



WHAT DOES THE FUTURE OF YOUR CONSTRUCTION SECTOR LOOK LIKE?

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DIRECTOR – SPECIALIST CONTRACTING

SECRETARY – CIF CONSTRUCTION 4.0 SUBCOMMITTEE

WHAT'S DRIVING THE NEED FOR CHANGE



Demand for improvements in project delivery



Asset life cycle performance



Affordability



Socio-economic drivers (flexibility-liveability-wellbeing)



Environmental resilience



Sustainability – the carbon challenge

CIF – PRODUCTIVITY RESEARCH 2018

An Examination of
Productivity in the
Irish Construction
Industry

CIF Economic & Policy Research | 2019

RESEARCH REPORT

- Undertaken by Jeanette Mair
- Identifying and quantifying construction productivity
- Key project stages
- Survey and sectoral engagement
- Key findings – inhibitors; enablers

Economic analysis of productivity in the Irish construction sector



KPMG | FutureAnalytics | DUBLIN

KPMG, FUTURE ANALYTICS, TU DUBLIN

- COMPLETED 2019 – PUBLISHED 2020
- FULL STAKEHOLDER ENGAGEMENT FOR 6 MONTHS
- PRELIMINARY FINDINGS
- 36 KEY RECOMMENDATIONS
- 7 SPECIFIC INNOVATION MEASURES WITH ALLOCATED ACTION LEADERS



DEPT. OF PUBLIC EXPENDITURE AND REFORM

- June 2020
- Detailed analysis of sector's financial performance and metrics
- Re-assertion of 7 key innovation initiatives as drivers for change

BUILDING INNOVATION REPORT

- 7 INNOVATION ACTIONS

Action	Leader
Further expand and develop the work of the Construction Research Forum and carry out an industry needs assessment.	CIF
Develop an action plan to promote funding opportunities arising from external funding sources such as the Horizon 2020 Programme and the Disruptive Technology and Innovation Fund.	ACEI/CIC
Establish a joint working group to guide the development of the off-site production sector.	CIF/CIC
Establish and fund a National Centre of Excellence for the construction sector.	Enterprise Ireland
Establish a digital network under the Construction Skillnet	CIF/CIC
Digitise the planning application process to reduce unsustainable, time and cost inefficient paper-based reporting.	LGMA, Local Authorities
Establish and fund Build Digital – a centre of excellence to promote BIM and digital adoption.	DPER

HIGH LEVEL STAKEHOLDER & PROJECT TEAM

Construction Sector Group – Chair David Maloney

Meet Every 12 weeks



Construction Sector Innovation and Digital Adoption Group – Chair PJ Rudden

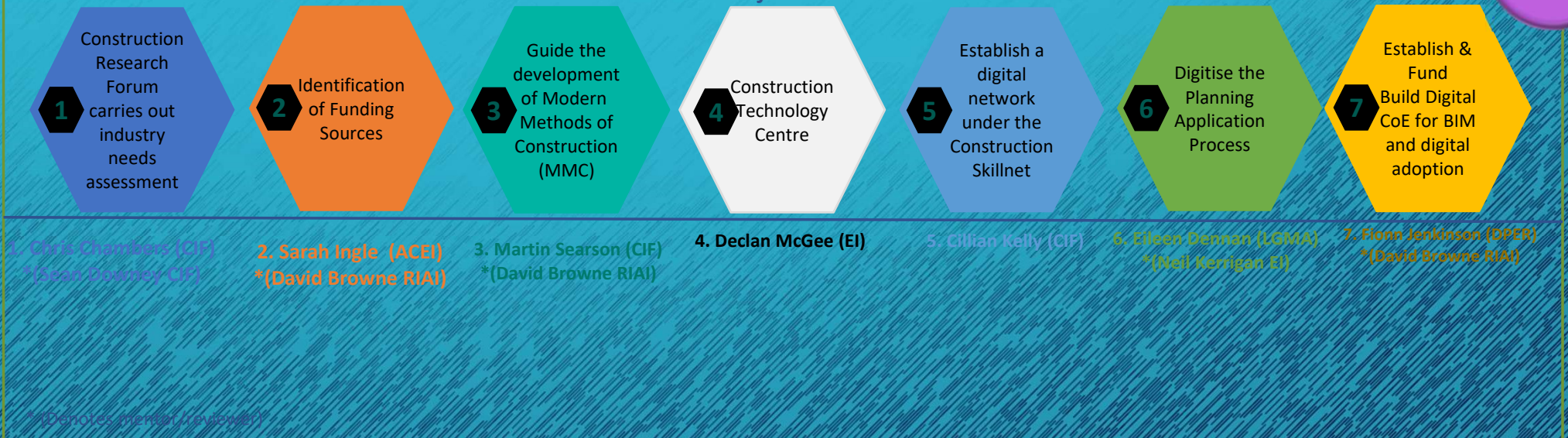
Meet Every 6 weeks

DPER	Eng. Ire.	BMF	RIAI	CIF	Ent. Ire.	NSAI	DBEI	SCSI	LGMA/LAs	ACEI
Ronnie Downes Kevin Meaney	Richard Manton	David Duffy	David Browne	Sean Downey	Neil Kerrigan	Sean Balfe	Alan Kelly	Patrick King	Eileen Dennan	Sarah Ingle



Innovation 7 Actions - Project Team – Chair PJ Rudden

Meet Every 4 Weeks



Action 1	Action 2	Action 3	Action 4	Action 5	Action 6	Action 7
<p>Chris Chambers (CIF) *(Sean Downey CIF) Tim Ferris (CIF) Derek Sinnott (CIF) Fergal Lawlor (CIF) John Hanahoe (CIF) Justin Keane (CIF) Micheal Healy (CIF) Roisin Murphy (CIF)</p>	<p>Sarah Ingle (ACEI) Marcus Keane (Eng. Ire.) Declan McGee (EI) *(David Browne RIAI)</p>	<p>Martin Searson (CIF) Brian Kennedy (CIF) Daragh Keran (CIF) David Browne (CIF) Declan Wallace (CIF) Frank Murphy (CIF) Gary Plunkett (CIF) James Clifford (CIF) Jennifer Nisbet-Daly (CIF) Joe Kennedy (CIF) John Whyte (CIF) Justin Keane (CIF) Martin Lydon (CIF) Martin Searson (CIF) Michael Burke (CIF) Michael Murphy (CIF) Pat Kirwan (CIF) Peter Browne (CIF) Rory O'Connor (CIF) Sean Sheridan (CIF) Stephen Ashe (CIF) Susan McGarry (CIF) Tim Ferris (CIF) William Power (CIF) *(David Browne RIAI)</p>	<p>Declan McGee (EI) Sean Downey (CIF) Martin Searson (CIF) Fionn Jenkinson (DPER) *(Neil Kerrigan EI)</p>	<p>Cillian Kelly (CIF) Diarmuid Mollin (Eng. Ire) *(Sean Downey CIF) *(Neil Kerrigan EI) Anthony Condon (CIF) Breda Corrigan (CIF) Brian Cass (CIF) Denis Cadogan (CIF) Emmanouela Chafnavi (CIF) Fergus Nugent (CIF) Gary Widger (CIF) Jason Rymer (CIF) Joe Mady (CIF) John O'Brien (CIF) Kevin O'Dwyer (CIF) Mark Danaher (CIF) Mark Halley (CIF) Michael Murphy (CIF) Niall Carolan (CIF) Ray Coote (CIF) Sean Dowd (CIF) Tim Ferris (CIF)</p>	<p>Eileen Dennan (LGMA) James Benson (CIF) Brian Beck (Tipp CC) Teresa Kiely (Tipp CC) *(Neil Kerrigan EI)</p>	<p>Fionn Jenkinson (DPER) Siobhán Moneley (ACEI) Diarmuid Mollin(Eng. Ire.) Coman DeBurca (RIAI) Cillian Kelly (CIF) Mary Flynn Trevor Wood (SCSI) Noel Walsh (SCSI) Neil Kerrigan (EI) *(David Browne RIAI)</p>

* (Denotes mentor/reviewer)

CONSTRUCTION TECHNOLOGY CENTRE BUILD PROCESS

(Linked to 7 CSG Actions on innovation and digital adoption)

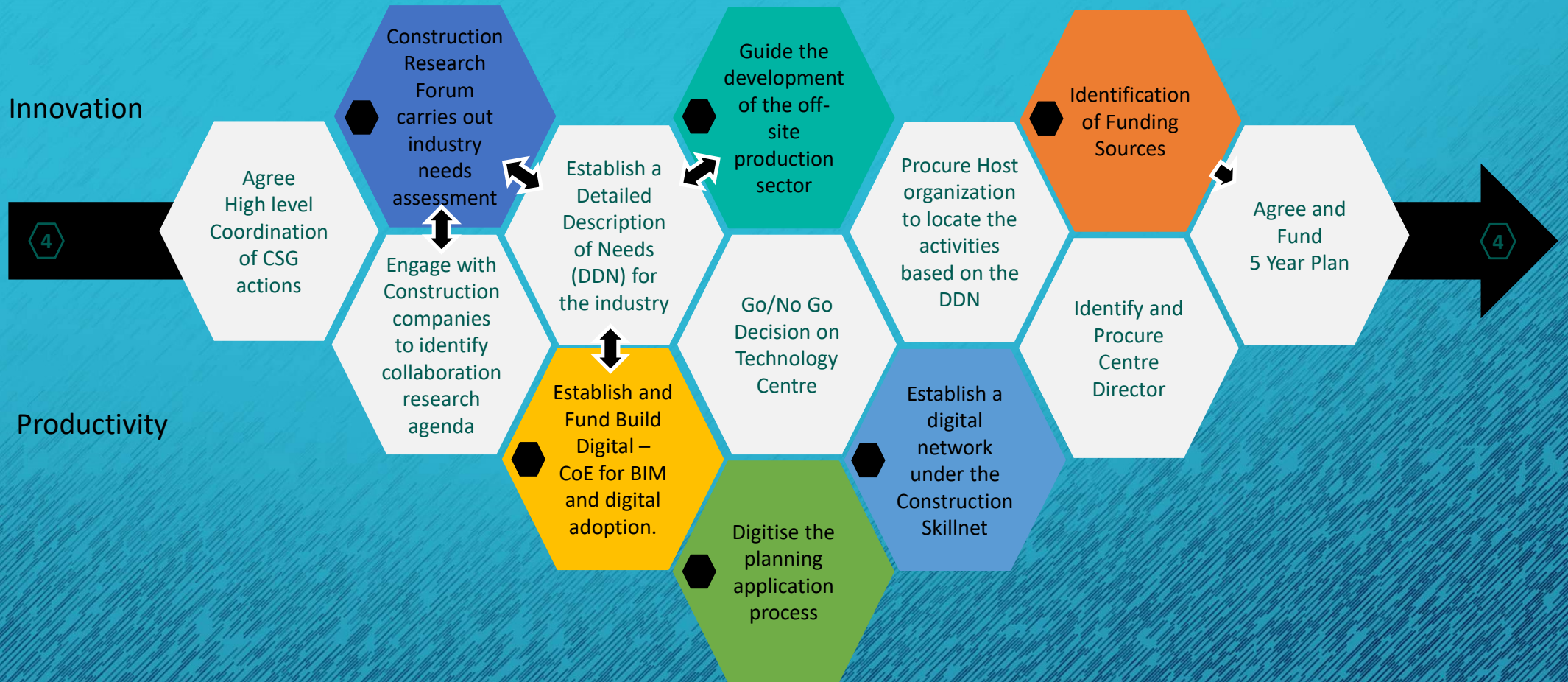


Figure 2

SURVEY 2020 - THEMATIC

- Management processes – Lean, continuous improvement, QMS, BIM, blockchain
- Modular, Off-site, industrial production, pre-manufacturing, workflows
- People and resource management, behavioural
- Product advancement, technology and innovation
- Sustainable construction, carbon reduction
- Supply chain optimisation, end-to-end delivery



**CIF
Modern Methods of
Construction**

October 2020

Rev. 3 www.cif.ie



**CIF
Construction Industry
Research Needs
Analysis**

November 2020 www.cif.ie



16 December 2020



Minister McGrath launches competitive challenge-based grant call to deliver Build Digital Project for the Construction Sector in 2021

The Minister for Public Expenditure and Reform, Michael McGrath TD, has today launched a competitive challenge-based grant call to deliver the Build Digital Project for the Construction Sector in 2021.

Increasing innovation in the Irish Construction Sector is more necessary than ever over the coming years in order to deliver on the ambitions set out in the Government's Project Ireland 2040 investment strategy.



**Build Digital
Project
(ACTION 7)**

INVITATION TO TENDER



This activity facilitates actions identified by the Government's Construction Sector Group to achieve and maintain a sustainable and innovative construction sector positioned to successfully deliver on the commitments in Project Ireland 2040.

Award of a Contract for	Technical facilitation and production of a Detailed Description of Needs (DDN) in the construction/built environment industry sector in Ireland in relation to: <ul style="list-style-type: none"> • Technology and Innovation • Digital Adoption and • Modern Methods of Construction while being attentive to environmental, sustainability and circular economy imperatives.
Procedure	OPEN
eTenders RFT ID	181354
EI Ref	2020/22
Issue Date	Friday, 4 th December 2020
Closing Date for Queries	Tuesday, 15 th December 2020 @ 12 noon (Irish Time)
Submission of Queries	Via the messaging portal on eTenders on www.etenders.gov.ie
Closing Date / Time For receipt of Tenders	Wednesday, 6 th January 2021 @ 12 noon (Irish Time)

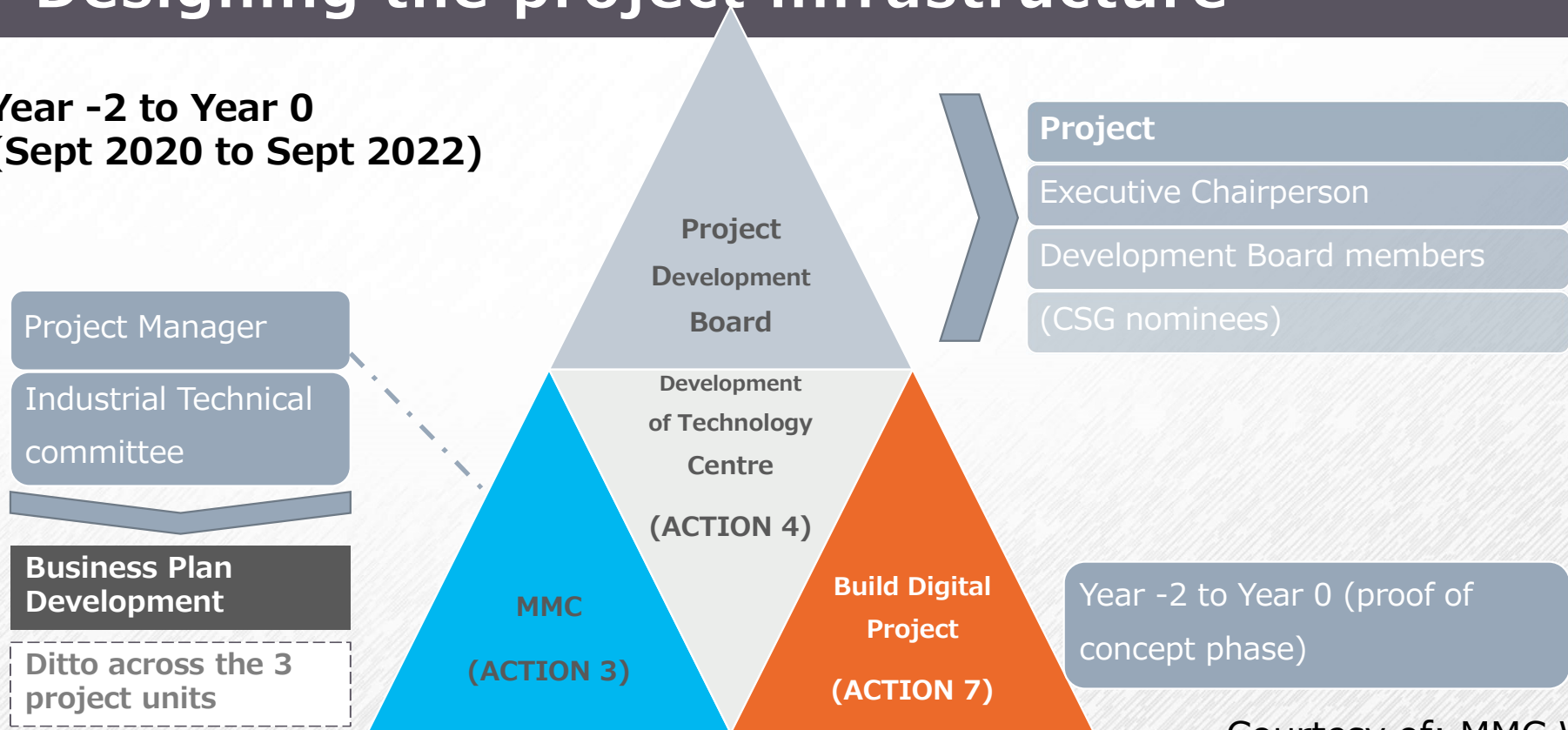
Please note that information relating to this Tender Document, including clarifications and changes, will be published on the Irish Government Procurement Opportunities Portal (www.etenders.gov.ie). Registration is free of charge and there is no charge for documents. Please note that The Contracting Authority cannot accept responsibility for information relayed (or not relayed) via third parties.

Development
of Technology
Centre
(ACTION 4)

Project Development Phase

Designing the project infrastructure

**Year -2 to Year 0
(Sept 2020 to Sept 2022)**

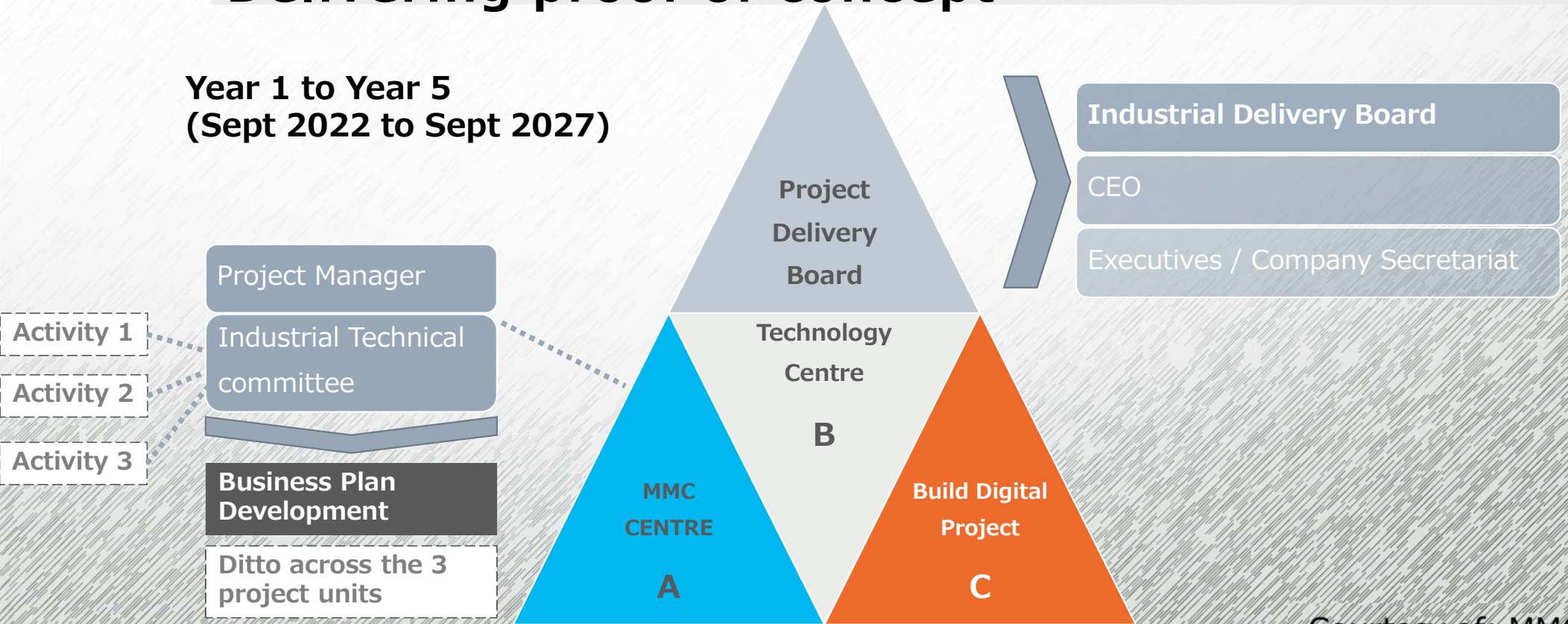


Courtesy of: MMC WG

Project Delivery Phase

Delivering proof of concept

Year 1 to Year 5
(Sept 2022 to Sept 2027)



Courtesy of: MMC WG

Benchmarking – What does our vision look like? Construction Scotland Innovation Centre



35,000 sq. ft
Designed to
support
construction
related businesses
to collaborate and
innovate.

<https://www.cs-ic.org/innovationcentre/innovation-factory/>

Courtesy of: MMC WG

Benchmarking Construction Scotland Innovation Centre



Pilot Insulation Line



Masonry Casting Press



Digital Router



Offsite Manufacturing Cell



OFFERS A RANGE OF
PRODUCT
DEVELOPMENT,



MANUFACTURING,



ROBOTICS AND
VISUALISATION
EQUIPMENT.



TECHNICAL AND
SUPERVISORY
SUPPORT



GUIDANCE AND ADVICE
REGARDING PROJECTS AND
EQUIPMENT USE.

Courtesy of: MMC WG

Current Technology Centre Portfolio (Centres funded based on performance and impact)



Dairy Processing
Projected ROI 13.7 X

€14.0m Funded
Phase 2

€10.0m Funded
Phase 3

Microelectronics
Projected ROI 20 X



Pharmaceutical Manufacturing
Projected ROI 17.2 X

€5.0m Funded
Phase 2

€12.0m Funded
Phase 2

Data Analytics & AI
Projected ROI 5.9 X



Food for Health
Projected ROI 6 X

€7.2m Funded
Phase 3

€23.5m Funded
Phase 2

Manufacturing
Projected ROI 16.9 X



Meat
Review 2020

Phase 1

Phase 2

E-Learning
Review 2020



Courtesy of:



SO WHAT DOES THE FUTURE OF YOUR CONSTRUCTION SECTOR LOOK LIKE?

Work from here



Serving projects here



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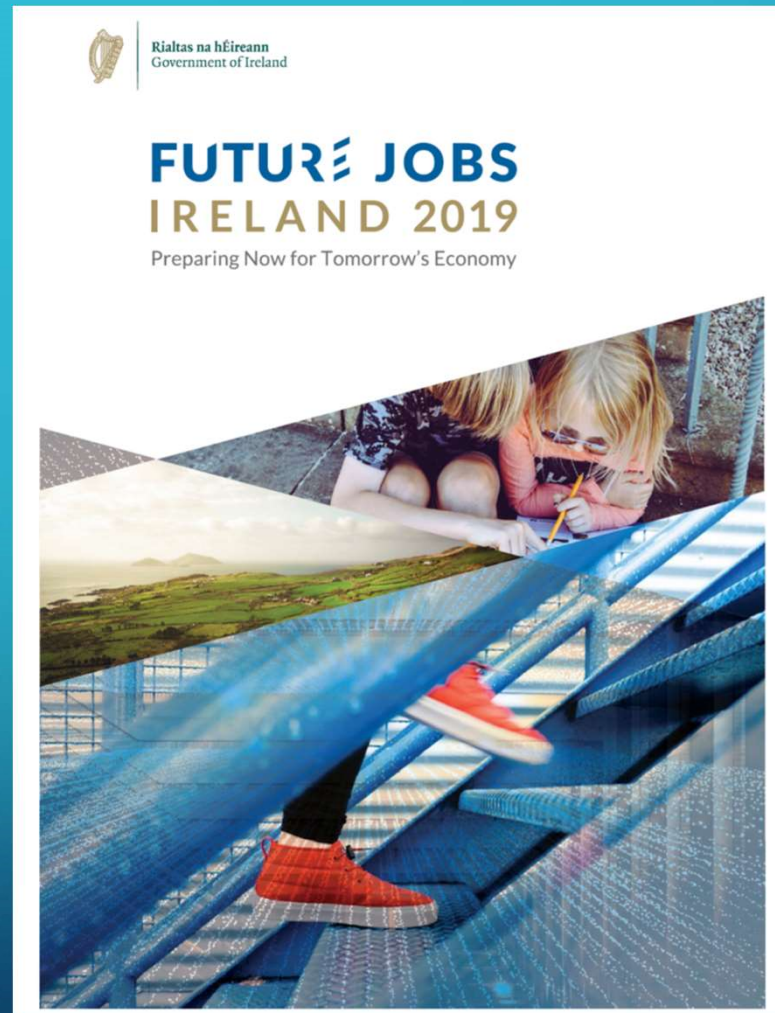
Disruptive technology transfer is here



All it needs now is belief and scale



A RECENT OECD
STUDY ESTIMATED
THAT THE AVERAGE
IRISH WORKER
FACED A 46%
PROBABILITY OF
BEING AUTOMATED
BY THE 2030'S



Thank you and good luck in your construction journey