



An Roinn Caiteachais
Phoiblí agus Athchóirithe
Department of Public
Expenditure and Reform

Construction Innovation and Digital Adoption

P. J. Rudden

Chair – CSG Innovation and Digital Adoption Group

According to McKinsey & Company:- *Construction is changing globally*



- Construction is the largest ecosystem in the world
- Historically the construction industry has underperformed
- Changing market environment, technological progress and disruptive new entrants will trigger industry overhaul
- Covid-19 crisis is accelerating change
- All players must prepare now for a different “new-normal”

Productivity of Irish Construction



- In 2017, there was an increase of 5.45% in labour productivity in the construction sector – however, this remains below the level recorded in 2010
- In 2017, the gross value added (GVA) per hour worked in the Irish construction sector was €25.2 or 25% below the Euro area average
- Investment in R&D by the Irish construction sector in 2017 was €0.70 per capita compared to €2.40 in the UK and €5 in the Netherlands

Comparison of International Construction Productivity

KPMG / Future Analytics / TU Dublin Report (June 2020)



GROSS VALUE ADDED PER HOUR (GVA)

2018	Ireland	Australia	Belgium	Denmark	Netherlands	NZ	UK
GVA/hr	€22.30 (2015)	n/a	€45.51	€37.60	€33.16	€25.90	€27.03

Causes of Low Productivity

KPMG / Future Analytics / TU Dublin Report (June 2020)



Initiative/Planning Stage

- Cyclical nature of construction
- Lack of project pipeline
- Complex planning system
- Procurement and contracting
- Fragmented nature of sector

Execution Stage

- Under investment in technology & innovation
- Under utilization of off-site construction
- Limited certification of training skills
- Poor recruitment & upskilling
- Precarious working conditions
- Inefficient treatment & management of construction waste

Performance & Monitoring Stage

- Difficulties measuring productivity
- Low uptake of education and training for digital transformation & sustainability
- A broad range of education and training supports available
- Poor public perception of built environment careers

What are Government Responses (see *Build 2020 Report – June 2020*)



- Increased public investment (€10bn in 2021)
- DPER / CSG are communicating for industry confidence with project pipeline
- Securing the skills pipeline - Future Skills Needs of the Build Environment Sector to 2030
- Driving productivity improvement – KPMG Report (June 2020)
- CSG Innovation and Digital Adoption Group – commenced Sept 2020



Construction Sector Group (CSG) Role

- Ensure regular and open dialogue between Government and the construction sector.
- Focus on issues that may impact successful delivery of the NDP on a value-for-money basis for the State.
- Working with industry and government bodies to
 - benchmark and improve productivity and environmental sustainability and
 - to modernise public works delivery
- Introduce reforms within the sector that will help in controlling construction price inflation, improving efficiency and delivering value for money for investment.

Construction Sector Group (CSG) Members

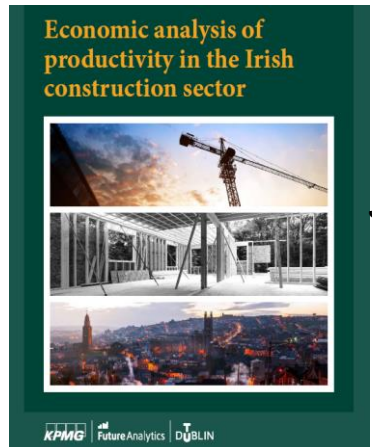
- Construction Industry Federation (CIF)
- Irish Congress for Trade Union
- The Building Materials Federation
- Engineers Ireland
- Society of Chartered Surveyors Ireland
- Royal Institute of the Architecture of Ireland
- Association of Consulting Engineers of Ireland (ACEI)
- Irish Planning Institute
- Office of Government Procurement
- Office of Public Works
- Health Service Executive
- Departments of :
 - Public Expenditure and Reform (DPER)
 - Business, Enterprise and Innovation
 - Communications, Climate Action & Environment
 - Education and Skills
 - Health
 - Housing
 - Transport, Tourism and Sport

	CSG Actions on innovation and Digital Adoption	Leader
1	Further expand and develop the work of the Construction Research Forum and carry out an industry needs assessment.	CIF
2	Develop an action plan to promote funding opportunities arising from external funding sources such as the Horizon 2020 Programme and the Disruptive Technology Innovation Fund.	ACEI/Engineers Ireland
3	Establish a joint working group to guide the development of Modern Methods of Construction.	CIF
4	Construction Technology Centre	Enterprise Ireland
5	Establish a digital network under the Construction Skillnet.	CIF
6	Digitise the planning application process to reduce unsustainable, time and cost inefficient paper-passed reporting.	LGMA/Local Authorities
7	Establish and Fund Build Digital – a centre of excellence to promote BIM and digital adoption.	DPER

Construction Industry Council (CIC); Local Government Management Agency (LGMA); Construction Industry Federation (CIF); Department of Public Expenditure and Reform (DPER); Association of Consulting Engineers of Ireland (ACEI)



16 June 2020



29 May 2020



THREE MAIN THEMES:- to promote “value for money in delivering of Project Ireland 2040”

- Increase investment in innovation and technology based on digital technology particularly in SMEs and small firms in order to spur the next wave of growth based on a foundation of digital adoption.
- Regulatory reform of procurement, environmental, labour to streamline and assist achieving competitiveness and sustainability.
- Ensure visibility of pipeline of project opportunities to provide industry with the confidence to invest.

HIGH LEVEL STAKEHOLDER & PROJECT TEAM

Construction Sector Group – Chair Robert Watt



Construction Sector Innovation and Digital Adoption Group – Chair PJ Rudden

DPER

Eng. Ire.

RIAI

BMF

CIF

Ent. Ire.

DBEI

NSAI

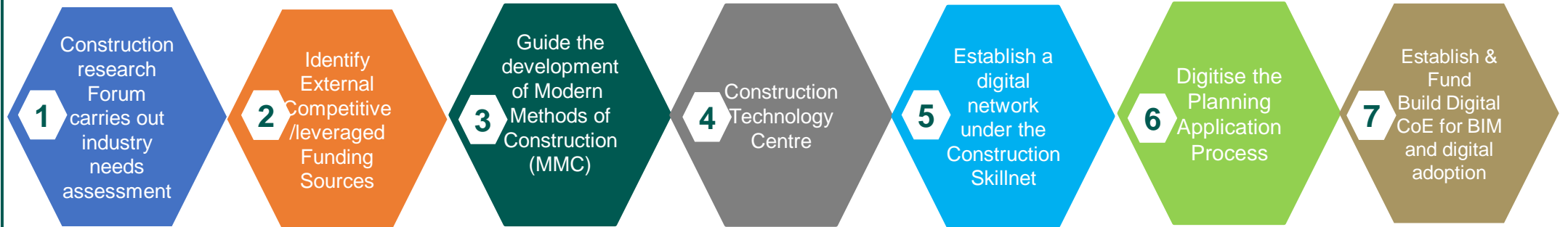
SCSI

LGMA/LAs

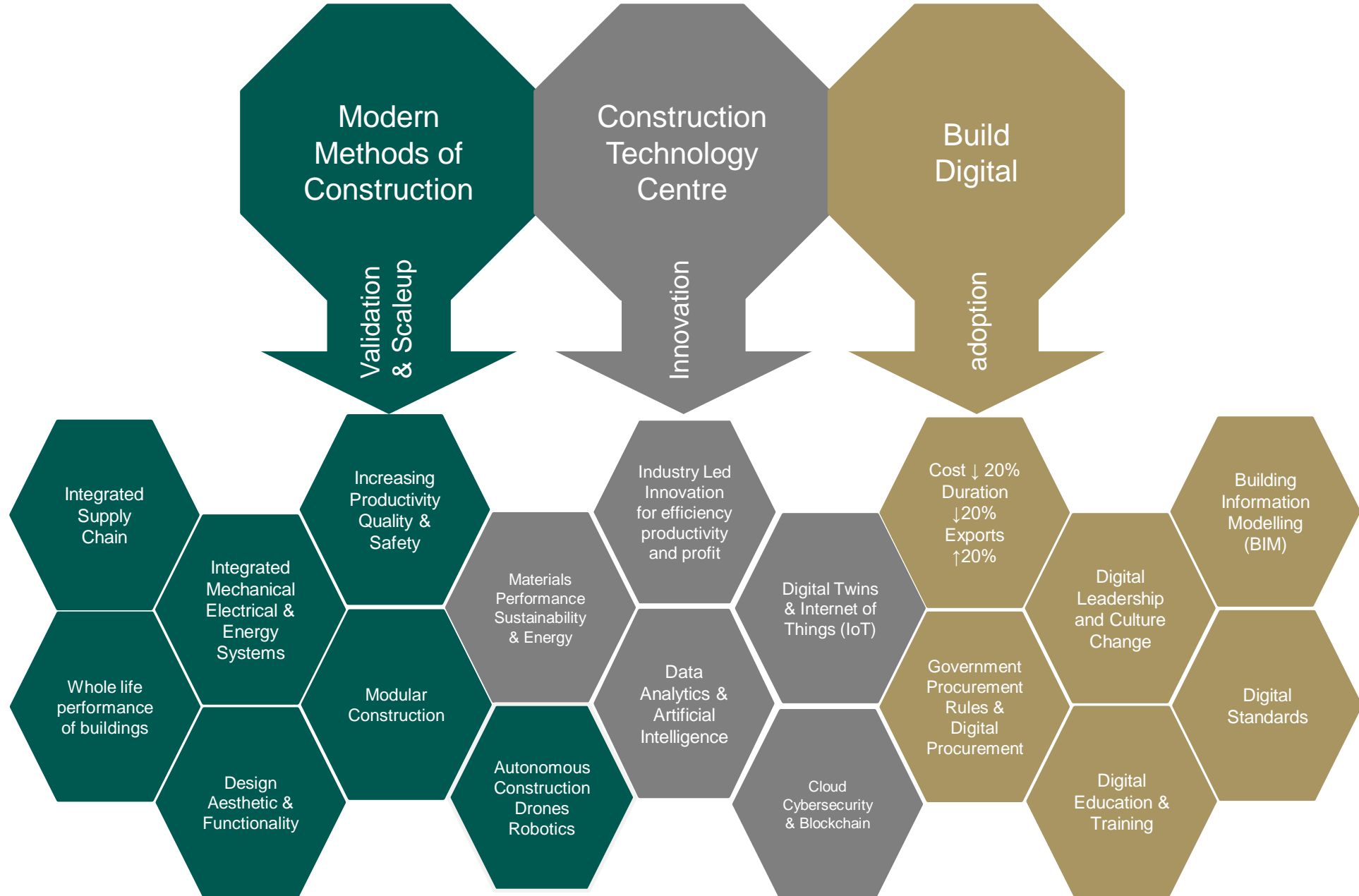
ACEI

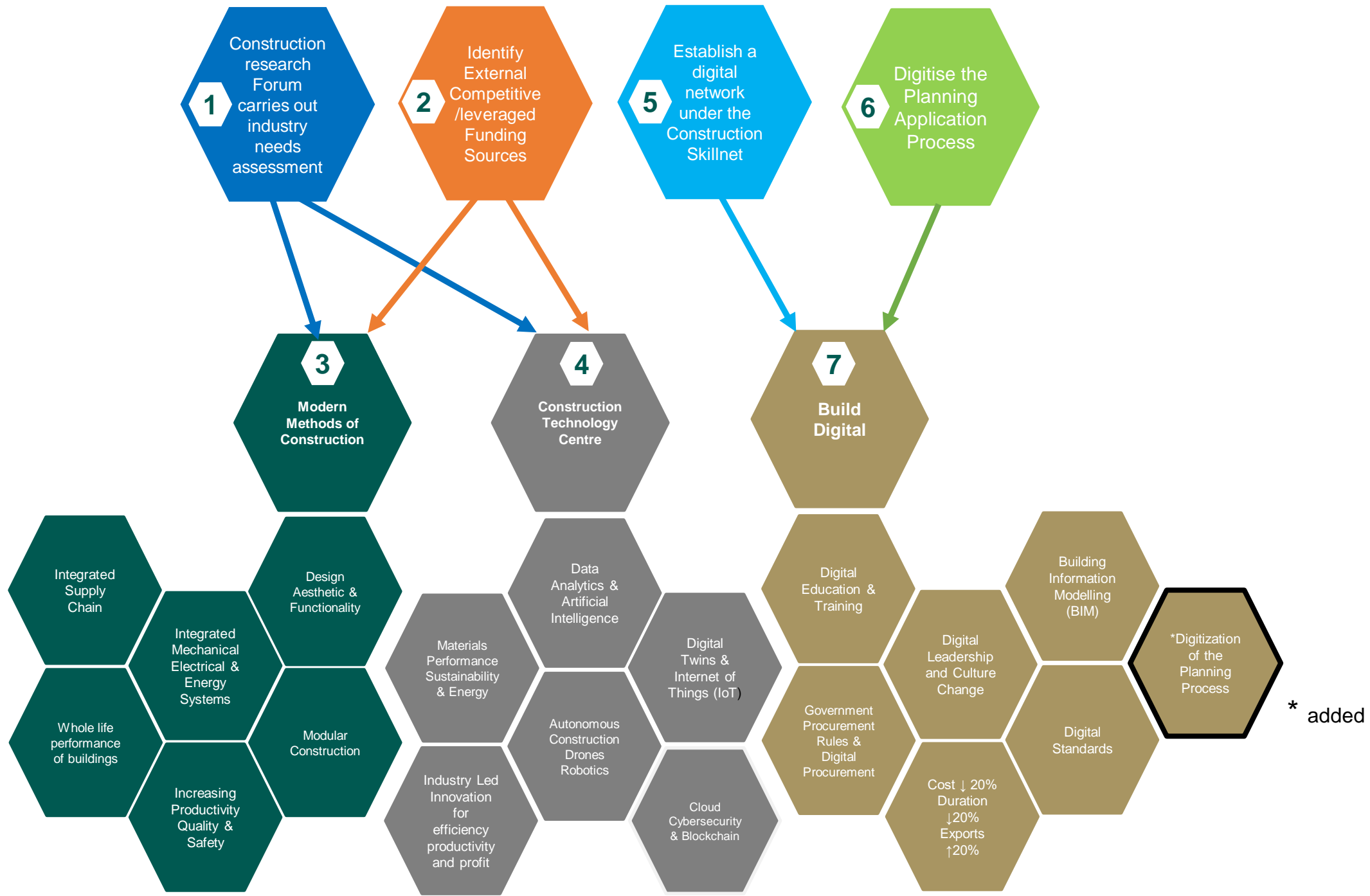


Innovation 7 Actions - 7 Project Teams – Chair PJ Rudden

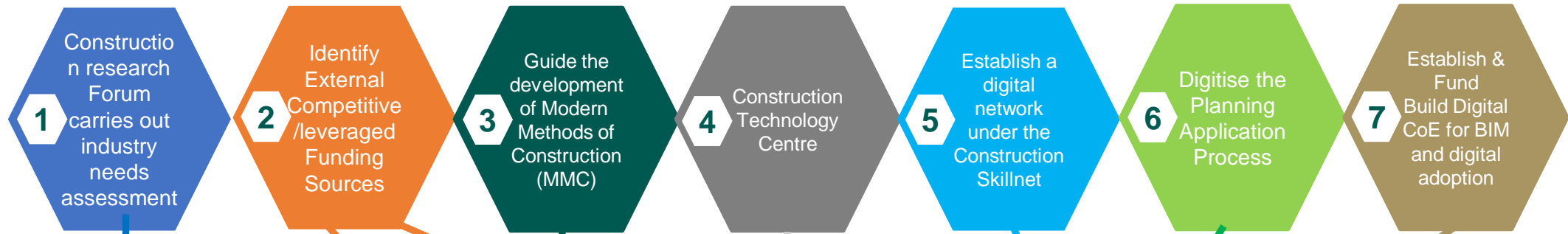


CSG Innovation and Digital Adoption - Linkages, Actions and Outcomes

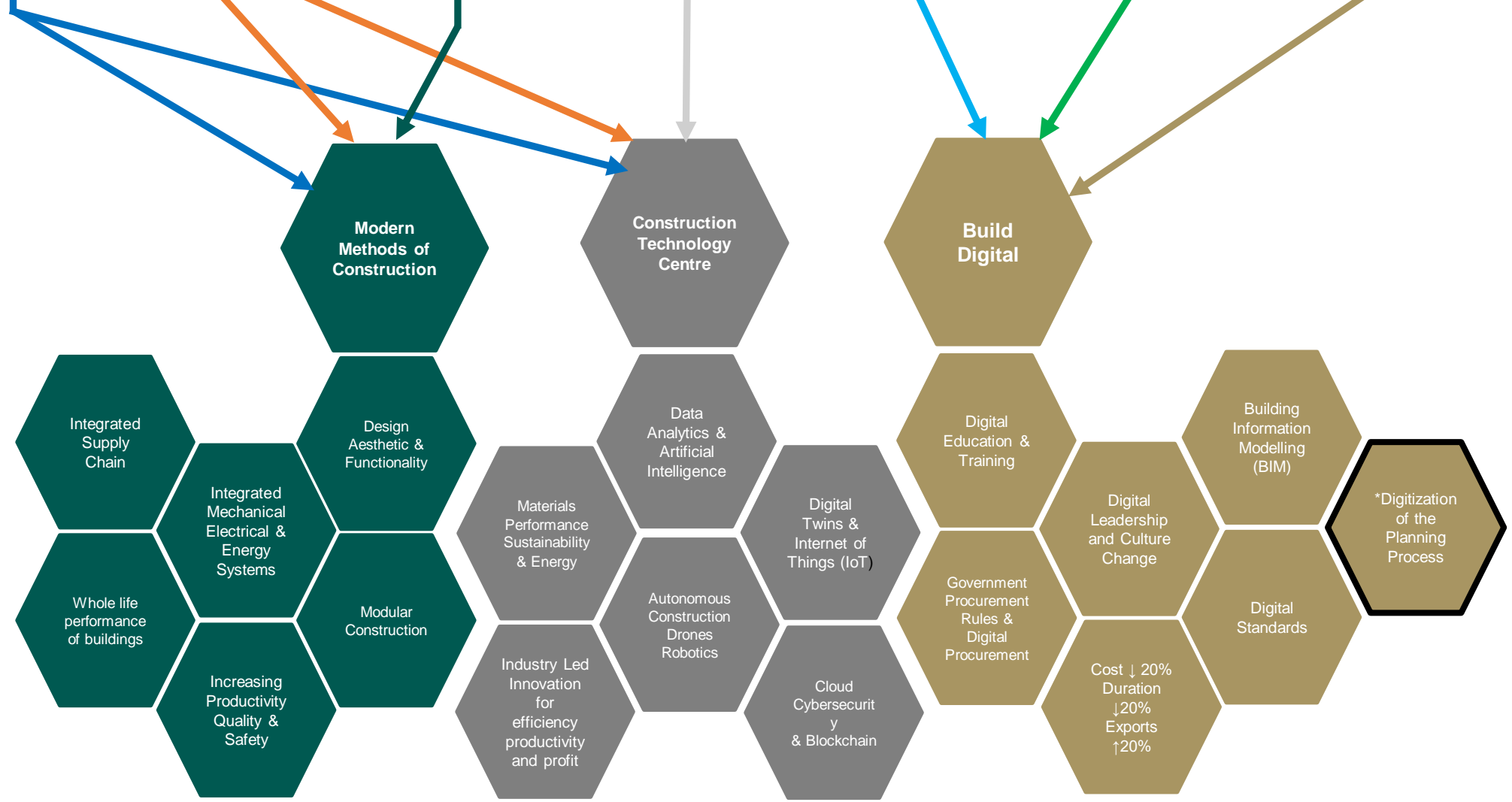




ACTIONS



OUTCOMES



* added



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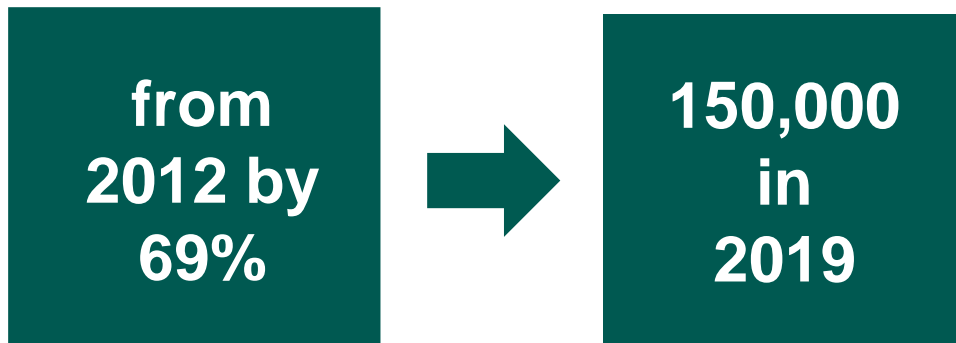
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How many construction industry SMEs?



Irish Construction Employment ... grew



There are 14 construction companies in Ireland that employ > 250 people

Of the remaining construction companies, 47,000 are SMEs which is 31% of the total

Building Innovation and Digital Adoption – Future Immediate Steps



1. CSG collaboration is growing but we need to intensify our communications
2. Actions assigned to 7 Activity Leaders / nominated person in each organisation who are champions to monitor and report progress on each action
3. Outline detailed programme for each subgroup action and assign performance metrics for reporting progress
4. Strategic Communications needed across industry – work in progress
5. Public and private funding sources to be secured to enable progress 2020 → 2023



Rialtas na hÉireann
Government of Ireland