



European
Commission

Horizon 2020
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for Research & Innovation



**Rethinking coastal defence and Green-energy Service infrastructures
through enHancEd-durAbiLiTy high-performance cement-based materials**

WP7. Business opportunities of the UHDCs developed

STRESS (Leader)

Carmine Pascale

Partners participating: CMW, EGP, ANF DEVELOPMENT, RDC, BANAGHER PREC,
API EUROPE MEPE, PENETRON IT

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WP objectives

- Evaluation of the potential applications, with a positive economic, social and environmental balance.
- Quantification of economic and social aspects with reference to the proposed UHDC materials and components by means of LCC and S-LCA methodologies respectively, to complement calculation of the environmental impact performed in WP6 by means of LCA (T6.2).
- Strategic analysis (e.g. SWOT analysis), market study and business plan of the most interesting materials and components identified, thus fulfilling Specific Objective 4* and related KPI4**.
- The activities of this WP are a preparation to take full advantage of the developments after TRL6, and exploit different market niches starting from the knowledge of the client need.

WP objectives

Strategy

Critical assessment of all the issues that relate to the creation of the necessary infrastructure for the promotion of a mass market for the ReSHEALience concept, materials and components: sustainability, market potentials, application perspectives, risks and opportunities.

Close collaboration with SMEs for:

- primary data collection on products development for LCC and SLCA
- Info for Strategic analysis and business models, Market Analysis and Business plan

Feedback from WP6:

- Combination and integration of the outputs from LCA (WP6)

WP tasks and partners

Task 7.1: Life Cycle Cost

[M13-M36]

(lead: STRESS; EGP, CMW, Banager Prec, ANF Development, API Europe, Penetron IT)

Task 7.2: : Social Life Cycle Assessment and Life Cycle Sustainability Assessment

[M13-M36]

(lead: STRESS; EGP, CMW, Banager Prec, ANF Development, API Europe, Penetron IT)

Task 7.3: Strategic analysis and business model

[M25-M42]

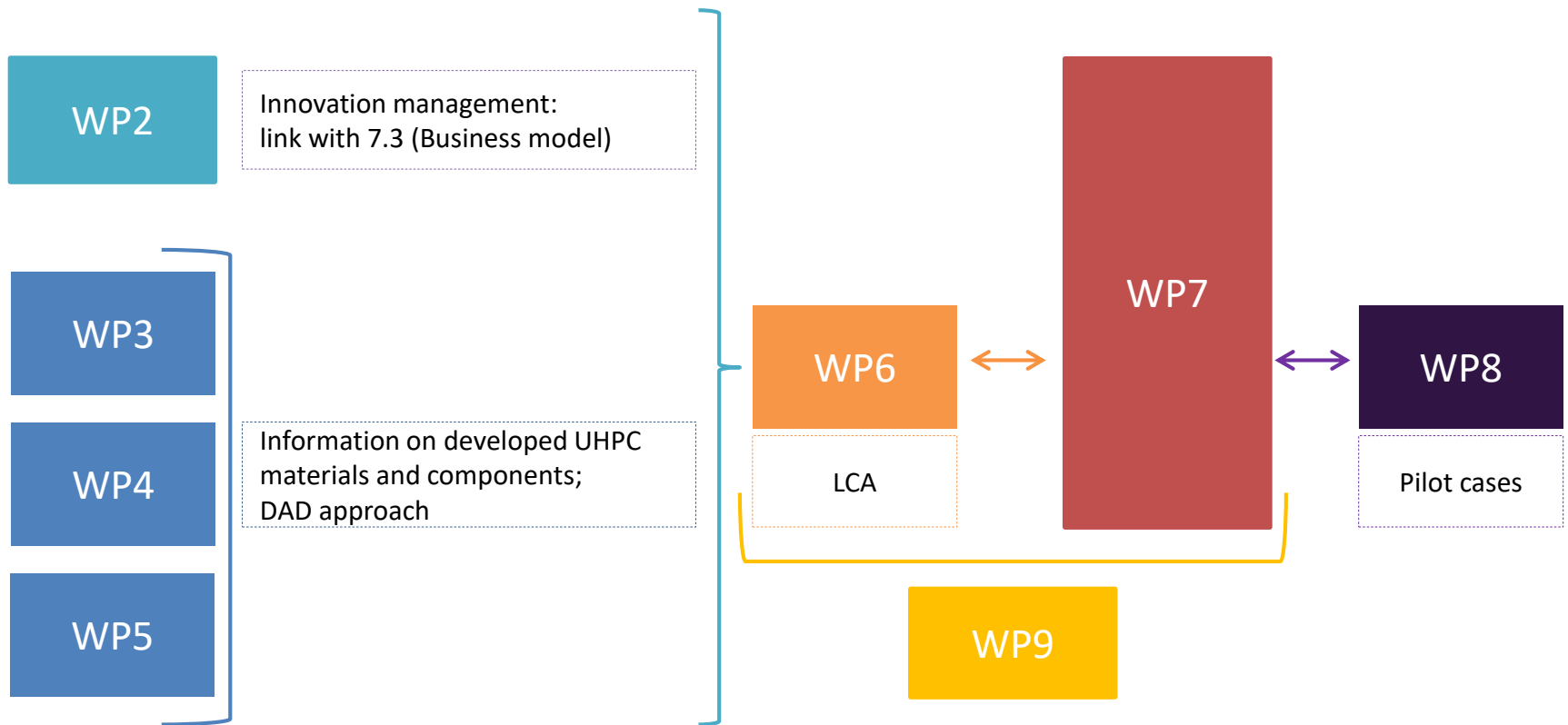
(lead: STRESS+LTP RINA-C; EGP, CMW, Banager Prec, API Europe, ANF Development, Penetron)

Task 7.4: Market analysis and Business plan

[M31-M48]

(lead: CMW +LTP EnerOcean; Banager Prec, STRESS (+LTP RINA-C), EGP, RDC, ANF Development , API Europe, Penetron IT)

Expected interactions within WPs



Deliverables and Milestones

DELIVERABLES

#	Title	Responsible	Dissemination level	Type	Deadline
D 7.1	Life Cycle Sustainability Assessment: LCA, LCC, SLCA	STRESS	PU	R	36 Update 48
D 7.2	Strategy and business model definition: SWOT analysis, business model.	STRESS (RINA-C)	CO	R	42
D 7.3	Market analysis and business plan – SO4	CMW (EO)	CO	R	48

MILESTONES

#	Title	Responsible	Due date	Means of verification
MS 9	Common Goal and Scope definition to perform LCA, LCC and SLCA	STRESS	18	Completion of relates section of D6.1/D7.3.
MS 10	Availability of LCA, LCC and SLCA results to perform the Life Cycle Sustainability Assessment	STRESS	36	Completion of D6.1 Intermediate LCC/SLCA reports
MS 11	Availability of results from Strategy and Business model definition for the business plan	STRESS (RINA-C)	42	Completion of D7.2

WP7 risks

RISKS

Description of risk	Proposed risk-mitigation measures
<p>LCA/LCC/SLCA analyses lack relevant input data likelihood: low consequences: low</p>	<p>Integrating data input from concurrent UHPC/UHPFRC experimental and modelling projects to foster progress of fuzzy-probabilistic strategies</p>
<p>High costs and LCA/ LCC/SLCA balance not satisfactory for business plan and market strategy likelihood: medium consequences: medium</p>	<p>Several alternatives will be analyzed even though some of them might not have mature technologies to be competitive in the market it is unlikely that all of them fail to be efficient</p>

Tasks and expected achievements

TASK 7.1

Title: “Life Cycle Cost”

Duration: M13 – 36

Task Leader: STRESS

Partners involved: EGP, CMW, BaPreC, NAFEN API, Penetron

EXPECTED ACHIEVEMENTS

Life Cycle Cost analysis (LCC) of the developed UHDC materials and components in accordance with ISO 15686-5:2008 and to the Code of Practice suggested by SETAC “Environmental Life Cycle Costing”.

LCC estimates the total costs to be incurred in the design, development, production, operation, maintenance and end of life of materials and components over their life cycle.

Comparison of all the alternatives in order to select the one that maximizes net savings.

Tasks and expected achievements

TASK 7.2

Title: “Social Life Cycle Assessment and Life Cycle Sustainability Assessment”

Duration: M13 – 36

Task Leader: STRESS

Partners involved: EGP, CMW, BaPreC, NAFEN API, Penetron

EXPECTED ACHIEVEMENTS

Social Life Cycle Assessment (SLCA) according to the UNEP/SETAC guideline, for the evaluation of the social and socio-economic aspects of the UHDCs materials and components

Combination and integration of the outputs of LCA (WP6), LCC and SLCA into an eco-efficiency assessment (i.e. Life Cycle Sustainability Assessment) aimed at identifying solutions (materials and components) with the best sustainability performance, comparing the new proposed UHPC materials and components, with the currently-available alternatives.

Tasks and expected achievements

TASK 7.3

Title: “Strategic analysis and business models”

Duration: M25-42

Task Leader: STRESS (+ LTP RINA-C)

Partners involved: EGP, CMW, BaPreC, API, NAFEN, Penetron

EXPECTED ACHIEVEMENTS

Comparative analysis of the proposed solutions, using the output of the experimental evaluation (WP5) and of LCA (WP6), LCC (WP7), SLCA (WP7)

SWOT analysis of the developed materials and components, to identify the best alternative considering technical and sustainability criteria

Development Business Models including description and analysis of the value proposition, configuration of the value creation, definition of all aspects related to the customers, partnership, key resources and mechanisms for revenue generation among others these activities will be preparatory with respect to the business plan development carried out in Task 7.4

Tasks and expected achievements

TASK 7.4

Title: “Market analysis and Business plan”

Duration: M31-48

Task Leader: CMW (+LTP EO),

Partners involved: BaPreC, STRESS (+LTP RINA-C), EGP, RDC, NAFEN , API, Penetron

EXPECTED ACHIEVEMENTS

Analysis of current legislation and policies and identification of statutory and industrial requirements

Road-map of the applicability of the new products throughout Europe and identification of potential end-users

Market characterization: reference market as well as the different market segments, identifying the market size, the potential market growth rate, actors and needs.

Development of the Business Plan and the commercialization strategy: marketing strategy definition, quantification of all the different revenue streams, development of the economic and financial plan, return on the investments (ROI) calculation and breakeven point.

Coordination in WP7

- Mailing list with all task leaders and partners
- **Coordination meeting to start activities at M13**
- Collaboration with WP6
- **Task Leaders:** T7.1 (STRESS), T7.2 (STRESS), T7.3 (STRESS/RINA-C), T7.4 (CMW/EnerOcean)
- **Skype meetings every 1 Month:** progress work review and contingencies respect WP

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