



# INTELLIGENT BUILDINGS GROUP

Newsletter Winter 2020



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“

An intelligent building is one that is responsive to the requirements of occupants, organisations and society. It is sustainable in terms of energy and water consumptions besides being lowly polluting in terms emissions and waste: healthy in terms of well-being for the people living and working within it; and functional according to the user needs

”

Clements-Croome (2010)

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The group can be joined (for free) by sending email to [groups@cibse.org](mailto:groups@cibse.org) or alternatively to Eva D'souza, the Group Secretary at [evabdsouza@yahoo.co.uk](mailto:evabdsouza@yahoo.co.uk)

# 4IR WEBINAR

On 1st July 2020, an online webinar was held on 'The Impact of the Fourth Industrial Revolution on the Design and Operation of Buildings and Cities'

The webinar was hosted by Matthew Marson and Derek Clements-Croome (Chair IBG).

The speakers were:

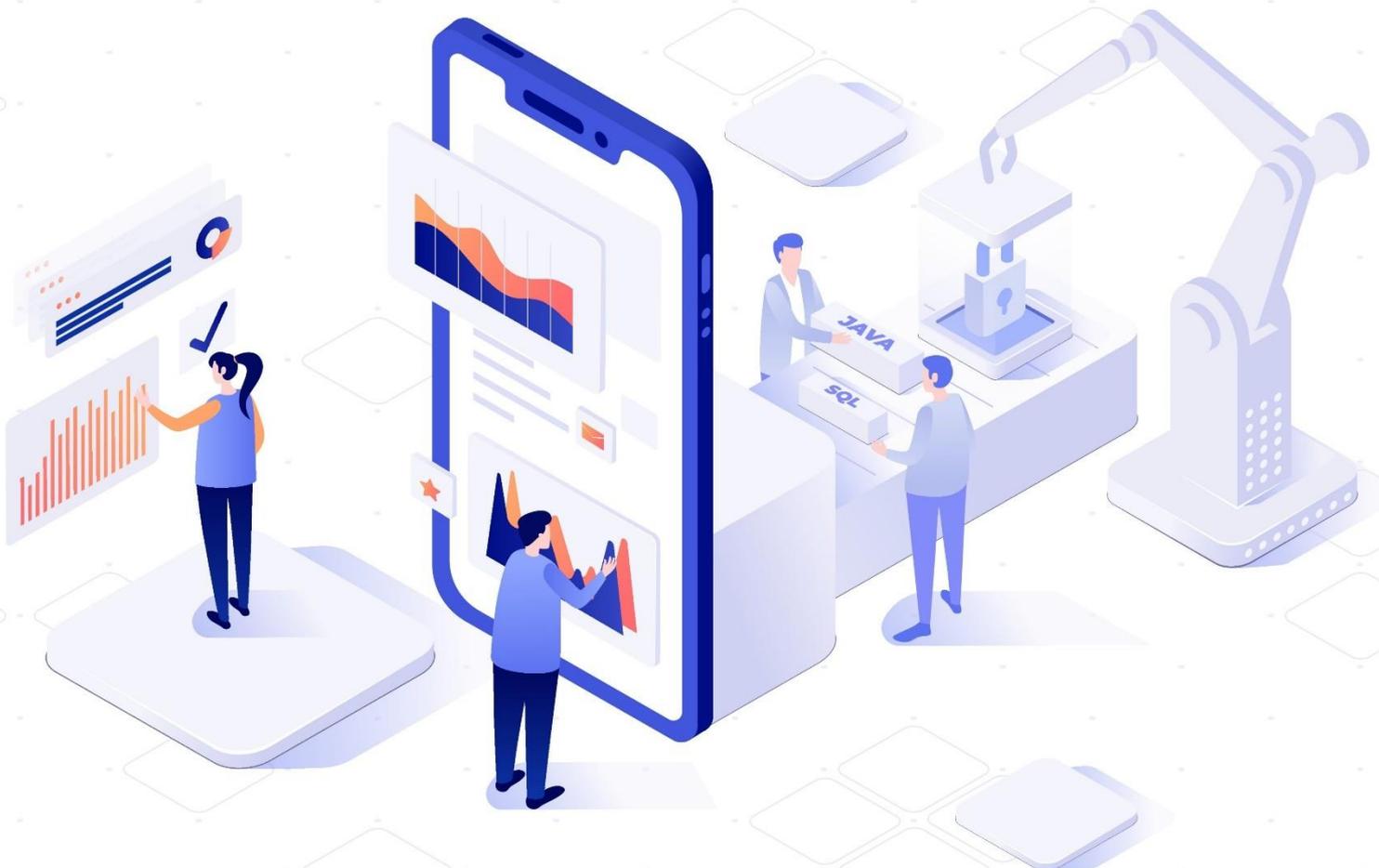
Philip Ross, CEO, Unwired Group  
**Setting the 4th Industrial Revolution in Context** Philip gave his view on where technology is leading us into the future.

Matthew Marson, Sector Director, Arcadis  
**The Relevance of the Fourth Industrial Revolution to the Built Environment**

Matthew began by introducing the fourth industrial revolution and what it means to designers of the built environment.

James Kinch, Co-Founder, CroudThings  
**Platform Economy & Digital Twin**  
James discussed how integrative technologies lead to new business models and social good.

Kristina Goncharov, SmartPlaces Analyst, WSP  
**Project Example: First-of-a-kind 4IR city**  
Kristina introduced a project example. The design of the city premiered the use and integration of many fourth industrial revolution concepts.



The 4IR webinar led to the creation of a special edition of Intelligent Buildings International, to be published in 2021

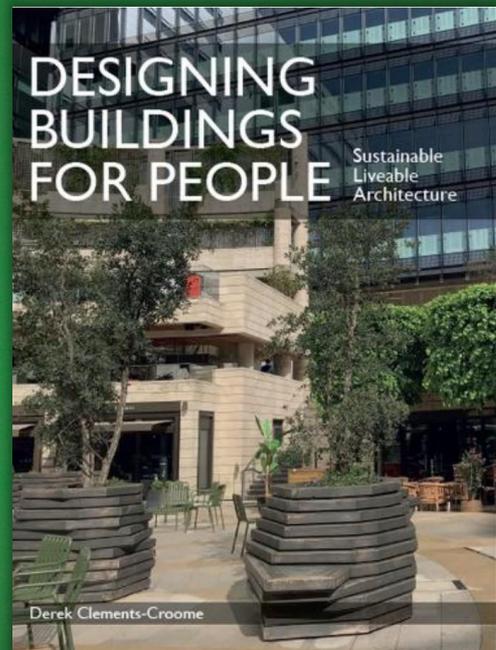
# DESIGNING BUILDINGS FOR PEOPLE: SUSTAINABLE LIVEABLE ARCHITECTURE

Derek Clements-Croome's book was released in summer 2020. Derek's new book, "Designing Buildings for People: Sustainable Liveable Architecture" (2020) published by The Crowood Press, was shortlisted for CIBSE Building Performance Awards 2021 (<https://www.cibse.org/building-performance-awards/2021-shortlist>).

## Synopsis

Our built environments can affect us in many subtle ways. Simply sensing fresh air and natural light or seeing greenery and open space can uplift our mood and improve our wellbeing. But these healthy environments are increasingly difficult to achieve in practice. The vital collaboration between the many people involved in designing and producing buildings is often not achieved. Then there is the pressing need to reduce waste and pollution. Managing these demands is a challenge, especially in a traditional climate of short-term thinking. Designing Buildings for People explores how we can learn from buildings of the past, vernacular

architecture and the natural world around us, while still harnessing the opportunities presented by technology, to think creatively, work collaboratively and exercise a transdisciplinary approach. The book features over 200 images, exhibiting the acclaimed work of internationally recognized and research-led designers from the fields of architecture, engineering and management. It is a prime reference work for professionals and students who want to build the sustainable buildings of the future.



★★★★★ “A thoroughly contemporary look at Sustainable Design in the Built Environment”

# IMPORTANT UPDATES

## COVID-19 Achievement Award created

A new award recognising the work undertaken by building services professionals and the wider supply chain to combat the effects of COVID-19 has been set up by CIBSE.

The COVID-19 Achievement Award, set up in association with CIBSE Journal, will recognise outstanding achievements of individuals, teams, organisations, projects, products or services, in combatting the effects of the COVID-19 pandemic.

The award aims to highlight the significant role building services engineering plays in creating safe and healthy environments, with winners demonstrating how they have responded to a problem or set of circumstances brought about by the pandemic.

The winner will be announced at the CIBSE Building Performance Awards 2021 on 25 February 2021.

## CIBSE updates Covid-19 guidance for winter New information on recirculation, thermal wheels and UV technology

The document reflects the onset of cooler conditions in the UK and includes additional guidance on the use of natural ventilation openings, recirculation and thermal wheels.

It says that colder conditions could bring thermal discomfort for occupants, who may block off ventilation and increase the risk of airborne viral transmission. While recommending that recirculation dampers be closed whenever possible, the guide accepts that, in colder weather, this could lead to unsatisfactory temperature conditions and a subsequent decrease in supply air.

It says recirculation of air in systems can be used if this is the only way of maintaining adequate levels of outside air to occupied spaces without causing 'undue occupant thermal discomfort'.

In naturally ventilated spaces, it warns against closing openings fully. It says that, in colder months, the natural forces that drive air through openings are greater, so they do not need to be opened as wide. It recommends that just opening high-level vents can enable more mixing of outside air with indoor air, creating more comfortable temperatures for those in the occupied zone

There is a new section addressing the potential use of UV and safety considerations. Ultraviolet germicidal irradiation (UVGI) – a disinfection method that uses short-wavelength ultraviolet C light to kill or inactivate microorganisms – could help mitigate the spread of diseases caused by aerosols.

The guide says UV disinfection may be a viable solution to reducing levels of active viral material in spaces where it is difficult to provide good ventilation. However, it warns that some UV technologies can be hazardous to health if applied or operated incorrectly.

A summary of the ventilation guide and more information on UV technology is available.

The guide is available on the CIBSE website.



# PREVIOUS NOTABLE EVENTS

## TRANSDISCIPLINARY RESEARCH FOR THE WORKPLACE (TWR) ON OCTOBER 7<sup>TH</sup> 2020

Health and wellbeing in the workplace has become an increasingly important issue in recent years as we realise the impact it can make on productivity and indirectly the costs to national health services. The pandemic COVID 19 just emphasises this fact even more.

### Speakers

Nicola Gillen, Director Occupier Business at Cushman & Wakefield, What are the unanswered questions?

Nigel Oseland, Workplace Consultant, Lessons from Studies and Research in Psychology

Piers MacNaughton, View and Harvard T.H Chan School of Public Health, How the office affects employee health and performance

Valerie Mace, University of the Arts, What are the research priorities for sensory design of the workplace?

Link to the presentation

[https://www.youtube.com/watch?v=JxIEhtVGUZA&feature=emb\\_title](https://www.youtube.com/watch?v=JxIEhtVGUZA&feature=emb_title)

## INTELLIGENT BUILDINGS POST COVID 19 ON NOVEMBER 4<sup>TH</sup> 2020

The pandemic has accelerated and intensified the need to rethink how we plan, design and manage buildings whether new or old ones. Infection risk is an important part of health and wellbeing besides the urgency to meet the demands of climate change. These issues affect all aspects how we select materials, arrange low occupancy densities, mobility of people, manage effective airflow through the building but these are just a few of the many other important aspects that need fresh thought.

### Speakers

Konkana Khaund (Frost & Sullivan, Americas)

Phil Obayda (Skidmore Owings and Merrill)

Rethinking Traditional Attitudes to Planning and Design

Neil Pennell (Land Securities) Overcoming Barriers and Opportunities

Link to the presentation

[https://www.youtube.com/watch?v=EZDI\\_494Dbg&feature=emb\\_title](https://www.youtube.com/watch?v=EZDI_494Dbg&feature=emb_title)

## LESSONS FROM DESIGNING INTELLIGENT MACHINES ON NOVEMBER 25<sup>TH</sup> 2020

Digital sociologist Lisa Talia Moretti (Ministry of Justice), and Phil Harvey (Senior Cloud Solution Architect for Data & AI at Microsoft) discussed how we navigate the potential pathways of intelligent buildings, their identities and control. The session was moderated by Mina Hasman, Sustainability Lead at SOM Europe.

Link to the presentation

[https://www.youtube.com/watch?v=ffweCIWO5iU&feature=emb\\_title](https://www.youtube.com/watch?v=ffweCIWO5iU&feature=emb_title)

## OFFICIAL LAUNCH OF THE CLIMATE FRAMEWORK –14 JANUARY 2020

A group of leading industry professionals—called the Cross-Industry Action Group—who are representing different disciplines and organisations) have come together with the mission to unite the industry and academia in upskilling and building collective capacity for climate action. In this united effort, the Group's first output—Climate Framework—aims to break down silos and establish a common ground, define a common language and create a comprehensive knowledge base and skills that will be equally relevant for those in academia and those in practice, in order to equip current and future generations of professionals with the competence and confidence required to deliver on the 1.5°C ambition.

Link to the website

<https://www.climateframework.com/>

## DELIVERING AND DEVELOPING INTELLIGENT CAMPUSES ON DECEMBER 2<sup>ND</sup> 2020

In 2009 Birmingham City University (BCU) embarked on a development scheme to deliver an 'intelligent campus'. This webinar discussed the experience of co-ordinating the delivery of 'intelligence' into BCU's new and refurbished campuses, featuring Steve Hipwell, Associate Director of IT Programme Management and Matt Majedi, Chief Technical Architect.

Link to the presentation

<https://youtu.be/wpVQDFa36Jw>

# UPCOMING EVENTS AND RESOURCES

EVENT TOPICS	ORGANISER	PROPOSED DATE AND VENUE
Rating methods for building intelligence	Matthew Marson is working on this and has come out with smart building rating <ul style="list-style-type: none"> <li>- Michela is back now, and she can contribute to this event.</li> <li>- Derek has suggested including balance between sustainability and health wellbeing rating schemes.</li> </ul>	March 2021
Green infrastructure cities+ Resilient cities	Mark Worall/ Briony Turner /Kristina Goncharov/Derek Clements-Croome  Chair: Kristina Goncharov /Derek Clements-Croome	Late Spring
Delivering the dream  Supply and Procurement of IBs or title based on discussion	Derek/Briony to organize webinar based on this title.  Peter/ Eva to organize this interactive face to face workshop when possible with a different title reflecting procurement and the issues Peter discussed. They preferred not to have an introductory webinar but not all in agreement on this. COVID-19 permitting, they are looking for Summer as they want to deliver this only as a face-to-face workshop with targeted audience. In the meantime, they will come up with the programme.  Topics: To include the relevant road map topics Practical examples  Chair: Derek Clements-Croome  Speakers: Peter McDermott Eva D'Souza	To be agreed
Intelligent buildings low tech in SA region	Mark Worall	TBA
Joint events	Planning for joint events with CIBSE Resilient Cities Group, CIBSE Information Technology (IT) & Controls Group, and The Cross-Industry Action Group.	TBC



Papers from the CIB WBC 2019 'Constructing Smart Cities' were published in the Journal of Intelligent Buildings International Special Issue 13.1



Derek's new book, "Designing Buildings for People: Sustainable Liveable Architecture" (2020) published by The Crowood Press, was shortlisted for CIBSE Building Performance Awards 2021 (<https://www.cibse.org/building-performance-awards/2021-shortlist>).



## Digital BuildingsBootcamp

A kick-start training programme for built environment professionals wanting to learn digital. [www.digitalbuildingsboot.camp](http://www.digitalbuildingsboot.camp)