

CO₂ Emissions in Concrete/Construction Industries (estimation)

(Prof. Em. Koji Sakai)

■ Concrete-related industries

Cement: 3 billion tons Steel: 2 billion tons

15.4% of 32.5 billion tons, CO₂ emitted from fossil fuel in 2017

■ Concrete/construction including execution and transport

7.04 billion tons 22% of 32.5 billion tons

■ Operation 20% ?

Total CO₂ emissions from construction-related industry: “37% + Operation”

Present supplier driven concrete economy

Cement & Aggregate influence

- STANDARDS

EN 197, 206 etc.

- LOBBY

Cembureau, ECTP, Brussels
WBCSD Geneva.

Global Cement & Concrete
Association, London

- SPONSORING

Concrete societies

Universities, events, etc.

“Value” chain

1. CLIENT

2. Architect

3. STRUCTURAL engineer

4. CONTRACTOR

5. Subcontractor (installations)

6. SUPPLIERS

7. Concrete producers

8. Ready mix & Prefab

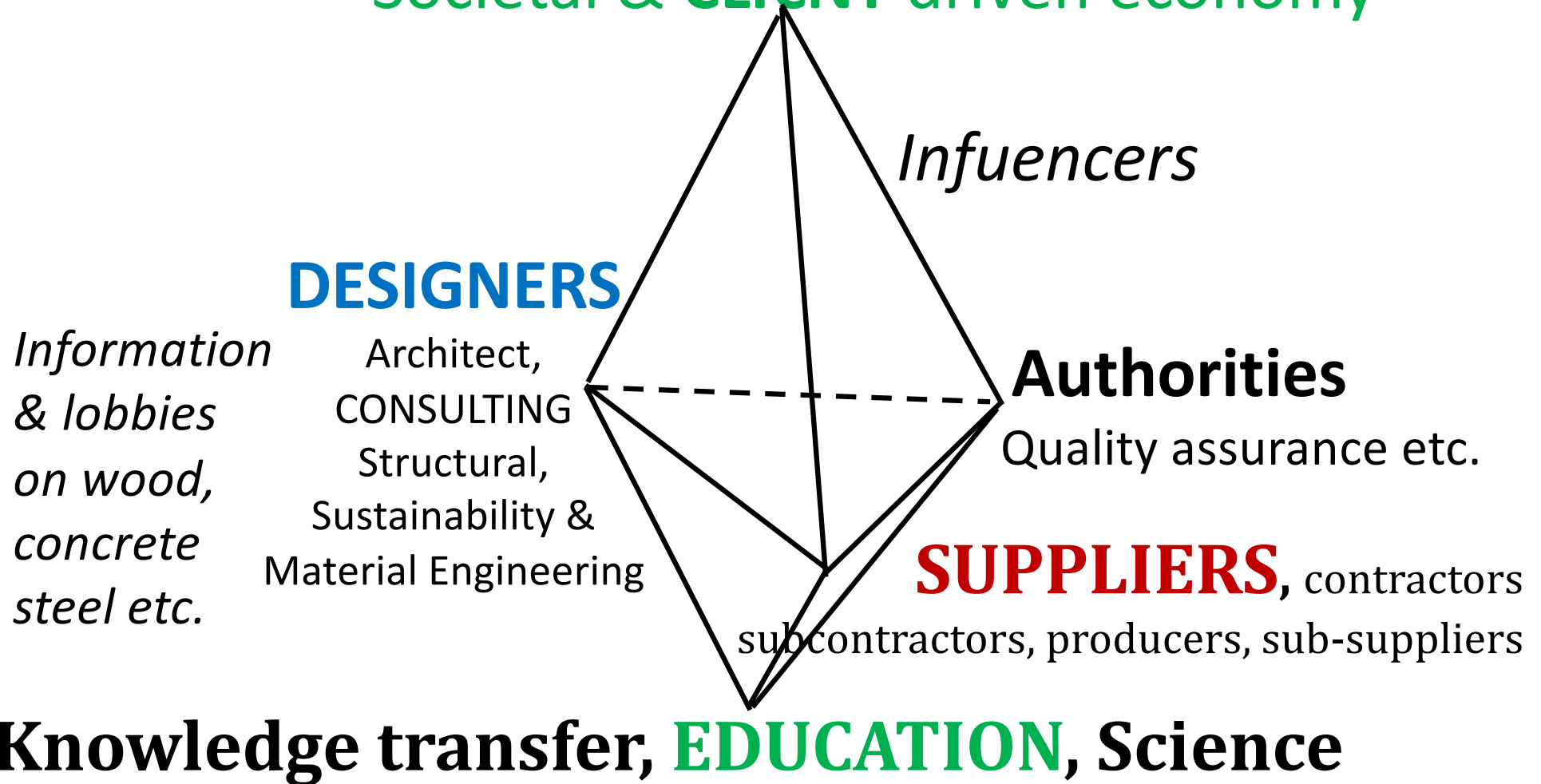
9. Sub-suppliers

10. Cement & Aggregate producers

(a natural healthy)

Sustainable construction Ecosystem

Societal & CLIENT driven economy

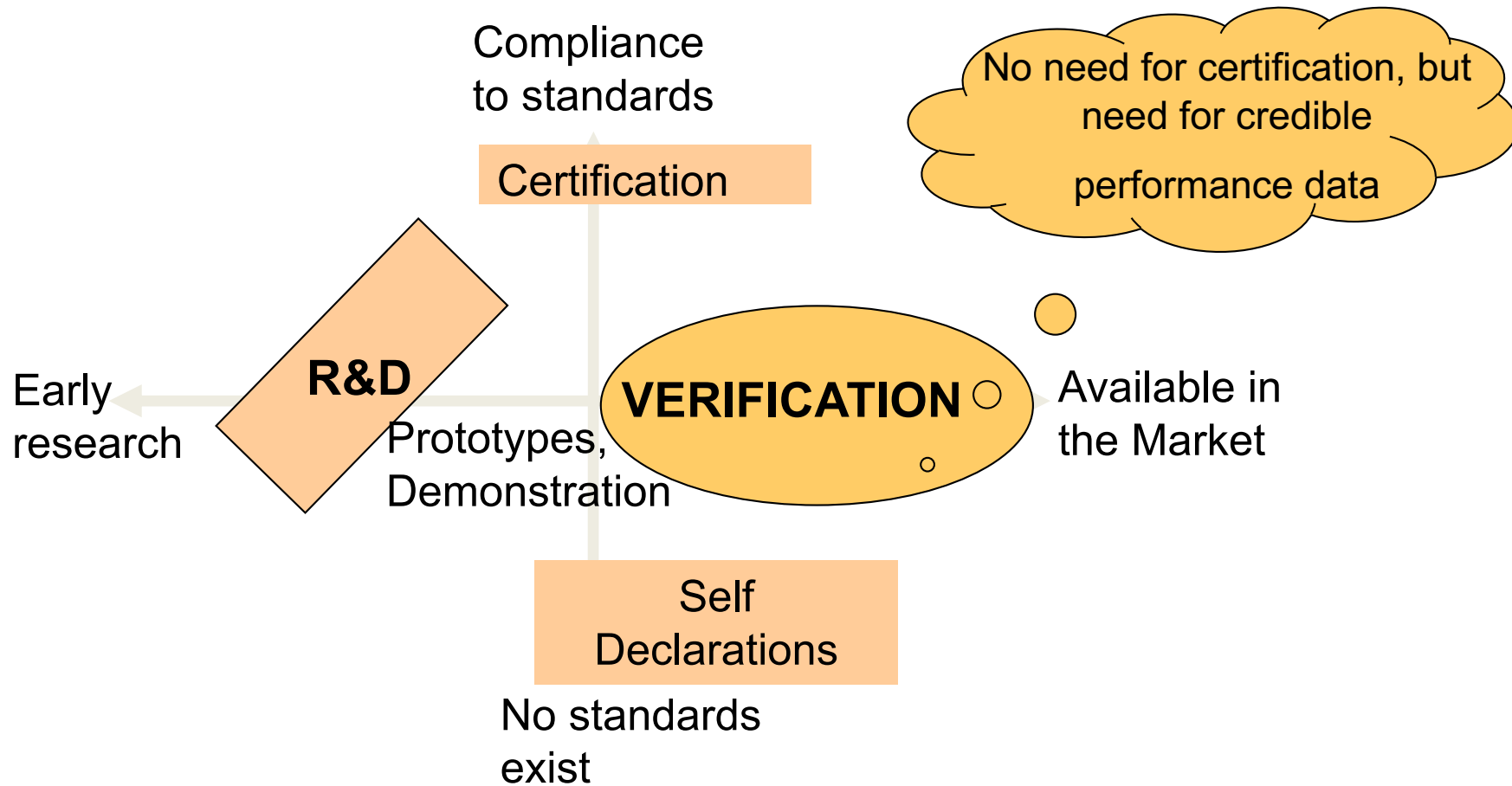


NEXT GENERATION CONCRETE

SUSTCON
EPV

SUSTAINABLE
CONCRETE
ENVIRONMENT
PERFORMANCE
VERIFIED

The positioning of Verification



Famous formula

NT + OO = EOO

New Technology

+ Old Organization

= **Expensive Old Organization**

Technological innovation without system and process innovation is pure waste.

What is next?

- Discussion please. We note.
 1. ?
 2. ??
 3. ???
 4. ????
 5. !!!!!