



**Collaboration.
Innovation. Impact.**

**Annual Report
July 2025-June 2026**

The Pistoia Alliance exists to make collaboration real

This year was an exceptional year of progress for the Pistoia Alliance. Our achievements were underpinned by the invaluable support of our Board of Directors and by our members' unwavering commitment to collaborative innovation. Together we have made an impact that extends across the biopharmaceutical industry, increasing the speed of life sciences R&D in the quest to deliver better outcomes for patients.

The pace of scientific and technological progress today is nothing less than extraordinary. Collaboration has become more important than ever in driving innovation and new breakthroughs. The Pistoia Alliance exists to this end, delivering value by bringing people together to solve a problem once and solve it everywhere. When we fix something in one organization but leave others to solve it again, we are not moving forward as efficiently as we could. In an industry where people move between organizations, we shouldn't have to keep fixing the same problems repeatedly.

This year we made a commitment to continuously measure and report on the **IMPACT** we deliver. I am pleased to share that our independent research* across our global community, spanning the entire life sciences ecosystem, found that **99%** of our members agree that the Pistoia Alliance is essential infrastructure for the growth and reputation of Life Sciences. Our engagement and relationship with regulators are stronger than ever, and **98%** say we offer the strongest collaborations globally. Solving shared challenges together, faster, ultimately ensures more resources can be focused on developing therapeutics that both transform and save lives.

99%

OF MEMBERS AGREE
PISTOIA ALLIANCE
IS ESSENTIAL
INFRASTRUCTURE



Dr. Becky Upton
President
Pistoia Alliance

The Pistoia Alliance exists to make collaboration real

Accelerating innovation

In a constantly changing world where technology is advancing rapidly, we strengthened our foundations to drive progress today for tomorrow. We set up a seed fund to accelerate new ideas sparked by our members and made the sustainability of our solutions a top priority to ensure long-term value is delivered.

Trusted to deliver

This year we delivered collaboration through a diverse range of global activities, including 25 active projects and communities, two world-class annual conferences, and seven Informatics Forums. Our initiatives brought together 12,720 global industry experts and professionals, including pharma, biotech, technology partners, academia, patient representative groups, and regulators.

I want to thank my colleagues, the Board of Directors, and the members for their contributions. Together we continue to move the industry forward, at speed.

Becky Upton
President
Pistoia Alliance

*Research conducted by Envoy Partners, April – June 2026



Boston Conference, November, 2025

Pistoia Alliance IMPACT

Members trust us as essential to the
future of Life Sciences

99%



Agree Pistoia Alliance
is essential infrastructure

89%



Annual Membership
renewal rate

84/100



Net Promoter Score

Introduction

This year, we made a commitment to continuously measure and report on the IMPACT the Alliance delivers because, as a not-for-profit built on collaboration, we should hold ourselves to the same standard we ask of members.

Solving shared challenges together, faster, means more resources can go towards driving innovation and new breakthroughs. It's why we keep challenging ourselves to be better collaborators.

Membership turns into valuable career growth



92%

People performing more effectively in their roles



5,061

Professionals benefited from training & education



434,944

Training & education hours received

Our projects deliver measurable impact to members



75%

Pistoia Alliance expedited their knowledge by 2 years



81%

Project involvement helps to achieve key organizational goals



93%

The Alliance ensures data interoperability & consistency across industry

When the industry needs a standard, it looks to Pistoia Alliance



12

Global regulation
frameworks & policies
influenced*



21

White papers and
peer-reviewed
articles*



35

Data standards
and frameworks
influenced*

**since 2021*

Members don't just join they stay



6.1 yrs

Average
member tenure
up from 4.4
years



89%

Member
retention up
from 74% since
2023



98%

Pistoia Alliance
offers the strongest
collaborations,
globally

When the industry needs a standard it looks to Pistoia Alliance



80%

Pistoia Alliance helps
improve regulatory
engagement and
readiness



292

Key opinion
leaders sharing
insights across the
community



12,720

Professionals
engaged worldwide
across the whole of
Life Sciences

Methodology

This global impact assessment is based on FYE 2026 performance data specified and verified by Envoy Partnership Ltd, and provided by Pistoia Alliance and any relevant partners.

Data points analyzed are at the aggregate level and verified by a qualified Fellow of the Institute of Corporate Responsibility & Sustainability, and include conference feedback questionnaires, training and events feedback, activity output and budget data, marketing performance metrics, and membership category metrics.

Looking ahead... a message from our Board

“Fresh ideas from our community are the lifeblood of the Pistoia Alliance and the primary way we generate tangible value for our members. As we look ahead, I invite everyone in our network to step up and submit their next big initiative. Your proposals drive our collaborative ecosystem forward - let’s build the next breakthrough solution together.”

“This year our ambition is to move the needle through greater collaboration across the industry, more engagement with regulators and by nurturing tomorrow’s leaders. We need to work together to build the knowledge and skills our industry needs to leverage the transformative technologies that will revolutionize outcomes for patients.”

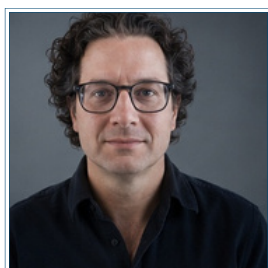


Lars Greiffenberg,
Director, R&D IT and Translational
Informatics, AbbVie, Vice Chairman
Chris Waller, Chief Strategist, Chairman

Our three key priorities this year which will guide our vision for growth and the value we deliver to members are:

1. Lifecycle management: from new ideas to robust industry solutions

We are committed to taking projects all the way from seed funding to sustainable, industry-ready solutions. A board-level working group has been tasked with creating a sustainability model and our legal framework continues to underpin every pre-competitive initiative.



Steve Penn, Head of
Research Data
Governance and Digital
Foundations, Takeda

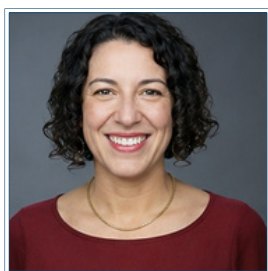
“As R&D becomes increasingly agentic, the absence of shared semantic foundations is no longer a friction cost; it is an exponential brake on innovation. The Pistoia Alliance transforms this challenge into collective acceleration, through pre-competitive initiatives like the CMC Process Ontology, FAIR community, Lab of the Future, and the Pharma General Ontology, a credible voice with regulators including the FDA, and a community that connects and develops the brightest minds across our industry delivering what no single organization could achieve alone.”

Lifecycle management: from new ideas to robust industry solutions



Lars Greiffenberg,
Director, R&D IT &
Translational Informatics

“In an increasingly agentic R&D landscape, the value of shared standards is no longer incremental. It is exponential. As intelligent agents seamlessly interact across domains and organizations, the absence of common semantic frameworks becomes the primary bottleneck to scale. The Pistoia Alliance uniquely enables the co-creation of these standards in a pre-competitive setting, ensuring interoperability, accelerating knowledge exchange, and unlocking the full potential of AI-driven innovation across the industry.”

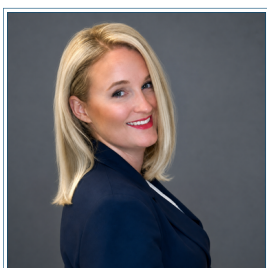


**Mirit Eldor, MD, Life
Sciences Solutions,
Elsevier**

“The best progress in science and health happens when people come together and collaborate on the toughest problems. That is why the role that the Pistoia Alliance plays is so valuable: through pre-competitive collaboration, the industry can advance the common data standards that help R&D move faster and improve health outcomes worldwide. Shared foundations like IDMP-O are something no single organization could build by itself. The Pistoia Alliance is here to help carry them from idea to solutions that the whole sector can rely on.”

2. Helping members engage with regulators

Our goal is to set up a Pistoia Alliance forum to enable us to connect with regulators and discuss strategic imperatives annually. This will enhance the regulatory guidance we provide on an ongoing basis and further strengthen our relationships with regulatory bodies, including the FDA, NICE, and Swiss Medic.



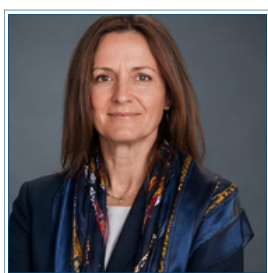
**Julie Morrison, SVP,
Head of Study
Management, Instem**

“As data moves from documents to structured, machine-readable standards, no single company can keep pace with the regulators. Submission standards seem like a moving target, with new guidance on New Approach Methodologies (NAMs) published frequently by different regulatory agencies. The Alliance gives our members a collective, credible voice, engaging with bodies like the FDA to translate shifting requirements into practical guidance. That shared front is exactly what pre-competitive collaboration was built to deliver.”

3. Nurturing the next generation of talent

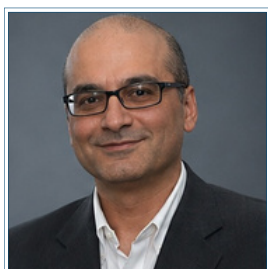
Building on the success of last year's Young Data Scientist of the Year Award, we crowned our first Data Science Team of the Year and will be adding a new category to our 2027 Data Science Awards.

We established dedicated training programs spanning AI/ML, FAIR and Data Governance and set up a new Venture Pharma Board to support the growth of talented emerging tech companies in our sector.



**Sophie Ollivier, Chief
Data Officer, R&D,
Servier**

“In a data-driven R&D landscape, nurturing the next generation of talent is strategic. Through initiatives spanning training, community building, and recognition, the Pistoia Alliance is creating a unique environment where data and digital skills can truly thrive. As a Chief Data Officer in R&D pharma, I really see this collective effort as an accelerator for therapeutic innovation and for preparing the future leaders of our industry.”



**Amrik Mahal, Former
Global Head of IT for
Research, AstraZeneca**

“True sector leadership isn't just about the discoveries we make today, but the ecosystem we build for tomorrow. By matching large pharma companies with global start-up and emerging companies through the Venture Pharma Board and celebrating breakthrough potential at the Data Science Talent Awards, we are doing more than developing skills we are accelerating innovation. When industry, leadership and emerging talent collaborate, we shorten the time between data insights and life-changing medicines.”

Building Strategic Partnerships

Partnerships form the backbone of pre-competitive collaboration. Trusted by the world's leading pharma, biotech and technology partners to accelerate innovation and bridge the gap between industry and regulators, we have strengthened existing partnerships and established new strategic initiatives to enable us to deliver even more actionable insights, practical frameworks, standards, tools and open solutions for our members.

- We signed an agreement with Allotrope Foundation to collaborate, enabling our projects and members to benefit from Allotrope's technology and expertise.
- We signed a collaboration agreement with CDISC, a global non-profit standards development organization.
- We released our third Lab of the Future industry benchmark survey in partnership with Open Pharma and formed a new partnership to support their Clinical Trials Technology Conference, thereby extending our reach within clinical development.
- We strengthened our engagement with the FDA with a new Public-Private Partnership for our In Vitro New Approach Methodologies (NAMs) project, complementing our existing IVP Public-Private Partnership.
- We set up our new global Pharma Venture Board to match large pharma companies with emerging technology and data companies that are developing solutions that could significantly impact the life sciences industry.



Events Spotlight

Our events program has doubled in size this year providing members with a diverse range of online and global face-to-face opportunities to build their skills, their knowledge and their personal networks. It has also sparked collaboration on complex challenges that require the collective intelligence and diverse perspectives of our membership.

Highlights include:

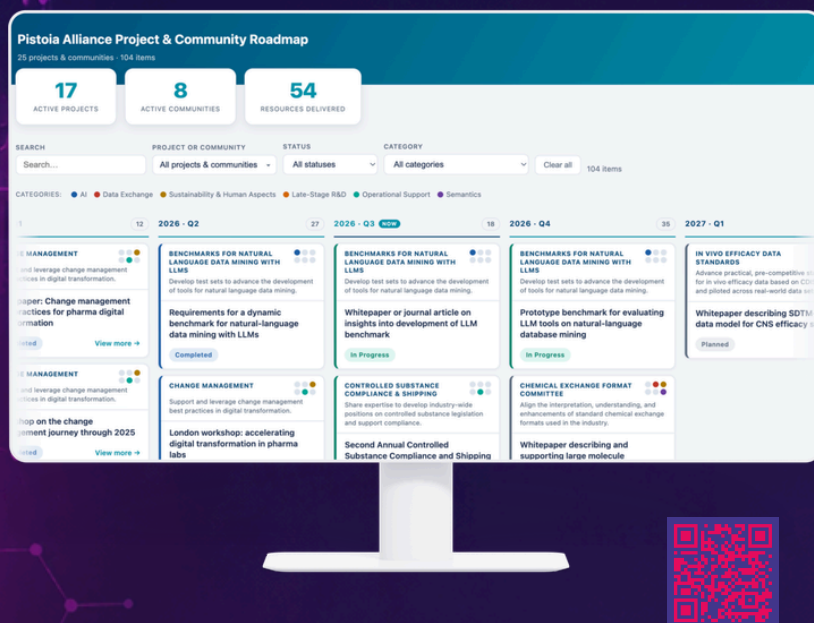
- Our annual Boston conference and our largest annual conference ever, held at London's Royal Society of Medicine including our prestigious Data Science Awards won by AbbVie and Roche
- Seven Life Science Informatics Forums hosted in the US, Europe and UK
- A dedicated webinar program delivering 45 hours of learning
- Launched the Life Sciences AI Exchange, a year-round virtual program
- First in-person Quantum Computing Conference held with IBM during London Science Week
- Chemical Exchange Format Committee workshop held at the Royal Society of Chemistry
- Dedicated community conferences for UXLS and CSCS, First IDMP-O User Group and workshops for our CMC and PGO projects
- ELIXIR and EMBL-EBI working group meetings



London Conference, March 2025

Portfolio highlights

Our pre-competitive working groups, practical projects and expert communities that align with our key strategic priorities continue to make a positive impact on life sciences R&D. This year we turned new ideas into actionable programs in record time, facilitated cross-pollination between our communities, and ensured our efforts are always focused on our members' most pressing needs.



To search the current Project & Community roadmap head to www.pistoiaalliance.org/roadmap

Delivering Data-Driven Value at Scale

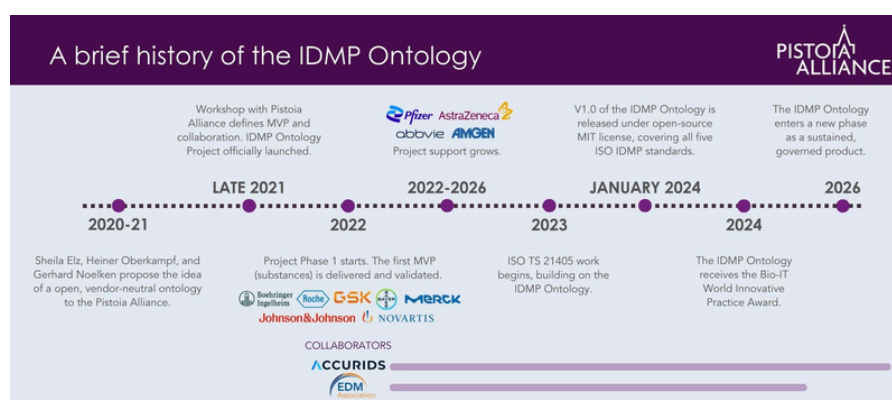
We released Version 1.0 of the **Pharmaceutical CMC Process Ontology**, a standardized, machine-readable representation of pharmaceutical Chemistry, Manufacturing and Controls processes.

"The CMC Process Ontology has matured structurally to become compatible with leading complementary ontologies. That compatibility is a prerequisite for its flexible deployment in a foundational role, accommodating both early science use cases at lab scale and the increasingly formal controlled specifications of processes progressing into manufacture." **Dr. Matt Walker, AstraZeneca**

Our **In Vitro Pharmacology (IVP) Public-Private Partnership** with the FDA launched Version 1.0 of its Assay Repository, a platform based on software donated by AbbVie, designed to standardize how biological assays are captured, shared, and reused across the life sciences industry. It supports improved data quality, reduces duplication, and enables more effective knowledge sharing.

"By facilitating the systematic transmission of in vitro pharmacology data to regulators, the IVP Assay Repository is an important step in the realm of data management for high-quality IND submission and review by regulators. The IVP Assay Repository creates a shared, FAIR foundation that benefits the entire biopharma ecosystem."

Bérengère Dumotier, Novartis



With tightening regulatory IDMP requirements, we released Version 1.6 of our flagship **IDMP Ontology**, providing a clear pathway to true IDMP interoperability across the industry. This release marked the beginning of a new phase with maintenance by ACCURIDS and strong governance to ensure the ontology remains a stable, authoritative and simple to use resource into the future.

"Seeing our consortium's work translated into action has been very rewarding. Working with ACCURIDS to build an IDMP-O-based product master for our Innovation Medicine sector showed how a shared industry resource can move beyond theory and become practical enterprise data infrastructure." **Gang Xue, Johnson & Johnson**

Our FAIR community released V1.2 of the FAIR Maturity Matrix, an organizational maturity model to guide the implementation of FAIR in life science organizations.

Harnessing AI to Expedite R&D

We launched a new year-round Life Sciences AI Exchange program, a collaborative forum to share real-world implementation experience, benchmark progress and shape the future of AI adoption in the life sciences.

Our Large Language Models (LLMs) project team published the outcomes of a systematic assessment of current practices in natural language querying of biological databases in a peer-reviewed paper and kicked off a follow-on project focused on automated benchmarking of such tools.



Sustainability-Driven R&D

As part of a broader initiative to help our members align with 3R rules (Replacement, Reduction, Refinement), our second Public-Private partnership with the FDA established a proof of concept for an SDTM-based data model for ***in-vitro* New Approach Methodologies (NAMs)** results using cardiac safety and hepatotoxicity data to validate a template for endpoints.

“Our collaboration with the Pistoia Alliance on in vitro NAMs data standardization is helping to unlock the full potential of alternative testing methods. By establishing common frameworks for data capture and exchange, we are paving the way for better integration of these methods into regulatory decision-making and accelerating their role in protecting public health.” **Md Yousuf Ali, Center for Drug Evaluation and Research (CDER), Office of New Drugs (OND), U.S. Food and Drug Administration**

Engagement in our **Clinical Trials Carbon Footprint** initiative continued to grow and Version 3 of the Clinical Trial Carbon Calculator was launched.

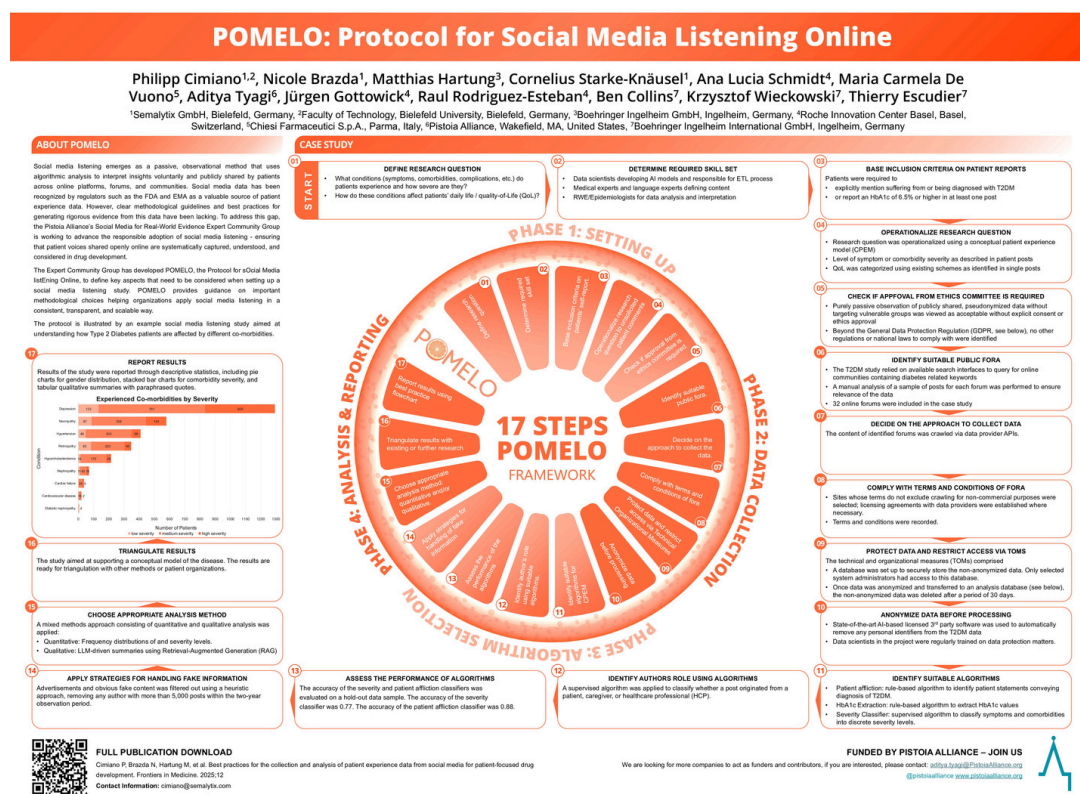
Our Change Management and Digital Transformation Community published a whitepaper highlighting why organizational change efforts in life sciences often stall, providing authoritative best practices to drive effective digital transformation.

Accelerating Late-Stage R&D

We published a **Protocol for Social Media Listening Online (POMELO)**, a structured, step-by-step questionnaire from study setup to data analysis that helps organizations apply social media listening in a consistent, transparent, and scalable way.

“Social media plays a vital role in connecting patients who might otherwise never meet, particularly within small patient populations such as rare diseases. Initiatives like the Alliance’s demonstrate how collaboration can turn the patient voice into meaningful progress.” Zorana Maravic, Digestive Cancers Europe

Our **Social Media and Real-World Evidence** project published two peer-reviewed papers sharing best practices with the industry to advance patient-centric R&D.



Operational Excellence

Our **Future Labs Evolution Community** produced a White Paper and Questionnaire for its EQIP initiative (Enhanced Questionnaire for Instrument Procurement) to ensure an industry-standard approach to gathering and sharing technical and digital compatibility information.

Pistoia Alliance Projects and Communities span themes and complement each other.

Each row in the chart to the right is a project, community, or new idea. Each column is a category of work. The bars mark the activities that span more than one. 23 of our 31 initiatives do. Eight stand alone.

The overlap is not an accident. Our work starts where members tell us friction exists. Because member problems rarely fit into a single category, the work we do rarely fits into a single category either.

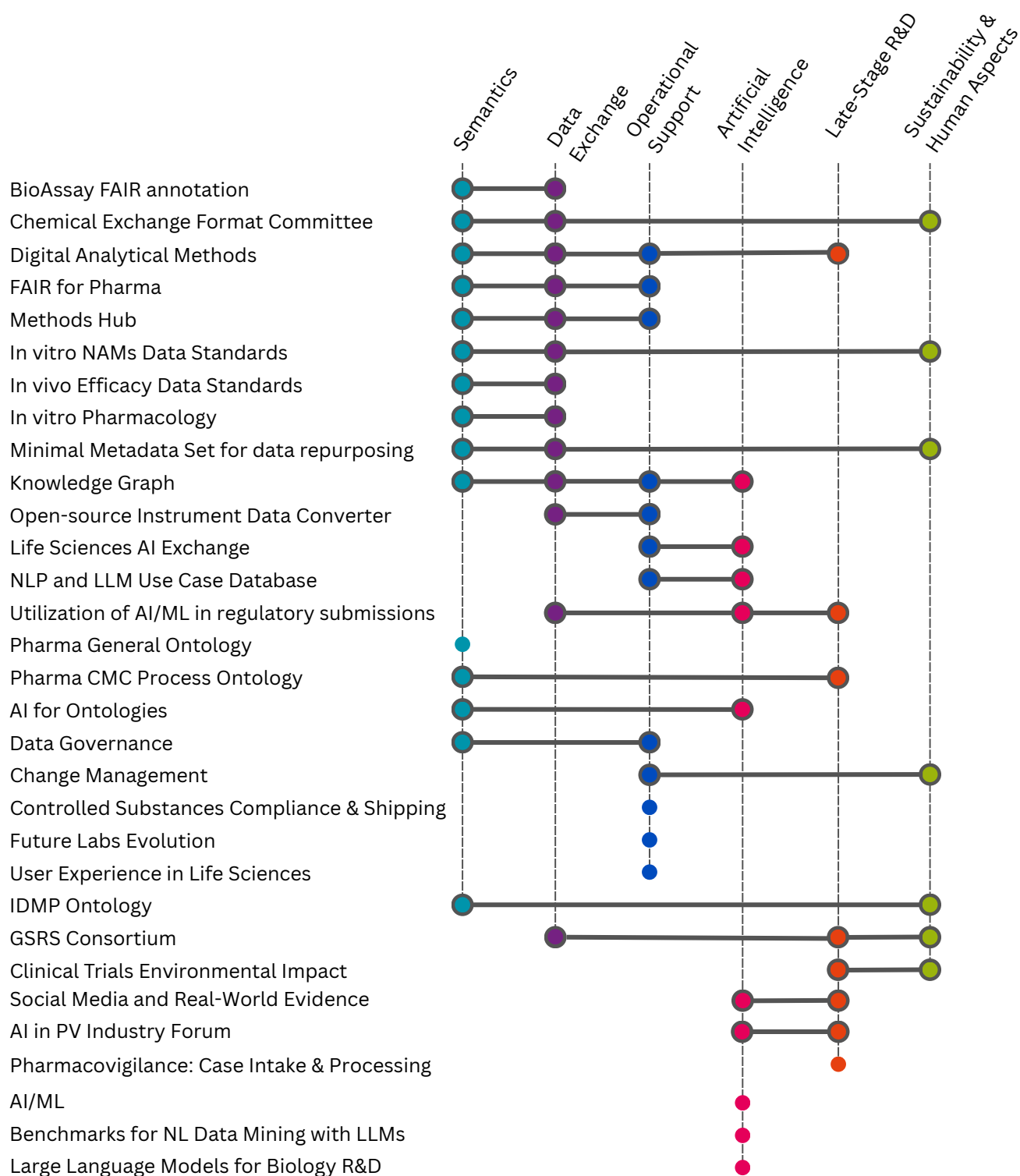
Examples where the lines cross

Three projects, one direction. In vitro pharmacology, in vitro NAMs and in vivo efficacy are projects that work on very different data. They operate in parallel but build on existing standards and projects, and aim for the FAIR alignment, controlled vocabularies and machine readability needed to create an integrated, interoperable ecosystem of preclinical data.

Project outputs beget new initiatives. Methods Hub closed this year, having shown that analytical methods can be exchanged digitally via standardized, machine-readable instructions. Digital Analytical Methods carries that objective forward with a wider scope. That is, completed work stays on our initiative map because it seeds what comes next.

FAIR and ontologies, seen as one. Outlining the future of FAIR, experts in our FAIR for Pharma community point to ontologies such as the Pharma General Ontology, CMC Process Ontology, and IDMP Ontology as assets that can accelerate FAIR implementation. Likewise, the community's output is foundational to the teams working on the ontologies. The steering committees of these initiatives see one complementary effort, rather than isolated goals.

Where our work connects



Leading the way - The Executive Team



**Becky Upton,
PhD,
President**



**Errol Sandler,
PhD,
Secretary**



**Steve Hollinshead,
FCA,
Treasurer**



**Christian Baber,
PhD,
Chief Portfolio Officer**

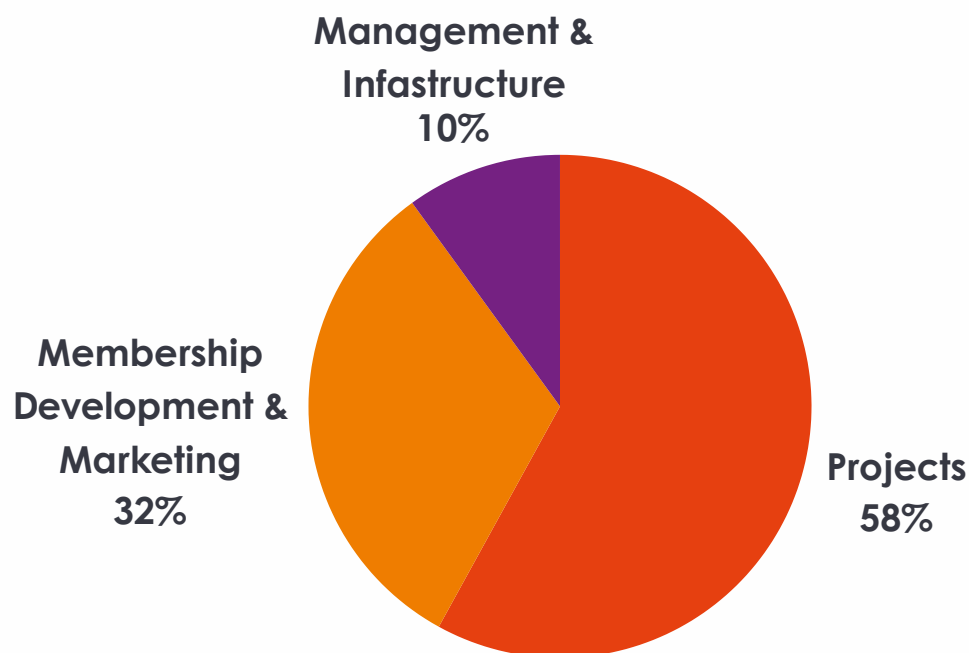
Board of Directors*

- Amrik Mahal, Former Global Head of IT for Research, AstraZeneca / Sophie Bailes, Head of Research and Early Therapy Areas, AstraZeneca
- Andy Bonner, VP, Quality Engineering & Labs for R&D Digital and Tech, GSK
- Anna Craig, VP and Global Head of Data and Digital, Roche
- Chris Waller, **Chairman of Pistoia Alliance**, Chief Strategy Officer, Quantori
- David Dorsett, Chief Digital Officer, Astrix
- DeAnna Zacherl, Executive Director R&D IT Portfolio Management and Operations, Eli Lilly
- Julie Klint, Director, Global Research, Lundbeck
- Julie Morrison, SVP, Head of Study Management, Instem
- Katrina Kalantar, Computational Biologist, Biohub
- Lars Greiffenberg, **Vice-Chair of Pistoia Alliance**, Sr. Director R&D Information Research, AbbVie
- Lauren Shields, Head of Solution and Value Delivery, Benchling
- Mirit Eldor, MD, Life Sciences Solutions, Elsevier
- Riccardo Mariani, VP Global R&D Project & Portfolio, Chiesi
- Roman Affentranger, Head of Information Products and Data Sciences, Novartis
- Sophie Ollivier, Chief Data Officer, R&D, Servier
- Steve Penn, Head of Research Data Governance and Digital Foundations, Takeda

*As at time of publication

Financial Report for FY25/26

In the FY25/26 ending June 30, 2026, the cost of running Pistoia Alliance and its programs was \$4.29m split as follows:



Financial growth during 2025/2026 compared to 2024/2025:

- Membership dues grew to \$2.466m from \$2.335m
- Net assets increased by approximately \$575k due to overall revenue growth and project activity
- Total assets increased by approximately \$650k due to increased cash balances resulting from the ongoing focus on project funding and continued focus on working capital management throughout the year

Pistoia Alliance Consultants



- Aditya Tyagi
- Anca Ciobanu
- Anja Brunner
- Asiyah Yu Lin
- Birthe Nielsen, PhD
- Catherine Maskell
- Cristina Fasca
- Tanya Randall
- Thierry Escudier
- Veronique Francois-Newton, PhD
- Vladimir Makarov
- David Prior
- Farah Egby
- Giovanni Nisato, PhD
- Nathalie Batoux
- John Wise
- Helen Taylor
- Marc Graber
- Miffy Wilson
- Paul Petriello
- Rob Gill
- Shaun Tamblin
- Stephanie Pearson

We would like to thank our Members, Board of Directors, Strategic Committee Members, Project Champions, Pistoia Alliance Alumni, and Consultants past and present, for their commitment in delivering the Pistoia Alliance mission.

Important dates for 2026/2027

The Pistoia Alliance brings together the biopharmaceutical ecosystem, powering collaboration to drive innovation and deliver new breakthroughs. Our members collaborate on pre-competitive challenges, pooling expertise and R&D costs to advance the industry and ensure better outcomes for all. Visit www.PistoiaAlliance.org/events

**Data Science Talent Awards Live from
September 1, 2026**

**Boston Conference, Boston Convene,
November 10-11, 2026**

**London Conference, Royal Society of Medicine,
March 23-24, 2027**

**Basel Conference, Syngenta,
June 1, 2027**

PISTOIA
ALLIANCE

