



Erasmus+

CLOEMC IV

INTELLECTUAL OUTPUTS 1-6

Activity 2

agreed manuals table of content

final version

## 1. Intellectual Output 1 - Manual 20 - M20. Revitalisation and Refurbishment in construction

Responsible Partners: **AEEBC** / AWBUD (related parts indicated in brackets)

The principal authors:

Dominik Krawczyk

Chris Motzko

Martin Russell – Croucher

Kevin Sheridan

1. Theory or refurbishment and revitalisation (AWBUD)
2. Refurbishment of modern buildings (AWBUD)
3. Revitalisation of heritage / monumental buildings (AEEBC)
4. Urban Mining (DARM)
5. Case studies

## 2. Intellectual Output 2 - Manual 21 - M21. Building Information Modeling – BIM

**Responsible Partners: RU / CIOB / PSMB** (related parts indicated in brackets)

The principal authors:

Ingibjorg R. Kjartansdottir

Jonas Thor Snaebjornsson

Arnab Mukherjee

Peter Nowak

1. Building Information Modelling, scope and definition (RU)
2. Stages of BIM (RU)
3. BIM Implementation (CIOB)
4. Aspects of the interface, differences between systems / software (CIOB)
5. Use of BIM in construction projects / case studies (RU/CIOB/PSMB/ALL when possible). Owner requirements vs construction companies capabilities.

**3. Intellectual Output 3 - Manual 22 - M22. Optimisation of Construction Processes.**  
**Responsible Partners: WUT / RU** (related parts indicated in brackets)

The principal authors:

Thordur Vikingur Fridgeirsson

Jerzy Rosłon

1. Introduction - chosen algorithms for optimisation in construction (WUT)
2. Tools used in decision making in construction, (RU)
3. Optimization algorithms (tabu search, simulated annealing, genetic algorithms, particle swarm optimisation, neural networks, etc.) - cost, time, quality, etc. (WUT)
4. Optimisation of structures (design) (WUT)
5. Logistics optimisation lean management RU, supplies, KASS, etc. (WUT)
6. Case studies (WUT / RU)

**4. Intellectual Output 4 - Manual 23 - M23. Diversity Management in Construction.  
Responsible Partners: WUT / RU / DARM** (related parts indicated in brackets)

The principal authors:

Thordur Vikingur Fríðgeirsson

Jörg Klingenberg

Krzysztof Kosy

Mariola Książek - Nowak

Christoph Motzko

Daniel Schmitz

1. Introduction (DARM)
2. Agile Management (RU), adaptive Life Cycle, Stakeholder engagement (DARM)
3. Cross-Cultural Aspects in Construction (DARM)
4. Gender Aspects in Construction – WUT Role of the woman in CI (CIOB/WUT), involvement (DARM)
5. Communication in Construction (WUT)
6. Case studies (RU/WUT/DARM)

## 5. Intellectual Output 5 - Manual 24 - M24. Mechanics of Materials and Structures for Construction Managers.

Responsible Partners: **WUT / DARM** (related parts indicated in brackets)

The principal authors:

Magda Kruk

Fabian Linnebacher

Christoph Motzko

Artur Zbiciak

Krzysztof Józefiak

1. Soil characteristic, soil description and mechanics, types of soil, strength and strengthening, soil samples, water, what information to gather during site preparation (WUT)
2. Elements of structural mechanics (WUT/DARM)
3. Practical applications (WUT, DARM)
4. Case studies (DARM/WUT)

**6. Intellectual Output 6 - Manual 25 - M25. Corporate Social Responsibility in Construction.  
Responsible Partners: PSMB / WUT** (related parts indicated in brackets)

The principal authors:

Andrzej Minasowicz

Paweł Nowak

Bolesław Rok

Janusz Zaleski

Jacek Zawistowski

1. Introduction, learning outcomes.
2. Basis and definitions of CSR. (PSMB / WUT)
3. First pillar – element of CSR of the construction company. (PSMB / WUT)
4. Second pillar - Sustainable Construction vs. CSR. (PSMB / WUT)
5. Third pillar - Social Influence of CSR. (PSMB / WUT)
6. Summary
7. Case studies - advantages and benefits of CSR in Construction Company. (PSMB / WUT)