume **as much energy as a house**
- **Chilling up -80s to -70°C** can save around 30% of the energy consumed
- Keep cold storage operating at **maximum efficiency:**
  - Maintain door seals
  - Defrost and remove ice
  - Clean filters and vacuum coils – this can save 10%

Top Image: https://www.dpr.com/projects/biogen-building-8-floors-4-5-lab-renovation
Bottom Image: https://www.thermofisher.com/us/en/home/life-science/lab-equipment/cold-storage.html

Water Wisdom

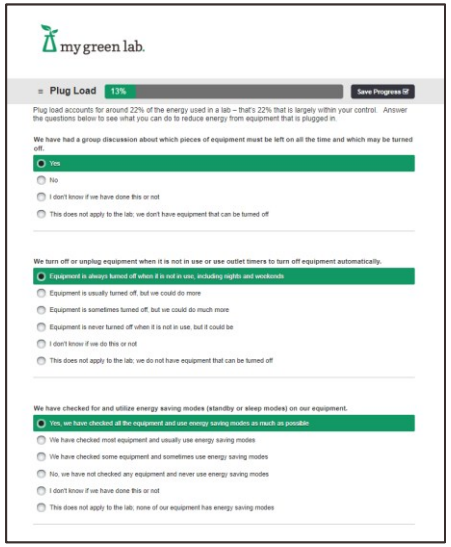
- Check faucets for **low-flow aerators** – they can reduce water usage at the tap by 50% - 70%
- Use **alternatives to single-pass cooling** like recirculated water or a condenser
- Run **autoclaves and dishwashers** when full as much as possible
- Use the **right quality water** for the task – it takes 3 liters of water to make 1 liter of DI water

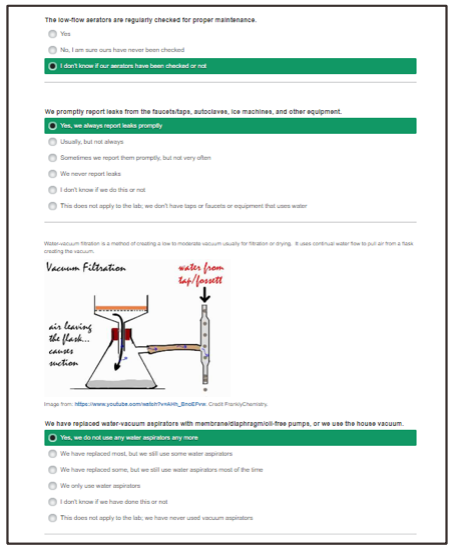
Reduce, Reuse, Recycle

- Get to know your waste and **identify your largest waste streams**
  - know what you can recycle
  - Identify what you can reduce
- Work with suppliers to **explore product alternatives** that can help you minimize waste, reduce hazards and/or decrease energy and water usage
- Use a **shared supply of common reagents** and materials to prevent over-purchasing
- **Choose** more sustainable products – look for environmental labels like ACT or ENERGY STAR

Solution: Get My Green Lab Certified

my green lab certification.



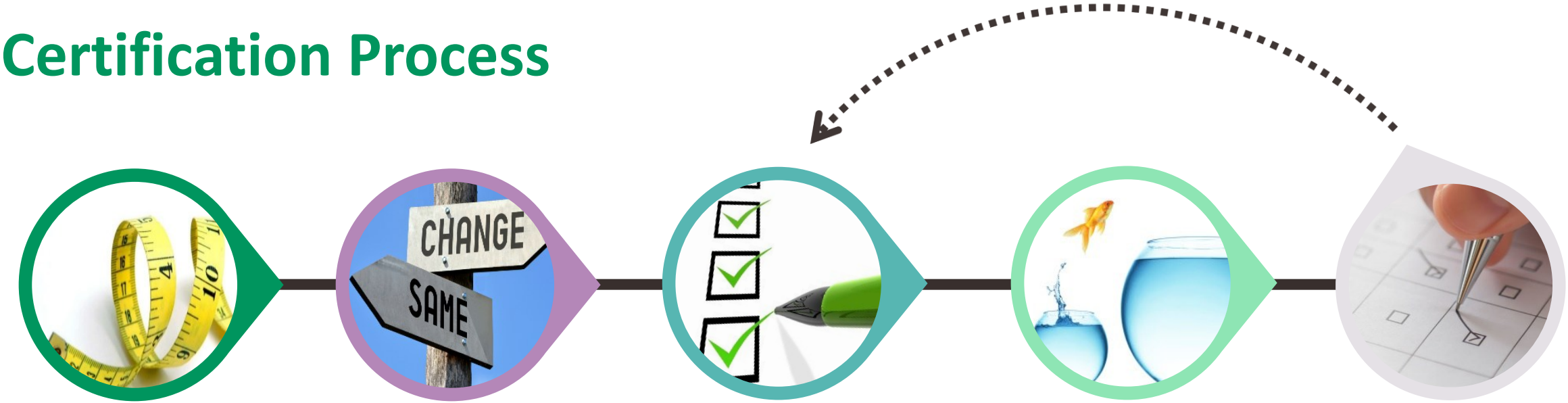


The process includes:

- Two online assessments – baseline and certification
- 14 topics
- 150 questions, 30 minutes to complete
- Focus is on lab behaviors
- 8-10 month certification journey

mygreenlab.org/green-lab-certification

Certification Process



1
Assess Baseline

- Survey lab members to understand current practices
- 3 weeks
- 50% participation
- Make recommendations for improvement

2
Implement Changes

- Labs discuss solutions and implement behavior change practices
- 6 – 8 months on average

3
Get Certification

- Re-assess lab practices
- 3 weeks
- 50% participation
- Certification level given
- Make recommendations for further improvements

4
Make More Changes

- Labs adopt additional policies and best practices

5
Do Re-Certification

- After 2 years, re-assess lab practices and provide new certification level
- Further recommendations made

Recognizing Success

Green

80% score on Certification Assessment

Platinum

70% score on Certification Assessment

Gold

60% score on Certification Assessment

Silver

50% score on Certification Assessment

Bronze

40% score on Certification Assessment

UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

Bernal Institute

My Green Lab Certification Case Study published on our blog, The Beaker

How We All Work Together

My Green Lab & Impact Laboratories

- Administering the assessment
- Analyzing results and giving feedback
- Training lab leads on communicating results with labs

"Green Team"

- Coordinate efforts across all labs
- Manage communications
- Organize and share resources
- Share/communicate results with labs

Lab Lead

- Coordinate efforts for lab
- Deliver results to laboratory and facilitate discussion
- Create action plan for lab activities
- Coordinate with supporting functions

Lab Members

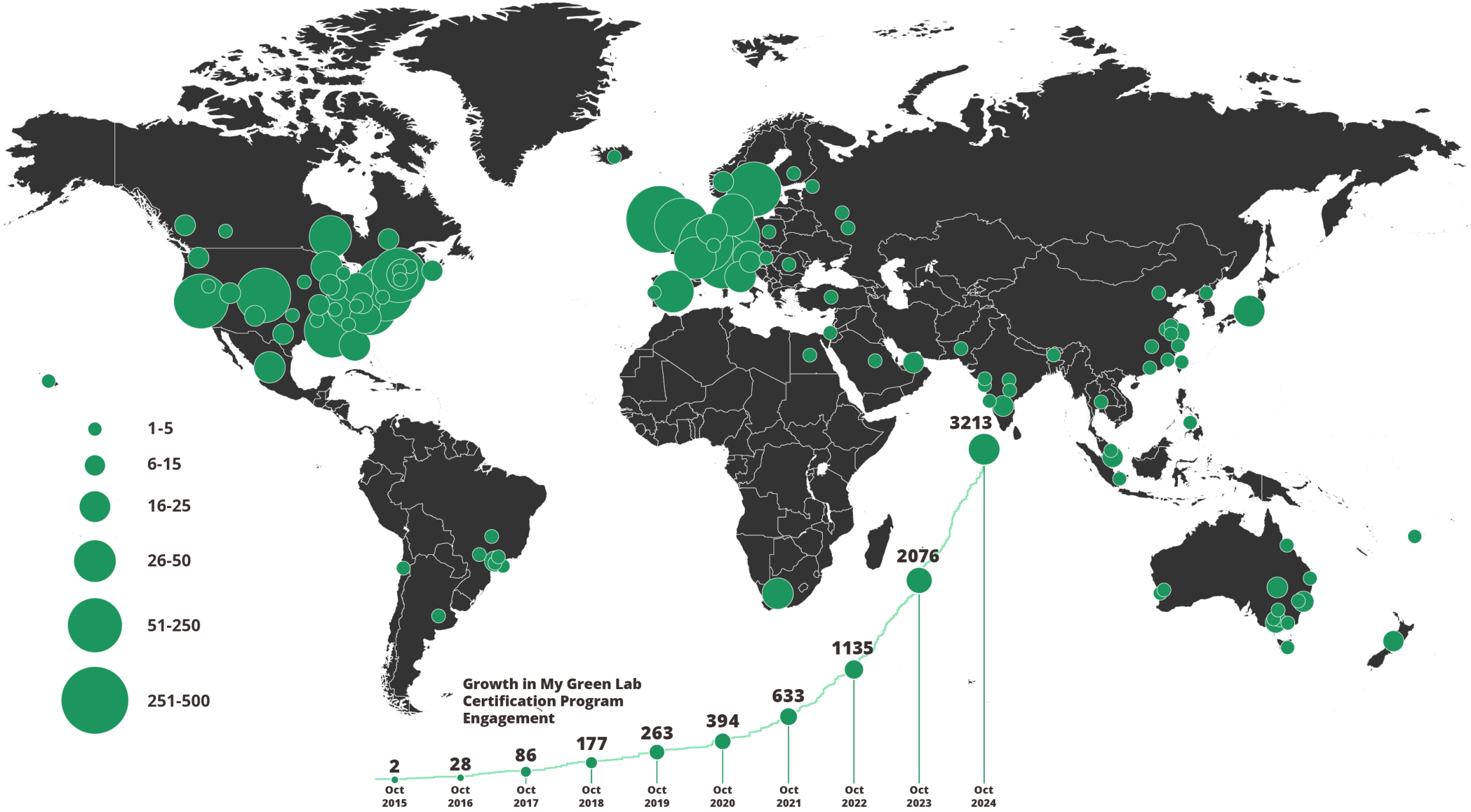
- Fill out the assessment
- Make recommendations on changes to make
- Implement recommendations and take action
- Re-assess after implementation phase

Local Supporting Functions

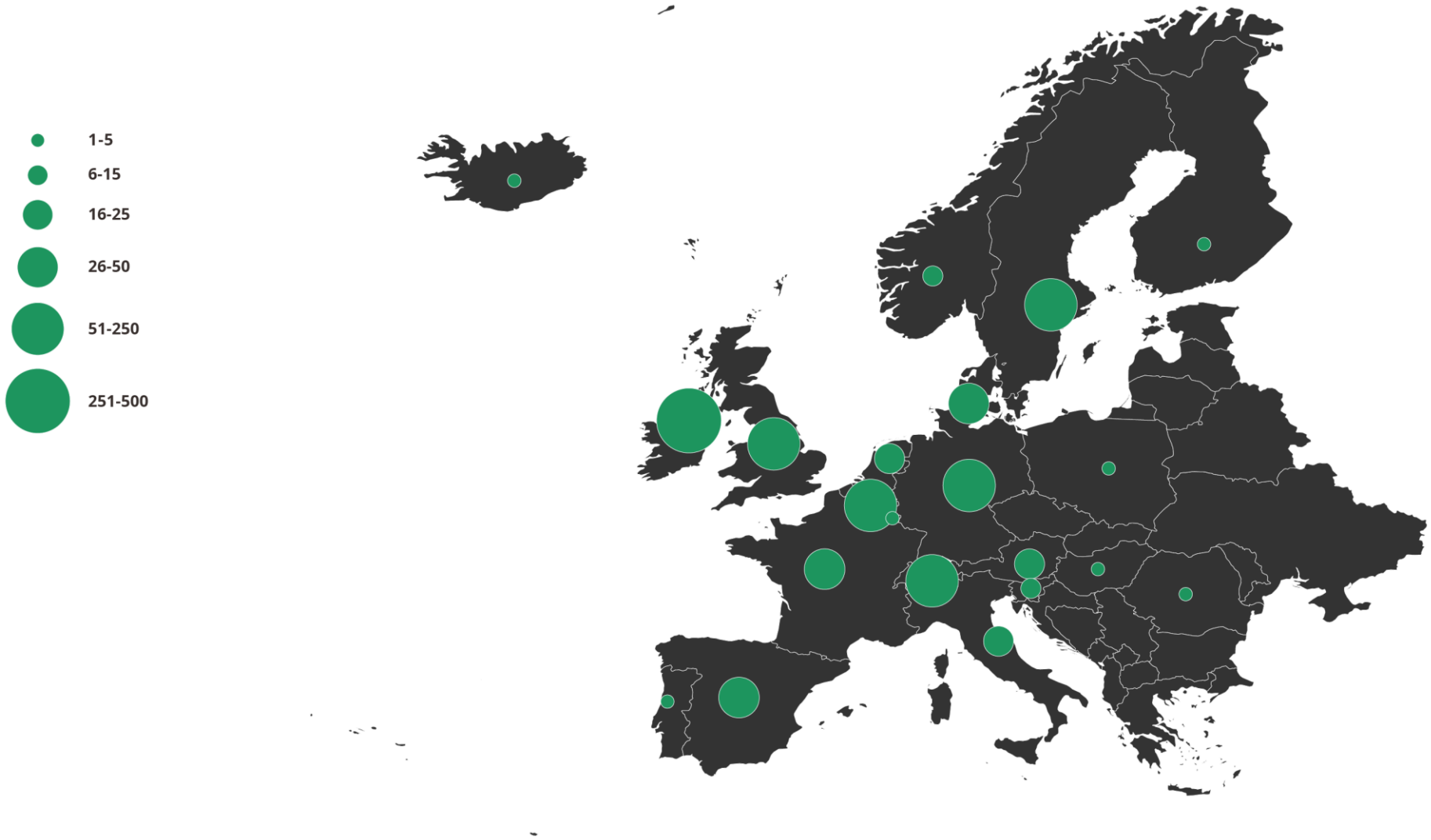
(including EHS, Green Committee, Procurement, Facilities, IT)

- Identify and utilize local programs
- Support local changes
- Explore opportunities for innovation

My Green Lab Certification



European Leadership on Green Labs



22 Countries

1,450+ Labs

36% of World Total & Growing Fast!

Customer Testimonial

"So far, we've adopted My Green Lab Certification in over 65 labs around the world.

This is a key way in which we are accelerating carbon reduction in healthcare R&D and instilling a culture of sustainability at AstraZeneca."

Penny James
Chief Operating Officer
Biopharmaceuticals R&D
AstraZeneca

41 of the 50 Largest Biotech and Pharma have implemented My Green Lab Certification

Amgen
Astellas
AstraZeneca
Bayer
Biogen
BioNTech
Boehringer Ingelheim
Bristol Myers Squibb
Genentech
Gilead
GSK
Johnson and Johnson
LabCorp
Lonza
Merck & Co.
Moderna
Novartis
Novo Nordisk
Pfizer
Regeneron
Roche
Sanofi
Takeda
UCB Pharmaceuticals
Vertex Pharmaceuticals

Companies in bold have a global, top-down strategy in place for the My Green Lab Certification program.

My Green Lab certified laboratories in Spain

Institute for Bioengineering of Catalonia
Integra Therapeutics
Telum Therapeutics
Catalan Institute of Nanoscience and Nanotechnology
ALLOX
Takeda Pharmaceutical

Organisations that have given us permission to share their involvement

United Nations Selects My Green Lab Certification as Key Indicator of Progress for Pharma & Med Tech Sector

RACE TO ZERO | my green lab certification.

"95% of labs across major pharma and med-tech companies are My Green Lab certified at the green-level by 2030."

Breakthrough Outcomes report here. Tracking progress found here.

My Green Lab Case Study: AstraZeneca

- In 2021, AstraZeneca invested $60,000 in My Green Lab Certification for select R&D labs as part of its corporate sustainability strategy.
- AstraZeneca's end-of-year report revealed an energy savings of **1,270,185 kWh**/year, equivalent to **900 tonnes of CO_2** emissions, and **$317,548** in energy costs.
- AstraZeneca found a **4.3 X ROI** from energy savings using My Green Lab Certification.*

Saved $317,548 in annual energy costs

Reduced energy usage by 1,270,185 kWh/year

Reduced CO_2 emissions by 900 tonnes/year

* Case study data from AstraZeneca

My Green Lab Case Study
University of Alabama –Birmingham

- UAB has the largest campus-wide My Green Lab program in the world, with 78 labs certified since 2017, and 79 certifications currently in progress in 2023.
- Through regular freezer maintenance encouraged by My Green Lab, UAB saves enough energy to power 75 US homes annually.
- UAB has found that EACH participating lab saves over 35,000 kWh annually*, leading to an estimated $4,382** annual energy savings per campus lab.

Reduced energy use by 35,000 kWh/year/lab

Recycled 20,000lbs of Pipette Tip Packaging

Reduced waste by 75,000lbs (total)

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

*As reported by University of Alabama
**Cost savings estimated using EIA 2023 U.S Commercial Electricity Rate

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My Green Lab Case Study: Henkel

- Henkel Ireland has been awarded My Green Lab Certification at the highest ‘Green’ level. The Irish site is the first of Henkel’s global labs to achieve this status.
- One of the actions that the labs implemented included installing a water circulator, which helped the team save 40,000 liters of water in one lab alone.
- Another action was to reduce the diameter on the ion chromatography instrument, which led to a 75% reduction in waste.

40,000 liters of water saved

75% waste reduction

All 4 labs are My Green Lab Certified at the ‘Green’ level

*As reported by Henkel

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My Green Lab Case Study
Colorado Dept. of Agriculture

- The department focused on fume hood and autoclave best practices, waste reduction, and energy management for 3 labs.
- The department's end-of-year report found energy savings of 187,000 kWh/year, 1.74 mio. litres of water/year, and a reduction of 181 kilos of waste in year one.
- **The Colorado Department of Agriculture achieved a 1,*460% Annualized ROI*** on energy savings using My Green Lab Certification.**

Reduced energy use by 187,000 kWh/year

Reduced water use by 1.74 mio. litres / year

Reduced waste by by 181 kilos / year

COLORADO
Department of Agriculture

*Cost savings estimated using EIA 2023 U.S Commercial Electricity Rate; My Green Lab non-profit program cost

My Green Lab Case Study
Technical University Berlin

- The Department of Applied Biochemistry focused on equipment energy reduction best practices for a single lab located in Berlin, Germany.
- The lab's sustainability report found energy savings of 26,000 kWh/year, over 35% of the lab's original energy usage.
- **The Technical University Berlin achieved an estimated 30 X ROI on energy savings using My Green Lab Certification.***

TECHNISCHE UNIVERSITÄT BERLIN

Saved €14,480 in annual energy costs

Reduced energy use by 26,000 kWh/year

Implemented equipment inventory program

*As reported by Technical University Berlin to My Green Lab

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Benefits for Scientists

Change in mindset

- Build a culture of sustainability
- Rethink how things have always done

Resource savings

- Reduce energy, water, waste
- Reduce greenhouse gas emissions
- Save on costs

Collaboration

- Work with other functions
- Model best practice in your organization
- Inspire customers

Innovation

- Explore new processes, technologies, methods and ideas
- Healthier materials for colleagues

ACT.

Accountability

Consistency

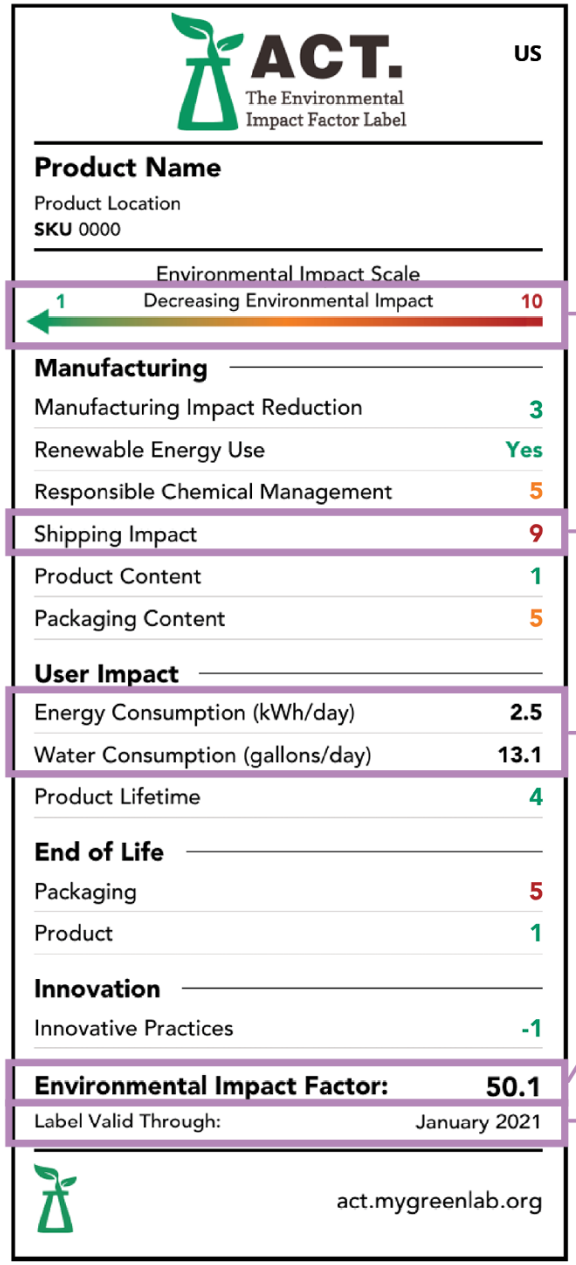
Transparency

An eco-label for laboratory products

- Consumables
- Chemicals/reagents
- Equipment

Almost **1,900** products labelled!

- Online database is public and free
- Visit **www.act.mygreenlab.org**



Simple color scale indicates environmental impact, with values on a scale of 1 to 10

Information about categories available online

Energy and water consumption data help drive sustainable lab practices

Total Impact Factor enables quick comparisons

Expiration date keeps data current and drives continuous improvement

Act.MyGreenLab.Org

Consumables

Chemicals & Reagents

Equipment

QIAGEN
SARTORIUS
METTLER TOLEDO
eppendorf
labcon
ThermoFisher SCIENTIFIC
MilliporeSigma
RAININ Pipetting 360°
ARVENSIS
burkle
MERCK
Biosigma
DOMINIQUE DUTSCHER GROUP
greiner BIO-ONE
MICRONIC
INNOVATION IN SAMPLE STORAGE
POREX Filtration Group
KIMTECH
KLEENGUARD
DIVERSIFIED BIOTECH
cytiva
USA SCIENTIFIC
alpha laboratories
supplying quality to science

MilliporeSigma
QIAGEN
Invitrogen living science
MERCK
Promega
ThermoFisher SCIENTIFIC
FUTURE FIELDS

B medical systems
Agilent
CHART
Waters™
DeNovix
cytiva

Miele
STERILIS SOLUTIONS
Prioclave
CoolLED Simply Better Control
eppendorf
ThermoFisher SCIENTIFIC
Biolife Solutions
METTLER TOLEDO
CONSOLIDATED STERILIZER SYSTEMS
envetec
KNAUER

Maturing Market

US EPA

Environmentally preferred purchasing program will require green cert to have a separate CAB

If approved: federal agencies to include in purchasing to 'maximum extent possible'

Market Expectations

Growth of MGL and more mature industry increasingly concerned w/ Greenwashing

MGL needs to implement credible 3rd party certification aligned with International Best Practice

EU Green Claims

Requires separate certification body and accreditation by 2026

If approved: strong regulatory push in the EU for adoption; unverified ecolabels & claims will be banned

my green lab certification.

Goals

- Increase Rigor and Comparability
- Improve Data Collection and Reporting
- Better Align with Organizational Goals and Zero Carbon
- Approval by US EPA and EU Green Claims

Timeline

- Technical Advisor Selected 2022
- Draft Standard Completed Q4 2023
- Pilot Complete Q2 2024
- AZ Launch October 2024
- **Full Commercial Launch Jan 30th 2025**

ACT.
The Environmental Impact Factor Label

Goals

- Increase Scalability
- Support Carbon Reporting
- Align scoring with Key Impact Areas per Product Category
- Approval by US EPA and EU Green Claims

Timeline

- Call for Technical Advisors Q1 2023
- Draft Standard Complete Q3 2024
- Pilot Kicked off in September 2024
- First Pilot Labels October 2024
- **Full Commercial Launch Planned May 2025**


Impact
laboratories.

Best Practice

We are adopting international best-practice to ensure the integrity and rigor of our certification as it grows.

Relationship to My Green Lab

As a subsidiary of the existing organization, our new certification body will provide 3rd party verification while retaining the quality, integrity and customer focus of our current programs.

Community Support

This enables us to better support our community and will help the entire scientific community by accelerating the journey to lab sustainability at a global scale.

The Vision

All parts of our organization remain 100% committed to our Vision. This new evolution enables us to provide independent verification and enhanced resources to support our vital programs and build an ever more successful community-driven movement.

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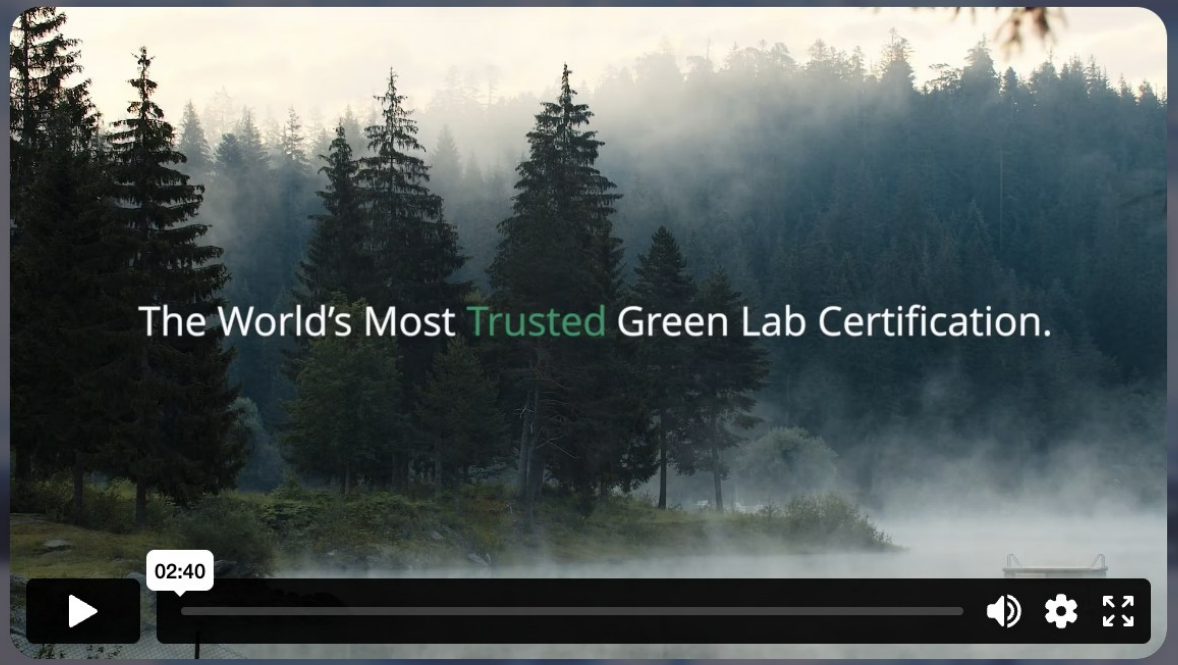
My Green Lab Certification 2.0: Raising the Bar

Introducing My Green Lab Certification 2.0 – the world's most trusted certification for sustainable laboratories. This updated certification enhances rigor, impact, scalability, and accessibility, empowering labs worldwide to make measurable, lasting improvements in sustainability.

START A GREEN LAB PROJECT



See What's Possible with 2.0

ACT 2.0 PILOT

- Communicate sustainability attributes clearly and directly
- Continue to drive transparency and continuous improvement
- Weight categories to reflect true environmental impact
- Facilitate portfolio-wide product certifications for manufacturers
- Standardize reporting of product sustainability attributes and carbon reporting
- US EPA & EU Green Claims Alignment
- **Program Commercial Launch May 8th!**

New Market Drivers

converge
my green lab supplier initiative

Science Funders

MGLC Endorse by Wellcome Trust, CRUK & Science Foundation Ireland

Researchers are incentivized to adopt lab certification

Pharma Supply Chain

8 of the largest pharma companies have united to endorse green labs

Thousands of pharma suppliers pushed to adopt MGL Certification

EU Regulations

CSRD and Green Claims Directive applies to any company with significant European operations

The world's science industry must meet EU regulations setting a new global standard

Strategic Plan

2025-2027

Raising the Bar: A Call to Action

- Expand My Green Lab Certification pilot projects into organization-wide initiatives that achieve policy and cultural change.
- Create value generating full-time roles for ‘green lab’ staff and provide them the resources needed to succeed.
- Expand grantmaking policy incentives on lab sustainability from a few funders and government agencies to the global standard for the world’s funders of scientific research.
- Continuously improve data on green lab actions and solutions to turn rough estimates into auditable & accurate measurements
- Completely replace first party claims with third-party certifications and standards.
- Move the industry towards a reality where certified Green Labs are the norm, not the exception.

International Laboratory Freezer Challenge

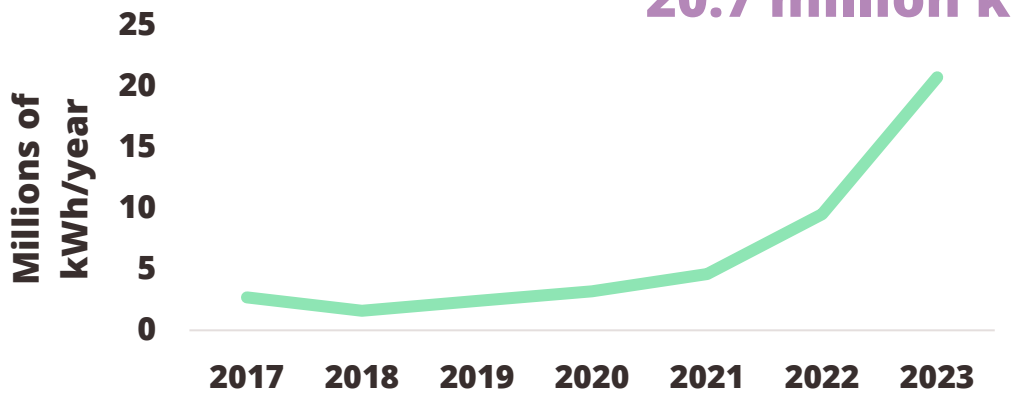
Energy Saved Through Participation
(in kWh)

Equivalent to
37.5 million miles
driven by an average gasoline-powered vehicle

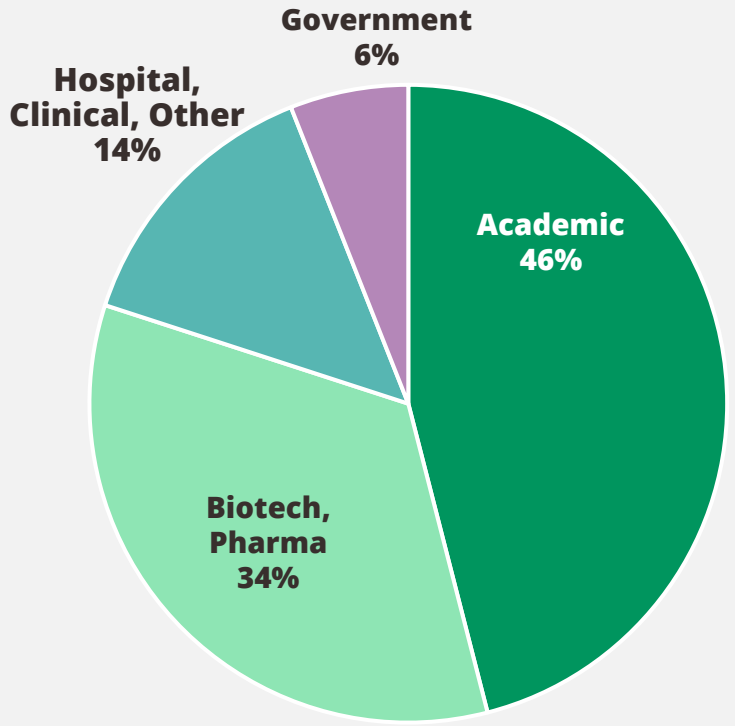
Equivalent to
14,663 Metric Tons
of CO_2 avoided

Since 2017, the total amount of energy saved is
44.7 million kWh

20.7 million kWh



Engagement By Sector



Participating Labs
1991

Countries Engaged
27

Participating Organizations
170

Participating Cold Storage Units
26,000+

Designed for scientists and laboratory professionals to drive sustainable lab practices

- Free, online learning program
- Quick introduction to lab sustainability
- Provides ideas for how sustainable actions can be implemented and communicated with lab members

What does the Ambassador Program Cover?

Four Smart Science training videos:

Energy

Waste

Water

Green Chemistry

5000+ Ambassadors

(as of August 2023)

- 52+ countries
- Growing Fast!

My Green Lab Accredited Professional Program

Become a Green Lab Expert!

www.mygreenlab.education

The first credential of its kind developed to offer scientists an opportunity to grow their knowledge and demonstrate their expertise in lab sustainability.

Waste

Energy

Water

Procurement

Green Chemistry

Engagement

*Discounted Pricing for Students/Univ/Nonprofits/Gov

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my green lab summit 2024

Sept 18–19 | 8 AM–11 AM PDT / 4 PM–7 PM UK

Raising the Bar

mygreenlab.org/summit


my green lab.
in collaboration with
LIVING FUTURE
EUROPE
My Green Lab Europe Summit 2025
Scalable Solutions for Wider Impact
Thu, March 27, 2025
3–6 PM CET (2–5 PM UK, 10 AM–1 PM EDT)
Free to attend upon registration

million advocates for sustainable science

My Green Lab and the International Institute for Sustainable Laboratories issue a challenge to science funders around the world to encourage sustainability in research.

We invite scientists and sustainability advocates around the world to join the Million Advocates for Sustainable Science.

sustainablescienceadvocates.org

Next Steps to Get Started

Decide on the number of labs

- We define a lab as a group of people who meet regularly, work on similar science, and share resources and equipment
- Typically, a lab consists of 3-30 people
- One lab cannot span beyond a single building

Get in touch

- The cost begins at $4,000 per lab and decreases as more labs are included in the proposal

Begin Your Certification Journey

- We will provide resources to get the labs ready to begin on their desired start date

Join the Movement

- Join the Million Advocates Campaign
- Become a Green Lab Ambassador
- Compete in the Freezer Challenge
- Start a My Green Lab Certification
- Support the ACT Label in Procurement

We are grateful to all our sponsors!

Transformative

Agilent

Triumvirate Environmental

Cell Signaling Technology

envetec

AstraZeneca

MilliporeSigma

Breakthrough

AMGEN

E&I Cooperative Services
Sourcing. Strategy. Savings.

RAININ

Kimberly-Clark Professional

Roche

Bristol Myers Squibb

ThermoFisher Scientific
The world leader in serving science

Discovery

PHCBI

QuidelOrtho

labcorp

GILEAD

eppendorf

B medical systems

sanofi

Experimental

Elemental Machines

QIAGEN

USA Scientific

Promega

LifeBee
Digitalizing Life Sciences
A ProductLifeGroup Company

REUZEit
Surplus Asset Management

Renovo Solutions

Standard Biotools

Bio-Rad

Grenova

Investigation

SONICU
The Leader In Monitoring

Chemishield

New England BioLabs Inc.

Waldner

Jacobs Wyper Architects

labcon

Flad

eurofins | BioPharma Product Testing

Community

- One Nucleus
- The Lab Project
- Quigley Compliance Associates

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.”

- Margaret Mead

Thank you!

Carlo Battisti, My Green Lab
carlo@mygreenlab.org