Press Release

Lens Collective Action Project

Embargoed until 14:00 GMT Sept 14

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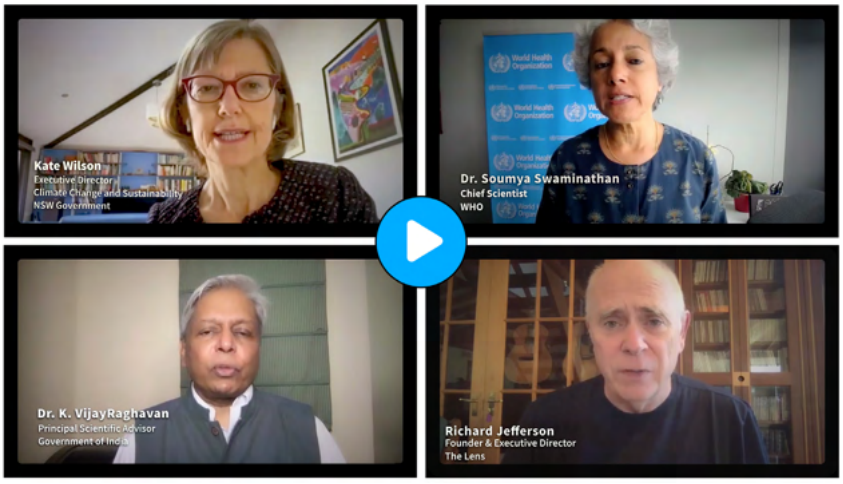

https://youtu.be/LGDhGMhau9w

'Universal access is the key that unlocks human potential. It is the way that we enable people around the world to participate, to contribute and ultimately to us all benefiting'

Jane Halton
Board Chair CEPI
Co-Chair COVAX

Lens serves global patent and scholarly knowledge as a public good to inform science and technology enabled problem solving.

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Solving COVID and Climate: ‘Innovation Without Borders’

CANBERRA, AUSTRALIA, 14 September 2021

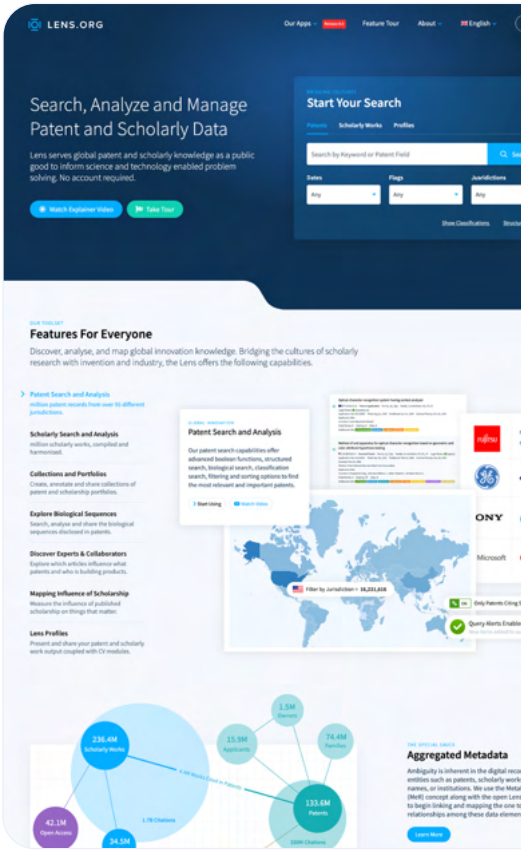
“A virus knows no borders. Climate knows no borders. Solutions to these crises require a new type of collective action to innovate beyond borders and beyond barriers,” said Kate Wilson, Executive Director for Climate Change and Sustainability for the NSW Government and Co-Founder and Chair of The Lens’ Board.

“In spite of the extraordinary progress of science, it cannot solve these problems alone. Science must be integrated and coordinated with diverse capabilities, including those of government, business, and civil society, in all countries and regions, to have a better chance at finding solutions,” said Richard Jefferson, Founder and CEO of The Lens. “The world needs informed actors, aligned and coordinated capabilities; no one must be left out.”

https://youtu.be/LGDhGMhau9w

Important Links

- Collective Action Project
- Equitable Access Program
- Lens Institutional Toolkits
- Lens.org
- Cambia



Today The Lens, an Australian-based non-profit and world leader in providing free and open innovation knowledge, announced the Collective Action Project (CAP), a multi-year initiative to equip individuals and institutions with the tools to contribute to shared solutions to these crises. Now, all scientists, investors, publishers, governments, businesses, and civil society can navigate open global research and patent information from over 134 million patent records linked with data from over 236 million research publications and 393 million biological sequences from patents.

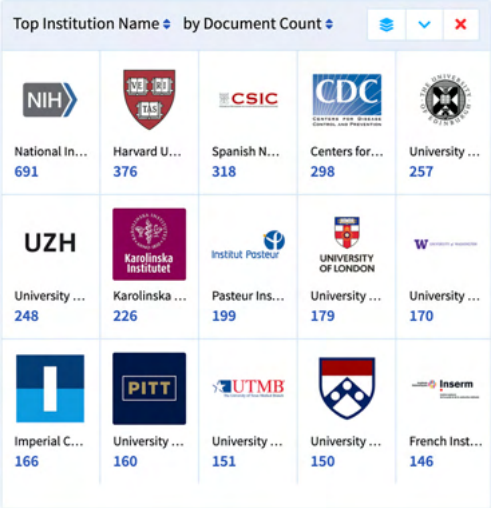
The Collective Action Project was developed in consultation with leadership at the World Health Organization, World Intellectual Property Organization, Coalition for Epidemic Preparedness Innovations, World Trade Organization, The United Nations Environment Program, the Office of the Principal Scientific Advisor of India, policy makers, publishers, and scientists and librarians at leading Universities, including MIT.

What are the key barriers to progress? Jurassic business models

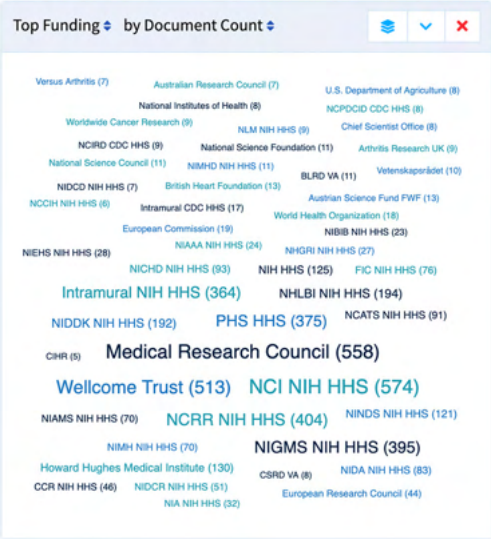
The ability to discover, measure, map and analyze research and patent knowledge worldwide is big business, estimated at well over US$1.5 billion a year, much of it paid by universities and public institutions. But the real costs are vastly greater: much of the world is excluded from contributing and countless opportunities are lost.

“The big corporations that sell this knowledge use closed and siloed data that can’t be shared, making it difficult to build on each other’s work or make informed decisions - the very foundation of how we’ve come so far as a species,” said Mark Garlinghouse, Director of Business Development at The Lens.

Collective Action Needs Connected Actors



Institutions doing RNA Viral Vaccine Research (2005-2015)



Funders of RNA Viral Vaccine Research (2005-2015)

“In spite of its extraordinary progress, science cannot solve these problems alone. Neither can government, business or civil society. We need collective action”

Kate Wilson
Executive Director for Climate Change and Sustainability for the NSW Government, and co-Founder & Chair of Cambia’s Board

"The siloing of knowledge between academia, business, government and civil society constrains the public sector. Until we bridge these sectors and coordinate their capabilities, public investment for valuable outcomes may continue to be hit and miss, slowing delivery of essential change," said Wilson.

What can Lens CAP do for us now?

Lens builds these bridges to enable mapping of innovation trajectories. Lens's International Industry and Innovation Mapping facility, In4M - pioneered in 2017 - shows how academia and business influence each other, and how government funding flows can create products by linkages between these actors.

Launch of the Collective Action Project coincides with a major new Lens release featuring Institutional Toolkits, which now includes Attested Portfolios, the new Report Builder, embeddable widgets and much more. "The Lens patent functionality was also increased by 300%, including over 120 indexed fields, APIs and patent legal status which exposes major opportunities," said Osmat Azzam Jefferson, Director of Product at The Lens.

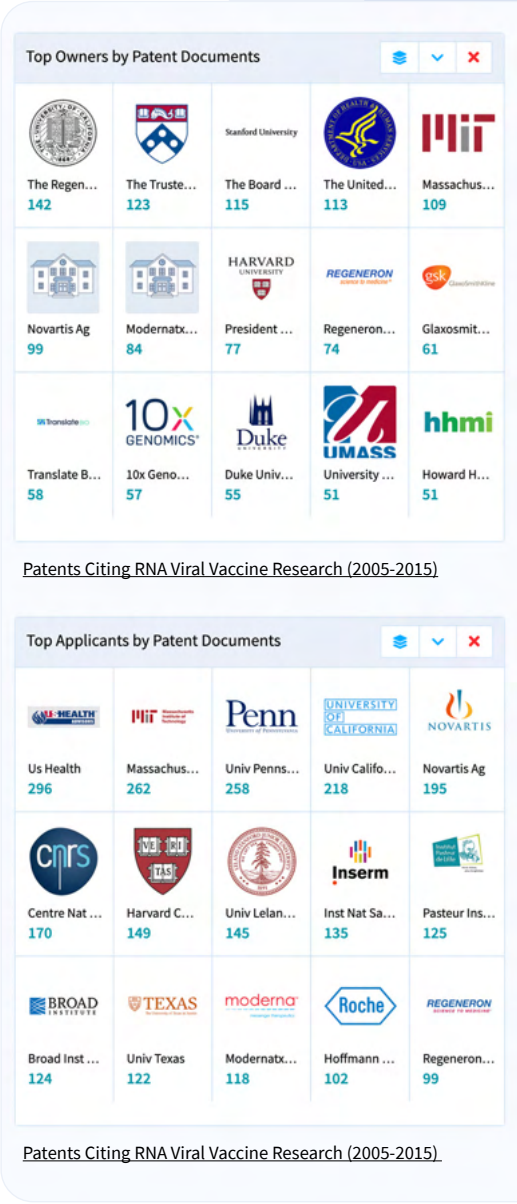
How do you ensure equitable access? LEAP

The Collective Action Project is guided by the Lens Equitable Access Program (LEAP). The Program charts a pathway towards community-supported autonomous financing of The Lens, to keep it inclusive, growing, open and comprehensive.

Under LEAP, every person in the world can use the platform anonymously for free with powerful analytic tools, and access to all the data. Any registered user can benefit from personalized workspaces and customized features - at no cost for personal public-good users, or for a modest cost for commercial use.

Furthermore any institution worldwide that needs or wants suites of powerful management and exploration tools in our Institutional Toolkit will have access based on low, fair, tiered pricing. All fees go towards keeping knowledge universally available as a community-supported public-good.

"We announce here that we are offering at no cost these Institutional Toolkits to all public-good institutions across much of the Global South - almost 130 countries - including universities, libraries, government agencies, NGOs and civil society," said Richard Jefferson.



Patents Citing RNA Viral Vaccine Research (2005-2015)

Patents Citing RNA Viral Vaccine Research (2005-2015)

"There should be democracy in the opportunity which we give to everyone. Even if you come from an extremely resource constrained environment, you should be able to have access to the tools, the teaching, the resources which allow you to innovate. And that's actually not unfeasible. It's possible," says K. VijayRaghavan, Principal Scientific Advisor to the Government of India.

"For 15 years running South Africa's CSIR - Africa's largest science and innovation institution - it was clear that the lack of integrated science and IP knowledge was a huge impediment to African innovation. The Lens is a unique opportunity to change this inequity and galvanise Africa's creative contributions to the crises we face together," said Sibusiso Sibisi, former CEO of CSIR and Lens Board Member.

Patently Amazing: Opportunities Hidden in Plain Sight

"It's ironic: the largest untapped source of innovation knowledge is hidden in plain sight, the patent system," said Tony Taubman, Director of IP for the World Trade Organization and Lens Board Member.

"The knowledge in the patent system was supposed to be a resource for the public, but can only be so when there is transparency in both meaning of the disclosure and an understanding of the limited rights. The moment a patent is published the knowledge is in the global public domain," added Maximiliano Santa Cruz, former Director of the Chilean Patent Office and Lens Board Member.

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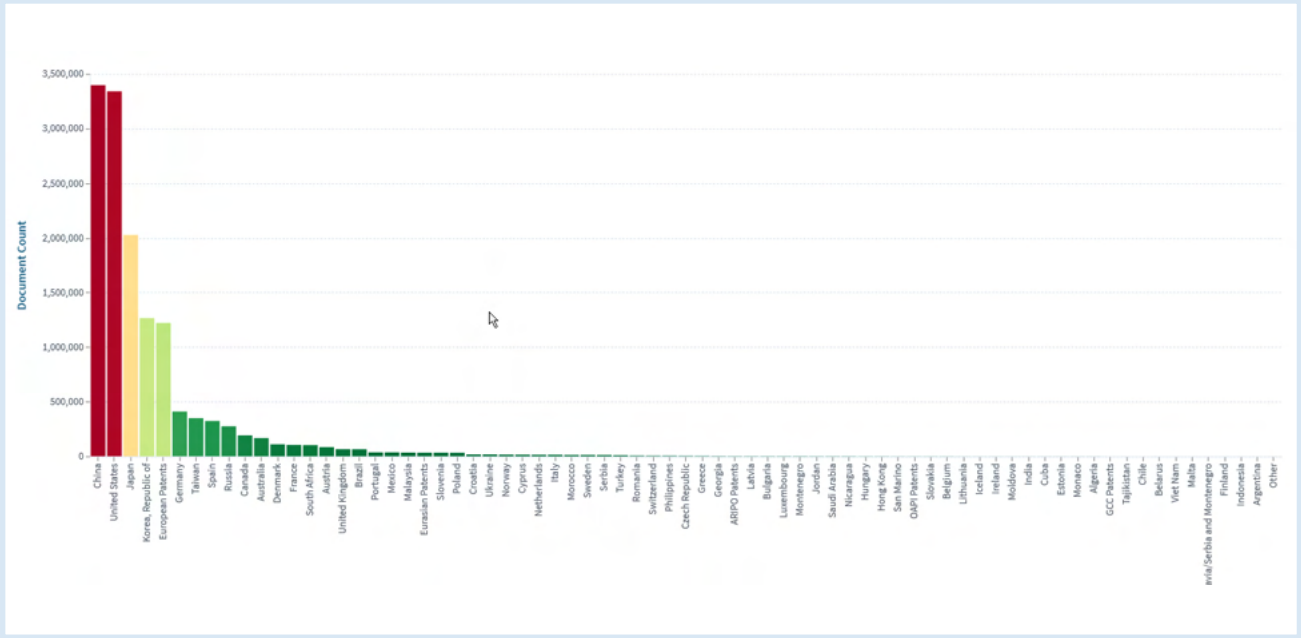

Active granted patents by jurisdiction.
Almost all the world's patents are being fought over only in the rich industrialised world.

The surprisingly convenient truth is that the vast majority of patents confer no rights over the majority of the world's people and institutions.

Of the nearly 14 million granted patents that are currently 'in force', almost 99% of them have rights in fewer than 20 countries. Fewer than 1% of patents have rights in any country across the Global South.

"A war of attrition is being fought by corporations in the richest countries, whilst nearly all patents have no legal rights in more than 150 other countries. It's a smörgåsbord for innovation and enterprise," explained Jefferson.

WHO thinks this is worth doing?

Speaking in support of the initiative and its objectives, the World Health Organization (WHO) Chief Scientist, Soumya Swaminathan said, "The mission of The Lens is to democratise science, to democratise knowledge and make it as easy as possible for academics, researchers and entrepreneurs in all parts of the world to have access to the tools that they need to make the innovations that are relevant and necessary for the areas they live in."

Mitchell Baker, Chair and CEO of Mozilla Foundation added, "Equitable access to knowledge has massive potential for the innovative capacity of the world."

Jane Halton, Chair, Coalition for Epidemic Preparedness Innovations (CEPI) concluded, "Universal access is the key that unlocks human potential. It is the way that we enable people around the world to participate, to contribute and ultimately to us all benefiting."

Read more about the **Collective Action Project** and watch an accompanying **launch video**.

"There will be no 'haves' and 'have-nots' in this program. Every institution worldwide that needs or wants these tools will have access based on fair, tiered pricing, confident that the fees go towards making knowledge available as a public good."

Richard Jefferson
Executive Director of The Lens,
Founder of Cambia

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About The Lens

https://www.lens.org

The Lens is a world leader in providing free and open discovery and analysis of worldwide patents and research knowledge, serving 236M+ scholarly work records, 134M+ patent documents from over 100 countries, and 393M+ biological sequences extracted from patents. The Lens has been operating for over twenty years as a project of the long-established non-profit social enterprise Cambia (doing business as The Lens), with support from leading global philanthropies and public institutions.

For more information about the logic of The Lens, please see a keynote presentation from Richard Jefferson at the Skoll World Forum for Social Entrepreneurship. https://youtu.be/R13j--mnxAc

For more information,
please contact info@cambia.org.

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Soumya Swaminathan
World Health Organization (WHO) Chief Scientist

Lens CAP Launch Summary Points

Summary

- The Lens launches the Collective Action Project (CAP), a new multi-year initiative to replace closed, proprietary innovation knowledge with open, reusable and shareable public knowledge.
- Discovery and analysis of innovation knowledge is a multi-billion dollar industry that uses closed data, charging exorbitant fees to find public knowledge, keeping innovators in silos and excluding most of the world from accessing this knowledge.
- The Lens is a global platform that will reverse this situation, dropping costs, saving the public sector 100s of millions of dollars and making 'open' a default
- The Lens guarantees every human free and unsurveilled use of Lens.org and its open data.
- Public-good institutions in almost 130 countries across the Global South will get Institutional Toolkits free of cost.
- The Lens releases a massive upgrade to provide the world's first integrated open research and patent platform with over 120 searchable fields, powerful analytics, APIs and global patent legal status.
- Nearly 99% of all granted patents are only in force in the richest 10-20 countries. For the rest of the world, these patents are public domain.
- The Lens Equitable Access Program guarantees every institution will have access to an Institutional Toolkit with low tiered fees supporting community open infrastructure.

Collective Action FAQs

What is The Lens?

The Lens is a project of the social enterprise Cambia (doing business as The Lens) designed to provide inclusive access to knowledge so that more people can participate in innovation and problem solving. Originally launched as 'Patent Lens', The Lens has been running continuously for more than 20 years.

Why is Collective Action and The Lens important now?

Humanity faces an unprecedented urgency to address the problems that we collectively face, some of which we have collectively created. Only with connected actors coordinating their contributions can we have a fair go at innovating our way out of our current crises.

Digital abundance of information means that using the linked knowledge accessible through The Lens can help public institutions save as much as US$1 billion annually while making the resources accessible to more people than can access them today. We can waste no time to redeploy resources to support productive outcomes and solve problems.

What is the business model of The Lens?

The business model of The Lens is LEAP: Lens Equitable Access Program. Briefly, this means that The Lens asks institutions to pay for services to support the financial sustainability of the platform. All of the services from The Lens are available at a fraction of the cost of closed, commercial alternatives.

The Lens has several revenue sources from institutions and individuals who support the mission of The Lens and/or derive value from The Lens services. These revenue sources are subscriptions, sponsorships and philanthropic donations.

- Subscriptions are provided to commercial users of The Lens and to users who choose to license one or more tools in the Institutional Toolkit. Subscriptions are renewable annually.
- Several types of sponsorships are available. These include sponsorship of specific platform enhancements, for example functionality or content. Sponsorship of public Lens Reports is also available.
- The Lens also actively seeks support from philanthropic donors who believe in the importance of inclusive access to knowledge and diverse participation in the innovation ecosystem.

For almost 20 years, The Lens was supported primarily by financial support from generous philanthropic donors and foundations who supported the mission to make knowledge accessible as a public good. More recently, The Lens was asked by donors to design and execute a financial sustainability strategy. It was as an outcome of this sustainability strategy that we developed the Lens Equitable Access Program and fee-based services.

How does The Lens maintain such low prices?

Well, actually, it is free for everyone on earth if they wish to access and use the site anonymously (i.e. as an unregistered guest user). Which is a pretty low price, we admit.

Our secret sauce is that we build on the contributions of others in the public good space: open source software, open data, open access publishing and new open machine learning tools. This is only possible with these shared approaches and it increases our quality rapidly and drops costs dramatically.

Our commitment to inclusive access to knowledge and LEAP, allows us to focus on enabling useful and actionable knowledge, not building expensive constraints and paywalls. Another reason the low prices are possible is because of 20 years of generous support from philanthropic donors and foundations who helped The Lens to build the foundation that we have today.

But the most important reason we can maintain low prices is because of you. Inclusive access means more people access the platform. Community supported infrastructure that really has the support of the community allows us to distribute costs across a wide base; it doesn't require a lot of money from each participant when there are lots of participants! The Lens believes that knowledge should be like the roads - infrastructure that facilitates the human activities of commerce and culture and as a result benefits us all.

What is Innovation Cartography?

Innovation Cartography is a process to view, analyze and understand knowledge in a way that enables action and decision making. The Lens is building an open platform for Innovation Cartography that is built on open content and tools but can have access rights that match the requirements of the user. In the patent world, an Innovation Cartography can be compared to a patent landscape. In the scholarly works domain, Innovation Cartography is similar to a dramatically expanded and dynamically updated literature review.

Innovation Cartography provides knowledge "maps" in specific disciplines or technology areas to identify the linked actors and inform about partnerships, opportunities, risks and trajectories. Innovation Cartography makes information enabled for decision making and action.

It is a priority for The Lens to build more capabilities around Innovation Cartographies, such as the Lens Report Builder, in order to make the underlying knowledge as accessible, understandable and deployable as possible.

How can I participate in collective action?

If you agree there is urgency to solve the problems we face and you support the mission of inclusive access to knowledge, there are many ways to help. We are grateful for anything that you can do!

- Tell a friend (or many friends) about The Lens.
  - Create and share a saved search or dashboard.
  - Create and share a Collection - privately or publicly!
  - Start a chat group about analyzing and interpreting open content.
  - If you or your contacts use the Lens in an individual capacity for commercial purposes, we will happily license that use for a modest fee (about the price of a low-spec iPad, or a nice office chair). The individual commercial use gives you the customizable workspace, and full commercial permission to use it to do your work, legally, respectfully, confidentially and knowing that the modest fee goes to support a sustainable global resource.
- Tell us why you love The Lens. Share a specific use case that you think others might benefit from. Drop us a line here.

This collective action includes financial support for The Lens.

- If you are an individual using The Lens for commercial purposes, subscribe to a commercial use license for individuals.
- Introduce The Lens to your institution. Encourage them to subscribe to the Lens Institutional Toolkit. The Lens offers packages of tools for universities and other public good institutions as well as for commercial companies. The packages are a fraction of the price of commercial alternatives and they are open. Choosing them means you are participating in making knowledge accessible as a public good.
- If you have the resources, support The Lens financially with a donation. Visit the Lens Collective Action Project GoFundMe page.

Be a champion for inclusive access to knowledge to support problem solving! Tell a friend about Lens.org today!

Is Lens CAP a solution to the COVID Patent Waiver?

It's a big contribution to ensuring it's a fair and evidence-based negotiation. While there are urgent calls for a COVID Patent Waiver to make vaccines more accessible, the problem goes much deeper. Almost all the countries that are calling for such changes, are also hamstrung in improving and showcasing their domestic capabilities, forging partnerships and developing their own scientific contribution. Thus constraining their ability to negotiate, because they lack affordable, transparent open knowledge of the innovation process, especially patents and scholarly works.

Directors of Cambia

An Australian not-for-profit social enterprise

Dr. Kate Wilson

Chair of Cambia Board
Executive Director, Climate Change and Sustainability for NSW Department of Planning, Industry and Environment, Australia

Dr Kate Wilson is the Executive Director of Climate Change and Sustainability for the Australian State of New South Wales' (NSW) Department of Planning, Industry and Environment.

She has oversight of programs to reduce NSW carbon emissions, increase climate resilience and work to embed sustainability, including protecting biodiversity and the natural environment, into planning and development decisions in the Greater Sydney region.

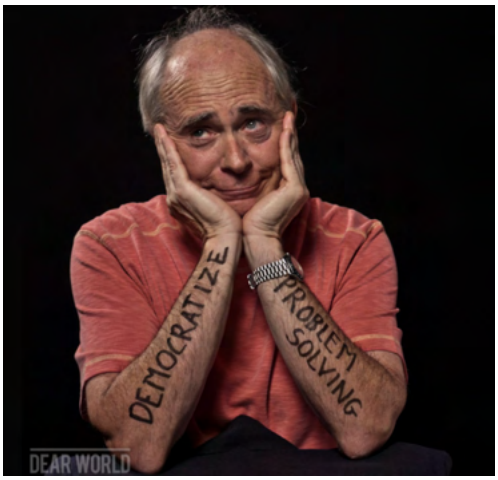
Kate joined the NSW environment agency in November 2009 as Executive Director, Science. In that role she led over 250 scientists and support staff to deliver technical analysis, expert advice and research to support the NSW environment agency, the NSW Environment Protection Authority and external government customers and clients to deliver great outcomes for the environment. She embedded a culture across the agency that values evidence and scientific rigour at all levels of decision-making.

Kate's scientific background is in molecular biology, microbiology and biotechnology and their application to agriculture and aquaculture. She has worked at the United Nations' International Atomic Energy Agency (IAEA) in Vienna and was co-founder of Cambia in the late 80's. She was research leader in tropical aquaculture at the Australian Institute of Marine Science (AIMS) in Townsville, then moved to Sydney in 2005 as Science Director and then overall Director of the CSIRO Wealth from Oceans Flagship – a multi-disciplinary marine research initiative.

Kate has a degree from Cambridge University and a PhD from Harvard University. She has served on the Editorial Staff at Nature magazine and had faculty appointments at University of London (Wye College). She has lived in the UK, US, Austria, Netherlands, India and Australia.

Richard Anthony Jefferson

Chief Executive Officer, Cambia



Richard is a prominent molecular biologist, social entrepreneur and open innovation systems strategist. He is founder & CEO of Cambia and Lens.org Ltd, and a Professor of Science, Technology & Law at the Queensland University of Technology (QUT) from 2009 to 2020 .

His work has been cited in the scholarly literature over 15,000 times and his inventions in biotechnology have been widely licensed in agriculture and life sciences enterprises globally.

Richard developed the landmark hologenome theory of evolution, developed and distributed critical enabling technologies in plant, animal and microbial genetics, and he conducted the world's first biotech field crop experiment.

After a position as the FAO of the United Nation's first molecular biologist, Richard founded Cambia in 1991, as an independent non-profit social enterprise to democratize science-enabled innovation. Fifteen years ago Cambia created Patent Lens, the most popular open full-text patent search site, and 10 years ago pioneered the world's first patent-based commons, the BiOS (Biological Open Source) Initiative. Cambia's main focus now is on Innovation Cartography, on the new open global platform, 'The Lens'.

Richard is is an 'Outstanding Social Entrepreneur' of the Schwab Foundation and a regular panelist at the World Economic Forum's Davos annual meetings and Summits, served four years on the World Economic Forum's Global Agenda Council on Intellectual Property and is now on the Global Agenda Council on the Economics of Innovation.

He is the recipient of the American Society of Plant Science' 'Leadership in Science' award, was named to Scientific American's list of the world's 50 Most Influential Technologists, and is the inaugural Medalist of the Center for Science & Policy Outcomes. His work has been featured in media in dozens of countries, and includes profiles in The Economist, New York Times, Newsweek, Red Herring, Nature, Science, Nature Biotechnology and many others.

Antony Scott Taubman

Director, Intellectual Property Division, World Trade Organization (WTO)

Antony Taubman is currently Director, Intellectual Property Division, World Trade Organization (WTO), with responsibility for intellectual property, competition and government procurement. He was previously the acting director and head of the Global Intellectual Property Issues Division of the World Intellectual Property Organization (WIPO), a position he assumed in May 2002.

After a diplomatic career, he left the Australian Department of Foreign Affairs and Trade (DFAT) in 2001 to join the newly-formed Australian Center for Intellectual Property in Agriculture, at the Australian National University in Canberra, teaching and researching on international IP law. He has also held a teaching appointment at the School of Law at the University of Melbourne.

From 1998 to 2001, he was the director of the International Intellectual Property Section of DFAT. He has authored a training handbook on intellectual property and biotechnology, a comprehensive study on the implementation of the TRIPS Agreement, and a range of academic and general publications on international intellectual property law and policy.

As a registered patent attorney, he has also worked in private practice in the law of patents, trade marks and designs. He has been awarded two academic prizes for postgraduate law from the University of Edinburgh, United Kingdom.

Sibusiso Sibisi

Former President and CEO, Council for Scientific and Industrial Research (CSIR) South Africa, Pretoria, ZA and Chair, International Advisory Council

Dr Sibusiso Sibisi was formerly the CEO of the Council for Scientific and Industrial Research (CSIR) from 2002 to 2016. CSIR is Africa's largest public research institution pursuing multidisciplinary scientific research to foster industrial and social development.

In January 2018, Dr Sibusiso Sibisi joined Wits Business School (WBS) as the head of school. He holds a BSc in Physics from Imperial College, London (1978) and a PhD in Applied Mathematics (1983) from Cambridge University (Churchill College and the Department of Applied Mathematics and Theoretical Physics).

Sibisi has previously sat on the boards of JSE-listed companies Murray & Roberts, African Rainbow Minerals and Harmony Gold. He currently sits on the boards of Liberty Holdings and Telkom. His career has spanned academia and industry, including being co-founder of a research-based start-up enterprise at Cambridge.

Sibisi was awarded the Order of Mapungubwe in Silver by President Thabo Mbeki in September 2007. National Orders are bestowed on South Africans who contribute to the betterment of the country in various fields and represent the highest award that the country, through its President, bestows on its citizens. He was a keen rower at Cambridge and he continues to enjoy an active lifestyle: fitness, cycling, swimming and running. He has completed several marathons, including London, Boston, Two Oceans and Comrades.

He takes a keen interest in national and international affairs, enjoys reading and, most of all, spending time with his wife and two children.

Maximiliano Santa Cruz

CEO, Santa Cruz IP - Intellectual property, technology transfer and Innovation, Santiago, Chile. Previous Director General, National Institute of Industrial Property of Chile

Maximiliano is the founder of Santa Cruz IP, a law firm that advises on the design of intellectual property (IP) strategies, innovation, and technology transfer. He is also Senior Counsel to Aninat Abogados, a Legal 500 corporate firm.

He headed the National Institute of Industrial Property (INAPI), the Chilean IP office, from its creation in 2009 until October of 2018. INAPI has been chosen twice as the best government agency of Chile and as the second most innovative IP office globally (World Trademark Review magazine). He led INAPI to become part of the group of International Patent Authorities within the PCT and a founder of PROSUR, the most advanced integration initiative between (15) Latin American IP Offices.

He chaired WIPO's Permanent Committee on Patents and the Working Group on the PCT, both for two terms. He was also a negotiator for the IP chapters in several of Chile's trade agreements, such as those with the EU, EFTA, Korea, the Pacific 4 (P4), and the one with the US.

He is a panelist in the dispute over IP and technology transfer between the US and China at the WTO, and a consultant with the Inter-American Development Bank, the European Union IP Office, the World Bank, and WIPO. He frequently publishes on IP issues and has taught IP at the Universidad Católica, the Universidad de Chile, and Finisterrae universities. He was Chair of the Expert Advisory Group of the Medicines Patent Pool from 2011 until 2020.

Chris Bourg

Director of Libraries at Massachusetts Institute of Technology (MIT)

Chris Bourg is the Director of Libraries at Massachusetts Institute of Technology (MIT), where she also has oversight of the MIT Press. She is also the founding director of the Center for Research on Equitable and Open Scholarship (CREOS).

Prior to assuming her role at MIT, Chris worked for 12 years in the Stanford University Libraries. Before Stanford, she spent 10 years as an active duty U.S. Army officer, including three years on the faculty at the United States Military Academy at West Point. She received her BA from Duke University, her MA from the University of Maryland, and her MA and PhD in sociology from Stanford.

Chris has extensive experience promoting equitable and open scholarship, and is an advocate for the role of libraries in promoting social justice and democracy. Chris co-chaired the MIT Ad Hoc Task Force on the Future of Libraries and the MIT Ad Hoc Task Force on Open Access to MIT's Research, and is a member of the National Academies of Science, Engineering and Medicine Roundtable on Aligning Incentives for Open Science.

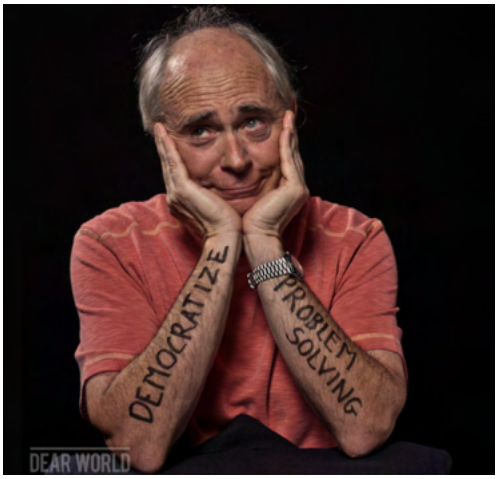
Chris is a member of a number of advisory boards and steering committees, including: the Steering Committee of SocArXiv, an open access platform for social science research; the Harvard Board of Overseers Committee to Visit the University Library, and the External Advisory Board of the Stanford Data Science Institute's Center for Open and REproducible Science (DSI-CORES).

The Lens Leadership Team

An Australian not-for-profit social enterprise

Richard Anthony Jefferson

Chief Executive Officer, Cambia



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Osmat Jefferson PhD MInt Law

Director of Product Development, The Lens;
Visiting Fellow at the BEST Center, QUT

Osmat is currently the director of the Lens product overseeing the development of the various capabilities available in the open and global platform, Lens.org. She joined Cambia in 2005 as a lab scientist and her research interests expanded to complex adaptive systems, mainly the biological innovation systems and so she moved with the Lens team to designing and developing open public resources that enable and engage different stakeholders in the use of transparency and evidence-based approaches in problem solving.

Osmat's scientific and legal background includes a master degree in Plant sciences from the American University of Beirut, a Ph.D. from Cornell University in that field focusing on plant virology with minors in ecology, international agriculture, and biochemistry, and another master's degree in International Law from the Australian National University. She has also had extensive training and experience in patent data analysis.

Osmat began her career as a research virologist in Latin American and then had her own lab for five years at the international organization, IRRI, in the Philippines, training students and researchers in South and Southeast Asia, and building public capabilities across national lab facilities. She held several joint appointments with universities in Asia and since 2009, Osmat has also held dual appointments with Queensland University of Technology's Faculty of Science and Law.

Mark Garlinghouse

Director, Business Development

Mark's professional experience is in the information industry working with content, analytics and software providers to help organizations to better manage the knowledge within their organizations as well as sourced externally.

He has built commercial teams and successfully expanded market share in Asia Pacific for IHS-Markit and Thomson Reuters (now Clarivate).

Mark holds an undergraduate degree in East Asian Studies from Stanford University and attended the Johns Hopkins University School for Advance International Studies' Nanjing Campus. Outside of work, Mark volunteers his time on the executive committee of the International Society of Knowledge Organization in Singapore and supports philanthropies that fund education.

Lens CAP Launch - Pull Quotes

Jane Halton

Board Chair CEPI
Co-Chair COVAX

- 'One of the reasons that CEPI was created was to have a science based, evidence based approach to research and then equitable access to that research and the products of that research... The great thing about something like the Lens is it embodies the genuine spirit that underpins CEPI and I think the effort that we've all tried to make in this pandemic to bring us together to solve problems'.

- 'In my previous roles in government, but also clearly in terms of what I currently do at CEPI and the work that I have always championed throughout my professional career, enabling speed of access, enabling knowledge to be transferred, [The Lens Toolkit] is so important. And I do think that it not only underpins the work that we're seeing at the moment, but it has the huge capacity to speed that work up in times of future crises. So I think it's really important'.

- '[The Lens] actually unleashes human potential regardless of where it is in the world'.

- 'I'm very supportive of the Lens' pledge to give tiered access to actually even up that playing field to give everyone a fair go'.

- Certainly in terms of the world, we need to actually change our mindset, we shouldn't see people who are the recipients of charity and donation, we should actually see everyone for their global potential.

- 'The Lens is a single, open, integrated platform that has the great strength of bringing together all of those [science, policy, civil society and business] disciplines into the one place. That is what we need for the future'.

- 'Universal access is the key that unlocks human potential. It is the way that we enable people around the world to participate, to contribute and ultimately to us all benefiting'.

- 'In solving the problems we have today, we've seen the strength of partnership, we've seen the benefit of collaboration, so a platform that facilitates, enables and positively champions that is what we need going forward'.

K. VijayRaghavan

Principle Scientific Advisor to the Government of India

- ‘It is just enormously inequitable, the distribution of access [to innovation knowledge], no doubt about that, if you’re a scientist in the West, you have one kind of access. And if you go to countries of the south there are very, very few places where access is wide’.

- ‘A treasure does not have value if it is not sufficiently used. If it’s locked-up and used only by a few, it benefits those few. So we have an enormous opportunity here [with the Lens] by broadening access to actually change things for the better’.

- ‘We need to have this all over India, all over Asia, all over Africa, all over South America. And that’s when you have a truly innovative system’.

- ‘We should view innovation as being able to come from all over the world and through a partnership benefit everyone’.

- ‘There should be no restrictions on people’s ability to innovate. Humans have always been extraordinary innovators, but now we need that ability to be unleashed globally so that we can actually look at innovation not just for our protection, not economic growth, but also as stewards of the planet’.

- ‘There should be a democracy in the opportunity which we give to everyone. Even if you come from an extremely resource constrained environment, you should be able to have access to the tools, the teaching, the resources which allow you to innovate. And that’s actually not unfeasible. It’s possible’.

- The potential for the Lens to catalyse collaborations with India, within India and over the world is immense’.

Mitchell Baker

Executive Chairwoman and CEO of the Mozilla Foundation and of Mozilla Corporation

- ‘Equitable access to knowledge has massive potential for the innovative capacity of the world’.
- ‘By sharing knowledge more globally, the range and scope of problems that we’ll solve will be greater and the variety of solutions will also be greater’.
- ‘Having the map to find your way as to what’s there and what’s possible in a sophisticated way for scientists and researchers is amazingly valuable’.
- ‘There are many areas of the Lens where I see great value. Not just that the information is out in the world, but that it can actually be found, that it’s accessible, that it’s indexed, that it’s correlated with other materials. So there’s knowledge sharing, but it’s also the creation of a knowledge base which is equitably available as a massive value to the Lens’.
- ‘It’s a tool in an area where innovation is bounded by patents and existing intellectual property. And so as a tool for finding one’s way through that, I think it’s massively valuable’.

Antony Taubman

Director, Intellectual Property Division, World Trade Organization (WTO)

- 'The lens is an invaluable step forward to turn on the lights, not only to make the data more accessible, but to make it more understandable, to make it more usable as the basis for decision making, whether it's decision making for policymakers, whether it's decision making for those with the very practical task of establishing a new vaccine production capacity or deciding who are the potential suppliers for an urgently needed vaccine; will we run into intellectual property issues or not?

- 'One of the real strengths of the Lens is that it recognises that patent data doesn't exist in isolation. It has to be understood in combination with the scientific literature'.

- 'One of the real strengths [of the Lens] is the combination of the patent literature, the patent information about specific innovation, specific inventions; and the broader scientific literature, which helps shed light on those inventions and gives us more detail, sets it in its wider context'.

- 'So for me, it's both the accessibility of the data, but also the usability and the integrated approach that brings these elements together in a way that adds value to each strain of each stream of information. Because ultimately what we need is a broad, inclusive, yet accessible overview of all these streams of development. They're all valuable in themselves, but they can be hard to understand and they can lead to a kind of tunnel vision. If you get too deeply into one line of data or another. The lens enables us to see it all in perspective.'

- 'The Lens is a particularly powerful tool because it enables us to understand individual inventions in individual patent documents in a broader context. We can understand how they fit within the broad background of scientific knowledge to fit into the innovation. And it enables us then to build on that insight for further innovation'.

- 'One of the strengths of the Lens is that it enables you to transcend those boundaries between different technical fields, and to understand the broad picture in a usable way'.

- 'It's a matter of bridging between the principle that knowledge is a public good to making it work, to make it actually do its job as a public good. Bridging that gap is what the lens is all about.'

- 'What the lens is doing is helping us bring about the intended function of the patent system in ensuring that if a patent is granted, it is truly a genuine innovation, a genuine contribution to our knowledge. And secondly, that that contribution to knowledge is fully and widely shared and available in a way that is both useful and accessible.'

Maximilliano Santa Cruz

CEO, Santa Cruz IP – Intellectual property, technology transfer and Innovation, Santiago, Chile. Previous Director General, National Institute of Industrial Property of Chile

- ‘But the beauty of the Lens is that it’s bringing the patent world together with the research world in a single window, at a single site. And it’ll give you information as important as who is the inventor of this or that invention, who owns it, where this innovation is going to and where it’s coming from. This information can be freely used by anyone to do research, to do analysis of what their competitors are doing and to to find hotspots of innovation, to avoid unnecessarily duplicating research and development efforts by leading your teams to work on other things.’

- ‘The Lens provides a powerful set of research and analytical tools to harness the creative potential of open data’.

- ‘By drawing links across science and business, the Lens tool kit enables users to map the innovative capabilities of scientists, public institutions and patent holders’.

- ‘The [Lens] toolkit allows you to see whose work patent discoveries were built on who the leaders are in the field and who you can collaborate with’.

- ‘The lens is an incredibly powerful tool because patents, together with the research that inspired them, represent the biggest body of innovation knowledge in the world’.

Kate J. Wilson

Chair of Cambia Board. Executive Director, Climate Change and Sustainability for NSW Department of Planning, Industry and Environment, Australia

- 'The lens does a number of things to really showcase capabilities and bring people together. So first, it doesn't just give us raw information, but it actually curates, interprets and gives us useful knowledge from that information. For example, who are the leading people publishing it in the scientific literature in that field, which are the companies generating the most patents? And then importantly, it actually links information from different fields, from scholarly research, from business together, so that we can get a much deeper understanding of what innovation's possible'.

- 'What the Lens is doing is building on that [open data] further and actually curating and bringing together different bodies of knowledge in a way that actually links and gives us much greater information. And it's also all accessible in one place and readily accessible through the Web so that people don't have to have expensive subscriptions, have specialised knowledge of particular databases, and they can go straight to the heart of matter'.

- 'The Lens has a number of tools that actually make that [open data] immediately usable to the user, to people who log on and explore its databases. So I've used it in my field. I've looked at areas of research in climate change. I can see immediately what are some of the leading topics, who's working on that in Australia and overseas. And that can immediately give me ideas for future collaboration'.

- 'One of the truly unique aspects of the lens is that it connects the patent literature to the scientific literature. So you can see whose work patent discoveries were built on, who are leaders in the field. And you can get a much deeper understanding of what's actually being exposed in those patents, what the science underpinning it was, and, of course, who you can talk to and who you can collaborate with in that field'.

- 'The lens offers everybody access to information about discovery, about inventions, about patents and about the underpinning science. And it's building more and more tools that let people see not just the technological facts, but understand the people who are driving that understand some of the key things and get a much better overview that is independent of the areas that they're interested in'.

- 'The LEAP policy means that anybody can access the information and knowledge that's available through the lens. That's irrespective of the ability to actually pay for it'.

- 'The Lens is the only platform to connect the vast wealth of patent literature to the scholarly work underpinning it'.

Soumya Swaminathan

Chief Scientist World Health Organisation

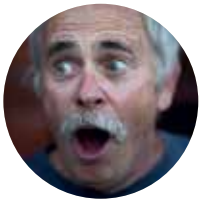
- ‘The mission of the Lens is to democratise science, to democratise knowledge and make it as easy as possible for academics, researchers and entrepreneurs in all parts of the world to have access to the tools that they need to make the innovations that are relevant and necessary for the areas they live in.’

- ‘We see this new initiative from the Lens as being very complementary and in line with the direction in which we want to see this progressing’.

- ‘The Lens provides the tools for researchers and entrepreneurs and innovators in all parts of the world to be able to access information on what’s going on in the landscape of the latest advances in science and technology. And that by itself gives a big boost to an individual citizen in one country to have the capacity to understand, to be able to see and appreciate what’s going on in other parts of the world and then form the connections and the linkages.’

- ‘We live in a global, interconnected world and we know that there is no innovation that is possible without collaboration between a number of groups and scientists across the world.’

- ‘Nobody can solve these challenges alone. And you need the partnership between the public and the private sector and governments and philanthropy and civil society in order to produce more products for the global public good.’



COMMENT:
RICHARD JEFFERSON

TURNING SCIENCE INTO SOCIAL OUTCOMES

For innovation to bring public benefit, mapping the influence of academic papers is just the beginning.

It takes much more than science to make an impact on society. The complex nature of modern innovation requires assembling a jigsaw puzzle of complementary and essential capabilities before benefits reach the public as useful and affordable products. These include research findings, intellectual property, market and manufacturing knowledge, quality assurance, and legal standards, and regulatory compliance.

Finding, understanding, visualizing and assembling these capabilities is expensive and difficult. Knowledge lies in silos of specialization, curated and overseen by expensive, skilled, practitioners. These silos must be joined and mapped if the social and economic outcomes from science and technology are to be increased and the benefits more equitably distributed.

To develop maps of how science and technology influence industry, the idea of 'innovation cartography', the primary knowledge corpora need to be open, linked, standardized and made more meaningful. Openness is essential to achieve a network effect.

Patents are a critical part of the primary knowledge corpora. They are a main tool in the innovation strategy used by the private sector, but rarely by the public sector, to reveal findings and inventions that have anticipated economic use.

Because a patented invention must be publicly disclosed, patents offer a valuable insight into the actors, capabilities and aspirations of inventive product development. They also contain metadata links to diverse knowledge, including people and institutions, science, standards, legal and regulatory issues. Almost 50 million patent inventions disclosed in the last 100 years include aspects of virtually all technology in use today.

But, simply inferring the performance of the public sector by counting a university or scholar's patents or patent applications is of marginal use to determine or improve impact. In many cases, these patents are non-performing — most are never licensed — and mainly indicate the ambitions of the academic applicant, and the willingness of the university's commercialization office to fund the application in anticipation of licensing revenue. It is more often patents owned by third parties, informed by and citing academic work, that expose the influence of research on the development of products and services.

To map such influence on industry and the innovation process, we need to combine published research with the patent corpus.

When patents are filed, the applicants or the patent examiners often cite published scholarship that informs, contextualizes, influences or enables their new inventions. By linking these published citations to unambiguous identifiers, we can begin connecting the two bodies of knowledge, creating an influence map. This would allow anyone to explore how published research findings and scholarship enable the process of innovation; and how the people and institutions interact to advance or hinder the uptake for society. This must occur in a free, open, private and secure format that encourages scientists and investors to discover and build bridges with the other actors in the innovation system.

> "UNDERSTANDING THE PATENT LANDSCAPE CAN FOSTER BETTER AND MORE TRANSPARENT PARTNERSHIPS."

Consider a disease vaccine whose lack of profitability means private industry alone cannot justify the investment and risks of commercialization.

This is a classic market failure. Effective disease prevention by immunization needs vastly more than the research that underlies discovery of the vaccine's immune target. All the other components are as important, such as demonstrating safety and efficacy through clinical trials and regulatory compliance. We have to know which institutions and what people should be 'at the table' to get the project done, and each needs to find sufficient incentive to participate and stay the course.

In this instance, open influence mapping would allow the academic research community and its public funders to better understand the complex innovation ecosystem. It can ensure the project operates by licensing or acquiring rights to third-party intellectual property — or inventing around it — from the outset.

Too often this process is tied up with research programmes conducted by academic scientists who neither know nor care about third-party intellectual property considerations. Understanding the patent landscape can foster better and more transparent partnerships.

Most innovative businesses spend vast sums to understand and map the knowledge and patent ecosystem in which they work. They cannot afford not to do it — the legal, business, financial and technical risks from ignorance are too great.

For the public sector, or for public-good targets, the same constraints and needs apply, but they cannot afford it, nor is it part of the culture of public science and investment. Yet it must be done.

The resolution is to make it cheaper, easier and more effective to join the knowledge corpora in a way that increases the quality of decisions for all participants, public and private, and enables more effective and equitable policy and practice of innovation. ■

Richard Jefferson is professor of Biological Innovation at Queensland University of Technology in Australia, and the founder of Cambia, a social enterprise, and Lens.org, a free, open and secure platform to make the innovation system more efficient, fair, transparent and inclusive.