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NetZero in the construction industry: legislation and technology as enablers for change

5 August 2021

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Ruth Keating, 39 Essex Chambers

Agenda

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- Legislation and Policy Update
- NetZero in the courts
- Contracts & Technology: enabling change

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Legislation and Policy Update

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Key updates

- Existing Legislation and Building Control/Approved Documents.
- Upcoming legislation/the Environment Bill.
- Impact on the construction industry.



Existing legislation

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Climate Change Act 2008

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Building Regulations: Approved Document L

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- Approved Document L (Conservation of fuel and power) – new and existing dwellings/buildings.
- The Future Homes Standard.
- October 2019 and January 2021 consultation-stage guidance for Approved Document L (conservation of fuel and power).
- “Interim” uplift to standards.

The Environmental Bill

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A snapshot of the impact

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- Environmental principles.
- Environmental target provisions.
- The new Office for Environmental Protection.
- Biodiversity.
- Conservation covenants.
- Air quality.
- Water.



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Environmental principles

- Clause 16 in its current form provides:

“Policy statement on environmental principles

(1) The Secretary of State must prepare a policy statement on environmental principles in accordance with this section and section 17.

(2) A “policy statement on environmental principles” is a statement explaining how the environmental principles should be interpreted and proportionately applied by Ministers of the Crown when making policy.

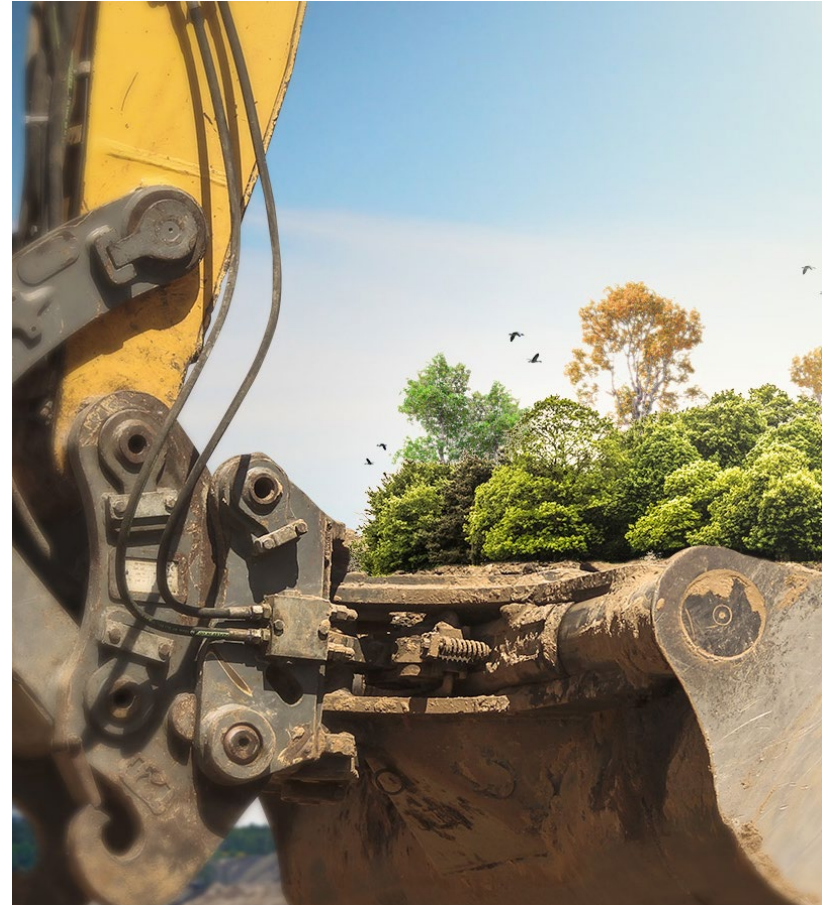
...

(4) The Secretary of State must be satisfied that the statement will, when it comes into effect, contribute to—

- *(a) the improvement of environmental protection, and*
- *(b) sustainable development.*” (Emphasis added.)

The OEP

- The establishment of “a new, world-leading, independent environmental watchdog”, the Office for Environmental Protection (“OEP”).
- The principal objective of the OEP is said to “contribute to—
(a) environmental protection,
and (b) the improvement of the natural environment”
(clause 23(1)).



Conservation covenants and biodiversity

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- The Bill adopts a recommendation by the Law Commission made in June 2014.
- Conservation covenants will be voluntary but legally binding written agreements between a landowner and a designated “responsible body” to conserve the natural or heritage features of the land.
- Features of conservation covenants.
- Interaction with the provisions relating to biodiversity (part 6 ‘Nature and Biodiversity’).

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Biodiversity

- A mandatory condition for most development to achieve a 10% biodiversity net gain in order to proceed.
- A 'biodiversity gain plan'.
- The Government's biodiversity metric calculator.
- Offsite options.



Change for the construction industry

- The Committee on Climate Change: call for the construction industry to be largely decarbonised by 2040.
- The built environment contributes around 40% of the UK's total carbon footprint.
- Examples: Highways England and the Granton Waterfront Regeneration.
- RICS carbon reporting rules.
- The Environmental Audit Committee's inquiry considering the sustainability of the built environment.



Environmental Audit Committee

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Chair's comment



Environmental Audit Committee Chairman, Rt Hon Philip Dunne MP, launching the inquiry said:

“For decades we have been constructing homes and buildings with concrete and steel, with little thought to the carbon footprint involved. While Government policy incentivising a house-building boom could contradict its net zero ambitions, there is an opportunity for innovation as we explore low-carbon and sustainable building materials. Our new inquiry will consider how we can decarbonise construction and the opportunities that may arise, and I invite anyone with thoughts to submit evidence.”

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Net Zero in the courts

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European court cases

- Netherlands, Germany, France, Ireland, Belgium;
- Typically, cases are brought on behalf of a large number of citizens by an NGO;
- The courts have found that
 - the governments owed an obligation to take necessary measures against climate change; and
 - the governments had failed this obligation;
- The obligation arose as a matter of fundamental human rights within national laws but also the European Convention on Human Rights;
- www.acaseforearth.com.

Netherlands

- Case brought jointly by several NGOs and more than 17,000 Dutch citizens, who alleged that Shell was threatening human rights (under the European Convention on Human Rights) by not reducing its emissions sufficiently.
- 26 May 2021, the district court in the Hague found that Shell:
 - Owed a duty of care to citizens to reduce its emissions; and
 - Had a climate policy but it was “not enough” to satisfy that duty, namely it was “not concrete” and was “full of conditions.”
- The court ordered:

“Royal Dutch Shell, by means of its corporate policy, to reduce its CO2 emissions by 45% by 2030 with respect to the level of 2019 for the Shell group and the suppliers and customers of the group.”

Netherlands

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- Shell, 21 July 2021:

“We agree urgent action is needed and we will accelerate our transition to net zero...But we will appeal because a court judgment, against a single company, is not effective. What is needed is clear, ambitious policies that will drive fundamental change across the whole energy system. Climate change is a challenge that requires both urgent action and an approach that is global, collaborative and encourages coordination between all parties.”

Australia

- Australian Federal Court case brought by eight Australian citizens, on behalf of “all young Australians”: asking the court to:
 - Accept that the Environment Minister has a duty of care to protect young people (because of their particular vulnerability to climate change);
 - Grant an injunction stopping the Environment Minister from approving an extension to Vickery coal mine in NSW.
- The Judge accepted that the minister had a duty of care to protect young people from climate change.

UK: court challenges

- *R (on the application of Friends of the Earth Ltd and others) v Heathrow Airport Ltd* [2020] UKSC 52;
- *Plan B & Others v the Prime Minister & Others*, proceedings served 1 May 2021;
- *Transport Action Network Ltd, R (On the Application Of) v Secretary of State for Transport*, [2021] EWHC 2095 (Admin)

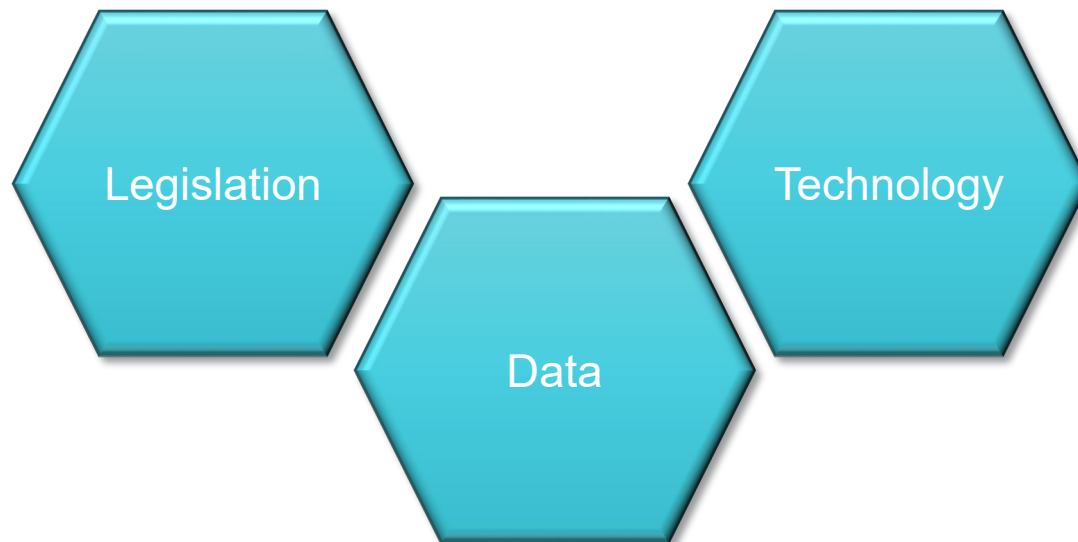


UK: procurement rules

- The UK construction minister Ann-Marie Trevelyan has listed three government actions to ensure contractors commit to reducing carbon contributions:
 - A ‘carbon exclusion measure’, or warning that companies without net-zero plans, or not committed to net-zero by 2050, will be barred from bidding for public sector work. The policy will apply to contracts above £5m.
 - National Procurement Policy statement: public sector buyers must consider how their procurement can tackle climate change and reduce waste.
 - A requirement for central government departments to “*expressly evaluate environmental, social and economic benefits*” during the procurement process.

Enabling change in 2021 & beyond...

- Enabler of change: Legislation & Technology
- Underpinning foundation (golden thread): Data



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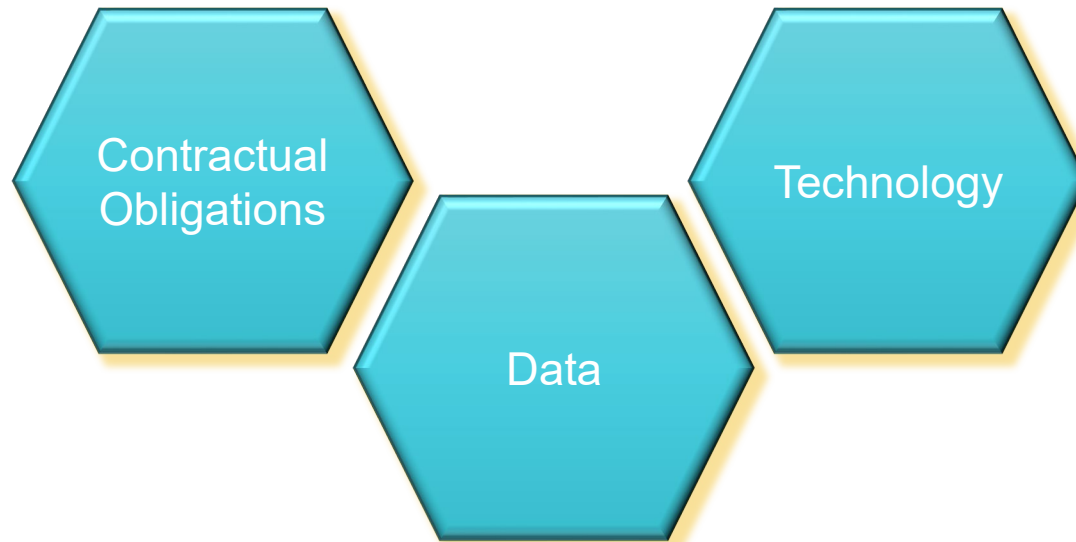
Contracts & Technology: enabling change

Dr Stacy Sinclair, Fenwick Elliott LLP



Enabling change in 2021 & beyond...

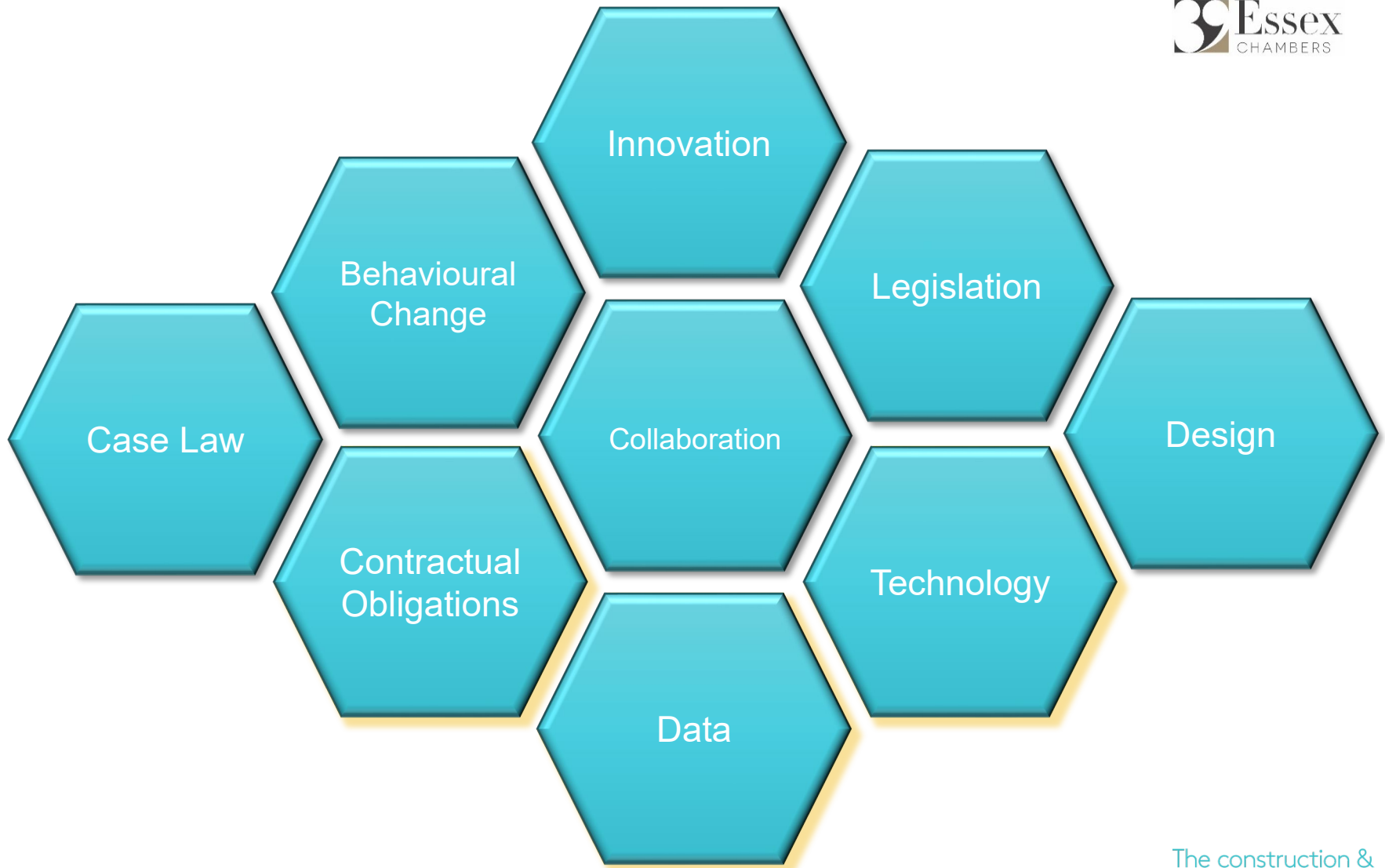
- Enabler of change: **Contracts & Technology**
- Underpinning foundation (golden thread): **Data**



Achieving NetZero

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Contractual Obligations

- Contractual landscape is immature – but watch this space...
- Expect to see contractual obligations (ie, low carbon emissions targets) working towards a net zero obligation, in contracts.
- Crucial that this is focused on design obligations as well as the construction and operational phases.

Contractual Obligations

- **Chancery Lane Project: Climate Contract Playbook**
A series of clauses that could be used in a variety of commercial situations, not just construction.

<https://chancerylaneproject.org/>

Construction

[Mary's Clause] Build Contract Energy Efficiency Clauses

[Luna's Clause] Green Construction Modifications

[Estelle's Clause] Net Zero Construction Standards

[Edgar's Clause] Climate Resilient landscape design contracts *NEW*

[Tristan's Clause] Construction Materials: Procurement *NEW*

[Francis' Clause] Climate Aligned Construction Waste Management *NEW*

Planning

[Rory's Clause] Net Zero Land Promotion

[Evelyn & Ezra's Clause] Securing Net Zero in development through planning *NEW*

Contractual Obligations

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A series of clauses that could be used in a variety of commercial situations, not just construction.

<https://chancerylaneproject.org/>

Build Contract Energy Efficiency Clauses

Mary's Clause

Amendments to the JCT standard Design and Build documents to make energy efficiency part of Practical Completion.

Construction Materials: Green Procurement

Tristan's Clause

A formal 'Carbon Budget' alongside the traditional Financial Budget for construction projects to incentivise industry participants to reduce GHG Emissions through use of more sustainable materials.

Green Construction Modifications

Luna's Clause

A clause that incentivises building contractors to propose 'Green Modifications' to project works, which will benefit the Employer, the overall Project and the environment into the future.

Contractual Obligations

- **Chancery Lane Project: Climate Contract Playbook**
A series of clauses that could be used in a variety of commercial situations, not just construction.

<https://chancerylaneproject.org/>

Green Supplier Agreement Terms

Zoë And Bea's Clause

Green procurement clauses and a checklist to make a standard supplier agreement focus on emissions across a value chain.

Net Zero Target Supply Chain Cascade

Owen's Clause

Clauses that “back to back” or align a business’s net zero target with its supply chain and business partners, thus enabling the business to achieve its target or take control to achieve it.

Termination for Greener Supplier

Agatha's Clause

The clause gives customers a right to switch supplier if the existing supplier is unable to match a ‘greener’ offer made by an alternative supplier.

Contractual Obligations

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- **Chancery Lane Project: Climate Contract Playbook**
A series of clauses that could be used in a variety of commercial situations, not just construction.

<https://chancerylaneproject.org/>

Watch this space...

MMC, NEC clauses, further supply chain obligations, etc...

Contractual Obligations

- Specifications?
- Requirement / pre-requisite to tendering?
- Benchmarking?
- Termination?
- Dispute resolution? (Protocols for green arbitrations)
- Businesses required to identify their carbon footprint

Contractual Obligations

- Carbon Footprint - reference to standards:

Examples:

Organisational Carbon Footprint	Product Carbon Footprint
Greenhouse Gas Protocol Corporate Accounting and Reporting Standards	GHG Protocol Product Life Cycle Accounting and Reporting Standard
Corporate Value Chain (Scope 3) Accounting and Reporting Standard	ISO 14064
ISO 14064	

Beware of Greenwashing

- What have you signed up to?
- What do the standards / specifications really mean?
- *ClientEarth v BP* (Dec 2019)
 - “Keep Advancing” & “Possibilities Everywhere” advertising campaigns
 - Complaint under the OECD guidelines for misleading statements
- More challenges to come in situations where companies make promises / sign up to specific contractual obligations?

Contractual Obligations

- Complying with your obligations of:-

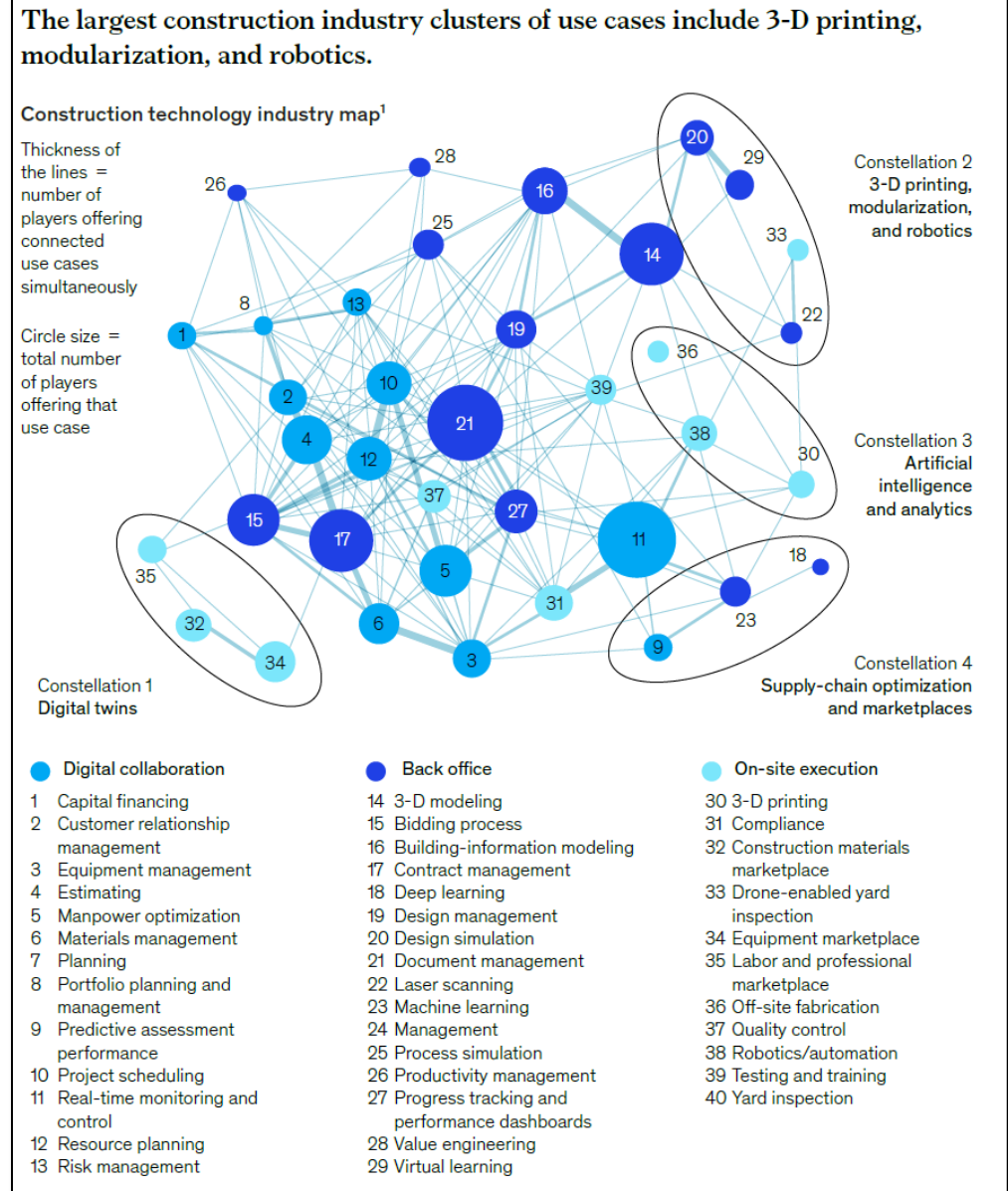
- Measurement
- Monitoring
- Management
- Mitigation
- Predicting
- Reporting



Use of technology

Connected Technologies: Already a reality

- Connected technologies and connected data
- Requirements for real-time flow of data
- What are the issues?

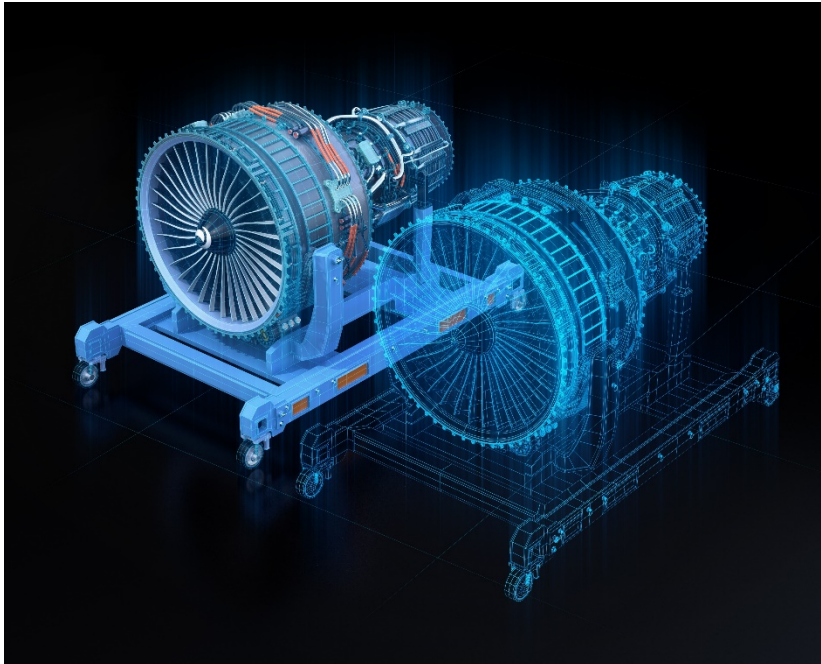


Enabler of change: Digital Twins

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- Digital Twins bring to the forefront the significance and importance of data and data management.
- It is no longer about static, siloed 2D drawings/documents, transferred intermittently and manually, but rather:



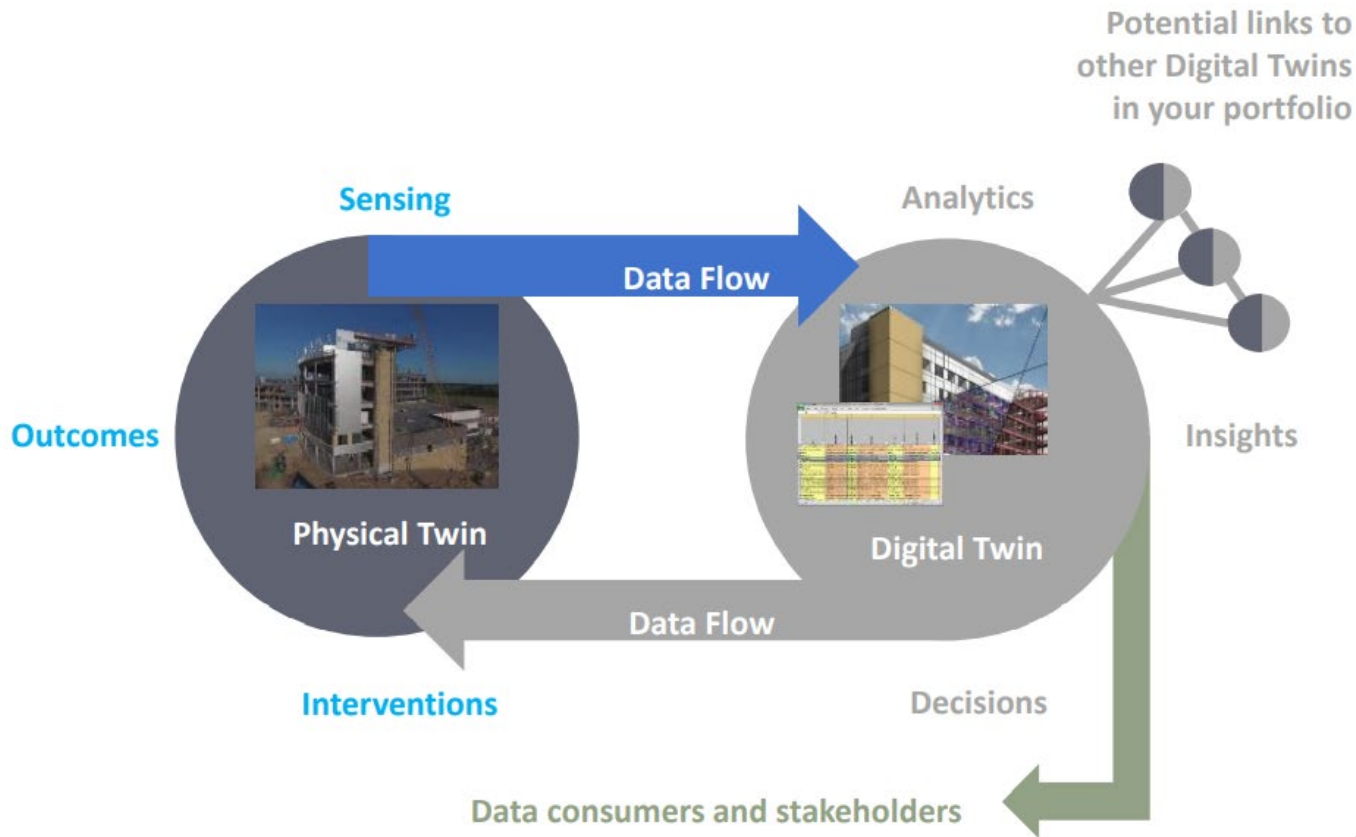
real-time connection of models, data and databases, to the physical asset, with the use of sensors and other tech, to monitor, control & predict

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Enabler of change: Digital Twins

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Digital Twin Navigator,
Construction Innovation
Hub, May 2021

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Enabler of change: Digital Twins

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- Comparative data & predictive analytics
 - know what the trend should be for a particular asset
 - analysis of the trends
 - predictive v reactive maintenance

Enabler of change: Digital Twins

Legal (and technical) issues

- Liability – roles & responsibilities - who is liable for the service performance and outcomes relating to the DT?
- Data capture – accuracy & tolerance of sensors, etc
- Data hosting – back-ups, security, SLAs, etc
- Data access, ownership & copyright – rights & licensing
- Information management & system integration
- Security

The importance of data

Access to data

- Consider throughout the course of the project and afterwards:
 - Who has the right to access the data / the platform / CDE? Even in the event of non-payment?
 - Will the platform exist in 6-12 years' time?
 - Who hosts/licenses the platform(s) / technology during the project and after?
 - Is the data backed-up and/or extracted on completion of the project?
 - ***Trant Engineering Limited v Mott MacDonald Limited*** (2017)

The importance of data

Right to use the data / database: Copyright & IP

- The use of other companies' data and databases in design, construction and operation, or for the purpose of developing new products and processes to do so, is part and parcel of construction and energy projects.
- Whether a company has rights over particular datasets depends on the facts.
- ***Software Solutions Ltd v 365 Health and Wellbeing Ltd*** (2021)
 - Issues of copyright and database rights
 - Important to understand what rights and licenses, both express and implied, are in place prior to embarking on the development of new innovations and advancements in technology.

The importance of data

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Deliverables | Outcomes

- Defining deliverables and outcomes is important to achieve NetZero and the successful completion of projects.
- What data / models need to be handed over on completion?
- Data and databases necessary for the lifecycle of an asset/project?
- Circular economy

Conclusion

The devil is in the detail...

- NetZero is an unprecedented, transformational game-changer, driving the change;
- Legislation, contractual obligations & technology are the enablers of this change;
- Digital Twins and other technologies play a pivotal role in meeting the upcoming legislation and contractual obligations;

measure, manage, monitor, benchmark, report, automate

necessary in design, construction and operation of built assets

- Need to be alive to the issues surrounding data, which is essential and integral to the success of technology & NetZero.

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Thank you!
Questions?

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