

Wednesday 24 September



SB08 Special Forum 14
“Developments in SB Standards and Certification”
ISO/TC59/SC17: Sustainability in infrastructures



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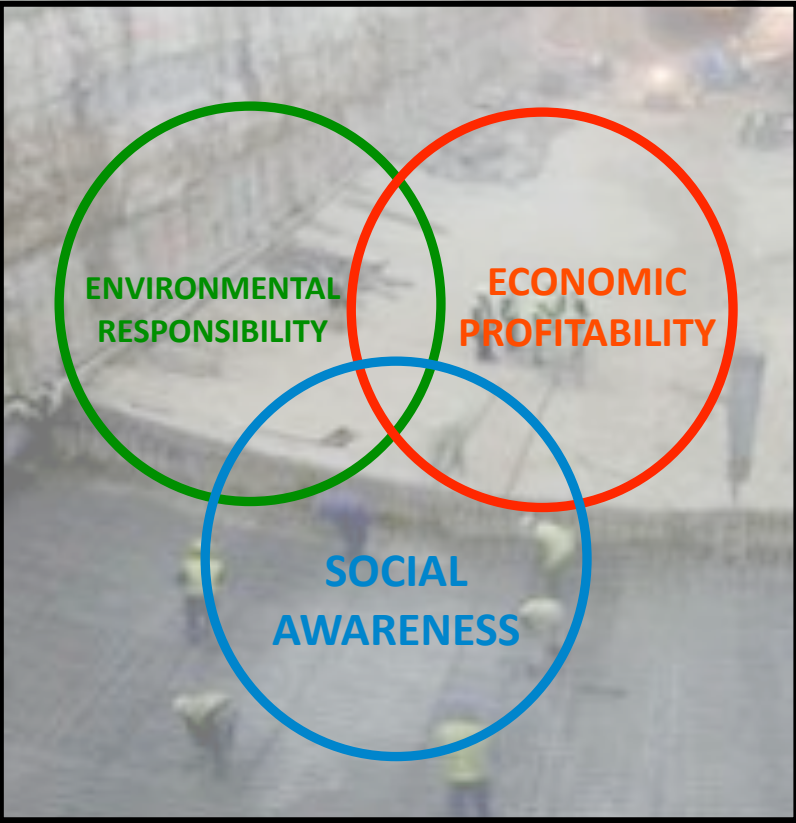
BACKGROUND

PUBLIC ADMINISTRATIONS

PRIVATE DEVELOPERS

CITIZENS

- 1
- 2
- 3
- 4
- 5



SUSTAINABLE CONSTRUCTION



SUSTAINABLE DEVELOPMENT

NECESSITY

SUSTAINABILITY
IN
CONSTRUCTION



UNITIL NOW, ISO/TC59/SC17

- Development of indicators for buildings (WG 2)
- Framework for methods of assessment for buildings (WG4)

WHY THAT? Possible reasons:

- ✓ immediate social perception
- ✓ space concentration

- No indicators
- Environmental Impact Assessment

Both, Buildings and Civil Works

Lack of

- ✓ Social aspects
- ✓ Economic aspects

Necessity: WHY?



- A wide range of stakeholders are interested in the infrastructure sector.
- Moreover, they want to express the sustainability of the civil works they develop.

NEED OF COMMON AND INTEGRATING TOOLS

- ✓ Indicator system
- ✓ Assessment criteria



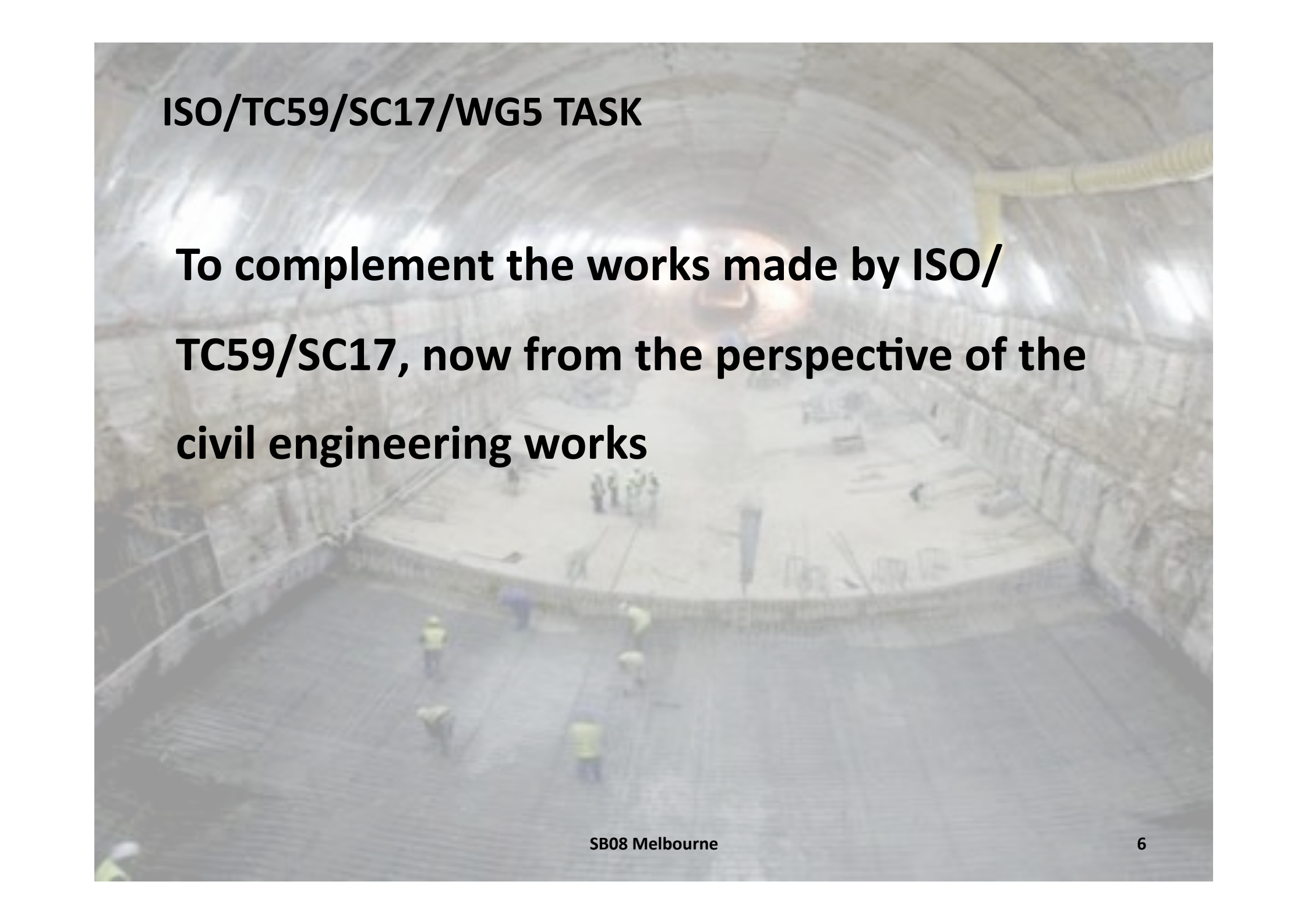
START: ISO/TC59/SC17/WG5 CONSTITUTION

Resolution from the 5th plenary meeting of ISO/TC59 SC17 – Seoul 2007-10-08 and 2007-10-12

Resolution 106 (Seoul 2007-9)

SC17 Work on Civil Engineering Works

ISO/TC 59/SC 17 acknowledges there is a need for new work to be initiated within the SC focusing on the sustainability of civil engineering works and agrees that a WG be formed with the appointment of Mr. Antonio Burgueño as Convenor, with secretary support from AENOR, with an initial task of, within 3 months of this Plenary, convening the first meeting of the WG for the purposes of establishing the intended work plan, including the work related to sustainability indicators (See Resolution 103), as well as developing a defined scope and terms of reference for the WG and an initial list of any new work items to be proposed.

A large, circular tunnel under construction. The interior is lined with corrugated metal. Several workers in high-visibility vests are visible on the floor, which is covered with construction materials and equipment. The tunnel is illuminated by overhead lights, creating a bright, industrial atmosphere.

ISO/TC59/SC17/WG5 TASK

**To complement the works made by ISO/
TC59/SC17, now from the perspective of the
civil engineering works**

MEMBER BODIES

Member bodies with experts on "*Civil engineering works*":

- Australia
- Finland
- France
- Germany
- Japan
- Republic of Korea
- Spain
- U.K.

ISO/TC59/SC17/WG5 MEETINGS HELD UNTIL NOW

- **2008-02-01 – Madrid**
- **2008-05-08 – Istanbul**
- **2008-09-16 – Melbourne**
- **2008-09-19 – Melbourne (WG2 Indicators & WG5)**

OBJECTIVES AND SCOPE

Objectives



- To improve the infrastructure sector in relation to sustainability
- To define sustainability indicators for civil engineering works
- To define a framework for assessment methods for civil engineering works
- To develop a framework for assessment tools, considering the criteria of all stakeholders (public and private sectors)
- To integrate the economic, environmental and social aspects of civil engineering works in the framework's definitions

OBJECTIVES AND SCOPE

Scope



- **Roads, Railroads**
- **Airport works**
- **Residential developments**
- **Underground oil and gas pipelines**
- **Energy infrastructures**
- **Maritime works**
- **Fluvial works**
- **Dams**
- **Civil works in urban areas**
- **Special civil works: water treatment plants, roads' maintenance**



WORKS TO BE DONE

FIRST STEP



- **Contribution to works already done on indicators by WG2 (ISO/TS 21929-1)**
 - ✓ **From the theoretical point of view**
 - ✓ **Set core of sustainability indicators for civil engineering works**
- **Contribution to works already done on general principles by WG1 (ISO 15392) but also on terminology by AHG on Terminology ISO/TC59.**

WORKS TO BE DONE

FUTURE STEPS

- Framework for methods of assessment the sustainable performance of civil engineering works
- Other work items needed during the works



WORK ITEMS

1. Framework for Indicators:

Necessity to adjust the framework already developed for buildings to the civil engineering works.



Why?

- **Different measures**
- **Different items to be assessed**
- **Different stakeholders/ participants**

WORK ITEMS

2. Set core of sustainability indicators for civil engineering works

- Environmental indicators
- Social indicators
- Economical indicators
- but also
- Functional performance indicators



Different scale

Different concepts

Different stakeholders

WORK ITEMS

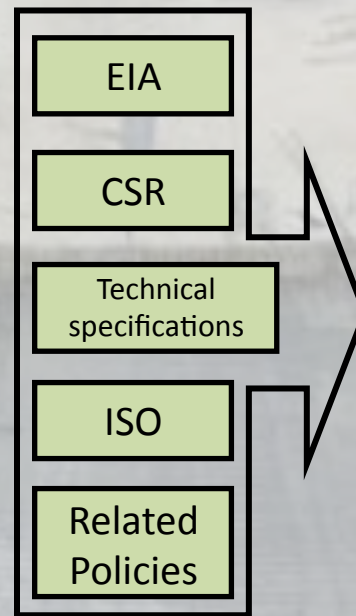
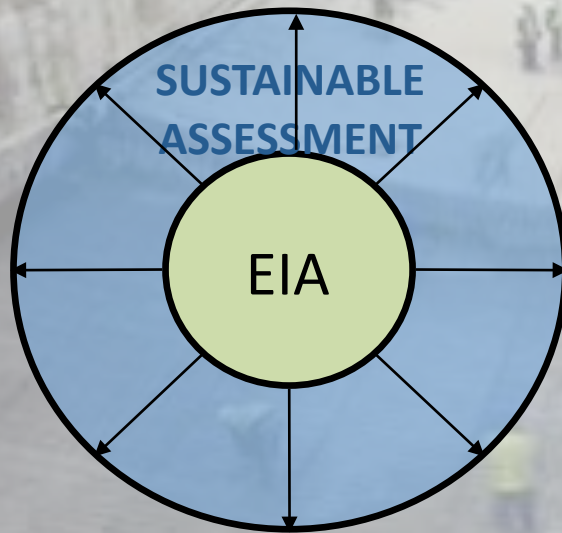
FUTURE

3. Assessment methods and criteria for sustainability in civil engineering works

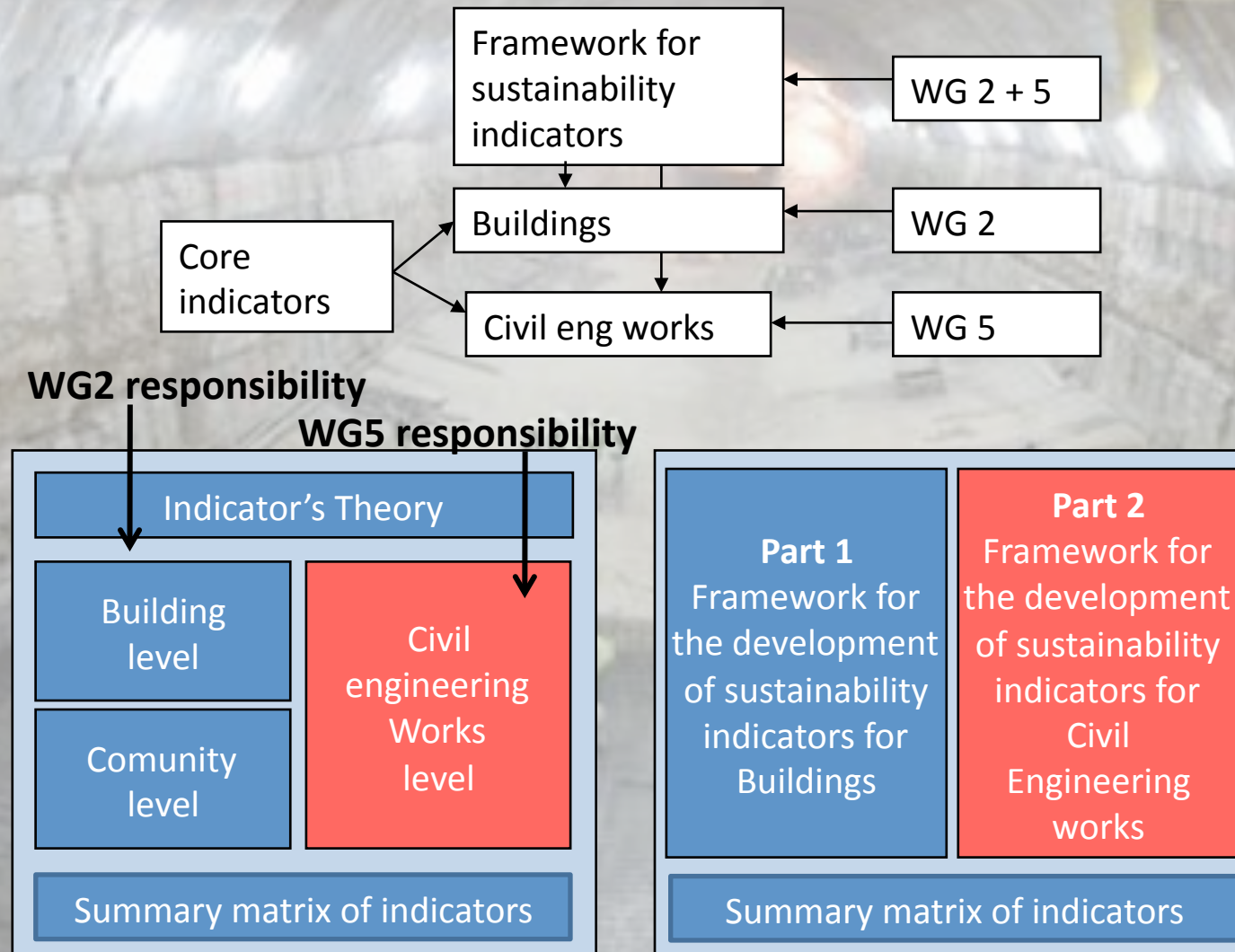
Taking into account 2 different approaches.



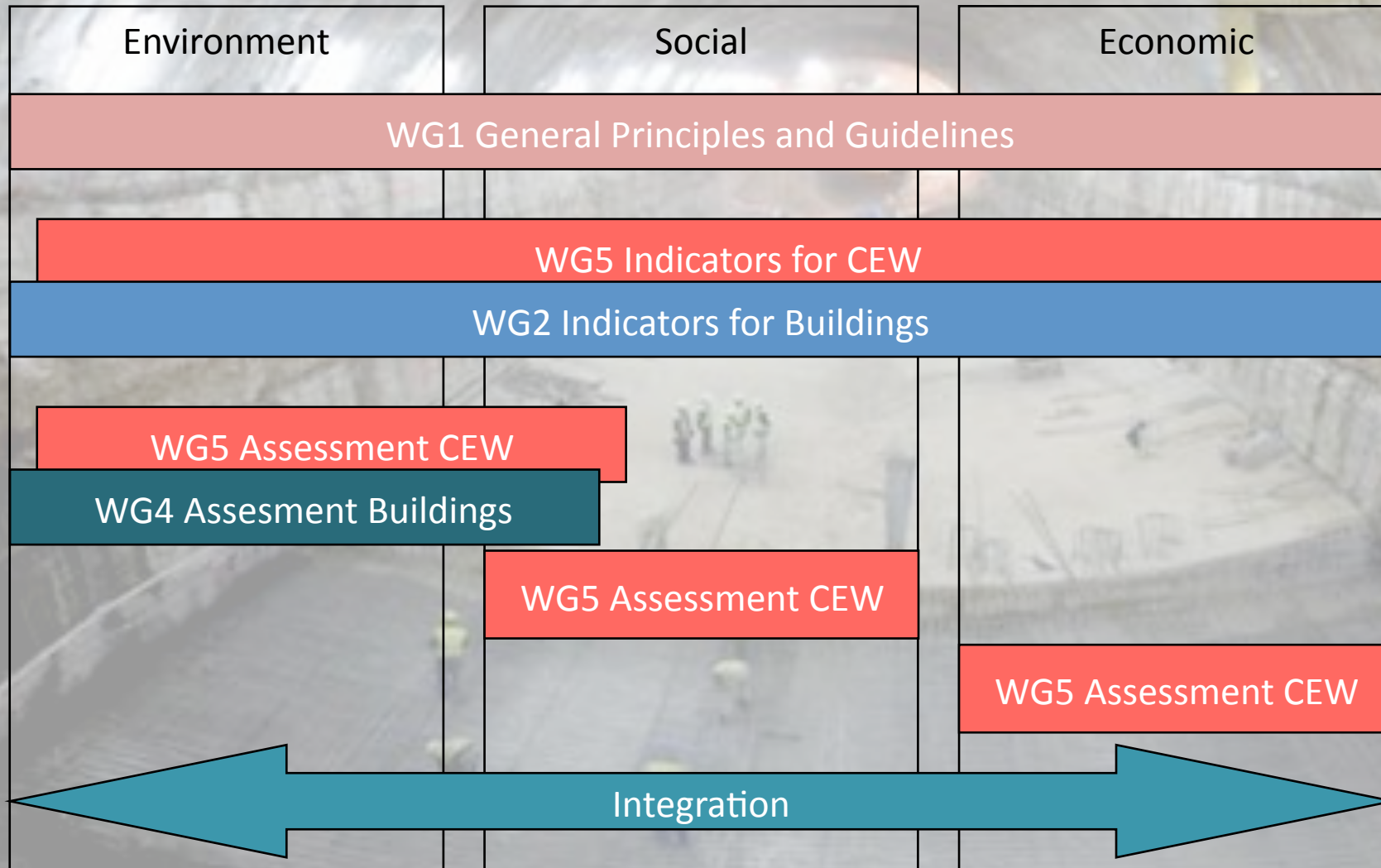
OR



Possible structure of the documents about sustainability indicators



ISO TC59 SC17 Sustainability in building construction



CONCLUSIONS



- **There is a real need of indicators and tools to reach a proper decision-making, both at political and technical level**
- **We are on time to provide a quick answer for this incipient and evident demand, in order to develop these works and concerns from an only principle, before they start appearing different alternatives**
- **ISO/TC59/SC17/WG5 invites member bodies and experts of the countries not involved until now, to join and work together**

A wide-angle, high-angle photograph of a large, circular tunnel under construction. The tunnel's interior is lined with a complex network of steel reinforcement and concrete structures. The ceiling is curved and supported by a series of radial beams. The floor is a flat, light-colored surface, possibly concrete or a temporary construction layer. Several workers in high-visibility vests and hard hats are visible on the floor, some standing in small groups and others working. A large, circular opening is visible in the distance, illuminated by bright lights. The overall atmosphere is industrial and dimly lit, with the primary light source being the artificial lights within the tunnel.

THANK YOU...

AND JOIN ISO/TC59/SC17/WG5

Caverna de Sol (Puerta del Sol, Madrid, Spain)