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The South African Council for the Project and Construction Management Professions

— CONSTRUCTING NEW PERSPECTIVES —

Competency Development of BE Professionals for sustainable development and Environmental Protection

Presented by

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Operations Executive

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ABOUT THE SACPCMP

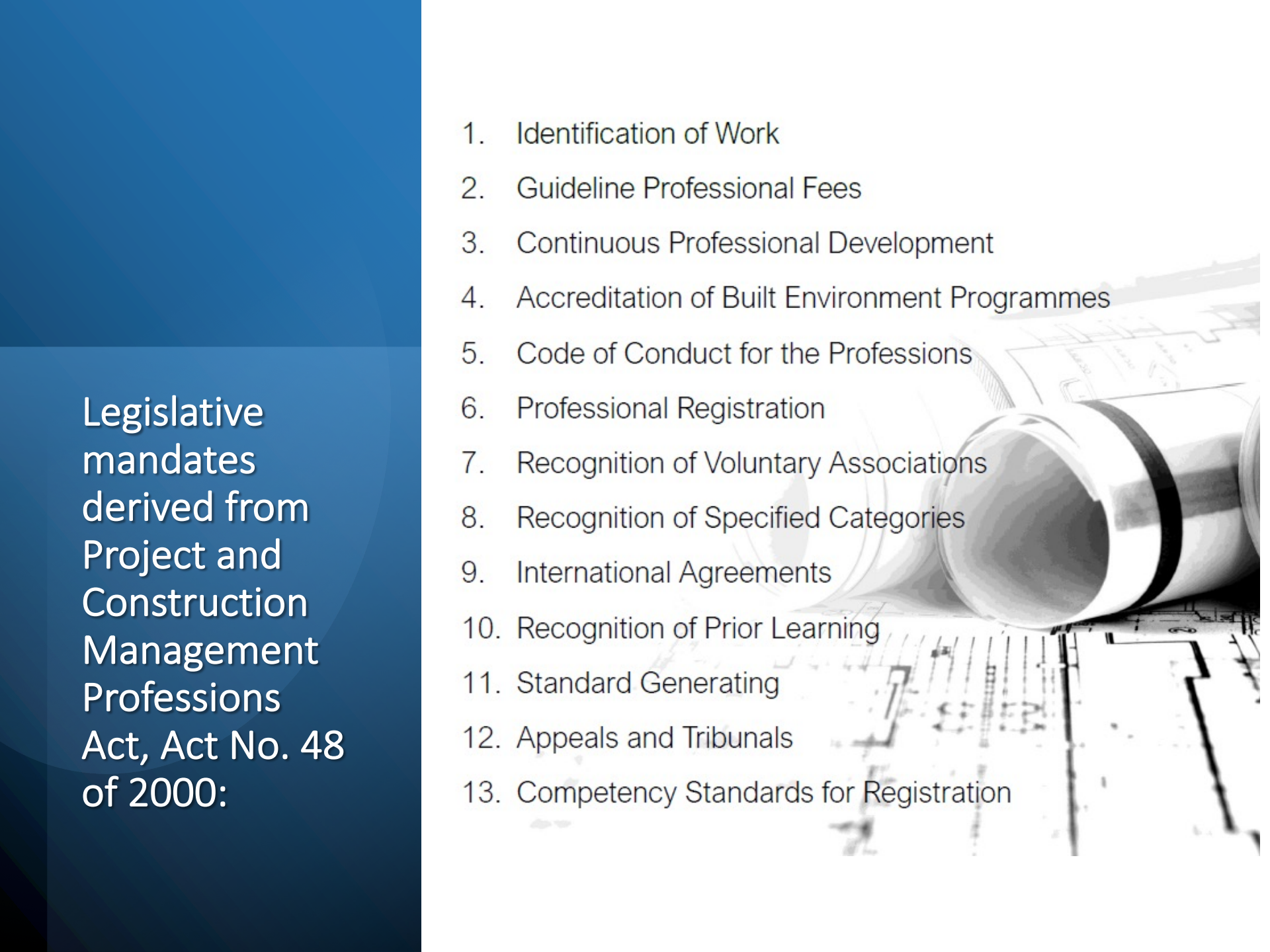
The SACPCMP is a **statutory** professional body established through an **act of Parliament.**

The Council was established by Section 2 of the Project and Construction Management Professions Act (No. 48 of 2000,) “to **regulate** Project and Construction Management Professionals to protect the public”.


public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA
C B E
SACPCMP
South African Council
for the Architectural Profession
ECSA
SOUTH AFRICAN COUNCIL FOR THE LANDSCAPE ARCHITECTURAL PROFESSION
SA COUNCIL FOR THE
PROPERTY VALUERS PROFESSION

Legislative mandates derived from Project and Construction Management Professions Act, Act No. 48 of 2000:

1. Identification of Work
2. Guideline Professional Fees
3. Continuous Professional Development
4. Accreditation of Built Environment Programmes
5. Code of Conduct for the Professions
6. Professional Registration
7. Recognition of Voluntary Associations
8. Recognition of Specified Categories
9. International Agreements
10. Recognition of Prior Learning
11. Standard Generating
12. Appeals and Tribunals
13. Competency Standards for Registration



Regulatory framework in which SACPCMP and its professions Operate:

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SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

South African Qualification Authority policies for conferring professional designations ensure standards are adhered to

employment & labour
Department:
Employment and Labour
REPUBLIC OF SOUTH AFRICA

Construction Regulations as part of the OHS Act through the Department of Employment and Labour

NATIONAL HOME BUILDERS
NHBRC
REGISTRATION COUNCIL

National Building Regulations through the NHBRC who "ensure that builders comply with the prescribed building industry standards"

cidb
Construction Industry Development Board

Regulation of Construction Industry Standards and the development of contractors – focus on mentorship competency

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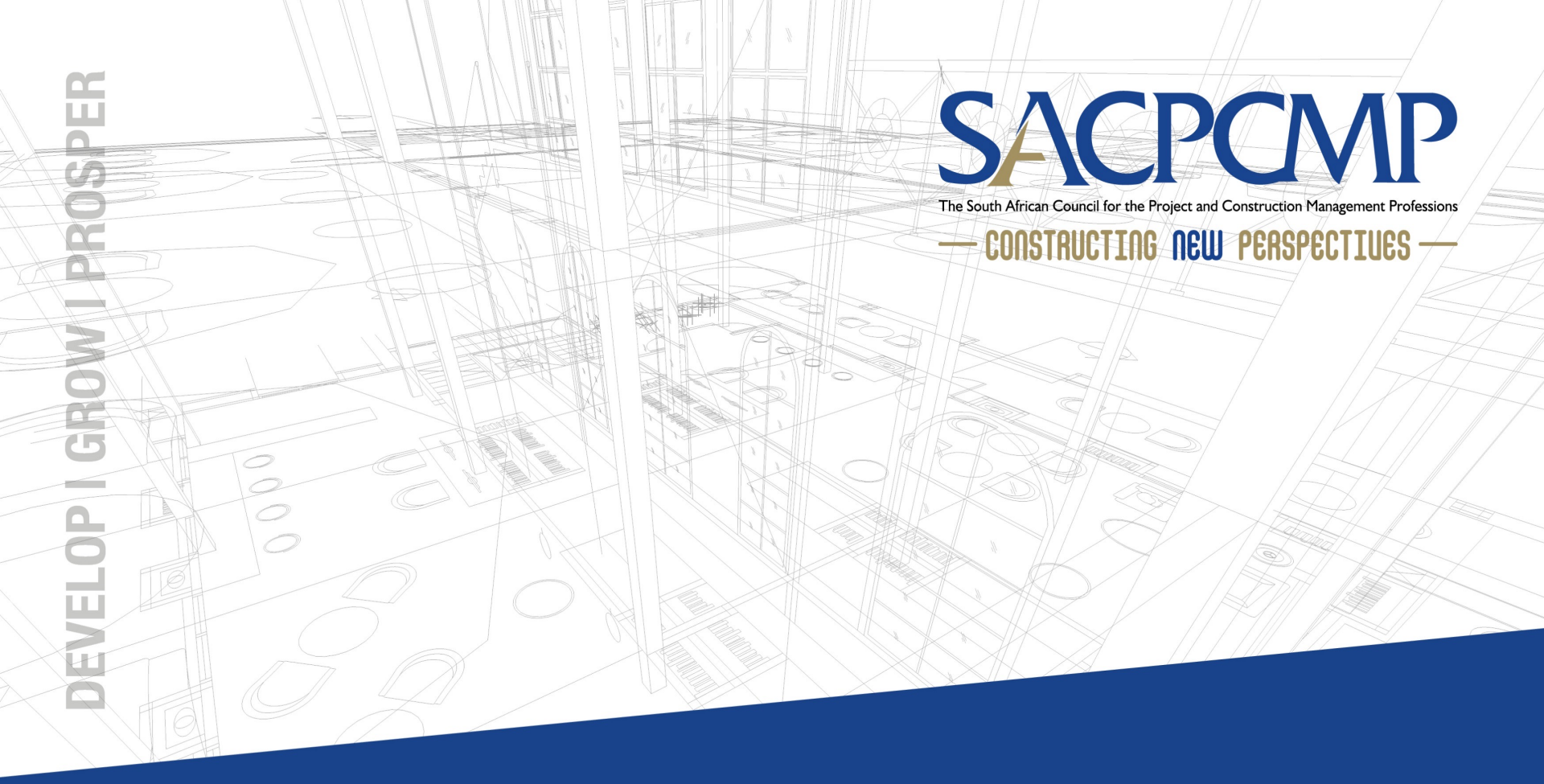
The SACPCMP registers management professionals in the built environment in 14 categories under the Project Construction Management, Construction Health and Safety, & Building Inspector sectors.

CATEGORIES OF REGISTRATION

- Professional Construction Manager (Pr.CM)
- Professional Construction Project Manager (PrCPM)
- Candidate Construction Manager
- Candidate Construction Project Manager

SPECIFIED CATEGORIES OF REGISTRATION

- Professional Construction Mentor (PrCMentor)
- Construction Mentor (CMentor)
- Professional Construction Health and Safety Agent (Pr. CHSA)
- Construction Health and Safety Manager (CHSM)
- Construction Health and Safety Officer (CHSO)
- Certified Building Inspector (Cert.BInsp)
- Professional Building Inspector (Pr.BInsp)
- Candidate categories across all specifies categories excl. Mentor category



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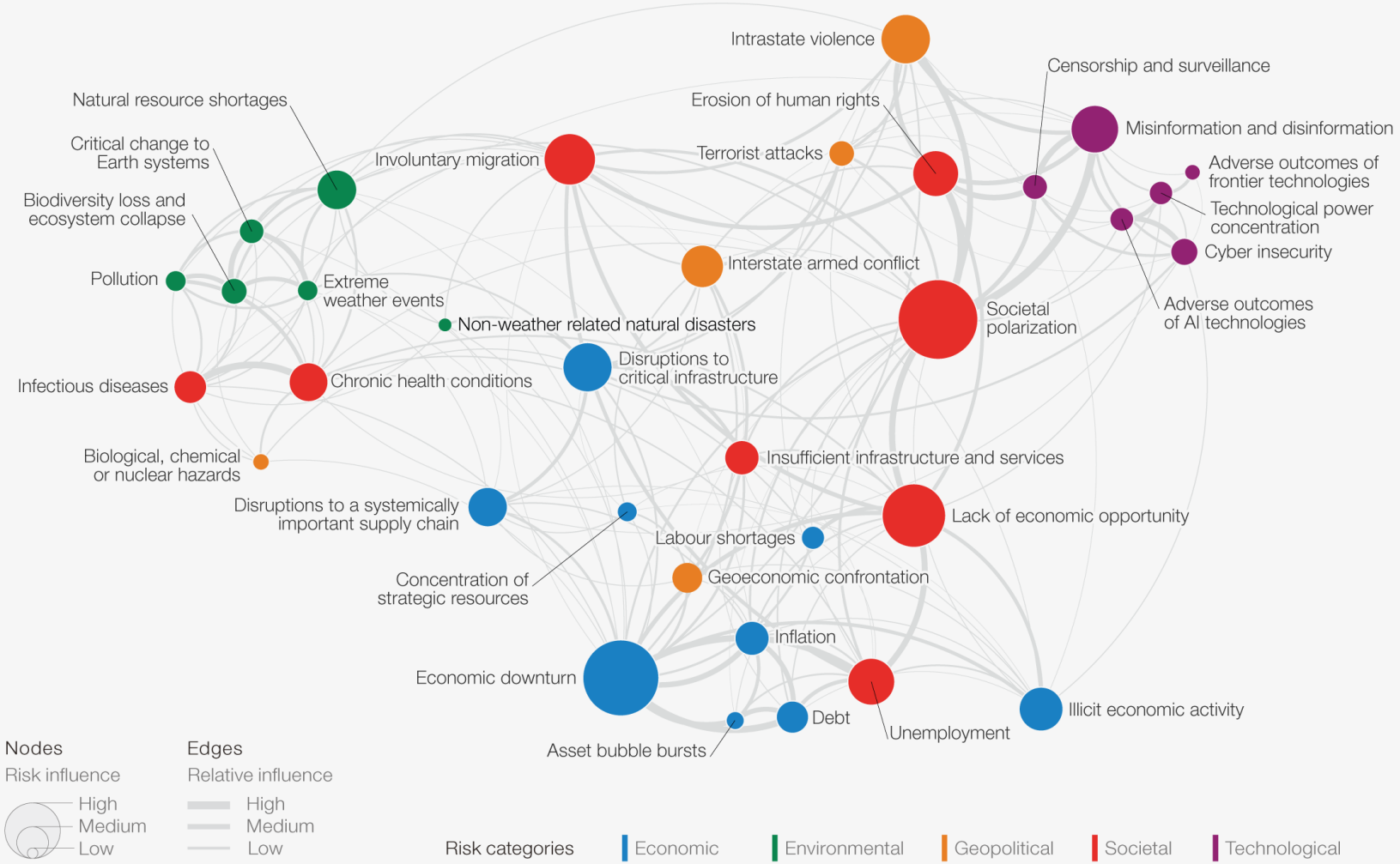
It’s all about competence!

FIGURE D **Global risks landscape: an interconnections map**



Source

World Economic Forum Global Risks Perception Survey 2023-2024.

Annual Global CO_2 Emissions

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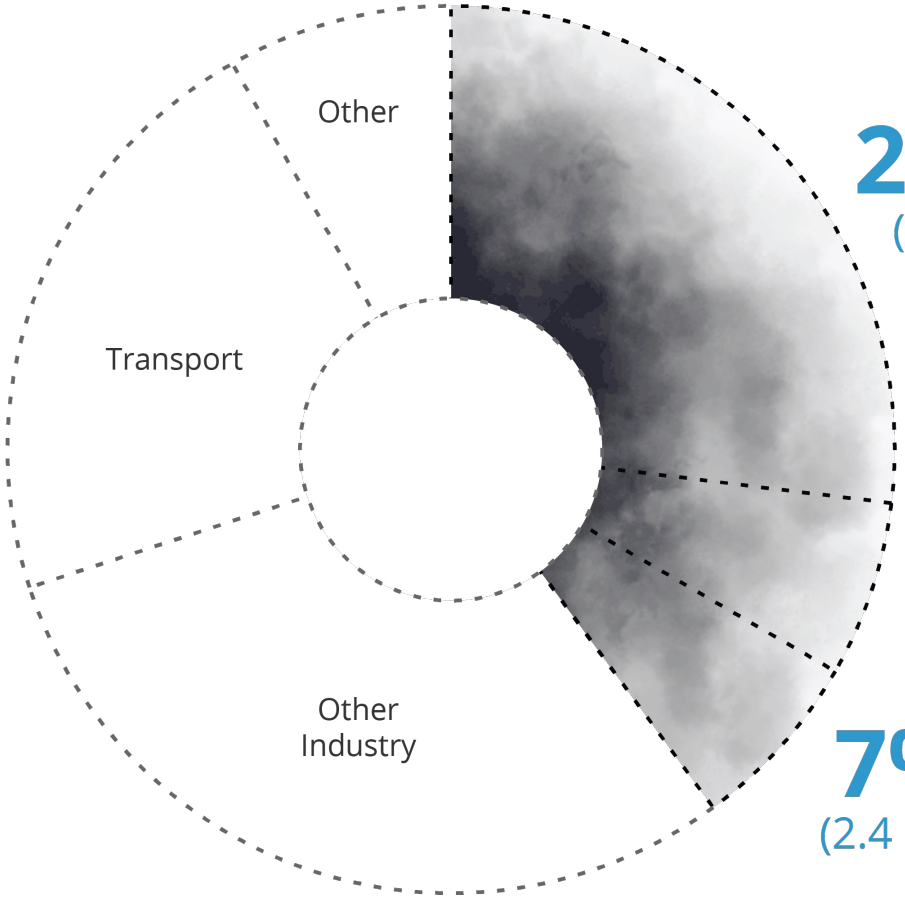

27% (9.9 GT) BUILDING OPERATIONS

6% (2.3 GT) BUILDING CONSTRUCTION INDUSTRY

7% (2.4 GT) OTHER CONSTRUCTION INDUSTRY

 Data Source: IEA (2022), Buildings, IEA, Paris

Building Construction Industry and Other Construction Industry represent emissions from concrete, steel, and aluminum for buildings and infrastructure respectively.

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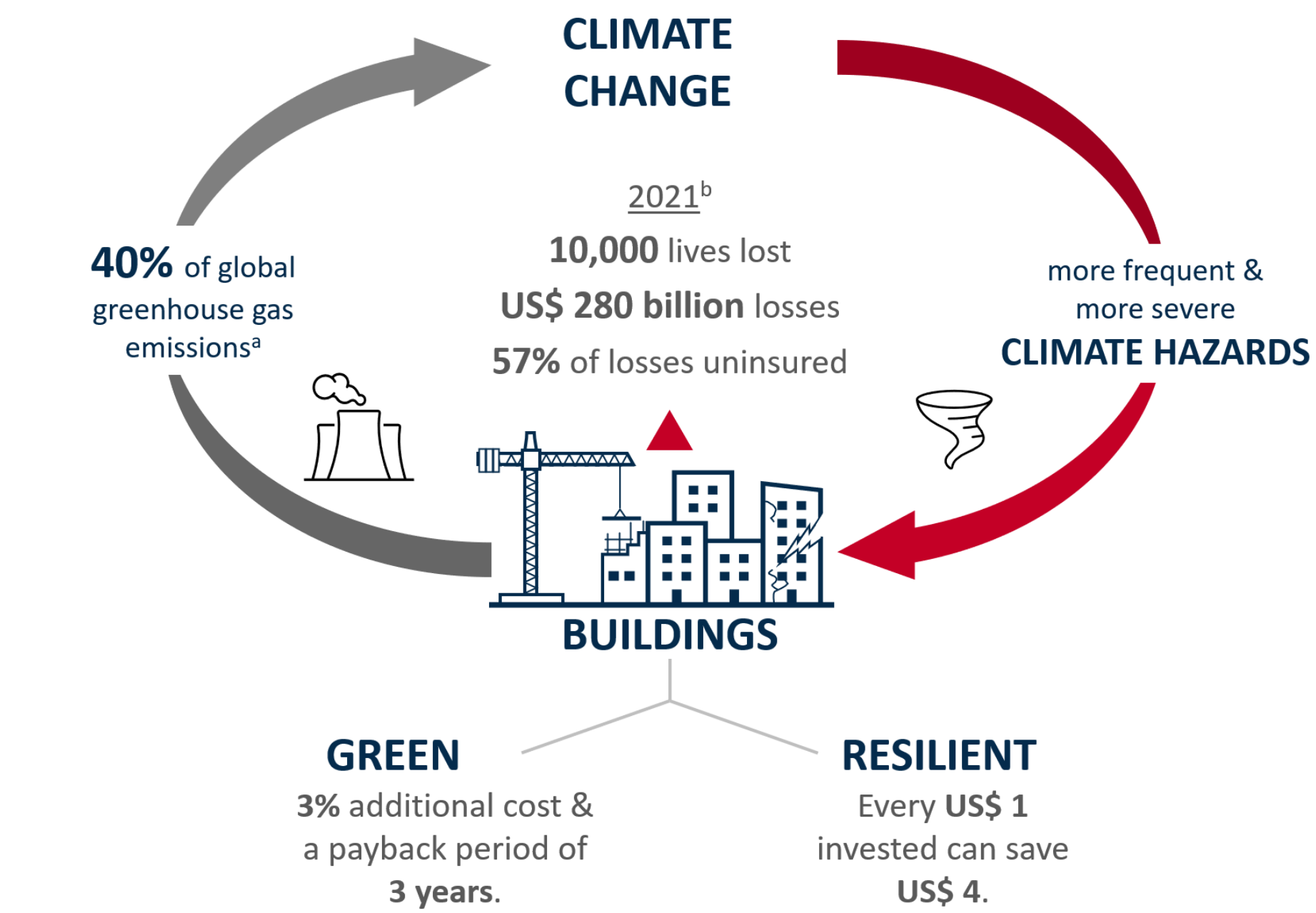

Building sector emissions and resilience cycle (a: emissions including embodied carbon; b:includes data from all natural disasters)Image: Ommid Saberi, Naz Beykan, IFC; Data from IFC, MunichRE and National Institute of Building Science

Are professionals equipped with the **knowledge** and **skills** they need to make them flexible, adaptable, and agile?

Where do we begin to transform the professions to respond to VUCA world, to ensure **relevance** and **sustainability**?

Are they equipped to be key drivers of **profitability** and **service delivery** in the South African construction industry?

Sustainable Development and Environmental Protection

Sustainable development embraces environmental, social and economic objectives to deliver long-term equitable growth which will benefit current and future generations whilst environmental protection aims at maintaining (including recovery if and when necessary) a healthy and natural environment.

Competency specialisation in Sustainable Development ('Green skills')

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https://www.linkedin.com/pulse/importance-sustainable-construction-practices-material-nadeem


Leveraging Resources
Building and Maintaining Relationships
Problem-solving
Resilience
Decision-Making

PROFESSIONAL CONSTRUCTION MANAGER
COMPETENCY STANDARDS FRAMEWORK:

TECHNICAL / FUNCTIONAL COMPETENCIES					
Competency Levels	**1. Poor/Non-Competent**	**2. Development/Coaching Area**	**3. Competent/Adequate for the Standard**	**4. Strength/Exceeds Expectations**	**5. Outstanding/Superior Performance**
2. Sustainable Development and Environmental Protection: *Sustainable development embraces environmental, social and economic objectives to deliver long-term equitable growth which will benefit current and future generations whilst environmental protection aims at maintaining (including recovery if and when necessary) a healthy and natural environment.*	• Showing a complete ignorance about the potential adverse impact of construction on the environment, causing numerous instances of pollution.	• Tends to underestimate the adverse impact on the environment, fails to see the importance of action to mitigate the impact.	• Showing a commitment to reducing the adverse impact of construction on the environment by controlling pollution (i.e. air, water, noise, vibration).	• Generating commitment and enthusiasm from others to mitigate the impact of construction on the environment i.e. using on-site water treatment plants.	• Advocating and educating for environmentally responsible citizenship.
	• Fails to take responsibility, often making excuses for not delivering on promises made.	• Showing an awareness of the sensible utilization of natural resources, energy and water but fails to take appropriate action.	• Recognizing the importance of using renewable energy and building materials.	• Advocating the need for the sustainable use of natural resources, preventing the depletion and destruction of natural resources.	• Champions the sustainable use of natural resources.
	• Showing a complete disregard, for the need for low-carbon products.	• Often expresses a lack of understanding and/or support for a low-carbon working environment.	• Demonstrating a willingness to develop and build a low-carbon construction strategy.	Facilitating the effective implementation of a low-carbon construction strategy.	• Energizes and generates commitment for a low-carbon construction environment.
	• Tends to talk down to others, often finding fault with others.	• Attempts to be sensitive towards the needs of others but fails to do so consistently.	• Engaging with local communities through forums and hearings, recording concerns about the impact on the environment.	• Values interaction with local communities; respects and protects the safety of the local residents.	• Honours commitments made to local communities.
	• Often avoiding personal responsibility, shows a lack of accountability and would rather wait on others to take action.	• Often fails to focus on most critical priorities, resulting in no action taken.	• Effectively utilizing an environmental monitoring and management system i.e. monitor and record pollutant discharge.	• Benchmarking with the industry to ensure optimal environmental monitoring and management of adverse impacts on the ecosystem.	• Creating a climate for continuous improvement.

Facilitating the effective implementation of a low carbon construction strategy

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- Promoting good practice.
- Ensuring good quality workmanship on site.
- Reducing waste.
- Using low-embodied energy, local products and materials.
- Using recycled and recyclable products and materials.
- Designing for deconstruction.
- On-site energy generation and storage.
- Reducing the use of vehicles.
- High levels of insulation.
- Low infiltration rates.
- Low water and power-consuming appliances.
- Carbon capture and storage.
- Passive design techniques.

DESIGNING BUILDINGS
THE CONSTRUCTION WIKI

https://www.designingbuildings.co.uk/wiki/Low_carbon_in_the_construction_industry

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Accreditation Criteria expanded

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Incorporation of Core Knowledge elements for registration categories:

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Education criteria for accredited educational programmes

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v. Sustainable Construction

Sub-theme	Level 6	Level 7	Level 8
Aspects of sustainability	Demonstrate knowledge and understanding of all aspects of sustainability, e.g. social, technical, environmental and economic.	Apply knowledge of sustainable principles in the construction industry and construction processes.	Analyse the main sustainability principles and how they impact on construction processes and industry.
Legislation and Policy	Demonstrate an understanding of legislation and policy for sustainability	Appreciate the legal and policy requirements for sustainability and impact on the construction industry.	Evaluate legal and policy dimensions with regards to sustainability and the construction industry.
Pollution Management and techniques	Recognise the sources of pollution generally, and those generated by the construction industry.	Apply appropriate techniques to minimise pollution passively and actively as used in the construction industry.	Evaluate techniques of minimisation of pollution and the trade-off between costs and benefits.
Waste management	Demonstrate an understanding of the sources of waste in the construction processes.	Develop and apply policies to minimise waste construction processes.	Evaluate techniques available to minimise waste in the construction processes.

Sustainable Construction

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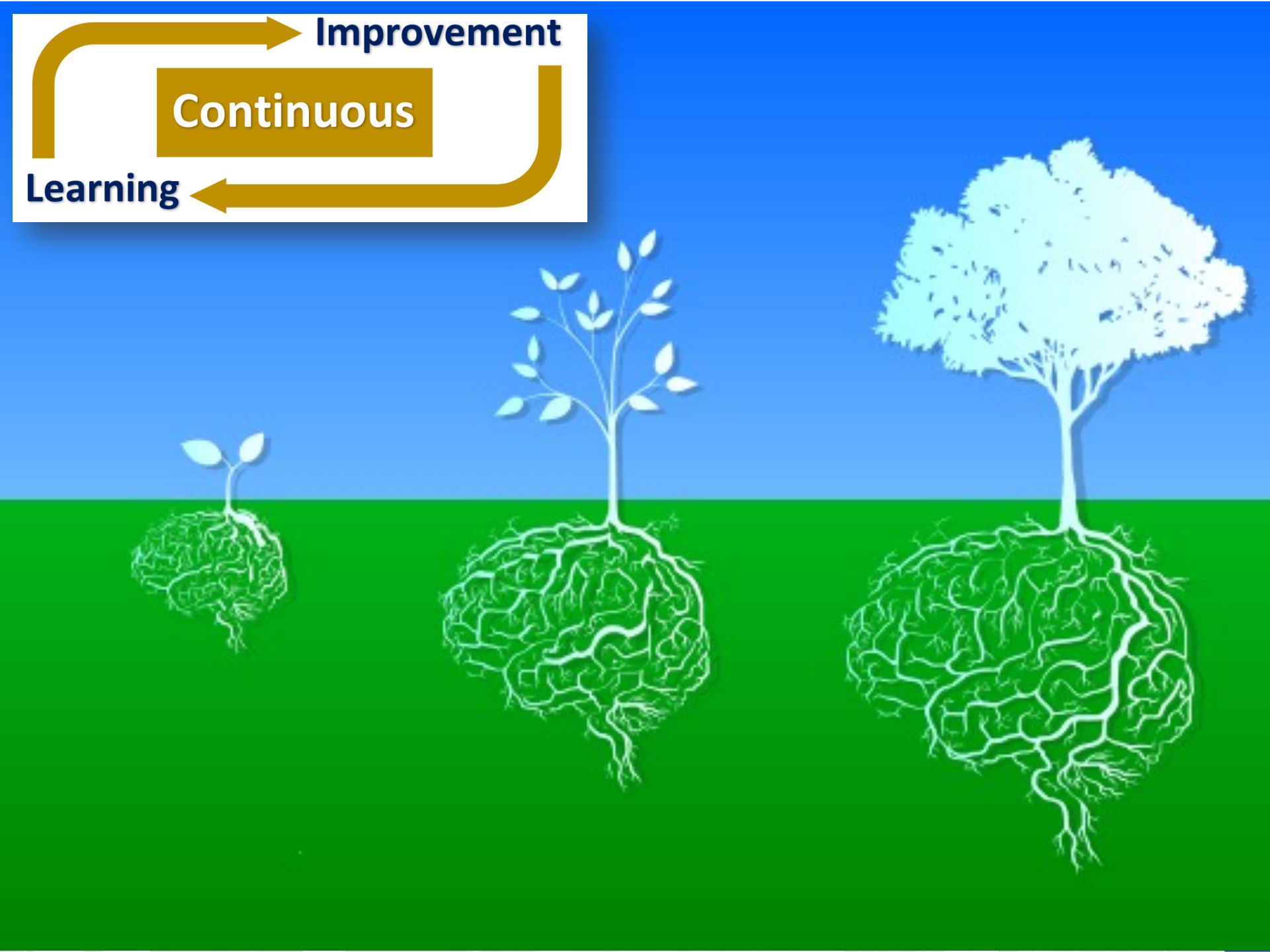
Sub theme	NQF Level	How will it be integrated	Curriculum framework	Notional Hours	Institutional Requirements for approval	Timelines
Aspects of sustainability	6 - 8	✓ Into an existing course ✓ As a standalone course credit bearing course ✓ As a standalone module (may be offered in collaboration with other department or faculty)	e.g. climate change, climate resilience, green building			
Legislation and Policy	6 - 8		e.g. climate change act, sustainable development goals			
Pollution Management and techniques	6 - 8		e.g. techniques on minimising pollution			
Waste management	6 - 8		e.g. deconstruction, circular supply chain			


Improvement
Continuous
Learning

GBC SA

GREEN BUILDING CONVENTION 2024

WORKSHOP: Timber Construction: Promoting Sustainable Construction through the Reduction of Embodied Carbon Hall C (Ground Floor)

Is it possible to achieve Net Zero today and Climate Positive tomorrow? Enter Timber Construction. When trees grow, they [illegible] carbon, and when the wood is used in construction, the carbon remains stored for the lifespan of the building. But [illegible] timber components for disassembly and reuse can further extend carbon sequestration. In [illegible] forests are certified by the Forest Stewardship Council [illegible] about 3% of South Africa's water [illegible] South

WORKSHOP: Building a Green Business Case

Venue: Hall B (Ground Floor)

Forget the myth that green means expensive. Building a Green Business Case shatters misconceptions and reveals the true financial power of sustainability. This session dives deep into groundbreaking research, uncovering the minimal cost of green building and the high performance of green investments. Join industry experts embedded in the field and learn how to translate this research into practical tools. By the end, you'll be equipped to champion the green cause, armed with compelling arguments that convince colleagues, clients, and decision-makers of the undeniable bottom-line value in greening your construction projects.

4.5. Environmental Sustainability

Registered Persons: -

i. have due regard for, and their work, avoid or minimize, adverse impact on the environment; and

ii. strive to ensure that in meeting present development needs, the ability of future generations to meet their needs is not compromised;

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