

- I can use the sensor's software tool such as ComSoft, that automatically collects temperature data from temparature sensor and implement the algorithm to calculate maturity indices and generate maturity-strength curves for different mixes and admixtures from lab tests.
- I integrate real-time data visualization dashboards for monitoring concrete curing.
- I create an automated reporting system that generates PDF or web-based reports summarizing test results, maturity curves, and recommendations.
- All data is stored securely and can be accessed remotely by project stakeholders.

# Life-Cycle Assessment Integration into Digital Concrete production workflows

- Research Questions

How can LCA be embedded into digital concrete production processes?

- What data from digital workflows (e.g., sensors, batching systems, mix designs) are needed for real-time LCA?
- How can automated feedback loops be created to optimize concrete production for sustainability?

# Start and end time of the maturity sensor