

Job sharing between Level(s) and Sustainability Assessment Systems

Dipl.-Ing. Andreas Rietz, Architect BDB
Head of Division Sustainable Building

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Level(s) and its place in the tool box for sustainable construction**
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SUSTAINABLE
BUILT ENVIRONMENT
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TRANSITION TOWARDS
A NET ZERO CARBON BUILT
ENVIRONMENT

Level(s) – A common EU framework

Level(s) is a **voluntary reporting framework** to improve the sustainability of buildings. Level(s) provides - using existing standards - an EU-wide approach for the assessment of the environmental performance of buildings.

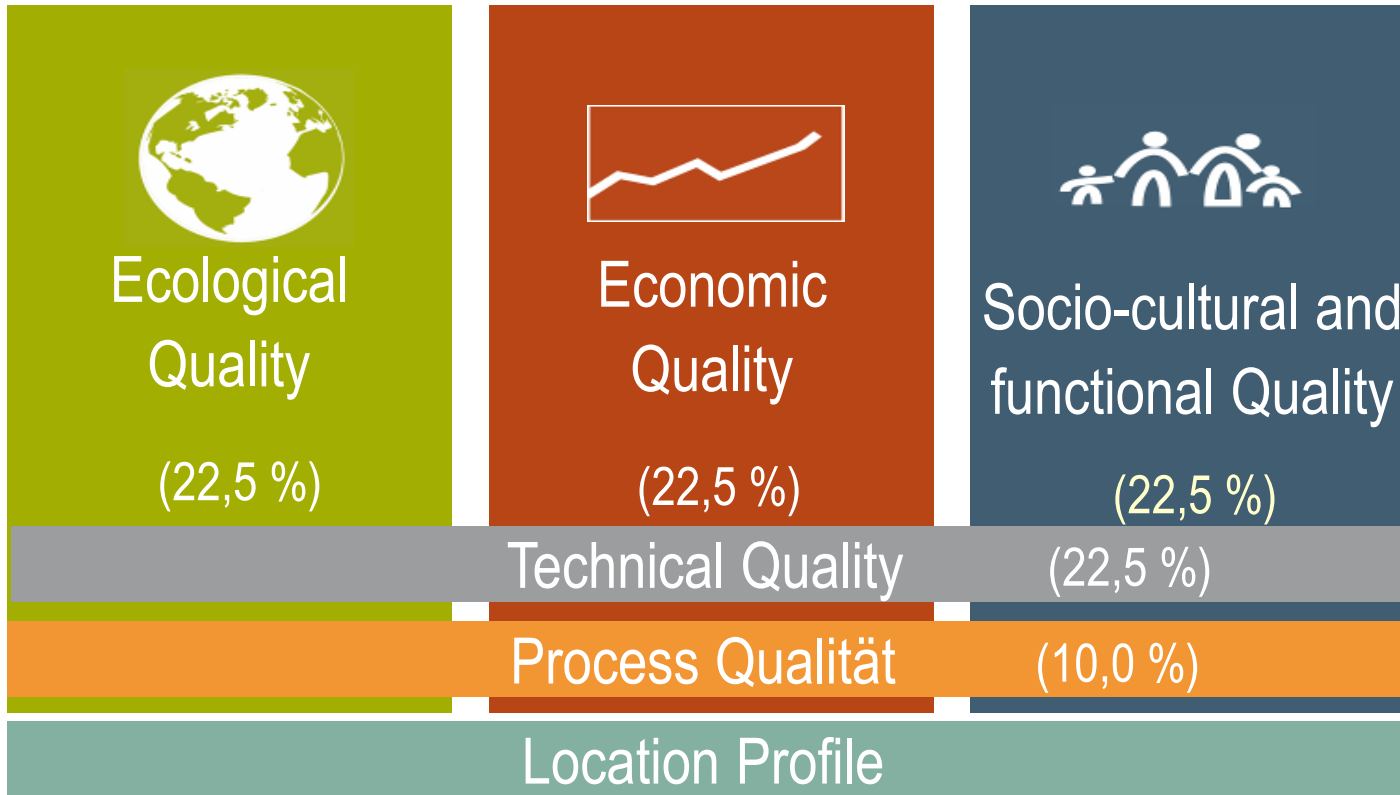
The Level(s) framework with its indicators aims to:

- achieve the general public, property developers and public procurement agencies **to raise awareness of better buildings and to increase the demand for the number of such buildings,**
- improve the **knowledge of resource efficiency** of buildings to promote **a better decision making** by planners, architects, developers, construction companies, manufacturers of building products, investors and building owners.



Assessment System for Sustainable Building (BNB)

Main Criteria Groups



Assessment System for Sustainable Building (BNB)

Criteria Groups and Indicator

Ecological Quality	→	10 Criteria:	Energy, Ecobalance - LCA, Pollutants, Water, Terrain, Wood
Economical Quality	→	3 Criteria:	Life Cycle Costs, Space Efficiency, Capability of Conversion
Sozio-cult. + funct. Quality	→	12 Criteria:	Building Physics, Health (VOC), Acoustics, Daylight, Accessibility, Competitions
Technical Quality	→	6 Criteria:	Sound and Heat Insulation, Cleaning, End of Life, Recycling
Process Quality	→	8 Criteria:	Integral Planning, Concepts, Quality Management, Documentation
Location Characteristics	→	6 Criteria:	Risks and Qualities, Transport Connection, Utilities

Level(s) is structured as follows :

- **Macro-objectives:** An overarching set of six macro-objectives for the Level(s) framework that contribute to EU and Member State policy objectives
- **Core Indicators:** A set of 9 common indicators for measuring the performance of buildings which contribute to achieving each macro-objective
- **Life cycle tools:** A set of 4 scenario tools and 1 data collection tool, together with a simplified Life Cycle Assessment (LCA) methodology
- **Value and risk rating:** A checklist and rating system provides information on the reliability of performance assessments made using the Level(s) framework

The calculation is supported, wherever possible, by EN and ISO reference standards.

Level(s) framework

Target groups for the Level(s) framework

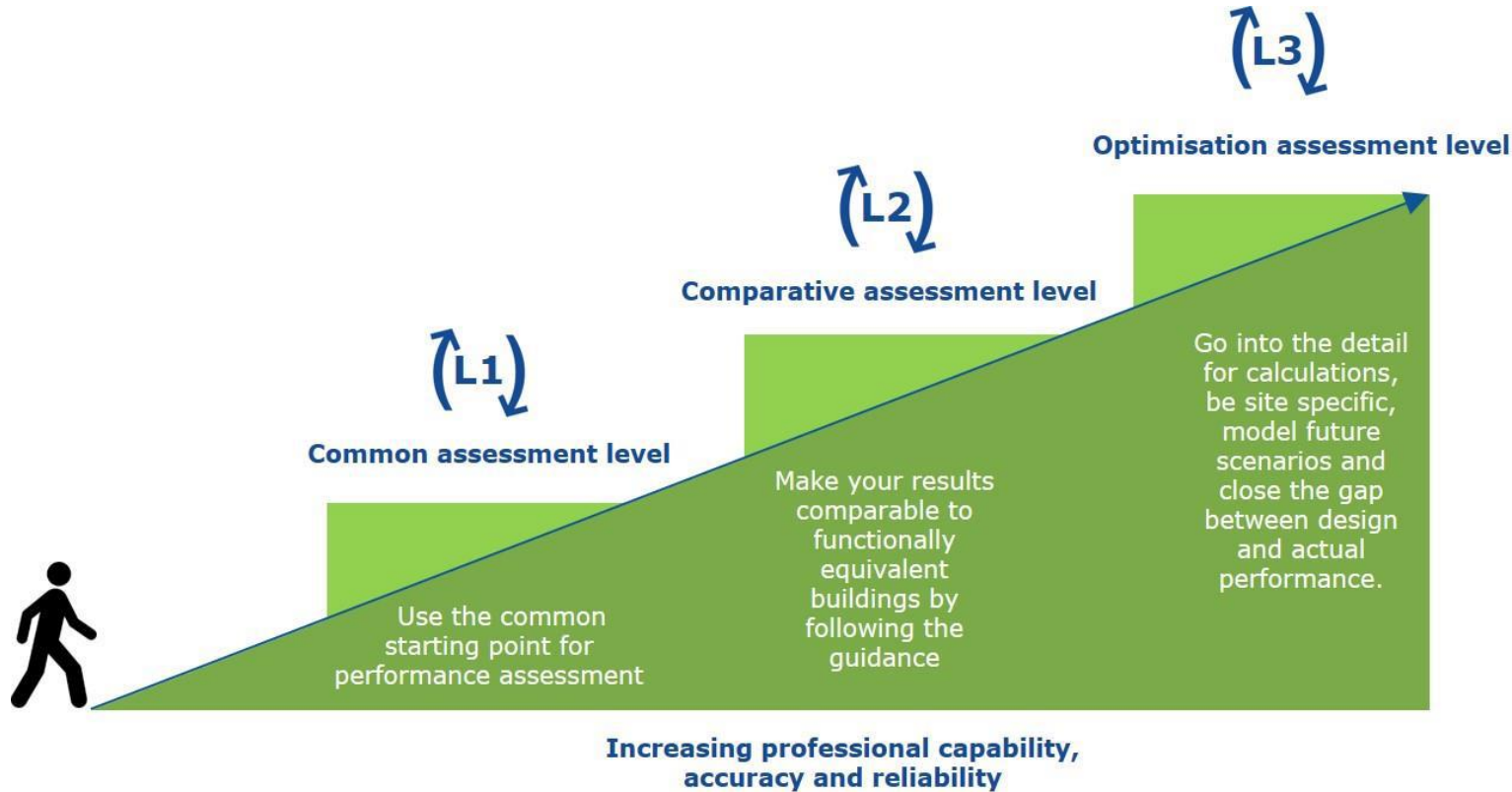
The **target groups** for the Level(s) framework are:

- Property owners, developers and investors
- Design teams (including architects, engineers and quantity surveyors)
- Construction and demolition management (including construction managers and lead contractors)
- Property agents and valuers
- Asset and facilities managers
- Public and private organisations that will occupy the buildings assessed



Level(s) – linked to the EU's sustainability priorities

Three levels of performance assessment



Level(s) – performance assessment

The six macro-objectives of the Level(s) framework

Macro objectives	Description
Thematic area: Life cycle environmental performance	
1. Greenhouse gas emissions along a buildings life cycle	Minimise the total greenhouse gas emissions along a buildings life cycle, from cradle to cradle, with a focus on emissions from building operational energy use and embodied energy.
2. Resource efficient and circular material life cycles	Optimise the building design, engineering and form in order to support lean and circular flows, extend long-term material utility and reduce significant environmental impacts.
3. Efficient use of water resources	Make efficient use of water resources, particularly in areas of identified long-term or projected water stress.

Level(s) – performance assessment

The six macro-objectives of the Level(s) framework

Thematic area: Health and comfort	
4. Healthy and comfortable spaces	Create buildings that are comfortable, attractive and productive to live and work in and which protect human health.
Thematic area: Cost, value and risk	
5. Adaptation and resilience to climate change	Futureproof building performance against projected future changes in the climate, in order to protect occupier health and comfort and to sustain and minimise risks to property values.
6. Optimised life cycle cost and value	Optimise the life cycle cost and value of buildings to reflect the potential for long term performance improvement, inclusive of acquisition, operation, maintenance, refurbishment, disposal and end of life.

Level(s) - Indicator or life cycle tool	BNB - Criteria
Macro-objective 1: Greenhouse gas emissions along a buildings life cycle	
1.1 Use stage energy performance 1.1.1 Primary energy demand 1.1.2 Delivered energy demand (supporting indicator)	1.2 Demand of Resources 1.2.1 Energy demand 1.2.3 Drinking Water Demand and Wastewater 1.2.4 Land Consumption
1.2 Life cycle Global Warming Potential	1.1 Effects on Global and Local Environment (Ecological Impact - LCA) 1.1.1 Global Warming Potential 1.1.2 Ozone Depletion Potential 1.1.3 Photochemical Ozone Creation Potential 1.1.4 Acidification Potential 1.1.5 Eutrophication Potential

Level(s) - Indicator or life cycle tool	BNB - Criteria
Macro-objective 2: Resource efficient and circular material life cycles	
2.1 Life cycle tools: Building bill of materials	1.1 Effects on Global and Local Environment 1.1.1 Risks to the local Environment
2.2 Life cycle tools: scenarios for building lifespan, adaptability and deconstruction	2.2 Economic Efficiency and Value Stability 2.2.2 Adaptability
2.3 Construction and demolition waste and materials	4.1 Technical Execution 4.1.4 Dismantling, Waste Separation and Utilisation
2.4 Cradle to grave Life Cycle Assessment	1.1 Effects on Global and Local Environment 1.1.1 - 1.1.5 Ecological Impact (LCA)

Level(s) - Indicator or life cycle tool	BNB - Criteria
Macro-objective 3: Efficient use of water resources	
3.1 Total water consumption	1.2 Demand of Resources 1.2.3 Drinking water demand and wastewater
Macro-objective 4: Healthy and comfortable spaces	
4.1 Indoor air quality	3.1 Health, comfort and user satisfaction 3.1.3 Indoor air quality
4.2 Time outside of thermal comfort range	3.1 Health, comfort and user satisfaction 3.1.1 Thermal comfort (summer and winter)
4.3 / 4.4 Potential future aspects	3.1.4 Acoustic comfort 3.1.5 Visual comfort

Level(s) - Indicator or life cycle tool	BNB - Criteria
Macro-objective 5: Adaptation and resilience to climate change	
5.1 Life cycle tools: scenarios for projected future climatic conditions (2030/2050) 5.2 / 5.3 Potential future aspects	So far no comparable criterion in the BNB 4.1.5 Resistance to natural disaster 6.1.1 Risks at the micro-site (flood)
Macro-objective 6: Optimised life cycle cost and value	
6.1 Life cycle costs	2.1 Life cycle costs 2.1.1 Building related life cycle costs
6.2 Value creation and risk factors	So far no comparable criterion in the BNB

- The German Assessment System for Sustainable Building (BNB) is based on **Level 3 "Optimized Performance Rating"** of Level(s).
- The BNB serves not only to evaluate and document building quality but also **to ensure quality** throughout the **entire planning and construction process**.
- The next step in the further development of the BNB Assessment System will aim to achieve an improved comparison with the reporting requirements of Level(s).
- It is necessary to check how the two components (Level(s) 6.2 Value creation and risk factors):
 1. the influence of the valuation on the valuation of a property and
 2. the assessment of the reliability of a performance evaluationcan be included in the BNB Assessment System.

Conclusion

- In principle, the introduction of a uniform EU-wide documentation framework for the sustainability of buildings is welcomed.
- Levels should integrate existing national assessment systems like BNB as a reporting framework.
- The use of national detection methods and calculation rules should be allowed in Level(s). Duplication of assessment should be avoided.
- The application of Level(s) in the EU member states should remain voluntary.
- Recommendations and targets should continue to be defined in the individual EU member states according to national policy.

Information and Contact

Thank you for your attention!




Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)

E-Mail: andreas.rietz@bbr.bund.de
 Telefon: +49 30 18401 - 2750