

ELIXIR

Annual Report 2014

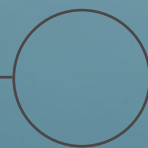


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Executive Summary

Welcome to the first Annual Report of ELIXIR, Europe's research infrastructure for life-science data and information.

Launched officially in January 2014, ELIXIR is a unique, unprecedented initiative to consolidate Europe's leading national bioinformatics centres, services and core resources into a single, coordinated entity.

By coordinating local, national and international resources, ELIXIR will make data-driven discovery easier for Europe's 500,000 life scientists. Our purpose is to support organisations and individuals who are tackling society's Grand Challenges through life science research into marine life, research via plants and agriculture to health research and medical sciences.

This report covers some of the major events in our first year of operation, provides facts and figures and gives an overview of our plans for 2015.

Note from the Chair, Alf Game

It has been a great privilege and pleasure to have chaired the Board for the major part of ELIXIR's first year of operation, and to see the development and consolidation of the infrastructure progress so rapidly.

The establishment by the first Director of the Hub team enabled a step change in leadership and coordination and we saw for the first time the diverse parts of the ELIXIR community across Europe come together on a large scale. They have set a direction for the scientific, technical and training aspects and initiated major collaborative partnerships and proposals for future activity. This gave a glimpse of the enormous potential of what is being created: that transformative potential was recognised when the Competitiveness Council and ESFRI identified ELIXIR as one of the three priority new European Research Infrastructures.

These first fruits are the result of years of effort by researchers, policy specialists and managers in many European countries, the European Commission, EMBL and globally. They are too numerous to mention, but the progress made stands as a testament to their vision, determination and cooperative spirit. It is the continued engagement of an ever wider community of users and service providers with that vision and spirit that will ensure ELIXIR's growth and success.



Alf Game, Chair of ELIXIR Board (year 2014)



Foreword from ELIXIR Director

The goals of ELIXIR's first year of operation were to build a collaborative community, lay a foundation for sustaining Europe's life-science data resources over the long term and begin delivering tangible services to the scientific community.

11 countries sign the ELIXIR Consortium Agreement.

The ELIXIR Consortium Agreement entered into legal force on 14 January 2014 following its ratification by the Czech Republic, Estonia, Sweden, Switzerland, United Kingdom and EMBL. By December, Denmark, Finland, Israel, Netherlands, Norway and Portugal had also signed the agreement, Spain had announced its intention to sign and Belgium, France, Greece, Italy and Slovenia were working through the national processes towards ratification. As of January 2015, ELIXIR is on solid ground with established governance and legal structures.

ELIXIR Scientific Programme published

I was delighted that over 100 people from across the ELIXIR Nodes collaborated to develop the first ELIXIR Scientific Programme for 2014-2018: the enthusiasm and collective vision of those involved impressed me immensely. The programme sets out the strategy and objectives for ELIXIR over the next five years and provides a foundation for building programmes of work. Through their participation in the process, working groups were able to form collaborative partnerships between different Nodes to tackle shared challenges.

The momentum generated in the Scientific Programme consultation was carried forward by the ELIXIR Technical Coordinators group, which sought to determine the best ways to implement different aspects of the programme and identify strong national solutions for sharing across ELIXIR. This group and The Training Coordinators group, formalised in 2014, began to provide experts in the Nodes with opportunities for professional development and a strong supporting network, which I know will further develop through 2015.

ELIXIR Hub

The ELIXIR Hub, which coordinates the infrastructure's activities, welcomed Rafael Jimenez as ELIXIR Technical Coordinator, Susanna Repo as ELIXIR Project Manager and Joy Friesner as ELIXIR Event Officer. Manuel Corpas of ELIXIR-UK was the first of what we hope will be many participants in the ELIXIR Hub Visitor Programme.

A priority for Europe

ELIXIR was selected as one of Europe's three priority research infrastructures in a decision approved by the European Competitiveness Council and ESFRI. This enabled us to apply for a dedicated Call within Horizon 2020, and in late 2014 ELIXIR developed a strong application thanks to the dedication and efforts of many experts in the Nodes.

Looking ahead

Having laid a solid foundation in 2014, ELIXIR now looks forward to its second year of operation. Our priorities in 2015 remain: Deliver useful services to European life-scientists, lay the foundations for long-term sustainable life-science data and continue to build the ELIXIR community in our member states. As a distributed organisation ELIXIR is built around our Nodes and their experts; a coordinated response from these national centres of excellence will allow us to address the formidable challenge to manage the data produced by Europe's 500,000 life scientists and I very much look forward to witnessing the fruits of this labour in 2015.



Niklas Blomberg, Director of ELIXIR



Scientific Programme

ELIXIR published its Scientific Programme for 2014-2018 in summer 2014. This Programme forms Europe's strategic response to the data-related needs of life-science research and development. It will be used by the ELIXIR Hub and Nodes to guide the implementation of ELIXIR over the next five years.

In the Programme, ELIXIR defines eight strategic objectives for the first operational phase. These objectives drive the development of the ELIXIR infrastructure at national and European levels, and lay the foundation for long-term sustainability and impact of our collective data resources.

The Programme includes activities to address specific challenges and user requirements in areas such as tools and data interoperability, technical services including cloud offerings and secure data access, and research data management. The plans to coordinate training within ELIXIR are also included, along with a description of domain-specific services that the ELIXIR infrastructure will support.

The Programme was developed following extensive consultation and was based on the substantial preparatory work carried out in all of the emerging Nodes. A total of 107 experts from the Nodes were involved in the development of the eight programmes of work. The process was coordinated by the Heads of Nodes, and received input from the Interim ELIXIR Board and the Scientific Advisory Board.

Next steps

In 2015, ELIXIR will focus on the coordination of data management for research projects, including developing tools and processes for the secure handling of sensitive human data. ELIXIR will also develop metrics that describe the usage, accessibility and impact of resources, which are all important performance indicators to support the sustainability plans of resources. Visible services that researchers are able to find and use is a key objective for ELIXIR and will be achieved in 2015 via the ELIXIR Tools and Data Services Registry, which is the focal point for European data resources.



Technical highlights

The ELIXIR Technical Coordinators group was formed to identify and disseminate best practices about technical and scientific aspects of ELIXIR. The group comprises technical experts representing each of the ELIXIR Nodes and is chaired by ELIXIR CTO, Rafael Jimenez.

The Technical Coordinators group provides recommendations for ELIXIR's strategy in technical matters and shares information about the latest advances amongst the infrastructure's technical experts. This on-going engagement enables ELIXIR to remain agile and adopt the most relevant technologies and methods.

The Technical Coordinators Group operates through task forces. These are working groups that gather experts around a specific theme, such as interoperability, metrics, communication or training portal. The task forces actively engage with the ELIXIR Nodes, the ELIXIR pilot actions and external communities and initiatives, thus ensuring the dissemination of best practise across ELIXIR.

In 2014, the Technical Coordinators Group published joint web guidelines for ELIXIR, which pave the way for a consistent user experience between the main ELIXIR website and those of the ELIXIR Nodes.

The group worked towards defining an ELIXIR strategy for cloud and data storage by reviewing existing resources at ELIXIR Nodes. They also performed a review of existing metrics and requirements for future indicators to understand how the quality of ELIXIR resources can be measured. This was important groundwork for the effective management of the resource portfolio. The technical coordinators further identified use cases for data security and privacy topics to ensure the ELIXIR strategy is aligned with user needs.

Training

The ELIXIR Training Coordinators group comprises training experts from each ELIXIR Node. The role of this group is to share information, and to identify and implement best practice in training services. Together with the Technical Coordinators, the group defined a strategy for an ELIXIR training portal that will store information on available courses and workshops for the users of ELIXIR services throughout the world.



Industry support

ELIXIR Innovation and SME programme

To support Europe's bioindustries, in particular small and medium-sized enterprises (SMEs), ELIXIR rolled out its Innovation and SME programme in 2014. This programme is a dedicated series of specialised events for local companies, hosted by ELIXIR Nodes, that provide companies with opportunities to learn more about bioinformatics services that can add value to their business, and to forge stronger links with the ELIXIR Node representatives who run these services. The first SME event, 'Turning Big Data into Growth', took place in Copenhagen in November. Representatives from 30 companies participated, including AstraZeneca, Biomax Informatics AG, Roche, gritsystems A/S, Gubra, Huntingdon Life Sciences, IBM, Intomics, LEO Pharma, Novo Nordisk, Novozymes and Nuevolution. The event included talks by ELIXIR representatives on resources such as ChEMBL and SureChEMBL and emerging ones such as the ELIXIR service registry. Two SME events are planned for 2015, including one on data-driven innovation in the agri-food industries in Wageningen, Netherlands, and one in Basel, Switzerland focussing on SIB's resources.

"Intomics and many other SMEs derive value from integrating various public bioinformatics resources and providing commercial services on top. The ELIXIR Innovation and SME Forum give us the opportunity of learning more about these public resources and to interact directly with those running them so they understand our needs better."

Annette Vibeke Uldall, Intomics

Industry Advisory Committee: Understanding the needs of industry

In late 2014 the ELIXIR Board appointed an ELIXIR Industry Advisory Committee, which will meet annually from 2015 onwards. This committee will provide strategic advice and guidance to ELIXIR on issues of relevance to industry. The following members were appointed:

- Martin Ebeling, Hoffmann-La Roche, Switzerland
- Anita Eliasson, Biocomputing Platforms Ltd, Finland
- Wendy Filsell, Unilever R&D, UK (Vice Chair)
- Mark Forster, Syngenta, UK (Chair)
- Iain Hrynaskiewicz, Nature Publishing Group - Macmillan, UK
- Natalia Jiménez Lozano, Atos, Spain
- Claus Stie Kallesøe, Gritsystems A/S, Denmark
- Angel Pizarro, Amazon Web Services, USA
- Philippe Sanseau, GlaxoSmithKline, UK
- Montserrat Vendrell, Biocat, Spain
- Jakob de Vlieg, Bayer CropSciences Innovation Center, Belgium



Participants at Copenhagen Innovation and SME forum

ELIXIR pilot actions

ELIXIR pilot actions are short, scalable projects that address key scientific and technical issues. Pilot actions explore new concepts and form a key part of the lifecycle for ELIXIR services and resources.

ELIXIR relies on pilot actions to provide user-centred mechanisms for testing new ideas, as this allows the infrastructure to adapt its technical strategy as new technologies emerge. The pilot actions also provide test cases for the adoption of services and standards in different life-science domains. This close connection with users through ELIXIR Nodes helps ensure that ELIXIR services and standards are continually driven by user needs.

In 2014, ELIXIR launched four new pilot actions. The topics were prioritised to cover specific key areas and included technical projects, domain-specific services and training.

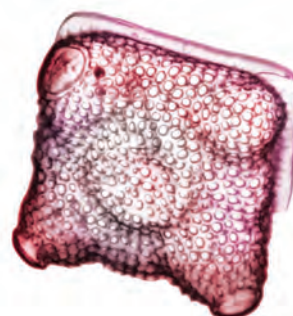
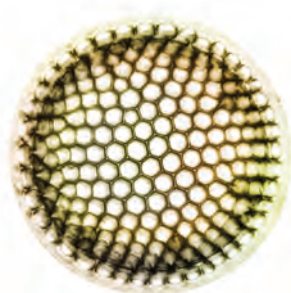
Integration of raw data repositories using e-infrastructure services

Exabyte-scale data growth is best managed through distributed data storage and replication, but it is essential to provide data access through a single-access interface. To integrate repositories for raw mass-spectrometry proteomics data, a pilot action was initiated between the Bioinformatics Services to Swedish Life Science (BILS) and ProteomeXchange via EMBL-EBI using the EUDAT European infrastructure. This pilot connects national data-storage services and international repositories through ELIXIR. It shows how collaboration among research infrastructures and e-infrastructures can optimise the management of growing volumes of data, and provides the information needed to evaluate the requirements of such federated systems.

Marine metagenomics: putting users first

Marine genomics and metagenomics - the study of genetic material recovered directly from marine environmental samples - are emerging areas of science that are rapidly gaining traction in biotechnology and environmental research. The relatively low cost of genome sequencing in biomedical research has led to data being produced much faster than users can analyse it, which can lead to bottlenecks that hold up progress. To prevent such bottlenecks in marine research, this ELIXIR pilot action is working to create a dedicated data-management e-infrastructure and bioinformatics pipelines specific to marine research. Such tools will pave the way for the large-scale implementation of marine genomics and metagenomics studies.

Involving ELIXIR Norway, EMBL-EBI and other partners from the ELIXIR Nodes, this pilot action aims to harmonize existing pipelines, develop new components and improve established tools in order to establish service platforms that are sustainable in the long term. The pilot action is also working to build a more cohesive user community for marine metagenomics analysis.



Training scientists in data management and analytics

Software Carpentry is an international collaboration to teach researchers software development skills to help them do more in less time and experience fewer problems. Data Carpentry teaches skills that help researchers work with their data more effectively so they can achieve more. These initiatives are crucial because funders and researchers alike demand enhanced, standards-driven experimental annotation at the source as well as data sharing to maximise data reproducibility and reuse.

This ELIXIR pilot action, led by ELIXIR-UK with support from other ELIXIR Nodes, aims to leverage the work of the existing Software Carpentry initiative for ELIXIR, and to launch the Data Carpentry initiative for ELIXIR, working closely with the existing international Data Carpentry network. The main focus areas are training materials, expanding the training network/centres and building the network of certified instructors.



Interoperable, controlled-access big data transfer

Large-scale, secure data transfer is a requirement for modern life science research. This pilot action was built on an existing collaboration between the European Bioinformatics Institute (EMBL-EBI) in the UK and the Centre for Genomic Regulation (CRG) in Spain to develop the European Genome-phenome archive (EGA). It resolved several important limitations on computing, network bandwidth and storage buffer areas that affect the delivery of EGA data. The outcomes of the pilot led to general data transfer solutions that are applicable across ELIXIR.

New pilot actions

In 2015 we will expand this pilot action portfolio with activities that support the formation and development of national Nodes. We will also establish internal ELIXIR structures and working groups. We are planning further technical pilots on the management of sensitive human data, ELIXIR metrics and activities with the NIH Big Data to Knowledge initiative to coordinate the usage of data identifiers.

Highlights from ELIXIR Nodes

Introducing ELIXIR-Netherlands

A public-private partnership of leading academic centres and commercial partners, the Dutch Techcentre for life Science (DTL) aims to establish a world-class technology infrastructure to enable integrated life sciences research in the Netherlands and acts as the Dutch ELIXIR Node. 21 organisations joined DTL in 2014: Delft University of Technology, University of Groningen, Groningen University Medical Centre, Utrecht University, Utrecht University Medical Centre, VU University Amsterdam, Netherlands Organisation for Applied Scientific Research (TNO), Centrum Wiskunde & Informatica (CWI), Eindhoven University of Technology, University of Amsterdam, Leiden University Medical Centre, the Netherlands eScience center, Radboud University Medical Centre, Leiden University, Wageningen University and Research centre, the Dutch e-Infrastructure SURF and the companies BaseClear, DSM, Elsevier, Euretos, Genalix and Genetwister. DTL formally launched in December 2014 at an event attended by members of the Dutch scientific community, national funders and international experts.

Strong scientific collaborations are developing with other ESFRIs in the Netherlands, most notably with the BioBanking and BioMolecular Resources Infrastructure (BBMRI) and EATRIS as well as similar initiatives in the agri-food and nutrition sectors. ELIXIR-Netherlands also made several next-generation sequencing courses available and was involved in setting up a workshop about Galaxy and cloud computing, specifically targeting plant breeders.

ELIXIR-Netherlands rolled out its Bring Your Own Data (BYOD) programme to support good data management practice in different communities through a first event in Leiden, where data owners from the Human Protein Atlas and MycoBase met data experts from ELIXIR Netherlands; and another in Rome following an international workshop on rare disease and orphan drug registries.



Opening ceremony at the DTL kick off event. Photographer: Thijs Rooimans.

New supercomputer for ELIXIR-Denmark

ELIXIR-Denmark is a public-private partnership, comprising Technical University of Denmark (DTU), University of Copenhagen, Aarhus University, the University of Southern Denmark, Lundbeck, Novo Nordisk, Novozymes, Exiqon and the Herlev University Hospital. In 2014, ELIXIR-Denmark secured funding to support its operations over a four-year period.

In addition to hosting the first ELIXIR Innovation and SME Forum for small and medium-sized enterprise in 2014, ELIXIR Denmark opened its life-science supercomputer, which will serve users in Denmark. This supercomputer, based on the Risø Campus, is among the 100 largest supercomputers in the world and is one of the most environmentally friendly. The CPUs are cooled using water that is then channelled into the district system to heat the whole area of Risø.

ELIXIR-Denmark also made significant progress in developing the ELIXIR Tools and Data Services Registry, a discovery portal for life science databases and tools, which launched in early 2015.

Czech Republic

- ELIXIR evaluated as one of the top Research Infrastructures in the Czech Republic in its construction phase (July 2014);
- Application for sustainable funding for 2016-2022 submitted.

Estonia

- ELIXIR-Estonia added to Estonian Research Infrastructure Roadmap for 2014-2020;
- ELIXIR-Estonia Node became operational, launching new tools and training events.

Norway

- Norwegian e-infrastructure for Life Science: NeLS launched;
- Integrated Galaxy instances across Norway with common data storage and sharing capabilities;
- ELIXIR-NO co-organised the Society for Bioinformatics in Northern Europe (SocBiN) Bioinformatics 2014 meeting, June 2014.

Sweden

- New release of the Human Protein Atlas (HPA, November 2014) featured in a special issue of Science magazine;
- Applying for 8-year funding for the national infrastructure from 2016.

United Kingdom

- ELIXIR-UK kick-off meeting held October 2014;
- ELIXIR-UK Training Outreach Manager hired;
- ELIXIR training survey carried out.

Observer states

Belgium

- Work continued on the development of an ELIXIR Node proposal.

Greece

- Continued to develop an ELIXIR Node proposal;
- ELIXIR added to the national roadmap in 2014.

Slovenia

- ELIXIR prioritised on the Slovenian Research Infrastructures Roadmap for Slovenia for 2011- 2020;
- Continued to work towards ECA signature and securing long-term funding, foreseeing signature in first half of 2015.

Spain

- Advanced the discussion towards the signing of the ECA.

EMBL-EBI

- Centre for Therapeutic Target Validation (CTTV) opened as a joint venture between GSK, Sanger and EMBL-EBI;
- Crucial NIH support for UniProt renewed;
- World Health Organisation joins as a Europe PMC funder.

Finland

- ELIXIR-FI included on the research infrastructure roadmap;
- Work continued towards the launch of an 'enterprise'-grade, ELIXIR-wide, secure cloud solution for sensitive data processing based on ELIXIR-FI cloud pilot;
- AAI Authentication and Authorisation Infrastructure for federated data access services expanded;
- A dedicated REMS instance established for ELIXIR.

Portugal

- ELIXIR included on National RI roadmap;
- Funding awarded to ELIXIR-PT.

Switzerland

- SIB-Swiss Institute of Bioinformatics expanded from 46 to 52 groups, offering upwards of 160 resources;
- Chief Technical Officer and Associate Director hired to handle the ELIXIR-related workload.

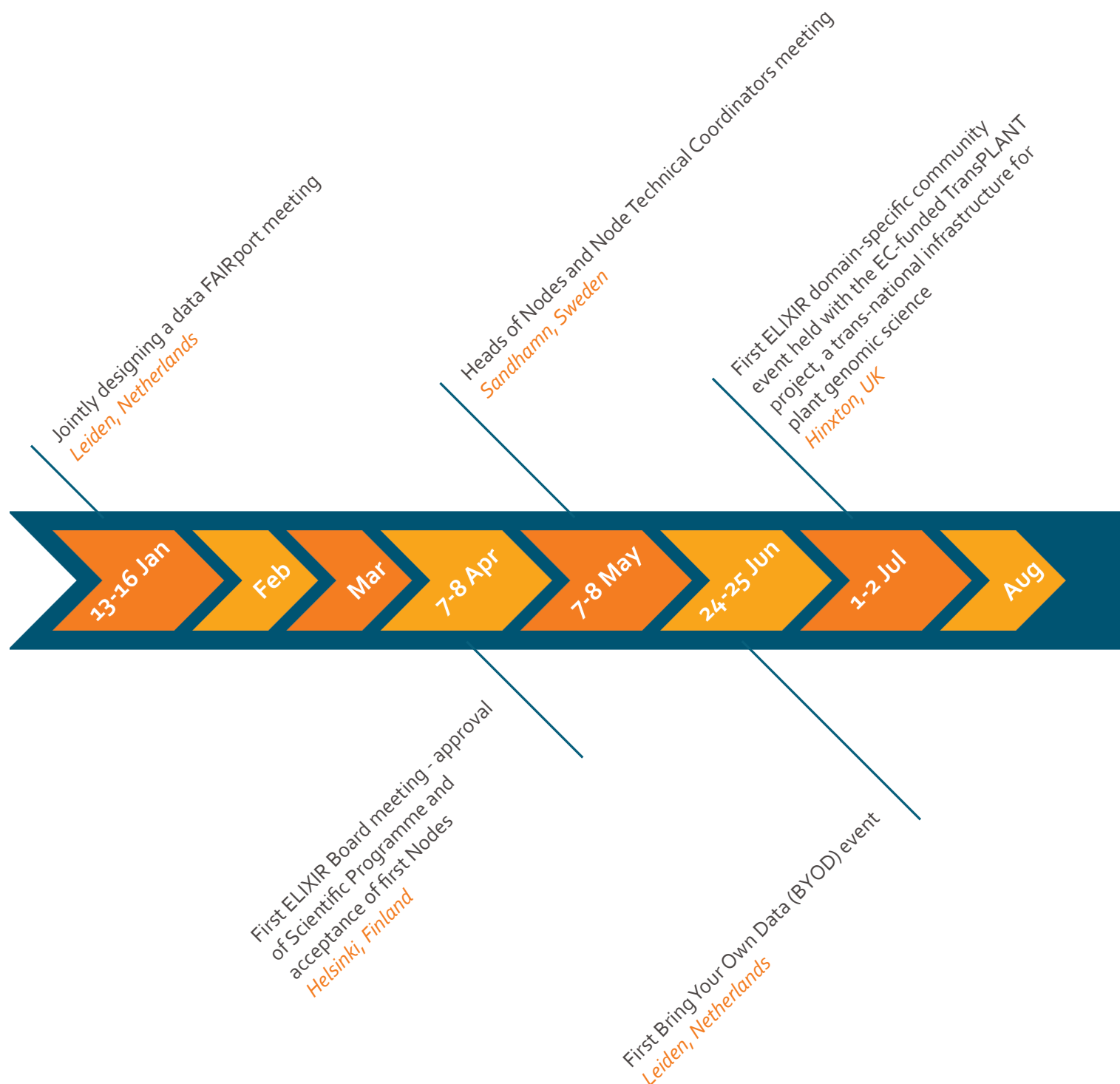
France

- Funding for ELIXIR included within the Investments for the Future program (2013-2020);
- Discussions continued concerning provisional membership of ELIXIR (pending ECA signature);
- Continued work setting up the French Institute of Bioinformatics national IT infrastructure.

Italy

- National roadmap under consideration;
- Carried out a survey of national bioinformatics resources;
- Established an internal service registry for eventual integration into the ELIXIR service registry.

Important events in 2014





Scientific collaborations

Biomedical imaging technologies are advancing rapidly, changing the life-science data landscape in exciting ways.

In 2014 ELIXIR published a joint collaboration strategy with Euro-BioImaging, the pan-European research infrastructure for biological and medical imaging, outlining plans to link biomedical imaging data with biomolecular data and to support user access to these deeply linked datasets. This collaboration demonstrates the feasibility and utility of aligning technical strategies between research infrastructures.



The joint strategy will be implemented with an initial set of studies that produce large image datasets in a collection of reference image domains. ELIXIR member EMBL-EBI, with significant funding from the BBSRC, will contribute capacity for image storage. These examples will guide the way for the collaboration strategy and strengthen the data bridge between ELIXIR and Euro-BioImaging. Going forward, the joint strategy will be continuously updated by both infrastructures as technologies and user needs change.

BioMedBridges

The 12 biomedical-science research infrastructures involved in BioMedBridges are developing shared e-infrastructure—technical bridges—that will enable data integration in the biological, medical, translational and clinical domains. ELIXIR has a central role in the project, with many of the efforts contributing to laying a foundation for future data integration and initiatives.



In 2014 ELIXIR hosted or co-organised several BioMedBridges activities. Representatives of e-infrastructures including GÉANT, PRACE, EGI, and CERN Openlab attended a knowledge-exchange workshop held in May at the ELIXIR Hub in Hinxton, providing an opportunity for the BMS research infrastructures to discuss their future service requirements. The workshop addressed biological big data and the challenges facing the life sciences over the next decade. The delegates discussed pressing issues in the storage, transfer and computation of biological data, and the outcomes laid a foundation for future initiatives and collaborations between BMS research infrastructures and e-infrastructures.

BioMedBridges plays an important role in promoting data integration and discoverability through common vocabularies, tackling the challenge of service providers and registries using different vocabularies to classify resources. In October, BioMedBridges jointly organised a workshop with ELIXIR and the Research Data Alliance to build consensus on a common vocabulary for topics. This will help classify resources such as databases, tools, courses, training materials, meetings, jobs and publications, making it easier for users to find the most relevant information. It is also an important step for data providers, facilitating the interoperability of resources and significantly increasing their impact and reach to different user communities. The workshop revealed widespread community interest in and support for the development of a common vocabulary for topics.

Data management

ELIXIR and EU-OPENSOURCE led the development of a joint statement of the BMS research infrastructures in 2014. The statement outlines the principles of data management and sharing held by these infrastructures, describes the background against which these activities take place and makes recommendations for how they can be supported in a sustainable manner.

The recommendations of greatest relevance to ELIXIR involve mechanisms that support data sharing (including sensitive data); the provision of systems, services and resources to facilitate straightforward data deposition by researchers; and the tracking of data provenance and use.

ELIXIR Scientific Advisory Board

The Scientific Advisory Board (SAB) plays a major role in reviewing and selecting ELIXIR Nodes, and provides strategic scientific advice to the ELIXIR Board. The SAB is an independent body made up of leading experts from around the world, and meets twice a year.

- Prof Alan Archibald, University of Edinburgh, UK
- Dr Ségolène Aymé, French Medical Research Council (INSERM), France
- Dr Robert Gentleman, Genentech, USA (Chair)
- Prof Gunnar von Heijne, Stockholm University, Sweden (Vice Chair)
- Prof Elina Ikonen, University of Helsinki, Finland
- Dr Janet Kelso, Max Planck Institute for Evolutionary Anthropology, Germany
- Prof Edward Marcotte, The University of Texas at Austin, USA
- Assoc Prof Nicola Mulder, UCT Computational Biology Group (NBN), South Africa
- Dr Jérôme Wojcik, Quartz Bio, Switzerland



ELIXIR Scientific Advisory Board, Hinxton, UK

ELIXIR committees

ELIXIR Board Members

Country	Scientific delegate	Administrative delegate
Czech Republic	Prof Jaroslav Koča	Mr Jan Burianek
Denmark	Prof Anders Krogh	Mr Troels Tvedegaard Rasmussen
Estonia	Prof Pärt Peterson	Mr Toivo Räm
		Mr Priit Tamm
Finland	Dr Per Öster	Ms Marja-Liisa Niemi
		Ms Riina Vuorento
Israel	Dr Yossi Kalifa	Ms Ilana Lowi
Netherlands	Prof Jaap Heringa	Dr Jasper Diderich (Jan - Mar 2014)
	Dr Ruben Kok	Dr Frans Martens (Jan- Sep 2014)
		Dr Bea Pauw (Sep - Dec 2014)
Norway	Prof Rein Aasland	Dr Jacob E. Wang
	Prof Stig Omholt	
Portugal	Dr Ana Teresa Freitas	Dr Ricardo Migueis
		Dr Tiago Saborida
Sweden	Prof Ulf Gyllensten	Dr Anna Wetterbom
		Dr Elin Swedenborg
Switzerland	Prof Torsten Schwede	Dr Isabella Beretta
	Prof Ron Appel (Advisor)	
United Kingdom	Prof Carole Goble	Dr Mark Palmer
		Dr Alf Game
EMBL	Prof Iain Mattaj	Dr Silke Schumacher
	Prof Janet Thornton	



Observers

Country	Scientific delegate	Administrative delegate
Belgium	Dr François Guissart	Mrs Tine Bekaert
		Mr Didier Flagothier
France	Dr Eric Guittet	Mr François Chambelin
	Dr Claudine Medigue	
Greece		Dr Konstantina Botsi
Italy	Prof Anna Tramontano	Dr Emanuele Fidora
Slovenia	Prof Damjana Rozman	Dr Albin Kralj
Spain		Dr Cristina Bauluz
		Dr Rafael de Andres-Medina

Heads of Nodes Committee

Country	Head of Node
Belgium	Prof Yves Van de Peer
Czech Republic	Dr Jiří Vondrášek
Denmark	Prof Søren Brunak
Estonia	Prof Jaak Vilo
Finland	Dr Tommi Nyrönen
France	Dr Jean-François Gibrat
Greece	Prof Babis Savakis
Israel	Prof Michal Linial
Italy	Prof Graziano Pesole
Netherlands	Prof Barend Mons
Norway	Prof Inge Jonassen
Portugal	Prof Jose Pereira Leal
Slovenia	Prof Brane Leskosek
Spain	Prof Alfonso Valencia
Sweden	Prof Bengt Persson
Switzerland	Prof Ron Appel
United Kingdom	Prof Chris Ponting
EMBL	Dr Rolf Apweiler Dr Ewan Birney



ELIXIR Training Coordinators Group

Node	Training coordinator
Belgium	Dr Katrijn Vannerum
Czech Republic	Dr Vojtěch Spiwok
Denmark	Dr Henriette Husum Bak-Jensen
Estonia	Dr Hedi Peterson
Finland	Dr Eija Korpelainen
France	Dr Julie Thompson
Greece	Dr Dimitris Kafetzopoulos
Israel	Prof Michal Linial
Italy	Dr Allegra Via
Netherlands	Dr Celia van Gelder
Norway	Dr Ståle Nygård
Portugal	Mr Pedro Fernandes
Slovenia	Prof Brane Leskošek Dr Peter Juvan
Spain	Dr Oswaldo Trelles
Sweden	Dr Sara Light
Switzerland	Dr Patricia Palagi
UK	Dr Rita Hendricusdottir
EMBL	Dr Sarah Morgan
ELIXIR Hub	Dr Susanna Repo

ELIXIR Technical Coordinators Group

Node	Technical coordinator
Belgium	Dr Lieven Sterck
Czech Republic	Dr David Antoš Dr Jan Paces
Denmark	Mr Kristoffer Rapacki
Estonia	Dr Hedi Peterson
Finland	Mr Jarno Laitinen Mr Olli Touronen
France	Dr Christophe Blanchet
Greece	Dr Theodore Dalamagas
Israel	Dr Jaime Prilusky
Italy	Dr Federico Zambelli
Netherlands	Dr Rob Hooft
Norway	Dr Kjell Petersen
Portugal	Dr Mário Silva
Slovenia	Dr Peter Juvan Prof Brane Leskošek
Spain	Mr Victor de la Torre
Sweden	Dr Mikael Borg
Switzerland	Dr Heinz Stockinger
UK	Dr Manuel Corpas
EMBL	Dr Steven Newhouse
ELIXIR Hub	Mr Rafael C Jimenez

Activities at the Hub

Staffing

The ELIXIR secretariat expanded in 2014 as the activities of the Hub increased and ELIXIR's operational budget grew to accommodate this growth. A new post of Chief Technical Officer (CTO) was created, and Rafael Jimenez was appointed CTO in January 2014. In addition, the roles of Project Manager (Susanna Repo) and Event and Meeting Support Officer (Joy Friesner) were made permanent.

In 2014 the ELIXIR Hub welcomed two talented interns to work on BioJS for industry (Maximillian Koch) and the Hub website (Chugiao Gong). Manuel Corpas joined as a Visitor to the ELIXIR Hub, working on a project to develop universal metrics for ELIXIR services.

EMBL, which provides legal support to ELIXIR, also experienced staffing changes that affected the secretariat. Vera Herkommer, Joint Head of Legal Services at EMBL, went on maternity leave; the role of Junior Legal Advisor was changed to part-time; and a new staff member, Amaranta Amador Bernal, joined to support the ECA and Collaboration Agreements.



ELIXIR Hub staff, from left: Rafael Jimenez (CTO), Niklas Blomberg (Director), Susanna Repo (Project manager), Andrew Smith (Senior External Relations Officer), Chugiao Gong (Intern), Nicola Kay (Scientific Administrator), Charles Gaillard (Intern), Joy Friesner (Event and Meeting Support Officer), and Stephanie Suhr (BioMedBridges Project Manager). Staff missing from the photo: Amaranta Amador Bernal (Legal Officer at EMBL), Vera Herkommer (Head of Legal Services at EMBL), Maximillian Koch (Intern), Lucie Pocha (Junior Legal Advisor) and Branka Stekovic (PA to ELIXIR Director).

Legal framework

ELIXIR's legal framework, the ELIXIR Consortium Agreement (ECA), entered into force on 12 January 2014 after having been signed and ratified by EMBL, the UK, Sweden, Switzerland, the Czech Republic and Estonia.

ELIXIR's constituent Board meeting took place in April 2014 in Helsinki, Finland. Following the ECA's entry into force, Norway, the Netherlands, Israel, Portugal, Denmark and Finland also joined ELIXIR. In November 2014, Spain announced that they would join in the spring of 2015.

To implement ELIXIR on the national level, the Hub will enter into collaboration agreements with the Nodes in the ELIXIR member states for the delivery of ELIXIR services. The ELIXIR Collaboration Agreement Template was approved at the ELIXIR Board meeting in April 2014, providing a tool to create the required legal link and basis for cooperation between the ELIXIR Hub and the respective ELIXIR Nodes.

The scientific and service content of the Collaboration Agreements will describe the role of the respective national ELIXIR Nodes. The ELIXIR Hub entered into negotiations with the ELIXIR Nodes with the vision to have the first ELIXIR Collaboration Agreements approved by the ELIXIR Board early in 2015.

The ELIXIR Board approved the Work Programme for EMBL at its Board meeting in November 2014. This document mirrors the provisions of the ELIXIR Collaboration Agreement Template and reflects EMBL's role within ELIXIR. It gives a clear account of the services EMBL provides to ELIXIR both in its role the host of the ELIXIR Hub delivering those Core Resources essential for the operation and management of the ELIXIR Hub, and as an ELIXIR Node, providing scientific and technical services.

ELIXIR communications

Website

The ELIXIR Technical Coordinator's website taskforce recommended building the new ELIXIR Hub website on a template that can be adopted by all ELIXIR Nodes, as this will allow for more seamless navigation between all ELIXIR websites. Re-launched in December, the new website will offer new features including a mobile-friendly interface in 2015.

In parallel, the ELIXIR Hub commissioned two Drupal experts to translate the task force recommendations on the Node websites into an HTML template that can be used by the Nodes. Their work also included the development of a more interactive Intranet for ELIXIR members, which is scheduled for completion in 2015.

Financial data

		2014	2013
<i>INCOME</i>		(€000)	(€000)
Member state contributions			
Ordinary contributions	(a)	€1,198	€1,366
Provision for unpaid member state contributions	(b)	(1)	(308)
Net Income		€1,197	€1,058
EXPENDITURE			
Technological Activities			
Salaries		33	159
Running costs		4	
Total expenditure of Technological activities		37	159
Directorate and Administrative expenditure			
Salaries		557	215
Running costs		265	195
Total expenditure of Directorate and Administration		822	410
Support and Admin Infrastructure costs		142	195
Total expenditure		1,001	764
Surplus/(Deficit)		196	294

(a)	2014	2013
<i>MEMBER STATE CONTRIBUTIONS</i>	(€000)	(€000)
Belgium	76	
Czech Republic	29	24
Denmark	51	42
Estonia	3	3
Finland	39	34
Greece	47	43
Israel	36	27
Netherlands	131	115
Norway	72	58
Portugal	34	30
Slovenia	8	7
Spain	86	86
Sweden	80	69
Switzerland	102	110
United Kingdom	404	414
Total	1,198	1,062
Less provision for unpaid member state contributions	(1)	(4)
Net member state receivables	1,197	1,058

(b)

The status of unpaid membership contributions during the Memorandum of Understanding phase of the organisation will be reviewed by the ELIXIR Board in its April 2015 meeting.

ELIXIR Hub

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ELIXIR is building a sustainable European Infrastructure for biological information, supporting life science research and its translation to:

Medicine

Environment

Bioindustries

Society

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