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The Open Data Institute 5 Year Strategy 2023–2028

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Part 1: Introduction

Since the Open Data Institute (ODI) was founded in 2012, the amount of data created globally has grown exponentially. Statista reported that the volume of data and information created, captured, copied and consumed worldwide would reach 97 zettabytes in 2022 – up from 6.5 zettabytes in 2012. A zettabyte is equivalent to a trillion gigabytes[1]. This data has become the driving force behind businesses, communities and society as a whole. With this come enormous possibilities but also anxiety about how data are used, by whom and for what purposes (including those yet to be realised). In the last 10 years, we have seen dramatic changes in the data ecosystem and in the needs, wants and priorities of the ODI's many stakeholders.

Data is now ubiquitous in every sector, industry and area of our lives. Yet, the tools, knowledge and processes needed to leverage it responsibly and meaningfully are often absent, or lag behind advances in technology. For example, the recent developments in generative AI or large language models - in fact all modern machine learning - are enabled by data. The ODI has a critical role to play in building an open, trustworthy data ecosystem upon which AI systems depend.

*We believe that the need for an open, trustworthy data ecosystem **at scale** is stronger than ever.*

After more than a decade of working with companies and governments, the ODI wants to do more to bring about positive change in practice and ensure that data works for everyone. The ODI believes that this can best be achieved by the building of a strong data infrastructure,[2] by the promotion of knowledge, by influencing policy and by driving tangible change in how organisations share and manage data responsibly, effectively, ethically and collaboratively. Differentiated by the ODI's brand and purpose, we strive to reach a global audience.

In the 1990s and 2000s, Thomas L. Friedman,[3] suggested that the world was becoming increasingly 'flat'. He suggested that there has been a levelling out of the economic playing fields between industrial and emerging markets across the world, making national boundaries less relevant. Yet recently, we have seen a dramatic shift in our understanding of the nature of localisation and the role it plays in both the challenges we face; and the potential solutions.

While many of the challenges – environmental, social and economic – happen at a on a global level, they often manifest differently in different countries, regions and even cities. Scalable actions to build data infrastructure and embed data literacy across populations are critical, but they must be complemented with a bespoke, consultative approach that tailors processes, solutions and best practices to the realities of **a specific location, community or organisation**. In addition, the world of data needs to work holistically. For example, data literacy

is an essential foundation, but we also need alignment in standards, practices and approaches to maximise the impact of data.

The ODI is well positioned to balance between its global understanding of trends, a wide perspective of how they manifest in different contexts and a tailored approach to designing, implementing and measuring solutions that drive impact. Only in this way can we create an open, trustworthy data ecosystem on a global scale – and deliver on the ODI's mission.[4]

To play this role in the world, the ODI must continue to evolve. Diversity of revenue is essential for us to have an impact across cultures, society and the economy. More than that, we believe that we can't achieve our vision of *a world where data works for everyone* unless we work across all sectors. This diversity gives us essential independence and credibility – as a neutral convener and thought-leader and as an institute working on cutting-edge transdisciplinary research about data. Our ability to extend our reach, to influence and to deliver our vision and mission depends on all of this. Therefore, we must expand our horizons, seek new funding opportunities and work with organisations and leaders positioned at different stages in their work with data.

As we write this strategy, in our decennial year, and plan for our next five years, we feel particular urgency to spread our mission and impact further – to counteract some of the harmful or dangerous effects of irresponsible data collection, use (and misuse) and sharing around the world and to maximise the opportunities. Over the next five years, we expect to see, for example:

- The adoption of a broader range of data sharing models, including Open Banking (of which the ODI was one of the originators) across new sectors, for example, in financial services, energy, health and physical activity, retail, travel, insurance and local government.
- The creation and utilisation of many more trusted research environments, for example, in healthcare. The ODI's work in data institutions leads the way in showing how data can be stewarded ethically and effectively so that it can be shared for specific uses without compromising confidentiality or commercial sensitivities. We expect to see more disruption in the form of new types of data institutions in the coming half a decade.
- Data assurance (demonstrating to organisations and individuals that the data and data practices of others are trustworthy; that is, that the data can be trusted and shared safely) will become hugely significant, with more professional career paths, standards and accreditation mechanisms. The ODI is already working in this area, and we expect to extend our activities.

In this context, the ODI will:

- Maintain consistency in our vision and mission and their outward expression – our brand – while ensuring that we remain relevant in the current economic and political climate.

- Engage and collaborate across the world, enabling others to think and do things in new ways, taking our ideas far and wide and enriching them with new perspectives.
- Improve data literacy and responsible use of data to widen the spectrum of people who have the skills and knowledge to mitigate the risks and maximise the opportunities that come from the use of artificial intelligence (AI).
- Operate like a beacon – based in London UK but leveraging digital technology to extend our mission far and wide, helping others who are navigating the data landscape to choose the right path – towards an open, trustworthy data ecosystem.

We believe that the greatest value from all types of data comes when the benefits are shared equitably – a world where data works for everyone. Openness remains one of our guiding principles, and we believe that the best foundation is as much open data as possible, supported and sustained as data infrastructure. But we have evolved our interest to encompass a whole spectrum of data and to think about how different types of data can empower each other or become interoperable – data from closed to shared to open, that is, the data spectrum.[5] We understand that not all data can be open, but value can still be found in sharing data in secure ways, and how this is done is increasingly important. We have learned valuable lessons in the past 10 years that have informed the development of this strategy, and we expect there will be many more to come.

For example:

- Traditionally, open data and privacy were seen as opposing forces, but we now understand that they can build on each other. We believe that the ODI has a role to play in helping navigate this and new types of data stewardship across the data spectrum.
- In the early days, we overestimated how mature organisations were in managing their data and how knowledgeable they were about data, especially in the private sector. Additionally, we overestimated the amount of knowledge and expertise that would be shared across industries and sectors to advance the overall level of understanding across society and the economy. In the past decade, we have seen the creation of data assets and knowledge ‘islands’, with no bridges between them. We have seen successes in the public sector and the broader civic society. But the real measure of success is when corporate entities commit to invest in data infrastructure and the potentially positive outcomes for society, the environment and the economy that might result. This is beginning to happen but remains a key challenge for us in the next five years.
- The ODI is uniquely positioned to help companies and organisations leverage data towards achieving business-minded objectives without compromising privacy, legislative and ethical boundaries. In the public, private, cultural and philanthropic sectors alike, we hope to see a move away from closed to more open markets. This shift by corporate bodies, society and governments should be identified, enabled and accelerated, and data infrastructure should be developed to move towards federated models of data sharing.

Part 2: Summary

This document articulates the strategic direction of the ODI for the next five years, tying our vision and mission to the **principles, priorities and commitments** we believe to be our most important areas of focus and where we can have the greatest impact. It is informed by and designed for our key stakeholders across government, industry and civic society. It has been developed collaboratively, with input from the ODI's board, leadership and staff. It will guide our decision-making, business planning, resourcing and marketing, amongst other key organisational functions. More than anything, it will serve as the compass we will follow as we both deepen and expand our role as a leading advocate and enabler of data best practices.

External drivers

No organisation – and no strategy – exists in isolation from the world in which it operates. As a mission-led not-for-profit company that strives to build a world where data works for everyone – businesses, governments, civic society and individuals – we aim to bring the greatest possible value across society, the economy and the environment. We are curious about the world around us and conscious that our value comes from our ability to respond to (and act within) this context. We are driven, at least in part, by the events, developments and trends that shape our world. These are explored in more depth in Part 3, but most significantly we notice that:

- **Global mega-trends** – climate change, conflict, an ageing population, repression, inequity and inequality, to name just a few – are impacting our society and create instability.
- **Creating a strong data infrastructure** can enable data to be shared safely; it can allow trends to be spotted early and action to be taken to minimise harm and maximise value (social, environmental and economic). Data infrastructure ranges from building institutions that safely and equitably steward data to training a new generation of data leaders to govern data for the benefit of all and ensuring that as many people as possible have access to information and tools that enable them to understand how to gather, share, publish and use data in ways that can be trusted.
- **When data is made available equitably as open data,** for anyone to access, use and share, it can contribute to transparency and accountability. But open data only works for everyone when everyone is able to leverage its benefits. Open data can allow for rapid innovation, often enables businesses to grow and thrive and frequently benefits the lives of citizens. We have seen many examples of this in the past 10 years, from global Open Banking to the innovative use of secondary health data.

- **Lack of trust in data and data practices can be a major barrier to data sharing.** It has been suggested that 68% of companies do not have sufficient systems to demonstrate trustworthy data practices. Scaled to the GDP of the twenty largest economies in 2019, estimates suggest that data sharing could unlock between US$700 billion and US$1.75 trillion in value[6]. According to a 2021 study, a 25% increase in trust in data and data practices could generate an additional US$47.3 billion to US$118.3 billion.[7]

- **Mistrust and distrust have become common features across borders and societies in the 21st century.** Global cooperation and trust are in short supply, yet increasingly, legal and regulatory instruments are being used in anti-monopoly efforts. There is a growing need for organisations working in data that can operate across geographic and sectoral boundaries and can act in the interests of all, with studied and respected neutrality.

- **While the threats posed by data can, to a certain extent, be managed through robust infrastructure and data sharing mechanisms, there is also the necessity to educate, that is, to develop knowledge and skills.** The results of efforts to improve data literacy have serious implications for bottom-line returns – a key concern for governments and corporations. It is predicted that 97 million new data-enabled and reliant roles will emerge by 2025,[8] and according to the 2018 Data Literacy Index, workforce data literacy has a proven correlation with corporate performance. Organisations ranked in the top third of the index were associated with three to five per cent greater enterprise value (market capitalisation).[9]

- **Deep fakes and data biases are just causes for mistrust.** Many data sets can hide implicit and learned biases, as detailed in The Big Data Paradox.[10] The scale and impact of this is immense. If biases and misinformation are not addressed, existing societal inequalities will continue to grow in influence and momentum. For diversity, equity and inclusion to be properly embedded in discussions around race, sexuality, gender and ethics, algorithms must avoid cultural biases. New culturally sensitive approaches towards data bias and robust mechanisms of stewardship[11] are required to establish and maintain trust in data.[12]

- **The emergence of generative AI or large language models (LLMs)** is driven by data. We must acknowledge that there is still much concern about the trustworthiness of this data, the products and services that are being created with it. Those developing AI systems must ensure that the data used in training or deployment is fit for function. High quality, trusted, open data is essential.

Six guiding principles

In response to these external drivers, we have defined six guiding principles for the next five years that are rooted in our core identity (our vision and mission), our position in the world and our unique body of knowledge and expertise. They build on and further develop the six manifesto points that are set out in our 2017 strategy[13] and that we continue to use to shape our work. In addition, our principles define the foundations that we believe underpin our role in responding to global trends, making the best of opportunities and addressing market forces outside our control. They are:

Principle 1: We believe that a **strong data infrastructure** is the foundation for building an open, trustworthy data ecosystem on a global scale and that this can help address our most pressing challenges.

Principle 2: Strong data infrastructure includes data across the spectrum, from open to shared to closed.[14] **But the best possible foundation is open data**, supported and sustained as data infrastructure. Only with this foundation will people, businesses and governments be able to realise the potential of data infrastructure across society and the economy.

Principle 3: For data to work for everyone, it needs to work across borders – geographic, organisational, economic, cultural and political. **For this to happen ethically and sustainably, there needs to be trust** – trust in data and trust in those who share it.

Principle 4: There is greater need than ever for **trusted, independent organisations** to help people across all sectors, economies and societies to benefit from better data infrastructure.

Principle 5: For data to work for everyone, those collecting and using it need to be highly alert to inequalities, biases and power asymmetries. All organisations working in data must take proactive steps to ensure that they contribute fully and consciously to creating **a diverse, equitable and inclusive data ecosystem**.

Principle 6: The world needs a new cohort of data leaders – individuals who **have data knowledge and skills and are equipped to understand the value, limitations and opportunities offered by data**, data practices and data sharing.

Our guiding principles will enable us to chart a course across the next five years, focusing on a set of priorities that in turn lead to direct commitments and actions that are further explored in the pages that follow. Over the next five years, we will engage actively with governments, industry, civil society organisations and citizens to bring these principles into effect and to devise systems and processes that respond effectively to changes as they occur.

In this strategy, we set out why we have chosen these principles, how we plan to deliver them and what we expect the impact of our work to be. This strategy is designed to set our course and keep us focused, but as someone very wise once said, there is never anything certain, but uncertainty itself!

Part 3: The ODI in the World

In this section, we explore the world in which the ODI finds itself (as we write). We reflect on our journey so far and the role we want to take in the next five years and beyond, and we explore how these elements come together to inform the principles that will guide us in the next stage of our evolution.

The big picture

Five years of change

We live in an unstable world. The last five years have seen profound levels of change and uncertainty. Society was thrust into unpredictably complex scenarios, from a worldwide pandemic to the continuation (and in some regions), the proliferation of hostilities. The likelihood of multiple economic crises is high, and we face one of our gravest challenges in combating climate change. **However, more and more, the ODI sees the potential for data, technology and the people who work with them to provide solutions to our most pressing problems.**

The destabilising effects of COVID-19 have been profound. In many countries, levels of dissatisfaction with the political and economic elites are high.[15] In efforts to curtail revolts and retain power, many ruling elites have adopted authoritarian and autocratic structures of government. The number of countries that moved in an authoritarian direction in 2020 outnumbered those moving towards democracy.[16]

It is unsurprising that conflict is predicted to increase. Political instability, climate change, inequity and inequality, youth bulges[17] in some countries and regions and an ageing population in others, the unchecked spread of small arms, the connectivity of non-state actors;[18] all these indicators of drivers of conflict are projected to grow. In such turbulent times, **the case for trusted and embedded data infrastructure to ensure transparency and accountability of action is arguably greater than ever.**

Developments in data

We have seen the negative outcomes of irresponsibly governed or stewarded data. We have witnessed data manipulated by bad actors, including micro-targeted disinformation offences throughout the pandemic and in key political contests,[19] spates of cyber-attacks, the exploitation of vulnerabilities in machine-learning systems, the emergence of biases and online harm and market imbalances that create opportunities to profit from the exploitation of personal data.[20] These all illustrate the importance of responsible data use and stewardship[21] and greater knowledge and skills.

A wide range of technologies, skills and practices have emerged to counteract some of these effects, for example, privacy enhancing technologies (PETs) and public interest

technology (PIT),[22] which have the potential to be more responsible and inclusive.[23] These also have a role to play in facilitating increased data sharing. The rate at which new technologies and assured data sharing mechanisms can be deployed depends, at least in part, on data protection authorities' progress in ironing out the intricacies of cross-border data transfer privacy.[24] [25] [26]

In a world with constantly changing parameters, we must find solutions and mechanisms to mitigate disruption. **The importance of openness and of responsibly stewarded and assured data practices is paramount.** We have seen the powerful effects of data sharing and open data in instilling trust in systems and processes.[27] Data-informed and data-enabled decisions will continue to trigger sustainable growth, the fruits of which can be channelled towards delivering long-term societal goals.[28] **The need for collective action to achieve shared goals presents a unique opportunity for data and data-enabled technologies to fuel innovation and international collaboration.**

Trust on a global scale

Self-interest and self-preservation have, in many cases, pointlessly taken precedence over global cooperation and trust. Initial responses to the pandemic demonstrated the strength of self-serving nationalism rather than collaboration.[29] Post pandemic, countries are looking for opportunities to re-shore operations and bolster domestic capabilities as they prepare for further trade protectionism.[30]

While accelerated by the pandemic, this shift has historic roots in the rise of global industrial policy, the US–China trade war and, more recently, Brexit. This turn inwards has been mirrored in the realm of data, evidenced by the rise of data sovereignty. This includes data localisation and retention laws, restrictions on the use of encryption, mandated access to citizen or company data, censorship and controls on international data flows.[31]

The complexities of cross-border and cross-sector sharing, and the digital trade that trusted shared and open data flows allow, need to be addressed. This is now more important than ever before, with the world's economic centre of gravity shifting eastwards. The economies of China and India, as well as those of rapidly growing countries in Africa and South-East Asia, look to outstrip the historically dominant USA. Where four of today's largest economies are European, there will be just one by 2050.[32] This transfer of power is set to be mirrored in the world of technology and data. New growth in internet use will likely be concentrated outside the West.[33] The innovations and approaches that emerging economies are now adopting will contribute to this change in dynamic ways, shifting the power away from certain blocs.[34]

The creation of data-enabled and digital economies offers a wealth of market opportunities for savvy actors. However, there are many differing approaches to data regulation. This fragmentation and inconsistency could inhibit progress, and restrictions on data flow and use could impose extra costs on trade and productivity.[35]

Data sharing potential

Data sharing and openness are critical in the processes of value identification, value assessment and value capture of previously overlooked or unused data sets. There are exciting opportunities to develop the people, practices, products and services that will reduce the frictions of data sharing,[36] ensuring that, where possible, it is deployed. The potential for data sharing has been revealed throughout the past decade, particularly during the pandemic, but memories are short. **Part of the ODI's mission is to embed this potential and make sure that the breakthroughs are long lasting.**

A sphere in which data sharing is of immediate benefit is in local governments. Civic authorities have an opportunity, where resources allow, to increase the use of data to make better informed decisions on behalf of their citizens and to allow for direct public involvement. With the demographic transition to megacities and urban environments, local governments have seen an increasing role in impacting both communities and individuals. This role is expected to grow, with increasing devolution (in some geographies), to local government as the key decision-making and execution mechanism of policies and processes.[37] [38]

Technology and an ageing population

Many countries will have to factor in ageing populations, with over 1.4 billion people predicted to be over the age of 60 by 2030. Technology will need to answer the call for increased levels of data accessibility and data infrastructure to foster engagement and trust with older demographics isolated from data and digital technology. It is in such areas that a move from digitalisation to a digital transformation is needed. **Digital transformations will surely rely on data from other sectors and will require investment and dedicated research into interoperability to create common data spaces.**

The ODI believes that it is important to communicate the opportunities that such transformations provide. This requires organisations such as the ODI to help all sectors understand the possibilities and risks associated with change; data and AI remain largely misunderstood.[39]

Innovation

Artificial intelligence and automation are set to transform economic growth and activity, raising the global GDP by 14% ($15.7 trillion) by 2030.[40] A service-based economy, serving a growing consumer class, is set to take the place of our manufacturing and product-based economy.[41]

The emergence of generative AI or large language models (for example, ChatGPT and Google Bard) – indeed all of modern machine learning – is driven by data (huge amounts of it). We must acknowledge that there is still much concern about the trustworthiness of data. Artificial intelligence-generated data can falsely convince people that it can be trusted,[42] and many data sets can hide implicit and learned biases.[43] We do not yet fully understand the fundamental characteristics of the data we are collecting at scale and should not be seduced by the idea that big data always reveals the truth!

At the same time, and whilst not without controversy of its own, Web3 will enable peer-to-peer interactions without centralised platforms and intermediaries,[44] creating a shift from control by government and big tech to control by individuals and enabling better computer-aided design. At the same time, there will be an increasing amount of real-time data created and used. Digital twinning is becoming more widespread; the concept is still new for many countries, but it is predicted to become mainstream within the next five to 10 years.[45] The UK is developing a National Digital Twin – an ecosystem of connected digital twins securely sharing infrastructure information to support better outcomes for us all.[46] With so much data being shared, it means that federated models of data sharing need to become commonplace.

Consumer data, trust and mistrust

In the years ahead, a new global middle class will render consumption patterns an increasingly important force.[47] Consumer data will have higher value, and commodification of personal data will be seen as an increasingly powerful resource.[48] It is here that trust and privacy will need to be established and embedded. Recent anti-monopoly big tech efforts will go some of the way.[49] [50] [51] However, with the development of very large models created around machine learning and AI services, a handful of big tech companies have immense capacity to harvest much of the internet. Governments, organisations and individuals must ask serious questions around big data governance. **The answers to important questions surrounding such governance must engender trust in systems and processes.**

At the same time, if biases and misinformation are not addressed, existing societal inequalities will continue to grow in influence and momentum. For diversity, equity and inclusion to be properly embodied in discussions around race, sexuality, gender and ethics, algorithms must avoid cultural biases. This will require new approaches towards data bias and robust mechanisms of data collection, as well as stewardship,[52] to establish and maintain trust in data.[53] Calls to empower communities to have full participation in activities involving the collection and use of data about them are growing ever stronger.[54]

Data literacy and ethical use of data

While the threats posed by data, be they malicious or unintentional, can, to a certain extent, be managed through robust infrastructure and open data sharing mechanisms, there is also the necessity to educate; to develop governments', organisations' and individuals' data knowledge and skills; and to embed best practices for responsible, ethical use of data.

The results of efforts to improve data literacy have serious implications for bottom-line returns, which is a key concern for governments and corporations.[55] It is predicted that 97 million new data-enabled and data-reliant roles will emerge by 2025[56] and, according to the 2018 Data Literacy Index, workforce data literacy has a proven correlation with corporate performance. Organisations ranked in the top third of the index were associated with three to five per cent greater enterprise value (market capitalisation).[57] At the same time, only 21% of the global workforce are fully confident in their data literacy skills,[58] and only 22% of millennials have knowledge and skills related to data.[59] The Data Literacy Index[60] found that 76% of key business decision-makers globally lack confidence in their data literacy skills. This poor data literacy is the second-highest internal roadblock to

the success of a chief data officer (CDO).[61] Despite more than half of C-suite executives (52%) reporting that they feel fully confident in their data literacy skills, 45% say they frequently make decisions based on gut feeling rather than data-led insights.[62]

There are also pressing environmental reasons for improving global data literacy levels. Countries must invest in their populations' data skills, building a sustainable capacity for effective use and understanding of data to solve environmental challenges[63] [64] and meet goals.[65]

The ODI in 2023

In the context of the forces, trends and influences outlined above, we believe that the ODI's vision for a world where data works for everyone has never been more relevant. The need for an open, trustworthy data ecosystem at scale is stronger than ever, and we are needed more than ever. **Our independent, non-partisan status, our trusted convening power and our extensive body of work – over 10 years – make us unique in the world.** We help organisations realise the potential of data, understand its properties and value through our research, and build skills and strategies for safe, ethical and trusted data sharing that benefit customers, citizens and stakeholders. We help leaders understand the value of data, and we show governments how creating standards for data and data practices can enrich public services. We break down barriers, help others forge alliances and create safe spaces for divergent views to be heard and for (sometimes conflicting) interests to align around a common cause.

We are proud of what we have achieved. Through 10 years of work, the ODI has become an important part of the global data ecosystem. We are both pro-innovation and pro-privacy and we believe that the two can coexist. In fact, we believe that trust is an enabler of innovation – trust that comes from respecting privacy, individual (and collective) rights and through operating in an ethical way. We reconcile different interests to work across business and society to the benefit of all. We are mission-driven and margin-generating; we are a not-for-profit with revenue from the public, private and philanthropic sectors; and we work internationally, nationally, locally and across society.

In the past decade, we have worked with others to:

- Train more than 50,000 people online and offline, supporting embedded learning to the UK's 480,000 civil servants via Civil Service Learning and delivering courses to more than 5,000 staff in the UK Foreign Commonwealth and Development Office.
- Incubate and help accelerate 191 early-stage enterprises across 25 countries. We have seen many of them grow into market leaders that drive positive change with data. These businesses combined have created more than 1,000 jobs and have generated in excess of £100 million in revenue.
- Work with some of the world's most credible brands to drive data best practices across many sectors. These include Arup, Wellcome, Microsoft, the J Patrick McGovern and Bill and Melinda Gates Foundations, Luminate, Omidyar Network,

Roche, Telefonica, the London Stock Exchange, Refinitiv, the BBC and Lloyd's Register Foundation.

- Catalyse or contribute to data-driven policies and approaches in more than 30 UK public sector bodies, including the Department for Digital, Culture, Media and Sport (DCMS), the Department for Business, Energy and Industrial Strategy (BEIS), Innovate UK, the Department for Transport (DFT), the Department for Education (DFE), the Department for Environment, Food and Rural Affairs (DEFRA), the National Health Service (NHS) and several Catapults, and we have contributed to many high-profile calls for evidence. Our work has been cited in dozens of reports by key decision-makers in data ecosystems, including in the UK government's National Data Strategy and the European Commission's Data Act. Our work with DEFRA propelled the UK into the top 10 worldwide for open data impact.[66]
- Directly advise the governments of Ukraine, Tanzania, Malaysia, Rwanda, Burkina Faso and Mexico through the Open Data Leaders' Network, collaborating with 43 countries.
- Create and contribute to key pieces of data infrastructure in the shape of: the global Open Banking system, which now has 6.5 million users in the UK alone; Open Corporates, which now publishes information about 219 million companies in 144 jurisdictions; and OpenActive, a community-led initiative that publishes open data on more than 500,000 opportunities to get active every month.
- Deliver returns of between four and 14 times the investment in the UK and EU-funded programmes we have run, and matched £22 million in government investment with £33 million in private sector and philanthropic contracts and funding.
- Collaborate with leading international researchers and world-class academic and cultural organisations to curate 14 audience-focused national and international exhibitions showcasing over 100 critically engaged artworks (40+ new commissions) from 77 internationally renowned, mid-career and emerging artists.

> *The ODI team has a wealth of expertise, particularly on the technical aspects to collaboratively create and maintain open data standards and tooling. The team has worked hard to help improve the sector's understanding of what open data is, through developing e-learning and courses, as well as helping partners to explore how this open data could benefit the sector.*
>
> **— Allison Savich**
> **Strategic Lead for Innovation and Digital Sport England**

Case study: Achieving sector change – the OpenActive story

OpenActive is a community-led initiative in the sports and physical activity sector that uses open data to get people more active. It was initiated to help address one of England's biggest public health challenges: the lack of physical activity and, specifically, the difficulties in finding opportunities to take part in activities. Sport England's Active Lives survey (2018) stated that only 17.5% (1.2 million) children and young people are meeting the Chief Medical Officer's guidelines of taking part in sport and physical activity for at least 60 minutes every day. The corresponding adult survey showed that only six in 10 adults gained the health benefits from achieving 150+ minutes of activity a week. The lack of physical activity causes an estimated 37,000 premature deaths annually and costs the UK economy around £20 billion per year.

Empowering people to make better and easier decisions around physical activity benefits the nation: general health and well-being is increased, strain on the health service is reduced, and the value of the sport and physical activity sector grows, boosting productivity.

A significant barrier to activity is a lack of clear information online about what activities are available – one fifth of adults have been put off doing fitness and sport activities because they were too difficult to find or book online.

Sport England initially tried to address this problem through a partnership with ukactive, which aimed to create a national activity finder, Spogo, but they realised that a one-size fits all solution was not the best approach. Several startups worked on solutions that used open data. Sport England recognised the potential but needed support to deliver a solution.

Solution

The ODI worked to develop OpenActive – using open data to get more people active. Through OpenActive, the ODI brought expertise and experience, which enabled it to promote the value of open data within the sector. The ODI's independence brought with it a unique advantage to encourage collaboration in a competitive sector.

The ODI's activities in developing the OpenActive initiative included:

- Increasing understanding of what open data is through eLearning and its Open Data in a Day course
- Encouraging activity providers to publish the data they hold openly

- Developing a data standard to ensure that published data is high quality, trustworthy and interoperable
- Building consumer confidence and user experience by developing booking standards
- Incubating startups to encourage innovative solutions using the published data

Due to the Covid-19 pandemic – and its significant impact on inactivity – the ODI expanded the OpenActive standards to also include virtual sessions so that the public could see whether an activity is in-person, online or both.

Outcomes

Our work with OpenActive helped to kick-start change in a slow-moving sector.

Currently, over 500,000 opportunities are published per month through the initiative, covering over 1,300 locations in England. In 2019, an external impact assessment of the OpenActive data standards estimated that the standards could help avoid up to 110 premature deaths per year, save up to £3 million per year in health costs and generate up to £20 million per year in increased productivity.

Individual organisations also benefit from greater access to data. One case study found that leisure operator Everyone Active – which provides physical activities such as gym classes and swimming lessons – gained almost 11,500 customers at its facilities (36% of whom had never used an Everyone Active service before) from its partnership with a data aggregator. Using open data about outdoor activities also helped Ordnance Survey meet the needs of a wider group of people as part of their Get Outside campaign.

The success of the OpenActive initiative means that (at the time of writing in 2022) the ODI is embarking on a new phase of work, focused on making our standards easier to implement and accessible to a wider range of organisations serving a greater variety of use cases. In particular, we anticipate serving a larger variety of public health and social prescribing needs and helping communities and marginalised groups to stay fit, healthy and mobile.

The ODI's markets

Both the markets in which we operate and those we foresee developing in the next five years have changed since writing our first five-year strategy, which covered the years 2017 to 2022. So have the aspirations of the ODI and the need for an unbiased organisation of experts and practitioners with our specialisms. To date, much of our work has been focused on the UK, but our efforts abroad have been noteworthy, including our work with the Open Data Leaders' Network and with governments in countries from Mexico to Ukraine and Burkina Faso. We believe that there remains a significant opportunity for investment in infrastructure and capacity to expand our global reach and impact.

The next five years will see us change in ways that help align our activities, reach and impact with the global vision of the organisation and the global issues we wish to address.

Our work in the UK will continue to be important while we look to bolster our client service capabilities to drive meaningful engagement with international partners, members, clients and a wider network. We have an opportunity to leverage our strong reputation, brand and existing market position and to showcase tangible evidence of impact in the organisations we work with today. We will continue to produce creative and original research and provocative and innovative thought leadership that will challenge leaders. We will implement new processes, tools and impact measurements.

The competitive landscape

The competitive landscape has changed dramatically in the decade since the ODI was founded. 10 – or even five – years ago, few organisations spoke about open data, the data spectrum, the value of data, data ethics, governance and privacy. These are now a part of the regular discourse for most data decision-makers across all sectors. Consulting firms have entire teams and departments dedicated to environmental, social and governance (ESG) reporting[67] (of which data management is a significant part), and 'data for good' has become more of a slogan than a call to action. In this highly competitive landscape, the ODI's biggest challenge will be differentiating itself.

The ODI's trusted and unbiased perspective, rooted in subject matter expertise and a powerful shared organisational ethos, separates it from the world of private sector consulting. Where government entities and offices are often perceived to operate solely as aggregators and disseminators of information and policy, the ODI looks to go further, implementing change at an organisational level. Where think tanks and academic institutions often focus on theoretical thinking, the ODI is distinguishable in **its commitment to deep research and policy** and its testing of theory in the complex reality of the world. The ODI has a strong opportunity to carve a niche as one, if not the only, organisation whose breadth of thinking and operations can span from theory and thought leadership through deep research to practical implementation and, ultimately, measurement of impact.

To ensure the ODI is able to cut through the noise of an increasingly crowded market, we will redouble our efforts to add value, to be seen and heard, and to deliver impact. This is already in motion: a significant portion of this document is written with insights driven by new research into our current and potential customers, audiences, competitors and markets.[68] We will continue to leverage insights to develop an even deeper understanding of our changing market and competition and to deliver our value proposition, aligned with our partners and audiences.

Our business model

At the time of writing in late 2022, the ODI operates as an institute (recognised by Companies House in the UK as undertaking research at the highest level[69]) that also undertakes commercial work to advance its mission. From 2012 to date, our operating costs have been met through a range of grants and commercial revenue. Our work includes applied research,[70] public policy research and advisory services, consultancy, training and the provision of free reports,[71] tools[72] and webinars.[73] Our public policy work brings us to some of the most influential forums around the world, including as part of the UK's G7 Presidency in 2021 in the Global Pandemic Data Alliance.[74] We have hundreds of members and 18k weekly newsletter subscribers, and we have hosted thousands of attendees at our annual summits. We also tell compelling data stories through our Data as Culture arts programme,[75] which includes more than 100 artworks that have reached and influenced hundreds of thousands of people, from general audiences to data specialists.

For the past 10 years, we have focused our efforts in three broad areas:

1. Improving the data practices of organisations so that they can build and manage adequate data infrastructure and data use.
2. Tackling challenges so that the data ecosystem works better.
3. Gathering and creating research, evidence and knowledge about data and the benefits of open, trustworthy data access to inform companies and policymakers as they create data infrastructure, assets, practices and policies.

It is often assumed that the ODI is exclusively funded by government, and even that we are part of government, but we are not. Government funding enabled the creation of the ODI in 2012 with an initial core grant of £10 million over five years, awarded through the Technology Strategy Board (now Innovate UK, which is part of UK Research & Innovation[76]), and the ODI has subsequently received grant funding through UK government departments, including DCMS. This funding has enabled us to deliver work to the benefit of the public good and to advise policymaking and legislation, using our deep expertise and research capabilities. Over the years, the ODI's experts have also led or been invited to participate in dozens of national and international government panels and committees, in large part because the ODI is a trusted not-for-profit organisation, renowned for its studied neutrality and reputation. In the past decade, the ODI has worked with several Catapults and is therefore well-situated to be the go-to organisation for other publicly funded STEM bodies that require data-related expertise.

Yet, however valuable these initiatives and relationships are, government funding represents only part of our revenue. The ODI is a company limited by guarantee, drawing between 15 and 20% of its funding from government, 20–30% from grant-giving (philanthropic) organisations and the remaining 50% from private sector contracts and other forms of grants.

This diversity of funding is essential for us to have an impact across society and the economy. More than that, we believe that we cannot achieve our vision for *a world where data works for **everyone*** unless we bring together all sectors. Delivering our mission

to build an open, trustworthy data ecosystem will only be possible if we work with organisations in the private, public and philanthropic sectors across the world. This diversity also gives us independence and credibility as a neutral convener and thought leader. Our ability to extend our reach and influence depends on these virtues.

Our guiding principles

Through the worldview described above – the external forces over which we have limited control, our unique position in the market, and the vision and mission that we live and breathe every day – we have developed a set of six principles that will guide us in the next stage of our evolution. These principles are the keystones that we believe will enable us, and all our partners, clients, customers and audiences, to help mitigate the negative consequences of trends and events that are shaping the world around us and to, where possible, take advantage of opportunities afforded by change. These principles represent a development of the six manifesto points included in our 2017 strategy, embracing and building on the themes of *infrastructure, capability, innovation, equity, ethics and engagement*.[77]

Our six principles will guide our strategy over the next five years; they will help us to set priorities, commit to taking action and stay focused.

Principle 1

We believe that a **strong data infrastructure** is the foundation for building an open, trustworthy data ecosystem on a global scale and that this can help address our most pressing challenges.

> *There is an emerging data economy globally that will have an impact on all sectors, but not all sectors understand this or the complexity of the topic. Data infrastructure in health has traditionally been seen as a capital cost and as such is evaluated predominantly against price point instead of being viewed as an 'enabler' of business strategy and in turn considered an investment in ensuring connectivity to the broader data ecosystem. Interoperability, non-traditional data sources and emerging technologies will transform our world - and how services are delivered.*
>
> **— Jennifer Pougnet**
> **Global Data Policy Strategy Lead, Roche**

Mechanisms that enable data to be handled responsibly must be created and maintained. These mechanisms can help to counter the global mega-trends that are currently impacting our society, such as climate change, conflict, ageing populations, inequity and inequality.

Data surrounds us and shapes our world. It is infrastructure – as essential as the roads, railways and electricity we use every day. Creating a strong data infrastructure can enable data to be shared safely; it can allow trends to be spotted early and action to be taken to minimise harm and maximise value (environmental, social and economic). Data infrastructure ranges from building institutions that safely and equitably steward data to training a new generation of data leaders to govern data for the benefit of all and ensuring that as many people as possible have access to information and tools that enable them to understand how to better collect, share, publish and use data.

Principle 2

Strong data infrastructure includes data across the spectrum, from open to shared to closed.[78] **But the best possible foundation is open data**, supported and sustained as data infrastructure. Only with this foundation will people, businesses and governments be able to realise the potential of data infrastructure across society and the economy.

When data is openly available – for anyone to access, use and share – it drives innovation, creates efficiencies and contributes to transparency and accountability.

Open data allows for rapid innovation, enables businesses to grow and thrive and benefits the lives of citizens. Even though the ODI works across the data spectrum, we remain committed to first asking the question: “can this data be released as open data?” in everything we do.

We have seen many examples of success in the past 10 years, from global Open Banking to the innovative use of secondary health data. Sadly, there has been slower progress in some areas. The campaign in the UK for a national open address file, while still active, has not yet achieved its aims (or the significant benefits that it would bring to consumers and businesses) 10 years after the sale of the Postcode Address File (see below).

Open data in focus – the case for national open address files

'There is no doubt that addressing – the network of road names and house numbers – constitutes a key element of functioning societies. While a single address in itself does not constitute a public good, the national address infrastructure, of which it forms a part, is an essential public good, and through interoperability with international systems the totality of addressing networks can be determined as global public good.

Address infrastructure provides access to the rights and duties of citizens from the local to the international level, as well as providing businesses with access to markets. All echelons of society should thus have equal access to address infrastructure in order to capture the social and economic benefits at the local, national and international levels.'

— 'Addressing the world', an address for everyone, white paper, Universal Postal Union, Berne, Switzerland (2012)

Accurate information about addresses and properties is important for every aspect of the economy, from sending a parcel to buying a house. In the UK, the database containing address data is expensive, hard to access, hard to correct and not always accurate. This causes problems for businesses and other organisations that rely on address data – and ultimately affects us all. Address data is critical data infrastructure. We believe the UK should have free and openly licensed address data like many other countries. We think this data should be maintained collaboratively and be the statutory responsibility of a single public body.

The sale of the Postcode Address File (PAF)

'**The sale of the PAF with the Royal Mail was a mistake.** Public access to public sector data must never be sold or given away again. This type of information, like census information and many other data sets, is very expensive to collect and collate into usable form, but it also has huge potential value to the economy and society as a whole if it is kept as an open, public good.'

— UK government Public Administration Select Committee (PASC) report on Statistics and Open Data, Chair Bernard Jenkin (2014)

The PAF is the UK's authoritative database of postal addresses (or delivery points) in the UK. It contains 1.8 million postcodes and over 28 million addresses. Each day,

millions of UK citizens interact with services incorporating PAF data while doing things like shopping online, registering for services and making appointments. In 2013, PAF was included by the UK government in its sale of Royal Mail. At the time, the Open Data Institute, the Open Data User Group[79] and others argued against the inclusion of PAF in the sale and encouraged the release of PAF under an open licence.

Economic value

Address data has **significant economic value.** It underpins products and services across every sector of the UK economy. A 2012 report from the PAF Advisory Board estimated its value to the UK economy to be between £992 million and £1.32 billion each year. In the intervening decade, this value is most likely to have increased.

In 2002, the Danish government made its national address file available for free. Since then, it has calculated the direct financial benefits-to-cost ratio at 30 to 1. By 2010, the year in which its report was published, the government estimated the direct benefits of free address data to the Danish population to be around €14 million, with costs of €200,000. Scaled to the UK population, this would be an annual benefit of around £110 million.

Current position

Address data is a subset of a much wider category of reference data that also includes maps and data about companies and public services. This data has huge value to the economy. If released as high-quality, maintained open data, it could enable innovation, reduce friction (for example allowing supply chains to operate more effectively) and bring other benefits, such as the detection of fraud[80] and greater efficiencies in the delivery of public services. Successive UK governments have promised to make more of this data available as open data, and there have been some successes. For example, the Department for the Environment, Food and Rural Affairs has opened up 8,000 valuable datasets, including LiDAR data[81] that brings efficiency and greater accuracy to topographic and land surveys. Yet many commitments, including one to deliver ‘the largest repository of open land data in the world’[82] made as part of the Conservative Party’s general election manifesto in 2017, have not materialised, leaving lots of potential untapped. Organisations like the ODI and the Centre for Public Data[83] will continue to work together to campaign for more of this important data to be opened up.

Principle 3

For data to work for everyone, it needs to work across borders – geographic, organisational, economic, cultural and political. **For this to happen ethically and sustainably, there needs to be trust** – trust in data and trust in those who share it.

> *We are ready for a more nuanced conversation about data. There is an appetite to know how it is being collected, used and shared. People should know what is being done with data about them, be comfortable with it and retain agency and control. Building trust in data and data practices will be essential in the next five years to ensure everyone shares equally in the value it can create. People are ready for the conversation.*
>
> **— Sushant Kumar,**
> **Director, Responsible Tech Investments, Omidyar Network**

Data can help to unlock huge value for the economy, society, and the environment, by improving public services and increasing efficiency and effectiveness in business. But data needs to be trusted and trustworthy to support growth and innovation. According to a 2021 study, trust in data has the potential to contribute 2.5% to overall GDP in the UK and a 25% increase in trust could generate an additional 47.3 to 118.3 billion US$ to the global economy[84].

To tackle some of the biggest challenges of our time, like climate change, data must flow across organisations, sectors and countries. By failing to share and reuse data we are missing opportunities to capitalise on the value and benefits that could be gained through greater trust in data, data flows and organisations. Overall, increasing data sharing across organisations and sectors has the potential to create economic value of between $700bn and $1.75tn globally[85].

Principle 4

There is greater need than ever for **trusted, independent organisations** to help people across all sectors, economies and societies to benefit from better data infrastructure.

Mistrust and distrust have become all-too-common features across borders and societies in the 21st century. Global cooperation and trust are in short supply, yet increasingly, legal and regulatory instruments are being used in anti-monopoly efforts. There is a growing need for organisations working in data that can operate across geographic and institutional borders, at the intersection of sectors and who are able to act in the interests of all, with studied and respected neutrality.

Principle 5

For data to work for everyone, those collecting and using it need to be highly alert to inequalities, biases and power asymmetries. All organisations working in data must take proactive steps to ensure that they contribute fully and consciously to creating **a diverse, equitable and inclusive data ecosystem**.

Deep fakes and data biases are just causes for this mistrust. Many datasets can hide implicit and learned biases, as detailed in The Big Data Paradox.[86] The scale and impact of this is immense. If biases and misinformation are not addressed, existing societal inequalities will continue to grow in influence and momentum. For diversity, equity and inclusion to be properly embodied in discussions around race, sexuality, gender and ethics, algorithms must avoid cultural biases. It will require new approaches towards data bias and robust mechanisms of stewardship[87] to establish and maintain trust in data.[88]

Principle 6

The world needs a new cohort of data leaders – individuals who **have data knowledge and skills and are equipped to understand the value, limitations and opportunities offered by data,** data practices and data sharing.

While the threats posed by the misuse of data can, to a certain extent, be managed through robust infrastructure and open data sharing mechanisms, there is also the necessity to educate and to develop governments', organisations' and individuals' data knowledge and skills. The results of efforts to improve data literacy have serious implications for bottom-line returns, which is a key concern for governments and corporations. The US economy alone loses over US$100 billion each year through data-induced procrastination.[89] The Data Literacy Index[90] found that 76% of key business decision-makers lack confidence in their data knowledge and skills. Gartner cites poor data literacy as the second-highest internal roadblock to the success of a CDO[91].

There are also pressing environmental reasons for improving global data knowledge and skills. Indeed, this has been cited as a critical success factor in addressing the climate emergency, with countries urged to invest in their populations' data skills, thereby building a sustainable capacity for effective use and understanding of data to solve environmental challenges[92] and meet goals[93].

Working together to understand and solve global challenges with data

Central to many of the principles outlined above are trust and cooperation. The ODI believes that transparent and open collaboration, embodied within our six principles, is integral to combating the negative products of external drivers and to benefiting from any opportunities they might present.

The ODI will continue to use its neutral and respected status to convene those from all geographies and industries, working at the intersection of public, private and philanthropic sectors to leverage data to solve shared problems, where previously collaboration had not occurred. Opening up data and stewarding it responsibly is one of the most effective ways of doing this, and individuals, organisations and governments should consider how best they might go about it, following best practices, supported by the ODI's research and services.

Key takeaways

1. We face profound and increasing levels of instability in all geographies, sectors and industries as a result of global mega-trends.

   We believe that a strong data infrastructure is the foundation for building an open, trustworthy data ecosystem on a global scale and that this can help address our most pressing challenges (Principle 1).

2. When data is openly available – for anyone to access, use and share – it can contribute to transparency, accountability and positive outcomes.

   Strong data infrastructure includes data across the spectrum, from open to shared to closed.[94] But the best possible foundation is open data, supported and sustained as data infrastructure. Only with this foundation will people, businesses and governments be able to realise the potential of data infrastructure across society and the economy (Principle 2).

3. Lack of trust in data and data practices can be a major barrier to data sharing and prevent value from being unlocked.

   For data to work for everyone, it needs to work across borders – geographic, organisational, economic, cultural and political. For this to happen ethically and sustainably, there needs to be trust – trust in data and trust in those who share it (Principle 3).

4. Mistrust and distrust have become common features across borders and societies in the 21st century. Yet international cooperation around the pandemic response, including international data sharing of different kinds (from pandemic surveillance to vaccine development) shows the huge potential benefits of trusted and cooperative data sharing.

   There is greater need than ever for trusted, independent organisations to help people across all sectors, economies and societies to benefit from better data infrastructure (Principle 4).

5. Deep fakes and data biases are legitimate objects for mistrust. Many datasets can hide implicit and learned biases. The pervasive deployment of AI and machine learning, the recent emergence of generative AI and large language models, creates an urgent need to ensure that the data they are using and trained on is fit for function.

   For data to work for everyone, those collecting and using it need to be highly alert to inequalities, biases and power asymmetries. All organisations working in data must take proactive steps to ensure that they contribute fully and consciously to creating a diverse, equitable and inclusive data ecosystem (Principle 5).

6. While threats posed by data can be managed through robust infrastructure and open data sharing mechanisms, there is also the necessity to educate, to develop data literacy.

   The world needs a new cohort of data leaders – individuals who have data knowledge and skills and are equipped to understand the value, limitations and opportunities offered by data, data practices and data sharing (Principle 6).

Part 4: Our ambition — a globally relevant data institute

Our priorities and commitments

Our **priorities** are shaped by the things we need to ***do*** to create an open, trustworthy data ecosystem in the context of the wider world: the political, economic, social, technological, legal and environmental forces discussed in Part 2. Our priorities align with our vision, our mission and the ***six principles*** described earlier in this strategy.

- **Our priorities** are the areas of focus for the next five years where we believe we can have the greatest positive impact and make the most significant contribution. They are informed by insights and an understanding - and continued assessment - of the market, our stakeholders, audiences, competition and the ever-changing world around us. They give us a framework for how to organise our work by focusing on the things that we believe in and that we think are most important. **These are areas in which the ODI is uniquely or best-placed to act, where we have expertise and networks to enable us to mitigate the negative effects of external factors.**
- **Our commitments** are the actions that we will take to deliver on our priorities. **They are the practical things we will do over the next five years to avoid negative consequences and maximise social, economic and environmental value.** They will enable us – and our partners, stakeholders and networks – to hold ourselves to account.

Our priorities and commitments are not all equally urgent. For example, we cannot achieve any of our aims unless we have financial sustainability and a strong reputation. Similarly, some of our priorities and commitments relate to more than one principle. For ease of understanding, we have grouped priorities and commitments with the principles to which we believe they most closely relate. Our work in each of the next five years will naturally focus on particular priorities and commitments, as we work towards the fulfilment of our mission. Each year, we will publish a separate summary for where our attention will lie in that specific twelve month period.

Principle 1

We believe that a **strong data infrastructure** is the foundation for building an open, trustworthy data ecosystem on a global scale and that this can help address our most pressing challenges.

Our five-year priorities:

- Contribute positively to building, hosting and stewarding key data infrastructure.
- Enable organisations across the world to develop greater skills and depth of understanding in how to gather, steward and share data responsibly.

Our five-year commitments:

- Work across sectors to find further opportunities to build nationally significant data institutions and create open standards to unlock value and enable innovation in new industries.
- Build a body of knowledge by conducting further original research and innovation activities to inform the effective building of data infrastructure, continuing to be the centre of global expertise on novel models for sharing and stewarding data in safe environments.
- Maintain and develop our role advising and supporting policymakers around the world, assisting them to shape data policy and inform the delivery of data-enabled public services.
- Run work programmes that enable us to remain at the cutting edge of innovation and foresight about emerging trends and technologies in the global data space.
- Invest in maintaining, developing and innovating tools, guides and practical support for those working to build data infrastructure.
- Build our own digital capabilities and reach to enable more people around the world to access our content and services, join us for events and collaborate on key projects.

Principle 2

Strong data infrastructure includes data across the spectrum, from open to shared to closed.[95] **But the best possible foundation is open data**, supported and sustained as data infrastructure. Only with this foundation will people, businesses and governments be able to realise the potential of data infrastructure across society and the economy.

Our five-year priorities:

- Preserve our core purpose; our commitment to open data as the key foundation for data infrastructure.
- Enable policies and technologies to work synergistically by working across the data spectrum – in data large and small, public and private, closed, shared and open.
- Maintain our leading edge in research and thought leadership about open data and the data spectrum and enable many more people worldwide to see and use our free content and tools.
- Offer our expertise and insights in open data and the data spectrum to policymakers, enabling the development of sensible public policy around data in government.
- Build engagement and collaboration on a global scale – enabling others to think and do things in new ways, taking our ideas far and wide and enriching them with new perspectives.

Our five-year commitments:

- Continue to seek funding partners and invest in:
    - original research
    - public policy work and advocacy – nationally and internationally
    - events and other forms of convening
    - innovation and thought leadership

- Identify and work with those who need specific help in the implementation of the knowledge, processes, tools and best practices around open data.
- Work with those developing AI systems to ensure that the data they are using and trained on are fit for function, and demonstrate how high quality, trusted open data is a foundation for this.
- Work to develop new ideas and perspectives that will positively influence international policy, business and science.
- Continue to evolve our understanding of the organisations, communities and individuals who are impacted or should be influenced by our work.

Principle 3

For data to work for everyone, it needs to work across borders – geographic, organisational, economic, cultural and political. **For this to happen ethically and sustainably, there needs to be trust** – trust in data and trust in those who share it.

Our five-year priorities:

- Work with others to build systems and processes to significantly advance trust in data and to professionalise the data space.
- Work towards the development of standards for data and organisations' data practices that have the potential to create incremental change in data sharing across organisational and geographical borders.
- Work with governments to inform policies on trusted data sharing and the actions needed to make it a reality.
- Enable organisations across sectors to adopt practices that facilitate the trusted flow of data within and between sectors, initially focusing on:
    - climate change, energy and the environment
    - healthcare and health and wellbeing research
    - global financial services.

Our five-year commitments:

- Develop products and services that will be easy for organisations to access and adopt, making it simpler for them to share data, and assuring them of the quality and efficacy of the data shared by others.
- Build consultancy and advisory services to help organisations demonstrate and deliver trusted data and trustworthy data practices.
- Be part of the drive to develop standards that help assure people and organisations that data and data practices can be trusted.
- At every step, contribute to the professionalisation of data practices and of individuals working with data, nationally and internationally.

Principle 4

There is greater need than ever for **trusted, independent organisations** to help people across all sectors, economies and societies to benefit from better data infrastructure.

Our five-year priorities:

- Further diversify our network and funding mechanisms while remaining committed to our original mission.
- Become a globally relevant institution around data
- Maintain independence from any political, economic or financial control.
- Work across society – in the private, public and third sectors.
- Ensure sustainability through a model that maintains, protects and grows the ODI's institutional core.

Our five-year commitments:

- Build a sustainable business model – one that is sufficiently varied to allow us to remain independent of any one or small number of vested interests and explores potentially diversified revenue streams.
- Maintain our core institute, our neutrality, our respected research, public policy work and thought leadership.

Principle 5

For data to work for everyone, those collecting and using it need to be highly alert to inequalities, biases and power asymmetries. All organisations working in data must take proactive steps to ensure that they contribute fully and consciously to creating **a diverse, equitable and inclusive data ecosystem**.

Our five-year priorities

- Commit to diversity, equity and inclusion in everything we do – from our internal operations to the delivery of projects and services. We will do this by:
    - scrutinising and questioning biases and inequalities in data and data practices, providing expertise and tools to help practitioners address them and exploring, through our research, the impacts and mitigations for potential prejudices in data and data practices.
    - ensuring that our own practices are diverse, equitable and inclusive; ensuring we adopt inclusive recruitment processes; making our events and courses accessible to all; and building a consideration of diversity, equity and inclusion into all the work we do with our partners, clients and customers.

Our five-year commitments:

- Ensure our workforce and leadership reflect the diversity of the communities we work in and, by reducing barriers to entry, create opportunities through recruiting diverse candidates, increasing the pipeline of talent through apprenticeships or placements and supporting progression within the organisation and beyond.
- Continue to champion diverse, inclusive and equitable approaches to the use of data, including by amplifying the voices of marginalised, minoritised and oppressed communities and communities from the global south and by centring their perspectives in our own work.
- Work to upskill and positively influence our clients, suppliers and delivery partners towards diverse, inclusive and equitable data practices.

Embedding diversity, equity and inclusion through Data as Culture

Through the Data as Culture (DaC)[96] programme, the ODI has consistently explored matters of diversity, inclusion and power asymmetries. Over 10 years, through more than 100 artworks, we have explored themes which include the following:

- Data anthropologies: The humans at the centre of emerging data landscapes
- Sustainable data ethics and AI biases
- New and alternative citizen-led modes of measuring, predicting, and sensing the world
- Surplus data and the myth of the perfect digital copy
- The neurodivergent city: How can data help make the city work for everybody?
- Critical network and systems thinking

Our exhibitions and ODI Summit panels reflect our values and the fact that we are committed to telling stories about different parts of the world and presenting events that are representative of diverse communities. We work with international artists and researchers from diverse backgrounds and cultures. Working with diversity, equity and inclusion experts we have developed inclusive language for our open calls and artist invitations. Artists have fed back that this made them feel welcome to apply to the ODI as a client of choice. In our most recent exhibitions, 29% of contributing artists identified as female and 21% as non-binary, while 36% disclosed invisible disabilities and of the 79% of those who disclosed their sexual orientation, 36% identified as LBGTQ+.

In 2021 we sought to commission an online artist in residence based in the global south. Delhi-based artist Rohini Devasher was selected and in 2022 presented her major new 4-channel film One Hundred Thousand Suns.[97] Inspired by the concept of digital twinning models, the work takes us on a journey through the vast amounts of data held at the Kodaikanal Solar Observatory[98] in India. Kodaikanal is one of only two observatories in the world that has over 120 years of data about the Sun and its influence on Earth and space. Drawing on archives of over 157,000 images, along with observations, interviews with eclipse chasers and eclipse data she collected herself, Rohini explores the relationships between observation and experience, and information, data and truth. Weaving through

the narrative is the underlying story of an observatory founded under British colonial rule transforming into an Indian innovation and science story.

The Data as Culture programme continues to challenge itself to provide platforms to traditionally underrepresented artists, and to reflect the experiences of marginalised communities. We recognise that there is ongoing work to do but are committed to building a data narrative that allow hitherto invisible, unheard or under-acknowledged stories to be told, seen and heard.

Principle 6

The world needs a new cohort of data leaders – individuals who **have data knowledge and skills and are equipped to understand the value, limitations and opportunities offered by data,** data practices and data sharing.

Our five-year priorities:

- Build greater data literacy for organisations worldwide, especially those leaders whose decisions affect others, developing the data literacy space to meet the requirements of an emerging profession.
- Ensure that organisational decision-makers and leaders across all sectors have access to knowledge that enables them to understand the opportunities and risks that exist in data.
- Enable organisations across the world to develop greater skills and depth of understanding in how to gather, steward and share data ethically and responsibly.

Our five-year commitments are to:

- Build greater data literacy for organisations worldwide, especially those leaders whose decisions affect others, developing the data literacy space to meet the requirements of an emerging profession.
- Ensure that organisational decision-makers and leaders across all sectors have access to knowledge that enables them to understand the opportunities and risks that exist in data.
- Enable organisations across the world to develop greater skills and depth of understanding in how to gather, steward and share data ethically and responsibly

The ODI's 2017 theory of change

When we developed our first Five Year Strategy in 2017, a central element was our theory of change.[99] We wanted to illustrate how we envisioned a world where those who steward data and those who create information from this data act in ways that lead to the best social and economic outcomes for everyone. In our theory of change, we called this goal the farmland. We also imagined less positive futures, where data might be hoarded (the oilfield) or feared (the wasteland). Openness and trust were two factors that we suggested could enable us to reach the farmland. Many elements of the 2017 theory of change are still relevant today. We still believe that the best possible foundation is provided by open data, supported and sustained as data infrastructure. We also believe that to enable data to flow, there needs to be trust – trust in data, trust in those who share it and trust in the systems and practices that they use. We remain committed to practices that are ethical and equitable and engage as many people as possible, and we retain our belief in the optimal effects of open innovation, data literacy and capability for all and an infrastructure that is as open as possible.

For the world as it is today, and the world that we want to co-create, we feel that the infographic we developed in 2017 still has utility but requires updating to work as a complete theory of change. As we worked through the years since it was first published, and in the conversations that informed the development of this strategy, we found that our stakeholders wanted us to say much more about *how* leaders can professionalise data practices within their organisations, embedding good data governance and delivery at every level. People told us that they would like to see how our ODI tools, frameworks, training and thought leadership can upskill, certify, regulate and assure organisations for the future.
In some respects, the relevancy and applicability of these to particular organisations will depend on their own organisational data maturity. In recent market research, we have found that different organisations are at different levels of understanding, adopting, implementing and measuring the value and impact of data in their organisations and beyond.

Therefore, we now intend to revisit our theory of change to reflect these variables, accounting for organisational data maturity and the different modalities of data use, governance and sharing that may exist. We will aim to show how the ODI can intervene to help organisations become data enabled in terms of how they steward their own data and in contributing to positive environmental and societal outcomes.

We recognise that corporate bodies have commercial drivers and need to deliver value to shareholders, but these organisations are also often sponsors of society. They have a vested interest in influencing global trends. There is increasing emphasis on **environmental, social and governance (ESG)** factors in organisational practices and structures. Investors are applying these non-financial metrics as part of their analysis process to identify material risks and growth opportunities. In the UK, the largest companies are now required to report on these elements. Without good data, data management and governance, this will be difficult, if not impossible. We will continue to work with our colleagues and partners on our theory of change throughout 2023 and beyond.

Key takeaways

- The ODI has now evolved to encompass many types of data and to work at the intersection of all sectors and industries.
- In the next five years, the ODI will strengthen its impact and continue to be a much needed and more globally relevant institute for *open, trustworthy data ecosystems.*
- To do this, we must further build our network and vary our business model while remaining committed to our original purpose. We are ambitious for the future of the institute, and we will diversify our funding mechanisms to realise this ambition.
- Through these efforts over five years, we aim to see significant growth in our reach and influence across all sectors – the private, public and third sectors. Without a cross-society pan-economic approach, we cannot build an open, trustworthy data ecosystem.

We are evolving as an organisation, and our Five-Year Strategy is ambitious.

It focuses solidly on the parts of our work that contribute to the creation of an *open, trustworthy data ecosystem* while securing our long-term future as a globally relevant institute around data, in times of great uncertainty.

We will:

- actively support the building of key data infrastructure
- pursue our mandate of open data as foundational while working across the data spectrum
- instil trust in data, trust in those who share it and trust in the systems and practices they use
- ensure sustainability through a commercial model that maintains, protects and

grows the ODI's institutional core

- enshrine our commitment to be a diverse, equitable and inclusive organisation in everything we do
- develop the ODI's online learning to equip governments, companies and individuals with the necessary data skills and literacy.

Part 5: From commitment to action — delivering the strategy

Our team, network and culture

Along with many other organisations, the ODI has been faced with a significant challenge – how to preserve organisational culture while working in the context of a global pandemic that has changed the world of work significantly. Since the pandemic started in 2020, we have moved into a new office, established a new leadership team and begun experimenting with different ways of working. We have also been thinking about our shared values.

Our ODI values

The ODI has a unique culture and perspective. Internally as well as externally, our team is open, inquisitive and experimental by nature. The principles, priorities and commitments set out in this strategy will require our whole team, indeed our whole network, to stride energetically towards the future with a sense of urgency (some of the external forces that drive us are moving at an unbelievable pace, including climate change and deepening inequities around the world). For our first 10 years, we aligned around the values of expert, fearless and enabling. In light of our evolving organisation and the changes that have come about since 2012, we wanted to look at these again and ask: 'Are these still our values, do they serve us well, and do they reflect who we are?'.

As we developed this strategy, we worked closely with our team, stakeholders and network, including revisiting our values, and have aligned around these as:

Curiosity – We ask questions, we are interested in our world, in the people we work with and the opportunities and risks we encounter together; we challenge assumptions and the status quo so that we continuously learn, improve and grow, enabling all our partners to do the same.

Creativity – We strive to be creative in our approach, culture and outcomes so that everything we do delivers unique value and is inspiring.

Collaboration – We seek to bring together the best people,

> organisations and ideas to contribute positively to everything we do together and the world we aim to be a part of - a world where we bring the best of collective working to provide skills and insights to achieve positive, sustainable impact.

The ODI has a wealth of knowledge and expertise and a differentiated position as a trusted, unbiased partner. In the coming five years, if we are to deliver on this strategy, we will need to hone our skills, diversify our workforce and develop a more global outlook. We are building on strong foundations to create a high-performing multi-disciplinary team, which will involve the following:

1. Growing capacity as our workload increases, hiring from a diverse range of backgrounds, strengthening our expertise in economics, the law, technology and finance, among other specialisms, to further professionalise our organisation.
2. Working with a broader range of associates and suppliers who enrich our teams with deep expertise as we extend our reach.
3. Building the capabilities of our team by investing in training and development and encouraging people to challenge themselves to grow and become champions of the ODI.
4. Developing scalable systems and processes, using digital tools and integrations (and ensuring interoperability), to allow us to extend our reach without adding huge costs or compromising on quality.
5. Building our capacity to be a ‘leading light’ organisation, utilising digital communications and convening and engagement tools and platforms that enable us to reach far beyond the UK and Europe within the next five years.
6. Offering a place – and a space – for people to come together and collaborate, convening and hosting sometimes sensitive conversations, as only we can – given our neutrality.
7. Making it much easier to interact with the ODI online, redesigning our online estate to make it simpler to find things and easier to navigate around.
8. Nurturing and collaborating more closely with our network, including our funders, clients, partners, members and the wider world.

The integration of operational excellence, new tools and a clear strategy will greatly contribute to our ability, as individuals and as an organisation, to assess our progress, work on the things that really matter, break down silos and align resources to deliver impact.

ODI Membership

In the next two years, we will pay special attention to our membership programme – one of the key touchpoints with our current network – and our members, who we know value the community we have built, and the potential to learn and grow as a virtue of being part of the ODI and through forging links with other members. The ODI's role as a neutral convener is more important than ever, and new digital tools give us the opportunity to build a much larger and more dynamic community.

Our approach will be insight-driven and focused on six key goals:

1. Gaining a greater understanding of our current members, what works, and what does not work (and why) in the current programme.
2. Developing our infrastructure, including improving client services, and integrating the tools and processes to better manage communications and engagement with our network and to understand their needs.
3. Simplifying our value proposition and aligning it to the needs and wants of our existing and prospective members while staying true to the vision, mission and principles described in this strategy.
4. Driving meaningful, sustainable and consistent engagement across an array of marketing and communication channels.
5. Identifying and bringing to light examples of impact, value and transformation that our members have experienced. Engagement and learning among members will be encouraged by showcasing these examples in the network to demonstrate impact to others and to show organisations the value of joining us.
6. Shifting our model to a tiered structure, where different organisations get different access to our content, depending on their requirements, and where the investment we make in creating world-leading research, thought leadership and insights, drives meaningful return on investment.

Growth for impact

In the next five years, the ODI will extend its reach and impact. In our first 10 years, we delivered returns of between four and 14 times the investment in the UK and EU-funded programmes we have delivered, and we matched the government's investment of £22 million with £33 million of private sector and philanthropic contracts and funding. Now, differentiated by ODI's brand, principles, priorities and commitments, we are setting out to reach a wider global audience of companies, governments, grant-makers, non-governmental organisations and civic society organisations.

To achieve this, we need to build on our foundations and focus more solidly on the parts of our work that contribute significantly to the creation of an open, trustworthy data ecosystem. We will work towards international data standards, practices and norms that enable data and data practices to be trusted by organisations around the world. We must now further diversify our network and our funding mechanisms while remaining committed to our original vision and mission. To have impact, we must become a sustainable institute – organisationally, financially and intellectually – across society and the economy.

Our plans for growth are closely aligned with the forecasted growth in the use of data over the next five years. Compound annual growth rates (CAGR) range from 6% in global financial services in 2023–2030[100] to 10% in UK renewables.[101] As already described in this strategy, there is an urgent need for the responsible gathering, sharing and use of data across society and the economy and for a non-partisan organisation that can act as a trusted convening force with a mixed income model. This need is global, although in terms of the markets we see as priorities, our likely focus in the next five years will include Europe, the United States, Asia, and the developing global south. In all these regions, we see a growing need for the ODI's expertise. We expect our revenues to be drawn from a wide range of sources, including:

- Philanthropic funders and grant-making organisations
- Corporate sponsorship and project work
- The ODI's network, membership and subscription services
- Government funding – for projects and programmes
- R&D funding from a variety of sources

Case Study: Creating value by investing in new work streams

The ODI's history of convening around particular challenges or work programmes has shown, over the years, how we are able to identify societal and economic needs and opportunities or an emerging market for new offerings. In the case of Data Institutions, the ODI has built a global reputation of helping to imagine, research and advocate for new approaches to stewarding data responsibly, especially for public, charitable and educational purposes.

We now help others to build new data institutions (such as the INSIGHT Health Data Research Hub) and support existing ones to open up access to data in new ways (Smart DCC). Over five years, the Data Institutions programme has contributed more than £3.5m to the ODI's revenues and £1m in gross margin - funds that we have been able to deploy in part to begin identifying new challenges and programmes for the next five years.

Measuring our success

Over the past year, the ODI has developed a comprehensive **monitoring, evaluation and learning (MEL) framework** alongside a refreshed suite of associated tools.

Monitoring, evaluation and learning are fundamental components of measuring and communicating success. MEL frameworks ensure that organisations' work and research have the desired impact, boosting accountability and providing an evidence base for decision-makers. Proving impact and gathering evidence engender a powerful environment of continuous learning and improvement. Moving forward, MEL will be a core tenant of the ODI's organisational approach.

The **MEL framework** will form the basis for the design and implementation of MEL activity across the full breadth of the ODI. It sets out the key areas where the ODI seeks to make a transformative difference, feeding into associated areas, and it will be used to communicate organisational purpose and impact. The framework will evolve over time to reflect changes to the ODI's focus as we adapt to meet the needs of a changing market.

A strong emphasis on MEL and implementing a consistent and robust approach institutionally will enable us to:

- articulate how the ODI fits into the global data ecosystem

- ensure that ODI's activity and its rationale are understood internally and externally, using SMART key performance indicators (KPIs) to show our outputs, outcomes and impacts
- better measure the impact of our programmes of work
- robustly collect and communicate better performance and impact related messaging
- effectively engage with funders who can see the true social, economic and environmental value of their investments
- dig deeper into our economic and social value and our environmental contribution.

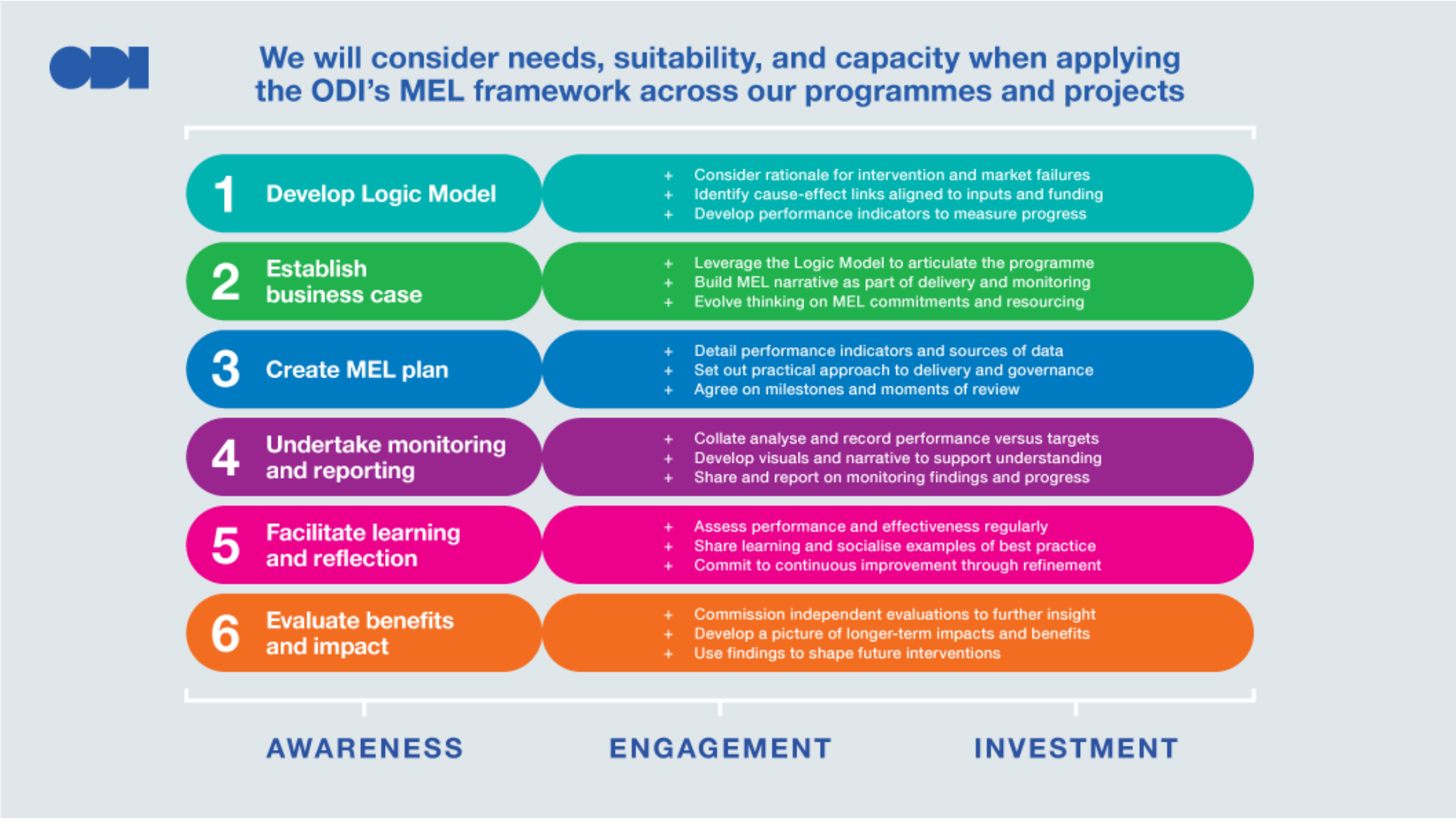

Figure 1. Embedding the ODI's MEL framework

The ODI's commitment to ESG best practices and processes and its alignment with the UN Sustainable Development Goals (SDGs) goes further than reporting. It is embodied in all that we do around sustainability, responsible governance and stewardship and in our commitment to diversity, equity and inclusion. Indeed, tracking, monitoring and reporting on our progress is a key advocacy tool and is integral to operating transparently.

The ODI is committed to embedding consideration of the SGDs and ESG practices and processes into delivery, using its MEL tools to:

- monitor and report on outputs, key SMART KPIs and ESG and SDG metrics
- evaluate outcomes, impacts and returns for the economy, society and the environment
- learn from the work done by our projects, programmes and disciplines with our worldwide partners, clients and funders so that best practices regarding social, economic and environmental value creation are followed.

A base of robust information, consistent feedback loops and rich evaluation insights is key in creating the conditions for organisational awareness and continuous improvement – the critical learning component of MEL.

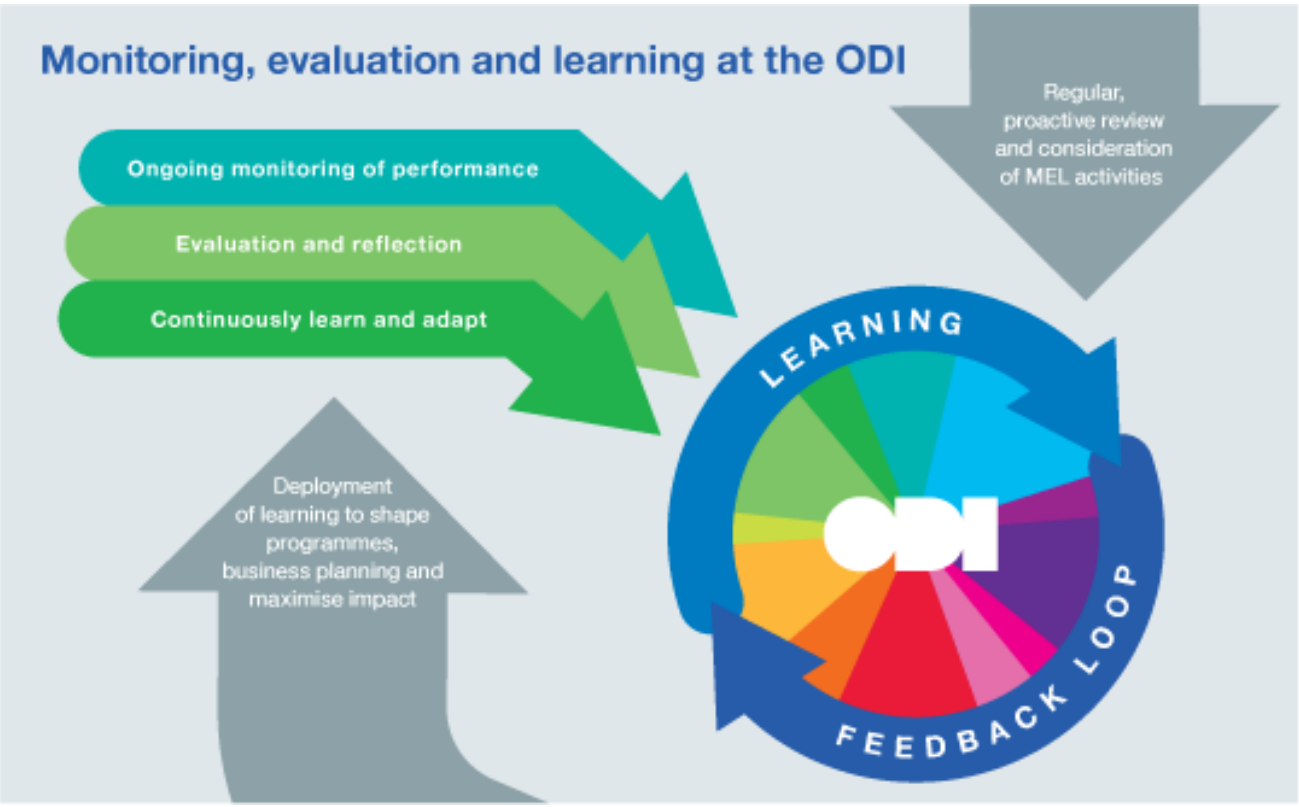

Figure 2. The process of continuous learning and improvement through MEL

The ODI will adopt a structured approach to learning. This will recognise the value of MEL in terms of regular monitoring, understanding real-time programme performance and using this intelligence to make strategic interventions and shape delivery. A structured learning approach will enable the ODI to be agile and respond to frequent changes. In practice, the cornerstones of this will not only be an annual review of performance and associated reporting but also the preparation and publication of dashboards. **A refreshed annual performance review, focusing on the ODI's progress in implementing its mission and vision, will illustrate the ODI's efforts in fulfilling commitments with relevant high-level organisational KPIs.**

As part of a continuous learning and feedback approach, the ODI will invest in preserving its institutional memory and building a library of legacy content. This will allow people to access our information and learn from our research, blog posts and case studies with more ease and in perpetuity.

Part 6: Approach and conclusion

Summary of our approach

The following infographic is designed to show how we are influenced by and seek to help mitigate external effects, including global trends and market forces, by staying true to our principles, defining clear priorities for the next five years and matching these with practical commitments. Our strategic approach, outlined in the infographic, allows us to adjust our offerings, engagement and implementation to where organisations are now, where they want to get to and the things they need to do to get there.

Figure 3. Our Strategic Approach

Conclusion

We believe that strong data infrastructure is the foundation for building an open, trustworthy data ecosystem at global scale. Most recently, international cooperation around the pandemic response, including data sharing (from pandemic surveillance to vaccine development) showed the huge potential benefits of trusted cross-border and cross-sector data sharing. But for data to work for everyone, those collecting and using it need to be alert to inequalities, biases and power asymmetries and there is more need than ever for independent organisations to help people across all sectors, economies and societies to benefit equally from the opportunities that exist.

In the next five years, the ODI will contribute further to the global data ecosystem, by working on original research and innovation activities, continuing to be the centre of global expertise on novel models for sharing and stewarding data in safe environments. We will work with others to build systems and processes to significantly advance trust in data and to professionalise the data space, working towards the development of standards for data and organisations' data practices that have the potential to create a step change in data sharing across organisational boundaries and geographical borders. And we will continue to diversify our funding model, working with more mission-aligned organisations to generate social, economic and environmental value across the private, public and third sectors.

In the past 10 years, the ODI has evolved to work with many species of data and we will continue to operate at the intersection of all sectors and industries. In the next five years, the ODI will strengthen its impact to become an even more globally relevant institute for open, trustworthy data ecosystems. We are developing as an organisation - our Five Year Strategy sets our destination and charts our course.

Each year, starting in 2023, we will publish a summary of our 12-month forward look – our plans for the year ahead – aligned with the principles, priorities and commitments set out in this strategy. And, in line with our approach to MEL, we will publish a review of the previous year, showing how we delivered on our intentions, what changed and what we learned. We look forward to discussing our new strategy with our colleagues, funders, clients and partners. If you have questions about the strategy, or comments to share, please email us at strategy@theodi.org.

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