RED

Foundation

RED FOUNDATION DATA ETHICS PLAYBOOK

Table of Contents

1. Introduction

The RED Foundation

The RED Foundation is an initiative set up to ensure the real estate sector benefits from an increased use of data, avoids some of the risks that this presents and is better placed to serve society. We do this by connecting people, projects and initiatives around the topic of data in the built environment and raising the sector's engagement with the ethical challenges that the use of data can present.

As property professionals, we know how important it is to be able to turn words into action, principles into practice, and how much impact our industry can have on society. That's why some of the RED Foundation's Data Ethics Steering Group are collaborating on a short, practical guide to data ethics in property policies and transactions.

The authors, on behalf of the RED Foundation

Yusra Ahmad is a technology executive with over 16 years' experience within the commercial occupier space. Having started her career at Lehman Brothers as a strategic space planner, leveraging data to advise on real estate strategy, she made a gradual move into business intelligence working with Credit Suisse, Jones Lang Lasalle and NHS Property Services amongst others before moving to CBRE. During her time at CBRE she built their analytics capability across Europe, Middle East and Africa then took on the role of GWS Global Data and Internal Technology Director to support both GWS and its clients on their

data management journeys. Being an entrepreneur at heart, she left to start Acuity Data focusing on helping clients to uncover the true value of one of their most valuable assets. Yusra has supported a range of FTSE 500 clients across industry to successfully implement data and analytics strategies that are aligned with their organisation's strategic direction generating invaluable insights that translate into significant operational efficiencies.

Sue Chadwick is a Strategic Planning Advisor for Pinsent Masons LLP specialising in digital planning and data ethics in the built environment. Alongside her work at Pinsents, Sue is a member of the London Data Board, and Chair of Business London Data Working

Group. She is also a member of Brent Council Data Ethics Board, Profusion Data Ethics Advisory Board and Chair of the RED Foundation Data Ethics Steering Group. After completing her PhD in planning law, in 2021 she completed a Research Fellowship with the Open Data Institute resulting in publication of a report: " Digital planning and its implications" and is currently working on the first legal practice note on Digital Planning for LexisPSL.

Ian McKenzie is a senior tech lawyer at Osborne Clarke with a focus on technology and data in the built environment, IT more broadly, as well as blockchain and digital assets such as cryptocurrencies. He advises on non-contentious commercial transactions, as well as data and privacy issues, and coordinates Osborne Clarke's international blockchain practice. Ian's expertise lies where the real estate sector meets the digital world, in particular relating to digitalisation, urban dynamics and smart cities. He regularly advises real estate clients and tech providers to the built environment on the deployment and commercialisation of tech, data and data driven business models and the associated legal issues. Ian has also acted as interim European Head of Legal for CoStar, a leading commercial real estate data vendor, and sits on the RED Foundation Data Ethics Steering Group.

Sanjaya Ranasinghe is Global Director of R&D at WiredScore. As leader of the R&D team at WiredScore, Sanjaya develops, implements, and reviews the criteria of WiredScore's scorecards to make the world's buildings smarter and better connected. Over the last four years his work has focused on building the world's first smart building certification, SmartScore, which focuses on how smart technology is implemented to deliver user centric outcomes for building owners, operators and occupants.

Janis Wong is a Postdoctoral Research Associate on the Ethics theme of the Public Policy programme at The Alan Turing Institute. Her research focuses on artificial intelligence, ethics, data protection, and data governance, with expertise in domains such as digital rights, health, and children's rights. In 2021-22, Janis was a Research Fellow at the Open Data Institute focusing on online teaching, analytics, and educational technology. She has also participated in research sprints as part of the Berkman Klein Center for Internet & Society at Harvard University between 2020-22, co-authored a report for the Scottish Parliament as part of Young Women Lead, and regularly provides data protection and ethics expertise for BBC radio. Janis holds a PhD in Computer Science and an LLB in Law.
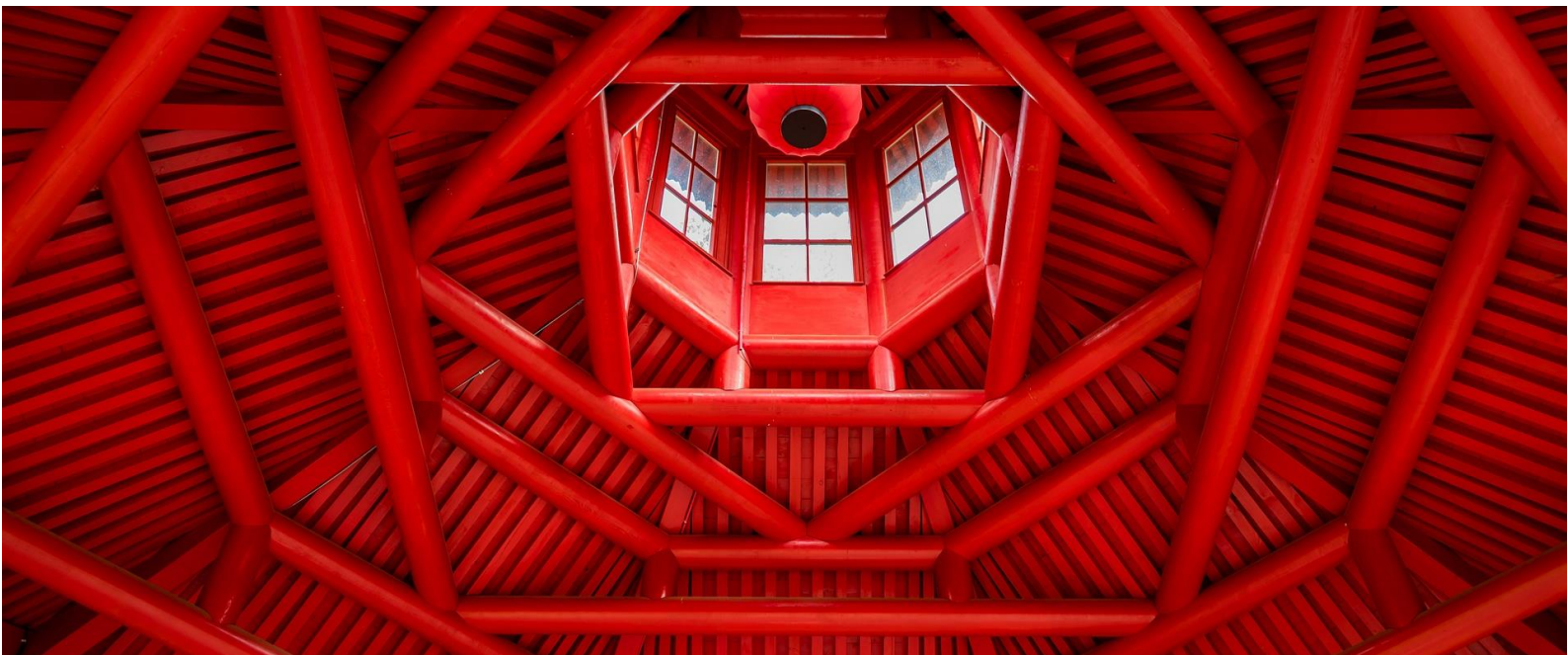
2. Purpose of this document

As the real estate industry's digital transformation continues at pace, the utilisation of the data generated from users of the industry's key output - the buildings along with the space and public realm that surround them - is coming into strong focus.

This focus is driven via new business initiatives such as the growing social and governance impact created by ESG+R (Environmental, Social, Governance and Resilience) reporting as well as the greater scrutiny and attention we all have on how our data is being used. The rate of change of digital transformation, and the impact of poor data use that this process generates, is one of the biggest risks companies in this real estate sector should be considering.

This playbook brings together a cross-section of views from regulatory, academia, and real estate data practices to help guide the industry with a set of approaches that can be taken to drive data ethics adoption. It is not meant as a prescriptive approach to implementing data ethics within a business but rather a *set of guidelines* that should be tailored to ensure real estate companies can apply data ethics in the most effective way for their requirements as they embark on their data ethics journeys.

It is envisaged that this playbook can be applied across all levels and stakeholder groups involved in real estate including but not limited to:

- All **asset classes** across commercial and residential real estate,
- At a **real estate corporation level**, across a portfolio of assets or at the individual building level,
- **Owners, operators, and occupiers of buildings** as well as **members of the public** that interact with those buildings, and
- **Technology hardware and service providers** to the industry.

The individual contributors that input into this guide have a strong background in the real-life application of data best practices in the industry within the UK. However, it is expected that this document can be used as the basis for evaluating data ethics within real estate globally.

If you plan to use our data ethics playbook or have found it useful, please reference this document as: RED Foundation, "Data Ethics Playbook" (www.theREDFoundation.org)

This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Licence. To view a copy of this licence, visit http://creativecommons.org/licenses/by-nc-sa/4.0/.

3. Why is data ethics important?

Recent trends in policy combine to show a pro-innovation approach to regulation and new technologies. In July 2022, the Department for Culture Media and Sport (DCMS) issued a command paper on regulating artificial intelligence (AI) promising "a regulatory framework that is proportionate, light-touch and forward-looking, followed in September with a policy paper on Data Strategy which stressed the need to remain "agile and alert to emerging trends".

This is great for innovation, and for the property industry generally, as the more data we can measure and the easier it is to share that data, the greater the commercial benefits. However, where there is an absence of formal regulation, organisations may struggle to establish a common understanding of what is acceptable, especially in a crowded policy landscape, and can increase the risk of unforeseen consequences - such as issues with grid capacity - or reputational damage - or increasing concern about issues such as commercial uses of facial recognition technology.

There is no formal definition of data ethics but the national Data Ethics Framework identifies three overarching principles: transparency, accountability, and fairness while the Open Data Institute's Data Ethics Canvas stresses the need to take existing legislation and policy into account, the importance of keeping personal, and sensitive information secure and the need for transparency.

There is no recognised way of integrating data ethics into business activities, such as property transactions and relationships, but we at the RED Foundation think our Principles are a great place to start. Committing to these - or other nationally recognised ethical standards - is a really good start for an organisation that wants to embed ethics alongside technological change. (see RED Foundation Data Ethics Principles)

But data ethics is about so much more than adopting a set of principles or creating a broad policy statement. It involves knowing what the regulatory context is, integrating this with evolving societal norms and expectations, and embedding data ethics into the organisation at all levels, and into policies, practices and documents. Crucially, it means being prepared to go back and adjust those policies and practices when things change.

1. Accountable

For the data collected and used. This includes taking responsibility for using the data in an appropriate and secure way.

2. Transparent

About what is collected and why. Whilst this cannot be expected for every data point, at a minimum a general data policy should be published for each building and company explaining what is collected and why.

3. Proportionate

Not only should data be collected within legal and technical requirements, but is also proportionate to the benefit and the expectations of wider society

4. Confidential & Private

All activity with data should at all times consider confidentiality and protect privacy; both within necessary legal requirements, but also according to the expectations of wider society.

5. Lawful

All data should only be used within all relevant local and international laws and regulations.

6. Secure

Security principles should be built in 'by design' into all applications and appropriate steps should be taken to keep data secure.

4. Benefits of implementing data ethics

Property companies are already grappling with the increasing significance of ESG+R issues, an increased emphasis on net zero, a circular economy and emerging new reporting requirements for fire safety. The Levelling up and Regeneration Bill is just the latest addition to the expanding regulatory framework that applies to the use of data, with wider reforms round the corner.

Incorporating data ethics into property transactions and relationships means change throughout organisations, as well as the spaces and places those organisations create; currently few of these changes are required by law. So why should anyone invest time and resources on it?

For the risk-averse practitioner, the obvious reason is to avoid the legal actions and reputational damage connected with errors and misjudgements but there are benefits too. The primary benefits are the reassurance of knowing that policies, processes, and documents are not just compliant but are engineered to reflect current societal concerns and adapt to future changes, as well as being ahead of the game when it comes to future regulation - such as the "golden thread" proposals emerging now on fire safety data.

At a macro level, with the rise in smart city technologies and planning for the incorporation of technologies into real estate and physical infrastructures, consideration of the ethical data practices can help support a more equitable, secure, and trustworthy approach to innovative urban planning:

- Individuals will have more trust in the smart city development and understand how their data is being used to benefit them, aided by transparent processes that encourage open dialogue,
- Communities may be able to derive insights from public data that has been pooled together, with the confidence that such data is being collected, analysed, and shared in lawful and secure ways,
- Developers can develop a clearer understanding of exactly what technologies are being implemented, how they can use the data to increase the efficiency, effectiveness, and profitability of their development, and
- Governments are able to maximise the utility of real estate developments to increase the value of public data to citizens and enable long-term planning, including stakeholder and public consultation.

There is also the opportunity to be an industry leader on a nascent topic. Just as the promoters of green energy and organic farming have moved from outlier to key market players, there is a real opportunity for visionaries to set a blueprint for the industry as a whole. A recent McKinsey survey recorded that 85% of consumers would be influenced by information on a company's data policies when making a purchase; hence there is a clear commercial opportunity to market developments as good quality digital as well as physical spaces, where occupiers are drawn to the development because they can trust how their data, and the data associated with that development, is used and managed.

5. Typical steps on the journey

It is important to note that the data ethics journey does not mean that we disconnect from technology or innovation, but rather map out how we can collect, use, and share data in ethical ways. In determining how to approach the implementation of data ethics as part of an organisation's data management processes, we recommend this is considered in the context of three domains: organisational structure, operations and technical capabilities.

Starting with organisational structure, companies should consider whether they have the right people with the right skills who can be responsible for ensuring that the way that data is being processed, prepared, and consumed across the organisation is ethical. Regardless of whether the right skills are available within the organisation, leadership engagement, and funding availability will be critical to success. Not only does this indicate leadership commitment but if there are any skills gaps, investment should be made available to provide both targeted as well as company-wide training, or to buy in expertise.

The second area of focus is defining a *modus operandi* for data ethics. While this is an evolving area, there are already a number of government-backed frameworks that organisations can choose to adopt. Which framework or playbook is chosen is arguably less important than adopting an approach that the organisation can rally around and to which it can begin holding itself to account. Once a framework is selected, focus should be placed on defining policies and aligning business processes to incorporate ethical practices.

Finally, consideration should be made not only to what technologies are available to support the organisation's approach, but to ensure that appropriate documentation is developed and access is facilitated as appropriate. For a more detailed checklist of the practical steps organisations are likely to need to take on their data ethics journey, please review Appendix A.

7

6. Data Ethics Playbook: Principles, Policies, Practices

1. Principles

The RED Foundation has developed six high level principles that all real estate businesses are encouraged to work towards and form the basis of the advice within this playbook.

Accountable For the data collected and used. This includes taking responsibility for using the data in an appropriate and secure way.

Transparent About what is collected and why. Whilst this cannot be expected for every data point, at a minimum a general data policy should be published for each building and company explaining what is collected and why.

Proportionate Not only should data be collected within legal and technical requirements, but is also proportionate to the benefit and the expectations of wider society

Confidential & Private All activity with data should at all times consider confidentiality and protect privacy; both within necessary legal requirements, but also according to the expectations of wider society.

Lawful All data should only be used within all relevant local and international laws and regulations.

Secure Security principles should be built in 'by design' into all applications and appropriate steps should be taken to keep data secure.

2. Policies

There are a number of ways in which ethical principles can be implemented as part of data practice, such as:

- The development and adoption of a data ethics policy (as distinct from a more general ethics or data protection policy). Such a policy should be used to embed ethical data use within an organisation but may also be used to impose ethical requirements on third parties with which the relevant organisation interacts in relation to data handling. This is akin to the way in which organisations already routinely require compliance with other policies such as health and safety, modern slavery, and corruption.
- The use of contractual clauses requiring ethical data use. In practice, we would expect such a clause to be relatively light touch, making reference to a policy that is either incorporated into, or sits alongside, the relevant contract, e.g.: "[Each party OR Party X] shall [use all reasonable endeavours] to comply with the [RED Foundation, "Data Ethics Playbook", [Publication Date OR as published from time to time] at [URL] OR The RED Foundation data ethics principles as published from time to time] at [URL] OR [insert reference to data ethics policy]]."
- The use of industry-wide accreditation marks or even the establishment of recognised ISO or British Standards.
- Organisational training programmes and governance bodies, such as a data ethics board with overall responsibility for ethical data use.

Given the ever-evolving nature of ethics, there will not necessarily be a one-size-fits-all approach to the adoption of data ethics standards. That said, for the journey towards adoption of data ethics to be effective, the measures required to implement it will need to be pragmatic, practical, and, critically, adaptable (both to the context in which they are being deployed and also in order to allow for flexibility over time as ethical standards shift). And as noted above, this playbook is not intended to be a definitive guide to ethical data use – it may be appropriate for other established data ethics frameworks (e.g. the UK government's data ethics framework) to be adopted alongside, or even instead of, the principles set out in this document.

The property industry is not often associated with the "move fast and break things" approach of some technology companies but it is capable of change, whether in response to legislation such as the introduction of Environmental Assessment regimes in the 1990s, or as a reflection of societal change. After all, there was a time when car free developments, green travel plans, and complex wildlife monitoring programmes were both novel and radical elements of planning agreements.

3. Practice

The implementation of the principles and policies outlined above will require organisational change in many cases and will require businesses and authorities to challenge themselves on their use of data in ways not previously considered. Compliance with legal requirements in respect of data use, in particular with privacy laws governing the use of personal data, should be seen as a minimum standard. The implementation of ethical principles and policies requires consideration of more profound, moral questions about whether, for example, proposed uses of data are the "right" thing to do or whether any improvements can be made to the ways in which data is handled.

In line with existing privacy legislation and the RED Foundation principles, ethical data use requires businesses and authorities to act in a transparent manner, making absolutely clear, rather than obfuscate, how they use data. Perhaps more fundamentally, before gathering and exploiting any data, lawful, legitimate, and ethical grounds for doing so must be established, and organisations should seek to achieve positive or beneficial outcomes from the use of that data – so called "data for good".

A key ethical consideration will be the extent to which data subjects (i.e. people to whom personal data relates), or indeed any third party whose data is being used, are given control over how their data is used. Certain data subject rights are enshrined in data protection law, for example the right of access and the right of rectification. As above, however, ethical data use arguably requires the adoption of practices that go beyond the legal minimum. In this context, it should be considered whether enhanced rights of access, control, and deletion of data should

be made available and whether data subjects are being adequately compensated (in whatever form) for the use being made of their data. Closely linked to these ethical considerations is the need to ensure that data is subject to strong data security (including anonymisation, where relevant and possible) and that there is organisational and individual accountability for the way in which data is used. Finally, regard must be had to the nature of the data, the data subjects and the providers of the data. While some data processed in the context of the built environment will be personal data (e.g. details of an individual's access to a particular building), much of it will not be (e.g. building level data about footfall over a given period) - ethical considerations will be equally relevant to personal and non-personal data.

7. Use cases - implementation of the playbook in specific situations

In this section, we demonstrate how an ethical approach can be applied to actual situations in real estate. In each case we'll look at the background to the project, what it hopes to deliver, the ethical challenges and how these are being addressed.

Use case 1: Digital identities for property processes

Interview with Stuart Young, Etive

What's the basic principle of digital identities?

The simplest explanation is that it gives any individual the ability to prove who they are without producing additional documents, either electronic or physical. DSIT has created a framework DSIT Digital Identity & Attributes Trust Framework - GOV.UK (www.gov.uk)" DSIT Digital Identity & Attributes Trust Framework - GOV.UK (www.gov.uk) that's already used by the Government in DBS checking and for Right to Rent/Right to Work checks. The challenge is finding a reliable and trustworthy way to establish that identity in an unregulated market.

Why is this relevant to the property industry?

As anyone who has bought, sold or rented a property knows, you find yourself "proving" identity in a number of contexts - estate agents, solicitor, mortgage brokers, mortgage lenders, and then insurance, utilities, internet. Etive is working on a set of pan-industry standards so that all the parties are able to rely on one digital identity established right at the start of the process, but without breaching any regulatory or professional rules.

What's the particular project being explored?

We are working with HBF as one of the key stakeholders in the property industry to help us create that set of standards that everyone in a property process can rely on. The HBF involvement is crucial because of the range of organisations it represents but it is only one of a number of stakeholders, including the Law Society. So far we have surveyed the membership as a whole and are supplementing this with interviews. We aim to complete this process by the end of February and ready to launch from the end of March.

What are the benefits?

It makes the whole process smoother for everyone. The individual only has to disclose personal information like a passport once. There is a significant reduction in the number of times identity documents are passed between the individual and stakeholders in the process and the potential to spot fraud earlier. Each party can rely on a set of Government backed standards that are endorsed at a national level and by significant institutions such as HBF which makes compliance easier, reduce customer friction and improve security and data protection

What do you see as the main ethical issues?

The first one is privacy. No individual is going to give up personal information if they are concerned that it will expose them to online risks such as identify fraud. The other issue is trust – the individual needs to know whether they can trust the individual they are interacting with. Consumers nowadays are much more aware of how data is used and misused by organisations and homebuying and selling is a stressful process already, so we need to reduce the worry not add to it. Inclusivity is another issue – we have to make sure that we don't set up a scheme that makes it harder for people who lack digital skills or specific documents to establish their identity

How are you managing those risks?

Once we have a robust process that is widely adopted, that will reduce risks across the whole process. This is why it is so important to have a set of standards that all of the professional bodies, and the industry generally, supports. There isn't a single way to make sure that people trust the process, and it isn't a one-off task; but I think there are a number of things we can do to keep working on trust: regular and wide engagement, asking organisations like ICO, and the RED foundation of course, for input on the work, and being as transparent as possible.

To mitigate against digital exclusion we always make sure that there is a "human in the loop" and we have manual processes available, aligned to the same set of standards to ensure equality and utility with digital processes. And we are aware that nothing stands still when it comes to data so the Digital Identity & Attributes Trust Framework (DIATF) and the MyIdentity scheme policies require identity provider and system audits every two years to ensure standards and compliance and to reflect the continued evolution and redevelopment of technologies and privacy laws. Finally, we are committed to constant industry engagement with regulators and representative bodies ensures transparency, consistency and adoption, as well as enforcement.

Use Case 2: Smart cities

Background / Objectives

Smart cities (technologically modern urban areas that use different types of electronic methods and sensors to collect specific data) are considered cities of the future that use data to improve citizen's lives, modernise government services, and accelerate economic development. The technologies and infrastructures that contribute to smart cities include opening up transportation data, transforming old payphones to wi-fi enabled digital street units, and enhancing the digital provision of government services. While smart cities focus on the network of technologies, these infrastructures are intrinsically linked to real estate and property, where sensors, surveillance cameras, and other devices are embedded into buildings and building materials. Smart cities can be seen as the extension of smart homes, where groups of individuals may benefit from greater connectivity, data, and digital access.

Challenges

While the potential opportunities resulting from smart cities can significantly help citizens and societies, there are also ethical risks related to the wide scale deployment of technologies. These include risks related to privacy, lack of awareness of data gathering by and of citizens, and digital oversight and data management. There are also questions related to data ownership, in particular the privatisation of public data and increased data-driven marketing that may reduce trust between real estate developers, governments of smart cities, and citizens. These challenges have resulted in halting smart city programmes across the world.

More specifically, it may be difficult to apply the data ethics playbook to smart cities due to the large scale and scope of data, technologies, and stakeholders involved. The playbook may be more appropriately applied to specific uses of technologies within smart cities, whether that may be transport, public use of space, environment, or telecommunications.

Application of Data Ethics Playbook

Accountability. In addition to existing regulations and policies that govern the use of data in public spaces, particularly in the context of smart cities, accountability can help identify who or which organisation is responsible. A developer and contact details should be noted on their website or directly on the site of technology deployment if applicable. Similar to smart homes, there should either be a clear

public policy or a clause in the developer's agreement, explaining what happens to the data collected.

Transparency. Similar to the first use case, this links strongly with accountability, and in developments that are used as part of public spaces, clarity should be provided on how data is recorded, for how long, who or what entity stores and analyses the data, and who individuals can contact for further information. Increased transparency can help build trust, where the public can understand how their data is being used.

Proportionality. Although public interest is an important consideration and legitimate reason for collecting vast amounts of data, only essential data points should be collected without consent. Further, data collected as part of smart city infrastructures should be made as open and available as possible due to the public value that such data can provide. Similarly to smart homes, there should be clear guidelines, common to all developments under any ownership, about what is being collected, and why, and whoever is responsible for the development should be able to justify that position – and change it if necessary.

Confidential & Private. Where data is being collected about individuals, such data should be anonymised and stored securely, given the detailed level of information that may be collected, such as where an individual lives or works, their travel patterns, or their health data. A clear time limit should be indicated on identifiable data that is collected and stored, where unused or outdated data is deleted after a specific time period.

Lawful. Individuals who pass through smart cities assume that the data is being used lawfully, as the opposite is not reflective of a democratic society. However, this perspective should not be taken for granted. Rather than assume lawfulness, developers and

organisations that make up the fabric of smart cities should provide as much information about the technologies they deploy and the data they collect as possible.

Secure. Data security is a fundamental tenant to smart cities and their uses of data. It is important that organisations and governments have full grasp of the data which they collect, analyse, and share, as well as put in place mitigation processes should data breaches occur.

Summary

Smart cities can transform urban areas and utilise data through the deployment of technology in real estate infrastructures to enrich citizens lives. However, this comes with risks related to **privacy, mistrust, and lack of accountability.** The use of a data ethics playbook can help identify where the risks are for different stakeholders and minimise these potential harms. For the real estate industry, this is **crucial for ensuring that people feel safe and secure** in the properties and public spaces they inhabit.

8. Key considerations

As stated in the preceding sections of this playbook, there is no one-size fits-all, standards-based approach to building data ethics into real estate companies that will have any meaningful impact. To embed an ethical approach to data usage requires alignment of business priorities to this approach. This necessitates both methods and motivation to achieve this goal.

The following should be considered as the foundational drivers to both define the methods required as well as the impact of having data ethics baked into business operations.

Methods

Expert external engagement: Bodies such as the RED Foundation can provide a critical and reflective eye on where to focus initial efforts.

Resource allocation: Early consideration has to be given in the process to who will be the top-level champion for data ethics within a company. This needs to be accompanied with having a realistic view on what internal resources can be applied to implementing changes.

Flexibility: Data ethics should be considered as an iterative process. As such, in the early stages, even small steps of change, due to, say, the availability of relatively low resource capacity, can have a high impact. Both due to the iterative process required along with the continually changing data ethics landscape around us, it is critical that any policy or business process that is implemented is designed in a way so as to be inherently flexible to maintain its relevance.

Motivations

Public focus: There is growing demand for individuals to understand how their data is being used by the corporate world with which they interact. Providing transparency to individuals on the ethical use of data will build both trust and engagement.

New business drivers: Impact and ESG+R performance are new additions to business success factors that supplement traditional financial measures. An ethical use of data aligns strongly with ESG+R in the following ways:

- *Environmental* - having the singular focus of using individuals' data to drive sustainability goals as well as reducing the overall data footprint you have
- *Social* - ensuring stakeholders that are directly and indirectly impacted by your business are treated in an appropriate way via your use of their data
- *Governance* - expanding business operation methods to include the ethical use of data
- *Resilience* - minimising the surface area of your data exposure and ensuring suitable cybersecurity and privacy methods are in place will make a business resilient to any unwanted data related actions or actors.

Accountability: Undoubtedly, corporate requirements for data reporting will continue to evolve and a proactive data ethics approach will provide a sustainable method to ensure this reporting continues to be as easy as possible. For example, the Strengthening American Cybersecurity Act in the USA requires critical infrastructure providers to report all cyber-attacks they face and this is seen as the first step of commercial real estate there having to do the same. In the EU, the equivalent is the GDPR data breach disclosure requirements which provide strict guidance for organisations to notify all those affected when a data breach occurs.

9. Where next?

Before starting, an organisation should consider carrying out a data management maturity assessment for data ethics to identify areas for prioritisation. Once there is a good view of where the problem areas are, then progress can be made in the following areas:

- Organisational readiness
    a. Drive organisational engagement into data ethics
    b. Implement an appropriate organisational structure
    c. Ensure that nominated resources are the right resources
    d. Devise training and embedded practice for both nominated resources & more widely across the organisation
    e. Secure some level of funding, as appropriate to the individual organisation, to aid development and adoption of data ethics policies / procedures
- Operational readiness
    f. Consider which ethics framework your organisation would like to adopt
    g. Devise strategic policy/principles at C-suite level
    h. Devise operational policies aligned with a governmental standard across key areas
    i. A process for consistent review, reporting and updating should then be implemented
- Technical readiness
    j. Consideration of how data ethics is managed through the process of delivering data, analytics & AI / ML models.
    k. Selection of appropriate tooling to track / document ethical decision making
    l. Availability of documentation

What are the RED foundations overarching ambitions in this space & how can users of this *playbook* help?

- The RED foundation will regularly review this playbook on a set cadence to ensure that it;
    a. Remains relevant,
    b. Incorporates the latest in thought leadership and guidance,
    c. Provides an up-to-date view of regulatory guidance for consideration,
    d. Maintains a record of use case examples of the application of data ethics relevant to the real estate industry.
- As this playbook is aimed to be a resource for the benefit of all, users are requested to share perspectives and or relevant case studies with the RED foundation so as to contribute towards the evolution of our combined understanding of this topic.
- The members of the RED foundation are available to support organisations looking to implement all or part of this playbook. For any questions or queries please reach out to us.

To get in touch or for further details on data and data ethics in the real estate sector, please visit www.theREDFoundation.org

10. Additional resources

- The Digital, Data & Technology Playbook – February 2022 (publishing.service.gov.uk)
- Data Ethics
    a. ODI Data Ethics Canvas
    b. UK Government Data Ethics Framework
    c. https://www.ons.gov.uk/aboutus/transparencyandgovernance/datastrategy/datapolicies/dataethicspolicy
    d. https://www.gov.uk/guidance/understanding-artificial-intelligence-ethics-and-safety
    e. Data Ethics in Real Estate – the next decade's biggest challenge
    f. Geospatial Council Building public confidence in location data (publishing.service.gov.uk)
    g. https://ethicalgeo.org/locus-charter/
- The National-ai-strategy/
- Smart homes
    a. https://techmonitor.ai/cybersecurity-2/how-secure-are-smart-meters,
    b. https://www.gov.uk/government/statistics/smart-meters-in-great-britain-quarterly-update-june-2022 (stats),
    c. Smart meters: a guide for households - GOV.UK
    d. Smart Home Technology Trends — the Future of Your House in Smart Home Solutions — Digiteum
    e. https://www.brsoftech.com/blog/iot-smart-home-devices/
    f. https://www2.deloitte.com/global/en/pages/public-sector/articles/urban-future-with-a-purpose/smart-and-sustainable-buildings-and-infrastructure.html
- Considering wider policy development in relation to green homes https://www.gov.uk/guidance/apply-for-the-green-homes-grant-scheme
- Scot Gov draft principles for public sector data https://blogs.gov.scot/digital/2022/08/19/draft-principles-for-unlocking-the-value-of-scotlands-public-sector-personal-data-for-public-benefit/
- Abbott, Ryan June 2020 "The Reasonable Robot: Artificial Intelligence and the Law"
- Smarter London Together
- Emerging Technology Charter for London

11. References

- RED Foundation Data Ethics Principles
- Department for Culture Media and Sport (DCMS) Command Paper
- Department for Culture Media and Sport (DCMS) Data Strategy Policy Paper
- Financial Times Article, 28 July 2022: West London faces new homes ban as electricity grid hits capacity
- ICO article, 23rd May 2022: ICO fines facial recognition database company Clearview AI Inc more than £7.5m and orders UK data to be deleted
- UK Government Data Ethics Framework
- Open Data Institute's Data Ethics Canvas
- Mckinsey survey, 23rd September 2022: Data ethics: What it means and what it takes
- International Organization for Standardization (ISO)
- British Standards Institute
- The Law Society article, 24th January 2022: Have your say on smart devices in our TA10 form
- ICO Data Protection Impact Assessment
- Transport for London (TFL) Unified API
- BT newsroom article, 22nd October 2018: Birmingham becomes first city in the Midlands to benefit from free ultrafast wi-fi and phone calls,
- UK Government Digital Service
- Cities Coalition for Digital Rights, New Video on Ethics and Privacy in Smart Cities
- Ars Technica article, 28th June 2017: BT's new "1Gbps" free Wi-Fi digital kiosks start appearing in London
- The Guardian article, 7th May 2020: Google affiliate Sidewalk Labs abruptly abandons Toronto smart city project
- Insider article, 24th February 2021: Alphabet's Sidewalk Labs has abandoned another US smart city project after reported fights about transparency
- The Independent article, 15th August 2019: King's Cross developers under investigation for scanning public with facial recognition cameras
- Strengthening American Cybersecurity Act
- GDPR Data Breach Disclosure

Appendix A: Data Ethics Checklist

Organisational Readiness:

- Drive organisational engagement into data ethics
    - Identify and refresh business values to reflect desired ethical behaviour
    - Secure senior leadership sponsorship for implementation of data ethics
    - Garner organisational acceptance of need for data ethics and what it means
    - Devise a structured communication plan for driving literacy on data ethics & its applications
- Implement an appropriate organisational structure
    - Appoint data ethics officers (where relevant a head of ethics)
    - Provision on necessary supporting roles / organisation (ie steerco / data ethics stewards etc) - Data Ethics Boards
    - Assigning specific responsibilities (updating job descriptions to reflect data ethics responsibilities and inclusion within performance management process)
    - Link career progression to ethical behaviour / compliance with policy
- Ensure that nominated resources are the right resources
    - Assessment of skill sets, bandwidth, experience and attitude required to drive the data ethics agenda
    - If necessary, ensuring that there is external resources identified to supplement internal knowledge base (ie consultants)
- Devise training and embedded practice for both nominated resources & more widely across the organisation
- Secure some level of funding, as appropriate to the individual organisation, to aid development and adoption of data ethics policies / procedures

Operational Readiness:

- Strategic policy/principles at C-suite level
    - Ensure that data ethics forms part of any overarching data strategy or compliance strategy
    - Integrate policy / ways of working into product / service development ("ethics by design")
    - Build a roadmap associated with the strategy that ensures that the topic of data ethics remains relevant and aligned with organisational / governmental frameworks.
    - Create project plan and identify/involve relevant stakeholders

- Identify aspects of the business that are more/less susceptible to unethical behaviour, other ethics issues/practices to be addressed, and other objectives. Then prioritise
- Draw up a code of ethics. Define approach for managing good and bad ethical behaviour and process for reporting unethical behaviour
- Create awareness among staff of ethical requirements and key policy points
- Build ethics into mission statement
- Implement ethical working practices based on code
- Devise operational policies aligned with a governmental standard across key areas in specific areas
  - Governance processes & structures in place to:
    i. audit & maintain oversight over data, data products
    ii. ensure transparency in decision (Data Ethics Boards)
    iii. Define and make available clear guidelines & processes highlighting the organisation's data privacy policies
    iv. Define and make available clear protocols with regards to data access, particularly in relation to PII data

  - Ethics by design applied to ensure that:
    i. user autonomy in decisions undertaken as a result of data / information consumed is maintained
    ii. consideration is made for users with disabilities as part of the design of data products & tooling selection
    iii. stakeholders who may directly or indirectly affected by the data and or data products developed consulted as part of any new development projects
  - Data management processes in place to:
    i. ensure that any and all unfair bias has been eliminated from data sets before use
    ii. regularly carry out an assessment of all critical algorithms, data and design processes
    iii. Ensure that in the application of ethical practices, where trade-offs arise, that they are explicitly acknowledged and evaluated in terms of their risk to ethical principles, including fundamental rights
    iv. Implement controls ensure the sustainability of the tools / products leveraged as part of the delivery of data and data products including the supply chain
    v. When unjust adverse impact occurs, make accessible mechanisms to ensure adequate redress
- Consistent review, reporting and updating - iteration

- Definition of success measures that are tracked on a set cadence and issued to key stakeholders for review and action
- Tracking of actions taken on the basis of tracked measures
- Impact of any tools / data products in use on the users / consumers of these capabilities assessed on a regular basis & protocols in place to deal with any negative impact identified
- Negative impacts of existing algorithms or data products tracked, reported and actioned on a timely basis
- Track satisfaction of staff / protection of stakeholders
- Track customer satisfaction/loyalty, competitive advantage and profitability
- Ongoing evaluation and refresh of policy as standards of ethical behaviour develop. Could include industry/competitor benchmarking

Technical Readiness:

- Consideration of how data ethics is managed through the process of delivering data, analytics & AI / ML models.
    - Processes in place to ensure regular auditing of systems for security vulnerabilities
    - Tracking and notification of data breaches to relevant stakeholders / authorities
    - Documentation & backups of data and algorithms forming part of any data platforms and critical data stores
    - Reasonable efforts made to ensure that data is kept of sufficient quality to support critical decision making & service delivery
    - Logic for any developed algorithm is documented and explainable in technical and layman's terms
    - Guidelines made available to consumers of data & insights that are based on algorithms that explain clearly, in layman's terms, the assumptions and logic used to develop outputs
- Selection of appropriate tooling to track / document ethical decision making
    - Ability to trace data lineage and data flows
    - Ability to review metadata (metadata repository)
- Availability of documentation
    - Documented data ethics policy, based on a government standard (dependent on geography & organisational preference)
    - Availability of published documentation on decision making process related to data usage & practices that articulate clearly how decision making was ethical in nature.

WWW.**THE**RED**FOUNDATION**.ORG

RED
Foundation