INTRODUCTION

The Sustainable Digitalisation Project (SDP) is a collaboration of industry, government and academic sustainability and digital leaders with the purpose of making digitalisation in real estate and cities responsible, ethical and sustainable. We call this sustainable digitalisation for short. This means ensuring that digitalisation-driven environmental, social and governance (ESG) risks and opportunities are being effectively identified, understood and managed with the use of technology.

We are observing two strong trends around the digitalisation – the application of technologies from artificial intelligence (AI) and augmented reality to the Internet of Things and robotics – of our cities and real assets:

1. Digitalisation is now rapid and accelerating. Industry and governments are seeking a range of digital technology benefits, including many in ESG areas. So far, the focus has predominantly been on the opportunities offered by digitalisation as numerous funds and investment products seek returns from investments in the likes of data analytics, artificial intelligence (AI) and automation.

2. There is a growing movement to ensure that digitalisation is done responsibly and ethically, and with attention to human rights. Research and advocacy organisations are being set up around Australia and globally to advance this, and big technology is seeking to demonstrate its trustworthiness and responsibility. Coupled with this, regulation is also evolving.

We have seen ESG integration become a widely adopted investment practice and it is now an expectation of regulators in Australia and many other nations. It requires institutional investors to broaden their risk lens and incorporate material ESG factors into their decision-making processes with manager selection, valuation, asset allocation and ongoing stewardship. This is done to better manage investment risks and opportunities, and generate longer-term, more stable returns.

As digitalisation permeates every sector, including real estate and infrastructure, real asset investors must take account of digitalisation-driven ESG issues throughout their investment processes and encourage high standards of ESG performance in the investee companies and the underlying assets they are invested in.

The Sustainable Digitalisation Investment Initiative

The purpose of the SDP’s Sustainable Digitalisation Investment initiative is to establish a set of sustainable digitalisation ESG investment indicators that investors can use to better engage with their investee companies on their approach to digitalisation risk and opportunity management and governance. This will protect and generate value from their real asset investments and enhance stakeholder trust. The initiative is doing this via these steps:

1. Understanding what is already happening around Australia and the world with digitalisation-driven ESG issues and indicators through engagement of the asset owner and investment manager community.

2. Examining the direct materiality for investors of the issues identified.

3. Developing a set of indicators with accompanying guidance recommendations for the advancement of sustainable digitalisation in real estate and infrastructure investments.

As part of Step 1, this working paper aims to start a conversation with real asset investors and investment managers on digitalisation-driven ESG issues of potential materiality to real asset investments. It provides an introduction to some of the emerging digitalisation-driven ESG issues and the risks and opportunities they might pose, with short case studies to illustrate how such issues are playing out. It concludes with an invitation to investors and investment managers to assist this initiative by contributing to the:

1. mapping of digitalisation-drive ESG issues for real asset investments; and

2. development of an indicator framework.
UNINTENDED CONSEQUENCES?

‘Unintended consequences’ is a term often used with digital technology, and such consequences can be of great concern. For example, in 2015, did we expect that the popular social media platform Facebook would be used to manipulate the 2016 US election, or be weaponised in the 2019 Christchurch racial violence attacks?

Such consequences require us to start thinking more deeply about the systemic implications of our actions with technology. We should also consider, in this rapidly evolving environment, that what we may define as unintended, may be considered by others to be entirely foreseeable. Our boundary of responsibility with sustainable digitalisation may already be much bigger than we currently perceive it to be, and it is expanding quickly.

Headlines on CNN on the day Facebook’s share price dropped USD119 billion on account of privacy concerns, 26 July 2018

Disclaimer

This working paper is for engagement and research purposes only and is not to inform investment or any other form of decision making with economic, social or other consequences. The Sustainable Digitalisation Project (SDP) and any party involved in or with the SDP and this initiative assumes no liability for any losses or damages suffered in association with the use of this paper or any of the content in it.
DIGITALISATION-DRIVEN ESG ISSUES

According to the World Economic Forum’s Global Risks Perception Survey¹, digitalisation-related risks, such as cyberattacks and data fraud or theft, were listed in the top 10 of long-term risks with regard to likelihood. These issues are early priorities for some investors, but there are other digitalisation-driven factors of consequence. As more smart technologies are used in real estate and infrastructure assets and in urban places, the risks increase, leading to possible adverse outcomes for stakeholders.

To assist our thinking about which digitalisation-driven ESG issues might be material to real asset investment, following are five examples for consideration, with some of the risks they might present noted.

Example Issue 1. Privacy
Data collection associated with the management and operation of real assets is accelerating and collected personal information is being transferred to third parties, such as data analytics and marketing firms. This is in an environment of increased cyber risk and of third parties combining data sets to identify people who have not consented to being identified. The public has observed scandals around data privacy, such as with Facebook and Cambridge Analytica, and there is a growing awareness of surveillance technology being used by corporations as well as authoritarian regimes around the world, including across borders.

Risks include

Failure to effectively give users comfort around privacy could lead to reputational damage for real assets and their owners/managers, and reduced desirability to tenants, customers and investors. This may occur overtly, such as with a scandal in the media, or subtly, such as through people not feeling comfortable in or around certain buildings and quietly choosing to avoid them.

Litigation may occur in the event of harm to individuals and company directors may be liable in the event of regulatory requirements not being met.

Many companies and investors alike are signatories to the UN Global Compact’s Principles for Business and Human Rights, which are a set of guidelines for states and companies to prevent, address and remedy human rights abuses committed in business operations. Many of the issues surrounding privacy also have implications for not respecting or even abusing human rights.

Example Issue 2. Data Rights
With increasing personal information being collected from our interaction with the built environment and the public potentially placing greater value on such data, questions of ownership and consent can be expected to increasingly be raised. For example, this might include understanding what third parties the data might be transferred to, how they might use it, including in combination with other data sets, and what other legal jurisdictions it might fall under.

Risks include

Reputational damage, including reduced desirability to tenants and customers, for real asset managers who are seen to have insufficient policies, practices and performance around data ownership.

With ‘smart’ development projects, financial risk could be caused by project delays and planning changes as a result of stakeholder activism around data rights.

The ownership of personal information already collected might be challenged by the relevant persons and, if this is successful, might lead to the devaluation of data assets.

**Example Issue 3_ Cybersecurity**

While cybersecurity has predominantly been associated with corporate data and private information being breached, the cybersecurity of properties and infrastructure assets is recognised as highly vulnerable to a range of breaches associated with crime, terrorism, espionage, sovereign warfare or simple mischief and human error.

**Risks include**

- Reputational risk and damage to investors, managers and associated businesses, including tenants and owners due to serious breaches. This may extend to company director liability, such as if disclosure regulations are not met or negligence with cyber security measures is found.
- Litigation, regulatory and compliancy risk, and reputational damages, due to certain breaches, such as terrorism through controlling building systems or taking over critical infrastructure projects. These may disrupt communities and harm or even kill people.

**Example Issue 4_ Exclusion**

Property or infrastructure facility users may be denied full access to use building or operating systems due to not having the required capabilities or digital skills, or by being selected and excluded by the algorithms of systems that control aspects such as access.

Technologies such as social media platforms or augmented or virtual reality, can also greatly assist with the engagement and inclusion of stakeholder groups associated with a property, organisation or development project.

**Risks include**

- Reputational or regulatory risks to responsible parties in the case when people are denied rights due to biases in algorithms or technological systems not being accessible for use by these people.
- Financial risks with delays in development projects or compromised operations in use. Reputational risks with community backlash, for development projects utilising intelligent technologies that do not ensure inclusion for its users.

**Example Issue 5_ Workforce Transitioning**

The automation of work with technologies such as big data, AI or robotics is affecting both blue- and white-collar workforces and is expected to have a major impact in sectors such as construction. Employers may have a responsibility to affected staff to transition them, whether they stay in the company or leave. Some may use proactive transitioning strategies, such as building up digital literacy, as a source of competitive advantage for attracting and retaining talent.

**Risks include**

- Reputational damage and diminished ability to attract talent due to insufficient transitioning of workers in roles being automated.
- Companies that do not maintain the digital literacy of teams and a strong ability to utilise advanced digital management tools may be perceived as less desirable, representing a market risk.
- For companies, an unjust workforce transition may cause misalignment with their socially responsible investment strategies and social impact commitments.
CASE STUDIES

The following case studies provide real world examples on how such issues are beginning to emerge and how they might impact investors and their investment managers.

CASE STUDY 1 _ SHOPPING CENTRE SURVEILLANCE

The public is increasingly aware of shopping centres using their personal information, often without recollection or full awareness of their consent, and the media is now discussing customer unease or privacy concerns associated with this. The pursuit of benefits such as targeted marketing and customer security are pushing uptake and the use of facial recognition in particular is drawing interest.

Questions about location tracking and meaningful consent, especially when privacy policies are too long and complex to read, are being raised. We might expect more public discourse about such issues in the context of shopping centres, especially as people re-assess the value of their personal information.

It is foreseeable that customers might preference the shopping centres they use based on their level of comfort with privacy and data ownership, possibly impacting shopping centre footfall and profitability.

CASE STUDY 2 _ BIOMETRIC COMMUTER PAYMENTS

Mastercard is working with transportation companies to develop new payment systems for access to public transport services based on biometrics such as the unique gait of a person’s walk, heartbeat or pattern of veins. This would be run through closed circuit cameras which analyse people approaching access points and can expedite the process of payment and access and increase payments security.

This is an example of digital technologies or projects in the built environment that in their own right may provide positive environmental and/or social outcomes, but as part of a broader system of urban surveillance could have unintended consequences. These might include a change to a government that is less human rights focused, misuse by corporate organisations, or cyber-attacks by terrorists or belligerent sovereign states.

CASE STUDY 3 _ SIDEWALK TORONTO

Sidewalk Labs is the urban innovation business of Alphabet Inc., Google’s parent company, and has been positioning itself as the developer to transform Quayside, a 4.9 hectare brownfield ex-port site in Toronto, into what is being promoted as one of the world’s most technologically innovative neighbourhoods. It has been doing so under the brand of “Sidewalk Toronto”.

The project has been significantly affected by controversy with the community concerned about many implications of the collection and use of their data, and the City of Toronto being accused of prioritising the promotion of a smart city vision over the needs of the community. As a result, the project was been delayed and scaled down in size, and Sidewalk Labs subsequently pulled out in May 2020.

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2 Steiner, R., Mastercard is pioneering new payment technology that identifies commuters by the way they walk, article at marketwatch.com, 17 Feb 2020. www.marketwatch.com/story/mastercard-is-pioneering-new-payment-technology-that-identifies-commuters-by-the-way-they-walk-2020-02-14
CASE STUDY 4. SOCIAL MEDIA MISUSE

While allowing people to connect brings many social and economic benefits, the use of social media platforms can facilitate negative social outcomes such as cyber bullying and harassment, addiction, and the sharing of fake news and views that are detrimental to society, e.g. with extremism.

The 2019 Christchurch racial violence attacks were livestreamed online and went viral on the web helping to inspire other attacks. It took Facebook 29 minutes and thousands of views before the live-streamed massacre at a mosque in New Zealand was reported to Facebook and ultimately removed. Facebook, YouTube and Twitter all carried links to the 17-minute video of the attack and struggled to completely stamp out repeat uploads of the footage, which reached millions of viewers.3

The event highlighted the urgent need for action and enhanced cooperation among the wide range of actors to eliminate the live streaming and distribution of objectionable content online. Following the attack, more than one hundred global investors representing approximately USD7.5 trillion of assets-under-management joined a collaboration to encourage social media companies such as Facebook, Alphabet (owner of YouTube via Google) and Twitter to strengthen controls over objectionable content.

While not related to real assets, this demonstrates the recognition of digitalisation-driven social risks by investors, in this case with the value of social media stock assets, and large-scale investor action to influence corporate change.

3 Flynn, M., No one who watch New Zealand shooter’s video live reported it to Facebook, company says, article on www.washingtonpost.com, 19 March 2019 https://www.washingtonpost.com/nation/2019/03/19/new-zealand-mosque-shooters-facebook-live-stream-was-viewed-thousands-times-before-being-removed/
A GROWING AGENDA

As context for this initiative, a movement to make digitalisation responsible, ethical and sustainable is rapidly emerging around the world. Many research and advocacy organisations, and initiatives have been recently established to advance the agenda. Some selected global examples include:

- The Contract for the Web⁴ was launched in 2019 to safeguard the web for humanity by a large consortium of organisations lead by web inventor, Sir Tim Berners-Lee, and the World Wide Web Foundation.
- The World Economic Forum is prioritising discourse on ethics and trust with the use of digital technologies and data.
- The Organisation for Economic Cooperation and Development (OECD) launched its Principles on AI⁵ in May 2019, which 43 countries have endorsed. The five principles for the responsible stewardship of trustworthy AI focus on common ESG themes including sustainability, equity, wellbeing, transparency, risk monitoring and accountability.

In Australia, notable examples include:

- The Australian Human Rights Commission is undertaking a major project on the relationship between human rights and technology, led by the Human Rights Commissioner Edward Santow.⁶
- The Ethics Centre has played a leading role setting the agenda, publishing Ethical by Design – Principles for Good Technology in 2018.⁷
- The Australian Government issued its finalised AI Ethics Principles⁸ in 2019 following a consultation of experts from business, academia and community groups.
- Multiple Australian university programs are emerging including the Australian Research Council (ARC) Centre for Excellence for Automated Decision-making and Society led by RMIT.⁹

Many technology companies are also developing principles for ethical AI, with Google, Microsoft, IBM, SAP and Salesforce being some of the well-known brands seeking to reassure governments, regulators, and customers that they are managing the risks associated with AI responsibly.

The development of such principles, while sometimes attracting cynicism due to not relating directly to action, is significant as they are the precursor to standards, policies and tools, and help establish the alignment of stakeholders.

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⁴ https://contractfortheweb.org/
⁶ https://tech.humanrights.gov.au
⁷ Beard, Matt and Longstaff, Simon: Ethical by Design – Principles for Good Technology: The Ethics Centre, Sydney, 2018
DRAFT PRINCIPLES FOR SUSTAINABLE DIGITALISATION

The SDP is currently developing a set of principles to define sustainable digitalisation. The principles in early draft are as follows:

1. Transparency of Purpose
   The purpose for using digital technology is clear and considered, including answering ‘What is right?’ It extends well beyond technological solutions and technology is only used as an enabling tool, and is not an end in itself.
   Being able to use it does not mean it should be used.

2. Do No Harm. Do Good
   Social or environmental harm associated with the use of digital technology is avoided and improvement is achieved where possible.
   It is used with both precaution and creativity.

3. Good for Humanity
   The fundamental qualities of being human, including our dignity, human and data rights and our intrinsic connection with nature, and the fair, inclusive and diverse nature of our society are supported.
   Being human needs to be sustainable.

4. Systemic Responsibility
   The deployers and operators of technology have responsibility for its broader systemic environmental, social and governance consequences; including through its whole lifecycle and up and down supply chains.
   While consequences may be unintended, responsibility may still exist.

5. Stakeholder Accountability
   The suppliers, owners and operators of digital technologies are accountable to stakeholders affected by its use for any environmental, social and governance impacts.
   They operate with transparency.
CONCLUSION_ STARTING A DIALOGUE

This working paper provides an initial introduction to the idea of sustainable digitalisation with regards to real asset investment. The next step is to start an active dialogue with the Australian and global investment community, aiming to build a picture of which sustainable digitalisation issues are emerging in industry and how they could be factored into investment decision-making and engagement processes. This will inform a draft set of sustainable digitalisation indicators for real estate and infrastructure investments.

Our request of you

The SDP invites you to participate in the Sustainable Digitalisation Investment initiative by responding to the following questions:

1. What digitalisation-driven ESG issues does your organisation see as potentially relevant when making investment decisions or when engaging with your real asset investment managers?
2. Have you examined materiality or saliency for any digitalisation-driven ESG issues? Please explain.
3. What issues do you see as priorities?
4. What indicators are you using, or could you foresee using, to understand and monitor any of these issues in your real asset investment portfolio?
5. Anything else you’d like to add to illustrate your answers?
6. Would you be willing to participate in a short interview regarding your thinking and/or approach on this topic?

Please provide your response via this survey link.

Thank you for your input.
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ABOUT THE SUSTAINABLE DIGITALISATION PROJECT (SDP)

The Sustainable Digitalisation Project (SDP) is a collaboration of industry, government and university sustainability and digital leaders with the purpose of making digitalisation in the real estate sector and in cities responsible, ethical and sustainable.

It was born out of the response to a publication called Crossing the Threshold – a primer for sustainable digitalisation in real estate and cities1, and the recognition that industry and government needed an agenda around responsibility, ethics and sustainability with digitalisation in the built environment.

See www.sdp.digital for more information.

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1 Carter, Simon: Crossing the Threshold – a primer for sustainable digitalisation in real estate and cities: Morphosis and RICS, Sydney, Sept 2018