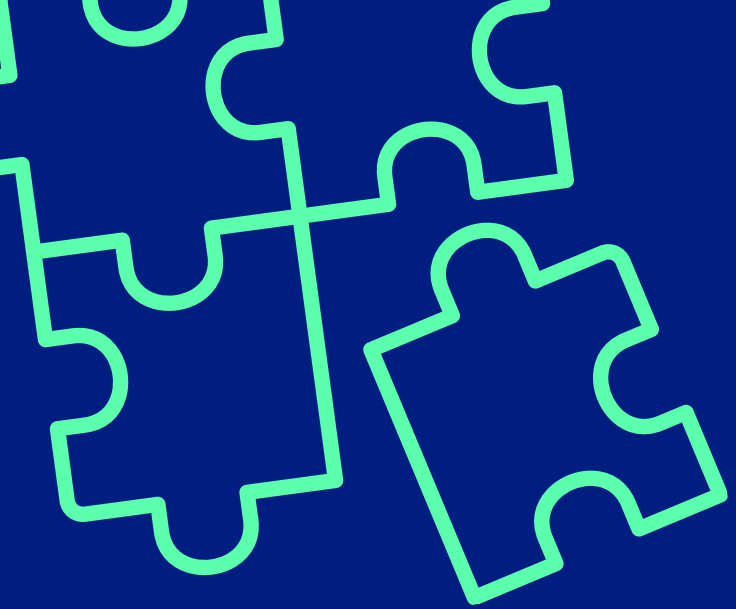
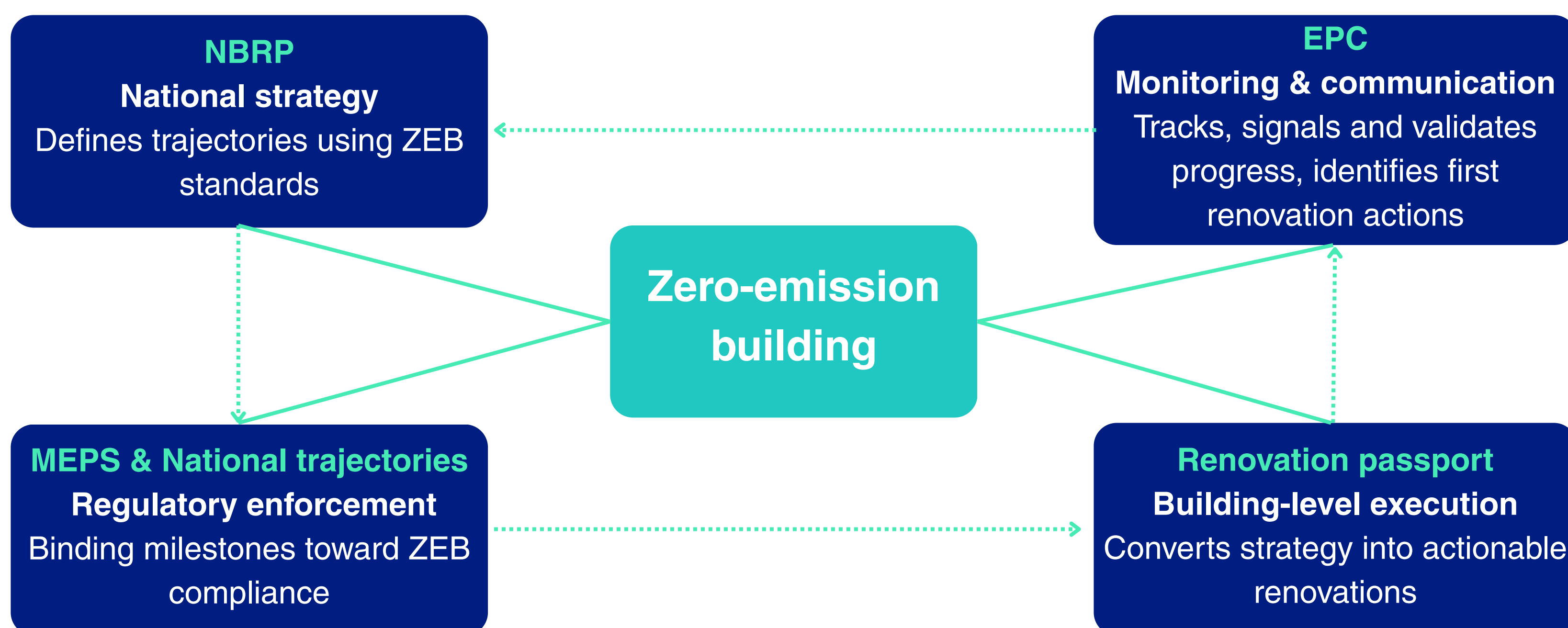




How to solve the EPBD implementation puzzle?

Guidelines for defining a zero-emission building



What defines a ZEB?

Three indicators

- Total annual primary energy — kWh/m²y
- Operational CO₂ emissions — kgCO₂eq/m²y
- Life-cycle global warming potential

On-site energy must have no carbon emissions from fossil fuels

Thresholds depend on cost-optimal calculations at national level



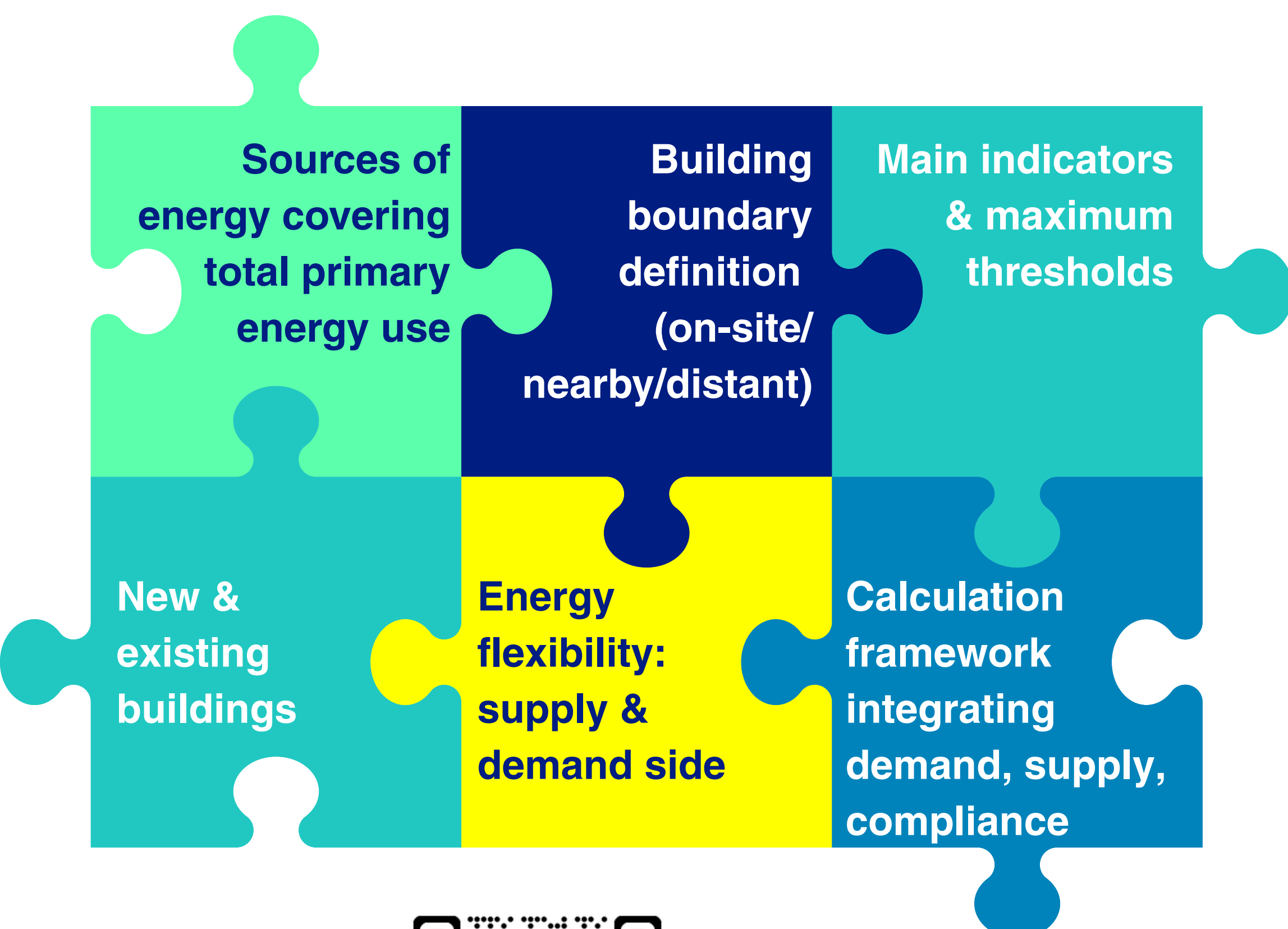
New buildings

Design from scratch

Existing buildings

Flexible, phased approach

How to develop a ZEB definition



Access the
EPBDwise
publications



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Our recommendations

Strengthen the regulatory framework

- Integrate ZEB indicators into calculation and certification frameworks.
- Revise national reference buildings, cost-optimal levels and primary energy factors in the transition from nZEB to ZEB.
- Define boundaries for on-site, nearby & off-site renewable energy.

Secure technical and legislative coherence

- Align with EED and RED legislation.
- Integrate renewables, efficient technologies and flexibility systems.
- Include flexibility indicators (SRI, BEFI) in ZEB assessment frameworks.

Strengthen governance and data infrastructure

- Ensure interoperability across EPC registries, renovation passports, building databases and incentive schemes
- Develop digital platforms for transparent monitoring and reporting
- Set up exchange networks and capacity-building

Tailor implementation pathways

- Apply phased renovation strategies via renovation passports
- Differentiate pathways for new and existing buildings