Appendix to item xx.x

# FIG Commission 10
# Work Plan 2023–2026

## Title: Construction Economics and Management (CEM)

### Introduction

Construction Economics and Management (CEM) involves determining the most cost-effective ways to manage construction projects from conception to completion of a project and even during the life cycle period.

Construction Economics and Management; includes quantity surveying, construction management, building surveying, , cost engineering, commercial, project and programme management and their value chains.

### Terms of Reference

Promote and provide support in the field of construction economics and management in the following main areas:

- Use of emerging Digital Technologies in the successful execution of construction projects.
- Efficient planning, management and delivery of construction projects to our members and beyond.
- Grow knowledge in the use of materials and methods of construction that will bring sustainability in the built environment and easy adaption to climate changes.
- Investment analysis on construction projects for the guidance of owners, financiers and contractors across buildings and infrastructure.
- Build new partnerships and sustain existing ones for the Commission

### Mission statement

The mission of Commission 10 is to:

- Promote the practice of Construction Economics and Management, Quantity Surveying, Cost Engineering, Construction Economics, Commercial and Project Management of construction projects globally
- Promote best practices for construction economics and management globally

- Dialogue between member organizations engaged in Construction Management, Quantity Surveying, Cost Management, Construction Economics , Cost Engineering, Project/Programme Management and Commercial Management within and outside of FIG
- Foster research appropriate to better understanding of construction projects and cost management practices around the world
- Promote cooperation among FIG Members organizations engaged in Quantity Surveying, Construction Economics, Cost Management, Cost Engineering, Project/Programme Management and Commercial Management for their mutual well-being and that of their individual members
- Advance continuing professional development amongst FIG member organizations
- Secure uniformity in standards and methodology for construction projects and cost management globally
- Facilitate collaboration with other international, regional and member organizations to achieve the Commissions mission.

**General**

Construction Economics and Management provides very useful knowledge for governments and businesses to manage construction projects more efficiently and ensure project completion on time and within budget. This involves an understanding of how different factors including digital technology can impact the cost and timetable of construction projects; new buildings, infrastructure projects, renovation works, existing projects and all activities along the value chain.

It also includes a general knowledge of economics, finance, engineering, business, project, progamme, and commercial management

FIG Commission 10 intends to explore the use of digital technology (BIM etc), sustainability construction, cost information and project management in its Work Plans for 2023 -2026 to align with the direction of the future of construction.

The existing relationship with several international organisations will be maximised to enhance exchange of knowledge, global best practices, promote innovations and standards in sustainable construction and technology, research and collaborative activities for the benefit of FIG member organizations, networks and task forces.

**Working Groups**

**Working Group 10.1 – Digital Technologies in Construction and Building Information Modelling (BIM)**

**Policy Issues:** The Construction Industry is constantly evolving and though technology has already played a significant role in the industry, more widespread and increasing use of technology will continue to shape the industry and define its future.

From 3D printing which is being used to create complex and intricate designs that would be difficult to build using traditional methods, to drones which are used to survey construction sites, inspect buildings, and map out the area, technology is being used to improve the efficiency and accuracy of construction projects by improving planning, designs and real-time monitoring of building performance, thus enhancing better integration of all construction processes

Likewise, Building Information Modelling (BIM) is changing the way Surveyors think, work, collaborate and earn a living. These include cost estimating, GIS analysis, Engineering Survey, Construction Work, Land Management and Facilities Management.

**BIM** involves the process of designing a building collaboratively using computer models. BIM is used throughout the design and construction processes to illustrate the designers' intent, to simulate construction sequences, and to manage construction activities. It is also used to develop quantity take-offs of building components to support development of cost estimates, to develop site logistics plans, to create construction schedules, and to identify opportunities for offsite prefabrication of building components.

Commission 10 intends to focus on evolving digital technological advancements in construction that will prepare us to conquer new frontiers in the industry.

**Chair:** Prof. Christian Clemen, Germany

**Specific project(s): BIM Workshops**

**Workshop(s):** Paper Presentations at FIG Working Weeks and Congress.
**Events:** Pre-Event Conference on "BIM for Surveyors"
**:** FIG Commission 10 Annual Meetings

**Publication(s):** Articles on Technological Advancement in Construction on FIG website

**Timetable:** 2023- 2026

**Beneficiaries:** FIG Commission 10, Member Bodies, Member Associations, Academic Members, Affiliate Members, Corporate Members, FIG Task Forces and Networks, Government agencies, Private Organizations, General Public

## Working Group 10.2 – Sustainable Construction in the Built Environment

**Policy Issues:**

Sustainability is becoming increasingly important in the construction industry, and this trend is expected to continue in the next few years.

This Working Group will explore how to integrate **sustainable construction** into the value chain in the Built Environment. Sustainable construction goes beyond the financial criteria of Construction Works to Building a better quality of life for communities. The strategy comprises more efficient use of resources, effective protection of the environment, economic growth and social progress for buildings and infrastructure that meets the needs of users of the construction output.

Construction projects that promote sustainability consider reuse of materials and minimization of construction waste; minimization of noise, light, and air pollution during construction; protection and restoration of the natural environment especially with the growing concern over the impact of climate change.; elimination of storm water runoff and soil erosion; and selection of construction materials with high recycle content and eco-friendly alternatives like bamboo and low emitting insulation materials.

All of these integrate sustainable concepts and support communities to achieve good quality of life through appropriate infrastructure and suitable housing that can ensure such developments are sustained and will guarantee good quality of life for present and future generations.

Commission 10 will work with FIG Task Force on Sustainable Development Goals (SDG), Climate Compass Network to achieve this task.

**Chair:** Kwando Osei-Asante, Ghana

**Specific project(s):** Joint Webinars on Sustainable Construction in the Built Environment

**Events:** FIG Commission 10 Annual Meetings

**Workshop(s):** Presentations at Working Weeks and Congress

**Publication(s):** Academic publications to be promoted and posted on the website especially in collaboration with other sister organizations.

**Timetable:** 2023-2026

**Beneficiaries:** All FIG members, Government agencies, General Public

**Working Group 10.3 – Cost Information Management**

**Policy Issues**: Cost Information Management enhances good business decisions and growth of organizations. Organizations and investors require efficient cost information management in decision-making processes. Commission 10 will focus on appropriate cost information systems that will be utilized for optimum investment results and budgets for investors and organizations. These will include international measurement standards that can be adopted through the whole project life cycle from benchmarking, cost prediction, procurement and facilities management through to carbon emission considerations to achieve the desired result.

**Chair:** Ts. Sr Khoo Sui Lai (Eric), Malaysia

**Specific project(s):** Webinars amongst sister organizations of common interest

**Workshop(s):** At Working Weeks (WW) and Congress

**Event:** FIG Commission 10 Annual Meetings

**Publication(s): P**ublications to be promoted and posted on the website in collaboration with RICS , ICEC, AAQS and CASLE

**Timetable:** 2023-2026

**Beneficiaries:** FIG Commission 10, related FIG members, Government Agencies, Private Organizations, Sister Associations and Partners, General Public

**Working Group 10.4 – Commercial /Project Management**

**Policy Issues:** The ability to identify and develop business opportunities from construction activities and the profitable management of projects and contracts from inception to completion is key to the success of members engaged in Construction Economics and Management.

This Working Group will focus on analysing investment in construction and real estate that should guarantee profitability of projects as businesses. We will work jointly with Commission 9 on the real estate segment.

**Chair:** QS Bolaji Sotunde, Nigeria

**Specific project(s):** Webinars on: Risk Management
: Stakeholder Engagement
: Effective Communication

**Event:** Promote active participation with PAQS at Kuala Lumpur 22-26th September 2023
**:** FIG Commission 10 Annual Meetings
: Promote Active Participation at NIQS Biennial Conference November 2023

**Workshop(s):** At Working Weeks (WW) and Congress

**Publication(s):** Publications on investment management of projects will be hosted on the FIG website along with publications on project management

**Timetable:** 2023-2026

**Beneficiaries:** Members of Commission 10 and 9, Government Agencies, Private Organizations and General Public

**Co-operation with United Nation Organisations, Sister Associations and other Partners**

The commission will leverage on the existing relationship between the FIG and United Nation and shall actively participate in activities that promote the UN Sustainable Goals (UN Division for Sustainable Dev.) in relation to Sustainable Construction, UN -Habitat, UN Economic Commission for Europe (Committee on Human settlements).

The commission will develop/renew collaborations between FIG and Africa Association of Quantity Surveyors (AAQS), International Cost Engineering Council (ICEC), Pacific and Asian Quantity Surveyors (PAQS), Commonwealth Association of Surveying and Land Economy (CASLE),Royal Institution of Chartered Surveyors (RICS) and others for better collaboration and to identify areas where the relationships need to be strengthened further.

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