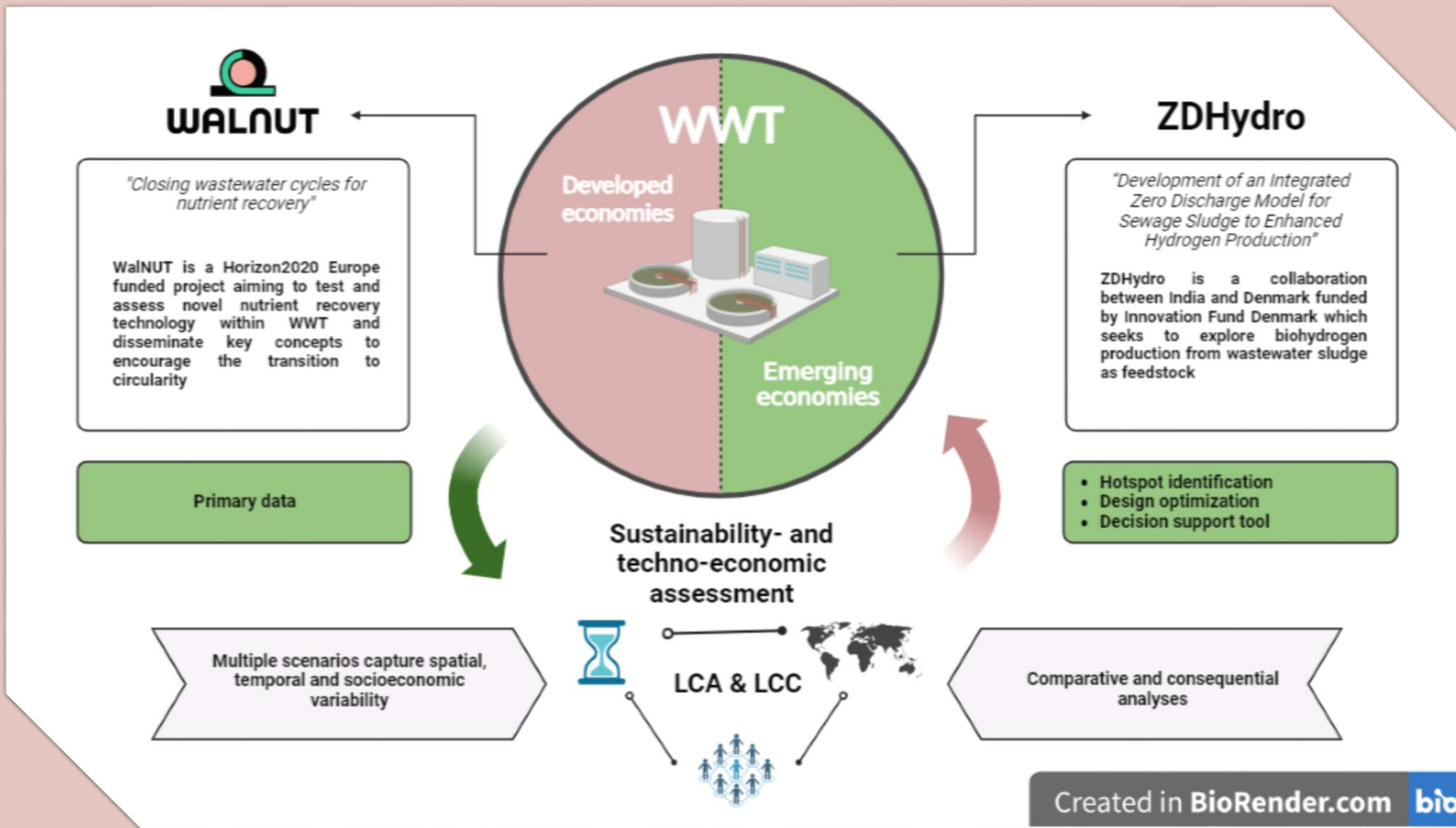


Wastewater treatment towards a circular economy

- exploring emerging technologies from a life-cycle perspective

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Within a paradigm shift towards circularity, wastewater is increasingly recognized as a valuable resource. Reimagining the wastewater treatment sector as bioresource recovery is a complex task requiring holistic systems thinking. Quantitative sustainability/techno-economic assessment is required to properly evaluate the potential of emerging technologies within a circular economy framework.



Goal

The aim of this research project is to explore and assess the sustainability and techno-economic performance of innovative technologies within WWT at lower technological readiness levels. Assessments are to be used as decision support tools in design, optimization and policy.

Methods

1. Data collection and scaling
2. Carrying out environmental sust. and techno-economic assessments via life cycle assessment and –costing studies. Consequential and comparative LCA methodology is used to map potential of future technology against status quo. Assessments are made in multiple spatial, temporal and socioeconomic scenarios.
3. Interpretation of results and reiteration.