

Reporting on the Value and Impact of EMBL and its Services

29 April 2022

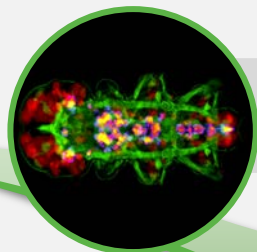
Jessica Vamathevan

EMBL Head of Strategy



The European Molecular Biology Laboratory

Europe's only intergovernmental laboratory for life science research



Excellent
research



Advanced
training



Integrating
life sciences



Innovation and
translation



Scientific
services

6

sites

1900

staff
high turnover
(9-year rule)

96

nationalities

27

member states

82 million

daily web
requests to EMBL
data services

>6700

user visits to
access scientific
services

EMBL Member States

Member states (27)

| | |
|---------------------|---------------------|
| Austria 1974 | Belgium 1990 |
| Denmark 1974 | Portugal 1998 |
| France 1974 | Ireland 2003 |
| Germany 1974 | Iceland 2005 |
| Israel 1974 | Croatia 2006 |
| Italy 1974 | Luxembourg 2007 |
| Netherlands 1974 | Czech Republic 2014 |
| Sweden 1974 | Malta 2016 |
| Switzerland 1974 | Hungary 2017 |
| United Kingdom 1974 | Slovakia 2018 |
| Finland 1984 | Montenegro 2018 |
| Greece 1984 | Lithuania 2019 |
| Norway 1985 | Poland 2019 |
| Spain 1986 | |

Associate member states

Australia 2008

Prospect member states

Estonia
Latvia



Six Sites with 1900 People and 96 Nationalities



EMBL-EBI

Bioinformatics



Grenoble

Structural
biology



Barcelona
Tissue biology
and disease
modelling



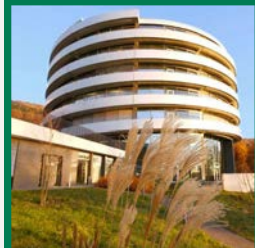
Hamburg

Structural
biology



Heidelberg

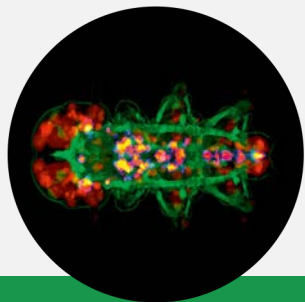
Life sciences



Rome
Epigenetics
and
neurobiology



EMBL's Missions



Excellent research

To perform fundamental research in molecular biology



Scientific services

To offer vital services to scientists in the member states and the world



Advanced training

To train scientists, students, and visitors at all levels



Innovation and translation

To actively engage in technology transfer and industry relations



Integrating life sciences

To coordinate and integrate European life science research

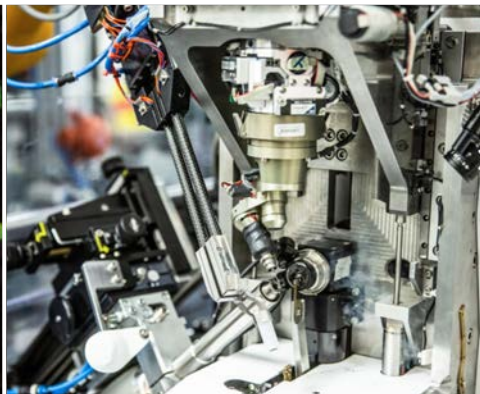
Scientific Services



Data resources

82m

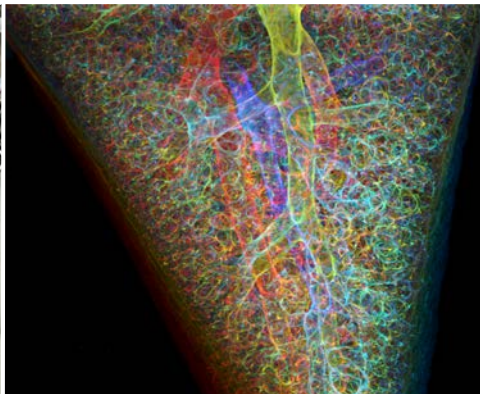
daily web requests to **EMBL-EBI data services**



Structural Biology

5400

annual user visits to
structural biology and imaging services



Imaging



Core Facilities

1300

users of multi-omics,
chemical biology, *in vivo*
gene editing, and sample
preparation facilities

Visit embl.org/services to find out more

2020 metrics shown

Key Impact Assessments



Annual Metrics and Regular Reporting

Annual reporting EMBL member states as part of the Annual Report

Regularly reporting about EMBL's engagement with member states to their ministries



Impact of Experimental Services

Reporting the value and impact of **EMBL experimental services** used by scientists in member states to member state ministries

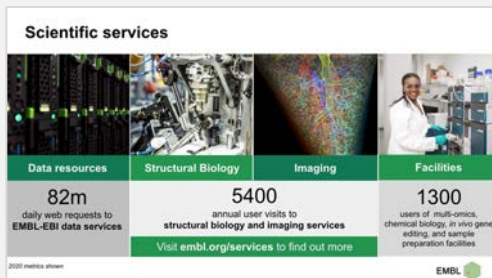


Value of Data Resources

Reporting the value and impact of **EMBL data resources** used by scientists in member states to member state ministries

Annual Metrics and Regular Reporting

Conveying the value that member states receive for their contributions



Metrics are collected yearly from EMBL departments and grouped according to five missions

Used in documents and slides given to member states to show the value that member states receive from EMBL

Key indicators for member states include:

- Number of **publications in collaboration**
- Number of **service users**
- Number of **course and conference participants**

Data could be more efficiently collected and better aligned and standardised across departments

Ongoing work to standardise and align metrics from EMBL experimental services

Impact of Experimental Services



Review assessed the impact of EMBL experimental services for external users

Carried out in 2021 to garner support from primary funders and promote EMBL experimental services to member states

Technopolis Group consultancy firm were commissioned to undertake a **survey** of past users and write **impact case studies**

Predominantly **qualitative** findings showcased the unique selling points and strengths of EMBL experimental services

Technopolis' key findings:

- Facilities are critical for research
- Facilities pioneer integrative services
- Facilities enable more research of higher quality
- Facilities ensure wider benefits for the research ecosystem
- Results contribute to solving global and societal challenges and generating economic impact
- Facilities support technology transfer and build industry relations
- Facilities are valued at €17.5 m per annum

Impact of Experimental Services



91% of users



said access to EMBL experimental services was vital for their research

70% of users



indicated that EMBL experimental services delivered wider societal impacts

"By using EMBL experimental services our lab started to add new techniques to our toolbelt. We widened our range of methodological expertise."

EMBL academic user, Portugal

Quality of the support provided by EMBL staff

Experience of support provided by staff reported as good or very good



- 99 % Timeliness of the support provided n=511
- 98 % Relevance of the support provided n=581
- 97 % Level of competence of the facility staff n=511
- 96 % Support provided on experimental design n=448
- 94 % Support provided on operation of experimental instrument n=438
- 91 % Support provided on data analysis n=398
- 90 % Support provided on data storage and archiving n=405

"The support has always been excellent, from the initial application to the data acquisition and processing."

EMBL academic user, Spain

Source: Technopolis analysis of EMBL external academic user survey

Societal benefits of using EMBL experimental services

Use of EMBL experimental services has helped to deliver wider societal impacts:



n=378 *Food security and sustainable agriculture **Other societal areas

"Scientific advances will always help find solutions to societal challenges."

EMBL academic user, France

Source: Technopolis analysis of EMBL external academic user survey

"Top notch facility that serves users in the best possible manner"

EMBL academic user, United Kingdom

"EMBL provides streamlined access to state-of-the-art instruments indispensable for structural biology studies."

EMBL academic user, Finland

Value of EMBL-EBI Data Resources



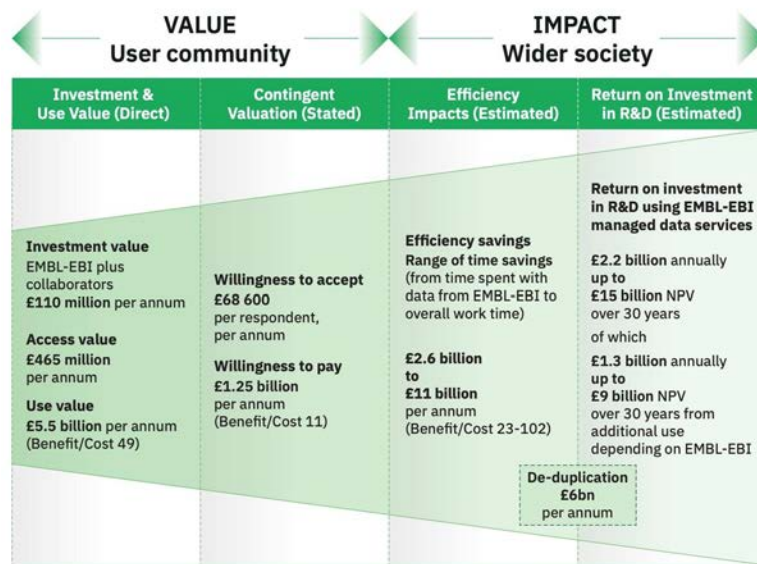
Survey assessed the value of EMBL-EBI data resources to external users

Carried out in 2021 as a follow-up to the previous report released in 2016 to garner support from primary funders

Charles Beagrie consultants were commissioned to undertake a **survey** and **economic analysis** of EMBL-EBI managed data resources

Predominantly **quantitative** findings showcased the exceptional economic value EMBL-EBI data resources provide

The value and impact of EMBL-EBI managed data resources



Note: NPV is Net Present Value. All estimates rounded.

Source: Authors' analysis

Value of EMBL-EBI Data Resources



Research Efficiency

For every £1 spent providing EMBL-EBI resources, researchers save time worth up to £102

Adds up to **£11 billion in annual benefits** to researchers and funders due to more efficient **research**

Research and Development

Research and Development facilitated by the use of EMBL-EBI managed data resources is estimated at up to £2.2 billion annually

“EMBL-EBI has transformed what I and my team and students are able to conceptualise and achieve. Wouldn’t be able to do one tenth of what I can or have done over the last 20 years.”

User Survey respondent, UK

My work will collapse without EMBL-EBI resources.”

User Survey respondent, Israel

It is an important educational example for future generations. Simply put.”

User Survey respondent, Spain



Challenges and Lessons

Challenges

Multi-site location

Different facilities with different users
and working models

Survey had to be bespoke

No guarantee about which case studies
would be the most impactful

Engaging past users to take a long
survey

Stakeholders to understand the
value of different types of impact



Lessons

Buy-in from staff involved in the
activities being reported on was crucial

Regular reports provide continuous and
current information to stakeholders

Regular complementary surveys to
better understand demographic of user
community would be useful

Access to Both Reports

technopolis
group



Charles Beagrie



Thank you!

