European Commission

#BuildCircular

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Agenda

- What is Level(s)?
- What does it cover?
- How was it developed?
- Benefits

INTRODUCING LEVEL(S)

Level(s) is a voluntary reporting framework to improve the sustainability of buildings. Using existing standards, Level(s) provides a common EU approach to the assessment of environmental performance in the built environment.

The buildings sector is one of the most resource consuming sectors in Europe, accounting for approximately half of all extracted materials, half of total energy consumption, one third of water consumption and one third of waste generation. That's why the buildings sector is a key target in the European Commission's policy for circular economy: a regenerative economic system in which resource and energy consumption are minimised.

Level(s) is a sustainability framework of the circular economy, and offers a tiered approach to life cycle assessment.

The Level(s) common framework of core indicators aims at:

(s) Raising awareness of, and demand for, better buildings – among the general public, developers and public procurement offices;

(s) Improving knowledge of resource efficiency in the built environment to support better decision making on the part of designers, architects, developers, construction companies, construction product manufacturers, investors, and building owners.

For each indicator, a 'graduated' approach is possible, enabling users to move from simple through to more complex and precise calculation methods and extended reporting.

WHAT DO THE INDICATORS COVER?

Within the framework, each indicator is designed to link the individual building's impact with the priorities for sustainability at the European level.

THESE PRIORITIES ARE:

- → Greenhouse gas emissions throughout the building's life cycle
- → Resource efficient and circular material life cycles
- → Efficient use of water resources
- → Healthy and comfortable spaces
- → Adaptation and resilience to climate change
- → Life cycle cost and value

STEP BY STEP

Each indicator within Level(s) can be used for different types of performance assessment, from a basic level through to a full Life Cycle Assessment (LCA).

The entry point to Level(s) is through the common performance metrics: the simplest and most accessible use of each indicator. Level(s) sets out common units of measurement and basic calculation methodologies, which

Environment

Level(s) is...

- Sustainability reporting
- Holistic assessment
- Covering the full life cycle
- Using few indicators
- Voluntary

Level(s) is for…

- Offices and housing
- New built or renovation
- Mainstream market!

Level(s) is not…

- an EU certification
- setting EU benchmarks

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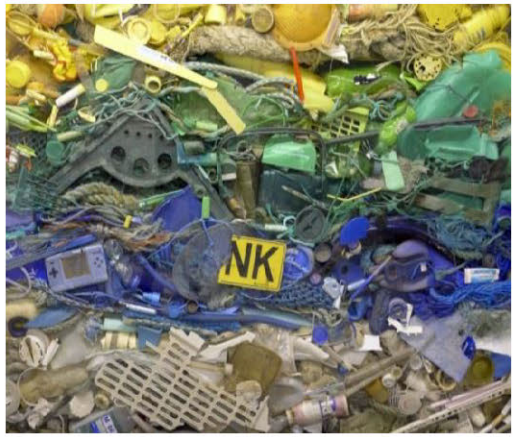


Images courtesy of Judit Kimpian, ACE

MACRO-OBJECTIVES & INDICATORS

1. GHG Emissions
Along the building lifecycle

- **Primary & Delivered Energy consumption in use:** kWh/m²/year
- **Global Warming Potential** embodied CO_2 eq./m²

2. Resource Efficient Material Life Cycle

- **Bill of Materials:** Abiotic fossil fuels, minerals and metals, Biotic materials
- **Waste Flows:** kg/m² Disposed, reused, recycled, recovery

3. Water Use
Circular use of water resources

- **Use Phase Consumption:** m³/occupant/year

4. IEQ
Healthy & comfortable spaces

- **Indoor Air Quality:** ventilation rate l/s/m2; CO2 ppm; RH %
- **Pollutants:** TVOC, CVOC, RI VOC, formaldehyde, benzene, PM2.5 & 10
- **Thermal Comfort:** % time out of range degree days or hours

5. Climate Change
Resilience and adaptation

- **Extreme weather events under future climate scenarios:**
- **Thermal Comfort:** % time out of range degree days or hours 2030/2050

6. Cost & Value
Optimised over whole life

- **Life cycle costs:** acquisition, utility, maintenance EUR/m2/year
- **Value Creation & Risk Factors:** Data quality of indicators

Service Life
Adaptability
Deconstruction/Reuse/recyclability

Other LCA Criteria: ozone depletion, acidification, eutrophication, Photochemical ozone creation

Light
Acoustic

Track levels

Level(3)⇒Optimise

⇑

Level(2)⇒Compare

⇑

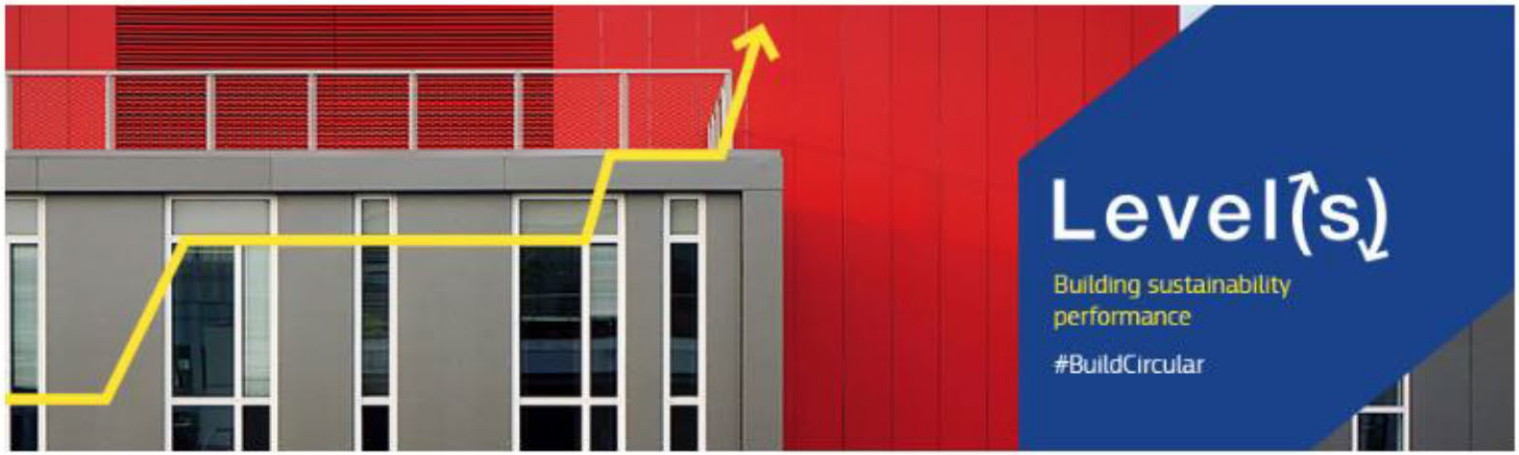
Level(1)⇒Get started

How was Level(s) developed?

- 2.5 years (2015-2017)
- Collaborations with groups of building professionals
- Several rounds of consultations
- Macro objectives => indicators => different levels

Benefits

- Common language
- Simple entry point
- Influence decisions
- Support business case
- Guide policy
- Complement initiatives



Technical documentation

- Introduction to Level(s) and how it works-Part 1 and 2 - DE | ES | FR | IT | PL
- How to make performance assessment using Level(s)-Part 3 - DE | ES | FR | IT | PL

Conclusion

- Common language
- Full life cycle
- Mainstream market
- By and for building professionals

http://ec.europa.eu/environment/eussd/buildings.htm