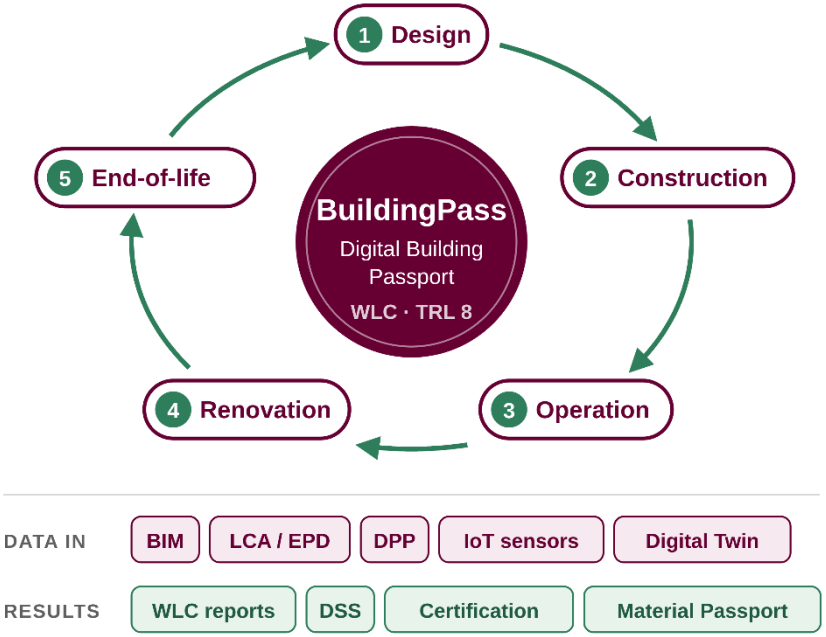
Epsilon	2026	BUILDINGPASS – BUILDING PASSPORT FOR WHOLE-LIFE CARBON & CIRCULARITY						
	Country	**Contract value (€)**	**% by Epsilon**	**Staff # provided**	**Client**	**Origin of funding**	**Date (start/end)**	**Consortium Members**
	Malta	**5,057,830**	16.3% (€826,345)	3	EC (CINEA)	Horizon Europe (Cluster 5)	36 months (from GA)	11 partners from MT (coord.), EL, PT, DE, DK, IT, NL

The Project (2026)

BuildingPass – Building Passport for Whole-Life Carbon & Circularity (Horizon Europe, HORIZON-CL5-2026-09-D4-03, Innovation Action) responds to the recast Energy Performance of Buildings Directive (EPBD), which introduces life-cycle GHG assessment for new buildings, and to the revised Construction Products Regulation and Digital Product Passports (DPP), which require reliable product-level environmental data. Today, the tools that handle embodied and operational carbon remain fragmented across the building lifecycle.

The project will develop, integrate, demonstrate and validate a **TRL 8 interoperable BuildingPass platform** through which EU-aligned Whole-Life Carbon (WLC) information flows seamlessly between BIM, LCA/EPD/DPP datasets, Digital Twins and assessment/certification systems across all five lifecycle stages: design, construction, operation, renovation and end-of-life. An AI-enhanced (NLP) interoperability engine maps BIM components to environmental datasets, feeding a multi-criteria Decision Support System (DSS) and a 4D Digital Twin that integrates IoT telemetry and construction scheduling within a secure, cloud-native data lake, and generates certification-ready carbon reports. Each assessed building receives a dynamic **Digital Passport** and Material Passport recording its carbon and circularity performance.

The platform is validated in **three large-scale pilots and a lighthouse**: deconstruction of the 100,000 m² University Hospital Augsburg (DE), a new university building at Instituto Superior Técnico, Lisbon (PT), renovation of three underground municipal car parks in Athens (EL), and the LTCP Living Lab in Lavrion (EL). Targets include a ≥25% WLC-reduction potential against pilot baselines, with post-project commercialisation through the **BuildingPass-EEIG**.



Services to be provided by EPSILON

As **Project Coordinator** (135 person-months, the largest share of the consortium), EPSILON leads six work packages and contributes to all others, providing:

- **Project management (WP1–2):** strategic governance and consortium coordination, administrative, financial and data management, risk and quality assurance, reporting and liaison with the EC and related Horizon Europe projects.
- **Living Lab & certification framework (WP5):** operational protocols and data-security guidelines for real-time monitoring across the pilots; certification framework aligned with EPBD and Level(s).
- **BIM–LCA interoperability (WP11):** leadership of the AI-driven multi-dataset coupling framework and of the Open BIM-API service that extracts material quantities from native BIM models.
- **LCA & WLC assessment (WP8–10):** environmental assessment covering materials extraction and production LCA, embodied carbon of installation, second-life GWI recalculation and final WLC reconciliation.
- **Decision support (WP6):** interactive "Serious Game" dashboard on the BuildingPass platform, supporting multi-criteria DSS scenarios that let designers, owners and authorities compare material and design alternatives.
- **Policy & regulatory alignment (WP14):** assessment of platform results, policy recommendations and alignment of material-recovery tracking with EU Delegated Acts for carbon-removal certification.
- **Pilot validation (WP15):** cross-pilot comparative analysis and validation of the hospital, university, car-park and lighthouse results against the baseline KPIs defined at project start.
- **Dissemination & exploitation (WP16–17):** branding, website, communication and stakeholder outreach; business, risk and marketing plans; set-up of the BuildingPass-EEIG for post-project commercialisation and EU replication.

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