Gathering21

Construction Innovations for Future Generations

Keynote Speaker

PJ Rudden Chair of Innovation and Digital Adoption Department of Public Expenditure and Reform





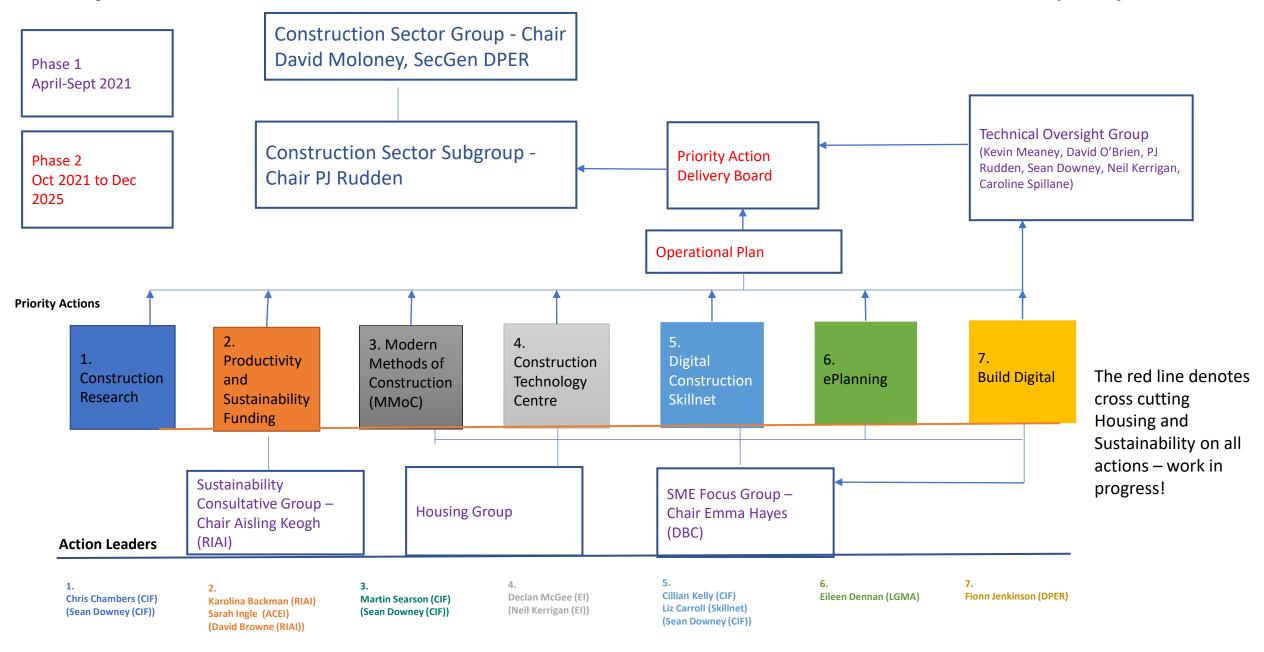
Progress update on CSG Innovation and Digital Adoption

- 7 Priority Actions to be delivered
- Housing and Sustainability to be Cross-Cutting Actions.
- Digitalisation, Productivity and Sustainability are the three key project pillars.
- Steady progress over the past 12 months.
- Approx. 100 experts on 7 Action Teams and consultative groups
- Communication and Collaboration are key.

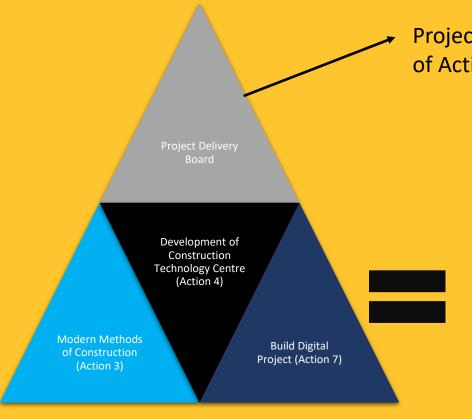




Project Ireland 2040 - CSG INNOVATION DIGITAL ADOPTION - PRIORITY ACTION DELIVERY (2021)



Innovation and Digital Adoption Project (7 priority actions) – Project Development Phase



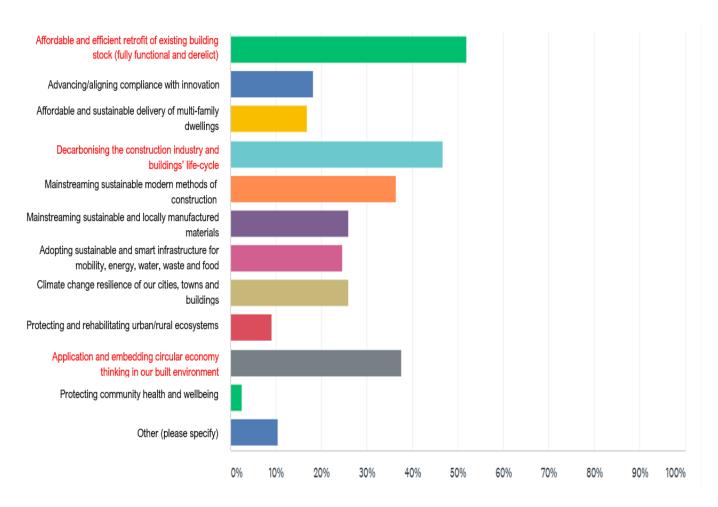
Project Delivery Board overseeing Delivery of Actions 1 to 7, specifically Actions 3, 4, 7

3 major deliverables within the new construction technology centre



Typical Extract from CSG Sustainability Survey – April 2021

What are the three biggest challenges in regards to sustainability for the Irish Construction Sector which could benefit from digitalisation to deliver the best practice and achieve the ambition of Ireland 2040?



Other suggestions:

- Digital library of NSAI Accredited construction details for high performance buildings
- Automation and tracking of Built Infrastructure data and asset history and readily assimilate/utilize it
- The BIM processing capabilities need to improve, to move towards, 4D, 5D, 6D, 7D and on to 8D. At present, this is a constraint.
- Acceleration towards IoT as a solution requires the right Digital Fundamentals and Protocols in place
- Affordability of building regulation and fire certification requirements for buildings in historic areas
- Demonstrating long term value (in terms of profits and returns) of adopting and delivering a sustainable construction industry to investors and stakeholders



5th CitA BIM Gathering Virtual Conference

21 - 23 September 2021

Manorhamilton, Co. Leitrim

Manorhamilton Innovation & Development

Quarry and Construction Industry

Innovation and R&D Centre (DETE BEDF €2.9m)

- · Robotics and Cobotics
- Artificial intelligence and Smart Data
- Virtual Reality & Augmented Reality
- 3D Printing
- Software Development for new prototypes/products
- Upskilling staff

Dublin

Irish Green Building Council Membership Model Established 2011

Educate; Rate; Innovate ; Advocate

- Leadership for sustainability and quality in the built environment
- Promote and assist in the provision of credible metrics
- Provide a source of resources to companies transitioning their activities

Limerick Institute of Technology

Digital Academy for Sustainable Built Environment (DFERIS €7.5 m)
Partners: Waterford ETB; Tipperary Energy Association; IGBC; AIT; GMIT

 Enabling construction SMEs, manufacturers and workers to upskill / gain new knowledge in a cost-effective worker centric environment.

DMc/NK-16-50pt-2021

Current and active key Innovative Initiatives in Construction

Broombridge, Dublin 7

TU DUBLIN

Construction Sector Cluster (Design & Construct) (DETE REDF 1 €350K)

- Skills development
- Technology enhancement
- · Productivity and process improvement
- · Sustainable development
- · Knowledge transfer
- Internationalisation for SMEs

Enniscorthy, Co. Wexford

High Performance Building Alliance (HPBA)

(Dept of Housing and Local Govt.€2m ,started 2017)

- Supporting UN Network of International Centres of Excellence (NICE)
- Advisory service to European Partners, Government Departments, Local Authorities, ETB's etc.
- Training facility for up-skilling opportunities for high performance buildings
- Research in collaboration with Irish and International 3rd level education providers
- Awareness and dissemination of information
- Supporting the continuous professional development of persons in the Construction Industry



Next Steps

- 'Housing for All' will be a priority cross-cutting action, together with Sustainability.
- Impact on standards
 - Critical importance of standards and training Definite gap on emerging technologies
 - Modern Methods of Construction (Modular, off-site construction, retrofitting)
 - Building Information Modelling Recent Irish Annex Approved and published
 - Sustainability of building materials (circular economy, low-carbon cement, Cross Laminated Timber (CLT), insulation)
- CSG Sustainability Group commenced work in June 2021 Cross cutting priority action making great strides.
- Build digital project about to be awarded by Department of Public Expenditure and Reform in October 2021 (2021 – 2025)



Next Steps (Continued)

- Design of Construction Technology Centre to advance in Autumn 2021 following Detailed
 Description of Needs (DDN) by EY Consultants for Enterprise Ireland Virtual and Physical
- Digitalisation of planning permission application to be completed in 31 local authorities by end of 2022 by Local Government Management Agency (LGMA) – No more paper based planning applications!
- Strategic communications Event planned for late Sept/ October 2021
- Need to see "Step change" in construction output in digitalisation, productivity and sustainability by 2030.



